

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS



Smith, David J. (1984)
Regents' Professor of Physics and Astronomy and Center for Solid State Science; Director, Center for Solid State Science; B.Sc., Ph.D., D.Sc., University of Melbourne (Australia)

Smith, Hal L. (1979), Professor of Mathematics and Statistics; B.A., Ph.D., University of Iowa

Smith, Harvey A. (1977), Professor of Mathematics and Statistics; B.S., Lehigh University; M.S., A.M., Ph.D., University of Pennsylvania

Smith, Henry Charles (1989), Professor Emeritus of Music; B.A., University of Pennsylvania; Artist Diploma, Curtis Institute of Music

Smith, Jeffrey B. (1990), Associate Professor of Music; M.M., University of Illinois; D.M.A., University of North Texas

Smith, Karen Ann (1999), Associate Professor of Curriculum and Instruction; B.A., University of the Americas (Mexico); M.A., Ph.D., Arizona State University

Smith, L. Christian (1971), Associate Professor of History; B.A., Union College; M.A., Ph.D., University of Illinois

Smith, Lehi T. (1959), Professor Emeritus of Mathematics and Statistics; B.S., M.A., Arizona State University; Ed.D., Stanford University

Smith, Marion W. (1952), Professor Emerita of Music; B.S., Capital University; M.M., American Conservatory of Music

Smith, Mary Lee (1986), Professor of Educational Leadership and Policy Studies; B.A., M.P.S., Ph.D., University of Colorado

Smith, Ralph E. (1970), Professor of Accountancy and Information Management; B.B.A., Washburn University of Topeka; M.S., Ph.D., University of Kansas; C.P.A., Kansas

Smith, Richard L. (1967), Professor Emeritus of Industrial Engineering; B.S., Washington University; M.S., Ohio State University; Ph.D., Arizona State University

Smith, Ronald D. (1962), Professor Emeritus of History; A.B., San Diego State College; Ph.D., University of Southern California

Smith, Stanley E. (1977), Professor Emeritus of Journalism and Mass Communication; B.A., Colgate University; M.A., Purdue University

Smith-Daniels, Dwight E. (1987), Associate Professor of Management; B.B.A., University of Michigan; Ph.D., University of Arizona

Smith-Daniels, Vicki L. (1987), Professor of Operations Management; B.B.A., University of San Diego; Ph.D., Ohio State University

Sneed, Jim (1990), Faculty Associate of Design; B.S., Arizona State University

Sneed, Jimmie R. (1988), Faculty Associate of Construction; B.S., Arizona State University

Snow, Robert (1970), Professor Emeritus of Sociology; B.S., M.A., Ph.D., University of Minnesota, Twin Cities

Snyder, Ernest E., Jr. (1958), Professor Emeritus of Physics and Astronomy/Science Education; A.B., M.A., Colorado State University; Ed.D., New York University

Snyder, Lester M. Jr. (1967), Professor Emeritus of Counseling Psychology; B.S., Millersville State College; M.Ed., Western Maryland College; Ph.D., University of Michigan

Soergel, Philip M. (1989), Associate Professor of History; B.A., Muskingum College; A.M., Ph.D., University of Michigan

Sola, Anthony (1995), Faculty Associate of Design; B.A., Ottawa University; M.B.A., University of Phoenix

Solis, Theodore (1989), Associate Professor of Music; B.A., Arizona State University; M.A., University of Hawaii, Manoa; Ph.D., University of Illinois

Somerville, Susan C. (1977), Professor of Psychology; B.A., University of New England (Australia); Ph.D., Australian National University (Australia)

Sommerfeld, Milton R. (1968), Professor of Plant Biology; Associate Dean, College of Liberal Arts and Sciences; B.S., Southwest Texas State College; Ph.D., Washington University

Song, Yuwu (1999), Assistant Librarian; B.A., Luo Yang Foreign Languages University, China (China); M.A., Clemson University; M.L.I.S., University of Texas, Austin

Sonmez, Sevil F. (1995), Associate Professor of Recreation Management and Tourism; B.B.A., Bernard M. Baruch College; M.P.R.T.M., Clemson University; Ph.D., Pennsylvania State University

Soroka, Ellen (1996), Assistant Professor of Architecture; B.F.A., Pratt Institute; M.Arch., Massachusetts Institute of Technology

Sousa, Karen H. (1998), Assistant Professor of Nursing; B.S., M.S., Ph.D., University of California, San Francisco

Spanias, Andreas S. (1988), Professor of Electrical Engineering; B.S.E.E., M.S.E.E., Ph.D., West Virginia University

Spanias, Photini (1998), Lecturer of Curriculum and Instruction; B.A., M.Ed., Ed.D., Arizona State University

Speer, Therese (1997), Faculty Associate of Nursing; B.S.N., Salve Regina University; M.S., University of Arizona

Spellman, Catherine (1995), Associate Professor of Architecture; B.A., B. Arch., Rice University; M.Arch., University of California, Los Angeles



Spence, John C.H. (1976)
Regents' Professor of Physics and Astronomy; M.Sc., Ph.D., University of Melbourne (Australia)

Spielberg, John (1990), Associate Professor of Mathematics and Statistics; B.S., Stanford University; Ph.D., University of California, Berkeley

Spielmann, Katherine A. (1987), Professor of Anthropology; A.B., Harvard University; M.A., Ph.D., University of Michigan

Spiers, James V. (1990), Senior Lecturer of Marketing; B.S., Weber State College; M.A., University of Northern Colorado

Spindler, Robert P. (1988), Archivist; Head, Department of Archives and Manuscripts; B.A., M.A., Boston University; M.S., Simmons College

Spinosa, Frank (1965), Professor Emeritus of Music; B.M., M.A., Boston University; D.M.A., University of Illinois

Spinrad, Tracy (2000), Assistant Professor of Family and Human Development; B.A., University of California, Irvine; M.S., Ph.D., Pennsylvania State University

Spring, Robert S. (1988), Professor of Music; B.M., M.M., D.M.A., University of Michigan

Spritzer, Ralph S. (1986), Visiting Professor of Law; B.S., LL.B., Columbia University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Spruyt, Hendrik (1999). Associate Professor of Political Science; Director of Graduate Studies; B.A., Leiden University (Netherlands); M.A., Ohio State University; Ph.D., University of California, San Diego

Squires, Kyle D. (1997). Associate Professor of Mechanical and Aerospace Engineering; B.S., Washington State University; M.S., Ph.D., Stanford University

Squires, Rose L. (1981). Professor Emerita of Nursing; B.S., Duquesne University; M.A., Ed.D., Columbia University

St. Louis, Robert D. (1982). Professor of Accountancy and Information Management; A.B., Rockhurst College; M.S., Ph.D., Purdue University

Staab, Wayne J. (2001). Adjunct Professor of Speech and Hearing Science; B.A., Fort Hays State University; M.S., University of Wisconsin; Ph.D., Michigan State University

Stafford, Kenneth R. (1957). Professor Emeritus of Education; B.A., M.Ed., Ph.D., University of Oklahoma

Stafford, Mary E. (1994). Associate Professor of Educational Psychology; Training Director, School Psychology; B.A., University of Texas, Austin; M.Ed., University of Houston, Victoria; Ph.D., University of Texas, Austin

Stage, Christina (1992). Lecturer, Division of Undergraduate Academic Services; Director, Bachelor of Interdisciplinary Studies; B.J., University of Nebraska, Lincoln; M.A., Ohio University; Ph.D., Arizona State University

Stahl, Robert (1978). Professor of Curriculum and Instruction; B.A., M.A., Ed.D., University of Florida

Staley, Frederick A. (1970). Professor of Curriculum and Instruction; B.A., M.A., Western Michigan University; Ph.D., Michigan State University

Stalzer, Frank S. (1955). Professor Emeritus of Music; B.M.Ed., University of Kansas; M.M., Eastman School of Music

Stamm, Jill (1998). Clinical Assistant Professor of Psychology in Education; B.A., DePauw University; M.A., Ph.D., Arizona State University

Stanciff, Michael G. (2001). Lecturer of English; B.A., Albion College; M.A., Ph.D., State University of New York, Buffalo

Stanford, Michael (1992). Senior Lecturer of the Barrett Honors College; B.A., Duke University; M.A., Ph.D., University of Virginia

Stange, Jean B. (1970). Professor Emerita of Family and Human Development; B.S., Iowa State University; M.S., University of Minnesota, Twin Cities

Stanley, James T. (1968). Professor Emeritus of Materials Science and Engineering; B.S., M.S., Ph.D., University of Illinois

Stanton, Ann M. (1980). Professor of Law; B.A., University of Minnesota, Twin Cities; Ph.D., J.D., Stanford University

Stanton, Dan (2000). Assistant Librarian, Government Documents/Maps Collection; B.A., Trinity College; M.L.S., University of Arizona

Stark, Barbara L. (1972). Professor of Anthropology; B.A., Rice University; M.Phil., Ph.D., Yale University



Starrfield, Sumner G. (1972)
Regents' Professor of Physics and Astronomy;
B.A., University of California, Berkeley; M.A.,
Ph.D., University of California, Los Angeles

Stauffer, Sandra L. (1990). Professor of Music; B.S., West Chester University; M.M., Ph.D., University of Michigan

Steadman, Lyle B. (1971). Assistant Professor of Anthropology; B.A., Occidental College; M.A., University of California, Los Angeles; Ph.D., Australian National University (Australia)



Stearns, Mary Beth (1981)
Regents' Professor Emerita of Physics and
Astronomy; B.S., University of Minnesota, Twin
Cities; Ph.D., Cornell University

Steenson, Craig A. (2001). Assistant Professor of Theatre; B.A., California State University, San Bernardino; M.F.A., Utah State University

Steere, Caryl J. (1960). Professor Emerita of Education; B.A., Albion College; M.A., Arizona State University

Steffl, Bernita M. (1961). Professor Emerita of Nursing; B.S.N., M.P.H., University of Minnesota, Twin Cities

Steimle, Timothy C. (1985). Professor of Chemistry and Biochemistry; B.S., Michigan State University; Ph.D., University of California, Santa Barbara

Steinbart, Paul (1997). Professor of Accountancy and Information Management; B.A., University of Illinois; M.B.A., Southern Illinois University; Ph.D., Michigan State University

Steiner, Sue (1996). Associate Professor of Social Work; B.A., Brandeis University; M.S.W., San Francisco State University; Ph.D., University of Washington

Stelmach, George E. (1990). Professor of Exercise Science and Physical Education; B.S., University of Illinois; M.A., Ed.D., University of California, Berkeley

Stephens, Nancy J. (1979). Associate Professor of Marketing; Director, Night M.B.A. Program; B.S., M.S., University of Illinois; Ph.D., University of Texas, Austin

Stephenson, Christine F. (1995). Adjunct Professor of Biology; B.S., University of Ulster (United Kingdom); Ph.D., The Queen's University of Belfast (United Kingdom)

Stephenson, Larry K. (1986). Adjunct Professor of Geography; B.S., M.A., Arizona State University; Ph.D., University of Cincinnati

Sterling, Pamela (1999). Assistant Professor of Theatre; B.F.A., M.F.A., University of Washington

Steverson, Norris J. (1932). Professor Emeritus of Physical Education; B.A., Arizona State University; M.S., University of Southern California

Stewart, Donald G. (1964). Professor Emeritus of Mathematics and Statistics; B.A., M.S., Utah State University; Ph.D., University of Tennessee, Knoxville

Stewart, Kenneth M. (1947). Professor Emeritus of Anthropology; A.B., M.A., Ph.D., University of California, Berkeley

Stiftel, Ruthy Z. (1997). Lecturer of Hebrew; B.A., Hebrew University of Jerusalem (Israel); M.A., Ohio State University

Stiles, Philip G. (1969). Professor Emeritus of Agribusiness and Resource Management; B.S., University of Arkansas; M.S., University of Kentucky; Ph.D., Michigan State University

Stillwell, Susan B. (1997). Clinical Associate Professor of Nursing; B.S., College of Saint Teresa; M.S.N., University of Florida

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Stinson, Judith M.** 1997, Director, Legal Research and Writing and Academic Success Program; B.S., Ph.D., University of Arizona
- Stites, William H.** (1974), Professor Emeritus of Communication; B.A., Louisiana Polytechnic Institute; M.A., Ph.D., University of Denver
- Stock, William A.** 1984, Professor Emeritus of Exercise Science and Physical Education; B.A., Blackburn College; M.S., Ph.D., Iowa State University
- Stocker, David Allen** 1976, Professor Emeritus of Music; B.S., Concordia Teachers College; M.M., Ph.D., Northwestern University
- Stokrocki, Mary I.** 1990, Professor of Art; B.S., State University of New York, New Paltz; M.S., Massachusetts College of Art; D.Ed., Pennsylvania State University
- Stone, Gregory O.** 1986, Associate Professor of Psychology; B.A., Harvard University; Ph.D., University of California, San Diego
- Stoner, K. Lynn** 1987, Associate Professor of History; B.S., George Peabody College for Teachers; M.A., Ph.D., Indiana University
- Stout, Robert** 1978, Professor Emeritus of Educational Administration and Supervision; B.A., Carleton College; Ph.D., University of Chicago
- Stout, Valerie** 1991, Associate Professor of Microbiology; B.S., University of Wisconsin, Madison; Ph.D., Kansas State University
- Stowe, Noel J.** 1967, Professor of History, Chair, Department of History; B.A., Ph.D., University of Southern California
- Strange, Richard E.** 1974, Professor Emeritus of Music; B.M.E., Wichita State University; M.M.E., University of Colorado; D.M.A., Boston University
- Streffert, Hildegarde** 1961, Professor Emerita of Design; B.S., University of Minnesota, Twin Cities; M.S., Iowa State University
- Strittmatter, Connie** 2000, Assistant Law Librarian; B.A., Indiana University of Pennsylvania; M.L.S., Kent State University
- Strom, Robert** (1969), Professor of Psychology in Education; B.S., Macaester College; M.S., University of Minnesota, Twin Cities; Ph.D., University of Michigan
- Stromberg, Juliet C.** (1988), Associate Professor of Plant Biology; B.S., M.S., University of Wisconsin, Milwaukee; Ph.D., Arizona State University
- Stromwall, Layne** (1996), Assistant Professor of Social Work; B.A., M.S.S.W., University of Wisconsin, Madison; Ph.D., Case Western Reserve University
- Strouse, Daniel S.** 1990, Professor of Law; A.B., S.M., Harvard University; J.D., University of Wisconsin, Madison
- Stuier, John H.** 1962, Professor Emeritus of Art; B.A., M.F.A., Arizona State University
- Stump, Edmund** (1976), Professor of Geological Sciences; A.B., Harvard University; M.S., Yale University; Ph.D., Ohio State University
- Stump, Glenda** 2000, Faculty Associate of Nursing; B.S., University of Pittsburgh; M.S., Wayne State University
- Stumpf, Angela M.** 1959, Professor Emerita of Nursing; B.S.N., Marquette University; M.A., University of Chicago
- Stutz, Jean C.** 1981, Associate Professor of Plant Biology; B.S., Ursinus College; M.S., University of Delaware; Ph.D., Pennsylvania State University
- Sudol, David E.** 1996, Senior Lecturer of English; B.A., Simpson College; M.A., Drake University; Ph.D., University of Arizona
- Sugar, Thomas G.** 1999, Assistant Professor of Mechanical and Aerospace Engineering; B.S.E., M.S.E., Ph.D., University of Pennsylvania
- Sugiyama, Saburo** 1999, Associate Research Professor of Anthropology; B.S., Tokyo Keizai University, Japan; Ph.D., Arizona State University
- Sullivan, Deborah A.** 1976, Associate Professor of Sociology; B.S., University of Massachusetts, Amherst; M.A., University of California, Irvine; Ph.D., Duke University
- Sullivan, Howard** 1977, Professor of Psychology in Education; B.S., Oregon College of Education; M.Ed., Ph.D., University of Oregon
- Sullivan, Jill M.** 2000, Assistant Professor of Music; B.M., Illinois State University; M.M., University of Michigan; Ph.D., University of Iowa
- Sullivan, John J.** 1976, Professor Emeritus of Education; B.A., Villanova University; M.A., Ph.D., Arizona State University
- Sunkett, Mark F.** 1976, Professor of Music; B.M., Curtis Institute of Music; M.M., Temple University; Ph.D., University of Pittsburgh
- Surbeck, Elaine** 1988, Professor of Curriculum and Instruction; Associate Director, Initial Teacher Certification program; B.A., University of Washington; M.Ed., Ed.D., University of Georgia
- Surgent, Scott** 1997, Lecturer of Mathematics and Statistics; B.S., M.S., University of California, Riverside
- Sushka, Marie E.** (1984), Professor of Finance; B.A., Sweet Briar College; M.A., Ph.D., Georgetown University
- Suslov, Sergei K.** 1997, Associate Professor of Mathematics and Statistics; M.Sc., Moscow Institute of Physics and Technology, Russia; Ph.D., Kurchatov Institute of Atomic Energy, Russia
- Susser, Eric** 1997, Lecturer of the Barrett Honors College; B.A., University of Michigan; M.A., Ph.D., University of Virginia
- Suwarno, Peter** 1997, Associate Professor of Indonesian; B.A., Satya Wacana Christian University, Indonesia; M.A., Ph.D., Ohio University
- Swadener, Beth Blue** 2001, Professor of Curriculum and Instruction; B.A., Indiana University, South Bend; M.S., Ph.D., University of Wisconsin, Madison
- Swafford, James R.** 1971, Professor Emeritus of Plant Biology; B.S., M.S., Arizona State University
- Swaim, S. Daniel** 1977, Professor of Music; B.M., Cincinnati College Conservatory of Music; M.M.E., Indiana University, Bloomington; D.M.A., North Texas University
- Swanson, Tod D.** 1988, Associate Professor of Religious Studies, Director, Latin American Studies Center; B.A., University of Minnesota, Twin Cities; M.Div., Luther Theological Seminary; Ph.D., University of Chicago
- Swartz, Jonathan** 2001, Assistant Professor of Music; B.M., Rice University; M.M., Mannes College of Music; D.M.A., Rice University
- Swaty, Mary A.** 1968, Associate Librarian, Technical Services Department; B.A., University of Missouri, Columbia; M.L.S., Indiana University, Bloomington
- Sweeney, J. Gray** 1956, Professor of Art; B.A., University of New Mexico; M.A., Ph.D., Indiana University, Bloomington
- Sweeney, James D.** 1989, Associate Professor of Bioengineering, Sc.B., Brown University; Ph.D., Case Western Reserve University
- Swimmer, Alvin** 1963, Associate Professor of Mathematics and Statistics; B.S., Pennsylvania State University; M.S., New York University; Ph.D., University of California, Berkeley

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Sylvester, Edward J. (1982), Professor of Journalism and Mass Communication, A.B., Princeton University; M.A., City College

Sylvester, Ginny 1981, Associate Librarian; Head, Access Services Interlibrary Loan and Document Delivery; B.A., Hobart and William Smith Colleges; M.L.S., Rutgers, The State University of New Jersey

Szarek, Stanley R. (1974), Associate Professor of Plant Biology, Associate Chair of Plant Biology, B.S., California Polytechnic State University, Pomona, Ph.D., University of California Riverside

T

Tao, Nongjian 2001, Professor of Electrical Engineering, B.S., Anhui University, China, Ph.D., Arizona State University

Tambs, Lewis A. 1969, Professor of History, B.S., University of California, Berkeley, M.A., Ph.D., University of California, Santa Barbara

Tan, Rui 1990, Assistant Research Professor, Cancer Research Institute, B.S., Beijing Medical University, China, M.S., Ph.D., Chinese Academy of Medical Sciences, China

Tang, Carol M. 1997, Assistant Professor of Geological Sciences, B.A., University of California, Berkeley, M.S., Ph.D., University of Southern California

Tann, Sheila 2001, Assistant Professor of Nursing, B.S.N., Northern Arizona University, N.D., University of Colorado Health Sciences Center School of Nursing

Tatro, B. J. 199, Faculty Associate of Public Affairs, B.A., M.S.S.W., University of Louisville; D.P.A., Arizona State University

Taylor, Dan 1996, Lecturer of Accountancy and Information Management and Computer Information Systems; B.A., University of Nebraska, M.A., M.Tax., Arizona State University

Taylor, Jack J. 1961, Professor Emeritus of Art, B.S., Kutztown State College, M.Ed., Pennsylvania State University

Taylor, Jacqueline (1984) Professor Emerita of Nursing, B.S.N., University of Washington, M.S., University of North Carolina Chapel Hill, Ph.D., University of Arizona

Taylor, Nora 1998, Assistant Professor of Interdisciplinary Humanities, B.A., Brown University, M.A., Ph.D., Cornell University

Taylor, Thomas 1983, Associate Professor of Mathematics and Statistics, B.S., California State University, Ph.D., Harvard University

Taysom, Elvin D. 1953, Professor Emeritus of Accounting and Resource Management; B.S., University of Idaho; M.S., Utah State University, Ph.D., Washington State University

Tenney, Lester I. 1969, Professor Emeritus of Finance, B.A., University of Miami, M.A., San Diego State College, D.B.A., University of Southern California

Tepedelentioglu, Cihan (2001), Assistant Professor of Electrical Engineering, B.S., Florida Institute of Technology, M.S., University of Virginia; Ph.D., University of Minnesota

Teson, Fernando R. 1984, Professor of Law, J.D., University of Buenos Aires, Argentina, LL.M., Free University of Brussels, Belgium; S.J.D., Northwestern University

Teye, Victor B. (1984) Associate Professor of Recreation Management and Tourism, B.A., University of Ghana, Ghana, M.A., Ph.D., University of Manitoba, Canada

Tharp, Julie 1991, Associate Librarian, Hayden Reference Services, B.A., University of Hawaii, M.L.S., University of Arizona

Theobald, Clarabelle 1962, Professor Emerita of Nursing, B.S.N., Arizona State University, M.S., University of California, Los Angeles, Ph.D., Arizona State University

Thibeau Catsis, Connie 2001, Assistant Professor of Design, B.Sc., University of Maryland, M.Sc., Oklahoma State University

Thieme, Horst R. 1988, Professor of Mathematics and Statistics, Associate Chair, Graduate Studies, M.S., Ph.D., University of Munster, Germany

Thomas, David A. 1999, Lecturer, Division of Undergraduate Academic Services and Bachelor of Interdisciplinary Studies Program, B.S., California State Polytechnic University, M.B.A., Ph.D., University of Southern California

Thomas, George M. 1981, Professor of Sociology, B.A., Arizona State University, M.A., Ph.D., Stanford University

Thomas, Keith J. 1973, Professor Emeritus of Reading and Library Science, B.S., Illinois State University, M.A., Lovola University, Chicago, Ed.D., University of Arizona

Thomason, Leslie L. 1969, Professor Emeritus of Technology, A.B., M.A., Ed.D., University of Oklahoma

Thompson, Janice Catherine 1977, Professor of Music, B.M.E., M.M.E., University of Wisconsin; M.M., Western Michigan University; D.M., Northwestern University

Thompson, Marilyn S. (1999), Assistant Professor of Educational Psychology, B.A., Carleton College, M.A., Ph.D., University of Kansas

Thompson, Victoria E. 1999, Assistant Professor of History, B.A., University of California Berkeley, Ph.D., University of Pennsylvania

Thomson, Jeffrey 1981, Professor of Theatre, B.A., Ripon College, M.A., University of Washington, M.F.A., Wayne State University

Thomson, Tom R. 1961, Professor Emeritus of Chemistry and Biochemistry, B.A., University of California, Berkeley, M.S., Ph.D., Kansas State University

Thorne, Anita 1984, Professor Emerita of Nursing, Diploma, Allegheny General Hospital, B.S.N., Ed. M.A., University of Pittsburgh

Thornton, Sybil (1994), Associate Professor of History, B.A., University of California, Berkeley; B.A., University of Cambridge, United Kingdom; M.A., San Francisco State University, M.A., Ph.D., University of Cambridge, United Kingdom

Thornton, Trevor John 1998, Professor of Electrical Engineering, B.S., Saint Catherine's College, United Kingdom; M.A., Ph.D., Cambridge University, United Kingdom

Thurber, Frances 1991, Professor of Nursing, Chair, Division of Adult Health Parent Child Nursing, B.S.N., Saint Anselm College, M.S.N., University of Pennsylvania; Ph.D., University of Michigan

Tice, Thomas E. 1967, Professor Emeritus of Electrical Engineering; B.S.E.E., M.S.E.E., Ph.D., Ohio State University

Tidwell, Victor H. 197, Professor Emeritus of Accountancy and Information Management, B.S., Illinois College; M.B.A., D.B.A., Indiana University, C.P.A., Arizona, Iowa

Tillery, Bill W. 1973, Professor of Physics and Astronomy and Science Education, B.S., Northeastern State College, M.A., Ed.D., University of Northern Colorado

Tillman, Hoyt C. 1976, Professor of History, B.A., Belhaven College, M.A., University of Virginia, A.M., Ph.D., Harvard University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Timothy, Dallen J. (2000). Assistant Professor of Recreation Management and Tourism; Graduate Coordinator, Department of Recreation Management and Tourism; B.S., Brigham Young University; M.A., University of Western Ontario (Canada); Ph.D., University of Waterloo (Canada)

Tipton, Gary P. (1969). Assistant Professor of Chinese; B.A., Brigham Young University; Ph.D., Indiana University, Bloomington

Tobiason, Sarah J. (1963–67; 1974). Professor Emerita of Nursing; B.S.N., Vanderbilt University; M.A., Columbia University

Tobin, Beth Fowkes (2001). Professor of English; B.A., Earlham College; M.A., Ph.D., University of Chicago

Tobin, Joseph (2001). Nadine Mathis Basha Professor of Curriculum and Instruction; B.A., Earlham College; Ph.D., University of Chicago

Tohe, Laura (1994). Associate Professor of English; B.A., University of New Mexico; M.A., Ph.D., University of Nebraska

Tompkins, Cynthia M. (1992). Associate Professor of Spanish; Licenciada en Letras Modernas, National University of Cordoba (Argentina); M.A., Ph.D., Pennsylvania State University

Tongret, JoAnn (2000). Lecturer of Dance, Music, and Theatre; B.A., M.A., Arizona State University

Torrest, Robert S. (1980). Professor Emeritus of Chemical Engineering; B.S., Polytechnic Institute of Brooklyn; Ph.D., University of Minnesota, Twin Cities

Towe, Bruce C. (1984). Professor of Bioengineering; B.S., M.S., Ph.D., Pennsylvania State University

Towill, Leslie R. (1975). Associate Professor of Plant Biology; B.S., M.S., University of Wisconsin, Milwaukee; Ph.D., University of Michigan

Traaen, Teresa (1993). Faculty Associate of Public Affairs; B.A., Northern Arizona University; M.A., Wheaton College; Ed.D., D.P.A., Arizona State University

Tracey, Terence (1999). Professor of Counseling Psychology; Academic Program Leader, Counselor Education; Training Director and Program Coordinator, Counseling Psychology; B.A., Cornell University; M.S.Ed., University of Kansas, Lawrence; Ph.D., University of Maryland, College Park

Tracogna, Stefania (2000). Lecturer of Mathematics and Statistics; Laurea, University of Trieste (Italy); Ph.D., Arizona State University

Tracy, Sarah J. (2000). Assistant Professor of Communication; B.A., University of Southern California; M.A., Ph.D., University of Colorado

Trapido-Lurie, Barbara (1987). Associate Research Professional; B.A., Pomona College; M.A., University of Hawaii

Trapuzzano, Michael (1989). Lecturer of Mathematics and Statistics; B.S., United States Air Force Academy, Colorado; M.B.A., University of Utah

Treasure, Darren C. (1998). Associate Professor of Exercise Science and Physical Education; B.A., West London Institute of Higher Education (United Kingdom); M.S., Ph.D., University of Illinois, Urbana-Champaign

Treleese, Richard N. (1971). Professor of Plant Biology; B.S., M.S., University of Nevada, Reno; Ph.D., University of Texas, Austin

Trennert, Robert A. (1974). Professor of History; B.A., Occidental College; M.A., Los Angeles State College; Ph.D., University of California, Santa Barbara

Trethewey, Angela (1996). Assistant Professor of Communication; B.A., M.A., California State University, Chico; Ph.D., Purdue University

Trost, Melanie R. (1991). Associate Professor of Communication; B.S., Montana State University; M.A., Ph.D., Arizona State University

Trotta, Victoria K. (1996). Associate Dean and Director, Ross–Blakley Law Library; B.A., Occidental College; M.L.S., University of California, Los Angeles; J.D., University of Southern California



Trotter, William T.

(1987)

Regents' Professor of Mathematics and Statistics; Vice Provost for Academic Programs, Office of the Senior Vice President and Provost; B.S., The Citadel; M.A., Ph.D., University of Alabama

Trujillo, Octaviana Valenzuela (1995). Assistant Professor of Curriculum and Instruction; B.A., M.A., Ph.D., Arizona State University

Trujillo, Rosanne E. (1999). Assistant Librarian, Hayden Reference Services; B.A., Utah State University; M.A., University of Arizona; M.B.A., University of Phoenix

Tsai, Wei-Tek (1999). Professor of Computer Science and Engineering; S.B., Massachusetts Institute of Technology; M.S., Ph.D., University of California, Berkeley

Tsakalis, Konstantinos S. (1988). Associate Professor of Electrical Engineering; B.S., National Technical University of Athens (Greece); M.S.E.E., Ph.D., University of Southern California

Tsen, Kong-Tong (1984). Professor of Physics and Astronomy; B.S., Fu-Jen Catholic University (Japan); M.S., Ph.D., Purdue University

Tseng, Ampere A. (1995). Professor of Mechanical and Aerospace Engineering; M.S., University of Illinois, Urbana-Champaign; Ph.D., Georgia Institute of Technology

Tsong, Ignatius S. T. (1981). Professor of Physics and Astronomy; B.Sc., M.Sc., University of Leeds (United Kingdom); Ph.D., University of London (United Kingdom); D.Sc., University of Leeds (United Kingdom)

Tsosie, Rebecca A. (1993). Professor of Law; Executive Director, Indian Legal Program; B.A., J.D., University of California, Los Angeles

Tsukayama, Jennifer (1998). Assistant Professor of Dance; B.F.A., George Mason University; M.F.A., New York University

Tu, Eugenia Y. (1973). Professor Emerita of Chinese; B.Ed., Taiwan Normal University (Taiwan); B.A., University of Mary Hardin-Baylor; M.S., University of Arizona

Tucker, Bonnie P. (1987). Professor of Law; B.S., Syracuse University; J.D., University of Colorado

Turk, Rudy H. (1967). Professor Emeritus of Art; B.S., University of Wisconsin; M.A., University of Tennessee

Turnbow, James W. (1959). Professor Emeritus of Civil Engineering; B.S.M.E., Texas Technological College; M.S.E.M., Ph.D., University of Texas

Turner, Caroline (1999). Professor of Educational Leadership and Policy Studies; B.A., M.A., University of California, Davis; Ed.S., Ph.D., Stanford University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS



Turner, Christy G. II (1966)
Regents' Professor of Anthropology; B.A., M.A.,
University of Arizona; Ph.D., University of
Wisconsin, Madison

Turner, Terry (2000), Lecturer of Mathematics and Statistics; B.S.,
College of Charleston; M.S., Northern Arizona University

Tutunjian, Vatche (1992), Faculty Research Associate of Physics and
Astronomy

Tyburczy, James A. (1985), Professor of Geological Sciences;
B.A., Whitman College; Ph.D., University of Oregon

Tylavsky, Daniel J. (1982), Associate Professor of Electrical
Engineering; B.S.E., M.S.E., Ph.D., Pennsylvania State University

U

Uhl, Rebecca S. (1989), Associate Librarian; Team Management,
Technical Services Department; B.S., M.A., Colorado State
University; M.S.L.I.S., University of Illinois

Umar, Muhammad Sani (1996), Assistant Professor of Religious
Studies; B.A., University of Jos (Nigeria); M.A., Bayero University
(Nigeria); Ph.D., Northwestern University

Umberger, Emily (1982), Associate Professor of Art; B.A.,
University of Pennsylvania; M.A., University of Texas, Austin;
Ph.D., Columbia University

Umberson, George E. (1977), Professor of Music; B.M.E.,
Eastern New Mexico University; M.A., University of Iowa; Ed.D.,
University of North Colorado

Underhill, Michael J. (1990), Professor of Architecture; B.Arch.,
Massachusetts Institute of Technology; M.C.P.U.D., Harvard
University

Underiner, Tamara (2001), Assistant Professor of Theatre; B.A.,
University of Dayton; M.A., Arizona State University; Ph.D.,
University of Washington, Seattle

Underwood, Max (1985), Professor of Architecture; B.S.,
University of Southern California; M.Arch., Princeton University

Upchurch, Jonathan E. (1982), Professor Emeritus of Civil and
Environmental Engineering; B.S., M.S., University of Illinois;
Ph.D., University of Maryland

Updegraff, Kimberly (1997), Assistant Professor of Family and
Human Development; B.S., M.S., Ph.D., Pennsylvania State
University

Upton, Mark Roy (1995), Faculty Associate of Construction; B.S.,
Michigan State University

Urban, Joseph E. (1989), Professor of Computer Science and
Engineering; B.S., Florida State of Technology; M.S., University of
Iowa; Ph.D., University of Southwestern Louisiana

Urban, Susan D. (1989), Professor of Computer Science and
Engineering; B.S., M.S., Ph.D., University of Southwestern
Louisiana

Urioste-Azcorra, Carmen (1995), Associate Professor of Spanish;
Licenciatura, University of Seville (Spain); M.A., Ph.D., Arizona
State University

Usman, Arribidesi (2001), Assistant Professor of African American
Studies; B.A., M.A., University of Ibadan (Nigeria); Ph.D., Arizona
State University

Uttal, William R. (1988), Professor Emeritus of Industrial
Engineering; B.S., University of Cincinnati; Ph.D., Ohio State
University

V

Valdivieso, L. Teresa (1971), Professor of Spanish; B.A., M.A.E.,
Ph.D., Arizona State University

Valentine, Carol Ann (1975), Professor Emerita of
Communication; B.A., M.A., University of Michigan; Ph.D.,
Pennsylvania State University

Valentine, Kristin B. (1976), Professor of Communication; B.S.,
University of Wisconsin, Madison; M.A., University of
Washington; Ph.D., University of Utah

Vallejo, Carlos J. (1976), Associate Professor of Curriculum and
Instruction; B.S., Chadron State College; M.A., Ed.D., University
of Nebraska, Lincoln

Valverde, Leonard A. (1992), Professor of Educational
Leadership and Policy Studies; B.A., California State University,
Los Angeles; Ph.D., Claremont Graduate School

Van Duzer, Leslie (1996), Associate Professor of Architecture;
B.Arch., M.Arch., University of California, Berkeley

van Gelderen, Elly (1995), Associate Professor of English; B.A.,
M.A., Utrecht University (Netherlands); Ph.D., McGill University
(Canada)

Van Hook, Barry L. (1976), Associate Professor of Management;
B.S., Illinois State University; M.S., Ed.D., Northern Illinois
University

Van Orden, Guy C. (1987), Professor of Psychology; B.S.,
University of Oregon; M.A., Ph.D., University of California, San
Diego

Van Schilfgaarde, Mark (2002), Associate Professor of Chemical
and Materials Science Engineering; B.A., University of California;
Ph.D., Stanford University

Van Wagenen, R. Keith (1963), Professor Emeritus of Education;
B.A., Pacific Union College; M.A., Arizona State University;
Ph.D., University of Utah

Vanacour, Martin (1987), Faculty Associate of Public Affairs;
B.A., State University of New York, Buffalo; M.P.A., New York
University; D.P.A., Arizona State University

Vanderhoff, Barbara A. (1968), Associate Librarian, Technical
Services Department; B.A., Fort Hays State University; M.A.,
University of Denver

VanderMeer, Philip R. (1985), Associate Professor of History;
B.A., Calvin College; M.A., Ph.D., University of Illinois

Vasilevska, Dragica (1997), Assistant Professor of Electrical
Engineering; B.S., M.S., University Cyril and Methodius
(Macedonia); Ph.D., Arizona State University

Vaz, Paul (1997), Senior Lecturer of Mathematics and Statistics;
B.S., M.S., Ph.D., Bombay University (India); Ph.D., Arizona State
University

Veatch, Jeannette (1968), Professor Emerita of Education; A.B.,
Western Michigan University; M.A., Ph.D., New York University

Vega, Santos C. (1989), Senior Research Specialist, Hispanic
Research Center; B.A., M.Ed., University of Arizona; Ph.D.,
Arizona State University

Venables, John A. (1986), Professor of Physics and Astronomy;
B.A., Ph.D., University of Cambridge (United Kingdom)

Verch, Todd (1994), Faculty Associate of Design; B.S.D., M.S.D.,
Arizona State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Verdini, William A. (1976). Associate Professor of Supply Chain Management; Associate Dean, College of Extended Education; B.S., Case Western Reserve University; M.B.A., D.B.A., Kent State University

Vermaas, Willem F. J. (1986). Professor of Plant Biology; Ph.D., Agricultural University (Netherlands)

Vernon, Brent (2000). Assistant Professor of Bioengineering; B.S.E., Arizona State University; Ph.D., University of Utah

Verstegen, Clare M. (1989). Professor of Art; B.S., University of Wisconsin, Stevens Point; M.F.A., Cranbrook Academy of Art

Vestre, Norris D. (1972). Professor Emeritus of Psychology; B.A., Ph.D., University of Minnesota, Twin Cities

Vicencio, Christina (1994). Lecturer of Speech and Hearing Science; B.A., M.T.E.S.L., Arizona State University

Villalobos, J. Rene (1999). Associate Professor of Industrial Engineering; B.S., Institute of Technology of Chihuahua (Mexico); M.S., University of Texas, El Paso; Ph.D., Texas A&M University

Villanueva, Virginia (1995). Faculty Associate of Nursing; B.S.N., M.S., Arizona State University

Vining, David C. (1975). Associate Professor of Theatre; B.A., University of Redlands; M.F.A., University of Minnesota, Twin Cities

Vinze, Ajay (1998). Professor of Accountancy and Information Management; B.Com., University of Delhi (India); M.B.A., University of Connecticut; Ph.D., University of Arizona

Virden, Randy J. (1984). Associate Professor of Recreation Management and Tourism; Chair, Department of Recreation Management and Tourism; B.S., M.S., Arizona State University; Ph.D., Utah State University

Virgilio, Carmelo (1965). Professor Emeritus of Romance Languages; A.B., State University of New York, Albany; A.M., Ph.D., Indiana University

Viri, Denis (1998). Associate Research Professional; Interim Director, Center for Indian Education; B.A., San Francisco State University; M.Ed., Ph.D., University of Arizona

Vissicaro, Pegge Harper (1983). Assistant Professor of Dance; B.F.A., University of Michigan; M.F.A., University of North Carolina, Greensboro

Vitulo, Juliann (1990). Associate Professor of Italian; B.A., University of Illinois; M.A., Ph.D., Indiana University, Bloomington

Voaden, Rosalynn (1998). Associate Professor of English; B.A., B.Ed., Queen's University, Kingston (Canada); M.A., University of Victoria, British Columbia (Canada); Ph.D., University of York (United Kingdom)

Voeller, Kytja (2000). Adjunct Professor of Speech and Hearing Science; B.A., Reed College; M.A., Bryn Mawr College; M.D., Columbia University

Vogel, Julie Ann (2001). Lecturer of Curriculum and Instruction; B.S., Iowa State University; M.Ed., Ph.D., Arizona State University

Vogus, Brad T. (1999). Assistant Librarian, Government Documents and Map Collection; B.A., Indiana University, Bloomington; M.I.L.S., University of Michigan, Ann Arbor

Volek, Emil (1975). Professor of Spanish; Prom.Phil., Ph.D., Charles University, Prague (Czechoslovakia)

Voss, Howard G. (1964). Professor Emeritus of Physics and Astronomy; A.B., Hope College; M.N.S., Arizona State University; M.S., Purdue University

Voth, Annette (1978). Librarian, Music Library; B.Mus., University of Kansas; M.L.S., M.A., University of California, Berkeley

Votichenko, T. Alexander (1956). Professor Emeritus of Philosophy; A.B., Princeton University; M.A., Columbia University

W

Wachter, Rebekka (2001). Assistant Professor of Chemistry and Biochemistry; B.A., University of California, Santa Cruz; Ph.D., University of Oregon



Wagner, J. Bruce Jr.

(1977)

Regents' Professor Emeritus, Chemistry and Biochemistry and Center for Solid State Science; B.S., Ph.D., University of Virginia

Wagner, Michael G. (1997). Assistant Professor of Computer Science and Engineering; B.S., M.S., Ph.D., Technical University of Vienna (Austria)

Wagner, Ronald F. (1962). Professor Emeritus of Art; B.S., University of Wisconsin, Madison; M.F.A., University of Iowa

Walker, Beth A. (1988). Associate Professor of Marketing; B.S., Virginia Polytechnic Institute and State University; M.S., Ph.D., Pennsylvania State University

Walker, John E. (1970). Professor Emeritus of Educational Administration and Supervision; B.A., Albion College; M.A., Michigan State University; Ed.D., Utah State University

Walker, Sharon (1996). Lecturer of Mathematics and Statistics; B.A., B.S., M.N.S., Arizona State University

Walker, Stephen G. (1969). Professor of Political Science; B.A., Creighton University; M.A., Ph.D., University of Florida

Wall, Gerard (1992). Adjunct Professor of Plant Biology; B.S., State University of New York, Stony Brook; M.S., Ph.D., Kansas State University

Wallace, Charles E. (1958). Professor Emeritus of Mechanical and Aerospace Engineering; B.S., Lewis and Clark College; M.S., Oregon State University; Ph.D., Stanford University

Wallen, Carl (1973). Professor Emeritus of Curriculum and Instruction; B.A., University of California, Santa Barbara; M.A., San Francisco State College; Ed.D., Stanford University

Waller, Margaret Ann (1997). Associate Professor of Social Work; B.M., DePaul University; M.S.W., University of Illinois; Ph.D., University of Chicago

Waller, Sam, Major (1998). Assistant Professor of Military Science; B.A., Mercer University

Walmsley, Amanda (2001). Assistant Research Professor of Plant Biology; B.S., Ph.D., University of Queensland (Australia)

Walsberg, Glenn E. (1978). Professor of Biology; B.S., California State University, Long Beach; Ph.D., University of California, Los Angeles

Walsh, Kenneth D. (1994). Associate Professor of Construction; B.S.E., M.S., Ph.D., Arizona State University

Walters, Sheila A. (1971). Librarian Emerita, B.A., University of Oklahoma; M.L.S., Louisiana State University

Walton-Ramirez, Anne (1999). Lecturer of Spanish; B.A., University of South Alabama; M.A., Arizona State University

Wamacks, Naomi W. (1968). Professor Emerita of Curriculum and Instruction; B.A., M.A., Ed.D., Arizona State University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Wang, Alan P. (1970). Professor Emeritus of Mathematics and Statistics; B.A., Washington State University; M.A., Ph.D., University of California, Los Angeles

Wang, Cecilia (1971). Professor Emerita of Mathematics and Statistics; B.A., Immaculate Heart College; M.A., Ph.D., University of California, Los Angeles

Wang, Edward Y. (1979). Professor Emeritus of Electrical Engineering; B.S., Morningside College; M.S., Purdue University; Ph.D., Tufts University

Ward, James C. (1986). Professor of Marketing; B.A., M.B.A., Ph.D., University of Minnesota, Twin Cities

Ward, Lance (1997). Lecturer of Mathematics and Statistics; B.S., M.S., Brigham Young University

Wardwell, Sandra W. (1974). Research Specialist Emerita of Geography; B.S., University of Michigan

Warner, Carolyn (1994). Associate Professor of Political Science; B.A., University of California, San Diego; M.A., Ph.D., Harvard University

Warnicke, Retha M. (1972). Professor of History; A.B., Indiana University; M.A., Ph.D., Harvard University

Warren, Morrison F. (1968). Professor Emeritus of Education; B.A., M.A., Ed.D., Arizona State University

Warren-Findley, Jannelle (1992). Associate Professor of History; B.A., Texas Woman's University; M.Phil., Ph.D., George Washington University

Watkins, Thomas B. (1972). Professor Emeritus of Technology; B.S., University of Wyoming; M.S., Arizona State University

Watson, Clyde W. (1971). Professor Emeritus of Art; B.F.A., Bethany College; M.A., Kansas State University

Watson, Emma Jane (1999). Lecturer and Curriculum Coordinator of Small Business; Academic Director, Small Business Programs; B.A., Sonoma State University; M.Ed., Western Washington University

Watson, George L. (1969). Professor of Journalism and Mass Communication; B.A., Phillips University; M.A., Ph.D., Duke University

Webb, L. Dean (1978). Professor of Educational Leadership and Policy Studies; B.A., M.A.T., Ph.D., University of Florida

Webb Peterson, Patricia R. (1998). Assistant Professor of English; B.A., M.A., Illinois State University, Normal; Ph.D., University of Illinois, Urbana-Champaign

Webber, Andrew N. (1989). Professor of Plant Biology; Director, Center for the Study of Early Events in Photosynthesis; B.Sc., Ph.D., University of Essex (United Kingdom)

Weber, Sandra L. (1985). Associate Professor of Construction; B.S.C.E., M.S.C.E., University of California, Berkeley; Ph.D., Arizona State University

Weed, Andrew (1999). Assistant Professor of Design; B.F.A., Arizona State University; M.F.A., Basel School of Design (Switzerland)

Wegner, Artnoll L. (1957). Professor Emeritus of Physical Education; B.S., Wisconsin State College; M.S., University of Wisconsin, Madison; P.E.D., Indiana University

Weidemaier, William (1977). Professor Emeritus of the Barrett Honors College; B.A., Northern Arizona University; M.A., Ph.D., Arizona State University

Weierstall, Uwe (1994). Assistant Research Scientist of Physics and Astronomy; B.S., University of Tübingen (Germany); M.S., Ph.D., Institute of Applied Physics in Tübingen (Germany)

Weigand, Robert F. Jr. (1990). Senior Lecturer of Family and Human Development and Psychology; Director, Child Laboratory Programs; B.S., University of Scranton; M.S., Purdue University

Weigend, Guido G. (1976). Professor Emeritus of Geography; Dean Emeritus, College of Liberal Arts and Sciences; B.S., M.S., Ph.D., University of Chicago

Weiner, Gordon M. (1968). Professor Emeritus of History; A.B., Ph.D., University of Pennsylvania

Weinstein, James (1986). Professor of Law; Amelia D. Lewis Professor of Constitutional Law; B.A., J.D., University of Pennsylvania



Weiser, Kurt

(1989)

Regents' Professor of Art; B.F.A., Kansas City Art Institute; M.F.A., University of Michigan

Weiss, Karl H. (1984). Senior Research Professional, Center for Solid State Science; B.Sc., Ursinus College; M.Sc., University of Arizona

Weiss, Jane (2000). Assistant Professor of Accountancy and Information Management; B.B.A., University of Wisconsin, Whitewater; M.Acc., University of Georgia; Ph.D., University of Wisconsin

Weiss, Neil A. (1970). Professor Emeritus of Mathematics and Statistics; B.A., M.A., Ph.D., University of California, Los Angeles

Weitz, Rose (1978). Professor of Sociology; B.A., City University of New York; M.A., Ph.D., Yale University

Weitzman, Irene (1998). Adjunct Faculty of Microbiology; B.S., Brooklyn College; M.A., Ph.D., Columbia University

Welch, H. William (1967). Professor Emeritus of Electrical Engineering; B.A., DePauw University; M.S., Ph.D., University of Michigan; P.E.

Welfert, Bruno (1990). Associate Professor of Mathematics and Statistics; M.A., University of Paris VI (France); Ph.D., University of California, San Diego

Wells, Barrie E. (1981). Professor Emeritus of Music; B.M., M.M., University of the Pacific; D.M.A., University of Oregon

Wells, Christine L. (1976). Professor Emerita of Exercise Science and Physical Education; B.S., University of Michigan; M.S., Smith College; Ph.D., Pennsylvania State University

Wells, David (1998). Lecturer, Division of Undergraduate Academic Services; Curriculum Coordinator, Bachelor of Interdisciplinary Studies Program; B.A., Bucknell University; Ph.D., University of Southern California

Wells, Valana L. (1987). Associate Professor of Engineering; A.B., M.S., Ph.D., Stanford University

Welsh, Peter H. (1986). Associate Professor of Anthropology; B.A., Northern Arizona University; M.A., Ph.D., University of Pennsylvania

Wentz, Elizabeth A. (1997). Assistant Professor of Geography; B.A., M.A., Ohio State University; Ph.D., Pennsylvania State University

Wentz, Richard E. (1972). Professor Emeritus of Religious Studies; A.B., Ursinus College; B.D., Lancaster Theological Seminary; M.Phil., Ph.D., George Washington University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Wesbury, Stuart A. Jr.** 1994 , Professor Emeritus of Health Administration and Policy, B.S., Temple University, M.H.A., University of Michigan, Ph.D., University of Florida
- Weschler, Louis** 1980 , Professor Emeritus of Public Affairs; B.A., California State University, Long Beach M.A. Ph.D., University of California, Los Angeles
- West, Stephen G.** 1981), Professor of Psychology B.A., Cornell University; M.A., Ph.D., University of Texas
- Westerhoff, Paul** 2011, Associate Professor of Civil and Environmental Engineering, B.S., Lehigh University M.S. University of Massachusetts, Amhurst, Ph.D., University of Colorado Boulder
- Westie, Frank R.** 1983 Adjunct Professor of Sociology, B.S., Central Michigan University, Ph.D. Ohio State University
- Wetsel, W. David** 1989 , Professor of French, B.A., University of Texas, Austin, M.A., University of Chicago, M.A., Ph.D., Brandeis University
- Wexler, Kathryn** 1992 , Clinical Assistant Professor of Speech and Hearing Science; B.A., University of Michigan, M.S., Tulane University
- Wheatley, John C.** 1983), Senior Research Professional of Physics and Astronomy; B.S., Arizona State University
- Wheeler, Jacqueline** 1994 , Senior Lecturer of English, B.S., M.A., Northern Arizona University; Ph.D., Arizona State University
- Wheeler, Michael D.** 1955 , Senior Research Professional of Chemistry and Biochemistry; B.S., University of Wisconsin, Madison
- Whiffen, Marcus** 1960 , Professor Emeritus of Architecture, B.A., M.A. University of Cambridge United Kingdom
- Whitaker, Matthew** 2001 , Assistant Professor of History, B.A., B.A., M.A., Arizona State University, Ph.D. Michigan State University
- Whitam, Frederick L.** 1966 , Professor Emeritus of Sociology, B.A., Millsaps College, A.M., Ph.D. Indiana University Bloomington
- White, Barbara G.** 1990 Clinical Associate Professor of Nursing; B.S. M.S., Virginia Commonwealth University
- White, Harold C.** (1966), Professor Emeritus of Management, B.S. M.S., University of Oregon, Ph.D., University of Florida
- White, James J.** 1991), Senior Lecturer of Chemistry and Biochemistry, B.A., Idaho State University, M.S. Ph.D., University of Arizona
- White, James R.** 1981 , Professor of Art, B.F.A., M.F.A. Ohio University
- White, Joann** 1997 , Faculty Associate of Design B.S., Northwestern University
- White, John P.** 1963 , Professor Emeritus of Political Science, A.B., University of Cincinnati A.M., Ph.D. University of Chicago
- White, Michael J.** 1974 , Professor of Philosophy B.A., Arizona State University; M.A., Ph.D., University of California San Diego
- White, Patricia D.** 1999 , Professor of Law; Dean College of Law; B.A., M.A., J.D., University of Michigan
- Whitcotton, Stacey** 1997 Associate Professor of Accountancy and Information Management, B.A., Texas Tech University Master of Accountancy, Ph.D., University of Oklahoma
- Whitehurst, Harry B.** (1958 , Professor Emeritus of Chemistry and Biochemistry, B.A., M.A. Ph.D., Rice University
- Wie, Bong** 1989 . Professor of Engineering, B.S., Seoul National University (South Korea) , M.S., Ph.D., Stanford University
- Wiesel, Avi** (1995 Associate Professor of Construction, B.Sc.C.E. Polytechnic Institute of Timisoara Romania M.Sc.C.E., Ph.D., Technion Israel Institute of Technology Israel
- Wigal, Kathy D.** 2000), Lecturer of Accountancy and Information Management B.S., Arizona State University M.B.A., M.Ed., Ed.D., Northern Arizona University
- Wiggins, Harry B.** 1987 Senior Lecturer Emeritus of Supply Chain Management, B.S., U.S. Merchant Marine Academy B.S., University of Vermont; M.B.A., Harvard University
- Wilcox, M. Jeanne** 199 , Professor of Speech and Hearing Science, B.A., Kansas State; M.A., Ph.D., Memphis State University
- Wiley, Terrence G.** 2011, Professor of Educational Leadership and Policy Studies, Director, Division of Educational Leadership and Policy Studies Academic Program Coordinator Education Policy Studies B.A. M.A., California State University, Long Beach, Ph.D., University of Southern California
- Wilkins, Barry J.** 1992 , Senior Research Professional Center for Solid State Science; B.A., Columbia Union College, M.S., Rutgers University
- Wilkinson, Christine K.** (1977) , Associate Professor of Educational Leadership and Policy Studies, Vice President, Student Affairs; B.A., Arizona State University; M.A., University of California, Berkeley, Ph.D., Arizona State University
- Wilkinson, Joseph W.** 1964 , Professor Emeritus of Accountancy and Information Management, B.S., Carnegie Institute of Technology, M.B.A., Stanford University; D.B.A., University of Oregon
- Williams, Carol E.** 1984 , Academic Associate, Division of Undergraduate Academic Services; Coordinator, Campus Match and Supplemental Instruction; B.A., Trinity University, San Antonio; M.A., Arizona State University
- Williams, David P. III** 1978), Instructor of Sociology B.A., B.S., M.A. University of Pennsylvania, Ph.D., Arizona State University
- Williams, Donald, SFC** 1999 Instructor of Military Science
- Williams, Frank G.** 1975 Professor Emeritus of Health Administration and Policy, B.S., M.A. Oregon State University, M.A. Ph.D. University of Iowa
- Williams, Jenny L.** 1967 Associate Librarian Technical Service Department B.A., M.L.S., Indiana University
- Williams, Peter** 1981 , Professor of Chemistry and Biochemistry, B.S. Ph.D. University of London United Kingdom
- Williams, Philip F.C.** 1956 . Professor of Chinese, B.A., University of Arkansas, M.A., Ph.D., University of California, Los Angeles
- Williams, Robert C.** 1978 , Professor of Anthropology, B.A., M.A. University of Cambridge United Kingdom , B.A., M.A., Ph.D., University of Michigan
- Williams, Stanley N.** 1991 , Professor of Geological Sciences; B.S. Beoit College, M.A., Ph.D., Dartmouth College
- Williamson, Madeline J.** 1976 , Professor of Music , B.A., Ohio Wesleyan University, M.M., Western Michigan University; Ph.D., Arizona State University
- Willis, Wayne T.** 1959 Associate Professor of Exercise Science and Physical Education, A.B., University of California, Berkeley, M.A., San Francisco State University, Ph.D., University of California, Berkeley
- Wills, J. Robert** 1994 Professor of Theatre, Dean, Herberg College of Fine Arts B.A., College of Wooster, M.A., University of Illinois, Ph.D., Case Western Reserve University

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

- Wilson, Angela Cavender** 1972, Assistant Professor of History, B.A., University of Minnesota, Minneapolis; M.A., Ph.D., Cornell University
- Wilson, Gail Eugene** 1972, Associate Professor of Music, B.S. Ohio State University, M.M., Arizona State University
- Wilson, Gloria N.** 1961, Professor Emerita of Educational Media and Computers, B.A., Montclair State College, M.A., E.D., Columbia University
- Wilson, Jeffrey R.** 1985, Associate Professor of Statistics, B.A., University of the West Indies, Trinidad and Tobago; M.S., Ph.D., Iowa State University
- Wilson, Lorna A.** 1968, Professor Emerita of French, B.Ed., University of Saskatchewan, Canada; M.A., Arizona State University
- Wilson, Patricia M.** 1957, Associate Professor of Family and Human Development, B.S., M.Ed., Iowa State University; Ph.D., Oklahoma State University
- Wilson-Rawls, N. Jeanne** 1997, Assistant Professor of Biology, B.S., McMaster University, Canada; Ph.D., Saint Louis University
- Wilt, Glenn A. Jr.** 1963, Professor Emeritus of Finance, B.A., Occidental College, M.B.A., Mount Union University; Ph.D., University of Michigan, C.F.A.
- Windhorst, Rogier A.** 1957, Professor of Physics and Astronomy, B.Sc., M.Sc., Ph.D., University of Leiden, Netherlands
- Winer, Laurence H.** 1953, Professor of Law, B.A., M.A., Ph.D., Boston University, D.Y.K. University
- Winkelman, Michael** 1955, Senior Lecturer of Anthropology, B.A., Rice University, Ph.D., University of California, Irvine
- Winkelman, Richard D.** 1965, Associate Professor of Economics, B.A., Southern Illinois University, M.A., Ph.D., University of Illinois
- Wintergalen, Barbara A.** 1992, Professor Emerita of Nutrition, B.S.N., Loretto Heights College; M.S., Arizona State University
- Wirtz, Dorothy** 1955, Professor Emerita of French, B.A., University of Iowa; M.A., Ph.D., University of Wisconsin
- Wiseman, Douglas E.** 1976, Professor Emeritus of Curriculum and Instruction, B.S., M.A., Eastern Michigan University; Ph.D., University of Illinois
- Witzak, Matthew W.** 1999, Professor of Civil and Environmental Engineering, B.S.C.E., M.S.C.E., Ph.D., Purdue University
- Witt, Tom** 1975, Associate Professor of Design, B.A., M.A., M.F.A., University of California, Los Angeles
- Wixted, Jane** 1991, Faculty Associate of Nursing, B.S.N., Arizona State University; M.S.N., Case Western Reserve University
- Wixted, J. Timothy** 1978, Professor of Asian Studies, B.A., University of Toronto, Canada; M.A., Stanford University; D.Phil., University of Oxford, United Kingdom
- Wochner, Raymond F.** 1952, Professor Emeritus of Education, B.S., York College; M.A., University of Nebraska, Lincoln; Ph.D., University of Wyoming
- Wojciechowski, Martin F.** 1991, Assistant Professor of Plant Biology, B.S., Northern Michigan University; Ph.D., University of Northern Colorado
- Wolchik, Sharlene** 1980, Professor of Psychology, B.A., Nassau College; M.S., Ph.D., Rutgers, The State University of New Jersey
- Wolf, Donald J.** 1969, Professor Emeritus of Political Science, B.A., M.A., Gonzaga University, S.T.M., University of Santa Clara, Ph.D., Georgetown University
- Wolf, George H.** 1986, Associate Professor of Chemistry and Biochemistry, B.A., University of California, San Diego; M.S., Ph.D., University of California, Berkeley
- Wolf, Robert** 1985, Professor Emeritus of Design, Director, School of Design, B.S., Southern Illinois University, Carbondale; M.A., University of Missouri, Certificate, Konstindustriskolan, Sweden
- Wolf, W. Shapard Jr.** (1983), Associate Research Administration, Sociology; Director, Survey Research Laboratory, Sociology; B.F.A., Florida State University; M.Ed., University of Georgia
- Wolfe, Philip M.** 1958, Professor of Industrial Engineering, B.S., University of Missouri; M.S.E., Ph.D., Arizona State University
- Wolfthal, Diane** 1995, Associate Professor of Art, Assistant Professor of Anthropology, B.A., M.A., City University of New York; Ph.D., Institute of Fine Arts, New York University
- Wollam, Owen A.** 1964, Professor Emeritus of French, B.A., M.A., Montana State University; Ph.D., University of Washington
- Wong, Elizabeth** 1996, Lecturer of Japanese, B.A., Western State College, M.A., Washington University, St. Louis; Ph.D., Stanford University
- Wong, Timothy C.** 1995, Professor of Chinese, Director, Center for Asian Studies, B.A., Saint Mary's College, M.A., University of Hawaii; Ph.D., Stanford University
- Wood, Byard D.** 1971, Professor Emeritus of Mechanical and Aerospace Engineering, B.S.M.E., M.S.M.E., Utah State University; Ph.D., University of Minnesota, Twin Cities
- Wood, Steven D.** 1975, Professor Emeritus of Marketing, B.S., M.A., California State University, San Diego; Ph.D., University of Wisconsin, Madison
- Woodbury, Neal W.** 1987, Professor of Chemistry and Biochemistry, B.S., University of California, Davis; Ph.D., University of Washington
- Woodhill, Marvin C.** 1966, Professor Emeritus of Computer Science and Engineering, B.S., M.S., Ph.D., Iowa State University
- Wooding, Robert R.** 1971, Professor Emeritus of Construction, B.S., United States Naval Academy; B.C.E., M.C.E., Rensselaer Polytechnic Institute
- Woodley, Ann E.** 2002, Professor of Law, Director, Lodestar Medical Clinic, B.A., University of Arizona; J.D., Arizona State University
- Woodman, Natalie J.** 1969, Professor Emerita of Social Work, B.A., New York University; M.S.S., Smith College
- Woods, Roosevelt Jr.** 1965, Professor Emeritus of Art, B.S., M.A., Arizona State University
- Woodson, Stephani E.** 2000, Assistant Professor of Theatre, B.F.A., M.A., University of Texas, Austin; Ph.D., Arizona State University
- Woodward, Mark R.** 1985, Associate Professor of Religious Studies, B.A., M.A., Ph.D., University of Illinois
- Woolf, Charles M.** 1961-63, 1964, Professor Emeritus of Biology; Dean Emeritus, College of Liberal Arts and Sciences and Graduate College, B.S., M.S., University of Utah; Ph.D., University of California, Berkeley
- Wootten, William W.** 1959, Professor Emeritus of History, B.A., University of Chicago, M.A., University of Iowa; Ph.D., University of Minnesota, Twin Cities
- Wootton, Richard T.** 1964, Professor Emeritus of Education, B.S., M.S., Ed.D., University of Utah
- Wosinski, Marek** 1995, Senior Lecturer of Psychology, B.A., M.A., Ph.D., University of Warsaw, Poland

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Wotring, Roxena A. (1994), Clinical Assistant Professor of Nursing, B.S.N., M.S., Arizona State University

Wright, David 1981, Associate Research Professional, Center for Solid State Science; B.S., Arizona State University

Wright, Johnson Kent 1994, Associate Professor of Interdisciplinary Humanities, Director, Graduate Studies; B.A., Kalamazoo College; M.A., Ph.D., University of Chicago

Wright, M. Lin 1973, Professor Emerita of Theatre, B.A., M.A., Ph.D., University of Minnesota, Twin Cities

Wu, Ai-Hwa 1964, Librarian Emerita; B.A., National Taiwan University, Taiwan; M.L.S., University of Washington

Wu, Jianguo 1995, Associate Professor of Plant Biology; B.S., University of Inner Mongolia, China; M.S., Ph.D., Miami University

Wu, Teresa 2001, Assistant Professor of Industrial Engineering, B.S., M.S., Beijing University of Aeronautics and Astronautics, China; Ph.D., University of Iowa

Wulk, Ned W. 1957, Professor Emeritus of Physical Education; B.S., Wisconsin State University, M.Ed., Xavier University

Wurzburger, Marilyn J. 1960, Librarian; Head, Special Collections, B.A., MacMurray College

Wurzell, Carol A. 1965, Professor Emerita of Nursing, B.S., California State College, Chico, M.S., University of Maryland, College Park

Wyckoff, Susan 1979, Professor of Physics and Astronomy; B.A., Mount Holyoke College, Ph.D., Case Western Reserve University

Wyndelts, Robert W. 1974, Professor of Accountancy and Information Management; B.B.A., M.P.A., Georgia State University; Ph.D., University of Georgia; C.P.A., Arizona, Georgia

Wytko, Joseph R. 1975, Professor of Music, B.M.E., West Virginia University; M.M., D.M., Northwestern University

X

Xu, Jun-Ping 1991, Assistant Research Professor, Cancer Research Institute; B.S., Shanghai College of Traditional Chinese Medicine (China), Ph.D., Tokyo College of Pharmacy (Japan)

Xue, Guoliang 2001, Associate Professor of Computer Science and Engineering, B.S., M.S., Qufu Teachers University, China; Ph.D., University of Minnesota, Minneapolis

Y

Yabes, Ruth Ammerman 1991, Associate Professor of Planning and Landscape Architecture; B.S. (Planning), B.A. (Economics), University of California, Davis; M.C.P., University of Pennsylvania; Ph.D., Cornell University

Yaghi, Omar M. 1992, Adjunct Professor of Chemistry and Biochemistry, B.S., State University of New York Albany, Ph.D., University of Illinois

Yamaguchi, Gary T. (1989), Associate Professor of Bioengineering; A.B., Occidental College, B.S., California Institute of Technology, S.M.M.E., Massachusetts Institute of Technology; Ph.D., Stanford University

Yamamori, Tetsumao 1989, Adjunct Professor of Sociology, B.A., Northwest Christian College; B.D., Texas Christian University, Ph.D., Duke University

Yancy, Margaret Lee 1997, Faculty Associate of Nursing, B.S.N., M.S., Arizona State University

Yao, Lun-Shin 1981, Professor of Engineering; B.S.E., Chenzung University, M.S., University of Texas, Ph.D., University of California Berkeley

Yao, Winberta M. 1975, Librarian Emerita, B.A., University of California, Berkeley, M.S., Columbia University

Yates, Ann M. 1978, Research Professional Emerita of Chemistry and Biochemistry; B.S., Saint Lawrence University, Ph.D., Arizona State University

Yau, Stephen S. 1994, Professor of Computer Science and Engineering, B.S., National Taiwan University, Taiwan, M.S., Ph.D., University of Illinois, Urbana-Champaign

Yazdi, Navid 1998, Assistant Professor of Electrical Engineering, B.Sc., University of Tehran, Iran, M.A.Sc., University of Windsor, Canada; Ph.D., University of Michigan, Ann Arbor

Ye, Nong 1998, Associate Professor of Industrial Engineering; B.S., Peking University, China; M.S.E., Chinese Academy of Sciences, China; Ph.D., Purdue University

Yeater, James W. (1958), Professor Emeritus of Theatre, B.A., Baker University, M.A., University of Washington, Ph.D., University of Illinois

Yellow Bird, Michael J. 2000, Associate Professor of Social Work; B.S.W., University of North Dakota; M.S.W., University of Wisconsin, Milwaukee; Ph.D., University of Wisconsin, Madison

Yen, Jerome 2002, Associate Professor of Accountancy and Information Management, B.S., M.E., Chung Yuan Christian University (Taiwan), Ph.D., University of Arizona

Yopez, Eleanor 1984, Academic Professional of Social Work, B.A., Michigan State University, M.A., Western Michigan University, M.S.W., University of Michigan

Yoshioka, Carlton F. 1988, Professor of Recreation Management and Tourism; B.A., University of California, Santa Barbara; M.A., California State University, Chico, Ph.D., University of Oregon

Youm, Kyu Ho 1991, Professor of Journalism and Mass Communication, B.A., Konkuk University, South Korea, M.A., Ph.D., Southern Illinois University, Carbondale

Young, Bernard 1988, Professor of Art, B.F.A., Temple University, M.F.A., Ph.D., Cornell University

Young, David A. 2001, Professor of Plant Biology, Dean, College of Liberal Arts and Sciences; B.A., M.A., California State University, Fullerton; Ph.D., Claremont Graduate University

Young, Dennis L. 1975, Professor of Mathematics and Statistics; B.S., Saint Louis University, M.S., Ph.D., Purdue University

Young, Hewitt H. 1967, Professor Emeritus of Industrial Engineering, B.S.M.E., M.S.I.E., Case Institute of Technology, Ph.D., Arizona State University

Young, Joseph E. 1979, Professor Emeritus of Art, B.A., California State University at Los Angeles, M.A., University of California, Los Angeles

Young, Josephine Peyton 1998, Assistant Professor of Curriculum and Instruction; M.A., University of West Florida, Ph.D., University of Georgia

Young, Otis E. Jr. 1963, Professor Emeritus of History, A.B., A.M., Ph.D., Indiana University

Youngblood, Robert L. (1973), Professor of Political Science; Chair, Department of Political Science, B.A., Willamette University; M.A., University of Hawaii, Manoa, Ph.D., University of Michigan

ASU MAIN FACULTY AND ACADEMIC PROFESSIONALS

Z

Zaffran, Annie (1997), Academic Associate of Interdisciplinary Humanities; B.S., M.S., University of Wisconsin

Zandieh, Michelle (1997), Assistant Professor of Mathematics and Statistics; B.A., Northwestern University; M.S., Ph.D., Oregon State University

Zaslow, Bertram (1956), Professor Emeritus of Chemistry and Biochemistry; B.A., Cornell University; M.S., University of Minnesota, Twin Cities; Ph.D., Iowa State University

Zatz, Marjorie S. (1982), Professor of Justice Studies; Associate Dean, Student Support Services, Graduate College; B.A., University of Massachusetts, Amherst; M.A., Ph.D., Indiana University, Bloomington

Zautra, Alex (1976), Professor of Psychology; Director, Clinical Program in Psychology; B.A., Antioch College; M.S., Ph.D., University of Utah

Zehnder, Joseph A. (2000), Professor of Geography; B.S., M.S., University of Illinois, Chicago; Ph.D., University of Chicago

Zeitlin, Marilyn A. (1992), Director, ASU Art Museum; A.B., M.A., Harvard University

Zell, Ann (2000), Academic Associate of Electrical Engineering

Zellmer, Linda R. (1997), Assistant Librarian, Map Collection; B.S., University of Wisconsin, Oshkosh; M.A., College of William and Mary; M.L.S., University of Wisconsin, Milwaukee

Zhang, Junshan (2000), Assistant Professor of Electrical Engineering; B.E., Huazong University of Science and Technology (China); M.S., University of Georgia; Ph.D., Purdue University

Zhang, Young-Hang (1997), Professor of Electrical Engineering; Nanjing Normal University (China); M.Sc., Institute of Semiconductors, Chinese Science and Technology University (China); Ph.D., University of Stuttgart (Germany)

Zhou, Lin (2001), Lincoln Professor of Ethics; B.S., Fudan University (China); Ph.D., Princeton University

Zhu, Anmin (1997), Senior Lecturer of Mathematics and Statistics; B.S., Anhui University (China); M.S., Milin University (China); Ph.D., Arizona State University

Zhu, Han (1997), Assistant Professor of Civil and Environmental Engineering; B.S., M.S., Fudan University (China); Ph.D., Northwestern University

Zhu, Yingxian (1996), Lecturer of Mathematics and Statistics; B.S., Anhui University (China); M.S., Dalian University of Science and Technology (China); Ph.D., Arizona State University

Zimiles, Herbert (1988), Professor of Educational Psychology; B.A., New York University; Ph.D., University of Rochester

Zimmer, Carl R. (1959), Professor Emeritus of Engineering; B.S.E.E., Cornell University; M.S.E.E., Ph.D., Syracuse University

Zucker, Stanley H. (1975), Professor of Curriculum and Instruction; B.A., State University of New York, Stony Brook; M.S., Hofstra University; Ph.D., University of Missouri, Columbia

Zunkel, Gretchen M. (1998), Assistant Professor of Nursing; B.S.N., University of Colorado; M.N., University of California, Los Angeles; M.N., Ph.D., University of Washington

Zuo, Yijun (1998), Assistant Professor of Mathematics and Statistics; B.S., Zhenjiang Teachers University (China); M.S., Lanzhou University (China); M.S., Ph.D., University of Texas, Dallas

Zwiebel, Imre (1979), Professor Emeritus of Chemical Engineering; B.S., University of Michigan; M.S., Ph.D., Yale University

Zygas, K. Paul (1984), Associate Professor of Architecture; A.B., M.Arch., Harvard University; Ph.D., Cornell University



A tour boat on Tempe Town Lake passes under the Mill Avenue bridge.

Tim Trumble photo

Administrative Personnel

Arizona Board of Regents

Executive Director	Linda Blessing
Governor of Arizona	Jane Dee Hull
Superintendent of Public Instruction	Jaime Molera
Student Regent (voting), appointed to June 2002	Myrna Robinson
Student Regent (nonvoting), appointed to June 2003	Matthew Meaker
Regent, appointed to January 2004	Kay McKay
Regent, appointed to January 2004	Donald J. Ulrich
Regent, appointed to January 2006	Chris Herstam
Regent, appointed to January 2006	Jack Jewett
Regent, appointed to January 2008	Christina Palacios
Regent, appointed to January 2008	Gary Stuart
Regent, appointed to January 2010	Fred T. Boice
Regent, appointed to January 2010	Robert B. Bulla
Counsel to the Board	Joel Sideman

President's Office

President	Lattie F. Coor
Senior Vice President	Gary S. Krahenbuhl
Senior Executive Assistant to the President	Ben R. Forsyth
Assistant to the President	Joyce Smitheran
Executive Assistant for University Programs	Ruth S. Jones
Advisor to the President on American Indian Affairs	Peterson Zah
Director, Athletics	Gene Smith
Director, Equal Opportunity/Affirmative Action	Barbara A. Mawhiney
Vice President and General Counsel	Paul J. Ward
Dean, College of Extended Education	Bette F. DeGraw
ICA Faculty Representative	Jerry L. Kingston

ASU Main

Academic Affairs

Senior Vice President and Provost	Milton D. Glick
Vice Provost	Kathleen K. Church
Vice Provost for Research	Jonathan Fink
Vice Provost for Academic Personnel	Gail Hackett
Vice Provost for Information Technology	William E. Lewis
Vice Provost for Academic Programs	William T. Trotter
Assistant Vice President for Academic Affairs	Louis Olivas
Assistant to the Senior Vice President and Provost	Linda Van Scoy
Fiscal Operations Administrator	Lynn Carpenter
Director, Academic and Administrative Documents	Tabb Forster
Director, Academic Articulation	Zoila Gamero de Tovar
Director, Academic Facilities	David Techau
Director, Center for Learning and Teaching Excellence	Duane Roen
Director, Data Warehousing and Data Administration	John Rome
Director, Fiscal Planning and Analysis	Alan Carroll
Director, Institutional Analysis	Joseph Matt
Director, International Programs	William G. Davey

ADMINISTRATIVE PERSONNEL

Director, Strategic Planning and Policy Analysis Douglas Vinzant
Director, Summer Sessions Carol Switzer
Director, University Evaluation Patricia Green
Executive Director, Division of Undergraduate Academic Services William S. Johnson

Barrett Honors College

Dean, the Barrett Honors College Ted Humphrey
Associate Dean Janet M. Burke
Assistant Dean Diane A. Facinelli
Director, Office of National Scholarship Advisement John M. Lynch

College of Architecture and Environmental Design

Dean, College of Architecture and Environmental Design *To Be Appointed*
Associate Dean, College of Architecture and Environmental Design Lorraine M. Cutler
Associate Dean, College of Architecture and Environmental Design Mary Kihl
Director, Ph.D. Program in Environmental Planning in Design David K. Pijawka
Director, School of Architecture Ron McCoy
Director, School of Design Jacques Giard
Director, School of Planning and Landscape Architecture *To Be Appointed*
Director, Herberger Center for Design Excellence Mary Kihl
Coordinator, Joint Urban Design Program John McIntosh
Coordinator, Joint Urban Design Studio Michael Dollin

College of Business

Dean, College of Business Larry E. Penley
Associate Dean, Executive and Professional Programs Lee R. McPheters
Associate Dean, Graduate Programs Dennis L. Hoffman
Associate Dean, Undergraduate Programs Philip R. Regier
Assistant Dean, Graduate Programs Carl Harris
Assistant Dean, Undergraduate Programs Kay Faris
Director, School of Accountancy and Information Management Philip M. J. Reckers
Chair, Department of Economics Arthur E. Blakemore
Chair, Department of Finance Herbert M. Kaufman
Director, School of Health Administration and Policy Eugene S. Schneller
Chair, Department of Management William H. Glick
Chair, Department of Marketing Michael P. Mokwa
Chair, Department of Supply Chain Management Joseph R. Carter
Director, Center for Advanced Purchasing Studies Phillip L. Carter
Director, Center for the Advancement of Small Business Mary Lou Bessette
Director, Arizona Real Estate Center Jay Q. Butler
Director, Center for Business Research Timothy D. Hogan
Director, Center for Services Leadership Stephen W. Brown
Director, Bank One Economic Outlook Center Lee R. McPheters
Director, L. William Seidman Research Institute Timothy D. Hogan

College of Education

Dean, College of Education Eugene E. Garcia
Associate Dean, Teacher Education Carlos Julio Ovando
Interim Associate Dean, Personnel and Academic Programs Terence Tracey
Interim Associate Dean for Research James Arthur Middleton
Assistant Dean, Office of Student Services Ina "Maggie" Tolan
Director, Division of Curriculum and Instruction Carlos Julio Ovando
Associate Director of Research and Graduate Education, Division of Curriculum and Instruction Robert B. Rutherford Jr.
Associate Director for Professional Development and Induction, Division of Curriculum and Instruction Billie J. Enz
Associate Director of Initial Teacher Certification, Division of Curriculum and Instruction Elaine Surbeck
Director, Division of Educational Leadership and Policy Studies Terrence G. Wiley
Director, Education Policy Studies Laboratory Alex Molnar
Academic Program Coordinator, DELTA Doctorate Kay Hartwell Hunnicutt

ADMINISTRATIVE PERSONNEL

Academic Program Coordinator, Educational Administration and Supervision, On Campus Programs . . .	M. Scott Norton
Academic Program Coordinator, Education Policy Studies	Gary Hanson
Academic Program Coordinator, Education Policy Studies	Terrence G. Wiley
Academic Program Coordinator, Social and Philosophical Foundations	Eric Margolis
Academic Program Coordinator, Higher and Postsecondary Education	Gary Hanson
Internship Coordinator, Educational Administration and Supervision	Donna J. Macey
Recruitment and External Program Planning Coordinator, Educational Leadership and Supervision	Timothy J. Dyer
Director, Division of Psychology in Education	Elsie G. J. Moore
Training Director and Academic Program Leader, Counseling Psychology	Terence Tracey
Academic Program Leader, Counselor Education	Terence Tracey
Academic Program Leader, Educational Technology	Thomas A. Brush
Academic Program Leader, Educational Psychology	Edward A. Nelson
Training Director, School Psychology	Mary E. Stafford
Director, Southwest Center for Education Equity and Language Diversity	Josué M. Gonzalez
Director, Bureau of Educational Research and Services	Margaret A. Mangini
Interim Director, Center for Indian Education	Denis Viri
Director, Counselor Training Center	Judith Homer
Director, Office of Professional Field Experiences	Karen Kimerer

College of Engineering and Applied Sciences

Dean, College of Engineering and Applied Sciences	Peter E. Crouch
Associate Dean, Academic Affairs	Ronald J. Roedel
Associate Dean, Planning and Administration	Ben M. Huey
Associate Dean, Research	Gregory B. Raupp
Associate Dean, Student Affairs and Special Programs	Mary R. Anderson-Rowland
Director, Del E. Webb School of Construction	William W. Badger
Director, School of Engineering	Ronald J. Roedel
Chair, Department of Bioengineering	Eric J. Guilbeau
Chair, Department of Chemical and Materials Engineering	Subhash Mahajan
Chair, Department of Civil and Environmental Engineering	Sandra L. Houston
Chair, Department of Computer Science and Engineering	Charles J. Colbourn
Chair, Department of Electrical Engineering	Stephen M. Goodnick
Chair, Department of Industrial Engineering	Gary L. Hogg
Chair, Department of Mechanical and Aerospace Engineering	Robert E. Peck
Director, Engineering Core and Special Studies	Ronald J. Roedel
Director, Center for Research on Education in Science, Mathematics, Engineering, and Technology	Donovan L. Evans
Codirector, Center for Low Power Electronics	Dieter K. Schroder
Director, Center for Professional Development and Distance Education	<i>To Be Appointed</i>
Director, Center for Solid State Electronics Research	Michael Kozicki
Director, Center for System Science and Engineering Research	Frank C. Hoppensteadt
Director, Institute for Manufacturing Enterprise Systems	Thomas E. Callarman
Interim Director, Telecommunications Research Center	Sayfe Kiaei

College of Extended Education

See "ASU Extended Campus Administrative Personnel," page 713

College of Law

Dean, College of Law	Patricia D. White
Associate Dean for Academic Affairs and Research	Patrick Brennan
Associate Dean and Director, Ross Blakley Law Library	Victoria K. Trotta
Assistant Dean, Administrative and Business Services	Rhonda Sandler
Assistant Dean and Director of Admissions	Brenda Brock
Assistant Dean, Student Services	Leslie Mamaghani
Development Officer	Susan Mathew
Director, Career Planning	Ilona DeRemer
Director, Communications	Jodi Weisberg
Director, Center for the Study of Law, Science, and Technology	Andrew Askland

ADMINISTRATIVE PERSONNEL

Director, Clinical Programs	Catherine O'Grady
Director, Development	Tom Stevick
Director, Legal Research and Writing and Academic Success Program	Judith M. Stirson
Director, Student Development and Financial Aid	Michael Bossone
W.P. Carey Director of Placement	Iona DeRemer
Executive Director, Indian Legal Program	Rebecca A. Tsosie
Executive Director, Center for the Study of Law, Science, and Technology	Garv E. Marchant
Director, Indian Legal Program	Kathlene Rosier

College of Liberal Arts and Sciences

Dean, College of Liberal Arts and Sciences	David A. Young
Associate Dean	Milton R. Sommertell
Associate Dean, Academic Program	T. Be Applegate
Associate Dean, Administration and Personnel	Nancy A. Gutierrez
Chair, Department of Aerospace Studies	Col. Ronald Scott Jr
Chair, Department of Anthropology	John K. Chance
Chair, Department of Biology	James P. Collins
Chair, Department of Chemistry and Biochemistry	J. Devens Gust
Chair, Department of Chicana and Chicano Studies	Cordelia Candelaria
Chair, Department of English	T. Be Applegate
Chair, Department of Exercise Science and Physical Education	Philip E. Martin
Chair, Department of Family and Human Development	Richard A. Fabes
Chair, Department of Geography	Breandan O'Huallachan
Chair, Department of Geological Sciences	Simon M. Placock
Chair, Department of History	Noe J. Stowe
Chair, Department of Languages and Literatures	Deborah N. Lusse
Chair, Department of Mathematics and Statistics	Andrew Brenner
Chair, Department of Microbiology	Edward A. Birge
Chair, Department of Military Science	Lt. Col. W. Scott Crawford
Chair, Department of Philosophy	Brad Arnold
Chair, Department of Physics and Astronomy	Barry G. Ritchie
Chair, Department of Plant Biology	J. Kenneth Hooper
Chair, Department of Political Science	Robert L. Youngblood
Acting Chair, Department of Psychology	Morris Okun
Chair, Department of Religious Studies	Joel D. Gereboff
Chair, Department of Sociology	Verna M. Keith
Chair, Department of Speech and Hearing Science	David Ingram
Director, African American Studies	Leonor Boulton Johnson
Director, Center for Asian Studies	Timothy Worrel
Director, Cancer Research Institute	C. Robert Pettit
Director, Center for the Study of Early Events in Photosynthesis	Andrew N. Webber
Director, Cytology Laboratory	Robert C. Balint
Director, Hispanic Research Center	Gary D. Keller
Director, Interdisciplinary Committee for Molecular and Cellular Biology	Robert W. McGaughey
Director, Institute of Human Origins	Dona C. Johanson
Director, Latin American Studies Center	Tod D. Swanson
Director, Arizona Center for Medieval and Renaissance Studies	Robert E. Bjork
Director, Center for Meteorite Studies	Carleton B. Moore
Director, Center for Solid State Science	David Smith
Director, Program for Southeast Asian Studies	Kaen L. Adams
Director, Women's Studies Program	Kathleen J. Ferraro
Interim Director, Interdisciplinary Humanities Program	Mary L. Rothschild

College of Nursing

Dean, College of Nursing	Barbara A. Durand
Associate Dean for Graduate Programs and Research	Pamela Kidd
Associate Dean for Undergraduate Programs and Extended Education	Mary K. Ileen

ADMINISTRATIVE PERSONNEL

Director, Continuum and Extended Education David Hrabe
 Director, Student Services Jean Craig Stengel
 Chair, Division of Adult Health/Parent Child Nursing Frances Thurber
 Chair, Division of Community Health/Psychosocial Nursing Systems Betty J. Gale
 Manager, Community Health Services Clinic Elizabeth Ho man

College of Public Programs

Dean, College of Public Programs Anne L. Schneider
 Associate Dean, College of Public Programs Frederick C. Corey
 Assistant Dean, College of Public Programs Kathryn Gundersen
 Director, Student Services Cheryl Herrera
 Director, Hugh Downs School of Human Communication Jess K. Alberts
 Director, Walter Cronkite School of Journalism and Mass Communication Joe S. Foote
 Director, School of Justice Studies Doris Marie Provine
 Director, School of Public Affairs Jeffrey Chapman
 Director, School of Social Work Leslie Leighninger
 Chair, Department of Recreation Management and Tourism Randy J. Virder
 Director, Advanced Public Executive Program Peggy O'Sullivan Kachel
 Director, American Indian Studies Program Carol C. Lu an
 Director, Asian Pacific American Studies Program Thomas K. Nakayama
 Director, Morrison Institute for Public Policy Robert Melnick
 Director, Center for Nonprofit Leadership and Management Robert F. Ashcraft
 Director, Center for Urban Inquiry Peg Bortler

Division of Undergraduate Academic Services

Executive Director, Division of Undergraduate Academic Services William S. Johnson
 Associate Director, Education Services Gay W. Brack
 Associate Director, Advising Services Stephanie Jacobson
 Director, Student Success Programs Stephen Rippon
 Director, Academic Advising Services Casey Self
 Director, Bachelor of Interdisciplinary Studies Christina Stage
 Senior Program Coordinator, General Studies Phyllis Lucie
 Senior Business Manager Kathleen Renshaw

Graduate College

Dean, Graduate College Bianca L. Bernstein
 Associate Dean, Student Support Services Marjorie S. Zatz
 Associate Dean, Academic Programs Maria T. Allison
 Assistant Dean, Academic Programs Sarah B. Lindquist
 Assistant Dean, Administrative Services and Information Systems Kent D. Blaylock

Herberger College of Fine Arts

Dean, Herberger College of Fine Arts J. Robert Witts
 Interim Director, School of Art Jon W. Sharer
 Chair, Department of Dance Claudia Murphey
 Director, School of Music Wayne A. Bailey
 Interim Chair, Department of Theatre Johnny Saldana
 Director, Communications Stacey Shaw
 Director, Community Programs Melnie Ohm
 Director, Institute for Studies in the Arts Thanasis R. Kakis
 Director, Public Art Dianne Cripe
 Director, Student Academic Services Gina Stephens
 Director, ASU Art Museum Marilyn A. Zeitlin

University Libraries

Dean, University Libraries Sherrie Schmidt
 Associate Dean, Continuous Improvement/Total Quality Service T. Beajjotted
 Associate Dean, Library Services Jane A. Conrow
 Interim Associate Dean, Video Resources Robert Follet

ADMINISTRATIVE PERSONNEL

Assistant Dean, Personnel Kurt R. Murphy
 Head, Access Services/Interlibrary Loan and Document Delivery Ginny Sylvester
 Head, Architecture and Environmental Design Library Deborah H. Koshinsky
 Head, Department of Archives and Manuscripts Robert P. Spindler
 Head, Government Documents/Map Collection Rebecca S. Burke
 Head, Library Instruction, Systems, and Technology (LIST) Scott S. Herrington
 Head, Music Library Robert E. Follet
 Head, Preservation Lois I. Schneberger
 Head, Special Collections Marilyn J. Wurzbarger
 Team Leader, Noble Science Reference Services Linda A. Shackles
 Team Leader, Collection Development Jeanne Richardson
 Team Leader, Hayden Reference Services Rosalinda DeFato
 Team Management, Technical Services Department Betsy J. Redman, Ronda L. Ridenour, and Rebecca S. Uhl

Administrative Services, ASU Main

Vice Provost, Administrative Services Memoy Harrison
 Assistant Vice Provost, Administrative Services LeEtta Overmyer
 Senior Executive Assistant, Administrative Services Sheila Stokes
 Comptroller and Treasurer Gerald E. Snyder
 Associate Comptroller Terr Deasey
 Associate Comptroller Marilyn Mulholland
 Associate Comptroller Joanne Wamsley
 Assistant Vice Provost, Facilities Management Scott Cole
 Director, Facilities Services Dave Brixen
 Director, Capital Program Management Group Ted Cary
 Director, Facilities Planning and Space Management David Techau
 Director, Risk Management Robert Gomez
 Acting Assistant Director, Administrative Services Carne McNamara Segal
 Assistant Director, Business Operations Dennis Ederer
 Assistant Director, Design and Construction Services Vance Linden
 Acting Assistant Director, Crafts Services Polly Pinney
 Assistant Director, Utilities and General Services Fred Giles
 Assistant Director, Custodial Services Charles Simonette
 Assistant Director, Environmental Affairs Steve Hunter
 Acting Assistant Director, Grounds Services Scott Cisson
 Campus Architect Jason Eslamieh
 Campus Planner Rick Collins
 Manager, Computing Services Joe Metzger
 Assistant Director, Engineering Services Ray Tena
 Assistant Vice Provost, Human Resources *To Be Appointed*
 Director, Human Resources Programs Connie Wood
 Assistant Director, Human Resources Christine Cervantes
 Assistant Director, Human Resources Susan Madden
 Director Chief of Police, Public Safety John Pickens
 Assistant Chief of Police Kay Gojkovich
 Director, Parking and Transit Linda Riegel
 Executive Director, Purchasing and Business Services Ray Jensen
 Associate Director John Riley
 Assistant Director Greg Rush
 Assistant Director, Real Estate Karen Honeycutt
 Assistant Director, Document Production Services Robert Lane
 Assistant Director, ASU Stores Operations Gina Webber
 Director, ASU Bookstore Val Ross
 Director, Internal Audit and Management Services Walter B. Silva

Institutional Advancement

Vice President for Institutional Advancement Jack Pfister
 Associate Vice President for Institutional Advancement Steve Miller

ADMINISTRATIVE PERSONNEL

Assistant Vice President for Institutional Advancement Nancy Jordan
 Interim Assistant Vice President for Strategic Communications Nancy Neff
 Executive Director, Alumni Association. Susan Clouse Dolbert
 Executive Director, Federal Relations Stuart Hadley
 Executive Director, Public Events Colleen Jennings Roggensack
 Director, Development Lonnie L. Ostrom
 Director, Economic Development and Community Outreach Gail Howard
 Director, Federal and Community Relations Neil Giuliano
 Director, Media Relations Nancy Neff
 Director, Public Relations Wilma Mathews
 Director, State Relations Blake Anderson
 Director, Special Events Adelaida Severson
 General Manager, Television Station KAET Charles R. Allen

Arizona State University Foundation

Chair of the Board Richard Parker
 Chair Elect Pam Grant
 First Vice Chair Malcolm Craig
 Second Vice Chair Wayne Doran
 Secretary Grady Gammage, Jr
 Treasurer Ed Rondthaler
 Past Chair Alice Snell
 President Lonnie L. Ostrom
 Legal Counsel John Christian
 At Large Florence Nelson

BOARD OF DIRECTORS, Arizona State University Foundation

Marty Alvarez	Barbara Barrett Emerita	Richard Boehm	Robert L. Buehler Emeritus
Junius Bowman	Linda Brock Nelson	Yvonne Campbell	Jose Cardenas
Ed Carson	Angela Cesa	Lattice Coor	Scott Crozier
Dino DeConcini Emeritus	Pam De Duca	Robert Duckworth Emeritus	Ralph Esner Emeritus
Ron Erhardt	Robert Fletcher	Armando Flores	Penny Gunnung Emerita
Michael Haynes	Mrs. G. Robert Herberger Emerita	Leonard Huck Emeritus	Lupe Iniguez
Frank Labrora	John Lassen Emeritus	Orme Lewis Jr Emeritus	David L. Nco
P. T. Lucking	Russ Lyon Jr	Samuel Mardian Jr Emeritus	Dane McCarthy
William Nassikas	Robert Parke	Budd Peabody	John Prtzaff Emeritus
Gene Rice Emeritus	Peter Schust	William Shover	James P. Simmons Emeritus
Ken Skinner	Mark Skar	Rex Staey Emeritus	Patricia Stark
Robert Swanson Emeritus	Dr. Mae Sue Taey Emerita	Gary Tooker	Don Ulrich
Dr. Morrison Warren Emeritus	Craig Weatherup	Stanley S. Weithorn	Morton Whiting
Lobby Williams Emerita			

ASU Alumni Association Board of Directors

Chair of the Board Nicki Lemmon
 Chair Elect Marty Shultz
 Past Chair William Hochgraef
 Treasurer R. J. Machules

BOARD MEMBERS, ASU Alumni Association

Tony M. Astorga	Kenneth Behringer	Darryl L. Bradley	Sandra Day
Eddie DeVea	Bette Dickey	Mark Dupuis	Joselyn Loada
Beth Newman	Kevin Oson	Michael A. Pressendo	Margot Richardson
Lucy Rivas	Richard J. Scherr	Paul Senseman Jr	Dane R. Tooker
Jo Barnes Weatherton	Kristy Westpha	Mark Wamson	Sister Lynn M. Wmsor

EX OFFICIO

Susan Clouse Dolbert	Patrick Dosta	Jeremy Heper	Morton Munk
Afsaneh Nahavand	Richard Parker	Jack Pfister	Devon Rankin

ADMINISTRATIVE PERSONNEL

KAET Community Advisory Board, 2001

ChairKathy Hancock
 Vice Chair Katherine Hutton Rabv
 Chair for the Nominating Committee Lois Savage
 Chair, Volunteer Friends of Channel 8 Dr. Maggie Sherwood
 Ex Officio, General Manager for KAET Charles R. Allen
 Ex Officio, Associate Vice President for Institutional Advancement Charles S. Miller
 Emeritus Robert Ellis
 Emeritus Kathy Zatz

MEMBERS, KAET Community Advisory Board, 2001

Lara Coe	Dan e Flores	Grady Gammage Jr	Max Gonzales
Dan e Lewis	Kathleen Lucier	Gema Darte Luna	Hamton McRae
Lawrence Moore	Angela Phoenix	Dan e Santy	Marty Shultz
Bonnie Taakle	Kenneth Van Winkle	Robert Venberg	Ann Vry
Sandy Werthman	John Whiteman	Faye Wendenmann	

Sun Angel Foundation

Chair Bill Schaefer
 Vice Chair Mike Gallagher
 Treasurer *To Be Appointed*
 Secretary Bob Matthews

AT-LARGE DIRECTORS, Sun Angel Foundation

Martin Caffee	Don Carson	Nadine Carson	CEPep Cooney
Gene Drake	Greg Hancock	Bob Hobbs Sr	Fred Homes
Dean Jacobson	Steve Johnson	Nap Lawrence	John Lewis
Steve Loy	Nate Norris	Bill Post	Ed Robson
Max Schrammer	Don Tapia	Gregg Tryhus	Steve Wood

Intercollegiate Athletics

Director, Athletics Gene Smith

ASU Head Coaches

Baseball Men Pat Murphy
 Basketball Men Rob Evans
 Basketball Women Charli Turner Thorne
 Cross Country Men Walt Drenth
 Cross Country Women Walt Drenth
 Diving Men and Women Mark Bradshaw
 Football Men Dirk Koetter
 Golf Men Randy Lein
 Golf Women Mickey Yokoi
 Gymnastics Women John Spina
 Soccer Women Ray Leone
 Softball Women Linda Wells
 Swimming Men Michael Chasson
 Swimming Women Michael Chasson
 Tennis Men Lou Belken
 Tennis Women Sheila McInerney
 Track and Field Men Greg Kraft
 Track and Field Women Greg Kraft
 Volleyball Women Patti Snyder Park
 Wrestling Men Thom Ortiz

Research

Vice Provost for Research Jonathan Fink
 Associate Vice Provost for Research Ronald Barr

ADMINISTRATIVE PERSONNEL

Assistant to the Vice Provost	Cynthia Ryan
Director, Fiscal and Business Services	Rich Fill
Executive Director Strategic Initiatives	Patrick Burkhart
Director, Office of Research and Sponsored Projects Administration	Randa Draper
Director, Office of Research Publications	Conrad Stora
Director, Center for Environmental Studies	Charles L. Redman
Director, Partnership for Research in Stereo Modeling Program (PRISM)	Anshuman Razdan
Director, Animal Care Facility	Tedd A. Brandon
Director, Southwest Center for Environmental Research and Policy	Anthony J. Brazel
Director, Radiation Safety Office	Kenneth L. Mossman
Director, Technology Collaborations and Licensing Office	Alan Poskanzer

Student Affairs

Vice President	Christine K. Wilkinson
Associate Vice President for Student Affairs and Dean, Student Development	Jim Rund
Assistant Vice President for Student Affairs and Dean, Student Life	Bob Soza
Director, Counseling and Consultation	Martha Dennis Christiansen
Manager of Student Affairs Computing Services	Michael Schaefer
Associate Dean, Student Development and Director, Memorial Union	Sally Ramage
Director, Arizona Prevention Resource Center	Gail Chadwick
Director, Career Services	Raymond I. Castillo
Director, Recreational Sports	Howard Taylor
Director, Residential Life and Assistant Dean, Student Development	Kevin Cook
Director, Student Financial Assistance	Diane Stemper
Director, Student Health and Wellness Center	Mary Rimza
Director, Student Medical	<i>To Be Appointed</i>
Director, Undergraduate Admissions	Tim Desch
Registrar	Lou Ann Denny

University Continuous Improvement

Project Administrator	Jacque Gentry
Program Coordinator	Vicki Harmon
Human Resources Specialist Senior	Patrick Patterson

ASU East

See "ASU East Administrative Personnel," page 688.

ASU Extended Campus

See "ASU Extended Campus Administrative Personnel," page 713.

ASU West

See "ASU West Administrative Personnel," page 701.

ASU East

www.east.asu.edu

Charles E. Backus, Ph.D., Campus CEO and Provost

Morrison School of Agribusiness and Resource Management	634
East College	640
Faculty of Applied Psychology	642
Faculty of Business Administration	643
Faculty of Education	644
Department of Exercise and Wellness	646
Faculty of Multimedia Writing and Technical Communication	649
Department of Nutrition	651
College of Technology and Applied Sciences	655
Department of Aeronautical Management Technology	659
Department of Electronics and Computer Engineering Technology	664
Department of Information and Management Technology	670
Department of Manufacturing and Aeronautical Engineering Technology	677
Map	682
Directory	683
Faculty and Academic Professionals	684
Administrative Personnel	688

Arizona State University East, located 23 miles southeast of ASU Main, was established in 1996 at the former Williams Air Force Base. There, ASU East and its educational partners have created the Williams Campus—an academic community focused on meeting the needs of students, business, industry, and the larger community. The 600-acre campus offers a small residential college environment, with access to the amenities of a major metropolitan area and the resources of a major research university.

ASU East offers degree programs that help students develop knowledge and skills they need for success in their professional, civic, and personal lives in the 21st century. Sixteen baccalaureate degree programs, five master's degree programs, and two certificate programs can be completed at

ASU East, with additional programs in the planning stages. See the "Morrison School of Agribusiness and Resource Management Baccalaureate Degrees and Majors" table, page 628, the "East College Baccalaureate Degrees and Majors" table, page 641, and the "College of Technology and Applied Sciences Baccalaureate Degrees and Majors" table, page 656.

The College of Technology and Applied Sciences offers a master's degree and a range of bachelor's programs in high demand areas of technology, the only programs of their kind in Arizona. The unique bachelor's and master's degrees in Agribusiness offered by the faculty in the Morrison School of Agribusiness and Resource Management lead to careers in one of the fastest growing sectors of global business. The Environmental Resources degrees offered through the Morrison School provide opportunities to study wilderness areas and urban habitats and how people's activities affect the regenerative ability of natural resources.

East College offers a range of supporting courses for all ASU East programs and bachelor's degrees with majors in Business Administration, Applied Psychology, Nutrition, Elementary Education, Multimedia Writing and Technical Communication, Exercise and Wellness, and Interdisciplinary Studies. Students who are uncertain of their major may start college at ASU East as East College/No Preference majors.

Although it is a young campus, ASU East has already developed significant student-centered innovations in higher education that have earned national recognition.

ASU East assumed leadership in Arizona in developing and offering the Bachelor of Applied Science (BAS) degree, a program designed specifically as a career progression degree for students holding the Associate of Applied Science (A.A.S.) degree. The BAS emphasizes management, leadership, and communication skills, along with additional technical course work.

ASU East has also developed an innovative academic partnership with Chandler Gilbert Community College (CGCC). This partnership combines the strengths of the two institutions to provide ASU students with high-quality education in a cost-effective way. CGCC provides lower division general education and major prerequisite courses that are directly equivalent to ASU courses and transfer automatically. ASU East provides both lower- and upper-division courses in the major and upper-division general studies and general interest courses. Through the partnership, students at the Williams Campus can take all of the courses needed to graduate with an ASU baccalaureate degree, generally at some savings in tuition.

New facilities, new programs, and new opportunities are constantly emerging at ASU East. The campus is easily accessible via major interstate routes. See the "ASU East

Academic Advising at ASU East

Unit	Location	Telephone	Days	Hours
Agribusiness and Resource Management, Morrison School of	CNTR 21	480 727 1585	Mon. Fri.	8 A.M. - 5 P.M.
Barrett Honors College ²	IRISH A121	480/965 2359	Mon. Fri.	8 A.M.-5 P.M.
East College	CNTR 92	480 727 1515	Mon. Fri.	8 A.M. - 5 P.M.
Elementary Education	COMM2 105	480 727 1454	Mon. Fri.	8 A.M. - 5 P.M.
Exercise and Wellness, Department of	CLRB 102	480 727 1945	Mon. Fri.	8 A.M. - 5 P.M.
Nutrition, Department of	HSC 1345	480 727 1728	Mon. Fri.	8 A.M. - 5 P.M.
Technology and Applied Sciences, College of	CNTR 10	480/727-1874	Mon. Fri.	8 A.M. - 5 P.M.

¹ Walk-ins are welcome; appointments are recommended.

² The Barrett Honors College is located at ASU Main.

Map," page 682. For the latest information, call 480 727 EAST 3278 or access the Web site at www.east.asu.edu.

ACADEMIC ORGANIZATION AND ACCREDITATION

The chief executive and academic officer of ASU East is the provost. There are two colleges and one school at ASU East administered by deans. These academic units develop and implement the teaching, research, and service programs of the institution. Additional support for the academic mission of the campus is provided by Library Services and Information Technology, each administered by a director. See "ASU East Faculty and Academic Professionals," page 684, and "Academic Organization," page 8.

Accreditation

The North Central Association of Colleges and Schools accreditation of ASU Main includes ASU East. In addition, ASU East programs in Aeronautical Engineering Technology, Electronics Engineering Technology, and Manufacturing Engineering Technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (TAC of ABET). For more information, call 410 347 7700 or write

TECHNOLOGY ACCREDITATION COMMISSION
OF THE ACCREDITATION BOARD FOR
ENGINEERING AND TECHNOLOGY INC.
111 MARKET PLACE SUITE 1050
BALTIMORE MD 21202 7102

Both the professional flight and the air transportation management concentrations, in the Department of Aeronautical Management Technology, are fully accredited by the Council on Aviation Accreditation. For more information, call 334 844 2431, e-mail caa@auburn.edu, or write

COUNCIL ON AVIATION ACCREDITATION
3410 SKYWAY DRIVE
AUBURN AL 36830

ADMISSION

Nondegree Students. Nondegree students may take courses at ASU East according to the special provisions under "Undergraduate Enrollment," page 55.

Degree-Seeking Students. Degree-seeking students must meet the university admissions standards set by the Arizona Board of Regents (ABOR). Any student admitted to ASU may take courses at ASU East. To be admitted to an ASU East degree program, the student must meet undergraduate admissions requirements and the specific admission requirements of the ASU East program. A student who is admitted to an ASU East degree program is defined as an ASU East student.

For more admissions information and applications to ASU East degree programs, call 480 727-EAST 3278 or write

UNDERGRADUATE ADMISSIONS
ARIZONA STATE UNIVERSITY
PO BOX 870112
TEMPE AZ 85287 0112

TRANSFER CREDIT

Courses taken from Chandler Gilbert Community College through the Partnership in Baccalaureate Education are automatically transferred to ASU East each semester. These courses and courses taken at other Arizona public community colleges transfer according to equivalencies established in the current Arizona Higher Education Course Equivalence Guide. (Transfer guides are available at www.asu.edu provost/articulation.) The acceptability and applicability of courses transferred from other universities and community colleges is determined by ASU Main Undergraduate Admissions in consultation with the faculty or academic advisor of the student's choice of major.

Transfer Among ASU Campuses

Degree-seeking students currently enrolled at either ASU Main or ASU West who want to relocate to an ASU East degree program should contact the OASIS at ASU East, the Office of the Registrar at ASU Main, or the Admissions and Records Office at ASU West for appropriate procedures. All credit earned at any ASU campus automatically transfers to ASU East. Students should consult with their ASU East major advisor to determine how this credit applies to their major and graduation requirements. Students should be aware that certain requirements (e.g., the minimum number

of liberal arts and core requirements) may differ at ASU East. For more information, contact the Registrar at ASU East. See General Student page

ASU EAST

of upper-division semester hours to graduate) may differ among campuses.

JOINT ADMISSION CONTINUOUS ENROLLMENT (JAC)

JAC 001 Joint Admission Continuous Enrollment. (0–12)

fall, spring, summer

For use by ASU East to track undergraduate students admitted to East Campus degree programs who are concurrently enrolled or solely enrolled in courses offered by Chandler-Gilbert Community College. May be repeated for credit.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.

ADVISING

Students are encouraged to take advantage of the skill and knowledge of the advising professionals available to them in the academic units and to seek academic advising early.

For more information or to schedule an advising session, contact an academic advisor (see the "Academic Advising at ASU East" table, page 623).

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and the region. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges, including those at ASU East to meet the instructional and informational needs of a diverse community.



Student Cindy Kolby (left) and Nutrition Professor Carol Johnston (right) study levels of glucose for diabetes tests.

Chris Lambrakis/Arizona

The ASU Extended Campus goes beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules; a vast network of off-campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies including television, the Internet, and Independent Learning. The Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see "ASU Extended Campus," page 703, or access the Web site at www.asu.edu/xed.

CAMPUS AND STUDENT SERVICES

ASU East is a student-centered campus that offers many of the features of a small residential college in a rural area while providing access to the resources of a major research university and the amenities of a large metropolitan area. The campus includes excellent educational facilities; modern classrooms and laboratories; a 21st-century electronic library; and state-of-the-art computer equipment. Other amenities include a learning center, child care services, campus union, bookstore, copy center, and free parking. A shuttle service provides transportation between ASU East, Mesa Community College, and ASU Main. An additional shuttle is available for transportation from ASU Main to ASU West.

Enrollment Services—OASIS

The OASIS provides one-stop services for admission, financial aid, business services, and registration. Conveniently located in the Academic Center Building, students find personnel ready to assist them with registration processes, tuition payment, financial assistance information, student employment, ASU Sun Cards (photo IDs), and parking information.

Learning Center

In the Learning Center, undergraduate and graduate students can study, utilize computers for research and writing, and access tutoring services that support ASU East course work. Qualified undergraduate and graduate students provide tutoring by appointment or on a drop-in basis. Writing assistance is offered both face-to-face and online through the Learning Center Web site. Other services include workshops on writing, presentation and study skills, and computer-assisted instruction.

Located in the Academic Center Building, the Learning Center offers a convenient and quiet study location for individuals and groups. The center encourages leisure reading by offering paperback books to borrow and comfortable furnishings in which to relax. All Learning Center services are free to currently enrolled students. For more information or to schedule a tutoring appointment, call 480/727-1452, or visit the Web site at www.east.asu.edu/learningcenter.

Library Services

Strong resources and personal service define the ASU East Library. As a primarily electronic research library, it is designed to take maximum advantage of new technology. Electronic indexes, catalogs, and journals support study and research in many fields, with an emphasis on the majors offered at ASU East. While the library acquires materials in

all formats, by intention it prefers electronic text. Thousands of periodicals are available digitally in all subjects, while those that remain in print form can be obtained by the library quickly. Documents in electronic form can be delivered directly to students' computers. Librarians and staff pursue service customized to individual students' needs, cultivating a small college atmosphere. The library's Web address is eastlib.east.asu.edu.

Computing Services

With more than 200 workstations in five classrooms and a Computing Commons, Information Technology at ASU East provides general computing services, including e-mail and general purpose computing. The IT East department provides specialized software and systems to meet the particular needs of the ASU East programs. In addition, IT East provides mediated classrooms and audiovisual material to support e-learning initiatives. IT East has a staff of support personnel to aid the campus community's diverse computing needs, including Web development.

Food Services

ASU East has a variety of food service options on campus to serve student, faculty, staff, and visitor needs. Services include a coffee bar/convenience shop in the Williams Campus Union, a full-service dining facility in the Campus Dining Hall, and catering services. Food can be purchased on a cash basis; a meal plan can be selected to suit individual preferences. For more information about food service at the Williams Campus, call 480-955-5212.

Student Health Services

Health services for ASU East students are provided by the Veteran's Administration Medical Center located at the Williams Campus. Services include primary assessment and treatment of health problems and injuries, physical examinations and immunizations, women's health care, diagnostic tests, laboratory tests/X-rays, and a pharmacy. Student registration fees cover the cost of office visits for full-time ASU East students. Part-time students pay a non-residential fee. Some office procedures and laboratory tests require additional charges. Health insurance is not required to use the health services; however, it is strongly advised for all students and is required for international students. For more information, call 602-222-6568.

Student Counseling

Confidential professional counseling services are available to help ASU East students achieve their academic goals by addressing a variety of problems and issues often faced in college. Students may schedule an appointment by calling 480-727-1041. Appointments may also be made in person at Student Services, Garden Level of the Academic Center Building.

Career Preparation Center

Professional career counselors are available to meet with ASU East students. They provide individual career advising, group workshops, assistance in researching job and internship possibilities, resume and cover letter critiques, preparation for employment interviews, and career resources in print and online. For more information, call 480-727-1411 or access the Web site at www.east.asu.edu/sta/career.htm.

Williams Campus Union

The Williams Campus Union is in the center of campus and serves as a common gathering place for students, faculty, staff, and guests. The union has meeting space, study rooms, private computer rooms, a TV lounge, a coffee bar/convenience shop, a game room, and a ballroom. Programs and services that complement the academic experience and enhance campus life include a film series, dances, live performances, resources for student organizations, cultural awareness activities, leadership workshops, community service, information, and holiday celebrations. The union is staffed primarily by students, providing them the opportunity to develop valuable leadership skills and work experience. For more information, call 480-727-1098.

Recreational Facilities and Services

The Williams Campus Fitness Center is equipped with state-of-the-art strength training and cardiovascular equipment, racquetball courts, and a full-size gymnasium. Trained exercise and wellness professionals are on duty daily to provide expert advice and personal training assistance. A variety of health, fitness, and sports classes also are offered at the fitness center.

The gymnasium is available for open recreation volleyball and basketball during the noon hour and some evenings.

The ASU East Physical Activity Center (PAC) serves two primary purposes. It is the headquarters for a variety of professional and nonprofessional activity classes offered by the Department of Exercise and Wellness. The PAC is also available during the lunch hour and evenings for open recreation and group fitness classes for Williams Campus students, faculty, and staff. The PAC offers three activity gyms, a fitness center equipped with state-of-the-art strength training equipment, a lounge, and a snack bar area for relaxing or studying.

In addition to high-quality indoor fitness and recreation facilities, Williams Campus offers an all-weather quarter-mile track, four newly resurfaced and remodeled tennis courts, numerous sand volleyball courts, outdoor basketball courts, a softball field, soccer field, and swimming pool. The Williams Campus Intramural and Recreation program offers a variety of team sports, individual sports, and special events. For more information on intramural activities, call 480-727-1972. For more information on open recreation and group fitness classes in the PAC, call 480-727-1971. For a fee of \$30 per semester, students, faculty, and staff may use the Williams Campus Fitness Center and the PAC. To sign up, call the Williams Campus Fitness Center at 480-988-8400.

Child Care

Child care programs on campus are offered through the East Mesa Apache Junction YMCA, Head Start, and Early Head Start, and the East Valley Boys & Girls Club. The YMCA offers toddler and preschool programs with full- and part-time options available. Head Start and Early Head Start also offer child care programs on campus for individuals.

L Tracy and rt a nury MA mat em CS omputer t t t c
qua t t a t i v e a p p c a t o HU h a t e a d f i n e a r t SB s a a d
b a r a e e SG n t r a e n e g n e o e o u r e SQ a t u r
c e n e q u a t t a t C t r a d v t y t h e t e d S t a t e G g o
H t a S e e G e r a S t u d e p g e

ASU EAST

who meet certain income criteria. The Boys & Girls Club offers after school programs for children ages 6 to 18. For more information, call the YMCA at 480/727-1400, the Boys & Girls Club at 480/279-1406, or Head Start at 480/988-9389.

Williams Campus Housing and Residential Life

Living on-campus at ASU East provides students with the best opportunity to make the most of their college experience. No matter which housing option students choose, the residential life program offers social, academic, and recreational activities that are designed to support and enrich the student's campus life experience. Residential students benefit from easy access to campus resources such as the library, learning center, fitness center, and campus union; and parking is available for residents at no extra cost.

ASU East's unique residential environment offers housing options for Williams Campus students throughout their undergraduate and graduate education. This includes residence halls, houses, and special residential communities. Residential students can also take advantage of such amenities as outdoor swimming, sand volleyball, tennis, and picnic areas.

For more information, call the Williams Campus Housing Office at 480/727-1700, or access the Web site at www.east.asu.edu/sta/u-life/housing.

Residence Halls. Undergraduate and graduate students are eligible for residence halls with a large private room, featuring a private bath and a shared kitchenette. Students may, if they prefer, elect to share a room with another student. Each

room includes basic furnishings; the kitchenette includes a refrigerator and microwave.

Houses. A large number of two-to-five bedroom houses are available for students with families or for groups of single undergraduate or graduate students. Each house includes basic appliances.

Freshman Year Experience (FYE). Freshmen may begin their residential experience on campus in a dedicated freshman residence hall that includes the Freshman Year Experience (FYE) program. The FYE program helps freshmen achieve academic and personal success by providing support services and enhanced opportunities for learning, campus involvement, and out of class interaction with faculty. Research has consistently shown that freshmen participating in living-learning communities, such as FYE, achieve greater academic success. For more information, call 480/727-1909.

The FYE residence hall offers two bedroom suites with a shared bath, to house four students. Each room is equipped with local phone service, basic cable, and two computer ports. The FYE hall features a computer lab, quiet study, group study/tutoring room, and community lounge. Residents can select a meal plan from several options offered by Campus Dining Services.

Special Residential Communities. Special residential communities for students in particular academic majors, and students sharing common interest areas are also available. All residential facilities are non-smoking.



ASU East students (from left) Tiffany Morrissey-Gollem, Dustin Gossett, Jennifer Clark, and Debbie Hurth enjoy an afternoon at the campus gazebo.

Dave Tav's photo

Morrison School of Agribusiness and Resource Management

www.east.asu.edu/msabr

Raymond A. Marquardt, Ph.D, Dean

PURPOSE

The Morrison School of Agribusiness and Resource Management provides academic programs in Agribusiness and in Environmental Resources. Agribusiness is the business of food and fiber production and the technology necessary to change a raw material, a commodity, or an idea into a new product or business for the world's consumers. Producing, financing, marketing, and providing food and fiber for the world amounts to more than one half of the earth's global economy.

Agribusiness courses in the Morrison School are designed to prepare students for a wide range of job opportunities in agribusiness and business. More than 20 percent of all jobs in the United States are agribusiness related, and the industry is even more important internationally, with more than half of all jobs in developing countries related to food and fiber products. Population increases worldwide have led forecasters to predict that more than nine billion food and fiber consumers will be part of the global agribusiness system by the year 2050. Forecasts also estimate that, at that time, more than 20,000 agribusiness jobs will go unfilled due to a lack of skilled professionals.

The academic programs in Agribusiness are especially designed to meet the needs of the urban student who has little or no previous agriculture experience. An interest in plants, animals, or food can be the starting point for career development in agricultural industries or resource management. The undergraduate programs also provide the necessary training for students preparing to enter graduate degree programs.

The Morrison School is strategically positioned to offer some unique programs. The concentration in professional golf management provides a student with the opportunity to qualify for the Professional Golfers' Association certification program in addition to majoring in Agribusiness. Similarly, for individuals more interested in the development and management of golf and other turf facilities, the golf and facilities management concentration is well suited.

Food, its marketing and safety, is of paramount importance today and in the future. The Morrison School offers specific concentrations in both of these areas. Food and agribusiness marketing is one of the signature academic concentrations in the school. Food science and safety are emphases stressed in the food and agribusiness marketing concentration.

For students interested in natural resource management, the school offers a major in Environmental Resources. Environmental resources is a science that applies across the eco-

logical continuum of wilderness areas and urban lands. Students learn not only about wildlands but also about urban habitats and how people's activities affect the regenerative ability of natural resources. The Environmental Resources curriculum provides the opportunity to develop technological skills such as remote sensing of data from aircraft or satellites, computer based Geographic Information Systems, and techniques for ecological restoration.

Graduates of the Environmental Resources programs have employment opportunities in environmental resource management, applied ecology, wildlife biology, soil and water conservation, and land reclamation in both private firms and government agencies.

NATIONAL FOOD AND AGRICULTURAL POLICY PROJECT

The National Food and Agricultural Policy Project (NFAPP) constructs a 10 year baseline forecast for the fruit and vegetable produce industry and specific commodities, responds to congressional inquiries concerning policies affecting the fruit and vegetable industry, and publishes a monthly newsletter highlighting research efforts. Areas of study include domestic and international promotion of fruits and vegetables, trade and the impact of trade agreements, and crop insurance and risk management. For more information, call the director at 480 727 1124.

DEGREE PROGRAMS

The Morrison School of Agribusiness and Resource Management offers two B.S. degrees: Agribusiness and Environmental Resources. Students interested in the Agribusiness major may select from the following concentrations: agribusiness finance, food and agribusiness marketing, food science, general agribusiness, golf and facilities management, international agribusiness, management of agribusiness, professional golf management, resource management, e-commerce, and preveterinary medicine. The Environmental Resources major offers concentrations in ecology, watershed ecology, and wildlife habitat management.

For students holding an A.A.S. degree, the school offers the Bachelor of Applied Science degree with concentrations in consumer products technology, food retailing, and resource team specialist.

Literacy and critical inquiry MA mathematics CS computer statistics quantitative applications HU humanities and fine arts SB social and behavioral science SG natural science general core courses SQ statistical science quantitative Cultural diversity in the United States Global health care See General Studies page 83

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

Morrison School of Agribusiness and Resource Management Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Agribusiness	B.S.	Agribusiness finance, e-commerce, food and agribusiness marketing, food science, general agribusiness, golf and facilities management, international agribusiness, management of agribusiness, preveterinary medicine, professional golf management, resource management	Morrison School of Agribusiness and Resource Management
Applied Science	B.A.S.	Consumer products technology, food retailing, resource team specialist	Morrison School of Agribusiness and Resource Management
Environmental Resources	B.S.	Ecology, watershed ecology, wildlife habitat management	Morrison School of Agribusiness and Resource Management

The school offers the M.S. degree in Agribusiness and the M.S. degree in Environmental Resources. Agribusiness students may select either a research-oriented program, which leads to the completion of a supervised thesis, or a program consisting of course work only (nonthesis option). All M.S. candidates in Agribusiness must complete a minimum of 36 semester hours. Students in the Environmental Resources degree program may study natural resource management, Geographic Information System remote sensing, and animal plant ecology. All M.S. candidates in Environmental Resources must complete 30 semester hours of approved graduate work. See the *Graduate Catalog* for more information.

See the "Morrison School of Agribusiness and Resource Management Baccalaureate Degrees and Majors" table on this page. For graduate degrees, see the "Morrison School of Agribusiness and Resource Management Graduate Degrees and Majors" table, page 631.

ADMISSION

The Morrison School of Agribusiness and Resource Management admits students to the B.S. degree programs who meet the undergraduate admission requirements of Arizona State University (see "Undergraduate Admission," page 58). Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree from a regionally accredited U.S. postsecondary educational institution. A GPA of 2.00 or higher is required for all resident applicants and 2.50 for nonresident applicants.

GRADUATION REQUIREMENTS

Agribusiness—B.S.

The completion of a minimum of 120 semester hours including First Year Composition, General Studies (see "General Studies," page 83), and the school and concentration requirements leads to the B.S. degree. Note that all three General Studies awareness areas are required. An overall GPA of 2.00 is required for graduation and students must have completed a minimum of 45 semester hours of upper division credit. Also see special graduation requirements under "Preveterinary Medicine," page 630.

Prerequisite Courses. Students who select the concentrations in agribusiness finance, food and agribusiness marketing, food science, general agribusiness, golf and facilities management, international agribusiness, management of agribusiness, professional golf management, or resource management must complete the following courses, some of which can also be used to meet university General Studies requirements:

ACC 231	Uses of Accounting Information I	3
ACC 240	Uses of Accounting Information II	3
BIO 101	The Living World SQ	4
CHM 101	Introductory Chemistry SQ	4
ECN 101	Macroeconomic Principles SB	3
ECN 102	Microeconomic Principles SB	3
ENG 301	Writing for the Professions L	3
MAT 210	Brief Calculus MA	3
Total		26

¹ This course is not required for the professional golf management concentration.

² This course is not required for the golf and facilities management or professional golf management concentration.

Core Requirements. Agribusiness employers require their employees to possess a wide range of skills and competencies. Rapid changes in information technology and the increasingly competitive food production and distribution sector mean that agribusiness needs graduates equipped to deal with these changes. The agribusiness core, required of all the concentrations, is designed to give students these skills. The core consists of courses in business principles, management, marketing and finance, as well as in the fundamentals of agribusiness operations management.

AGB 101	Introduction to Agribusiness	3
AGB 106	Computer Application for Agribusiness Industries CS	3
AGB 310	Agribusiness Management	3
AGB 320	Agribusiness Marketing I	3
AGB 322	Agribusiness Marketing II	3
AGB 332	Agribusiness Finance I	3
ACB 333	Agribusiness Finance II	3
AGB 360	Agribusiness Statistics CS	3
AGB 364	Agribusiness Technologies	3
AGB 365	Agribusiness Technologies II	3

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

AGB 410 Agribusiness Management II	3
AGB 414 Agribusiness Analysis I	3
Core total	36

* This course is not required for the professional golf management or golf and facilities management concentrations.

Concentrations

After completing the required agribusiness core, students select a concentration in their area of interest. A concentration allows a student to select a series of courses that complement the agribusiness core, supplement the student's desire to master another area of interest, and broaden career opportunities.

E-commerce Concentration. The extraordinary growth of e-commerce in the business and agribusiness venues provides significant opportunities for students prepared to work in this medium. A student following this concentration builds on the prerequisite core and the agribusiness core to prepare for this field. The opportunities for personal development, advancement, and success are present domestically and internationally.

E-commerce

AGB 436 Entrepreneurship and Financial Management (E-commerce)	3
AGB 463 Electronic Commerce Applications	3
AGB electives	8
Agribusiness core	36
Agribusiness prerequisite courses	26
Website design course	3
Total	79

Agribusiness Finance Concentration. Agribusiness finance concentration graduates are expected to possess a broad knowledge of financial theory and practice as it pertains to the agribusiness sector. This will involve applying quantitative and computer-based analytical techniques to real-world agribusiness problems. Specific course content includes topics in financial management, financial markets, risk management, and the evaluation of financial assets and business alternatives.

Agribusiness Finance

AGB 334 Agricultural Commodities	3
AGB 431 Intermediate Agribusiness Financial Management	3
AGB 434 Agricultural Risk Management and Insurance	3
AGB electives	8
Agribusiness core	36
Agribusiness prerequisite courses	26
Total	79

Management of Agribusiness Concentration. Agribusiness managers encounter many problems and opportunities on a daily basis that are unique to the agribusiness sector. Students choosing this concentration develop skills in managing people, internal resources, and external relationships in an increasingly dynamic environment.

Management of Agribusiness

AGB 351 Management Science	3
AGB 350 Applied Microeconomics	3

AGB 411 Agricultural Cooperatives	3
or AGB 480 Agribusiness Policy and Government Regulations (3)	
AGB electives	8
Agribusiness core	36
Agribusiness prerequisite courses	26
Total	79

Food and Agribusiness Marketing Concentration. Students in the food and agribusiness marketing concentration develop critical skills relevant to dealing with firms involved in food, fiber, consumer products, and pharmaceutical manufacturing; distribution, and retailing. Students also learn about the relationship between input suppliers, commodity associations, and primary producers. To this end, food and agribusiness marketing students are required to complete a series of courses that analyze the behavior and performance of both commodity and consumer food markets.

Food and Agribusiness Marketing

AGB 334 Agricultural Commodities	3
or AGB 420 Food Marketing (3)	
AGB 422 Consumer Behavior	3
AGB 429 Marketing Research	3
AGB electives	8
Agribusiness core	36
Agribusiness prerequisite courses	26
Total	79

Food Science Concentration. The food science concentration focuses on both scientific and technical competency skills with an emphasis on food microbiology, food chemistry, biotechnology, mathematics, and statistics. This unique program prepares graduates for employment opportunities in the food, beverage and dairy industries; regulatory agencies such as the FDA and USDA; international organizations such as FAO and WHO; and consumer organizations. In addition, graduates may choose to pursue advanced degrees.

Food Science

AGB 340 Food Processing	3
AGB 440 Food Safety	3
AGB 442 Food and Industrial Microbiology	4
AGB upper division electives	7
Agribusiness core	36
Agribusiness prerequisite courses	26
Total	79

General Agribusiness Concentration. The general agribusiness concentration offers students a chance to build a broad perspective in the field of agribusiness. In an age of specialization, there remains a growing need for generalists. These individuals have mastered finance, marketing, management, and other technologies such as computers and statistics and are capable of demonstrating this mastery.

General Agribusiness

AGB 334 Agricultural Commodities	3
AGB electives	14

L = literacy and critical inquiry MA = mathematics CS = computer statistics quantitative applications HU = humanities & life sciences SB = social and behavioral sciences SG = natural science general core courses SQ = natural science quantitative & diversity the United States & global history & culture See "General Studies" page B3

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

Agribusiness core	36
Agribusiness prerequisite courses	26
Total	79

International Agribusiness Concentration. A student studying international agribusiness is typically preparing for a career with government agencies oriented toward international issues; programs of agribusiness for or in developing countries; U.S. agribusiness firms affected significantly by trade; or U.S. based international agribusiness firms. This concentration requires a mastery of subjects in international trade, agricultural development, international policy, and global marketing practices and institutions.

International Agribusiness

AGB 450 International Agricultural Development G	3
AGB 452 International Agricultural Policy ..	3
AGB 454 International Trade	3
AGB electives	8
Agribusiness core	36
Agribusiness prerequisite courses	26
Total	9

Professional Golf Management Concentration. The Professional Golf Management (PGM) concentration, accredited by the Professional Golfer's Association (PGA) of America, is specifically designed for students who aspire to become Class A PGA Professionals and work in management careers in the golf industry. International students admitted to this program should be aware that membership in the PGA of America is restricted to U.S. citizens and resident aliens. PGM students complete the agribusiness core, which helps them develop the critical skills needed to manage complex organizations. In addition, the PGM concentration requires a minimum of 23 semester hours of golf related curriculum, of which nine hours consist of hands on internship experience at golf facilities. The remaining 14 semester hours include courses selected from the following areas: golf course operations, turf grass management, club fitting and repair, pro shop merchandising, movement analysis, sports psychology and equipment, mechanics and shop maintenance and repair. Students must also complete the majority of requirements in the PGA Golf Professional Training Program, including the PGA Playing Ability Test. All golf related courses and internships are selected with the assistance of the PGM program director.

PGM Admission. To be admitted to the PGM program, students must meet a playing ability test. Call the PGM director at 480 727 1017 for more information.

Professional Golf Management

Agribusiness core	30
Agribusiness prerequisite courses	22
Professional golf management courses	14
Professional golf management internship	9
Total	75

Golf and Facilities Management Concentration. The Golf and Facilities Management (GFM) concentration is designed to prepare students for careers as golf course superintendents. Through the agribusiness core, students develop the critical skills needed to manage complex orga-

nizations. In addition, the GFM concentration requires a minimum of 25 semester hours of golf and facilities management related curriculum, of which six hours consist of hands on internship experience at golf courses. The remaining 19 semester hours include courses selected from the following areas: golf course operations, plants and landscaping, soils, irrigation and water management, fertilizers, pest control, turf grass management, mechanics and shop maintenance and repair. The GFM concentration also requires the student to complete six semester hours of internship experience at golf facilities, providing valuable hands on experience. Call the GFM program coordinator at 480 727 1256 for additional information.

Golf and Facilities Management

Agribusiness core	30
Agribusiness prerequisite courses	23
Golf and facilities management courses	19
Internship	6
Total	78

Prerequisite Courses for Preveterinary Medicine. Students who select the preveterinary medicine concentration must take the following courses, some of which can also be used to meet the General Studies requirement.

ACC 230 Uses of Accounting Information I	3
BCH 361 Principles of Biochemistry	3
BIO 87 General Biology I SQ	4
BIO 88 General Biology II SG	4
BIO 340 General Genetics	4
CHM 13 General Chemistry SQ	4
CHM 115 General Chemistry with Qualitative Analysis SQ ..	5
or CHM 116 General Chemistry SQ 4	
Choose between the course combinations below	4-8
CHM 231 Elementary Organic Chemistry SQ 3	
CHM 235 Elementary Organic Chemistry Laboratory SQ (1 ¹)	
CHM 331 General Organic Chemistry 3	
CHM 332 General Organic Chemistry 3	
CHM 335 General Organic Chemistry Laboratory 1	
CHM 336 General Organic Chemistry Laboratory 1	
ECN 112 Microeconomic Principles SB	3
ENG 31 Writing for the Professions L	3
MAT 210 Brief Calculus M4	3
MIC 205 Microbiology SG	3
MIC 206 Microbiology Laboratory SG ²	1
PHY 111 General Physics SQ ³	3
PHY 113 General Physics Laboratory SQ ³	1
Upper division AGB, BIO, or ERS	6
Total	53-58

¹ Both CHM 231 and 235 must be taken to secure SQ credit.
² Both MIC 205 and 206 must be taken to secure SG credit.
³ Both PHY 111 and 113 must be taken to secure SQ credit.

Preveterinary Medicine. A student studying agribusiness could also be preparing for admission to a professional veterinary school. While completing the courses needed for acceptance into veterinary school, the student is broadening his or her career potential with agribusiness courses. The major reason for the lack of success as a professional veterinarian is rarely bad medicine or science. It is often a lack of knowledge of how to run a business or practice. In addition,

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

Morrison School of Agribusiness and Resource Management Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Agribusiness	M.S.	Agribusiness management and marketing, food quality assurance	Morrison School of Agribusiness and Resource Management
Environmental Design and Planning*	Ph.D.	Design; history, theory and criticism; planning	Committee on Environmental Design and Planning
Environmental Resources	M.S.	GIS remote sensing, natural resource management, range ecology	Morrison School of Agribusiness and Resource Management

* Courses for the interdisciplinary program administered by ASU Main are also offered at ASU East

should a preveterinary student decide not to apply to a veterinary school, this major provides alternative career paths into human or veterinary pharmaceutical industries or the food industry. This concentration permits students to complete the preveterinary requirements for entrance to professional veterinary school.

Preveterinary Medicine

Agribusiness core . . . . .	. . . . .	. . . . .	. . . . .
AGB 300 Agribusiness Management I	3		
AGB 32 Agribusiness Marketing I	3		
AGB 332 Agribusiness Finance I	3		
AGB 360 Agribusiness Statistics	CS 3		
AGB 364 Agribusiness Technologies I	3		
AGB 365 Agribusiness Technologies II	3		
AGB 414 Agribusiness Analysis	L 3		
Preveterinary medicine prerequisites . . . . .	. . . . .	. . . . .	. . . . .
Total . . . . .	. . . . .	. . . . .	. . . . .

Veterinary College Acceptance. A student who has been accepted to a school of veterinary medicine before he or she has earned a B.S. degree in the Morrison School may do so by completing a minimum of 30 semester hours at ASU and the General Studies requirement. Students must receive a written statement from the dean of the Morrison School giving senior in absentia privileges. A student is eligible to receive the B.S. degree after the ASU Office of the Registrar receives a recommendation from the dean of the veterinary professional school and a transcript indicating the student has completed the necessary semester hours commensurate with ASU graduation requirements.

Veterinary Medical Schools. There are approximately 27 schools of veterinary medicine in the United States. Each school establishes the specific prerequisites that are required for admission. Advisors in the Morrison School assist students in designing their class schedules to meet the requirements of the veterinary schools to which they plan to apply. Each school generally looks for courses in biology, chemistry, genetics, microbiology, and organic chemistry. In addition to a science foundation, all students must meet the University General Studies requirement, complete 45 semester hours of upper-division courses, and satisfy the school requirements.

Resource Management Concentration. The resource management concentration combines the agribusiness concentration core with solid technical preparation in biology, chemistry, and or economics. There is a growing demand by industry and government for persons who understand both

the technical and managerial bases for sustainable development, remediation and or utilization of natural resources for agribusiness, conservation, and habitat restoration. Courses and field projects prepare the student to analyze, develop, and manage programs that make use of land and water in an economic as well as environmentally sustainable fashion.

Resource Management Concentration Prerequisite Courses.

Students who select the resource management concentration must complete the following courses, some of which can also be used to meet university General Studies requirements:

ACC 230 Uses of Accounting Information	L	. . . . .	3
BIO 187 General Biology I	SQ	. . . . .	4
BIO 188 General Biology II	SG	. . . . .	4
CHM 101 Introductory Chemistry	SQ	. . . . .	4
CHM 231 Elementary Organic Chemistry	SQ ¹	. . . . .	3
CHM 235 Elementary Organic Chemistry Laboratory	SQ ¹	. . . . .	1
ECN 112 Microeconomic Principles	SB	. . . . .	3
ENG 301 Writing for the Professions	L	. . . . .	3
MAT 210 Brief Calculus	MA	. . . . .	3
PHY 111 General Physics	SQ ²	. . . . .	3
PHY 113 General Physics Laboratory	SQ ²	. . . . .	1

¹ Both CHM 231 and 235 must be taken to secure SQ credit
² Both PHY 111 and 113 must be taken to secure SQ credit

Resource Management

AGB 455 Resource Management	SB	. . . . .	3
AGB 490 Agribusiness Policy and Government Regulations		. . . . .	3
ETM 301 Environmental Management		. . . . .	3
Agribusiness core . . . . .	. . . . .	. . . . .	36
Resource Management prerequisites . . . . .	. . . . .	. . . . .	43
Total . . . . .	. . . . .	. . . . .	88

GRADUATION REQUIREMENTS

The completion of a minimum of 120 semester hours including the First-Year Composition requirement, General Studies (see "General Studies," page 83), the Environmental Resources core, and selected concentration requirements leads to the B.S. degree. An overall GPA of 2.00 and a minimum grade of "C" in the Environmental Resources core are required for graduation. Students must have completed a minimum of 45 semester hours of upper division credit.

Literacy and critical inquiry MA mathematics CS computer statistics quantitative applications HU humanities SB social and behavioral sciences SG natural science—general courses SQ natural science quantitative C university in the United States G global health See General Studies page 83

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

Some of the Environmental Resources core courses may also be used to meet General Studies requirements

Environmental Resources—B.S.

The primary emphasis of the Environmental Resources major is natural resource management and conservation. Particular attention is given to the study of ecosystem characteristics as they relate to the use of renewable resources. Students learn applications of ecological principles to resource management through examples drawn from forest, range, riparian, and urban ecosystems. The Environmental Resources major offers three concentrations: ecology, watershed ecology, and wildlife habitat management.

Environmental Resources Core

BIO 187	General Biology I SQ	4
BIO 188	General Biology II SQ	4
CHM 101	Introductory Chemistry SQ	4
CHM 231	Elementary Organic Chemistry SQ	3
CHM 235	Elementary Organic Chemistry Laboratory SQ	1
ERS 13	Introduction to Environmental Science	4
ERS 27	Applied Plant Taxonomy	3
ERS 225	Soils	3
CRS 226	Soils Laboratory	1
CRS 240	Environmental Conservation and Ecology	3
ERS 301	Ecology	3
ERS 35	Environmental Statistics CS	3
ERS 365	Watershed Management	3
ERS 42	Vegetation Measurement	4
ERS 48	Ecosystem Management and Planning L	3
ERS 485	GIS in Natural Resources	3
ERS 49	Recent Advances in Environmental Resources	1
MAT 2	Brief Calculus MA	3
Core total		33

Both CHM 101 and 235 must be taken to secure SQ credit

Ecology Concentration

The ecology concentration focuses on connections between basic ecological principles and their application to a broad array of environmental challenges across a wide range of ecosystems. Course work concentrates on the interrelationships of soil, water and vegetation systems and the fauna that inhabit these systems. In addition to a strong foundation in these areas, students are provided with the analytical tools and skills to evaluate and apply ecological concepts to non-anthropogenic issues. Potential employers of graduates in this field of study include federal resource management agencies, environmental protection agencies, departments of environmental quality, state land departments, and private environmental consulting firms.

This concentration is completed by taking the ERS core curriculum and 23 semester hours of courses listed below with a minimum of 10 semester hours from each group.

Additional courses must be approved by an advisor

GPH 4	Introduction to Biology I Laboratory SQ	1
ERS 37	Plant Identification	4
ERS 311	Applied Ecology	4
ERS 42	Ecological Restoration	3
ERS 425	Sociospatial Management	3
ERS 435	Riparian Ecosystem Management	3
CRS 434	Wetland Ecosystems and Soils	3
ERS 46	Applied Systems Ecology	3
ETM 3	Environmental Management	3

GLG 1	Introduction to Geology I Physical SQ	3
GLG 3	Introduction to Geology I Laboratory SQ	1
CPH 1	Introduction to Physical Geography SQ	4
GPH 210	Society and Environment C	4
P.B. 308	Plant Physiology	4
Group B I		
ERS 364	Surface Water Hydrology	3
ERS 448	Soil Ecology	3
ERS 449	Landscape Ecology	3
ERS 474	Wildlife Ecology	3
ERS 475	Wildlife Management	4
ERS 48	Environmental Risk Assessment and Management	3
ERS 486	Remote Sensing in Environmental Resource	4
GPH 314	Global Change HLG	3
GPH 38	Geography of Natural Resources C	3
GPH 418	Landforms of the Western United States L	3
GPH 451	Environment Geography	3

Both GLG 1 and 3 must be taken to secure SQ credit

Watershed Ecology Concentration

The watershed ecology concentration underscores the importance of understanding and placing environmental processes and problems at the watershed or landscape level. Students completing this concentration have a solid background in physical and biological sciences. Upper division course work focuses on providing the intellectual capability and tools to address water-related management issues. Graduates may pursue careers with federal and state agencies or in the private sector as resource managers, environmental health specialists, or consultants.

This concentration is completed by taking the ERS core curriculum and 25 semester hours of courses listed below, with a minimum of 10 semester hours from each group.

Additional courses must be approved by an advisor

ERS 337	Environmental Chemistry	3
ERS 31	Plant Identification	4
ERS 31	Applied Ecology	4
ERS 333	Water Resources Management	3
ERS 364	Surface Water Hydrology	3
ERS 47	Sociospatial Management	3
ERS 460	Applied Systems Ecology	3
ERS 465	Surface Water Quality	3
ETM 32	Water and Wastewater Treatment Technology	4
GPH 11	Introduction to Geology I Physical SQ	3
GPH 3	Introduction to Geology I Laboratory SQ	1
GPH 7	Introduction to Meteorology SQ	3
CPH 214	Introduction to Meteorology Laboratory SQ	1
Group B F		
ERS 420	Ecological Restoration	3
ERS 435	Riparian Ecosystem Management	3
ERS 47	Environmental Risk Assessment and Management	3
ERS 480	Remote Sensing in Environmental Resources	4

Both GPH 212 and 214 must be taken to secure SQ credit.

Wildlife Habitat Management Concentration

The wildlife habitat management concentration focuses on the connection between wildlife ecology and habitat management. The student completing this concentration gains a solid background in wildlife biology, coupled with a strong understanding of the physical and biological elements of vegetation ecology. Upper division course work

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

provides those necessary tools to meet the challenges of maintaining a balance between biological diversity and social pressures on the wildland resources. Potential employers of graduates from this field of study include the U.S. Fish and Wildlife Service, U.S. Forest Service, Bureau of Land Management, Department of Defense, state wildlife management departments, and private environmental consulting firms.

This option is completed by taking the ERS core curriculum and 25 semester hours of courses listed below, with a minimum of 10 semester hours from each group.

Additional courses must be approved by an advisor.

<i>Group A: Invertebrate and Vertebrate Wildlife Habitat Management</i>	
BIO 331 Animal Behavior	3
BIO 340 General Genetics	4
BIO 360 Animal Physiology	3
BIO 370 Vertebrate Zoology	4
BIO 385 Comparative Invertebrate Zoology	4
BIO 426 Limnology	4
BIO 470 Ornithology	3
BIO 472 Mammalogy	4
BIO 474 Herpetology	3
<i>Group B: Field Activities in Terrestrial Wildlife Habitat Management</i>	
ERS 307 Plant Identification	4
ERS 311 Applied Ecology	4
ERS 355 Wildlife Nutrition	3
ERS 420 Ecological Restoration	3
ERS 433 Riparian Ecosystem Management	3
ERS 434 Wetland Ecosystems and Soils	3
ERS 460 Applied Systems Ecology	3
ERS 474 Wildlife Ecology	3
ERS 475 Wildlife Management	4
ERS 456 Remote Sensing in Environmental Resources	4

Environmental Resources Minor

A minor in Environmental Resources is available to students who are interested in environmental courses but who wish to pursue other majors. A minimum of 27 semester hours of course work is required with 15 semester hours of upper division courses in environmental resources. A grade of "C" or higher is required for all courses taken for the minor. Independent study and special topics courses may not be used to satisfy the minimum course requirements.

Required courses

BIO 157 General Biology I SQ	4
BIO 158 General Biology II SC	4
ERS 225 Soils	3
ERS 226 Soil Laboratory	1
ERS 311 Ecology	3
Addl total upper division ERS courses	2
Total	22

APPLIED SCIENCE—B.A.S.

The Bachelor of Applied Science degree is a capstone degree for the Associate of Applied Science degree. The B.A.S. degree exposes students to advanced concepts and diverse critical thinking skills to prepare them for future career opportunities and professional advancement.

Admission

Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree from a regionally accredited U.S. postsecondary educational institution. A GPA of 2.00 or higher is required for all resident applicants and 2.50 for nonresident applicants.

B.A.S. Degree Graduation Requirements

The B.A.S. degree program consists of 60 semester hours of upper division courses with 30 semester hours in residence. An overall GPA of 2.00 or higher is required.

A.A.S. degree	6
Assignable credit	6
B.A.S. core	16
Concentration	19
General Studies	19
Total	126

General Studies Curriculum. The B.A.S. curriculum builds on the general education content of the A.A.S. degree. Additional General Studies courses are taken in the core or concentration. General Studies courses focus on contextual learning.

Literacy and critical inquiry	3
MA mathematics	3
HU humanities	3
HU or SB social and behavioral science	3
SB social and behavioral science	3
SG natural science	4
Total	19

Assignable Credit. Assignable credit allows space in the curriculum for prerequisite courses. The courses are determined by the student and advisor.

B.A.S. Core

AGB 301 Agribusiness Management I	3
AGB 302 Agribusiness Marketing I	3
AGB 360 Agribusiness Statistics I	3
AGB 404 Agribusiness Analysis I	3
AGB 405 Agribusiness Management Systems	4
Total	16

Consumer Products Technology Concentration. Students studying consumer products technology prepare for a career in the food and consumer products industries. Students learn to develop food, drug, cosmetic, and other consumer products and to ensure product safety in the marketplace by obtaining a thorough mastery of courses in product and package design, manufacturing, processing, and safety.

Consumer Products Technology

AGB 340 Food Processing	3
AGB 364 Agribusiness Technologies I	3
AGB 440 Food Safety	3
MET 341 Manufacturing Analysis	3
MET 494 ST Consumer Manufacturing	3

Literacy and critical inquiry MA mathematics CS computer statistics quantitative application HU humanities and culture SB social and behavioral science SG natural science general education SQ statistical quantitative curriculum diversity United States global history and general studies page 83

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

MET 494 ST: Packaging Design.....3
 AGB elective1
 Total19

Food Retailing Concentration. A student studying food retailing prepares for a career in the food marketing and distribution industries. Potential employers are food manufacturing and processing companies, distribution centers, wholesalers, and all types of food retailers, e.g., supermarkets, mass merchandisers, fast food outlets, restaurants, and direct marketers of food.

Food Retailing
 AGB 332 Agribusiness Finance I.....3
 AGB 340 Food Processing.....3
 AGB 420 Food Marketing.....3
 AGB 440 Food Safety3
 AGB 445 Food Retailing.....3
 AGB 484 Internship1
 AGB elective3
 Total19

Resource Team Specialist Concentration. The resource team specialist concentration combines the technical preparation acquired in an A.A.S. program with a special orientation in environmental and resource management. This concentration prepares individuals to participate as an integral part of an environmental emergency response team as well as postemergency biological and environmental rehabilitation efforts.

Resource Team Specialist
 AGB 332 Agribusiness Finance I.....3
 AGB 457 Resource Policy and Sustainability.....3
 AGB 484 Internship1
 ETM 301 Environmental Management.....3
 ETM 303 Environmental Regulations.....3
 AGB electives6
 Total19



Mary Ann Turney, associate professor in the Department of Aeronautical Management Technology at ASU East

Tim Trumble photo

Morrison School of Agribusiness and Resource Management

www.east.asu.edu/msabr
 480/727-1585
 CNTR 20

Raymond A. Marquardt, Dean

Professors: Brady, Brock, Daneke, Edwards, Kagan, Marquardt, Seperich, Shultz, Thor

Associate Professors: Green, Miller, Patterson, Raccach, Richards, Whyson

Assistant Professors: Manfredo, Schmitz, Stanton

Senior Lecturer: Lindley

AGRIBUSINESS (AGB)

- AGB 100 Introduction to Agribusiness. (3)**
fall
 Overview of agribusiness industries and career opportunities.
- AGB 161 Computer Applications for Agribusiness Industries. (3)**
spring
 Uses and integrates word processing, spreadsheets, and databases as tools for managing an agribusiness firm. Lecture, lab.
General Studies: CS
- AGB 171 Animal Science. (3)**
spring
 Comparative growth, development, and propagation of domestic animals.
- AGB 191 First-Year Seminar. (1-3)**
selected semesters
- AGB 194 Special Topics. (1-4)**
selected semesters
- AGB 258 International Agribusiness. (3)**
fall
 Identifies and analyzes methods, problems, and future of international agribusiness operations. Emphasizes special problems associated with international agribusiness systems.
General Studies: G
- AGB 266 Golf Course Irrigation. (3)**
fall and spring
 Design, management, and maintenance of golf course irrigation systems. Lecture, lab.
- AGB 271 Veterinary Medicine Today. (3)**
spring
 Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.
- AGB 294 Special Topics. (1-4)**
selected semesters
- AGB 310 Agribusiness Management I. (3)**
fall
 Principles of management, including planning, organizing, integrating, measuring, and developing people in agribusiness organizations.
- AGB 311 Establishing an Agribusiness. (3)**
fall
 Opportunities and problems associated with new firm development in agribusiness. Business plan is written and presented orally.

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

AGB 320 Agribusiness Marketing I. (3)

fa and spring

Examines marketing strategy focusing on the marketing mix: product price promotion and place in a dynamic socioeconomic environment Prerequisites ACC 230 240, AGB 360, ECN 112.

AGB 321 Agribusiness Marketing II. (3)

fa and spring

Examines the food marketing system with emphasis on the marketing institutions arrangements and methods for basic commodities Prerequisites ACC 230 240, AGB 360; ECN 112

AGB 332 Agribusiness Finance I. (3)

fa and spring

Introduces concepts in agribusiness financial management time value of money, risk and return, capital budgeting and cost of capital Prerequisites ECN 111 and 112 or the equivalents introductory accounting

AGB 333 Agribusiness Finance II. (3)

spring

Introduces financial markets and institutions interest rate determination money and banking equity markets, farm credit system vendor financing Prerequisites ECN 111 and 112 or the equivalents introductory accounting

AGB 334 Agricultural Commodities. (3)

fa

Trading on futures market Emphasis on the hedging practices with grains and meats Prerequisite AGB 320

AGB 340 Food Processing. (3)

fa

Introduces processed food quality assurance statistical sampling and inspection procedures Prerequisite AGB 364

AGB 341 Food Analysis. (3)

selected semesters

Processing control and scientific instrumentation used in food quality assurance laboratories Prerequisites AGB 364 CHM 101

AGB 351 Management Science. (3)

fa

Focus on the construction solution, and interpretation of quantitative models used for management decision making in agribusiness firms Prerequisites AGB 320 360 ECN 112 MAT 117
General Studies CS

AGB 355 Sustainable Agriculture Systems. (3)

fa and spring

Innovative development in precision farming irrigation soil age methods machinery and biotechnology in crop production

AGB 360 Agribusiness Statistics. (3)

fa and spring

Statistical methods with applications in agribusiness and resource management Lecture computer lab Prerequisite college algebra
General Studies CS

AGB 364 Agribusiness Technologies I. (3)

fa

Examines methods of managing diverse crop and livestock enterprises with emphasis on growth development marketing and conservation Prerequisite BIO 100

AGB 365 Agribusiness Technologies II. (3)

fa

Biotechnology and other methods used in the production processing and distribution of food Prerequisite BIO 100

AGB 366 Golf Turf Management. (2)

fa and spring

Select on establishment and maintenance of turf grasses bred specifically for golf greens fairways and roughs Lecture lab

AGB 367 Golf Course Landscape Plants and Design. (3)

fa and spring

Identification culture and use of plants in a golf course setting Cross listed as PLB 363 Credit awarded for only AGB 367 or PLB 363
Fee

AGB 370 Wildlife and Domestic Animal Nutrition. (3)

spring

Survey of nutritional needs of domestic and wild animals Prerequisite a General Studies SQ course.

AGB 371 Animal Genetics. (3)

fa

Principles of animal genetics including heritable traits chromosomes aberrations population genetics molecular genetics and gene regulation Prerequisites BIO 187, 188

AGB 380 Applied Microeconomics. (3)

fa and spring

Emphasize application of the theory of the firm theory of exchange, and consumer theory

AGB 394 Special Topics. (1-4)

selected semesters

AGB 410 Agribusiness Management II. (3)

spring

Principles of human resource management in agribusiness firms Prerequisite AGB 310

AGB 411 Agricultural Cooperatives. (3)

spring

Organization operation, and management of agricultural cooperatives

AGB 414 Agribusiness Analysis. (3)

fa and spring

Analysis of agribusiness firm decisions in the economic, social, and political environments Special emphasis on ethical issues surrounding food production and consumption
General Studies L

AGB 420 Food Marketing. (3)

spring

Food processing packaging, distribution, market research, new food research and development and social implications Prerequisite AGB 320

AGB 422 Consumer Behavior. (3)

fa

Apples behavior concepts in analyzing consumer food purchases and the implications for marketing strategies Prerequisite completion of Agribusiness core or its equivalent

AGB 424 Sales and Merchandising in Agribusiness. (3)

summer

Principles and techniques of selling and merchandising in the agricultural and food industries

AGB 425 Agricultural Marketing Channels. (3)

fa

Operational stages of agricultural commodities in normal distribution systems and implementation of marketing strategies Prerequisite AGB 320

AGB 429 Marketing Research. (3)

fa

Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design and data analysis Prerequisite completion of Agribusiness core or its equivalent

AGB 431 Intermediate Agribusiness Financial Management. (3)

spring

Comprehensive treatment of topics in financial management of agribusiness: capital structure dividend policy asset valuation mergers and acquisitions risk management. Prerequisites AGB 332 333

AGB 433 Intermediate Agribusiness Financial Markets. (3)

spring

Role and function of agribusiness in U.S. financial system Topics include rural banking farm credit system monetary policy and federal reserve Prerequisite completion of Agribusiness core or its equivalent

AGB 434 Agricultural Risk Management and Insurance. (3)

fa

Strategies to manage agricultural price and business risk derivatives insurance, self insurance, and public policy Prerequisite completion of Agribusiness core or its equivalent

Literacy and critical inquiry MA mathematics CS computer statistics quantitative applications HU humanities and fine arts SB social and behavioral sciences SG natural science gene core courses SQ natural science—quantitative C ulture diversity in the United States G global Health to a See "General Studies" page 83

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

AGB 436 Entrepreneurship and Financial Management of E-commerce (3)

fa
Uses lecture, case studies, and business plans to highlight challenges of starting and running a small business. e-lecture, seminar, case study, computer labs.

AGB 440 Food Safety. (3)

spring
Control, prevention, and prediction of microbial and chemical foodborne diseases. Prerequisite: AGB 442 or instructor approval.

AGB 441 Food Chemistry (3)

spring
Biochemical and chemical interactions that occur in raw and processed foods. Prerequisites: CHM 115, 231.

AGB 442 Food and Industrial Microbiology. (4)

selected semesters
Food and industrial related microorganisms, deterioration and preservation of industrial commodities. Lecture/lab. Prerequisite: a course in microbiology with lecture and lab.

AGB 443 Food and Industrial Fermentations. (3)

spring
Management, manipulation, and metabolic activity of industrial microorganisms and their processes. Prerequisite: AGB 442 or instructor approval.

AGB 445 Food Retailing. (3)

fa
Food retail management. Discusses trends, problems, and functions of food retail managers with various retail institutions. e-lecture, case studies.

AGB 450 International Agriculture Development. (3)

fa
Transition of developing countries from subsistence to modern agriculture. Emphasis placed on implications for U.S. agriculture's working abroad.
Genea Studies G

AGB 452 International Agricultural Policy. (3)

fa
Use of international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agriculture. Prerequisite: ECN 112.

AGB 454 International Trade. (3)

spring
International practices in trading of agricultural commodities and resource products and services.

AGB 455 Resource Management. (3)

spring
Explores differences between sectors and individual valuation of natural resources and considers public policy versus market based solution to environmental concerns. Prerequisite: ECN 112.
General Studies SB

AGB 457 Resource Policy and Sustainability. (3)

fa
Consider the evolution of policy decisions focusing on how resource and environmental concerns have affected agricultural development and trade policies. Prerequisite: ECN 112.

AGB 460 Agr business Management Systems. (4)

spring
Development and use of decision support systems for agricultural business management and marketing. Lecture/lab.

AGB 463 Electronic Commerce Applications. (3)

fa
Overview of electronic commerce technology with introduction to basics of design, contract, operation, organization, and emerging issues. Prerequisite: AGB 460 or its equivalent.

AGB 466 Integrated Pest Control. (2)

fa and spring
Management of pests affecting golf turf and a discipline in turfgrass. Pest Control Board, prayer certification on preparation offered during the semester. Lecture/lab.

AGB 470 Comparative Nutrition. (3)

selected semesters
Effects of nutrition on animal systems and metabolic functions. Prerequisite: HM 231.

AGB 471 Diseases of Domestic Animals (3)

spring
Discusses animal welfare, mechanisms of disease development, causes, and classification of diseases, disease resistance, and common zoonoses. Prerequisite: BIO 188.

AGB 473 Animal Physiology I. (3)

selected semesters
Control and function of the nervous, muscular, cardiovascular, respiratory, and renal systems of domestic animals. Prerequisites: BIO 188, CHM 113.

AGB 479 Veterinary Practices. (3)

fa and spring
Observation of and participation in veterinary medicine and surgery supervised by a veterinarian. Prerequisite: advanced preveterinary student.

AGB 480 Agr business Policy and Government Regulations. (3)

spring
Development and implementation of government food, drug, pesticide, and farm policies and regulations that affect the management of agriculture.

AGB 484 Internship. (1-12)

fa and spring

AGB 492 Honors Directed Study (1-6)

selected semesters
Topics may include the following:
• Recent Advances in Food Science 1

AGB 493 Honors Thesis. (1-6)

selected semesters

AGB 494 Special Topics. (1-4)

selected semesters

AGB 498 Pro-Seminar. (1-7)

selected semesters

AGB 499 Individualized Instruction. (1-3)

selected semesters

AGB 500 Research Methods. (1-12)

selected semesters

AGB 501 Master's Thesis Preparation. (1)

fa and spring
Step-by-step guidelines to major elements of a master's thesis along with practical guidelines for conducting research.

AGB 511 Advanced Agribusiness Management. (3)

spring
Analyzes organizational behavior, change, and resource requirements within agricultural systems.

AGB 512 Food Industry Management. (3)

spring
Operations and management of food processing facilities, food distributors, and retail food handling firms.

AGB 513 Advanced Cooperatives. (3)

fa
Advanced study of cooperatives and other nongovernmental organizations. NGO focusing on management and proposal preparation for international agencies.

AGB 514 Advanced Agribusiness Analysis I. (3)

spring
Vertical integration and differentiation in food and agricultural industries. Prerequisite: AGB 528.

AGB 515 Agr business Coordination. (3)

spring
Organization alternatives for agriculture with emphasis on cooperative and trading companies. Prerequisite: AGB 528.

AGB 528 Advanced Agribusiness Marketing. (3)

fa
Theory and analysis of marketing farm commodities, risks, and the effect of future trading on cash prices.

AGB 529 Advanced Agribusiness Marketing Channels. (3)

spring
Analyzes agricultural market channel systems. Formulation of marketing strategies.

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

AGB 532 Advanced Agribusiness Finance. (3)

fa

Financial management of agribusiness firms; agribusiness financial analysis; investment analysis, agricultural risk management and introduction to agricultural financial derivatives. Prerequisite: both computer literacy and a course in finance or on instructor approval.

AGB 535 Commodity Analysis. (3)

fa

Analysis of commodity markets.

AGB 536 Small Business Finance, Entrepreneurship, and E-commerce. (3)

fa

Uses lectures, case studies, and business plans to highlight challenges of starting and running a small business. Lecture/seminar/case studies/computer labs.

AGB 540 Advanced Food Science. (3)

se ected semesters

Chemical and physical nature of processed foods. Emphasizes food product development.

AGB 550 International Agricultural Development. (3)

fa

Transition of developing countries from subsistence to modern agriculture. Emphasizes paid on-campus catons for U.S. agribusiness work abroad.

AGB 551 Agribusiness in Developing Countries. (3)

spring

Factors influencing successful development of agribusiness enterprises in developing countries; reducing poverty; access to capital and technology; and trade opportunities.

AGB 552 International Agricultural Policy. (3)

fa

Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.

AGB 554 Advanced International Trade. (3)

fa

Advanced international practices in trading of agribusiness technology and resource products and services.

AGB 557 Resource Policy and Sustainability. (3)

fa

Considers the evolution of policy design focusing on how resource and environmental concerns have affected agricultural development and trade policies.

AGB 558 Advanced Bioremediation. (3)

spring

Management and policy issues related to bioremediation of metals and animal waste and remediation of chemical contamination with biological methods. Lecture/case studies.

AGB 560 Advanced Agribusiness Management Systems. (3)

se ected semesters

Development and use of decision support systems for agribusiness management decisions on making.

AGB 561 Agribusiness Research Methods. (3)

fa

Uses modeling, hypothesis testing, and empirical analysis in solving agribusiness problems.

AGB 570 Managerial Economics for Agribusiness. (3)

fa

Concepts in micro and macroeconomics applied to agribusiness management environments; price formation; market structure; information economics; fiscal and monetary policy. Prerequisites: introductory micro and macroeconomics.

AGB 580 Practicum. (1–12)

se ected semesters

AGB 581 Advanced Agribusiness Policy. (3)

fa

Policy making history, structure, and process.

AGB 583 Field Work. (1–12)

se ected semesters

AGB 584 Internship. (1–12)

se ected semesters

AGB 587 Resource Policy and Sustainability. (3)

fa

Consider the evolution of policies designed focusing on how resource and environmental concerns have affected agricultural development and trade policies.

AGB 589 Agribusiness Capstone. (3)

fa and spring

Strategic management of organizations focusing on developing value creating strategies in dynamic environments. Prerequisite: AGB 511, 528, 532, 56, 561, 570.

AGB 590 Reading and Conference. (1–12)

se ected semesters

AGB 591 Seminar. (1–12)

se ected semesters

AGB 592 Research. (1–12)

se ected semesters

AGB 593 Applied Project. (1–12)

se ected semesters

AGB 594 Conference and Workshop. (1–12)

se ected semesters

AGB 595 Continuing Registration. (1)

se ected semesters

AGB 598 Special Topics. (1–4)

se ected semesters

AGB 599 Thesis. (1–12)

se ected semesters

AGB 600 Research Methods. (1–12)

se ected semester

AGB 690 Reading and Conference. (1–12)

se ected semesters

Omnibus Courses. For a explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

ENVIRONMENTAL RESOURCES (ERS)

ERS 130 Introduction to Environmental Science. (4)

fa

Introduce soil resources, the physical and chemical properties of soils, energy dynamics, and the role they play in the environment. Lecture/lab.

ERS 191 First Year Seminar. (1–3)

se ected semesters

ERS 207 Applied Plant Taxonomy. (3)

spring

Introduces identification of vascular plants. Surveys plant families. Lecture/lab/field trips. Prerequisite: B O 187.

ERS 225 Soils. (3)

fa

Fundamental properties of soils and the relationship to plant growth and the interaction of man and animals. Relationship of soils to environmental quality. Prerequisite: CHM 101 or 113 or its equivalent.

ERS 226 Soils Laboratory. (1)

fa

Selected exercises to broaden the background and understanding of basic concepts. Lab Corequisite: ERS 225.

ERS 246 Environmental Conservation and Ecology. (3)

spring

Principles of environmental conservation from global history and ecological perspectives. Considers development, sustainability issues. General Studies G.

ERS 294 Special Topics. (1–4)

se ected semesters

L: language and culture MA: math at CS: computer literacy quantitative pp: at HU: human and fine art SB: social and behavioral SG: natural science/geography/recreation SQ: natural science—quantitative C: cultural diversity in the United States G: global H: health See eea Student page 3.

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

ERS 301 Ecology. (3)

fa

Introduces the principles of ecology emphasizing vegetation community ecology Field trips Prerequisite: B O 187

ERS 307 Plant Identification. (4)

fa

Identification of key plants of western range and woodlands and forests Laboratory emphasis on grassland identification Lecture, lab Prerequisite: ERS 207 or PLB 310 or its equivalent

ERS 311 Applied Ecology. (4)

spr ng

Ecology case studies and the impact on for management of ecosystems 3 hours lecture 1 hour lab Prerequisite: ERS 225 301 350

ERS 333 Water Resources Management. (3)

selected semesters

Sources of water development and conservation in arid regions for agricultural natural resources and urban uses Prerequisite: CHM 101 or 113

ERS 350 Environmental Statistics. (3)

fa

Statistical methods with applications in natural resource management and the environmental sciences Uses computers and the internet Prerequisite: CSE 180 MAT 117

General Studies: CS

ERS 353 Wildlife Nutrition. (3)

selected semesters

Principles of nutrient metabolism in wildlife species with emphasis on understanding the interaction of wildlife with the environment Prerequisite: a combination of B O 187 and 188 and CHM 101 or on y instructor approval

ERS 364 Surface Water Hydrology. (3)

fa n even years

Hydrologic principles in an ecological context Discharge measurements, open channel hydraulics bedforms sediment transport as applied to ecological problems Lecture lab field trip Prerequisite: ERS 350

ERS 365 Watershed Management. (3)

selected semesters

Hydrologic physical biological and ecological principles applied to watershed management impact of ecosystem manipulations on water yield and quality 1 weekend field trip Prerequisite: ERS 225 246

ERS 402 Vegetation Measurement. (4)

spr ng

Vegetation sampling and inventory as related to animal habitat evaluation Lecture lab 1 weekend field trip Prerequisite: a combination of ERS 311 and 307 and 350 and program manager on y instructor approval

ERS 415 Wildlife Life Histories. (4)

spr ng

Life histories of the moose marmot reptile amphibian and avian species found in the Southwest with emphasis on management Lecture lab Prerequisite: B O 370 or 385

ERS 420 Ecological Restoration. (3)

spr ng

Techniques of ecological restoration applied for the improvement of arid and semiarid land and sensitive habitats Weekend field trip

ERS 425 Soil Classification and Management. (3)

selected semesters

Principles of soil genesis morphology and classification Presents management and conservation practices Prerequisite: ERS 225

ERS 433 Riparian Ecosystem Management. (3)

selected semesters

Examines the functions and components that make up riparian ecosystems and the management of these ecosystems Lecture, field trip Prerequisite: ERS 225 or instructor approval

ERS 434 Wet and Ecosystems and Soils. (3)

selected semesters

Wetland ecosystems structure and function including hydrology and biogeochemistry with special emphasis on soils Lecture weekend field trip Prerequisite: ERS 225 or instructor approval

ERS 448 Soil Ecology. (3)

selected semesters

Soil viewed in an ecosystem context soil plant interactions nutrient budgets and abiotic factors that influence soil processes Prerequisite: a combination of B O 320 and ERS 225 and 226 or on y instructor approval

ERS 449 Landscape Ecology. (3)

selected semesters

Causes and ecological consequences of spatial and temporal patterns in the environment Prerequisite: ERS 301

ERS 460 Applied Systems Ecology. (3)

selected semesters

Systems approach applied to analysis and management of natural resource ecosystems Uses simulation models 2 hours lecture 3 hours lab Prerequisite: ERS 350 or its equivalent a course in ecology

ERS 465 Surface Water Quality. (3)

spr ng n odd years

Examines factors that impact water quality, surface water sampling and analysis with interpretation for wildlife humans, and other users Prerequisite: ERS 364 365

ERS 474 Wildlife Ecology. (3)

selected semesters

Integrates ecological concepts as applied to wildlife populations and the interaction with the habitat and other species Lecture lab 1 weekend field trip

ERS 475 Wildlife Management. (4)

spr ng

Principles and techniques of applied ecology for the management and wildlife population Lecture lab Prerequisite: ERS 311 and 474 or the equivalent

ERS 477 Environmental Risk Assessment and Management. (3)

selected semesters

Survey of methods related to identification evaluation comparison and management of environmental risks Prerequisite: senior standing

ERS 480 Ecosystem Management and Planning. (3)

spr ng

Planning for management and conservation of wildlife and ecosystems Ecological economic and social constraints on long-term sustainable resource development Computer tools for resource planning Lecture 1 weekend field trip Prerequisite: ERS 402 or its equivalent senior standing

General Studies: L

ERS 484 Internship. (1-12)

selected semesters

ERS 485 GIS in Natural Resources. (3)

fa

Principles of Geographic Information Systems GIS utilized in natural resource management Use of computer for spatial analysis of natural resources Lecture, lab Prerequisite: CSE 180 or its equivalent

ERS 486 Remote Sensing in Environmental Resources. (4)

spr ng

Principles and application of remote sensing technologies in natural resource management integration of computerized data from aerial photography and Landsat imagery in resource management Lecture lab Prerequisite: ERS 485 or its equivalent

ERS 489 Undergraduate Research. (1-3)

fa and spr ng

Undergraduate research under the supervision of an environmental resources faculty member Prerequisite: junior or senior status

ERS 490 Recent Advances in Environmental Resources. (1)

fa and spr ng

Current literature and significant developments involving environmental resources May be repeated for credit

ERS 492 Honors Directed Study. (1-6)

selected semesters

ERS 493 Honors Thesis. (1-6)

selected semesters

ERS 494 Special Topics. (1-4)

selected semesters

MORRISON SCHOOL OF AGRIBUSINESS AND RESOURCE MANAGEMENT

ERS 498 Pro-Seminar. (1-7)

se ected semesters

ERS 499 Individualized Instruction. (1-3)

se ected semesters

ERS 500 Research Methods. (1-12)

se e ted semesters

ERS 533 Riparian Ecology. (3)

se ected semesters

Review of recent literature developments, and methods related to riparian ecology. Application of soil and landscape ecology to riparian systems. Lecture, discussion, field trip.

ERS 540 Plant Responses to Environmental Stresses. (3)

se ected semesters

Reaction of plants to environmental stresses: aerobically and anaerobically. Herbivores, mechanical treatments, pesticides, and soil amendments. 1 weekend field trip. Prerequisite: instructor approval.

ERS 550 Vegetation Dynamics. (4)

fa

Dynamics of vegetation: emphasis on ecological succession, application of landscape ecology and GIS, and analysis of vegetation data. Field trips. Prerequisite: a course in introductory statistics.

ERS 551 Advanced Environmental Statistics. (4)

spr ng

Advanced statistical procedures for environmental resources. Techniques for analyzing research data that do not meet assumptions. Student. Prerequisite: ERS 350 or its equivalent.

ERS 553 Advanced Animal Nutrition. (4)

se ected semesters

Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds. Lecture, lab.

ERS 560 Systems Ecology. (3)

se ected semesters

Quantitative description and mathematical modeling of ecosystem structure and function. Techniques for model construction and simulation. Lecture, lab. Prerequisites: ERS 350 or its equivalent; computer programming. 6 hours in ecology class studies.

ERS 561 Spatial Statistics and GIS. (3)

fa

Dependent spatial data analysis and description of semivariograms, variograms, kriging, and GIS analysis. Lecture, lab. Prerequisites: ERS 350 and 485 or their equivalents.

ERS 580 Practicum. (1-12)

se ected semesters

ERS 584 Internship. (1-12)

se ected semesters

ERS 585 Spatial Modeling with GIS. (3)

fa

GIS technology for spatial modeling of natural resources. Practical application of GIS technology for problem solving. Lecture, lab. Prerequisite: ERS 485 or its equivalent or instructor approval.

ERS 590 Reading and Conference. (1-12)

se ected semesters

ERS 591 Environmental Resources Seminar. (1-12)

se ected semesters

ERS 592 Research. (1-12)

se ected semesters

ERS 593 Applied Project. (1-12)

se ected semesters

ERS 594 Conference and Workshop. (1-12)

se ected semesters

ERS 595 Continuing Registration. (1)

se ected semesters

ERS 598 Special Topics. (1-4)

se ected semesters

ERS 599 Theses. (1-12)

se ected semesters

ERS 691 Seminar. (1-12)

se ected semesters

Omnibus Courses. For an examination of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

PROFESSIONAL GOLF MANAGEMENT (PGM)

PGM 100 Introduction to GPTP. (2)

fa and spr ng

Introduces the golf professional training program. Career enhancement features of golf tournament operations and playing professional development programs. Prerequisite: admission to PGM program.

PGM 110 Player Development I. (1)

fa and spr ng

Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test. Lecture, lab. Prerequisite: admission to PGM program.

PGM 111 Player Development II. (1)

fa and spr ng

Instruction to assist PGM students in preparation for Players Ability Test with emphasis on follow-through mechanics and practice plan development. Lecture, lab. Prerequisite: admission to PGM program.

PGM 112 Player Development III. (1)

fa and spr ng

Emphasizes classroom and hands-on applications of follow-through analysis and short game strategies. Special focus on golf course management. Lecture, lab. Prerequisite: admission to PGM program.

PGM 113 Player Development IV. (1)

fa and spr ng

Emphasizes classroom and hands-on applications of follow-through analysis and short game strategies. Special focus on golf course management. Lecture, lab. Prerequisite: admission to PGM program.

PGM 150 Teaching Golf I. (2)

fa and spr ng

Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques. Prerequisite: admission to PGM program.

PGM 200 GPTP II. (2)

fa

Focus on golf professional training program and the completion of the PGA Level One experience kit. Prerequisite: admission to PGM program.

PGM 250 Teaching Golf II. (1)

fa and spr ng

Communication with student golfers. Swing evaluation on key factors contributing to developing a successful teaching practice. Prerequisite: admission to PGM program.

PGM 300 GPTP III. (1)

fa

Business planning and operations. Business communications related to business of golf. Completion of the PGA Level Two experience kit. Prerequisite: admission to PGM program.

PGM 350 Teaching Golf III. (1)

fa and spr ng

Teaching swing concepts. Developing a teaching philosophy. Analyzing flawed swing mechanics through video and swing analysis software. Prerequisite: admission to PGM program.

PGM 400 GPTP IV. (1)

fa

Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit. Prerequisite: admission to PGM program.

PGM 484 Internship. (1-12)

se ected semesters

Omnibus Courses. For an examination of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

Literacy and critical inquiry. **MA** mathematics. **CS** computer statistics. Quantitative applications. **HU** humanities and fine art. **SB** social and behavioral sciences. **SG** natural science general core courses. **SQ** natural science—quantitative. **C** cultural diversity. The United States. **G** global history. See General Studies, page 83.

East College

www.east.asu.edu/ecollege

David E. Schwalm, Ph.D., Dean

PURPOSE

East College was created by the Arizona Board of Regents in February 1997 to serve four purposes:

1. to offer an array of upper division General Studies and general interest courses for students enrolled in ASU East degree programs;
2. to coordinate the Partnership in Baccalaureate Education with Chandler Gilbert Community College through which ASU East students are provided with lower division General Studies and major prerequisite courses;
3. to offer an academic home for students who choose the unique environment of ASU East but do not wish to declare a major immediately; and
4. to develop new degree programs for ASU East

General Studies General Interest. Each semester, East College offers a selection of popular upper division ASU General Studies and general interest courses, primarily for support of ASU East students but open to all ASU students who might find the time or location convenient. East College typically offers courses in anthropology, art, communication, economics, English, history, mathematics, music, philosophy, political science, psychology, religious studies, sociology, and women's studies. Students should refer to the current *Schedule of Classes* for specific courses offered at ASU East each semester. All credit earned at ASU East automatically transfers to ASU Main or ASU West.

East College also offers support courses for the Bachelor of Applied Science (B.A.S.) degree. The applied science core ASC courses are upper division courses specifically designed to build upon the mathematics and science base acquired in the Associate of Applied Science (A.A.S.) degree.

APPLIED MATHEMATICS (APM)

APM 301 Introductory Statistics (3)

selected semesters

Probability, distributions, statistical hypothesis testing, t tests, correlation, and regression. Prerequisite: MAT 117 or instructor approval.

APM 401 Intermediate Statistics. (3)

selected semesters

Analysis of variance, multiple comparison, multiple regression. Prerequisite: APM 301 or its equivalent or instructor approval.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

APPLIED SCIENCE CORE (ASC)

ASC 301 Contextual Uses of Algebra in Technology. (1)

fall and spring

Uses algebra to solve real world technology problems using current available computer software. Prerequisite: B.A.S. major

ASC 302 Contextual Uses of Geometry in Technology. (1)

fall and spring

Uses geometry concepts to solve real world technology problems using current available computer software. Prerequisite: B.A.S. major

ASC 303 Contextual Uses of Trigonometry in Technology. (1)

fall and spring

Uses trigonometry to solve real world technology problems using current available computer software. Prerequisite: B.A.S. major

ASC 315 Numeracy in Technology. (3)

fall and spring

Contextual use of mathematics in applied sciences. Emphasize using mathematical methodologies to solve technology related problems. Prerequisite: B.A.S. major

ASC 325 Physical Sciences in Technology. (4)

fall and spring

Physical systems and their relationship on technology systems. Real world application of physical systems. Lecture and lab. Prerequisite: B.A.S. major

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56.

Partnership in Baccalaureate Education. Through the partnership with Chandler Gilbert Community College,

ASU East students can take first year composition courses and courses that meet lower division ASU General Studies requirements listed in "General Studies," page 83. These courses, combined with introductory courses in the major, are available in an innovative integrated first year curriculum designed to foster academic success. Students can also take major prerequisite courses, introductory language courses, and other lower division courses of general interest through the partnership.

East College No Preference Majors. Students who would like to start their college career at ASU East to benefit from the unique campus environment can declare "East College No Preference" as an interim major while completing the General Studies requirements and searching for an ASU major that serves their personal and career objectives. East College provides advising for No Preference majors.

DEGREE PROGRAMS

See the "East College Baccalaureate Degrees and Majors" table, page 641. For graduate degrees, see the "East College Graduate Degrees and Majors" table, page 642.

East College also offers a certificate program in Multimedia Writing and Technical Communication, minors in Wellness Foundations, Food and Nutrition Management and Human Nutrition, and a concentration for the B.A.S. See the *Graduate Catalog* for more information about graduate programs.

East College Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Applied Psychology	B.S.		East College
Applied Science	B.A.S.	Multimedia writing and technical communication	East College
Business Administration	B.S.		East College
Elementary Education	B.A.E.		East College
Exercise and Wellness	B.S.		Department of Exercise and Wellness
Interdisciplinary Studies	B.I.S.	See the "B.I.S. Concentrations" table, page 116.	Bachelor of Interdisciplinary Studies Advisory Committee
Multimedia Writing and Technical Communication	B.S.		East College
Nutrition	B.S.	Dietetics, food and nutrition management, human nutrition	Department of Nutrition

INTERDISCIPLINARY STUDIES—B.I.S.

The Bachelor of Interdisciplinary Studies (B.I.S.) is a university-wide program intended for the student who has academic interests that might not be satisfied with existing majors. Building on two academic concentrations and an interdisciplinary core, students in the B.I.S. are expected to take an active role in creating their educational plan and defining their career goals. The B.I.S. emphasizes written communication, versatility, and critical thinking skills desired in a changing workplace environment. Self-assessment and appraisal of opportunities to support academic and career goals are key elements in the core courses. The concentrations are generally based on approved academic minors, certificate programs, or special coherent clusters of course work. The student should be able to integrate these into a meaningful program.

The combination of areas of concentration gives students flexibility in creating unique programs to accomplish individual academic goals. Students who declare the B.I.S. as their major in East College at ASU East take their core courses and at least one concentration through ASU East. The second concentration may be taken at ASU Main, ASU West, or ASU East. The B.I.S. core courses are offered by East College. Concentrations at ASU East are offered by East College, the College of Technology and Applied Sciences, and the Morrison School of Agribusiness and Resource Management. Students interested in the B.I.S. should arrange an appointment with an East College advisor at 480-727-1515 before declaring the B.I.S. major.

Basic Requirements

The B.I.S. requires 120 semester hours. The major is composed of a 12-hour core and a minimum of 36 hours in two concentrations (18 hours each). Throughout the core sequence, the student assembles a portfolio including self-assessment of progress toward career goals and an evaluation of key educational and personal activities that may apply. The core courses must be taken in sequence. These courses may not be transferred from other institutions. BIS 302 and 401 may be taken concurrently. All core courses must be completed with a grade of "C" or higher.

Core Courses

BIS 301	Foundations of Interdisciplinary Studies	3
BIS 302	Interdisciplinary Principles	3
BIS 401	Applied Interdisciplinary Studies	3
BIS 402	Senior Seminar	3
Total		12

For course descriptions, see "Bachelor of Interdisciplinary Studies," page 117.

Other Requirements

In addition to the basic requirements, students must complete all university requirements, including First Year Composition and General Studies. Early advising is recommended to ensure that students meet requirements efficiently and optimize their choices.

Declaring the B.I.S. Major. Students must receive approval from an East College advisor before declaring the B.I.S. major. In addition, the following requirements must be met:

1. 45 semester hours of college credit completed;
2. cumulative GPA of 2.00 for continuing ASU students or in-state transfer students (2.50 for out-of-state transfers); and
3. selection of two concentrations with a minimum of two courses in each (minimum grade of "C") completed or one completed and one in progress (one after the drop/add period) in each area.

Approved Concentrations

Each concentration requires 18 semester hours, with each course completed with a grade of "C" or higher. Twelve of the hours must be in upper-division courses. Students should check for new information about concentrations on the Web at www.east.asu.edu/ecolgc or contact an East College advisor at 480-727-1515.

Let a y a d t qury MA m thematic CS computer statist cs
 q antitative ap cato HU nte and fine art SB o a and
 be a o a sc nes SG n t ra ence genera co e cour SQ natura
 ce e nntal C t ra dversity nte nted tates G g ba
 H hst r ca See enera St de page 83

East College Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Curriculum and Instruction*	Ph.D.	Exercise and wellness education	Interdisciplinary Committee on Curriculum and Instruction
Exercise and Wellness	M.S.		Department of Exercise and Wellness
Nutrition	M.S.		Department of Nutrition

* Doctoral courses for this interdisciplinary program administered by ASU Main are offered at ASU East.

Faculty of Applied Psychology

www.east.asu.edu/ecollege/appliedpsych
480 727-1515
CNTR 78

Roger W. Schvaneveldt, Faculty Head

Professor: Schvaneveldt

Assistant Professor: Gray

APPLIED PSYCHOLOGY—B.S.

This major offers a traditional psychology core leading to graduate school preparation and/or to applications in human factors with emphasis on human-computer interaction, aviation, or manufacturing. Although most careers in psychology require graduate training, there are some employment opportunities for B.S. students in applied settings. For example, there is a need for individuals who can help deal with problems of usability of products and systems. The Applied Psychology program offers courses and experiences to prepare students for these positions. The rigor of the major also provides strong preparation for further graduate study in psychology. The program serves students in other ASU East programs such as manufacturing engineering technology, aeronautical management technology, information management technology, and business administration.

Graduation Requirements

The completion of 120 semester hours (including First-Year Composition, General Studies (see "General Studies," page 83), and major requirements) leads to the B.S. degree. The major allows for at least 24 semester hours of electives. The major requirements for the B.S. degree in Applied Psychology consist of a 25-hour core of psychology courses, 12 hours in applied psychology, and 18 hours of related course work.

Core Courses (25 hours). Core courses provide a general background in the basic scientific areas of psychology and provide a culminating experience to integrate the varied studies.

PGS 101 Introduction to Psychology SB	3
PGS 350 Social Psychology SB	3
PSY 230 Introduction to Statistics CS	3
PSY 290 Research Methods L SG	4
PSY 323 Sensation and Perception	3
PSY 324 Memory and Cognition	3
PSY 325 Physiological Psychology	3
PSY 477 Applied Psychology Capstone Experience* or HON 493 Honors Thesis L 3	3
Total	25

* This PSY course is offered only by ASU East. All other PSY courses listed above are offered by both campuses.

Applied Psychology Courses (12 hours). Students work with an advisor to select courses in Applied Psychology emphasizing human computer interaction (HCI), aviation, training, manufacturing, or methods. Course work must include a minimum of four of the following courses.

AMT 41 Aviation Safety and Human Factors	3
PGS 47 Psychological Testing	3
PSY 320 Learning and Motivation	3
PSY 33 Statistical Methods CS	3
PSY 36 Cognitive Science*	3
PSY 390 Experimental Psychology L	3
PSY 437 Human Factors L	3
PSY 438 Human Computer Interaction	3
PSY 439 Training and Skill Acquisition*	3
PSY 440 Industrial Organizational Psychology*	3
PSY 494 Special Topics	4

* This PSY course is offered only by ASU East. All other PSY courses listed above are offered by both campuses.

Sample 12-hour Course Sets

Aviation

PSY 437 Human Factors
PSY 438 Human Computer Interaction
PSY 440 Industrial Organizational Psychology
AMT 410 Aviation Safety and Human Factors

Human-Computer Interaction

PSY 437 Human Factors
PSY 438 Human Computer Interaction
PSY 440 Industrial Organizational Psychology
PSY 494 Special Topics

Manufacturing

PSY 437 Human Factors
PSY 438 Human Computer Interaction

FACULTY OF BUSINESS ADMINISTRATION

E PSY 477 Applied Psychology Capstone Experience. (3)
fall spring summer
 Applied psychology from a systems perspective. Requires a report based on research and or applied work as a cumulative experience. Lecture/discussion, projects. Prerequisites: senior standing.

Omnibus Courses. For an examination of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

Faculty of Business Administration

www.east.asu.edu/college/businessadmin

480 727-1515

CNTR 76

Roger W. Hutt, Faculty Head

Professors: Daneke Edwards Kagan Marquardt, Shultz Thor

Associate Professors: Hutt Patterson Richards

Assistant Professor: Manfredo

BUSINESS ADMINISTRATION—B.S.

The B.S. degree in Business Administration offers a survey of contemporary business disciplines and additional depth in at least three disciplines. The curriculum enables students to gain essential business competencies, knowledge of business disciplines and methods, and appreciation for contemporary business environments and cultures. Students prepare for careers in business, industry, or government, as well as for career advancement and entrepreneurial enterprises. This program operates under the umbrella of the ASU Main College of Business AACSB International accreditation, but it is offered through East College.

Requirements for the Business Administration major consist of 30 hours of upper division core and skill courses, 34 hours of upper division core courses, and nine hours of advanced business electives. All of the upper division business courses with the exception of nine hours must be taken at ASU East.

Business Administration Core

- E ACC 36 Management Uses of Accounting
- E BLS 194 Professional Development
- E CIS 194 ST Information Management
- E ECN 194 S Current Issues in Economics
- E FIN 36 Fundamentals of Finance
- E IBS 36 Principles of International Business
- E LIT 36 Literature and Rhetoric
- E MGT 36 Organizational Management
- E MGT 463 Strategic Management
- E MKT 36 Principles of Marketing
- E SCM 36 (Global Supply Operations)

Literacy and critical thinking MA mathematics CS computer statistics quantitative application of human behavior and social science natural science qualitative cultural diversity United States global history

PSY 439 Training and Skill Acquisition

PSY 440 Industrial Organizational Psychology

Methods

PSY 330 Statistical Methods

PSY 36 Cognitive Science

PSY 390 Experimental Psychology

PGS 471 Psychological Testing

Training

PSY 32 Learning and Motivation

PSY 437 Human Factors

PSY 439 Training and Skill Acquisition

PSY 440 Industrial Organizational Psychology

Related Course Work

BIO course with a lab

Computer skills course

MAT 210 Bret Calculus

or a higher MAT course

Writing skills course

Courses selected in consultation with an advisor

Total

For more information about program requirements and courses, call an East College advisor at 480 727 1515, send e-mail to eastcollege@asu.edu, or access the Web site at www.east.asu.edu/college/appliedpsy.

For PGS courses and additional PSY courses, see "Department of Psychology," page 455.

PSYCHOLOGY (PSY)

The courses listed are offered on by ASU East. For more PSY courses that may be offered by ASU East see Department of Psychology under College of Liberal Arts and Sciences

E PSY 360 Cognitive Science. (3)

Examines cognition from the varied perspectives of philosophy, cognitive psychology, computer science, artificial intelligence and neuroscience. Lecture/discussion. Prerequisite: PSY 324

E PSY 438 Human-Computer Interaction. (3)

Theories, methods and findings concerning the usability of computer systems and the design of effective user interfaces. Lecture/discussion. Prerequisite: PSY 437

E PSY 439 Training and Skill Acquisition. (3)

Theories, methods and findings concerning the acquisition of knowledge performance and the design of effective training systems. Lecture/discussion. Prerequisite: PSY 437

E PSY 440 Industrial Organizational Psychology. (3)

Examines personnel selection, performance assessment, job satisfaction, organizational behavior, management systems, and industrial safety. Lecture/discussion. Prerequisite: PSY 230 or an equivalent statistics course

E PSY 448 Human Factors in Transportation. (3)

Examines human performance and human-machine design issues in aviation and ground transportation. Lecture/discussion. Prerequisite: PSY 323

E PSY 449 Human Factors in Sport. (3)

Examines human performance and human-machine design issues in sport. Lecture/discussion. Prerequisite: PSY 323

PSY 32 323

EAST COLLEGE

EWC 447 Business Reports L	5
Total	34

Students who complete the major requirements may also choose to take additional business courses, related courses in ASU East industry specific business programs (Agribusiness, Information and Management Technology, and Educational Management Technology), or special optional nine semester hour extensions of the basic major in our industry specific programs.

For the latest information about application, admissions, program requirements, and courses, call an East College advisor at 480 727 1515, or access the Web site at www.east.asu.edu/college/businessadmin.

Minor in Small Business

The minor in small business is in the process of transfer from the College of Business, ASU Main, to the faculty of Business Administration at East College at ASU East. For more information see "Minor in Small Business," page 181.

B.I.S. Concentration in Small Business (B.I.S. Majors Only)

The requirements for the small business concentration are identical to those for the minor in Small Business listed on page 181. For B.I.S. degree requirements, see "Bachelor of Interdisciplinary Studies," page 114.

Faculty of Education

www.east.asu.edu/college/elementaryed
 480 727-1103
 COMM2 101

Bette S. Bergeron, Faculty Head

- Professor:** Bergeron
- Senior Lecturer:** Wenhart
- Lecturers:** Gryder Hopper

ELEMENTARY EDUCATION—B.A.E.

Program Overview

The Elementary Education program at ASU East is unique in its focus on intensive field experiences, practical application of current theory, and emphasis on technology. The newly revised curriculum is also focused on and directly aligned with Arizona's standards for teachers. Courses are arranged sequentially and taken with peer cohorts in four semester long blocks. Each semester Elementary Education students are immersed in field experiences that directly link with course discussions and assignments. Course instructors have taught in a variety of K-8 settings and can therefore augment class experiences with practical applications. Current educational technologies are

incorporated into course delivery and assignments. Additionally, students have the opportunity to choose between the Elementary Education program at the ASU East campus or participate in one of the campus's district based school partnerships.

Graduation Requirements

A total of 120 semester hours is required for graduation with a minimum of 45 semester hours of upper division credit. As part of the undergraduate degree program, students will complete ASU General Studies (see "General Studies" section, page 83) requirements. In addition, Elementary Education students are required to complete 15 semester hours in an academic specialization, which is tailored to an individual student's academic strengths (e.g., math, science, social studies, English). The remaining program hours, which specifically focus on the teaching profession, are outlined below. Students must first be admitted to the ASU East Elementary Education program before enrolling in the Professional Preparation Program courses (Blocks I-IV).

Foundations (15 semester hours)*

ECD 314 The Developing Child	3
EDP 310 Educational Psychology SB	3
MCE 446 Understanding the Culturally Diverse Child C	3
ME 150 Theory of Elementary Mathematics	3
SPE 311 Orientation to Education of Exceptional Children SB	3

For foundation courses see "College of Education," page 55.

Professional Preparation Program*

Block I (11-12 hours)

EDC 32 Integrated Learning Experience I: Learning Climate	2
EDC 330 Literacy I: Emerging Literacy and Phonemic Awareness	3
EDC 340 Schooling and Social Context L	3
EDC 350 Educational Technology I: Applications	3
EDC 355 Educational Technology II: Instruction and Evaluation	3
EDC 357 Educational Technology III: Design	3
EDC 474 Field Experience	1

Block II (11-12 hours)

EDC 325 Integrated Learning Experience II: Instructional Design and Implementation	2
EDC 335 Literacy II: Intermediate Literacy and Phonetic Principles	3
EDC 345 Math Methods for the Elementary Classroom	3
EDC 355 Accommodating Instruction for Diverse Learners	3
EDC 474 Field Experience	0-1

Block III (11-12 hours)

EDC 420 Integrated Learning Experience III: Assessment	2
EDC 430 Literacy III: Intervention	3
EDC 440 Science Methods for the Elementary Classroom	3
EDC 450 Social Studies Methods for the Elementary Classroom	3
EDC 474 Field Experience	0-1

Block IV (12-14 hours)

EDC 425 Integrated Learning Experience IV: Professional Knowledge	3
EDC 454 Student Teaching in the Elementary School	1-12

* Block courses can only be taken upon admission to the Elementary Education program.

Postbaccalaureate Program. Individuals who hold a bachelor's degree from an accredited institution are encouraged to participate in the Elementary Education program as non-degree graduate students. Postbaccalaureate students complete the same professional preparation program courses as outlined above, which are augmented by the students' unique life and work experiences.

For more information, visit CNTR 82, or call 480/727-1103.

Application. Applications for the ASU East Elementary Education programs are due October 15 for spring admission, and May 15 for fall admission. Students eligible for admission must meet the following criteria:

1. admission to ASU East;
2. a minimum cumulative GPA of 2.50;
3. completion of at least 56 semester hours at the time of admission (undergraduate degree-seeking students); or, completion of a bachelor's degree from an accredited institution (postbaccalaureate students);
4. evidence of competence in written English.

Applications include two letters of recommendation and a résumé outlining work with school-age children and/or their families. Students should call the ASU East Teacher Education Office at 480/727-1103 for complete admission packet information and eligibility requirements.

State Certification. Students who successfully complete the undergraduate or postbaccalaureate routes to Elementary Education teacher preparation at ASU East are recommended for K–8 certification in the State of Arizona pending the completion of all other requirements mandated by the state. These additional requirements include, but are not limited to, successful completion of all appropriate areas of the Arizona Education Proficiency Assessment and course work in the United States and Arizona constitutions.

Because of the possibility that requirements for state certification may change, students are urged to maintain close contact with their education advisor.

Advising Information. It is important for all students to work closely with an ASU East academic advisor to ensure that their overall curriculum is coherent and best reflects their unique academic talents. For the latest information about application, admissions, program requirements, and courses, access the Web site at www.east.asu.edu/ecollege/elementaryed, or call the ASU East Teacher Education Office at 480/727-1103.

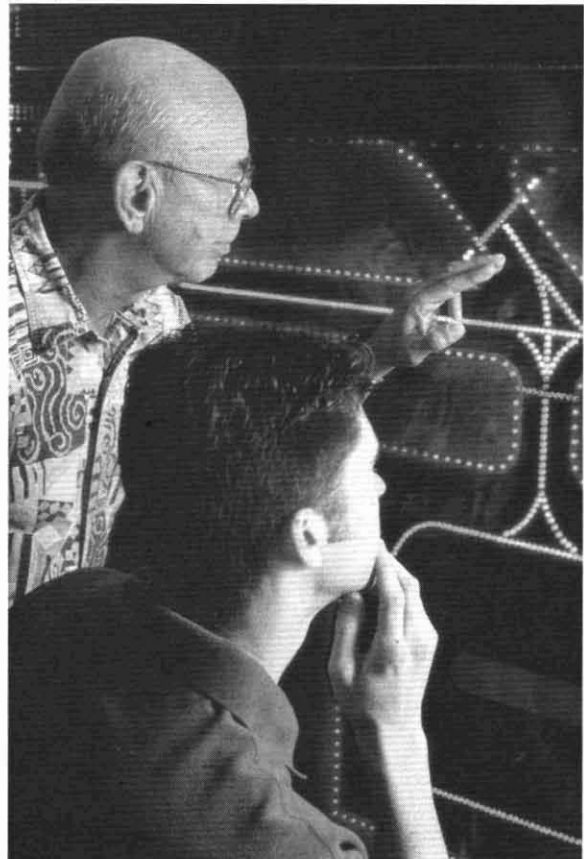
ELEMENTARY EDUCATION (EDC)

EDC 320 Integrated Learning Experience I: Learning Climate. (2)
fall and spring

Explores factors contributing to a positive and productive classroom learning environment. Interactive forum.

EDC 325 Integrated Learning Experience II: Instructional Design and Implementation. (2)
fall and spring

Design and implementation of developmentally appropriate instruction, and the alignment of instruction with district and state academic standards. Interactive forum. Prerequisite: EDC 320.



Consultant Ron Jones (left) and student Mark Bibby discuss effective use of lighting on the airport lighting simulator.

David Tevis photo

EDC 330 Literacy I: Emerging Literacy and Phonemic Awareness. (3)
fall and spring

Development of language from birth to age 8, and appropriate strategies for promoting growth in speaking, listening, reading, and writing. Applied inquiry. Corequisite: EDC 474.

EDC 335 Literacy II: Intermediate Literacy and Phonetic Principles. (3)
fall and spring

Strategies for teaching literacy in intermediate elementary classrooms, the application of phonetic principles to instruction, and integrating literacy across disciplines. Applied inquiry. Prerequisite: EDC 330. Corequisite: EDC 474. Pre- or corequisite: EDC 325.

EDC 340 Schooling and Social Context. (3)
fall and spring

Seminar addressing foundational issues in education, including the culture of schooling, current social contexts, and educational law. Interactive forum.

General Studies: L

EDC 345 Math Methods for the Elementary Classroom. (3)
fall and spring

Developmentally appropriate practices for teaching and assessing mathematics in grades K–8. Applied inquiry. Fee. Prerequisite: MTE 180. Corequisite: EDC 474. Pre- or corequisite: EDC 325.

L literacy and critical inquiry **MA** mathematics **CS** computer/statistics-quantitative applications **HU** humanities and fine arts **SB** social and behavioral sciences **SG** natural science—general core courses **SQ** natural science—quantitative **C** cultural diversity in the United States **G** global **H** historical See “General Studies,” page 83.

EDC 350 Educational Technology I: Applications. (1)

fall and spring
Module focused on basic technological skills needed for managing classroom instruction. Lab

EDC 351 Educational Technology II: Instruction and Evaluation. (1)

fall and spring
Module focused on technology as an instructional medium evaluation and effective classroom use. Lab Prerequisite EDC 350

EDC 352 Educational Technology III: Design. (1)

fall and spring
Module focused on instructional design utilizing a variety of technologies including multimedia. Lab Prerequisite EDC 351

EDC 355 Accommodating Instruction for Diverse Learners (3)

fall and spring
Identifying and accommodating learners with special needs including classroom adaptations instruction and assessment. Forum practicalicum Prerequisite SPE 311 Corequisite EDC 474 Prerequisite EDC 325

EDC 420 Integrated Learning Experience III: Assessment. (2)

fall and spring
Principles related to classroom assessment including the alignment of assessment to curriculum test interpretation and a variety of assessment techniques. Interactive forum Prerequisite EDC 325

EDC 425 Integrated Learning Experience IV: Professional Knowledge. (2)

fall and spring
Explores issues related to professional knowledge including interdisciplinary instruction and the impact of the community on students learning. Interactive forum Prerequisite EDC 420 Corequisite EDC 484

EDC 430 Literacy I I: Interventions. (3)

fall and spring
Strategies for accommodating students struggling with learning with a focus on the areas of literacy acquisition and assessment. Forum practicalicum Prerequisites EDC 335 355 Corequisite EDC 474 Prerequisite EDC 420

EDC 440 Science Methods for the Elementary Classroom. (3)

fall and spring
Developmentally appropriate practices for teaching and assessing sciences in grades K-8. Applied inquiry. Fee. Prerequisites EDC 325 345 Corequisite EDC 474 Prerequisite EDC 420

EDC 450 Social Studies Methods for the Elementary Classroom. (3)

fall and spring
Developmentally appropriate practices for teaching and assessing social studies in grades K-8. Applied inquiry. Prerequisite EDC 325 335 Corequisite EDC 474 Prerequisite EDC 420

EDC 474 Field Experience. (0-1)

fall and spring
Application course content in a K-8 school. Emphasize observation classroom management planning and delivery of instruction and assessment. Practical Corequisite all methods courses in the teacher preparation program must be taken with Field Experience

EDC 484 Student Teaching in the Elementary School. (10-12)

fall and spring
Supervised teaching in the area of specialization. Capstone internship in curriculum student and classroom management. Internship. Prerequisites 2.50 GPA completion of professional course sequence approval of ASU East teacher preparation office. Prerequisite EDC 425

Omnibus Courses. For an explanation of courses offered but not specified in this catalog see Omnibus Courses, page 56

Department of Exercise and Wellness

www.east.asu.edu/ecollege/wellness

480 727-1945

CLRB

William J. Stone, Chair

Professors: Burkett, Corbin Stone

Associate Professor: Swan

Assistant Professors: Jones Phillips Tudor-Locke

Lecturer: Woodruff

EXERCISE AND WELLNESS—B.S.

The B.S. degree in Exercise and Wellness is designed to prepare professionals and scholars in exercise and physical activity leadership and management, as well as health and wellness promotion and education. Exercise and Wellness students study physical activity and other healthy lifestyles as they relate and contribute to good health and wellness. Areas of study include the kinesiological and physiological foundations of physical activity, nutrition, stress management, social/cultural issues, and factors involved in health behavior change. Students are exposed to the latest research and practices designed to enhance fitness and wellness, including both laboratory and field experiences. One unique aspect of the Exercise and Wellness program is an outstanding internship program that provides pre-professional experience in all segments of the fitness and wellness industry and health professions throughout the metropolitan Phoenix area.

Career opportunities range broadly across several sectors of the fitness and wellness industry and health professions, including worksite/corporate health promotion/fitness, clinical/medical programs, community agencies and programs, and private health and fitness clubs. The degree is ideal preparation for advanced study in such health professions as cardiopulmonary rehabilitation, athletic training, physical therapy, and also graduate study in exercise and wellness.

Graduation Requirements

A total of 120 semester hours is required for graduation with a minimum of 45 semester hours of upper division credit. As part of the undergraduate degree program, students complete ASU General Studies requirements. For a list of courses that meet ASU General Studies requirements, see "General Studies Courses," page 87.

Exercise and Wellness students are required to complete the following courses.

Required courses

EXW 301 Foundations of Exercise and Wellness L 3
EXW 310 Computer Skills and Technology for Exercise and Wellness CS 3

DEPARTMENT OF EXERCISE AND WELLNESS

EXW 342 Health Behavior Change	3
EXW 45 Cultural and Social Issues in Exercise and Wellness SB, C	3
EXW 484 Exercise and Wellness Internship	3
NTR 241 Human Nutrition	3
Total	12

Each EXW core course has specific prerequisite courses that must be taken before taking the respective core course. These prerequisite courses include the following:

BIO 201 Human Anatomy and Physiology I SG	4
BIO 202 Human Anatomy and Physiology II	4
CHM 101 Introductory Chemistry SQ or any equivalent chemistry	4
COM 225 Public Speaking L	3
PGS 201 Introduction to Psychology SB	3
Total	18

All prerequisite and EXW courses must be completed with a minimum grade of "C." Additional requirements for the majors are described below.

EXW 212 Instructional Competency Laboratory	6
EXW 315 Physiological Foundations of Movement	3
EXW 327 Program Development and Leadership	3
EXW 330 Kinesiological Foundations of Movement	3
EXW 400 Stress Management for Wellness L	3
EXW 420 Exercise Testing	3
EXW 425 Exercise Prescription	3
Elective	3
Total	27

Three semester hours must be selected from an approved list of concentration electives.

WELLNESS FOUNDATIONS MINOR

The minor in Wellness Foundations is appropriate for students in the BIS degree program. It consists of the following plus all prerequisite courses:

EXW 300 Foundations of Exercise and Wellness L	3
EXW 325 Fitness for Life	3
EXW 342 Health Behavior Change	3
EXW 450 Cultural and Social Issues in Exercise and Wellness SB, C	3
EXW electives	6
Total	9

* Six semester hours must be selected from an approved list of EXW electives. See an advisor for a list of approved electives.

GRADUATE PROGRAMS

The faculty in the Department of Exercise and Wellness offer programs leading to the M.S. degree in Exercise and Wellness. The department also participates with the Graduate College and College of Education in the program leading to the Ph.D. degree in Curriculum and Instruction with a concentration in Exercise and Wellness. See the *Graduate Catalog* for requirements.

EXERCISE AND WELLNESS (EXW)

EXW Note 1. A \$5.00 towel and locker fee is required each semester by students using towel and locker facilities for physical activity courses.

EXW Note 2. Physical activity instruction courses EXW 105, 205, 305 may not be taken for audit. Excessive absences and/or tardiness are considered disruptive behavior.

EXW 100 Introduction to Health and Wellness. (3)

fa, spring, summer
Current concepts, health exercise and wellness. Emphasis placed on personal health theories, attitudes, beliefs and behaviors. Cross-listed as EPE 100, HES 100. Credits allowed only for EPE 100 or EXW 100 or HES 100.
General Studies: SB

EXW 105 Physical Activity Instruction: Beginning. (1)

fa, and spring
Beginning instruction in a variety of physical activities such as aerobic, aquatic, racquet sports, physical conditioning, and golf. Y grade on Y. May be repeated for credit 3 hours per week. Activity Fee. See EXW Notes 1, 2.

EXW 205 Physical Activity Instruction: Intermediate. (1)

fa, and spring
Intermediate level instruction in a variety of physical activities. Continuation of EXW 105. Y grade on Y. May be repeated for credit 3 hours per week. Activity Fee. See EXW Notes 1, 2.

EXW 212 Instructional Competency Laboratory. (2)

fa, and spring
Methods of instruction and leading fitness activities including aerobic, resistance and flexibility activities. May be repeated for credit. Lab. See EXW Note 1. Prerequisite: Exercise and Wellness major.

EXW 215 Physical Activity and Healthy Lifestyles. (1)

fa, and spring
Application of physical activity to personal fitness testing and program planning for people of all ages. Teacampus course. Not open to Exercise and Wellness majors or to students who have credit for EXW 325.

EXW 280 Global Issues in Exercise and Wellness. (3)

spring
Historical overview of health promotion and wellness models as they relate to minority, gender, social, cultural, economic, international and environmental issues.
General Studies: G

EXW 300 Foundations of Exercise and Wellness. (3)

fa, and spring
Analyzes research in various disciplines which contribute to health promotion and wellness.
General Studies: L, SB

EXW 301 Concepts of Fitness and Wellness. (1)

fa, and spring
Guidelines for achieving health benefits of physical activity and other healthy lifestyles. Teacampus course. Not open to Exercise and Wellness majors or to students who have credit for EXW 325.

EXW 305 Physical Activity Instruction: Advanced. (1)

fa, and spring
Advanced level instruction in a variety of physical activities. Continuation of EXW 105. May be repeated for credit. Y grade on Y. 3 hours per week. Activity Fee. See EXW Notes 1, 2.

EXW 310 Computer Skills and Technology for Exercise and Wellness. (3)

fa
Use of computers to statistically analyze data and design presentations of findings. Design of health promotion educational applications and presentations. Lecture/Lab. Prerequisite: MAT 117.
General Studies: CS

Literacy and critical inquiry MA: mathematical CS: computer statistics quantitative applications HU: human and fine arts SB: social and behavioral science SG: natural science—general requirements SQ: natural science—quantitative Cultural diversity in the United States Global history. See General Studies page 3.

EAST COLLEGE

EXW 311 Special Populations in Exercise and Wellness. (3)

fa

Introduces the engaged population and surveys the general population at work with special populations

EXW 315 Physiological Foundations of Movement. (3)

fa

Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training. Lab Fee Prerequisites BIO 201 202

EXW 320 Program Development and Leadership. (3)

fa

Principles of planning organizing promoting and leading fitness and wellness program. Prerequisite COM 225, Exercise and Wellness major

EXW 325 Fitness for Life. (3)

fa and spring

Physical fitness and benefits of exercise with emphasis on self evaluation and personalized program planning for fitness. Not open to Exercise and Wellness majors. Restricted to students who have credit for EXW 215 301

EXW 330 Kinesiological Foundations of Movement. (3)

spring

Studies and understands human movement with emphasis on kinesiology principles and the application to movement and fitness. Lecture Lab Prerequisites BIO 01 202

EXW 342 Health Behavior Change. (3)

fa

Examines major theories of health behavior change. Develops intervention strategies and techniques employed to facilitate health behavior change. Prerequisite PGS 101

EXW 380 Body Image and Wellness. (3)

spring

Explores body image in American culture from physical psychology, health, and societal perspectives. Prerequisites NR 241, PGS 101

EXW 400 Stress Management for Wellness. (3)

fa

Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups. Prerequisite PGS 101

General Studies L

EXW 420 Exercise Testing. (3)

fa and spring

Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure and interpretation of results. Lecture Lab Fee Prerequisite EXW 315. Current CPR certification

EXW 425 Exercise Prescription. (3)

spring

Theoretical basis for and application of general principles of exercise prescription to various ages fitness levels and health status. Prerequisite EXW 320 330. Prerequisite EXW 420

EXW 442 Physical Activity in Health and Disease. (3)

spring

Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span. Prerequisite EXW 115

General Studies L

EXW 450 Cultural and Social Issues in Exercise and Wellness. (3)

spring

Examines contemporary cultural and social issues in physical activity. Focuses on theories of social behavior, racial ethnic and cultural differences. Prerequisite PGS 111

General Studies SB C

EXW 460 Resistance Training Application and Theory. (3)

fa

Fundamental thinking as it applies to resistance training theory. Prerequisite EXW 315

EXW 484 Exercise and Wellness Internship. (6)

fa spring summer

Supervised practical experience in approved exercise and wellness health promotion agencies. Fieldwork. Prerequisite EXW 315 330 420. Prerequisite EXW 425

EXW 500 Research Methods. (3)

fa

Introduces the basic aspects of research including problem selection literature review instrumentation data handling methodology and writing the report

EXW 501 Research Statistics. (3)

spring

Statistics procedures comparing techniques hypothesis testing and experimental designs as they relate to research publications

EXW 505 Applied Exercise and Wellness Laboratory Techniques. (3)

spring

Investigative techniques used in the applied exercise testing procedure. Laboratory Emphasizes cardiorespiratory assessment energy balance body composition and anthropometry. Lab Fee

EXW 534 Sports and Fitness Conditioning. (3)

fa

Bases of sports and fitness conditioning including aerobic and anaerobic power strength flexibility and analysis of conditioning components for sports and fitness

EXW 536 Physiological Aspects of Physical Activity and Chronic Disease. (3)

fa

Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness

EXW 542 Health Promotion. (3)

spring

Theory and research concerning fitness and wellness programs nutrition physical activity, smoking cessation and stress management

EXW 544 Fitness Wellness Management. (3)

spring

Development of the fitness wellness industry. Planning goal setting promoting and managing fitness wellness programs

EXW 575 Teaching Lifetime Fitness. (3)

spring

Organizing and implementing physical fitness programs in the school with emphasis on individual problem solving

EXW 591 Seminar. (1-12)

selected semesters

EXW 599 Thesis. (1-12)

selected semesters

EXW 642 Exercise Epidemiology. (3)

spring

Physical activity exercise and physical fitness and the development of chronic disease

Omnibus Courses. For an explanation of courses offered but not specifically stated in this catalog, see Omnibus Course, page 56

Faculty of Multimedia Writing and Technical Communication

www.east.asu.edu/ecollege/multimedia
480 727-1190
CNTR 80

Barry M. Maid, Faculty Head

Professor: Maid

Associate Professor: Barchion

MULTIMEDIA WRITING AND TECHNICAL COMMUNICATION—B.S.

In the Multimedia Writing and Technical Communication program, students learn how to produce, to design, and to manage information using both traditional and leading edge technologies.

Students learn

1. to communicate, both orally and in writing, across audiences and cultures;
2. issues of ethics in technical communications;
3. awareness of the global nature of technical communication—both culturally and economically;
4. the ability to evaluate print, oral, and electronic sources;
5. understanding of appropriate technical genres;
6. the ability to demonstrate technical editing skills in all work;
7. the ability to incorporate appropriate visual elements and design in written documents and oral presentations; and
8. the ability to work in appropriate media.

The program serves students who wish to pursue careers as technical writers, technical editors, Web page and intranet page designers, multimedia designers, desktop publishers, publications managers, and information designers.

GRADUATION REQUIREMENTS

To graduate with a B.S. degree in Multimedia Writing and Technical Communication, students must complete a minimum of 126 semester hours, including university graduation requirements and requirements of the major.

Multimedia Writing and Technical Communication Core	
TWC 301 General Principles of Multimedia Writing L	3
TWC 411 Principles of Technical Communication L	3
TWC 411 Principles of Visual Communication L	3
TWC 421 Principles of Writing with Technology L	3
TWC 431 Principles of Technical Editing L	3
TWC 490 Capstone	3
Total	15

Major Electives (15 hours). The remaining hours will be electives in the major—TWC—at least six of which need to be in core courses such as TWC 443 Proposal Writing or TWC 447 Business Reports. An Internship (TWC 484) or supervised work experience is strongly recommended.

For information about program requirements and courses access the Web at www.east.asu.edu/ecollege, or call an East College advisor at 480 727 1515.

Related Area (12 hours). Students select a related area consisting of 12 semester hours of study in one other discipline. At least nine of these 12 hours must be in the upper division. Suggested disciplines might be, but are not limited to, applied psychology, business administration, or computer graphics. Students, with the help of an advisor, may also develop a coherent interdisciplinary related area.

BACHELOR OF APPLIED SCIENCE—B.A.S.

A Bachelor of Applied Science is also offered with a concentration in multimedia writing and technical communication. The B.A.S. degree is a "capstone" degree for the Associate of Applied Science degree. The B.A.S. degree exposes students to advanced concepts and diverse critical thinking skills that prepare them for future career opportunities and professional advancement.

Admission. Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree or equivalent from a regionally accredited U.S. postsecondary educational institution. A GPA of 2.00 or higher is required for all resident applicants and a 2.50 for nonresident applicants.

Degree Requirements. In addition to the A.A.S. degree, the B.A.S. in Applied Science through East College consists of 60 semester hours of upper division (300 level and above) courses, with 30 semester hours in residence.

Assignable credit	6
B.A.S. core	15
General Studies	19
MWTC concentration	2
Total	60

General Studies Curriculum (19 hours). The B.A.S. curriculum builds on the general education content of the A.A.S. degree. Additional General Studies—LCS, and awareness areas—are met with courses in the core or concentration. General Studies courses focus on contextual learning.

LCS	3
MA	3
HU	3
HU or SB	3
SB	3
SG	4
Total	19

LCS literacy and numeracy MA mathematics CS computer statistics quantitative application HU human and fine art SB social and behavioral sciences SG natural science—general core course SQ natural science—quantitative Cultural diversity United States Global history See General Studies page 83



Bryan Jones (left), Russell Martin, and Robert Poister create a prototype wheelchair in a Manufacturing and Aeronautical Engineering Technology course. Tom Trumble photo

Assignable Credit (6 hours). Assignable credit allows space in the curriculum for prerequisite courses needed for students to succeed in the program. The courses are determined by the student and an advisor.

B.A.S. Core (15 hours). The area core is focused on management and organization, professional communication, qualitative analysis, and computer competency.

Multimedia Writing and Technical Communication concentration (20 hours). In consultation with an advisor, students will select 20 hours of upper-division TWC courses.

CERTIFICATE PROGRAMS

An undergraduate Multimedia Writing and Technical Communication Certificate is available and requires 18 semester hours.

For students who have already completed a baccalaureate degree, a Postbaccalaureate Certificate in Multimedia Writing and Technical Communication is available that also requires 18 semester hours.

For more information about both certificate programs, call the East College advisor at 480/727-1515, or access the Web site at www.east.asu.edu/ccollege/multimedia.

MULTIMEDIA WRITING AND TECHNICAL COMMUNICATION (TWC)

TWC 194 Special Topics. (1–4)
selected semesters

TWC 200 Impact of Communications Technology on Society. (3)
fall and spring
Organizational issues and development of technical communication. Activities include research, evaluations, and presentation of oral arguments in support of positions. Prerequisites: both ENG 101 and 102 or only ENG 105.

General Studies: L

TWC 294 Special Topics. (1–4)
selected semesters

TWC 301 General Principles of Multimedia Writing. (3)
fall and spring

Introduces writing in a variety of media, understanding the consequences of integrating media, and effective editing techniques. Prerequisite: First-Year Composition.

General Studies: L

TWC 351 Technical Writing and Editing. (3)
fall and spring

Effective style, format, and organization of technical material; editing principles and practices; copyediting versus substantive editing; and document management. Prerequisite: ENG 102.

TWC 400 Technical Communications. (3)

fall, spring, summer

Planning and preparing technical publications and oral presentations based on directed library research related to current technical topics. Prerequisites: completion of first-year English requirements; a General Studies L course; senior standing with a major in College of Technology and Applied Sciences.

General Studies: L

TWC 401 Principles of Technical Communication. (3)

fall and spring

Basic information design principles to produce effective written, oral, and electronic technical communication. Understanding of rhetorical and audience analysis. Pre- or corequisite: TWC 301.

General Studies: L

TWC 403 Writing for Professional Publication. (3)

selected semesters

Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer. Pre- or corequisite: TWC 401.

TWC 411 Principles of Visual Communication. (3)

fall and spring

Basic principles of visual communication in print and electronic media. Understanding graphic and document design, including typography and color. Pre- or corequisite: TWC 401.

General Studies: L

TWC 421 Principles of Writing with Technology. (3)

fall and spring

Understanding historical and social impact of technology on writing, with emphasis on multimedia design, computer-mediated communication, and hypertext. Pre- or corequisite: TWC 401.

General Studies: L

TWC 431 Principles of Technical Editing. (3)

fall and spring

Basic principles of technical editing (for print and electronic media) including copyediting, reviews, standards, style, and project management. Pre- or corequisite: TWC 401.

General Studies: L

TWC 443 Proposal Writing. (3)

once a year

Develops persuasive strategies and themes for researching and writing professional proposals. Pre- or corequisite: TWC 401.

TWC 444 Manual and Instructional Writing. (3)

once a year

Design and development of a user manual, writing instructions, improving graphics and page design, and usability testing. Pre- or corequisite: TWC 401.

TWC 445 Computer Documentation. (3)

once a year

Introduces writing documentation for the computer industry. Pre- or corequisite: TWC 401.

TWC 446 Technical and Scientific Reports (3)

once a year
Introduces strategies, formats and techniques of presenting information to technical and scientific audience. Prerequisite: TWC 401

General Studies

TWC 447 Business Reports. (3)

once a year
Introduces strategies, formats and techniques of presenting information to business and other workplace audiences. Prerequisite: TWC 401

General Studies L

TWC 484 Internship. (3)

fall and spring
Apples classroom work to a supervised workplace environment. Prerequisite: TWC 411 or 421 or 431

TWC 490 Capstone. (3)

fall and spring
Development of a professional portfolio creation of a cumulative learning document and synthesis of undergraduate experience. Prerequisite: instructor approval

TWC 494 Special Topics. (1-4)

selected semesters

TWC 501 Principles of Technical Communication. (3)

fall and spring
Basic principles of design principles to produce effective written oral and electronic technical communication. Understanding of rhetoric and audience analysis. Prerequisite: graduate standing

TWC 503 Writing for Professional Publication. (3)

selected semesters
Analyzes the market and examines the publication process including the roles of the author, editor, and reviewer. Prerequisite: TWC 501

TWC 511 Principles of Visual Communication. (3)

fall and spring
Basic principles of visual communication and electronic media. Understanding graphic and document design including typography and color. Prerequisite: TWC 501

TWC 521 Principles of Writing with Technology. (3)

fall and spring
Understanding historical and social impact of technology on writing with emphasis on multimedia design, computer mediated communication, and hypertext. Prerequisite: TWC 501

TWC 531 Principles of Technical Editing. (3)

fall and spring
Basic principles of technical editing for print and electronic media including copyediting, reviews, standard style and project management. Prerequisite: TWC 501

TWC 543 Proposal Writing. (3)

once a year
Develops persuasive strategies and themes for researching and writing professional proposals. Prerequisite: TWC 501

TWC 544 Manual and Instructional Writing. (3)

once a year
Design and development of a user manual, writing instructions, improving graphics and page design and usability testing. Prerequisite: TWC 501

TWC 545 Computer Documentation. (3)

once a year
Introduces writing documentation for the computer industry. Prerequisite: TWC 501

TWC 546 Technical and Scientific Reports. (3)

once a year
Introduces strategies, formats and techniques of presenting information to technical and scientific audience. Prerequisite: TWC 501

TWC 547 Business Reports. (3)

once a year
Introduces strategies, formats and techniques of presenting information to business and other workplace audiences. Prerequisite: TWC 501

TWC 584 Internship. (3)

fall and spring
Apples classroom work to a supervised workplace environment. Prerequisite: TWC 511, 521, 531

TWC 598 Special Topics. (1-4)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see Omnibus Courses, page 56

Department of Nutrition

www.east.asu.edu/ecollege/nutrition

480 727-1728

HSC 1386

Linda A. Vaughan, Chair

Professors: Johnston, Vaughan

Assistant Professors: Hamp, Hutchins

Senior Lecturer: Marten

Lecturer: Dixon

NUTRITION—B.S.

The B.S. degree in Nutrition offers three concentrations: dietetics, human nutrition, and food and nutrition management. The dietetics concentration provides students with a comprehensive range of nutrition, foods, and science courses that meet the academic, didactic requirements necessary to become a registered dietitian. This concentration has been granted full Accreditation as a Didactic Program in Dietetics (DPD) by the Commission on Accreditation for Dietetics Education of the American Dietetic Association. Graduates of a DPD may apply for Dietetic Internships to establish eligibility to write the Dietetic Registration examination.

The human nutrition concentration provides a sound foundation in the basic sciences and nutrition, but no foods courses are required. This program is often used by students who, while not seeking the credential of Registered Dietitian, are working towards a career in nutrition research or completing a premedical predoctoral program of study. The food and nutrition management concentration provides a number of nutrition, foods, and business courses and is offered to students with an interest in food production, nutrition program management, and food nutrition marketing.

Accreditation. The B.S. degree in Nutrition with a concentration in dietetics has been granted full Accreditation as a Didactic Program in Dietetics (DPD) by the Commission on

Literacy and Critical Inquiry MA, Mathematics CS, Opticostatistics, Quantitative Analysis HU, Leadership SB, Behavioral Science SG, Natural Science—General Course SQ, International Education by the United States GGBA, Health and Safety, General Education 3

EAST COLLEGE

Accreditation for Dietetics Education of the American Dietetic Association. For more information, call 312 899 0040, or write

COMMISSION ON ACCREDITATION FOR
DIETETICS EDUCATION
AMERICAN DIETETIC ASSOCIATION
216 W JACKSON BLVD
CHICAGO IL 60606 6995

Dietetics Concentration. The following NTR courses are required of all students in the dietetics concentration:

NTR 142 Applied Food Principles	3
NTR 241 Human Nutrition	3
NTR 341 Introduction to Planning Therapeutic Diets	3
NTR 343 Food Service Purchasing	3
NTR 344 Nutrition Services Management L	3
NTR 35 Nutrition Counseling	3
NTR 400 Nutrition and Health Promotion	3
NTR 440 Advanced Human Nutrition I	3
NTR 441 Advanced Human Nutrition II	3
NTR 444 Medical Nutrition Therapy	3
NTR 445 Quantity Food Production	3
NTR 446 Human Nutrition Assessment Lecture/Laboratory	3
NTR 448 Community Nutrition L	3
Total	39

In addition to the required NTR courses, the following related courses are required in order to complete the academic requirements of the Didactic Program in dietetics.

BCH 361 Principles of Biochemistry	3
BCH 367 Elementary Biochemistry Laboratory	1
BIO 201 Human Anatomy and Physiology I SG	4
BIO 202 Human Anatomy and Physiology II	4
CHM 113 General Chemistry SQ	4
CHM 116 General Chemistry SQ	4
CHM 231 Elementary Organic Chemistry SQ	3
CHM 235 Elementary Organic Chemistry Laboratory SQ ¹	1
MIC 205 Microbiology SG ²	3
MIC 206 Microbiology Laboratory SG ²	1
Statistics course	3
Technical writing course	3
Total	34

Both CHM 231 and 235 must be taken to secure SQ credit
Both MIC 205 and 206 must be taken to secure SG credit

Additional supporting courses in the social sciences are required for completion of the DPD and must be selected in consultation with the Nutrition academic advisor.

Human Nutrition Concentration. The following NTR courses are required of all students in the human nutrition concentration:

NTR 142 Applied Food Principles	3
NTR 241 Human Nutrition	3
NTR 341 Introduction to Planning Therapeutic Diets	3
NTR 440 Advanced Human Nutrition I	3
NTR 441 Advanced Human Nutrition II	3
NTR 444 Medical Nutrition Therapy	3
NTR 446 Human Nutrition Assessment Lecture/Laboratory	3
Total	21

An additional nine semester hours from the Department of Nutrition are required to complete this concentration. A maximum of three semester hours of Independent Study may be used to satisfy this requirement. Students select these courses in consultation with the Nutrition academic advisor.

In addition to the required NTR courses, the following related courses are required to complete the academic requirements of this concentration:

Food and Nutrition Management Concentration. The following NTR courses are required of all students in the food and nutrition management concentration:

NTR 100 Introductory Nutrition	3
or NTR 241 Human Nutrition	3
NTR 142 Applied Food Principles	3
NTR 300 Computer Applications in Nutrition	3
NTR 343 Food Service Purchasing	3
NTR 344 Nutrition Services Management L	3
NTR 445 Quantity Food Production	3
Total	18

An additional twelve semester hours from the Department of Nutrition are required to complete this concentration. A maximum of three semester hours of Independent Study may be used to satisfy this requirement. Students select these courses in consultation with the Nutrition academic advisor.

In addition to the required NTR courses, the following related courses are required to complete the academic requirements of this concentration:

CHM 101 Introductory Chemistry SQ	4
MIC 205 Microbiology SG	3
MIC 206 Microbiology Laboratory SG	1
Business or technical writing course	3
Management AGB 310 or MGT 301, 380, or 394	3
Market mgmt AGB 320 or MKT 300 or 394	3
Other agr/bu business or business courses	6
Total	23

Both MIC 205 and 206 must be taken to secure SG credit

Courses taken to fulfill the final six credit business requirement should be taken from courses with the following prefixes: ACC, AGB, BUS, COB, CIS, CSE, ECN, F N, HSA, IBS, MCT, MKT and QBA. Students select these courses in consultation with the Nutrition academic advisor.

MINORS

The faculty of the Department of Nutrition also offers minors in Food and Nutrition Management and Human Nutrition, each requiring 18 semester hours. At least 12 of the 18 must be in upper division courses.

Food and Nutrition Management. The Food and Nutrition Management minor requires that students take the following courses:

NTR 100 Introductory Nutrition	3
or NTR 241 Human Nutrition	3
NTR 142 Applied Food Principles	3
NTR 300 Computer Applications in Nutrition	3
NTR 343 Food Service Purchasing	3

NTR 344 Nutrition Service Management L 3
 NTR 445 Quantity Food Production 3
 Total 18

Human Nutrition. The Human Nutrition minor requires that students take the following courses:

NTR 24 Human Nutrition 3
 NTR 341 Introduction to Planning Therapeutic Diets 3
 NTR 44 Advanced Human Nutrition I 3
 NTR 441 Advanced Human Nutrition II 3
 NTR 444 Medical Nutrition Theology 3
 Total 15

One additional upper division (or graduate) course must be selected from among the following:

NTR 348 Cultural Aspects of Food 3
 NTR 350 Nutrition Counseling 3
 NTR 446 Human Nutrition Assessment Lecture/Laboratory 3
 NTR 448 Community Nutrition L 3
 NTR 450 Nutrition in the Life Cycle I SB 3
 NTR 451 Nutrition in the Life Cycle II 3
 NTR 452 Current Research in Nutrition 3
 NTR 498 Special Topics 3

NUTRITION (NTR)

NTR 100 Introductory Nutrition. (3)

fa spring summer

Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.

NTR 142 Applied Food Principles. (3)

fa and spring

Applied scientific principles of food preparation and production. 2 hours lecture 3 hours lab Fee

NTR 241 Human Nutrition. (3)

fa spring summer

Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease. Prerequisite: CHM 101 or its equivalent.

NTR 300 Computer Applications in Nutrition. (3)

spring

Introduces nutrition and food software including dietary assessment and analysis, food inventory and control, and telecommunication. Lecture computer lab. Prerequisite: NTR 100 or 241, 341 strongly recommended basic computer literacy.

NTR 341 Introduction to Planning Therapeutic Diets. (3)

fa and summer

Cultural, health, and economic aspects of diet planning. Assessment of food and diet composition. Review of common therapeutic diets. Fee. Prerequisites: NTR 100 or 241 and 142 or the equivalent.

NTR 343 Food Service Purchasing. (3)

fa

Introduces purchasing systems, food processes, receiving and storage procedures, and regulatory agencies involved in the food service industry. Prerequisite: NTR 142.

NTR 344 Nutrition Services Management. (3)

fa and spring

Organization, administration, and management of food and nutrition services in hospitals and other institutions. Possible field trip. Prerequisites: NTR 100 or 241 and 142 or the equivalent.

General Studies L

NTR 348 Cultural Aspects of Food. (3)

spring and summer

Organic development and diversity of food preferences and dietary habits, food patterns, and attitudes of global populations and US immigrants. Prerequisite: NTR 100 or 241 or its equivalent.

General Studies C

NTR 350 Nutrition Counseling. (3)

fa and spring

Counseling techniques, nutrition, interpersonal and communication skills, cultural and community issues, nutrition education for individuals and populations. Lecture/lab. Prerequisites: NTR 100 or 241 and 142 or the equivalent.

NTR 400 Nutrition and Health Promotion. (3)

fa and spring

Role of nutrition in health promotion, application of academic knowledge in field practice, components of professional development. Lecture/practicum. Prerequisites: NTR 341, 440 or 441 or 444 senior standing. Deleted senior human nutrition.

NTR 440 Advanced Human Nutrition I. (3)

fa

Metabolic reactions and interrelationships of vitamins, minerals, and water. Prerequisites: BIO 202 and HM 231 and NTR 241 or the equivalent.

NTR 441 Advanced Human Nutrition II. (3)

spring

Metabolic reactions and interrelationships of carbohydrate, lipid, and protein. Prerequisites: BCH 361 and BIO 202 and NTR 241 or the equivalent.

NTR 442 Experimental Foods. (3)

fa and spring

Food product development techniques, food evaluation and testing, and investigation of current research into food composition. 2 hours lecture 3 hours lab. Fee. Prerequisites: CHM 231, NTR 142.

NTR 444 Medical Nutrition Therapy. (3)

spring and summer

Principles of medical nutrition therapy for prevention and treatment of disease and promotion of health. Prerequisites: BIO 201 and 202 and NTR 241 or the equivalent.

NTR 445 Quantity Food Production. (3)

fa and spring

Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. Lecture/lab possible field trips. Fee. Prerequisites: NTR 100 or 241 and 344 or the equivalent.

NTR 446 Human Nutrition Assessment Lecture Laboratory. (3)

fa and spring

Clinical and biochemical evaluation of nutritional status. 2 hours lecture 3 hours lab. Fee. Prerequisites: BCH 361, 367, NTR 440 or 441.

NTR 448 Community Nutrition. (3)

fa and spring

Food-related behaviors, organization and delivery of nutrition services, program development, implementation, and evaluation strategies; nutrition assessment of populations. Prerequisite: NTR 241 or its equivalent.

General Studies L

NTR 450 Nutrition in the Life Cycle I. (3)

fa

Emphasizes nutritional needs and problems during pregnancy, lactation, infancy, and childhood. Prerequisite: NTR 100 or 241 or its equivalent.

General Studies SB

NTR 451 Nutrition in the Life Cycle II. (3)

spring

Nutritional requirements and nutrition-related disorders, food access, middle adulthood, and later life. Prerequisite: NTR 100 or 241 or its equivalent.

NTR 500 Research Methods in Nutrition. (3)

fa

Experimental design, methods of data collection, laboratory analyses and statistical analyses; development of thesis proposals. Lecture/lab. Fee. Prerequisites: a course each in advanced nutrition, biostatistics, and statistics.

Literacy and critical inquiry MA mathematics CS computer statistics quantitative applications HU human and fine arts SB social and behavioral science SG natural and geological sciences SQ natural science quantitative Curriculum diversity in the United States GG a history and general studies page 83

EAST COLLEGE

NTR 531 Recent Developments in Nutrition. (1)

fall and spring

Selected topics addressing current issues in nutrition research. Prerequisites: a course each in advanced nutrition and biochemistry.

NTR 532 Current Research in Nutrition. (3)

spring

Vitamins and minerals. Prerequisites: a course each in advanced nutrition and biochemistry.

NTR 540 Advanced Micronutrient Metabolism. (3)

fall

Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized. Prerequisites: a course each in basic nutrition and biochemistry.

NTR 541 Advanced Macronutrient Metabolism. (3)

spring

Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized. Prerequisites: a course each in basic nutrition and biochemistry.

NTR 542 Advanced Food Product Development. (3)

fall and spring

Food product development techniques, food evaluation and testing, and investigation of current research into food composition. 2 hours lecture, 3 hours lab. Fee. Prerequisites: CHM 231 and NTR 142 (or their equivalents).

NTR 544 Therapeutic Nutrition. (3)

spring and summer

Current theories of the nutritional prevention or treatment of various diseases. Prerequisites: a course each in basic nutrition, introduction to diet therapy, and physiology.

NTR 545 Recent Developments in Institutional Feeding. (3)

fall and spring

Current practices in institutional feeding, including supervised practicum with local quantity food operation. 1 hour lecture, 6 hours lab. Fee. Prerequisites: NTR 142 and 344 (or their equivalents).

NTR 546 Assessment Techniques in Nutrition. (3)

fall and spring

Clinical and biochemical evaluation of nutritional status. 2 hours lecture, 3 hours lab. Fee. Prerequisites: a course each in advanced nutrition, biochemistry, and physiology.

NTR 548 Nutrition Program Development. (3)

fall and spring

Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications. Prerequisites: a course each in basic nutrition and sociology.

NTR 550 Advanced Maternal and Child Nutrition. (3)

fall

In-depth review of metabolic characteristics and nutritional needs of the pregnant woman, lactating woman, infant, and child. Prerequisites: a course each in basic nutrition, biochemistry, and physiology.

NTR 551 Advanced Geriatric Nutrition. (3)

spring

In-depth review of metabolic characteristics and nutritional requirements of the elderly. Prerequisites: a course each in basic nutrition, biochemistry, and physiology.

NTR 580 Dietetics Practicum. (3-9)

fall, spring, summer

Structured practical experience in the Dietetic Internship, supervised by practitioners with whom the student works closely. Practicum. Prerequisite: acceptance into the Dietetic Internship.

NTR 591 Seminar. (1-12)

selected semesters

Topics may include the following:

- Recent Developments in Food and Nutrition. (1)

NTR 592 Research. (1-12)

selected semesters

NTR 593 Applied Project. (1-12)

selected semesters

NTR 594 Conference and Workshop. (1-12)

selected semesters

NTR 598 Special Topics. (3)

fall and spring

In-depth review of recent research in areas including nutrition and exercise, nutrition and immunology, energy balance, vegetarianism, nutritional pathophysiology. Fee. Prerequisites: a course each in advanced nutrition, biochemistry, and physiology.

Omnibus Courses. For an explanation of courses offered but not specifically listed in this catalog, see "Omnibus Courses," page 56.



ASU East Student Union fountain

© 2010 ASU

College of Technology and Applied Sciences

www.east.asu.edu/ctas

Albert L. McHenry, Ph.D., Dean

PURPOSE

The College of Technology and Applied Sciences (CTAS) helps students develop knowledge and skill in technological fields that qualify them for career positions and leadership responsibility in industry, government, and commercial enterprise. Each student is guided to select a major that addresses short-term employment goals through state-of-the-art technological preparation. Long-term career aspirations are supported through the development of a strong base in mathematics, science, engineering, and technical principles, coupled with a solid foundation in liberal arts and a commitment to lifelong learning.

Engineering technology programs offer professional preparation through a B.S. degree that stresses state-of-the-art technological applications. Special emphasis is placed on the development of knowledge and skill in applied mathematics, natural sciences, and engineering principles with formal laboratory experiences. This mixed educational approach provides the basis for both employment and a long-term career evolution.

The other CTAS technology programs provide the opportunity for students to develop knowledge and skill in solving broad-scale industrial problems, operating modern technological systems, and managing personnel in the implementation of processes and production. Programs of study focus on the latest technologies in areas such as aviation flight training and management, environmental technology management, graphic information technology, fire service management, and industrial management.

Each student is encouraged to participate in creative activities through a close relationship with a faculty mentor. Learning through execution of the scientific method, using both inductive and deductive processes in applied research activities, is essential for both faculty and students.

ORGANIZATION

The College of Technology and Applied Sciences is composed of the following four academic units:

- Department of Aeronautical Management Technology
- Department of Electronics and Computer Engineering Technology
- Department of Information and Management Technology
- Department of Manufacturing and Aeronautical Engineering Technology

DEGREE PROGRAMS

See the "College of Technology and Applied Sciences Baccalaureate Degrees and Majors" table, page 656. For graduate degrees, see the "College of Technology and

Applied Sciences Graduate Degrees and Majors" table, page 657.

The College of Technology and Applied Sciences offers programs leading to the B.S. degree and B.A.S. degree. The college also offers the Master of Science in Technology (M.S.T.) degree. For more information on courses, faculty, and programs in the M.S.T. degree, see the *Graduate Catalog*.

ACCREDITATION

Undergraduate B.S. degree programs in Aeronautical Engineering Technology, Electronics Engineering Technology, and Manufacturing Engineering Technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. For additional information, call 410-347-7700 or write

TECHNOLOGY ACCREDITATION COMMISSION OF
THE ACCREDITATION BOARD FOR
ENGINEERING AND TECHNOLOGY, INC.
111 MARKET PLACE SUITE 1050
BALTIMORE MD 21202-7102

Both the professional flight and the air transportation management concentrations in the Department of Aeronautical Management Technology are fully accredited by the Council on Aviation Accreditation. For more information call 334-844-2431, send e-mail to caa@auburn.edu, or write

COUNCIL ON AVIATION ACCREDITATION
3410 SKYWAY DRIVE
AUBURN AL 36830

ADMISSION—B.S. DEGREE

The College of Technology and Applied Sciences admits first-year students who meet the undergraduate admission requirements of Arizona State University. See "Undergraduate Admission," page 58. High school precalculus, physics, and chemistry are recommended. Transfer applicants must meet the university requirements for transfer students as specified under "Transfer Credit," page 61, with the exception that Arizona resident transfer students must have a 2.25 GPA.

Students admitted to a B.S. degree program in CTAS begin study under one of two student classifications, professional or preprofessional.

Library and Reference MA Mathematics CS Computer Statistics
Qualitative Applications HU Humanities Fine Arts SB Social and
Behavioral Sciences SG Natural Science—Geography and Ecology SQ Natural
Science Quantitative Curriculum Diversity the United States Global
Historical See General Table page

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

College of Technology and Applied Sciences Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Aeronautical Engineering Technology	B.S.		Department of Manufacturing and Aeronautical Engineering Technology
Aeronautical Management Technology*	B.S.	Air transportation management, professional flight	Department of Aeronautical Management Technology
Applied Science	B.A.S.	Aviation maintenance management technology, aviation management technology, computer systems administration, digital media management, digital publishing, emergency management, fire service management, instrumentation, manufacturing technology and management, microcomputer systems, municipal operations management, operations management, semiconductor technology, software technology applications, technical graphics	Bachelor of Applied Science Advisory Committee
Computer Engineering Technology*	B.S.	Computer hardware technology, embedded systems technology, software technology	Department of Electronics and Computer Engineering Technology
Electronics Engineering Technology	B.S.	Electronic systems, microelectronics, telecommunications	Department of Electronics and Computer Engineering Technology
Industrial Technology	B.S.	Environmental technology management, graphic information technology, industrial technology management	Department of Information and Management Technology
Manufacturing Engineering Technology†	B.S.	Manufacturing engineering technology, mechanical engineering technology	Department of Manufacturing and Aeronautical Engineering Technology

*This major requires more than 20 semester hours to complete

Professional Status

First year students (new freshmen) are admitted to CTAS with professional status if they meet the general aptitude criteria for admission and have no deficiencies in the basic competency requirements for admission. First year students admitted upon completion of the GED are admitted with professional status if they have also achieved the minimum ACT or SAT scores required for undergraduate admission to the university.

Students transferring from other ASU colleges are admitted to CTAS with professional status if they have no remaining admissions deficiencies and meet the required GPA.

Transfer students from other institutions must meet the minimum admission requirements for college transfer students as described under "Transfer Credit," page 61. The CTAS also requires resident transfer students to have a cumulative GPA of 2.25.

All international students must have a minimum 5.0 TOEFL score to be admitted with professional status.

Preprofessional Status

All other students are admitted with preprofessional status and may apply for professional status after they have removed the deficiency that disallows awarding professional status. Students with preprofessional status may not register

for 300 and 400 level courses in the college until they have been awarded professional status. See an advisor for details.

Transfer Credit

Credit for courses taken at a community college or another four year institution is awarded according to the guidelines under "Transfer Credit," page 61. Students who are transferring from an Arizona community college and have been in continuous residence may continue under the category of "Direct" at the time of their entrance into the community college. Students should be aware that some course work that transfers to ASU may not be applicable to vary CTAS degree requirements. Students should confer with an advisor. The College of Technology and Applied Sciences maintains a cooperative agreement with most Arizona community colleges and with selected out of state colleges and universities to structure programs that are directly transferable into the technology programs at ASU East. For assistance in the transfer from Arizona community colleges, transfer guides are available at www.asu.edu/provost/afic/at/on.

Courses taken more than five years before admission to a CTAS degree program are not normally accepted for transfer credit at the option of the department in which the applicant wishes to enroll. Courses completed within the five

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

College of Technology and Applied Sciences Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Technology	M.S.Tech.	Aeronautical engineering technology, manufacturing engineering technology, mechanical engineering technology	Department of Manufacturing and Aeronautical Technology
		Aviation human factors, aviation management technology	Department of Aeronautical Management Technology
		Computer systems engineering technology, electronic systems engineering technology, instrumentation and measurement technology, microelectronics engineering technology	Department of Electronics and Computer Engineering Technology
		Environmental technology management, fire service administration information technology management of technology	Department of Information and Management Technology
		Global technology and development, security engineering technology	College of Technology and Applied Sciences

years preceding admission are judged as to their applicability to the student's curriculum.

ADMISSION—B.A.S. DEGREE

Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree from a regionally accredited U.S. postsecondary educational institution. A GPA of 2.00 or higher is required for all resident applicants and a 2.50 for nonresident applicants.

ADVISING

New incoming and transfer students should seek initial advising from the academic advisor in the Dean's Office. CTAS students are then assigned faculty advisors who assist them with planning a program of study in the department of their major. The college requires that students consult with advisors before registering each semester. Advisors should be made aware of any employment obligations or special circumstances that may affect a student's ability to successfully handle a full course load. CTAS students may register for a maximum of 19 semester hours per semester. Any student wishing to take more than the maximum must petition the CTAS Standards Committee and have an approval on file before registering for an overload.

GRADUATION REQUIREMENTS

Students must meet all university graduation requirements given in "University Graduation Requirements," page 79, as well as degree requirements of their major in the College of Technology and Applied Sciences. For detailed information on the degree requirements of a major in CTAS, refer to that department's individual description.

COLLEGE STANDARDS

Pass/Fail Grades

The College of Technology and Applied Sciences does not offer pass/fail grades. Courses graded on a pass/fail basis do not count toward degree credit in CTAS. Students may request credit for pass/fail courses by petitioning the CTAS Standards Committee.

Entry into Upper-Division Courses (B.S. Degree)

Before enrolling in courses at the 300 level and above, CTAS students must be in the professional status within the college. Students who are not in good academic standing must petition the CTAS Standards Committee. Students enrolled in another ASU college may not register for any 300- and 400-level CTAS courses unless those courses are required in the degree program and the students have the proper course prerequisites.

ACADEMIC STANDARDS

Retention. A student is expected to make satisfactory progress toward completion of degree requirements to continue enrollment in the College of Technology and Applied Sciences. Any one of the following conditions is considered unsatisfactory progress and results in the student's being placed on probationary status:

1. a semester with a GPA less than or equal to 1.50,
2. two successive semesters with GPAs less than 2.00, or
3. an ASU cumulative GPA less than 2.00.

A student on probation is subject to disqualification if 1) a semester GPA of 2.25 is not attained and the cumulative GPA is below 2.00 at the end of the probationary semester or 2) the student is placed on probation for two consecutive semesters and is unable to achieve the standard GPAs stated in number one.

Students on academic probation are not allowed to register for more than 13 semester hours. Probationary students may not register for the semester following the semester in which they were declared probationary without a special permit from an advisor in the dean's office. Special permits are given only after the registrar records grades for the current semester.

L t e r a y n d r i c a n q r y M A m t h e m a t i c C S c o m p u t e r t i s t c
 q u a n t a t i v e a p p l i c a t i o n H U h o m e t e c h n o l o g y S B o a r d
 b e h a v i o r a l e n S G a t u a c e n e - g e n e r a c o r e c o u r s e s S Q n t u
 e n e q u a t i t i v e C u l t u r a d i v e r s i t y t h e S t a t e G o v e r n m e n t
 H h t t p : / / w w w . c o l l e g e . s t e . p a g e 8 3

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

Disqualification. During a semester on academic probation, a student who fails to meet the retention standards is disqualified. Students may request a review of their disqualification status by contacting the CTAS associate dean in the Academic Center Building (CNTR), room 10. Any disqualified student who is accepted by another college at ASU may not register for courses in CTAS unless the courses are required in the new major. Disqualified students who register for courses in CTAS may be withdrawn from these courses any time during the semester.

Reinstatement. The college does not accept an application for reinstatement until the disqualified student has remained out of the college for at least a 12-month period. Merely having remained in disqualified status for this period of time does not, in itself, constitute a basis for reinstatement. Proof of ability to do satisfactory college work in the chosen discipline is required; for example, completing pertinent courses in the discipline at a community college with higher-than-average grades.

STUDENT RESPONSIBILITIES

Course Prerequisites. Students should consult the *Schedule of Classes* and the catalog for course prerequisites. Students who register for courses without the designated pre-



Welcome Week activities at ASU East

Tim Trumble photo

quisites may be withdrawn without their consent at any time before the final examination. The instructor, the chair of the department, or the dean of the college may initiate such withdrawals. In such cases, students do not receive monetary reimbursement. Such withdrawals are considered to be unrestricted as described under "Unrestricted Course Withdrawal," page 73, and do not count against the number of restricted withdrawals allowed.

SPECIAL PROGRAMS

Academic Recognition. Students completing baccalaureate degree requirements receive the appropriate honors designations on their diplomas consistent with the requirements specified by the university.

Students in the college are encouraged to seek information concerning entry into honor societies that enhance their professional stature. Tau Alpha Pi is the engineering technology honor society, and Alpha Eta Rho is available for aeronautical management technology students.

Barrett Honors College. The College of Technology and Applied Sciences participates in the programs of the Barrett Honors College, which provides enhanced educational experiences to academically superior undergraduate students. Participating students can major in any academic program. For more information see "The Barrett Honors College," page 118.

Scholarships. Information and applications for academic scholarships for continuing students may be obtained by contacting departmental offices. Other scholarships may be available through the university Student Financial Assistance Office.

ROTC Students. Students pursuing a commission through either the Air Force or Army ROTC program must take from 12 to 20 semester hours of courses in the Department of Aerospace Studies or Department of Military Science. To preclude excessive overloads, these students should plan on at least one additional semester to complete degree requirements. Because of accreditation requirements, aerospace studies (AES) or military science (MIS) courses are not accepted in the engineering technology majors.

ENGINEERING TECHNOLOGY CORE (ETC)

ETC 100 Languages of Technology. (4)

fall and spring

Introduces computer-aided design, programming, modeling, and technical documentation. Lecture, lab.

General Studies: CS

ETC 191 First-Year Seminar. (1–3)

selected semesters

ETC 194 Special Topics. (1–4)

selected semesters

ETC 211 Applied Engineering Mechanics: Statics. (3)

fall and spring

Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. Prerequisites: MAT 260; PHY 111, 113.

ETC 340 Applied Thermodynamics and Heat Transfer. (3)

fall and spring

Thermodynamic systems and processes, first and second laws of thermodynamics, properties of pure substances, and applications to heat engines and special systems. Fundamentals of conduction, radiation, and convection. Prerequisites: MAT 261; PHY 112, 114.

DEPARTMENT OF AERONAUTICAL MANAGEMENT TECHNOLOGY

ETC 492 Honors Directed Study. (1-6)
selected semesters

ETC 493 Honors Thesis (1-6)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specified in this catalog see omnibus course page 56

GLOBAL TECHNOLOGY AND DEVELOPMENT (GTD)

See the *Graduate Catalog* for the GTD courses.

SECURITY ENGINEERING TECHNOLOGY (SET)

See the *Graduate Catalog* for the SET courses

Department of Aeronautical Management Technology

eastair.east.asu.edu
 480 727-1381
 SIM 205

William K. McCurry, Chair

Professor: Gele

Associate Professors: Jackson Karp, McCurry, Turney

Assistant Professor: Pearson

Lecturer: O'Brien

PURPOSE

Graduates are prepared for entry into the aviation and aerospace industry in productive professional employment or, alternatively, for graduate study. Curricula emphasize principles underlying the application of technical knowledge as well as current technology preparation to graduate to adapt to the rapid and continual changes in aviation and aerospace technology.

ADMISSION

New and transfer students who have been admitted to the university and who meet the requirements for admission to the College of Technology and Applied Sciences may be admitted without separate application to the Department of Aeronautical Management Technology. In the professional flight concentration, students are cleared for enrollment in flight courses on a competitive basis. Transfer credits are reviewed by department faculty advisors. To be acceptable for department credit, transfer courses must be equivalent in both content and level of offering.

DEGREES

The faculty in the Department of Aeronautical Management Technology offer a B.S. degree in Aeronautical Management Technology with concentrations in professional

flight and air transportation management. A B.A.S. degree in Applied Science is also offered with concentrations in aviation maintenance management technology and aviation management technology.

A Master of Science in Technology degree is offered for graduate study with concentrations in aviation management technology and aviation human factors. For more information, see the *Graduate Catalog*.

AERONAUTICAL MANAGEMENT TECHNOLOGY—B.S.

The Aeronautical Management Technology curricula are designed to provide a thorough technical background combined with an interdisciplinary general university education. The graduates are prepared to assume responsibilities in a wide area of managerial and technically related areas of aviation. The student gains a background in aircraft structures, reciprocating and turbine engines, aircraft performance and design, management skills, business principles, systems analysis, and a variety of course work specific to aircraft flight, airport operations, and air transportation systems. The degree offers two concentrations: professional flight and air transportation management, both of which have been accredited by the Commission on Aviation Accreditation. The concentrations are described separately on the following pages.

A degree requirements are shown on curriculum check sheets for the concentrations that are available by visiting the department or by accessing the department Web site at eastair.east.asu.edu. Requirements include First Year Composition, university General Studies (see "General Studies," page 53) and the Aeronautical Management Technology Core. Note that all three General Studies awareness areas are required. Consult your advisor for an approved list of courses. Refer to individual concentration degree requirements for additional required courses. Students must complete each Aeronautical Management Technology course with a grade of "C" or higher.

Aeronautical Management Technology Core

AMT 111	Introduction to Aeronautical Management Technology	1
AMT 157	Physics for Pilots/Crew Resource Management	3
AMT 211	Air Traffic Control	3
AMT 226	Aviation Meteorology	3
AMT 250	Aircraft Structures, Materials, and Systems	4
AMT 287	Aircraft Powerplants	4
AMT 315	Aviation Human Factors	3
AMT 320	Aircraft Design Performance and Avionics	3
AMT 366	Aircraft Professionalism	1
AMT 410	Aircraft Safety and Human Factors	3
AMT 442	Aviation Law Regulations	3
ETC 111	Language of Technology CS	4
TWC 411	Technical Communication L	3
Total		35

Library and Reference MA Mathematics CS Computer Technology
 Humanities HU Humanities and Fine Arts SB Social and Behavioral Science SG Statistics and Management Science SQ Natural Science Quantitative Curriculum and Learning Studies GG Global Health and Environmental Studies page 3

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

Professional Flight Concentration

Flight training is certified by the Federal Aviation Administration. Students in the professional flight concentration must pass an FAA medical examination before flying solo. While this physical examination is required for admission to the program, it must be completed before flying solo as the medical certificate becomes the student pilot certificate. An FAA Class I medical examination is required to complete the certificates and ratings necessary to meet graduation requirements. It is recommended that a medical examination be completed by an aviation medical examiner of the student's choice before the start of classes.

Professional flight combines academic studies and flight training to prepare graduates for a wide variety of positions within the air transportation industry including general, air line, and military aviation. Ground school and flight training are available, allowing the student to obtain private pilot, commercial pilot, and flight instructor certificates and also the instrument pilot, instrument instructor, and multiengine pilot ratings.

This curriculum concentrates on flying plus the technical management and computer related applications necessary to operate in the high density environment of modern airspace. The program also emphasizes critical thinking, analytical skills, and oral and written communication skills. A career in professional flight leads to the development, administration, and enforcement of safety regulations, including airworthiness and operational standards in civil aviation.

While enrolled at ASU, students do not receive college credit for flight activity or instruction received at flight schools other than those entities with which the university has currently contracted for such instruction. Consideration is given for flight experience received before enrollment at the university through the private pilot certificate only.

Flight instruction costs are not included in university tuition and fees. The estimated cost of flight training is \$40,000 in addition to normal university costs.

Degree Requirements

Professional flight students are required to complete 128 semester hours with a 2.25 cumulative GPA in cumulative a minimum of 50 semester hours of upper division courses. All degree requirements are shown on the student's curriculum check sheet.

Concentration Requirements

In addition to the required courses for First Year Composition, university General Studies (see "General Studies," page 83), and the Aeronautical Management Technology core, the following additional courses are required for the professional flight management concentration:

AMT 101 Flight Safety I	1
AMT 201 Flight Safety II	2
AMT 214 Commercial/Instrument Ground School	3
AMT 301 Flight Safety III	2
AMT 322 Commercial Instrument Cross Country School	5
AMT 387 Air Navigation	5
AMT 388 Flight Instructor Ground School	3
AMT 387 Multiengine Pilot Ground School	3
AMT 392 Flight Instructor Instrument Ground School	3
AMT 400 Flight Safety IV	3
AMT 408 National Aviator Policy	3

AMT 450 Airline Instrument Procedures	3
AMT 459 Airline Administration	3
AMT 496 Airline Aircraft System Capstone	3
ECN 111 Macroeconomic Principles SB	3
or ECN 112 Microeconomic Principles SB	3
PGS 101 Introduction to Psychology	3
S.P. 470 Introductory Applied Statistics	3
Technical electives or internship	6
Total	49

Suggested Course Pattern for Freshmen

First Semester

AMT 101 Flight Safety I	1
AMT 111 Introduction to Aeronautical Management Technology	1
AMT 187 Private Pilot Ground School	3
AMT 220 Aviation Meteorology	3
ENG 101 First Year Composition	3
MAT 260 Technical Calculus I/MA	3
Total	14

Second Semester

AMT 201 Air Traffic Control	3
AMT 214 Commercial Instrument Ground School	3
ENG 102 First Year Composition	3
ETC 100 Languages for Technology Skills	4
PHY 111 General Physics SQ	3
PHY 113 General Physics Laboratory SQ	1
Total	17

* Both PHY 111 and 113 must be taken to secure SQ credit.

Air Transportation Management Concentration

The air transportation management concentration is designed to prepare graduates for managerial and supervisory positions throughout the air transportation industry. An in-depth technical education is included along with broad exposure to business and management courses. This program of study is interdisciplinary in nature and prepares the aeronautical career-oriented student for positions such as air traffic control specialist, air carrier manager, airport manager and general aviation operations manager.

Degree Requirements

Air transportation management students are required to complete 128 semester hours with a 2.00 cumulative GPA, including a minimum of 50 semester hours of upper division courses. All degree requirements are shown on the student's curriculum check sheet.

Concentration Requirements

In addition to the required courses for First Year Composition, university General Studies (see "General Studies," page 83), and the Aeronautical Management Technology core, the following additional courses are required in the airway science management concentration:

ACC 230 Uses of Accounting Information	3
AMT 408 National Aviation Policy	3
AMT 444 Airport Management and Planning	3
AMT 450 Airline Administration	3
AMT 491 Aviation Management Capstone	3
ECN 111 Macroeconomic Principles SB	3
or ECN 112 Microeconomic Principles SB	3
IMC 346 Management Dynamics	3

DEPARTMENT OF AERONAUTICAL MANAGEMENT TECHNOLOGY

ITM 343 Occupational Safety and Ergonomics	3
ITM 430 Ethical Issues in Technology	3
ITM 452 Industrial Human Resource Management	3
ITM 456 Introduction to Organized Labor	3
ITM 48 Organizational Effectiveness	3
PGS 101 Introduction to Psychology	3
STP 420 Introductory Applied Statistics	3
Technical Electives or Internship	7
Total	49

Suggested Course Pattern for Freshmen

First Semester

AMT 101 Introduction to Aeronautical Management Technology	1
AMT 182 Private Pilot Ground School	3
AMT 220 Aviation Meteorology	3
ENG 101 First Year Composition	3
MAT 260 Technical Calculus I/MA	3
Total	13

Second Semester

AMT 211 Air Traffic Control	3
ENG 102 First Year Composition	3
ETC 100 Languages of Technology CS	4
PHY 111 General Physics SQ*	3
PHY 113 General Physics Laboratory SQ*	1
General Studies elective	3
Total	17

* Both PHY 111 and 113 must be taken to secure SQ credit.

APPLIED SCIENCE—B.A.S.

The Bachelor of Applied Science degree is a “capstone” degree for the Associate of Applied Science degree. The B.A.S. degree exposes students to advanced concepts and diverse critical thinking skills that prepare students for future career opportunities and professional advancement.

Admission

Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree from a regionally accredited U.S. postsecondary educational institution. A GPA of 2.00 or higher is required for all resident applicants and a 2.50 for nonresident applicants.

Degree Requirements

The B.A.S. degree in the College of Technology and Applied Sciences consists of 60 semester hours of upper division (300 level and above) courses, with 30 hours in residence.

A.A.S. degree	60
Assignable credit	6
B.A.S. core	15
General Studies	19
Technical concentration	20
Total	120

General Studies Curriculum

The B.A.S. curriculum builds on the general education content of the A.A.S. degree. Additional General Studies (L, CS and awareness areas) are met with courses in the core concentration. General Studies courses focus on contextual learning.

L	3
MA	3
HU	3
HU or SB	3
SB	3
SG	4
Total	19

Assignable Credit

Assignable credit allows space in the curriculum for prerequisite courses needed to succeed in the program. The courses are determined by the student and the advisor.

B.A.S. Core

The area core is focused on management and organization, professional communication, quantitative analysis, and computer competency.

GIT 494 ST. Computer Systems Applications	3
IMC 346 Management Dynamics	3
or ITM 344 Industrial Organization (3)	
or ITM 452 Industrial Human Resource Management (3)	
IMC 470 Project Management	3
STP 420 Introductory Applied Statistics CS	3
TWC 400 Technical Communications L	3
Total	15

Technical Concentrations

Aviation Maintenance Management Technology. This concentration is for those students who have completed an airframe and powerplant certification as part of their A.A.S. degree. Students receive an orientation in management practices that prepares them for progressively more responsible positions in the field of aviation maintenance management.

Aviation Management Technology. This concentration is for those students who have received training and education in some aspect of the air transportation industry (other than aviation maintenance), such as flight certificates and ratings as part of their A.A.S. degree. Students receive an orientation in management practices that prepares them for progressively more responsible positions in the field of aviation management.

STUDENT ORGANIZATIONS

The department hosts the local chapter of Alpha Eta Rho, an international professional aviation fraternity open to all students with an interest in aviation. The American Association for Airport Executives is open to all students with an interest in airport management. The Student Advisory Council is a leadership organization that facilitates student communication with faculty, departmental leaders, and university administrative personnel. The Precision Flight Team competes in regional and national flying safety competitions. The Women in Aviation International organization is open to all students.

L: literacy and critical inquiry MA: mathematics CS: computer statistics quantitative application HU: humanities and fine art SB: social and behavioral science SG: natural science—general core courses SQ: natural science—quantitative C: cultural diversity in the United States G: global history See “General Studies” page 83

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

AERONAUTICAL MANAGEMENT TECHNOLOGY (AMT)

AMT Note 1. Flight instructor costs are not included under tuition and fees

AMT 100 Flight Safety I. (1)

fall spring summer

Separate private pilot flight training and flight safety briefings. Requires continuous enrollment until completion of the FAA Private Pilot Certificate. Lecture. Lab Fee. See AMT Note 1. Prerequisite: Prerequisites both AMT 182 and 220 or the equivalent.

AMT 101 Introduction to Aeronautics Management Technology. (1)

fall and spring

Facilitates entry to Aeronautics Management Technology programs. Empresses *Genea Catalog* and concentration requirement registration career and Academic factors.

AMT 182 Private Pilot of Ground School. (3)

fall spring summer

Ground school preparation for Private Pilot Certificate. Aerodynamics, average performance and regulations. Elective. Prerequisite: Corequisite AMT 220.

AMT 194 Special Topics (1-4)

selected semesters

AMT 200 Flight Safety II (2)

fall spring summer

Supervise commercial instrument flight training and safety briefings. Requires continuous enrollment until completion of FAA Commercial Pilot Certificate with Instrument Rating. Lecture. Lab Fee. See AMT Note 1. Prerequisite: AMT 100 Private Pilot Certificate. Prerequisite: AMT 214 or 322.

AMT 201 Air Traffic Control. (3)

fall

Ground school preparation for weather services communications and flight procedures. FR operation, departure and arrival and airport operations and emergencies. Prerequisite: AMT 182.

AMT 214 Commercial Instrument Ground School I. (3)

fall and spring

Ground school preparation for FAA Instrument Pilot Rating. Commercial Pilot Certificate part 1 of 2. 10-hour ground training. Recorded Lecture. Lab Fee. Prerequisite: AMT 182 or 220.

AMT 220 Aviation Meteorology (3)

fall spring summer

Evaluation analysis and interpretation of atmospheric phenomena. Low and high altitude weather from the pilot's viewpoint. Corequisite: AMT 182.

AMT 280 Aerospace Structures, Materials, and Systems. (4)

fall

Basic aerodynamics, incompressible compressible air flow, wind tunnel test, weight theory, analysis of aircraft structure, properties and application of materials and aircraft systems. Lecture. Lab Fee. Prerequisite: PHY 111 113.

AMT 287 Aircraft Powerplants. (4)

spring

Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems and environmental control. Lecture. Lab Fee. Prerequisite: PHY 111 113.

AMT 300 Flight Safety III. (2)

fall spring summer

Supervised instruction for flight training and safety briefings. Requires continuous enrollment until completion of FAA Flight Instructor Certificate with Instrument Instructor Rating. Lecture. Lab Fee. See AMT Note 1. Prerequisite: AMT 200. Prerequisite: AMT 385.

AMT 308 Air Transportation (3)

fall

Studies the socioeconomic and technological development of air transportation and its economic and environmental impact upon global interaction. Prerequisite: Junior standing.
General Studies G

AMT 322 Commercial Instrument Ground School II. (3)

spring

Ground school preparation for FAA Instrument Pilot Rating. Commercial Pilot Certificate part 2 of 2. 10-hour ground training. Recorded Lecture. Lab Fee. Prerequisite: AMT 100 or instructor approval. Prerequisite: AMT 214.

AMT 350 Aircraft Design, Performance, and Avionics. (3)

spring

Fundamentals of aircraft design, turboprop and turbojet performance parameters, efficiency, AC/DC circuits, and operation of transport category aircraft avionic systems. Lecture. Lab Fee. Prerequisite: AMT 280 282.

AMT 360 Introduction to Helicopter Technology. (3)

selected semesters

Introduces the working functions of modern rotary-wing aircraft, rotary-wing flight theory, aerodynamics, controls, flight, and power requirements. Prerequisite: PHY 111 113.

AMT 370 Air Freight Operations. (3)

selected semesters

Air freight operations in National Aviation System ramp operations, loading weight and balance and administration, forwarding and ground operations. Prerequisite: Junior standing.

AMT 382 Air Navigation (3)

spring

Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management, multi-crew cockpit. Lecture. Lab Fee. Prerequisite: AMT 322. Prerequisite: Corequisite: AMT 200 or instructor approval.

AMT 385 Flight Instructor Ground School. (3)

fall and spring

Ground school preparation for the FAA Flight Instructor Certificate. Lecture. Lab Fee. Prerequisite: Corequisite: AMT 200.

AMT 387 Multiengine Pilot Ground School. (1)

fall and spring

Ground school preparation for the FAA Multiengine Rating. Lecture. Lab Fee. See AMT Note 1. Prerequisite: AMT 200 or instructor approval.

AMT 391 Multiengine Instructor Ground School. (2)

selected semesters

Ground school preparation for the FAA Multiengine Flight Instructor Rating. Lecture. Lab Fee. See AMT Note 1. Prerequisite: AMT 387 4.

AMT 392 Flight Instructor Instrument Ground School. (3)

fall and spring

Ground school preparation for the FAA Instrument Flight Instructor Rating. Lecture. Lab Fee. See AMT Note 1. Prerequisite: AMT 200 385.

AMT 395 Multiengine Land, Airplane Flight Instructor Rating (1)

selected semesters

Norma and emergency flight operations, structural techniques and procedure for multiengine and airplane. Requires CFAME Rating for course completion. Lecture. Lab Fee. See AMT Note 1. Prerequisite: AMT 91.

AMT 396 Aviation Professional. (1)

fall and spring

Careerful for management and flight student, including internships, resume writing, interviews, and employment search in aviation industry. Prerequisite: Junior standing.

AMT 400 Flight Safety IV. (1)

fall spring summer

Multiengine and crew training and safety briefings. Requires continuous enrollment until completion of rating and multi-crew training. Lecture. Lab Fee. See AMT Note 1. Prerequisite: AMT 300. Prerequisite: Corequisite: AMT 387.

AMT 408 National Aviation Policy (3)

fall

Example aviation and aerospace policy and policy process including agencies involved in formulation, implementation, and evaluation of aviation policy. Prerequisite: Junior standing.

AMT 409 Nondestructive Testing and Quality Assurance. (1)

selected semesters

Purpose of nondestructive quality assurance. Theory and application of nondestructive testing methods. Application of pertinent standards, specifications and codes. Lecture. Lab Fee. Cross-listed as AET

DEPARTMENT OF AERONAUTICAL MANAGEMENT TECHNOLOGY

409 Credits awarded for only AET 409 or AMT 409. See AMT Note 1
Prerequisite: AMT 280 or MET 230

AMT 410 Aviation Safety and Human Factors. (3)

fa

Aviation accident prevention human factors the support fire prevention accident investigation and air survivability Development and analysis of aviation safety programs Prerequisites: junior standing completion of 1 semester of General Studies L requirement

AMT 412 Air Transportation Research. (1)

fa

Survey practical research methodology in the air transportation industry Topics include planning and design considerations

AMT 419 Aviation Logistical Management. (3)

spr ng

Survey FAA requirements for personnel and facilities. Topics include parts supply quality control product ability pricing profitability and administration Lecture, lab Prerequisite: junior standing

AMT 442 Aviation Law Regulations. (3)

fa

Aviation within context of U.S. Common Law system Public law administration rule making sovereignty, enforcement and case law analysis Prerequisite: junior standing

AMT 444 Airport Management and Planning. (3)

spr ng

Oriented to administration and management of modern public airport including overview of planning, funding and development of airport facilities Prerequisite: junior standing

AMT 482 Airline Instrument Procedures. (3)

fa

Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management Lecture, lab Prerequisites: a combination of AMT 200 and 322 and 382 or on instructor approval

AMT 484 Aeronautical Internship. (1-12)

fa, spr ng summer

Work experience assignment with aerospace industry commensurate with student's program. Special project guidance by industry with university supervision Prerequisites: advisor approval, junior standing.

AMT 489 Airline Administration. (3)

spr ng

Administration organizational elements of airline administration operational structure and relationship with federal government agencies Prerequisite: junior standing

AMT 491 Aviation Management Capstone. (3)

spr ng

Integration and overview of management tools, current business problems and topics related to aviation industry. Group project with industry and government and business partners Prerequisite: senior standing

AMT 494 Special Topics. (1-4)

se ected semesters

AMT 496 Airline Aircraft Systems Capstone. (3)

spr ng

Commercial airline aircraft systems and flight procedures includes theoretical educational large commercial passenger aircraft Lecture, lab Prerequisite: senior standing

AMT 498 Pro-Seminar. (1-7)

se ected semesters

AMT 499 Individualized Instruction. (1-3)

se ected semesters

AMT 521 Air Transportation Regulation. (3)

se ected semesters

Reviews evolutionary history of government regulations. Explores alternatives for economic, safety, social and administrative regulatory reform in air transportation Prerequisite: AMT 444 or 489 or its equivalent

AMT 523 Aviation Systems Management. (3)

se ected semesters

Systems theory applied to intermodal transportation networks Survey of air and ground transportation infrastructure institutional frameworks and intermodal promotion connecting connections between modes Prerequisite: AMT 444 or 489 or its equivalent

AMT 525 Airport Planning and Design. (3)

se ected semesters

Completion of various phases of airport master planning process. Provides guidance for capital development of airport. Project work groups assigned Prerequisite: AMT 444 or 489 or its equivalent

AMT 527 Airline Management Strategies. (3)

se ected semester

Since deregulation airlines have undergone profound changes through mergers consolidation and acquisition in-depth look at airline management strategies for the 21st century Prerequisite: AMT 444 or 489 or its equivalent

AMT 528 International Aviation. (3)

se ected semesters

Major issue of international aviation history a review of institutional framework B-737 route agreements freedom versus sovereignty current negotiations arrangements Prerequisite: AMT 444 or 489 or its equivalent

AMT 529 Fixed Base Operations Management. (3)

se ected semesters

Examines FBOs in the national aviation system Organization of flight operations aircraft maintenance and administration for multiple aircraft type Prerequisite: AMT 444 or 489 or its equivalent

AMT 541 Aviation Physiology. (3)

se ected semesters

Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operation in multiple environments Prerequisite: AMT 410 or its equivalent

AMT 543 Ergonomics in High-Technology Environments. (3)

se ected semesters

Examines ergonomics design principles regarding man-machine interface requirement of high technology workstations Emphasizes computer workstation design issues Prerequisite: AMT 410 or its equivalent

AMT 545 Human Factors in Aviation. (3)

se ected semesters

Overview of human role in aviation solves problem of unsafe acts and attitudes in human behavior Human engineering capabilities and limitations Prerequisite: AMT 410 or its equivalent

AMT 546 Crew Resource Management Line-Oriented Flight Training. (3)

se ected semesters

Evaluate in-depth multi-crew coordination for commercial aviation pilots Stresses importance of critical thinking decisions making integrated resource utilization Prerequisite: AMT 410 or its equivalent

AMT 547 Modern Human Factors Design Issues. (3)

se ected semesters

Research and discussion of current human factors issues State of the art analyses of information regarding rapidly evolving designs and applications Prerequisite: AMT 410 or its equivalent

AMT 549 Human Factors Research. (3)

se ected semesters

Aviation human factors research principles applied and tested in operational settings through project assigned in conjunction with industry partners Prerequisite: AMT 410 or its equivalent

AMT 580 Practicum. (1-12)

se ected semesters

AMT 584 Internship. (1-12)

se ected semesters

AMT 590 Reading and Conference. (1-12)

se ected semesters

AMT 591 Seminar. (1-12)

se ected semesters

Topics may include the following

- Transportation System Process Air

L: literacy and dictation; MA: mathematics; CS: computer statistics; quantitative applications; HU: human and information; SB: social behavior; SG: general education courses; SQ: natural sciences-quantitative; CU: university in the 21st century; GG: global history. See General Studies page 83

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

AMT 592 Research (1–12)
selected semesters

AMT 593 Applied Project (1–12)
selected semesters

AMT 595 Continuing Registration (1)
selected semesters

AMT 598 Special Topics (1–4)

selected semesters
Topics may include the following:

- Airport Systems

AMT 599 Thesis (1–12)
selected semesters

Omnibus Courses. For an explanation of courses offered but not specifically stated in this catalog see Omnibus Courses page 56

Department of Electronics and Computer Engineering Technology

www.east.asu.edu/ctas/ecet

480 727-1029

TECH 101

Timothy E. Lindquist, Chair

Professors: Lindquist, McHenry, Munukutla, Robertson

Associate Professors: Koehnemann, Maca, Mard, Sundararajan, Zeng

Assistant Professor: Gannod

Senior Lecturer: Whitehouse

PURPOSE

The Department of Electronics and Computer Engineering Technology prepares graduates to apply scientific and engineering knowledge, methods, and techniques in support of technological applications in electronics and computer engineering activities and processes.

The engineering technology curriculum is applications oriented and builds upon a background of applied science and mathematics, including the concepts and applications of calculus. Graduates are prepared to produce practical, workable, and safe solutions to technologically challenging problems. Graduates are employed in the electronics and computer industries with responsibilities such as designing, installing and operating technical systems, analyzing and re-engineering systems that embed computer hardware and software for unique applications, developing and producing products, managing manufacturing processes, and providing customer support for technical products and systems.

DEGREES

The faculty in the Department of Electronics and Computer Engineering Technology offer the B.S. degree in Electronics Engineering Technology (B.S. EET) and the B.S. degree in Computer Engineering Technology (B.S. CET).

For students holding an A.A.S. degree, the department offers the B.A.S. degree with a major in Applied Science. Five concentrations are available: computer systems administration, instrumentation/microcomputer systems, semiconductor technology, and software technology applications.

A Master of Science in Technology degree program with concentrations in electronics engineering technology, computer systems engineering technology, instrumentation and measurement technology, and microelectronics engineering technology is available for qualified B.S. graduates. See the *Graduate Catalog* for more information.

Electronics Engineering Technology B.S.

Students interested in the B.S. degree in Electronics Engineering Technology may choose to specialize in one of the following three concentrations: electronic systems, microelectronics, and telecommunications.

The *electronic systems* concentration is aimed at preparing persons for careers in control, electronics, instrumentation, and power systems applications. This concentration allows a student to develop a broad-based knowledge of electrical/electronic fundamentals with an applications perspective.

The *microelectronics (MET)* concentration combines applied electronics, monolithic and hybrid integrated circuit processing and applications, device and component fabrication, and manufacturing. The objective of this concentration is to prepare persons to assume positions in the area of microelectronics manufacturing with immediately applicable knowledge as well as to develop a strong foundation of electronic fundamentals and methods. Graduates of this concentration secure positions in processing/manufacturing operations, and applications areas in industry as members of the diverse scientific engineering team.

The *telecommunications* concentration encompasses the fundamentals of information and signal processing, modern bandwidth-efficient digital radio analysis with RF and microwave circuits and systems. Applications include telephone pulse code modulation, cable TV, fiber optic links, and satellite transmission circuits and systems.

The departmental curriculum is organized into two categories: technical studies and General Studies. Technical studies consist of core areas and the concentration specialty area. General Studies consist of courses selected to meet the university General Studies requirement (see "General Studies," page 83) as well as the math/science requirement of TAC (of ABET). Note that all three General Studies awareness areas are required. Consult your advisor for an approved list of courses.

A minimum of 50 upper division hours is required, including at least 24 semester hours of EET, CET, or UE upper division hours to be taken at ASU. A minimum of 128 semester hours with a 2.0 cumulative GPA is required for graduation. Complete program of study guides with typical four-year patterns are available from the department.

The General Studies portion of the B.S./EET curriculum has been carefully structured to meet the specific requirements of the university and to include the content required by the Technology Accreditation Commission of the

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING TECHNOLOGY

Accreditation Board for Engineering and Technology, the professional accrediting agency for such curricula.

**ELECTRONICS ENGINEERING TECHNOLOGY—
B.S. DEGREE REQUIREMENTS**

In addition to the courses listed for First Year Composition and university General Studies, the following courses are required.

ENGINEERING TECHNOLOGY CORE

The following courses are required as part of the engineering technology core:

ETC 110	Languages of Technology CS	4
ETC 21	Applied Engineering Mechanics Statics	3
ETC 40	Applied Thermodynamics and Heat Transfer	3
Total		10

Electronics Engineering Technology Core and Major Requirements

CET 101	Oriented Software Development I	3
CET 151	Digital Systems I CS	4
CET 350	Digital Systems II	4
CET 354	Microcomputer Architecture and Programming	4
EET 208	Electric Circuit Analysis I	4
EET 301	Electric Circuit Analysis II	4
EET 310	Electronic Circuits	4
EET 37	Communication Systems	4
EET 396	Professional Orientation	1
EET 407	Energy Conversion and Applications	4
EET 410	Electronic Circuits II	4
EET 433	Electronic Materials	3
UET 415	Electronic Manufacturing Engineering Principles	3
Total		46

* Students must take EET 396 the semester in which they are enrolled in the 57th hour of credit ASU plus transfer hours. If the 57th hour occurs in an intersession students should take EET 396 the prior spring semester.

Electronics Engineering Technology Concentrations

Electronic Systems

CET 383	Shell and Script Programming with UNIX	3
EET 406	Control System Technology	4
EET 450	Instrumentation Systems	4
EET 460	Power Electronics	4
Approved technical elective		
Total		22

Microelectronics

CHM 116	General Chemistry SQ	4
UET 416	Monolithic Integrated Circuit Devices	3
UET 41	Monolithic Integrated Circuit Laboratory	2
UET 48	Hybrid Integrated Circuit Technology	4
UET 421	Applied Device Physics	3
UET 437	Semiconductor Packaging and Heat Transfer	3
Approved technical elective		3
Total		22

Telecommunications

CET 473	Digital/Data Communications	4
EET 304	Transmission Lines in Computer Networks	3
EET 401	Digital Signal Processing for Multimedia	3

EET 476	Communication Circuits	4
Approved technical electives		7
Total		21

**Electronics Engineering Technology
Program of Study
Typical First- and Second-Year Sequence
First Year**

First Semester

CET 151	Digital Systems I CS	4
ENG 111	First Year Composition	3
MAT 111	Pre-Calculus MA	3
PHY 111	General Physics SQ	3
PHY 113	General Physics Laboratory SQ	1
Total		14

Second Semester

ENG 112	First Year Composition	3
ETC 101	Languages of Technology CS	4
MAT 261	Technical Calculus I MA	3
PHY 112	General Physics SQ	3
PHY 114	General Physics Laboratory SQ	1
HU, SB, or awareness area course		3
Total		17

Second Year

First Semester

CET 256	C Programming for Engineering Technology	3
CHM 113	General Chemistry SQ	4
ECN 111	Manufacturing Principles SB	3
EET 208	Electric Circuit Analysis I	4
MAT 261	Technical Calculus II MA	3
Total		17

Second Semester

EET 301	Electric Circuit Analysis II	4
ETC 211	Applied Engineering Mechanics Statics	3
MAT 262	Technical Calculus III MA	3
LI course		3
HU, SB, or awareness area course		3
Total		16

Both PHY 111 and 112 must be taken to secure SQ credit
Both PHY 112 and 114 must be taken to secure SQ credit

**COMPUTER ENGINEERING TECHNOLOGY—
B.S. DEGREE REQUIREMENTS**

Students interested in the B.S. degree in Computer Engineering Technology (B.S. CET) may choose to specialize in one of the following three concentrations: computer hardware technology, embedded systems technology, and software technology.

The *computer hardware technology* concentration is designed to provide students with an opportunity to develop broad based knowledge and skills in digital systems, interfacing techniques and computer hardware applications.

The *embedded systems technology* concentration prepares students for the application, interconnection, design, analysis,

Literacy and literacy MA, mathematics CS, computer literacy quantitative application HU, humane and fine arts SB, social and behavioral sciences SG, natural science—general core, SQ, natural science quantitative, CI, a diversity in the United States, GG, global history. See General Studies page 8.

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

and realization of systems that involve both software and hardware components. This concentration balances the hardware concerns of computer engineering with the processes and technologies involved in producing reliable software solutions.

The *software technology* concentration prepares students for careers in software applications in the context of an industry in which software solutions are increasingly distributed, using object oriented languages and frameworks, and in which the Internet, Web and wireless technologies play an important role.

Each student must satisfy the courses listed for First Year Composition and the university General Studies requirement. In addition, the following courses are required:

Lower-Division Core

CET 110 Object Oriented Software Development I	3
CET 150 Digital Systems I CS	4
CET 200 Object Oriented Software Development II	3
EET 205 Electric Circuit Analysis I	4
CEC 110 Languages of Technology CS	4
Core total	18

Major

CET 326 Programming Languages for Technology with C++ and Visual BASIC	4
CET 350 Digital Systems II	4
CET 354 Microcomputer Architecture and Programming	4
CET 383 Shell and Script Programming with UNIX	3
CET 456 Assembly Language Applications	3
EET 396 Professional Orientation	1
LET 415 Electronic Manufacturing Engineering Principles	3
Total	22

Computer Hardware Technology Concentration

CET 452 Digital Logic Applications	4
CET 455 Microcomputer Systems Interfacing	4
CET 473 Digital/Data Communications	4
CET 486 Hardware Description Languages VHDL	3
EET 301 Electric Circuit Analysis II	4
EET 310 Electronic Circuits I	4
EET 372 Communication Systems	4
EET 411 Digital Signal Processing for Multimedia	3
EET 422 Electronic Switching Circuit	4
Technical electives	7
Total	41

Embedded Systems Technology Concentration

CET 23 Applied Data Structures	3
CET 386 Operating Systems Principles	3
CET 42 Foundations of Distributed Web Based Applications in Java	3
CET 450 Digital Logic Applications	4
CET 455 Microcomputer Systems Interfacing	4
CET 458 Digital Computer Networks	3
CE 473 Digital Data Communications	4
CET 486 Hardware Description Languages, VHDL	3
EET 301 Electric Circuit Analysis II	4
EET 411 Digital Signal Processing for Multimedia	3
Technical electives	7
Total	41

Software Technology Concentration

CET 230 Applied Data Structures	3
CET 386 Operating Systems Principles	3
CET 40 Software Engineering Technology	3

CET 420 Foundations of Distributed Web Based Applications in Java	3
CET 425 Server Software Programming	3
CET 427 Distributed Objects with Java and CORBA	3
CET 433 Database Technology	3
CET 458 Digital Computer Networks	3
CET 488 Systems Administration of UNIX	3
CET 459 Network Administration with TCP/IP	3
Technical electives	11
Total	41

**Computer Engineering Technology
Program of Study
Typical First- and Second-Year Sequence
First Year**

First Semester

ENG 111 First Year Composition	3
ETC 106 Languages of Technology CS	4
MAT 70 Pre-calculus MA	3
PHY 111 General Physics SQ ¹	3
PHY 113 General Physics Laboratory SQ ²	1
Total	14

Second Semester

CET 106 Object Oriented Software Development I	3
ENG 112 First Year Composition	3
MAT 260 Technical Calculus MA	3
PHY 112 General Physics SQ ¹	3
PHY 114 General Physics Lab SQ ²	1
Total	13

Second Year

First Semester

CET 150 Digital Systems I CS	4
CET 200 Object Oriented Software Development II	3
CET 256 C Programming for Frontier Technology	3
CHM 11 General Chemistry SQ ¹	4
MAT 261 Technical Calculus II MA	3
Total	17

Second Semester

CET 230 Applied Data Structures	3
CET 350 Digital Systems II	4
FCN 111 Macroeconomic Principles SB	3
EET 208 Electric Circuit Analysis	4
MAT 243 Discrete Mathematical Structures or MAT 262 Technical Calculus III MA	3
Total	17

Both PHY 111 and 113 must be taken to secure SQ credit.
Both PHY 112 and 114 must be taken to secure SQ credit.

APPLIED SCIENCE—B.A.S.

The Bachelor of Applied Science degree is a capstone degree for the Associate of Applied Science degree. The B.A.S. degree exposes students to advanced concepts and diverse critical thinking skills that prepare them for future career opportunities and professional advancement.

Admission

Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree from a regionally accredited U.S. postsecondary educational institution. A GPA of

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING TECHNOLOGY

2.00 or higher is required for all resident applicants and a 2.50 for nonresident applicants

Degree Requirements

The B.A.S. degree in the College of Technology and Applied Sciences consists of 60 semester hours of upper division (300 level and above) courses, with 30 hours in residence.

A.A.S. degree	60
Assignable credit	6
B.A.S. core	15
General Studies	19
Technical concentration	20
Total	20

General Studies Curriculum

The B.A.S. curriculum builds on the general education content of the A.A.S. degree. Additional General Studies (L, CS and awareness areas) are met with courses in the core or concentration. General Studies courses focus on contextual learning.

L	3
MA	3
HL	3
HL or SB	3
SB	3
SG	4
Total	19

Assignable Credit

Assignable credit allows space in the curriculum for prerequisite courses needed to succeed in the program. The courses are determined by the student and the advisor.

B.A.S. Core

The area core focuses on management and organization, professional communication, quantitative analysis, and computer competency.

CET 420 Foundations of Distributed Web Based Applications in Java	3
EET 494 ST Data Analysis	3
GIT 352 Technical Presentations	3
IMC 346 Management Dynamics	3
TWC 410 Technical Communications I	3
Total	15

Technical Concentrations

Computer Systems Administration. This concentration is designed to broaden and provide more in depth knowledge in computer networks. Graduates from this concentration will be prepared to specify, install, maintain, and administer various computer networking systems.

Instrumentation. This concentration studies instrumentation, power systems, and computer systems. The curriculum prepares the graduate to specify and prepare solutions for a wide variety of electrical and electronic instrumentation systems. Graduates from this concentration are primed for technical leadership positions in the various segments of the electronics industry.

Microcomputer Systems. This concentration prepares graduates for product specification and marketing positions in microcomputer applications. The B.A.S. degree provides additional technical skills in microcomputer systems to prepare graduates for responsible and productive positions in the support of computer systems.

Semiconductor Technology. This concentration prepares graduates for careers in the semiconductor industry. The B.A.S. degree provides graduates with an understanding of integrated circuit processing, mask making, packaging, and the software tools used in this industry.

Software Technology Applications. This concentration prepares graduates for careers in the software industry. The B.A.S. degree furnishes additional technical expertise in software technology to prepare graduates to design, specify, and provide software solutions for industry and the consumer market. This concentration also prepares graduates for computer systems and network administration careers.

COMPUTER ENGINEERING TECHNOLOGY (CET)

CET 100 Object-Oriented Software Development I. (3)

fa
Basic concepts of object oriented analysis, design, and programming using Java, Basic, Java, variables, expressions, arrays, statements, methods, and classes. Prerequisite: ETC 100

CET 150 Digital Systems I. (4)

fa and spring
Number systems, Boolean algebra, combinational logic, K-map, flip-flops, sequential circuits, state machines, and minimization techniques.

General Studies: CS

CET 191 First-Year Seminar. (1-3)

selected semesters

CET 200 Object-Oriented Software Development II. (3)

fa and spring
Object modeling with class and interaction diagrams, inheritance and runtime binding, introduces frameworks with Java collections and windowing. Prerequisite: CET 100.

CET 230 Applied Data Structures. (3)

fa
Introduces data structures: strings, stacks, queues, binary tree recursion, searching, and sorting. Prerequisite: CET 100

CET 256 C Programming for Engineering Technology. (3)

fa, spring, summer
Applied and practical problem solving using the C programming language. Prerequisite: ETC 100

CET 294 Special Topics. (1-4)

selected semesters

CET 326 Programming Languages for Technology with C++ and Visual BASIC. (4)

fa
Programming language design and implementation concepts through programming C++ Visual BASIC execution, runtime management, data control, pointers, templates, multiple inheritance. Lecture/lab. Prerequisite: CET 100

CET 350 Digital Systems II. (4)

fa
Analysis and design of synchronous and asynchronous state machine. Introduces VHDL. Lecture/lab. Prerequisite: CET 150

Literacy and Technical Inquiry MA mathematics CS computer statistics quantitative applications HU humanities and fine arts SB social and behavioral sciences SG natural and general sciences SQ natural and quantitative Curriculum developed by the United States Government. See General Studies page 83

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

CET 354 Microcomputer Architecture and Programming. (4)

fa and spring

Microcomputer architecture assembly language programming Operations exceptions and interrupt handling introduces interfacing Prerequisite CET 150

CET 383 Shell and Script Programming with UNIX. (3)

fa and spring

UNIX operating system programming files environment and 4th generation languages and tools such as sed awk perl grep make Lecture ab Prerequisite CET 200 or 326

CET 386 Operating Systems Principles. (3)

spring

Fundamentals of operating systems process management scheduling and synchronization techniques memory and file management protection and security issues Prerequisite CET 256

CET 400 Software Engineering Technology. (3)

spring

Software life cycle models project management team development environments, software specification design implementation techniques and tools validation, and maintenance user documentation Prerequisite senior standing in Technology

CET 401 Digital Signal Processing for Multimedia. (3)

fa

Applied DSP techniques in multimedia Digital filter analysis and design Time and frequency techniques Computer applications Cross listed as EET 401 Credit is awarded for only CET 401 or EET 401 Prerequisite EET 301 MAT 262

CET 420 Foundations of Distributed Web Based Applications in Java. (3)

fa and spring

Principles underlying design and implementation of distributed software components protocols threads, XML serialization reflection security and events etc. ab Prerequisites CET 200 386

CET 425 Server Software Programming. (3)

once a year

Design and implementation of software servers, threaded socket servers, servers for distributed Web based applications security for the Web. Prerequisite CET 420 or instructor approval

CET 427 Distributed Objects with Java and CORBA. (3)

spring

Managing network objects with RMI and CORBA frameworks for naming discovery and invocation such as JNDI JINI and JavaSpaces Prerequisite CET 42 or instructor approval

CET 428 Web-Client User Interface Programming. (3)

fa

Client server model for window interfaces Java Swing Applets markup and scripting languages Web tools and related technologies Prerequisite CET 420 or instructor approval

CET 433 Database Technology. (3)

fa

Introduces database techniques and DBMS data models and languages Prerequisite CET 230 420

CET 452 Digital Logic Applications. (4)

spring

Design of sequential machines using system design techniques and complex MSLS devices with ab Prerequisite CET 350

CET 456 Assembly Language Applications. (3)

fa

Programming using BIOS and DOS routines. High level language interfacing Disk operation TSR routines and device drivers Prerequisite CET 354

CET 457 Microcomputer Systems Interfacing (4)

spring

Applications of microcomputer hardware and software Specification intro interface design Lecture ab Prerequisites CET 354 CSE 183 EET 31

CET 458 Digital Computer Networks. (3)

once a year

Network technology topics protocols, control techniques reliability and security Prerequisite CET 354

CET 473 Digital/Data Communications. (4)

fa

Signal distortion noise and error detection correction Transmissions and systems design interface techniques and standards Lecture ab Prerequisites CET 354 EET 372

CET 484 Internship. (1 12)

selected semesters

CET 486 Hardware Description Languages: VHDL. (3)

spring

Introduces hardware description languages using VHDL Techniques for modeling and simulating small digital systems using a VHDL simulator Prerequisites CET 350 383

CET 488 Systems Administration of UNIX. (3)

fa

Administration of UNIX, its processes system calls kernel structure, and interprocess communication using command line tools Lecture ab Prerequisites CET 383 386

CET 489 Network Administration with TCP/IP. (3)

spring

Writing C programs and shell script to create control and administer computer network installation and maintenance of computer networks Lecture ab Prerequisites CET 383 458 473

CET 490 Reading and Conference (1 12)

selected semesters

CET 492 Honors Directed Study. (1-6)

selected semesters

CET 493 Honors Thesis. (1-6)

selected semesters

CET 494 Special Topics. (1-4)

selected semesters

Topics may include the following
• Computer Project

CET 498 Pro-Seminar. (1 7)

selected semesters

CET 499 Individualized Instruction. (1-3)

selected semesters

Omnibus Courses For a complete list of courses offered but not specifically listed in this catalog see Omnibus Courses page 56

ELECTRONICS ENGINEERING TECHNOLOGY (EET)

EET 191 First Year Seminar (1 3)

selected semesters

EET 208 Electric Circuit Analysis I. (4)

fa and spring

Electrical models AC DC steady state analysis of first and second order systems Circuit theorems Three phase circuits Lecture ab Prerequisite corequisite MAT 261

EET 294 Special Topics (1-4)

selected semesters

EET 301 Electric Circuit Analysis II. (4)

fa and spring

Analysis of continuous-time signals and near systems of using Laplace and Fourier response of circuits Lecture ab Prerequisite EET 208 Prerequisite corequisite MAT 262

EET 304 Transmission Lines in Computer Networks. (3)

spring

Theory and application of transmission lines in high speed computer networks Signal propagation and impedance matching Lecture ab computer labs Prerequisite EET 301

EET 310 Electronic Circuits I. (4)

fa and spring

Multi-stage amplifier analysis and design using models and computer simulation Lecture ab Prerequisite EET 208

EET 372 Communication Systems. (4)

fa and spring

System analysis and design of AM FM, PCM, and SSB communication systems Noise and distortion performance of communication systems Lecture ab Prerequisite corequisites EET 301, 310

EET 394 Special Topics. (1-4)

selected semesters

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING TECHNOLOGY

EET 396 Professional Orientation. (1)

fa and spring

Technical professional, economic, and ethical aspects of electronics computer engineering technology practice and industrial organization. Lecture, projects. Prerequisite: junior standing.

EET 401 Digital Signal Processing for Multimedia (3)

fa

Applies DSP techniques to multimedia. Digital filter analysis and design. Time and frequency techniques. Computer applications. Cross-listed as CET 401. Credit awarded for only CET 401 or EET 401. Prerequisites: EET 301, MAT 262.

EET 406 Control System Technology. (4)

spring

Control system components analysis of feedback control system stability performance, and application. Lecture/lab computer simulations. Prerequisites: EET 301, MAT 262.

EET 407 Energy Conversion and Applications (4)

fa

Electricity, magnetism, mechanics, heat and units, and three phase circuits. Electrical machines, transformers, generation, transmission, and distribution of electrical energy. Lecture/lab. Prerequisite: EET 208.

EET 410 Electronic Circuits II. (4)

fa and spring

Analysis and design of OP amps, power amplifiers, and digital logic families. Feedback design using frequency response. Computer analysis and design. Lecture/lab. Prerequisites: EET 301, 310.

EET 422 Electronic Switching Circuits. (4)

once a year

Analysis and design of electronic circuits operating in a switching mode. Wave shaping, timing, and logic. Computer simulation. Lecture/lab. Prerequisites: CET 350, EET 301, 310.

EET 430 Instrumentation Systems. (4)

fa

Measurement principles and instrumentation techniques. Signal and error analysis. Lecture/lab. Prerequisites: EET 301, 310.

EET 460 Power Electronics. (4)

spring

Analyzes circuits for control and inversion of electrical power and energy. Lecture/lab. Prerequisites: EET 310, 310, 407.

EET 470 Communication Circuits. (4)

spring

Analysis and design of passive and active communication circuits. Coupling networks, filters, and impedance matching. Modulation and demodulation techniques. Computer simulations. Lecture/lab. Prerequisites: EET 372, MAT 262.

EET 482 Industrial Practice: Internship/Co-op. (1-4)

fa spring summer

Special assignment or approved activities in electronic industries or institutions. Requires report. May be repeated for up to a maximum of 10 credit. Prerequisites: Electronics Engineering Technology major; junior or senior standing.

EET 484 Internship. (1-12)

several semesters

EET 490 Electronics Project. (1-4)

fa spring summer

Individual or small group projects in applied electronics with emphasis on laboratory practice or hardware solutions to practical problems. Prerequisite: instructor approval.

EET 492 Honors Directed Study. (1-6)

several semesters

EET 493 Honors Thesis. (1-6)

several semesters

EET 494 Special Topics (1-4)

fa and spring

Topics may include the following:

- Data Analysis 3

EET 498 Pro-Seminar. (1-7)

several semesters

EET 499 Individualized Instruction. (1-3)

several semesters

Omnibus Courses. For an explanation of courses offered but not specified in this catalog, see "Omnibus Courses" page 56.

MICROELECTRONICS ENGINEERING TECHNOLOGY (UET)

UET 191 First Year Seminar (1-3)

several semesters

UET 194 Special Topics. (1-4)

several semesters

UET 294 Special Topics. (1-4)

several semesters

UET 331 Electronic Materials. (3)

fa

Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid state device characteristics and the material properties. Prerequisites: CHM 113, EET 208, PHY 112, 114.

UET 411 Applied Vacuum Technology. (3)

spring

Fundamental applications and practical aspects of vacuum systems and the uses in semiconductor fabrication. Prerequisite: UET 331.

UET 415 Electronic Manufacturing Engineering Principles. (3)

fa and spring

Electronic equipment design and fabrication principles and practice. Comparison of electronics hardware design project and report. Lecture/lab. Fee. Prerequisite: senior standing, 113 hours in Electronics Engineering Technology.

UET 416 Monolithic Integrated Circuit Devices. (3)

fa

Physics and electronics of bipolar and MOS devices used in integrated circuits. Prerequisite: UET 331. Corequisite: UET 417.

UET 417 Monolithic Integrated Circuit Laboratory. (2)

fa

Laboratory practice: the fabrication of integrated circuits. Lab. Prerequisite: UET 331. Corequisite: UET 416.

UET 418 Hybrid Integrated Circuit Technology. (4)

spring

Layout, fabrication, design, and manufacture of thin and thick film hybrid circuits. Lecture/lab. Prerequisites: EET 310, UET 331.

UET 421 Applied Device Physics. (3)

fa

Band structures of solids, physics of current carriers in solids, pn junctions, MOS and bipolar transistors. Prerequisite: senior standing in the department.

UET 424 Integrated Circuit Mask-Making Technology. (3)

fa

Fundamental applications and techniques for the fabrication of integrated circuit mask. Prerequisite: UET 331.

UET 426 Software Tools for the Semiconductor Industry. (3)

spring

Introduces software tools commonly used in the semiconductor industry such as SUPREM, V, PSPICE, VEWLOG, C, and CED. Prerequisite: UET 331.

UET 432 Semiconductor Packaging and Heat Transfer. (3)

spring

Packaging theory and techniques: ceramic, dip, surface mount, thermal management, electrical characteristics, and electrical properties. Prerequisites: EET 340 and UET 331 or the equivalents.

UET 437 Integrated Circuit Testing. (3)

spring

Principles, techniques, and strategies employed at wafer level and final product testing, both destructive and nondestructive. Prerequisite: UET 416.

Literacy and critical inquiry. **MA** mathematics. **CS** computer statistics. Quantitative application. **HU** human and fine art. **SB** science and behavior sciences. **SG** natural sciences general core courses. **SQ** quantitative. **C** cultural diversity in the United States. **G** global. **H** honoraria. See General Student page 83.

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

UET 484 Internship. (1–12)
se ected semester

UET 485 Digital Testing Techniques. (3)
once a year
 Hardware software a pect f d g ta test ng techno gy systems board and g c test ng and equ pment Lectu e ab Prerequ s tes CET 350 EET 310

UET 492 Honors Directed Study. (1–6)
se ected semesters

UET 493 Honors Thesis. (1–6)
se ected semesters

UET 494 Special Top cs. (1–4)
se ected semesters

UET 498 Pro Sem nar. (1 7)
se ected semesters

UET 499 Individual ized Instruction. (1 3)
se ected semesters

Omnibus Courses. For an exp anat on of our es offered but n t spec fca y sted n th s cata og see Omnibus Courses page 56

Department of Information and Management Technology

www.east.asu.edu ctas imt
 480 727-1781
 TECH 102

Thomas E. Schildgen, Chair

Professors: Duff H ld, Sadowski Sch dgen

Associate Professors: Grossman Hi ata Humbe Matson O son, Peterson

Assistant Professor: K me

Senior Lecturer: W son

Lecturers: Do n, Harr s Lestar

PURPOSE

The mission of the department is to prepare graduates who are able to develop and communicate technological solutions to industrial problems, to manage systems operations, to improve and evaluate products, to provide customer support, and to facilitate technology transfer in industry and government. Increased complexity and sophistication have created great demand for those individuals who possess a working knowledge of the technical phases of planning, testing, production, and fabrication of consumer and industrial products and equipment. Technology includes the application of science, systematic methods, procedures, techniques, communication protocols, and materials control for the development, improvement and perpetuation of state of the art solutions to industrial problems.

DEGREES

The faculty in the Department of Information and Management Technology offer the B.S. degree in Industrial Technology, with concentrations in the following areas: environmental technology management, industrial technology management, and graphic information technology.

For students holding an A.A.S. degree the department offers the B.A.S. degree in Applied Science, with concentrations in digital media management, digital publishing, emergency management, fire service management, operations management, municipal operations management, and technical graphics.

A Master of Science in Technology degree is offered for graduate study. The department offers four concentrations for the graduate degree: environmental technology management, fire service administration, graphic information technology and management of technology. For more information about the graduate program, see the *Graduate Catalog*.

INDUSTRIAL TECHNOLOGY—B.S.

The curriculum consists of First Year Composition, university General Studies, and technical courses. Note that all three General Studies awareness areas are required. Consult with an advisor for an approved list of courses. The technical part of the curriculum includes a required Information and Management core, program concentration course work, and technical electives selected with approval of an advisor.

Information and Management Technology students are required to complete a minimum of 120 semester hours with a 2.0 cumulative GPA, including a minimum of 50 semester hours of upper division courses to graduate.

Information and Management Core*

ETC 106 Languages of Technology CS...	4
GIT 233 Digital Publishing	3
IMC 331 Quality Assurance	3
IMC 346 Management Dynamics	3
IMC 396 Professional Orientation	1
IMC 404 Project Management	3
Total ...	17

*These courses are for the industrial technology management and graphic information technology concentration.

Environmental Technology Management Concentration. The environmental technology management concentration prepares graduates to manage such challenging problems in industry as regulatory compliance, hazardous materials management, pollution prevention, and international environmental standards for manufacturing. The curriculum is designed to provide a unique blend of critical, scientific, technical, and management skills. Degree requirements encompass the development of a broad background in the natural sciences and mathematics, social and behavioral sciences, management theory, regulatory issues, and applied sciences. The program is purposely structured to facilitate transfer students who are searching for a degree program that builds upon a strong technical background and focuses on the environmental issues faced by industry.

Certificate Program in Hazardous Materials and Waste Management. The Certificate Program in Hazardous Materials and Waste Management is designed to provide current and prospective employees of industry and government with a comprehensive and practical curriculum of study in hazardous materials management. The certificate program features instruction by ASU faculty, attorneys, and professionals who work in the specific area in which they teach. Participation in the certificate program is available in three options: a certificate program for nondegree students, a B.S. degree in Industrial Technology with a Certificate in Hazardous Materials and Waste Management, and a Master of Science in Technology degree with a Certificate in Hazardous Materials and Waste Management. Students must complete seven selected courses—five required and two electives—and earn a grade of “C” or higher to receive the certificate. Except for the introductory course, ETM 501 Principles of Hazardous Materials and Waste Management, the remainder of the courses may be taken in any sequence.

Industrial Technology Management Concentration. The industrial technology management concentration prepares students for supervisory and administrative positions in industry, manufacturing, and public service organizations. Course work includes accounting, data analysis, economics, effective decision making, finance, international business, legal and ethical studies, marketing, operations management, and safety. Emphasis is placed on health and safety within the workplace.

The industrial technology management program may be articulated with a broad range of community college technical courses. Community college specializations in areas such as aeronautics, construction, electronics, fire science, police science, graphic information technology, hazardous materials and waste management, computer graphics safety and health, human resource management, production management, and manufacturing may form a technical specialty area within the industrial technology management option. Consultation with an advisor is required to coordinate the course selection for transfer to this option.

Graphic Information Technology Concentration. The graphic information technology concentration prepares students for technical and management positions in the diverse graphic communication and information technology industries, digital printing and publishing; technical digital media production; management of graphic products; planning and evaluation of print, Internet, multimedia, and computer-based communications. This is an intensive 120 semester-hour graphic technology program of study emphasizing theory and hands-on laboratory practice. Students develop skills to plan and execute graphic solutions using visualization and sketching, engineering graphic standards, technical document design, higher-level graphic programming languages, computer drawing and illustration, multimedia and three-dimensional modeling, project management, quality assurance, and e-commerce practices.

The Graphic Information Technology Facility (GITF), located in the Technology Center, provides internship opportunities and exposes students to current production technology, problem-solving skills, cost analysis, and human resource issues. Graduates are able to present technical solutions using graphics in print and Internet publications, engineering documents, media-rich presentations, interactive training and instruction, models, and animations. Typical career opportunities include graphic operations management, sales and marketing, information technology support in graphics-related industries, graphic systems analysis, digital publishing (both print and online), and computer graphics content planning and creation.

APPLIED SCIENCE—B.A.S.

The Bachelor of Applied Science degree is a “capstone” degree for the Associate of Applied Science degree. The B.A.S. degree exposes students to advanced concepts and diverse critical thinking skills that prepare them for future career opportunities and professional advancement.

Admission

Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree from a regionally accredited U.S. postsecondary educational institution. A GPA of 2.00 or higher is required for a resident applicant and a 2.50 for nonresident applicants.

Degree Requirements

The B.A.S. degree in the College of Technology and Applied Sciences consists of 60 semester hours of upper division (300 level and above) courses, with 30 hours in residence.

A.A.S. degree	.....60
Assignable credit	.....6
B.A.S. core	.....15
General Studies	.....19
Technical concentration	.....20
Total	.....120

General Studies Curriculum

The B.A.S. curriculum builds on the general education content of the A.A.S. degree. Additional General Studies L, CS, and awareness areas are met with courses in the core or concentration. General Studies courses focus on contextual learning.

L	.....3
MA	.....3
H	.....3
H or SB	.....3
SB	.....3
SG	.....4
Total	.....19

L literacy and critical inquiry MA mathematics CS computer statistics quantitative application HU humane and fine art SB social and behavioral sciences SG natural and general education courses SQ natural science quantitative C cultural diversity in the United States G global history See General Studies page 83

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

Assignable Credit

Assignable credit allows space in the curriculum for prerequisite courses needed to succeed in the program. The courses are determined by the student and the advisor.

B.A.S. Core

The core focuses on management and organization, professional communication, quantitative analysis, and computer competency.

GIT 335	Computer System Technology	3
IMC 346	Management Dynamics	3
ITM 452	Industrial Human Resource Management	3
	or IMC 476 Project Management 3	
MET 411	Quality Assurance	3
	or STP 42 Introductory Applied Statistics CS 3	
TWC 400	Technical Communication SL	3
Total		15

Technical Concentrations

Operations Management Technology. The purpose of this technical concentration is to prepare supervisors for managerial functions in industry, manufacturing, and public service organizations. The B.A.S. degree provides the managerial and supervision content required for industry and governmental agencies.

Digital Media Management. This concentration prepares graduates for technical positions in industries implementing, planning, and producing interactive communications, integrated media, and multimedia design, training, and marketing. Prospective students with A.A.S. degrees in areas such as multimedia, print and publishing, commercial graphics, desktop publishing, or computer illustration may be interested in pursuing a digital media management concentration.

Technical Graphics. This concentration prepares graduates for positions in industries implementing technical and engineering graphics in computer aided design and computer integrated manufacturing. A.A.S. degrees in drafting and design, computer aided design, computer integrated manufacturing technology, mechanical technology, architectural technology, or construction technology may provide an excellent foundation for a technical graphics concentration.

Digital Publishing. This concentration prepares graduates for technical and entry-level management positions in the printing and publishing industry. A.A.S. degrees in multimedia, print and publishing, commercial art, desktop publishing, or computer illustration may find that this technical concentration provides excellent opportunities.

Emergency Management. This concentration prepares graduates for positions in industry, municipal departments, and government agencies. The curriculum addresses the established Federal Emergency Management Administration FEMA guidelines, on-site emergency response contingency planning, first responder secret management, logistical analysis, and communications protocol.

Fire Service Management. This concentration prepares graduates for positions in industry, municipal departments, and governmental agencies. The curriculum addresses services rendered by fire departments, fire service personnel development, fire management, inspection, and arson investigations.

Municipal Operations Management. This concentration prepares students for supervisory and management functions within municipalities, public service organizations, or businesses that provide services to the public sector. The curriculum addresses quality assurance, ethical issues, leadership practices, operations management, project management, marketing, finance, public sector management, and organizational effectiveness.

GRAPHIC INFORMATION TECHNOLOGY (GIT)

G T 135 Graphic Communications (3)

fall and spring
Introduce the techniques involved in the design image generation transmission and industrial production of multiple images for on-line presentation. Lecture/lab/field ps.

GIT 194 Special Topics (1-4)

selected semester

GIT 210 Creative Thinking and Design Visualization (3)

fall and spring
Fundamental methods concepts and techniques for creative thinking, design visualization and problem solving. Assigns individual and group projects. Lecture/lab. Prerequisite: ETC 100

G T 212 Computer Aided Design and Drafting (CADD) (3)

fall and spring
ADD for product design representation and documentation include project theory descriptive geometry graphics a day drafting standard and precision drawing techniques. Lecture/lab. Prerequisite: ETC 100 or equivalent.
General Studies: S

GIT 215 Introduction to Graphics Programming (3)

fall
Introduce analyzing planning and executing graph programs using industry standard programming tools. Lecture/lab. Prerequisite: ETC 100 or equivalent.

GIT 230 Digital Illustration in Publishing (3)

fall and spring
Rate and vector illustration publishing. Lecture/lab. Prerequisite: GIT 15

GIT 233 Digital Publishing (3)

fall and spring
Introduces software and hardware used for digital publishing and information graphics. Lecture/lab. Prerequisites: T 135 210

GIT 237 Web Content Design (3)

spring
Introduce design principles for visual content on the World Wide Web. Rate vector for file portable documents. Lecture/lab. Prerequisite: G T 135 or its equivalent. Prerequisite: G T 233

GIT 312 3D Computer Graphics Modeling and Representation (3)

fall
3D modeling application concept techniques data structures modeling strategies and embedding geometric representation. Lecture/lab. Prerequisite: G T 12
General Studies: CS

G T 313 Technical Illustration and Photorealistic Rendering (3)

fall
Computer generated graphics for technical illustration and design representation. Axonometric and perspective drawing shading shadowing

DEPARTMENT OF INFORMATION AND MANAGEMENT TECHNOLOGY

mate as a d textures photo ea t c render ng for Po tScr pt output
Lecture ab Pre equ ste G T 212

GIT 314 Multimedia Design, Planning, and Storyboards. (3)

spring
Creative and conceptual processes for collection page design
designing flowchart storyboard programming infographic prototyping and presenting multimedia projects Lecture ab Prerequisite G T 23

GIT 333 Printing Technology (3)

spring
theory and application of sheet and web press technology for offset lithography flexography screen printing and digital printing Lecture ab Prerequisite G T 135

GIT 334 Image Capture and Manipulation. (3)

fall
Theory and application of image capture techniques used for copy formats and conversion processes required for reproduction in digital format Lecture ab Prerequisite G T 233

GIT 335 Computer Systems Technology. (3)

selected semesters
Survey of computer based technology covering hardware software storage networking internet telecommunication and information systems Lecture ab Prerequisite none

GIT 337 Web Content Design. (3)

fall and spring
introduces design principles for visual content in the World Wide Web raster vector fonts printable documents color palettes effects mats Lecture ab Prerequisite G T 233

GIT 352 Technical Presentations. (3)

spring
Techniques for planning creating and delivering individual and group presentations Prerequisites EN 102, G T 33

GIT 394 Special Topics. (1-4)

selected semesters

GIT 411 Computer Animation. (3)

fall and spring
2D and 3D computer animation methods project planning scriptwriting storyboards advanced modeling lighting materials animation and motion Lecture ab Prerequisites G T 312 334

GIT 412 Multimedia Authoring, Scripting, and Production. (3)

fall and spring
Production of multimedia projects using industry standard authoring applications project management content development and project documentation user interface design interactivity media and databases. Lecture ab Prerequisite G T 314

GIT 413 Professional Portfolio Design and Presentation. (3)

spring
Digital media portfolio design and production planning audience analysis media selection, authoring media formats production copy rights considerations marketing and delivery Lecture ab Prerequisite G T 314 334

GIT 414 Web Site Design and Internet/Web Technologies. (3)

spring
Web site design authoring standard protocols and development techniques for commercial content driven Web based information systems Lecture ab Prerequisite G T 334 337

GIT 415 Computer Graphics. Business Planning and Management. (3)

spring
implementation planning feasibility and application of needs assessment and operation analysis technical organization management and technology considerations business plan development Lecture ab Prerequisites Prerequisite senior standing in information technology graphic information technology concentration

GIT 417 Advanced Internet Programming (3)

fall
Uses different standard programming languages and techniques to create interactive graphic format on Websites and applications Lecture ab Prerequisite G T 414

GIT 432 Graphic Industry Business Practices. (3)

selected semesters
Business practices related to prepress Web distribution trade show most analysis marketing and management approaches Lecture ab Prerequisite G T 414

GIT 435 Web Management and E-commerce (3)

spring
internet Website management security online database, and e-commerce business models Lecture ab Prerequisite G T 414

GIT 436 Gravure Technology. (3)

spring
in depth study of the market for a digital product on equipment related to the gravure method printing Prerequisite G T 135.

GIT 437 Color Reproduction Systems. (3)

fall
Scientific analysis for the engineering of color reproduction systems and color mode used in the graphics industry Prerequisite G T 334

GIT 441 Graphic Information Systems. (3)

selected semester
Graphic information systems common to the workplace graphic user interfaces from databases geographic industrial architecture and management application Lecture ab Prerequisite senior standing in information technology graphic information technology concentration

GIT 450 Digital Workflow in Graphic Industries. (3)

fall
Analyzes digital production systems from prepress and output of graphic information printing and Web networking network graphic job tracking Lecture ab Prerequisite G T 334

GIT 494 Special Topics (1-4)

fall and spring
Topics may include:
• Computer systems Application 3

GIT 510 Computer Graphics Programming: Design, Customization, and Development. (3)

selected semesters
Advanced design development and documentation of graphic application programs Lecture ab

GIT 512 Multimedia Based Education and Training. (3)

fall
Creative design page development documentation and production of technology based learning and multimedia based education and training materials and programs Lecture ab Prerequisite G T 412

GIT 537 Current Issues in Quality Assurance. (3)

selected semester
Directed group study of selected issues relating to quality assurance in the printing publishing and information industry

GIT 538 Personnel Development for the Graphics Industry. (3)

selected semesters
Employee training and development for product and management in the graphics industry

GIT 590 Reading and Conference. (1-12)

selected semesters

GIT 598 Special Topics. (1-4)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specified in this catalog see Omnibus Courses page 56

ENVIRONMENTAL TECHNOLOGY MANAGEMENT (ETM)

ETM 301 Environmental Management. (3)

fall
Focuses on knowledge and skills necessary to manage environmental programs Perspectives on regulatory individual corporate, and consulting Prerequisites CHM 113 MA 170

Literacy and critical inquiry MA mathematics CS computer technology
initiative application HU humanities SB social and behavioral science SG natural and environmental science SQ natural and environmental science
H to a e Ge e a t e pa e 83

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

ETM 302 Water and Wastewater Treatment Technology (4)

selected semesters

Explores the development of treatment technology. Addresses regulatory standards. Emphasizes theory and practice of system design, laboratory analysis standards and procedures. Lecture/lab. Prerequisite: ETM 301

ETM 303 Environmental Regulations. (3)

fall and spring

Explores environmental laws, regulations and directives. Addresses air and water. Prerequisite: ETM 301

ETM 360 Introduction to Emergency Management. (3)

fall

Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response and recovery. Post-disasters and policy formation. Current FEMA and hazards approach.

ETM 362 Managing Natural and Technological Disasters. (3)

spring

Federal state and local responses to emergencies. Management of mass casualties, evacuation, sheltering and terrorism; decontamination of emergency procedures.

ETM 363 Computer Applications in Emergency Management. (3)

spring

Explores specific computer programs which are currently in use for contingency planning, tracking chemical inventories and response resources. Cross-listed as FSM 363. Credit is allowed for only ETM 363 or FSM 363.

ETM 364 Toxicology and Biohazards in Emergency Management (3)

fall

Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.

ETM 401 Hazardous Waste Management. (3)

fall and spring

Definition of hazardous waste, RCRA classification and OSHA criteria. Overview of requirements and methods of waste management. Prerequisite: ETM 301

ETM 402 Unit Treatment Technologies. (3)

spring

Addresses various treatment technologies for contaminated air, water and soil. Emphasizes design based upon medium, type of contamination, and concentration. Prerequisite: ETM 302

ETM 406 Environmental Chemistry. (3)

fall and spring

Examines reactions, transport, and fates of hazardous chemicals in water, soil, and living organisms. Prerequisites: both CHM 113 and 115 or only CHM 114, MAT 170

ETM 407 Occupational Hygiene. (3)

spring

Overview of occupational health hazards including recognition, evaluation, and control. Includes regulatory status and health standards. Prerequisites: CHM 101 or 113 or 114, MAT 17

ETM 424 Comprehensive Emergency Management. (3)

summer

Addresses theory and management techniques for emergency preparedness including mitigation, preparedness, response and recovery. Prerequisite: ETM 301

ETM 426 Environmental Issues. (3)

spring

Explores the science and policy implications of contemporary problems that threaten the environment. Prerequisites: CHM 113, MAT 170

ETM 428 International Environmental Management. (3)

summer

Emphasizes technological and economic perspectives experienced by developing countries. Prerequisite: ETM 301

General Studies G

ETM 460 Incident Management Systems and Emergency Operations Center (3)

fall

Covers MS, terminology, payers and management philosophy. EOC setup, activation, operation and termination. EOC funding and pro-

cess. Cross-listed as FSM 460. Credit is allowed for only ETM 460 or FSM 460.

ETM 461 Contingency Planning. (3)

selected semesters

Provides understanding of techniques for in-house or on-site planning. A wide as community planning.

ETM 468 Simulation and Exercising. (3)

selected semesters

Requirements, planning, conduct and critique of exercises related to emergency planning. Emphasizes realism using mouage and props.

ETM 494 Special Topics. (1-4)

spring

Topics may include the following:

- Bioremediation 3

Technological regulatory and policy issues emanating from managing and managing waste. Lecture/case studies.

ETM 501 Principles of Hazardous Materials and Waste Management. (3)

fall

Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification and OSHA criteria. Prerequisite: both CHM 113 and 115 or only CHM 114.

ETM 502 Regulatory Framework for Toxic and Hazardous Substances. (3)

fall

Examines federal and state regulations for hazardous materials and wastes. Includes history and trends in regulatory development. Prerequisite: ETM 501

ETM 503 Principles of Toxicology. (3)

spring

Interaction of chemicals with life and environment. Mechanisms of toxic action, dose response relationships, toxicity testing methods, predicted toxicology and epidemiology. Prerequisites: both CHM 113 and 115 or only CHM 114.

ETM 504 Technology for Storage, Treatment, and Disposal of Hazardous Materials. (3)

fall

Current and state of the art technologies and future trends for storage, treatment and disposal of hazardous materials and waste. Prerequisites: both CHM 113 and 115 or only CHM 114, ETM 501

ETM 505 Quantitative Analysis and Practical Laboratory Techniques. (3)

fall and spring

EPA methodologies for sampling and analysis of soils and water. Includes quality assurance and regulatory requirement. Lab arranged off-site. Prerequisites: CHM 114 or 113 and 115, 231, MAT 170

ETM 506 Chemistry of Hazardous Materials. (3)

fall

Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal. Prerequisites: both CHM 113 and 115 or only CHM 114, MAT 170. Corequisite: CHM 231

ETM 507 Industrial Hygiene. (3)

selected semesters

Emphasizes chemical hazards, industrial setting. Topics include recognizing and measuring hazards, control techniques and regulatory standards. Prerequisites: both CHM 113 and 115 or only CHM 114, MAT 170

ETM 522 Air Pollution and Toxic Chemicals. (3)

fall

Examines issues, the measurement analysis and control of toxic chemicals in air pollution. Prerequisites: both CHM 113 and 115 or only CHM 114, ETM 501, MAT 170

ETM 523 Soils and Groundwater Contamination. (3)

fall

Theoretical and practical hydrogeology as it applies to cleaning up contamination, investigative techniques, monitoring risks, assumptions and assessment methodology. Prerequisites: both CHM 113 and 115 or only CHM 114, ETM 501, MAT 170. Corequisite: CHM 231

DEPARTMENT OF INFORMATION AND MANAGEMENT TECHNOLOGY

ETM 524 Emergency Preparedness, Response, and Planning for Hazardous Materials. (3)

summer

In-house or on-site emergency response contingency planning. Pre-emergency assessment resource for cooperation equipment requirements and coordination with other agencies. Prerequisite: both CHM 113 and 115 or on CHM 114; ETM 501 MAT 170

ETM 525 Risk Assessment for Hazardous Materials. (3)

spring

Applies the risk assessment process to site ranking from hazardous facilities regulated toxic substances in the environment. Prerequisites: both CHM 113 and 115 or on CHM 114 ETM 501, MAT 170

ETM 526 Current Environmental Technology Issues. (3)

fall

In-depth study of current issues in environmental technology facing both the private and public sectors

ETM 527 Environmental Resources Regulations Concepts. (3)

spring

Develops environmental regulations from common law to statutory requirements. Emphasizes Superfund hazardous materials toxic and abatement acts. Prerequisite: ETM 501

ETM 592 Research. (1-2)

selected semesters

ETM 598 Special Topics. (1-4)

spring

Topics may include the following:

- Advanced Bioremediation 3
Management and policy issues related to bioremediation in metal and non-metal waste and replacement of chemical controls with biological methods. Lecture case studies

Omnibus Courses. For an explanation of courses offered but not specified in this catalog see "Omnibus Courses" page 56

FIRE SERVICE ADMINISTRATION (FSA)

See the *Graduate Catalog* for the FSA courses.

FIRE SERVICE MANAGEMENT (FSM)

FSM 304 Fire Personnel Management. (3)

fall

Promotion personnel development career and incentive systems. Evaluation of physical requirements, managerial and supervisory procedures

FSM 305 Quality Emergency Services. (3)

selected semesters

Covers quality issues related to services delivered by progressive fire departments. Covers management of personnel and resources during organizational change

FSM 306 Fire Prevention Organization and Management. (3)

selected semesters

Examines and evaluates the techniques, procedures, programs and agencies involved in preventing fires

FSM 363 Computer Applications in Emergency Management. (3)

spring

Explores specific computer programs which are currently in use for contingency planning, tracking chemical inventories and response resources. Cross-listed as ETM 363. Credit is allowed for only ETM 363 or FSM 363

FSM 400 Human Behavior and the Fire Threat. (3)

selected semesters

Proper ways of conducting post-fire interviews, emphasizes the psychological effects of communications during emergencies

FSM 421 Political and Legal Consideration in Fire Science. (3)

spring

Study of legal and political considerations that affect the decisions making of fire service managers

FSM 425 Fire Service Administration. (3)

fall

Presents modern management and planning techniques that apply to organizing a fire department

FSM 460 Incident Management Systems and Emergency Operations Center. (3)

fall

Covers IMS terminology payers and management philosophy EOC setup activation operation and termination. EOC funding and politics. Cross-listed as ETM 460. Credit is allowed for only ETM 460 or FSM 460

FSM 494 Special Topics. (1-4)

selected semesters

FSM 598 Special Topics (1-4)

selected semesters

Omnibus Courses. For an explanation of courses offered but not specified in this catalog see "Omnibus Courses" page 56

INFORMATION AND MANAGEMENT CORE (IMC)

IMC 294 Special Topics. (1-4)

selected semester

IMC 331 Quality Assurance. (3)

spring

Principles and methodologies for materials testing and quality control in various manufacturing processes. Lecture field trips

IMC 346 Management Dynamics. (3)

fall and spring

Management challenges and the leadership skills needed to achieve organizational objectives in the changing industrial and technological environments. Prerequisite: junior standing

IMC 396 Professional Orientation (1)

fall and spring

Senior advancement industry presentations and career counseling

IMC 470 Project Management (3)

spring

Introduces techniques for managing major projects within larger organizations including team building motivation planning tracking activities and computer tools. Prerequisite: ECN 111 IMC 346 ITM 344.

IMC 498 Pro-Seminar. (1-7)

selected semester

IMC 499 Individualized Instruction. (1-3)

selected semesters

IMC 584 Internship. (1-3)

fall and spring

IMC 590 Reading and Conference. (1-12)

selected semesters

IMC 592 Research. (1-12)

fall and spring

IMC 593 Applied Project. (1-12)

fall and spring

IMC 595 Continuing Registration. (1)

selected semesters

IMC 599 Thesis. (1-12)

fall and spring

Omnibus Courses. For an explanation of courses offered but not specified in this catalog see "Omnibus Courses" page 56

INDUSTRIAL TECHNOLOGY MANAGEMENT (ITM)

ITM 343 Occupational Safety and Ergonomics. (3)

fall

Health and safety movement, accident theories and effects, OSHA standards and safety safeguarding hazard, workers compensation, ergonomics and safety. Prerequisite: junior standing

ITM 344 Industrial Organization. (3)

spring

Industrial organization concepts. Topics relate to industrial relations, governmental regulations, organizational structure, labor relations, human factors and current industry practices. Prerequisite: IMC 346

Letter and critical inquiry. **MA** mathematics **CS** computer statistics quantitative application **HU** human and **SA** social and behavioral science **SG** natural science—general courses **SQ** natural science—qualitative **C** cultural diversity in the United States **G** global **H** history **S** e **G** era **S** tude page 8

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

ITM 345 Public Sector Management. (3)

fa and spring

Management in government and public agencies includes mission planning and organizing to provide services human resource issues conflict resolution coordination Prerequisite: junior standing

ITM 402 Legal Issues for Technologists. (3)

fa

American legal system and impact in technology management issues contract torts intellectual property, white collar crime antitrust environmental and employment

ITM 405 Forecasting and Evolution of Technology. (3)

se eced semesters

History and evolutionary nature of selected technologies issues the management of emerging technologies and methods of technology forecasting Prerequisite: MC 346 or its equivalent

ITM 430 Ethical Issues in Technology. (3)

spring

Topics in social responsibility in industry technology and engineering Prerequisite: MC 346

ITM 440 Introduction to International Business. (3)

spring

International business principles and operations including partnership trade agreements currency issues international sales and cultural differences between countries Prerequisite: MC 346

General Study G

ITM 445 Industrial Internship. (1-10)

fa spring summer

Work experience assignment in industry commensurate with student's program. Specific instruction by industry with university supervisors on Pass fail Prerequisites: advisor approval junior standing 2.50 GPA

ITM 451 Industrial Distribution and Materials Management. (3)

se eced semesters

Surveys topics in industrial distribution including but not limited to materials handling, purchasing receiving warehousing traffic inventory control and shipping Prerequisite: M 346 or TM 343

ITM 452 Industrial Human Resource Management. (3)

fa

Concepts and practices of human resource management in a global industrial environment Prerequisite: MC 346

ITM 453 Safety Management. (3)

se eced semesters

Development and management of safety programs education and training and related responsibilities within an organization Prerequisite: M 343 or instructor approval

ITM 455 Industrial Marketing Concepts. (3)

se eced semesters

Customer needs strategies for industrial organizations including current practice and future planning Prerequisites: ECN 111 M 346 junior standing

ITM 456 Introduction to Organized Labor. (3)

spring

Introduces labor relations in non-federated collective bargaining grievances and labor contracts Prerequisites: MC 346 TM 344

ITM 461 Operations Management (3)

fa

Introduces supervisory principles as applied to production of goods and services Prerequisite: MC 346, TM 344

ITM 480 Organizational Effectiveness. (3)

spring

Human aspects of supervisory behavior in the industrial setting and how they influence efficiency morale, and organizational practices Prerequisite: IM 346

ITM 494 Special Topics. (1-4)

se eced semesters

ITM 502 Financial Management. (3)

se eced semesters

Examine corporate financial and managerial accounting systems budgeting and financial policy using microcomputer to analyze forecast and report format

ITM 503 Marketing Management. (3)

se eced semesters

Modern methods and industrial case studies of planning pricing promotion and distribution goods and services including global marketplace Prerequisites: TM 48 or its equivalent instructor approval

ITM 504 Law and Ethics for Technical Professionals. (3)

se eced semesters

Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering and technology related industries

ITM 520 Strategic Management of Technology. (3)

se eced semesters

Analyzes entrepreneur dynamics and technology development methods of research and development management new technology implementation and strategic organization Prerequisites: TM 480 or its equivalent instructor approval

ITM 540 International Management. (3)

se eced semesters

Practice and procedures for effective management of multinational business organizations including partnerships joint ownerships and global subsidiaries

ITM 548 Statistical Methods for Research. (3)

se eced semesters

Multivariate statistical techniques to analyze research data estimates statistical software and applications Prerequisite: STP 420 or its equivalent

ITM 549 Research Techniques and Applications. (3)

fa and spring

Selection of research problems, analysis of literature and individual investigations preparing reports and proposal writing Prerequisite: STP 420 or its equivalent

ITM 550 Industrial Training and Development (3)

se eced semesters

Training techniques and learning processes Planning development evaluation and managing industrial and governmental programs Prerequisite: ITM 480

ITM 552 Global Management Philosophies. (3)

se eced semesters

Analyzes and compares significant supervisory philosophies developed various industrial nations and their potential application in the United States

ITM 560 Managerial Decision Making. (3)

fa

Analyzes common decision making bases and techniques to overcome them. Uses both subjective quantitative decisions and computerized decisions

ITM 570 Advanced Project Management. (3)

spring

Planning organizing coordinating and controlling staff and project groups to accomplish the project objective

ITM 593 Applied Project. (1-12)

se eced semesters

ITM 598 Special Topics. (1-4)

se eced semesters

Topics may include the following

- Quantitative Research Analysis

Omnibus Courses. For an explanation of courses offered but not specified in this catalog, see Omnibus Course page 56

**Department of Manufacturing
and Aeronautical
Engineering Technology**

www.east.asu.edu/ctas/maet
480 727-1584
SIM 295

Scott G. Danielson, Chair

Professor: Collins

Associate Professors: Bekert, Danielson, Nam, Palmgren, Rajadas, Rogers

Assistant Professor: Post

PURPOSE

The mission of the Department of Manufacturing and Aeronautical Engineering Technology is to emphasize applied engineering practice in the manufacturing and aerospace fields through four year degree programs in Manufacturing Engineering Technology and Aeronautical Engineering Technology. This is accomplished by the application of math and science principles to the solution of technical problems in a lecture laboratory environment. The goal of the Manufacturing Engineering Technology program is to prepare students for employment in areas such as materials, mechanics, design, manufacturing processes, automation, and quality control. The department actively supports the student chapter of the Society of Manufacturing Engineers. The purpose of the Aeronautical Engineering Technology program is to prepare students for employment in areas such as aircraft and aerospace vehicle design, and manufacturing, applied thermodynamics, fluid mechanics and aerodynamics, propulsion, and wind tunnel testing. For more information, access www.east.asu.edu/ctas/maet on the Web.

ACCREDITATION

The B.S. degree in Manufacturing Engineering Technology and the B.S. degree in Aeronautical Engineering Technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (See "Accreditation," page 657, for more information.

DEGREES

The Department of Manufacturing and Aeronautical Engineering Technology offers the B.S. degree in Manufacturing Engineering Technology and the B.S. degree in Aeronautical Engineering Technology

For students holding an A.A.S. degree, the department offers the B.A.S. degree with a concentration in manufacturing technology and management.

A Master of Science in Technology degree is offered for graduate study. See the *Graduate Catalog* for more information.

B.S. Degree Requirements

All degree requirements for the program are shown on curriculum check sheets. Requirements include First Year Composition, University General Studies (see "General Studies," page 83), and the Engineering Technology Core. Note that all three General Studies awareness areas are required. Consult your advisor for an approved list of courses. To graduate, students are required to complete a minimum of 128 semester hours with a 2.00 cumulative GPA, including at least 50 semester hours of upper division courses.

Manufacturing Engineering Technology—B.S.

The B.S. degree in Manufacturing Engineering Technology requires 128 semester hours as specified below.

Engineering technology core	14
First Year Composition	6
General Studies department requirements	45
Manufacturing Engineering Technology major	52
Selected concentration	11
Total	128

The following courses constitute the Manufacturing Engineering Technology major and are required of all manufacturing engineering technology students. Refer to the specific concentrations for additional requirements.

Manufacturing Engineering Technology Major

EET 46 Control System Technology	4
MET 231 Manufacturing Processes	3
MET 30 Applied Material Science	4
MET 302 Welding Survey	3
MET 313 Applied Mechanics of Materials	3
MET 314 Applied Mechanics of Materials Laboratory	1
MET 331 Machine Design I	3
MET 341 Manufacturing Analysis	3
MET 344 Casting and Forming Processes	3
MET 345 Advanced Manufacturing Processes	3
MET 396 Manufacturing Professional Orientation	1
MET 401 Quality Assurance	3
MET 416 Applied Computer Integrated Manufacturing CS	3
MET 443 CNC Computer Programming	3
MET 444 Production Technology	3
MET 451 Introduction to Automation	3
MET 460 Manufacturing Capstone Project I	3
MET 461 Manufacturing Capstone Project II	3
Total	52

A student participating in the Manufacturing Engineering Technology program may select from two concentrations: manufacturing engineering technology or mechanical engineering technology. Major emphasis is placed on reducing the amount of time required by industry to make the graduate productive in any area of work.

L liberal arts MA mathematics CS computer statistics quantitative HU humanities and fine arts SB social and behavioral sciences SG natural science general course SQ natural science quantitative Cultural diversity in the United States Global history and geography State page 3

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

Manufacturing Engineering Technology Concentration.

This concentration is designed to prepare technologists with both conceptual and practical applications of processes, materials, and products related to manufacturing industries. Accordingly, this concentration is intended to prepare students to meet the responsibilities in planning the processes of production, developing the tools and machines, and integrating facilities for product on or manufacturing.

Required Courses

MET 409 Applied Engineering Economics	3
MET 442 Specialized Production Processes	3
Technical Electives	3
Total	9

Mechanical Engineering Technology Concentration. The primary objective of the mechanical engineering technology concentration is to prepare students for entry level work in mechanical design and testing, either in engineering or manufacturing departments in product oriented industries. Students obtain a well rounded academic background with an emphasis in mechanics and thermal sciences. Required courses follow.

AET 415 Gas Dynamics and Propulsion	3
MET 434 Applied Fluid Mechanics	3
MET 438 Machine Design II	3
Approved technical elective	2
Total	11

Aeronautical Engineering Technology—B.S.

The B.S. degree in Aeronautical Engineering Technology requires 125 semester hours as specified below.

Aeronautical Engineering Technology major	63
Engineering technology core	14
First Year Composition	6
General Studies department requirements	42
Total	125

The following courses constitute the Aeronautical Engineering Technology major and are required of all Aeronautical Engineering Technology students.

Aeronautical Engineering Technology Major

AET 15 Introduction to Aeronautical Engineering Technology	1
AET 21 Measurements and Testing	3
AET 215 Mechanics of Aerospace System	3
AET Aircraft Design I	3
AET 312 Applied Engineering Mechanics Dynamics	3
AET 396 Aerospace Professions and Orientation	1
AET 415 Gas Dynamics and Propulsion	3
AET 417 Aerospace Structures	3
AET 420 Applied Aerodynamics and Wind Tunnel Testing	3
AET 432 Applied Heat Transfer	3
AET 487 Aircraft Design II	3
EET 406 Control System Technology	4
MET 311 Manufacturing Processes	3
MET 313 Applied Material Science	4
MET 313 Applied Mechanics of Materials	3
MET 314 Applied Mechanics of Materials Laboratory	1
MET 333 Machine Design I	3
MET 432 Thermodynamics	3

MET 434 Applied Fluid Mechanics	3
Programming language course	3
Technical electives	7
Total	63

APPLIED SCIENCE—B.A.S.

The Bachelor of Applied Science degree is a "capstone" degree for the Associate of Applied Science degree. The B.A.S. degree exposes students to advanced concepts and diverse critical thinking skills that prepare them for future career opportunities and professional advancement.

Admission

Admission to the B.A.S. degree program is restricted to students holding an A.A.S. degree from a regionally accredited U.S. postsecondary educational institution. A GPA of 2.00 or higher is required for all resident applicants and a 2.50 for nonresident applicants.

Degree Requirements

The B.A.S. degree in the College of Technology and Applied Sciences consists of 60 semester hours of upper division (300 level and above) courses, with 30 hours in residence. A total of 120 semester hours is required for graduation.

A.A.S. degree	60
Assignable credit	6
B.A.S. core	15
General Studies	19
Technical concentration	20
Total	120

General Studies Curriculum

The B.A.S. curriculum builds on the general education content of the A.A.S. degree. Additional General Studies (L, CS and awareness areas) are met with courses in the core or concentration. General Studies courses focus on contextual learning.

L	3
MA	3
HU	3
HU or SB	3
SB	3
SG	4
Total	19

Assignable Credit

Assignable credit allows space in the curriculum for prerequisite courses needed to succeed in the program or additional technical electives. The courses are determined by the student and the advisor.

B.A.S. Core

The area core focuses on management and organization, professional communication, quantitative analysis, and computer competency.

IMC 47 Project Management	3
ITM 344 Industrial Organization	3
MET 40 Quality Assurance	3
MET 416 Applied Computer Integrated Manufacturing CS	3

DEPARTMENT OF MANUFACTURING AND AERONAUTICAL ENGINEERING TECHNOLOGY

TWC 40 Technical Communications L	3
Total	15

Technical Concentration

Manufacturing Technology and Management. This concentration prepares supervisors and other personnel for technical and management positions in the manufacturing industry. The students increase their knowledge of manufacturing and gain insight into other areas, such as management, that support their professional growth.

AERONAUTICAL ENGINEERING TECHNOLOGY (AET)

AET Note 1. Flight instruction costs are not included in university tuition and fees

AET 150 Introduction to Aeronautical Engineering Technology. (1)
fa
Introduction to the fields of aeronautical engineering and engineering technology

AET 191 First-Year Seminar. (1–3)
se ected semesters

AET 194 Special Topics. (1–4)
se ected semesters

AET 210 Measurements and Testing. (3)
fa
Measurement systems, components, system response, and the characteristics of experiment data. Lecture, lab. Prerequisites: MET 230, PHY 112, 114.

AET 215 Mechanics of Aerospace Systems. (3)
spring
Basic physics of flight. Principles and design of aircraft systems and powerplants

AET 294 Special Topics. (1–4)
se ected semesters

AET 300 Aircraft Design I. (3)
fa
Applied aerodynamics, standard atmosphere, speed measurement, lift and lift-to-weight, airplane performance. Fee. Prerequisites: MAT 260, PHY 112, 114.

AET 310 Instrumentation. (3)
fa
Measurement systems, components, system response, and the characteristics of experimental data. Methods of collecting and analyzing data. Lecture, lab. Prerequisite: MAT 261. Pre- or corequisite: MET 313

AET 312 Applied Engineering Mechanics: Dynamics. (3)
fa
Masses, motion, kinematics, dynamics of machinery. Prerequisites: ETC 211, MAT 261

AET 394 Special Topics. (1–4)
se ected semesters

AET 396 Aerospace Professional Orientation. (1)
fa
Career focus for Aeronautical Engineering Technology students. Familiarization with the aerospace industry. Prerequisite: junior standing

AET 409 Nondestructive Testing and Quality Assurance. (1)
se ected semesters
Purpose of inspection and quality assurance. Theory and application of nondestructive inspection methods. Application of pertinent standards, specifications, and codes. Lecture, lab. Cross-listed as AMT 409. Credit allowed for only AET 409 or AMT 409. See AET Note 1. Prerequisite: AMT 280 or MET 230

AET 415 Gas Dynamics and Propulsion. (3)
spring
Introduces compressible flow, transonic and supersonic flow, and aerothermodynamic analysis of propulsion systems. Prerequisite: MET 434

AET 417 Aerospace Structures. (3)
fa
Analysis and design of aircraft and aerospace structures. Shear flow, semimonocoque structures. Effects of dynamic loading. Prerequisites: AET 300, 312, MET 313

AET 420 Applied Aerodynamics and Wind Tunnel Testing. (3)
fa
Introduces viscous and inviscid flow and the relationship to aircraft lift and drag. Wind tunnel design and testing. Lecture, lab. Prerequisites: AET 300, MET 434

AET 432 Applied Heat Transfer. (3)
fa
Heat transfer by conduction, convection, and radiation. Application of heat transfer to engineering design problem. Prerequisite: ETC 340. Pre- or corequisite: MET 434 or instructor approval

AET 484 Internship. (1–12)
se ected semesters

AET 487 Aircraft Design II. (3)
spring
Basic aerodynamics and airplane performance analysis methods applied to practical design project. Prerequisite: AET 300

AET 492 Honors Directed Study. (1–6)
se ected semesters

AET 493 Honors Thesis. (1–6)
se ected semesters

AET 494 Special Topics. (1–4)
se ected semesters

AET 498 Pro-Seminar. (1–7)
se ected semesters

AET 499 Individualized Instruction. (1–3)
se ected semesters

AET 500 Research Methods. (1–12)
se ected semesters

AET 524 Application of Heat Transfer. (3)
fa
Energy conservation, steady-state and transient conduction, convection, and free and forced convection, Reynolds analogy, body and environmental radiation. Prerequisite: MET 434 or instructor approval

AET 525 Advanced Propulsion. (3)
spring
Mechanics and thermodynamics of propulsion systems. Solid and liquid propellant rocket design performance. Electric nuclear propulsion system. Space missions. Prerequisites: both AET 415 and 420 or MET 434 or ony instructor approval

AET 560 Numerical Methods in Engineering Technology. (3)
se ected semesters
Analyzes problems in physical sciences, models physical problems, perturbation techniques, curve fitting, data analysis, numerical solutions, ordinary and partial differential equations

AET 580 Practicum. (1–12)
se ected semesters

AET 583 Field Work. (1–12)
se ected semesters

AET 584 Internship. (1–12)
se ected semesters

AET 590 Reading and Conference. (1–12)
se ected semesters

AET 591 Seminar. (1–12)
se ected semesters

AET 592 Research. (1–12)
se ected semesters

AET 593 Applied Project. (1–12)
se ected semesters

Literacy and critical quality: **MA** mathematics, **CS** computer statistics, quantitative application, **HU** humanities and fine arts, **SB** social and behavioral science, **SG** general science—general core course, **SQ** natural science quantitative, **C** cultural diversity, **th** liberal state, **G** global, **H** history. See General Student page 3

COLLEGE OF TECHNOLOGY AND APPLIED SCIENCES

AET 594 Conference and Workshop. (1–12)

se ected semester

AET 595 Continuing Registration. (1)

se ected semesters

AET 598 Special Topics. (1–4)

se e ted semesters

AET 599 Thesis. (1 12)

se ected semesters

Omnibus Courses For a exp a ation of course offered but not specif a y sted n ths catalog see Omnibus Course page 56

MANUFACTURING ENGINEERING TECHNOLOGY (MET)

MET 191 First-Year Seminar. (1 3)

s cted semeste s

MET 194 Special Topics (1–4)

se ected seme ters

MET 230 Engineering Materials and Processing (3)

fa pr g summer

Material s the t ure propertes fab cato character tics and app ations Mate a forming j n g a d f n sh ng processes Auto mat and q a ty contro

MET 231 Manufacturing Processes (3)

fa

Des gn do umentat a d materia pr ces es n p a t s ferro u a d nonfer ou materia emp as z ng orthograph c pro ecton geo metr c d mens on ng and to eran es Lecture ab Prerequ s te MET 117 r 170

MET 294 Special Top cs (1–4)

e ected seme ters

MET 300 Applied Materia Science. (4)

fa

Pr ncp e of materia science emphas z g concept relevant to manufa t ng a d use D s us es meta poymer ceramcs and mposites 3 hours ecture 1 hour ab Prerequ s te MET 231 r nstructor approva

MET 302 Welding Survey. (3)

fa

T eory and app caton of ndu tra we d ng processes tro ictory we d ng meta urgy and we dment des gn SMAW GTAW GMAW oxy a ely en and braz ng exper ences e ture ab Prerequ te jun or or sen or stand ng

MET 313 Applied Mechanics of Materials. (3)

spr ng

Stres tran stres tran reatons Ax a, shear be d g tors ona and comb ned oads and defe tions Prereq s te ETC 211

MET 314 Applied Mechanics of Materials Laboratory. (1)

spr ng

Mea urement of oads and deformat ons re at g stress and stran n ax a ear bend ng tors ona and comb ned oad ng conf gurat ons 3 hours ab Pre or oreq s te ME 313

MET 331 Machine Design I. (3)

fa

App es me ha cs to des gn of ma h ne e ements and structures Stress a ys fa ure mode terances, cy ndr a fts and haft de gn Prerequ te MET 313

MET 341 Manufacturing Analysis. (3)

spr ng

Organ z tona and fu tona requirements fr effect ve prod ton Ana ysis of ndu tra spe f catons GD T costs, and group tech o o y W t g assembly pr du ton pans Prereq s te MET 231

MET 344 Casting and Form ng Processes (3)

sp g

Ana yzes var o s f m ng proces e to determ ne oad requirements necessary fr a part cu ar meta fo m ng perato n format n ed to ee t equipment and des g too g Meta a t ng pr cesse and de gn of ca t ngs Introduces powder meta urgy Prerequ s te MET 300

MET 345 Advanced Manufacturing Processes. (3)

spr ng

Material remova processe emp as z ng advan e turn ng, m ng and mach nab ty stud es u ng cutt ng to s CNC programm ng fo mach n ng and t n ng centers Lecture, ab Prerequ s te MET 231

MET 394 Special Topics (1–4)

se ected eme ters

MET 396 Manufacturing Professional Orientation. (1)

fa

Career focus for Manufa tur ng Eng neer ng Techno gy student Fam ar zat on w th the ma ufactur ng industry Prerequ s te n r stand ng

MET 401 Quality Assurance. (3)

spr ng

ntroduces stat st ca qua ty contro methods de gn of exper ents samp ng gage requirements specif ations qua ty assurance t o s em has z ng CNC CMM programm ng Lecture ab Prerequ s te un or ta d ng

MET 409 Applied Engineering Economics. (3)

spr ng

Fundamenta s of eng nee ng eco om n a pra t ca industry based approach ncude effect of deprec aton taxes nf aton and replacement ana ysis Lecture computer ab exper ences

MET 415 Manufacturing Simulation. (3)

spr ng

Computer mu at on of manufactur ng operat o s D screte event m u at on mode range from nd v dua proces t who e fa tor es Lecture computer ab exper ences Prerequ s te MET 345

MET 416 Applied Computer-Integrated Manufacturing. (3)

fa

Techn ques and pract ces f computer ntegrated manufactur ng w th emphas s n c mputer a ded des gn and computer a ded man ufactur g Prerequ s te ME 345

Genera Stud e CS

MET 432 Thermodynamics (3)

spr na

Thermodynam cs of mxtures Comb st n process App es therm dynam cs to power and refr ge at on cyc es Prerequ s te ETC 34

MET 433 Thermal Power Systems. (4)

e ected semesters

Ana yzes gas power vapor powe , and efr gerat on cyc es Compe ts of a r cond t on ng systems D rect energy co vers n Psy hr metry Ana yze nterna c mbust on eng nes a d f u d ma h nes. Lecture ab Prerequ s te MET 432 or nst utor approva

MET 434 Applied Fluid Mechanics (3)

spr ng

Fud stat s Bas c f u d f low equat n V scous f w n p pes and c anne s Compress be f low App es f u d measurement and f w n condu ts Prereq s te E C 340

MET 435 Alternate Energy Sources. (3)

se ected semesters

Alternate energy systems e ergy use and ts pact on the env ron me t and demonstrat ng pra t ca a ternat ve energy sources to f ss fue s Prerequ s te nstructor approva

MET 436 Turbomachinery Design. (3)

se ect d eme ters

App e thermodynam cs and f u d mech n s to the a a y s of mach ne y des g and power yc e perfo mance pred ct ons Prerequ s tes ETC 340 MET 434

MET 438 Machine Design II. (3)

spr ng

App e me han c to the de g of ma h ne e ements and struct res Emphas zes bas cs of gear spr ng , brak s c utches and bear gs Prerequ s te AET 312, MET 331

MET 442 Specialized Production Processes. (3)

fa

No trad tona manufactur ng pro e ses empha z ng EDM ECM ECG CM PM HERF EBW and LBW Prerequ s te MET 231

MET 443 CNC Computer Programming. (3)

fa

Theory and app cat o of NC nguages us ng CAM oftw are and CNC mach ne too s Lecture ab Prerequ s te ME 345 or nstructor approva

DEPARTMENT OF MANUFACTURING AND AERONAUTICAL ENGINEERING TECHNOLOGY

MET 444 Production Tooling. (3)

fa
Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods. Lecture/lab. Prerequisite: MET 345

MET 451 Introduction to Automation. (3)

spring
Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material handling systems, sensors, and controls. Lecture/lab. Prerequisite: MET 345

MET 452 Implementation of Robots in Manufacturing. (3)

selected semesters
Robotics workcell design, including end effectors, parts presenters, and optimum material flow. Prerequisite: MET 451. Instructor approval.

MET 460 Manufacturing Capstone Project I. (3)

fall
Group project design, evaluation, and analyzing components, assemblies, and systems. Develop products, manufacturing techniques, demonstrating state-of-the-art technology. Lecture/lab. Prerequisite: MET 331, 341. Senior standing.

MET 461 Manufacturing Capstone Project II. (3)

spring
Small group projects applying manufacturing techniques with emphasis on demonstrating state-of-the-art technology. Lecture/lab. Prerequisite: MET 460 or instructor approval.

MET 484 Internship. (1-12)

selected semesters

MET 492 Honors Directed Study. (1-6)

selected semesters

MET 493 Honors Thesis. (1-6)

selected semesters

MET 494 Special Topics. (1-4)

fa and spring

- Topics may include the following:
- Consume Manufacturing 1-3
 - Manufacturing Process Simulation 1-3
 - Packaging Design 1-3

MET 498 Pro-Seminar. (1-7)

selected semesters

MET 499 Individualized Instruction. (1-3)

selected semesters

MET 500 Research Methods. (1-12)

selected semesters

MET 501 Statistical Quality Control Applications. (3)

spring

SPC problem solving techniques for implementation in industrial setting, design and analysis of experiments. Prerequisite: instructor approval.

MET 502 Specialized Production Processes. (3)

fa

Specialized production processes including lasers, electron beam, abrasive and water jet, and chemical and thermal processes. Prerequisite: instructor approval.

MET 504 Applications of Production Tooling. (3)

fa

Design and fabrication of fixtures, gages, templates, and specialized industrial tooling for manufacturing. Lecture/lab. Prerequisite: instructor approval.

MET 507 Manufacturing Enterprise. (3)

fa and spring

Organization and project management of cellular manufacturing methods in unit and lean manufacturing. Prerequisite: instructor approval.

MET 509 Applied Engineering Economics. (3)

spring

Fundamentals of engineering economics in a practical industry-based approach, includes effects of depreciation, taxes, inflation, and replacement analysis. Lecture/computer lab experiences.

MET 512 Introduction to Robotics. (3)

selected semesters

Introduces industrial robots. Topics include robot workspace, trajectory generation, robot actuators, and sensors, design of end effectors

and economic justification. Application case studies. Prerequisite: instructor approval.

MET 513 Advanced Automation. (3)

fa

Analysis and design of hard and flexible automation systems. Particular attention to material handling technology. Prerequisite: instructor approval.

MET 514 CNC Computer Programming. (3)

spring

Theory and application of NC languages using CAM software and CNC machine tools. Lecture/lab. Prerequisite: instructor approval.

MET 515 Manufacturing Simulation. (3)

spring

Computer simulation of manufacturing operations. Discrete event simulation, material range from individual processes to whole factories. Lecture/computer lab experiences.

MET 517 Applied Computer Integrated Manufacturing. (3)

fa

Techniques and practices of computer integrated manufacturing, with emphasis on computer-aided design and computer-aided manufacturing. Prerequisite: MET 345 or instructor approval.

MET 571 Waste Minimization and Waste Prevention. (3)

spring

Lifecycle analysis, selection of environmentally compatible materials, design of waste minimization equipment and operation, economics of waste minimization and prevention. Prerequisite: ETC 340 or instructor approval.

MET 580 Practicum. (1-12)

selected semesters

MET 584 Internship. (1-12)

selected semesters

MET 590 Reading and Conference. (1-12)

selected semesters

MET 591 Seminar. (1-12)

selected semesters

MET 592 Research. (1-12)

selected semesters

MET 593 Applied Project. (1-12)

selected semesters

MET 594 Conference and Workshop. (1-12)

selected semesters

MET 595 Continuing Registration. (1)

selected semesters

MET 598 Special Topics. (1-4)

selected semesters

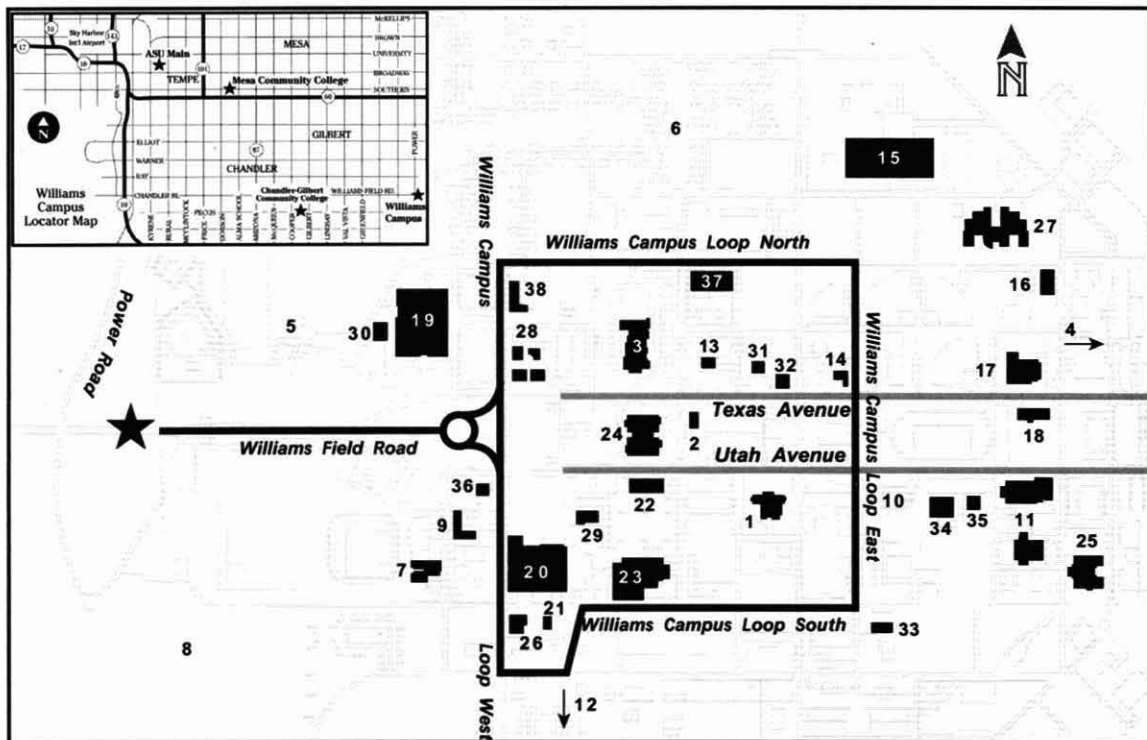
MET 599 Thesis. (1-12)

selected semesters

Omnibus Courses. For an explanation of courses offered but not officially listed in the catalog, see "Omnibus Courses" page 56.

Literacy and critical inquiry. **MA** mathematics. **CS** computer statistics. **Q** qualitative application. **HU** human and fine art. **SB** social and behavioral sciences. **SG** natural science. **ENR** energy resources. **SO** social sciences. **QU** quantitative. **C** cultural diversity. **US** the United States. **GB** global. **H** history. **EE** "General Studies" page 83.

ASU East Map



Williams Campus

- 1 Williams Campus Dining Hall (FOOD)
- 2 Williams Campus Housing Office (WCHO)
- 3 Williams Campus Union (UNION)
- 4 Williams Gateway Airport and Flight Line
- 5 Toka Sticks Clubhouse and Golf Course
- 6 North Desert Village
- 7 Child Development Center (CDC)
- 8 West Desert Village
- 9 Facilities Management/DPS (FMDP)
- 10 Swimming Pool (POOL)
- 11 Research Training Laboratory
- 12 South Desert Village
- 13 Williams Express Copy Services (COPY)
- 14 Williams Campus Post Office (WCPO)

Chandler-Gilbert Community College at Williams Campus

- 15 Aviation Technology Center, Embry-Riddle, and University of North Dakota (ATC)
- 16 General Studies Building (GSB)
- 17 Physical Education Center (PEC)
- 18 Science Lab Building (SLB)

ASU East

- 19 Health Sciences Center (HSC)
(ASU East Student Health, VA Clinic)
- 20 Technology Center (TECH)
- 21 Agribusiness Food Science Lab (FDSCI)
- 22 Auditorium (EAUD)
- 23 Future Classroom and Lab Building
- 24 Academic Center Building (CNTR)
- 25 Classroom Building (CLRB)
- 26 TECH 2
- 27 Flight Simulator Building (SIM)
- 28 Morrison School of Agribusiness and Resource Management Complex (1-4)
- 29 Communication (COMM2)
- 30 Professional Golf Management (PGM)
- 31 American Indian Programs (AIP)
- 32 International Projects Unit (INTRP)
- 33 Photovoltaic Testing Lab (SOLAR)
- 34 Physical Activity Center (PAC)
- 35 Exercise Instructional Lab Building (EAW2)
- 36 Administrative Services (ADSVCS)
- 37 Tennis Courts (TENNIS)
- 38 Altitude Chamber Building (ALTCH)

ASU East Directory

For the "ASU Main Directory," see page 543. For the "ASU West Directory," see page 694. For the "ASU Extended Campus Directory," see page 713.

Organization	Location	Telephone	Web Address
Agriculture and Resource Management, Morrison School of	CNTR 20	480/727 1585	www.east.asu.edu/msabr
Environmental Resources	CNTR 20		cactus.east.asu.edu
Professional Golf Management	CNTR 20	480/727 1017	www.east.asu.edu/msabrgpm
American Indian Programs	AIP	480/727 1161 480/727-1075	www.east.asu.edu/aip
Bookstore	CNTR 12	480 727 1146	www.asu.edu/east/admin/business.htm#Bookstore
Campus Union	UNION	480/727 1098	www.asu.edu/east/clsunion.htm
Cashiering Services	CNTR 81	480 27 1081	www.asu.edu/east/admin/business.htm#CashieringServices
Computer Commons ASU East	CNTR 150	480 727 1118	www.east.asu.edu/infotech/abs
East College	CNTR 92	480/727 1515	www.east.asu.edu/ecollege
Applied Psychology Faculty of	CNTR	480/727 1515	www.east.asu.edu/ecollege/appedpsych
Business Administration Faculty of	CNTR	480 727 1515	www.east.asu.edu/ecollege/businessadm
Education, Faculty of	COMM2	480/727 1103	www.east.asu.edu/ecollege/elementaryed
Exercise and Wellness, Department of	CLRB	480 727 1945	www.east.asu.edu/ecollege/wellness
Multimedia Writing and Technical Communication, Faculty of	CNTR	480/727 1515	www.east.asu.edu/ecollege/multimedia
Nutrition, Department of	HSC 1386	480 727 1728	www.east.asu.edu/ecollege/nutrition
Fitness Center, Williams Campus	WCFC Bldg	480 988 8400	www.asu.edu/east/cls/recreation.htm
General Information	CNTR Garden Level	480 727 3278	www.east.asu.edu
Housing Williams Campus	WCHO Bldg	480/727 1700	www.asu.edu/east/cls/housing
Learning Center	CNTR 160	480 727 1452	www.east.asu.edu/learningcenter
Library Services	CNTR 110	480/727 1037	east.lib.east.asu.edu
OASIS Student Services *	CNTR Garden Level	480 727 3278	www.east.asu.edu/sta/contact1.htm
Printing and Copy Center, Williams Express	BLDG 210	480/727 1600 480/727 1616	www.valleyofthesun.org/printshop.htm
Provost Office of the	CNTR 30	480 727 1028	
Student Health Services	HSC	602/222 6568	www.asu.edu/east/student/stuhealth.htm
Technology and Applied Sciences College of	CNTR 10	480 27 1874	www.east.asu.edu/ctas
Aeronautics Management Technology, Department of	S M 201	480 727 1381	east.aer.east.asu.edu
Electronics and Computer Engineering Technology, Department of	TECH 101	480/727 1029	www.east.asu.edu/ctas/ecet
Information and Management Technology, Department of	TECH 102	480 727 1781	www.east.asu.edu/ctas/mt
Manufacturing and Aeronautics Engineering Technology Department of	SIM 295	480/727 1584	www.east.asu.edu/ctas/maet

* OASIS includes ASU Sun Cards, Office of the Registrar Student Business Services, Student Financial Assistance Undergraduate Admissions, and Williams Campus Parking Details

ASU East Faculty and Academic Professionals

A

Autore, Donald D. 1959 Professor Emeritus of Technology, B.S.E., University of Michigan M.S.E. Arizona State University

B

Backus, Charles E. 1968 Professor of Electrical Engineering; Campus Chief Executive Officer and Provost, ASU East, Vice President ASU B.S.M.E., Ohio University; M.S., Ph.D., University of Arizona

Barchilon, Marian G. 1989 Associate Professor of Technical Communication, B.A., State University of New York Binghamton, M.S., Northeastern University

Barrett, Thomas W. (1980), Professor Emeritus of Air business and Resource Management, B.S., Brigham Young University M.S. Ph.D., Cornell University

Bergeron, Bette S. 2000 Professor of Education B.S. Ed., University of Maine Orono, M.S. Ed., Ph.D. Purdue University

Biekert, Russell G. (2001), Associate Professor of Manufacturing and Aeronautical Engineering Technology, B.S., M.S., Southern Illinois University; Ed.D., Arizona State University

Brady, Ward W. 1973 Professor of Environmental Resources, B.S., M.S., Ph.D. Colorado State University

Brock, John H. 1977 Professor of Environmental Resources, B.S., M.S., Fort Hayes State University Ph.D. Texas A&M University

Brown, Walter C. 1966 Professor Emeritus of Technology, B.S., Northwest Missouri State University M.Ed. Ed.D. University of Missouri Columbia

Brownson, Charles W. (1980), Librarian ASU East Library Services, Director, ASU East Library Services, B.A. South Dakota State University, M.F.A., University of Oregon M.L.S., University of California Berkeley

Burdette, Walter E. 1956 Professor Emeritus of Technology, B.S., M.S., Kansas State College (Pittsburg); Ed.D., University of Missouri Columbia

Burk, Karl W. 1949 Professor Emeritus of Technology, B.A. M.A., Arizona State University, Ed.D., Bradley University

Burkett, Lee N. 1974 Professor of Exercise and Wellness; B.A., M.A., San Diego State University, Ph.D., Washington State University

Busch, Jay S. 2000 Lecturer of General Studies, B.A. Michigan State University M.A., Arizona State University

C

Carlsen, Paul A. 1978 Professor Emeritus of Technology; B.A.E. M.N.S., Ed.D., Arizona State University

Cavaliere, William A. (1946), Professor Emeritus of Technology B.A., M.A. Arizona State University

Chalquest, Richard R. 1977 Professor Emeritus of Agriculture and Resource Management, B.S., D.V.M., Washington State University, M.S., Ph.D. Cornell University

Collins, Donald W. 1989 Professor of Manufacturing and Aeronautical Engineering Technology B.Arch., Virginia Polytechnic Institute and State University, M.S., Ph.D., University of Illinois Chicago

Corbin, Charles B. 1982 Professor of Exercise and Wellness, B.S., University of New Mexico M.S. University of Illinois, Ph.D., University of New Mexico

Cox, Frank E. 1972 Professor Emeritus of Technology, B.S.M.E. Purdue University M.S.E., Arizona State University

D

D'Angelo, Barbara J. 2001 Assistant Librarian, ASU East Library Services; B.A., Executive College, M.S. University of Illinois, Urbana Champaign

Daneke, Gregory A. 1982 Professor of Air business and Resource Management; B.A., M.A., Brigham Young University; Ph.D., University of California Santa Barbara

Danielson, Scott G. 1999 Associate Professor of Manufacturing and Aeronautical Engineering Technology, Chair, Department of Manufacturing and Aeronautical Engineering Technology, B.S., M.S., University of Wyoming Ph.D., North Dakota State University

Dixon, Kathleen S. 2000 Lecturer of Nutrition B.S. University of Arizona, M.Ed., Northern Arizona University

Dolin, Penny Ann (1998), Lecturer of Information and Management Technology B.A., Bard College, M.S., Arizona State University

Duff, Jon M. 1997 Professor of Information and Management Technology B.S., M.S., Purdue University; Ph.D., Ohio State University

E

Edwards, Mark R. 1978 Professor of Agriculture and Resource Management B.S.M.E. United States Naval Academy M.B.A., D.B.A., Arizona State University

Edwards, Marvin J. 1959 Professor Emeritus of Technology, B.S. M.A., Arizona State University

F

Fordemwalt, James N. 1957 Professor Emeritus of Electronic and Computer Engineering Technology, B.S. M.S., University of Arizona; Ph.D., Iowa State University of Science and Technology

G

Gannod, Barbara D. 2001 Assistant Professor of Electronics and Computer Engineering Technology, B.Sc. Calvin College, M.Sc., Ph.D., Michigan State University

Gesell, Laurence F. (1984), Professor of Aeronautical Management Technology B.A., Upper Iowa University M.P.A., University of San Francisco; Ph.D., Arizona State University

ASU EAST FACULTY AND ACADEMIC PROFESSIONALS

Gordon, Richard S. (1980) Professor Emeritus of Agriculture and Resource Management, A.B., University of Rochester, M.A., Harvard University, Ph.D., Massachusetts Institute of Technology

Gray, Robert D. 2001, Assistant Professor of Applied Psychology, B.A., Queen's University, Canada, M.A., Ph.D., York University, Canada

Green, Douglas M. 1999, Associate Professor of Environmental Resources, B.S., Oregon State University, M.S., North Dakota State University, Ph.D., Oregon State University

Grossman, Gary M. 1994, Associate Professor of Information and Management Technology, B.A., University of the Pacific, M.S., Ph.D., Purdue University

Gryder, Missy 2001, Lecturer of Elementary Education, B.A., M.B.A., Ed.D., Arizona State University

H

Hampl, Jeffrey (1998), Assistant Professor of Nutrition, B.S., Liberty University, M.S., University of Massachusetts Lowell, Ph.D., University of Nebraska

Harris, Laverne Abe 1999, Lecturer of Information and Management Technology, B.A., M.Tech., Arizona State University

Hefner, Stephen P. 1973, Instructional Professional of Agribusiness and Resource Management, Morrison School of Agribusiness and Resource Management, B.S., Illinois State University, M.S., Arizona State University

Hild, Nicholas R. 1983, Professor of Information and Management Technology, B.S.M.E., M.S.E.E., University of Iowa, Ph.D., Union Graduate School

Hirata, Ernest T. 1974, Associate Professor of Information and Management Technology, B.A., San Diego State College, Ed.D., Arizona State University

Hopper, Lee Ann 2001, Lecturer of Elementary Education, B.S., Texas Tech University, M.A., Arizona State University

Horowitz, Renee B. 1986, Professor Emerita of Information and Management Technology, B.A., Brooklyn College, M.A., Ph.D., University of Colorado

Humble, Jane E. 1989, Associate Professor of Information and Management Technology, B.S.E., M.S.E., Ph.D., Arizona State University

Hutchins, Andrea M. 2001, Assistant Professor of Nutrition, B.S., Kansas State University, M.S., Ph.D., University of Minnesota

Hutt, Roger W. 1975, Associate Professor of Business Administration, B.S., M.B.A., Ohio State University, Ph.D., Michigan State University

J

Jackson, Andrew E. 1995, Associate Professor of Aeronautical Management Technology, B.A., University of Louisville, M.B.A., Embry Riddle Aeronautical University, Ph.D., University of Central Florida

Johnston, Carol S. 1986, Professor of Nutrition, B.S., University of Michigan, M.S., Ph.D., University of Texas, Austin

Jones, Kathy 1996, Assistant Professor of Exercise and Wellness, B.A., University of California, Berkeley, M.S., Ph.D., Arizona State University

K

Kagan, Albert (1992) Professor of Agriculture and Resource Management, B.S., M.S., Ph.D., Iowa State University of Science and Technology

Karp, Merrill R. 1994, Associate Professor of Aeronautical Management Technology, B.S., Arizona State University, M.A., Central Michigan University, Ph.D., Western University

Keith, Marlow F. 1946, Professor Emeritus of Technology, B.A., M.A., Arizona State University

Kelley, Donald G. 1981, Professor Emeritus of Manufacturing and Aeronautical Engineering Technology, B.S., M.S., Arizona State University

Kigin, Denis J. 1958-67; 1961, Professor Emeritus of Technology, Dean Emeritus, Continuing Education and Summer Sessions, B.S., Mankato State University, M.S., University of Wisconsin, St. Cloud, Ed.D., University of Missouri

Kime, Charles H. 1999, Assistant Professor of Information and Management Technology, B.S., Arizona State University, M.B.A., University of Phoenix, D.P.A., Arizona State University

Kisielewski, Robert V. 1978, Professor Emeritus of Technology, B.S.M.E., M.S.M.E., University of Wisconsin, Madison

Kleemann, Gary L. 1979, Administrative Professional, Adult Programs, Director, E-Learning, B.A., M.S., San Jose State University, Ph.D., Arizona State University

Koehnemann, Harry E. 2001, Associate Professor, Electronics and Computer Engineering Technology, B.S., Northern Arizona University, M.S., Ph.D., Arizona State University

L

Lawler, Eugene D. 1967, Professor Emeritus of Technology, B.S., Northern State College, M.A., Arizona State University

Lestar, Dot J. 1995, Lecturer of Information and Management Technology, B.S., M.Tech., Arizona State University

Lindley, James 2001, Senior Lecturer of Preventive Medicine, B.S., D.V.M., University of Missouri

Lindquist, Timothy 1955, Professor of Electronics and Computer Engineering Technology, Chair, Department of Electronics and Computer Engineering Technology, B.S., Purdue University, M.S., Ph.D., Iowa State University

Lytle, Robert G. (1972) Professor Emeritus of Agriculture and Resource Management, B.S., Western Kentucky University, M.S., Arizona State University

M

Macia, Narciso F. (1990) Associate Professor of Electronics and Computer Engineering Technology, B.S., M.S., University of Texas, Arlington, Ph.D., Arizona State University

Maddy, Kenneth H. 1987, Professor Emeritus of Agriculture and Resource Management, B.S., Pennsylvania State University, M.S., University of Wisconsin, Madison, Ph.D., Pennsylvania State University

Maid, Barry M. 2001, Professor of Multimedial Writing and Technical Communication, B.A., University of Wisconsin, Madison, M.A., University of Texas, Austin, Ph.D., University of Massachusetts, Amherst

Maisel, James E. 1987, Professor Emeritus of Electronics and Computer Engineering Technology, B.E., B.S.E., B.E.E., Penn College, M.S.E.E., Ohio State University

Manfredo, Mark R. (1999), Assistant Professor of Agriculture and Resource Management, B.S., California State University Fresno, M.S., New Mexico State University, Ph.D., University of Illinois, Urbana

Manore, Melinda M. (1984), Professor Emerita of Nutrition, B.S., Seattle Pacific University, M.S., University of Oregon, Ph.D., Oregon State University

ASU EAST FACULTY AND ACADEMIC PROFESSIONALS

Marquardt, Raymond A. 1991, Professor of Agribusiness and Resource Management, Dean, Morris Sch. of Agribusiness and Resource Management; B.S., M.S., Colorado State University; Ph.D., Michigan State University

Martin, Rose L. 1990, Senior Lecturer of Nutrition, B.S., University of Illinois; M.S., Pennsylvania State University

Matson, John H. 1978, Associate Professor of Information and Management Technology; B.S., M.S., Illinois State University

Matthews, James B. 1989, Professor Emeritus of Aeronautical Technology, B.S., Rose Hulman Institute of Technology, M.S., Massachusetts Institute of Technology, Ph.D., University of Arizona

McBrien, Edward F. 1986, Professor Emeritus of Electronic Computer Technology; B.S.E., Fenn College, M.S.E.F., Cleveland State University

McCurry, William K. 1995, Associate Professor of Aeronautical Management Technology, Chair, Department of Aeronautical Management Technology; B.S., Purdue University, M.S., Troy State University, Ph.D., University of Kansas

McHenry, Albert L. 1978, Professor of Electronics and Computer Engineering, Technology; Dean, College of Technology and Applied Sciences; B.S., Southern University and A&M College; M.S., Ph.D., Arizona State University

Mermis, William L. 1975, Professor of Human Health; B.S., M.S., Saint Louis University; Ph.D., Arizona State University

Millard, Bruce R. 1988, Associate Professor of Electronic and Computer Engineering, Technology; B.A., M.S., Washington State University; Ph.D., Arizona State University

Miller, Victor J. 1975, Professor Emeritus of Agribusiness and Resource Management; B.S., M.S., Ph.D., University of Illinois

Miller, William H. 1984, Associate Professor of Environmental Resources; B.S., M.S., Ph.D., Washington State University

Minter, Marshall R. Jr. 1965, Professor Emeritus of Technology; B.S.M.E., Purdue University; M.S.M.F., University of Arizona

Monte, Woodrow 1991, Professor Emeritus of Nutrition; B.S., New Mexico Institute of Mining and Technology; M.S., Ph.D., Colorado State University

Moody, E. Grant 1951, Professor Emeritus of Agribusiness and Resource Management; B.S., University of Arizona; M.S., Kansas State University; Ph.D., Purdue University

Munukutla, Lakshmi V. 1987, Professor of Electronic and Computer Engineering, Technology; Associate Dean, College of Technology and Applied Sciences; B.S., M.S., Andhra University, India; Ph.D., Ohio University

N

Nam, Changho 1998, Associate Professor of Manufacturing and Aeronautical Engineering Technology; B.S., M.S., Seoul National University, South Korea; Ph.D., Purdue University

Newman, Richard L. 1971, Assistant Administrative Professional Director, Training Services, College of Technology and Applied Sciences; B.S., M.S., Arizona State University

O

O'Brien, Marc H. 1997, Lecturer of Aeronautical Management Technology; B.A., Boston University; M.S., Indiana State University

Olson, Larry W. 1995, Associate Professor of Information and Management Technology; B.S., Baylor University; Ph.D., University of Pennsylvania

P

Palmgren, Dale E. 1984, Associate Professor of Manufacturing and Aeronautical Engineering Technology; Assistant Dean, College of Technology and Applied Sciences; B.S., M.S., Ph.D., University of Wisconsin-Madison

Pardini, Louis J. 1967, Professor Emeritus of Technology; B.A., A.M., Idaho State University; Ed.D., University of Northern Colorado

Patterson, Paul M. 1995, Associate Professor of Agribusiness and Resource Management; B.S., Auburn University; M.S., Ph.D., Purdue University

Pearce, Martha V. 1971, Professor Emerita of Technology; B.S., Columbia University; M.S., Boston University; Ed.D., Arizona State University

Pearson, Michael W. 1995, Assistant Professor of Aeronautical Management Technology; B.A., University of Houston; M.B.A., J.D., Arizona State University

Peterson, Danny M. 1977, Associate Professor of Information and Management Technology; B.S., University of Idaho; M.B.A., California State University-Sacramento; M.S., Ph.D., Arizona State University

Peterson, Edward R. 1977, Professor Emeritus of Electronic and Computer Engineering Technology; B.S.E.E., Fairleigh Dickinson University; M.S.E.E., Arizona State University

Phillips, Wayne T. 1991, Assistant Professor of Exercise and Wellness, Cert. Ed., Cardiff College of Education, Cardiff, United Kingdom; M.S., Loughborough University of Technology, United Kingdom; Ph.D., Arizona State University

Post, Alvin 2000, Assistant Professor of Manufacturing and Aeronautical Engineering Technology; B.S., University of Arizona; M.S., Stanford University; Ph.D., University of Hawaii

Prust, Zenas A. 1959, Professor Emeritus of Technology; B.S., University of Wisconsin-Stout; M.A., University of Minnesota; Twin Cities; Ed.D., University of Northern Colorado

R

Raechach, Moshe 1981, Associate Professor of Agribusiness and Resource Management; B.Sc., M.Sc., The Hebrew University of Jerusalem; Ph.D., Cornell University

Rajadas, John N. 1996, Associate Professor of Manufacturing and Aeronautical Engineering Technology; B.Tech., Indian Institute of Technology, India; M.S., Ph.D., College of Technology

Reed, William H. 1968, Professor Emeritus of Manufacturing and Aeronautical Engineering Technology; B.S., University of Oklahoma; M.S., Arizona State University

Richards, Timothy J. 1994, Associate Professor of Agribusiness and Resource Management; B.Com., University of British Columbia; M.A., Ph.D., Stanford University

Richardson, Grant L. 1983, Professor Emeritus of Agribusiness and Resource Management; B.S., M.S., University of Arizona; Ph.D., Oregon State University

Robinson, Daniel O. 1975, Professor Emeritus of Agribusiness and Resource Management; A.B., Brigham Young University; M.S., University of Arizona; Ph.D., Ohio State University

Robertson, John M. 1971, Professor of Electronics and Computer Engineering Technology; B.S., University of St. Andrew's, United Kingdom; M.S., University of Dundee, United Kingdom; Ph.D., University of Edinburgh, United Kingdom

Roe, Keith B. 1979, Professor Emeritus of Technology; B.S., Wisconsin State College, M.A., University of Michigan

ASU EAST FACULTY AND ACADEMIC PROFESSIONALS

Rogers, Bradley B. 1984, Associate Professor of Manufacturing and Aeronautical Engineering Technology, B.S., M.S., Montana State University; Ph.D., Arizona State University

Rook, Fern H. 1969, Professor Emerita of Technology, B.A. University of Colorado; M.A., Arizona State University

Roper, Devon J. 1966, Professor Emeritus of Aeronautical Technology; B.S., Utah State University; M.S., Arizona State University

S

Sadowski, Mary A. 1999, Professor of Information and Management Technology, B.S.E., Bowling Green University; M.A., Ohio State University; Ph.D., Purdue University

Salmirs, Seymour 1951, Professor Emeritus of Technology, B.A.E., M.S.A.E., Georgia Institute of Technology

Schildgen, Thomas F. 1981, Professor of Information and Management Technology, Chair, Department of Information and Management Technology, B.S., M.S., Illinois State University; Ed.D., Northern Arizona University

Schmidt, Peter A. 1975, Professor Emeritus of Manufacturing and Aeronautical Engineering Technology, B.S., Northern Illinois University; M.A., Ed.D., Arizona State University

Schmitz, Troy G. 1995, Assistant Professor of Agribusiness and Resource Management, B.S. University of Saskatchewan; Canada; M.S., Ph.D. University of California, Berkeley

Schoen, Robert A. 1966, Professor Emeritus of Technology, B.S., M.S., Arizona State University

Schvaneveldt, Roger 2001, Professor of Applied Psychology, B.A., University of Utah; M.S., Ph.D., University of Wisconsin, Madison

Schwalm, David E. 1986, Associate Professor of English, Dean of East College, Vice President ASLE, B.A., Carlton College; M.S., Ph.D., University of Chicago

Seperich, George J. 1976, Professor of Agribusiness and Resource Management, Associate Dean, Morrison School of Agribusiness and Resource Management, B.S., Loyola University, Chicago; M.S., Ph.D., Michigan State University

Shepard, Christina W. 1999, Academic Associate of Nutrition, B.S., University of Arizona; M.S., Arizona State University

Shultz, Clifford J. 1992, Professor of Agribusiness and Resource Management, Marley Foundation Chair in Consumer Field Marketing, B.A., DePauw University; M.S., Ph.D., Columbia University

Stanton, Julie V. 1996, Assistant Professor of Agribusiness and Resource Management, B.A., Georgetown University; Ph.D., University of Maryland, College Park

Stiles, Philip G. 1969, Professor Emeritus of Agribusiness and Resource Management, B.S., University of Arkansas; M.S., University of Kentucky; Ph.D., Michigan State University

Stone, William J. 1967, Professor of Exercise and Wellness, Chair, Department of Exercise and Wellness; B.S., Boston University; M.S., Florida State University; Ed.D., University of California, Berkeley

Strawn, Roland S. 1967, Professor Emeritus of Technology; B.S.E., M.S.E.E., University of Illinois; Ph.D., Arizona State University

Sundararajan, Rajeswari 1996, Associate Professor of Electronics and Computer Engineering Technology; B.S. University of Madras, India; M.S., Indian Institute of Science, India; Ph.D., Arizona State University

Swan, Pamela 1994, Associate Professor of Exercise and Wellness; B.A., University of California, Santa Barbara; M.S. University of North Carolina, Greensboro; Ph.D., University of Tennessee

T

Taysom, Elvin D. 1953, Professor Emeritus of Agribusiness and Resource Management, B.S. University of Idaho; M.S., Utah State University; Ph.D., Washington State University

Thomason, Leslie L. 1969, Professor Emeritus of Technology, A.B., M.A., Ed.D., University of Oklahoma

Thor, Eric P. 1991, Professor of Agribusiness and Resource Management, B.S., M.S., Ph.D., University of California, Berkeley

Tudor-Locke, Catrine 2001, Assistant Professor of Exercise and Wellness; B.A., University of Lethbridge, Canada; M.S., Dalhousie University, Canada; Ph.D., University of Waterloo, Canada

Turney, Mary Ann 1999, Associate Professor of Aeronautical Management Technology, B.A., Le Moyne College; M.A., Hofstra University; Ed.D., Nova Southeastern University

V

Vaughan, Linda A. 1982, Professor of Nutrition, Chair, Department of Nutrition; B.S., University of California, Davis; M.N.S., Cornell University; Ph.D., University of Arizona

W

Watkins, Thomas B. 1972, Professor Emeritus of Technology, B.S., University of Wyoming; M.S., Arizona State University

Welty, Ellen L. 1996, Reference Instruction Librarian, ASU East Library Services, B.A., University of Wyoming; M.L.S., University of Arizona

Wenhardt, James C. 1996, Senior Lecturer of Elementary Education, B.S., M.Ed., Arizona State University

Whitehouse, Richard O. 1997, Senior Lecturer of Computer Science and Engineering, B.S., Worcester State College; M.S., University of Tennessee

Whysong, Gary L. 1974, Associate Professor of Environmental Resources, B.S., M.S., Montana State University; Ph.D., University of Wyoming

Wilson, Daniel 1978, Senior Lecturer of Information and Management Technology, B.S., Drexel University; M.S.E., Ph.D., Arizona State University

Wood, Billy G. 1977, Professor Emeritus of Electronics and Computer Engineering Technology, A.B., University of California; B.S., Eastern Illinois University; M.S., University of Arizona

Woodruff, Larry 1998, Lecturer of Exercise and Wellness, B.S., University of Oregon; M.S., Western Oregon University

Z

Zeng, Guoliang 1991, Associate Professor of Electronics and Computer Engineering Technology, B.S., Chengdu Telecommunications Institute, China; M.S., University of California, San Diego; M.N.S., Ph.D., Arizona State University

ASU EAST FACULTY AND ACADEMIC PROFESSIONALS

ASU East Administrative Personnel

Academic Administration

Campus CEO and Provost, ASU East; Vice President, ASU	Charles E. Backus
Vice Provost, Academic Programs	David E. Schwalm
Dean, Student Affairs	Gary L. McGrath
Director, Academic Services	C. Vinette Williams
Director, Administrative Services	Terry C. Isaacson
Director, American Indian Programs	Phillip J. Huebner
Director, Information Technology	Kati L. Weingartner
Interim Director, Institutional Advancement	C. Vinette Williams
Director, Library Services	Charles W. Brownson
Director, Planning and Budget	Sheila L. Ainlay
Director, Research and Sponsored Projects	Jean N. Humphries
Marley Foundation Chair in Consumer Food Marketing	Clifford J. Shultz
Coordinator, Sustainable Technologies, Agribusiness, and Resources Center	John H. Brock

College of Technology and Applied Sciences

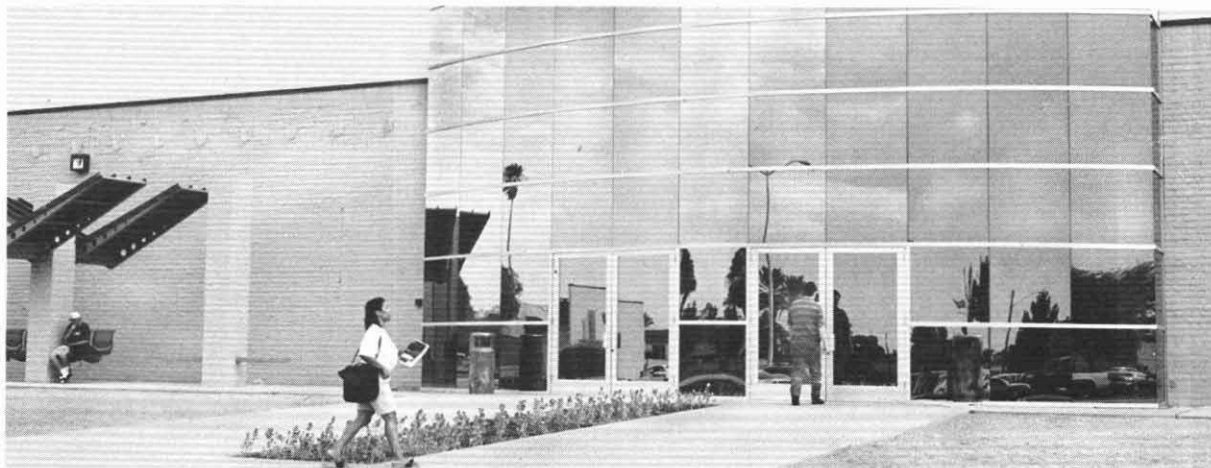
Dean, College of Technology and Applied Sciences	Albert L. McHenry
Associate Dean, College of Technology and Applied Sciences	Lakshmi V. Munukutla
Assistant Dean, College of Technology and Applied Sciences	Dale E. Palmgren
Chair, Department of Aeronautical Management Technology	William K. McCurry
Chair, Department of Electronics and Computer Engineering Technology	Timothy E. Lindquist
Chair, Department of Information and Management Technology	Thomas E. Schildgen
Chair, Department of Manufacturing and Aeronautical Engineering Technology	Scott G. Danielson
Project Director, International Projects Unit	Gary M. Grossman

East College

Dean, East College	David E. Schwalm
Chair, Department of Nutrition	Linda A. Vaughan
Head, Faculty of Applied Psychology	Roger W. Schvaneveldt
Head, Faculty of Business Administration	Roger W. Hutt
Head, Faculty of Education	Bette S. Bergeron
Chair, Department of Exercise and Wellness	William J. Stone
Head, Faculty of Multimedia Writing and Technical Communication	Barry M. Mait

Morrison School of Agribusiness and Resource Management

Dean, Morrison School of Agribusiness and Resource Management	Raymond A. Marquardt
Associate Dean, Morrison School of Agribusiness and Resource Management	George J. Seperich



The ASU East campus offers a variety of programs, from Agribusiness to Aeronautical Engineering Technology.

T. M. Trumble photo

ASU West

www.west.asu.edu

Elaine P. Maimon, Ph.D., Campus CEO and Provost

Admission and Advising	689
Degree Programs	691
Map	693
Directory	694
Faculty and Academic Professionals	696
Administrative Personnel	701

A vital component of the ASU multicampus system, ASU West serves nearly 6,000 undergraduate and graduate students on its growing campus in northwest Phoenix. ASU West provides a friendly, small-campus atmosphere along with the services, resources, and expertise of a nationally acclaimed, PAC-10 research university. Founded in 1984 with upper division and master's programs, ASU West became a four-year university campus in 2001.

ASU West prides itself on serving the diverse needs of students who balance academics with the multiple demands of work and family through convenient scheduling of small classes. Courses at ASU West lead to 29 bachelor's degrees, nine master's degrees, and eight professorial certificates. Academic programs are linked directly to community needs, providing relevant, applied learning opportunities, such as internships. The campus mission balances teaching and research, faculty-student collaboration, interdisciplinary perspectives, and many thriving university-community partnerships. The faculty and staff share a deep commitment to learner-centered education.

ASU West offers many on-campus services and facilities, including a multimedia resource library, state-of-the-art computer classrooms and labs, tutoring services, bookstore, cafeteria, credit union, fitness center, recreational facilities, child care, and post office. Plus many student activities clubs, and organizations. ASU West facilities are completely accessible for those with disabilities, with academic services provided by a disability resource center. Classes are offered in the day and evening, as well as on weekends, and via television and the Internet.

The architecture and courtyards at ASU West are modeled on those of the University of Oxford in Great Britain, enhanced by a beautifully landscaped natural environment featuring widely acclaimed public art. The campus occupies approximately 300 square acres between 43rd and 51st Avenues on West Thunderbird Road in Phoenix, easily accessed from Interstate 17 and Loop 101.

ACCREDITATION

ASU West is accredited by the Higher Learning Commission and is a member of the North Central Association.

Professional programs in various academic areas are also accredited.

The Business and Accountancy degree programs in the School of Management are accredited by AACSB International, the Association to Advance Collegiate Schools of Business. The Accountancy program is also an Endorsed Internal Auditing Program by the Institute of Internal Auditors.

In the College of Human Services, the Department of Recreation and Tourism Management is accredited by the National Recreation and Park Association, American Association for Leisure and Recreation Council on Accreditation, and the Bachelor in Social Work program is accredited by the Council on Social Work Education (CSWE). The Master in Social Work programs in candidacy for accreditation by the CSWE Full accreditation is anticipated in 2002. See "Academic Accreditation at ASU West," page 716.

ACADEMIC ORGANIZATION AND ADMINISTRATION

The campus chief executive officer and provost provides executive leadership for the continuing development and management of the campus and reports directly to the president of ASU. The provost is aided in the administration of the campus by vice provosts, deans, directors, department chairs, faculty, and other officers. There are four schools and colleges at ASU West and a Division of Collaborative Programs administered by deans. These academic units develop and implement the teaching, research, and service programs of the institution, aided by the ASU West Library and other services.

The faculty and students of the institution play an important role in campus governance with the Academic Senate, Associated Students of ASU West, and numerous cross-campus and joint ASU West-ASU Main-ASU East committees serving the needs of a rapidly growing institution.

See "ASU West Administrative Personnel" page 01.

ADMISSION AND ADVISING

Admission

Nondegree Students. Nondegree students may take courses at ASU West according to the special provisions under "Admission of Undergraduate Nondegree Applicants," page 64.

ASU WEST

ASU West Baccalaureate Degrees and Majors

Major	Degree	Concentration	Administered By
Accountancy	B.S.		Department of Accounting and Information Systems Management
Administration of Justice	B.S.		Department of Administration of Justice
American Studies	B.A.		Department of American Studies
Applied Science	B.A.S.	All minors available at ASU West, individualized concentration	Division of Collaborative Programs
Communication Studies	B.A., B.S.		Department of Communication Studies
Elementary Education	B.A.E.	Bilingual education/English as a second language, early childhood education	Department of Elementary Education
English	B.A.		Department of American Studies
Global Business	B.S.	Financial management, human resources management, information systems management, international studies, marketing	School of Management
History	B.A.		Department of American Studies
Integrative Studies	B.A.	All minors available at ASU West, individualized concentration	Department of Integrative Studies
Interdisciplinary Arts and Performance	B.A.	Media, music, performance studies, theater performance, visual art	Department of Interdisciplinary Arts and Performance
Life Sciences	B.S.	---	Department of Life Sciences
Nursing	B.S.N.	---	College of Nursing (ASU Main)
Political Science	B.A., B.S.	---	Department of Social and Behavioral Sciences
Psychology	B.A., B.S.	---	Department of Social and Behavioral Sciences
Recreation and Tourism Management	B.S.	---	Department of Recreation and Tourism Management
Secondary Education	B.A.E.	Academic specializations: biological sciences, English, history, mathematics, social studies	Department of Secondary Education
Social and Behavioral Sciences	B.A., B.S.	---	Department of Social and Behavioral Sciences
Social Work	B.S.W.	---	Department of Social Work
Sociology	B.A., B.S.	---	Department of Social and Behavioral Sciences
Spanish	B.A.	---	Department of American Studies
Special Education	B.A.E.	---	Department of Special Education
Women's Studies	B.A., B.S.	---	Women's Studies Program

Degree-Seeking Students. Any student admitted to ASU may take courses at ASU West. To be admitted to an ASU West degree program, the student must meet university admissions requirements and the specific admission requirements of the ASU West program. A student admitted to an ASU West degree program is defined as an ASU West student.

For more information on applying to ASU West degree programs, see the current *ASU West Catalog* or *ASU West Schedule of Classes*. For applications and admission information, call 602-543-8203, or write

ADMISSION SERVICES
UNIVERSITY CENTER BUILDING 120
ARIZONA STATE UNIVERSITY WEST
PO BOX 37100
PHOENIX AZ 85069-7100

Change of Major from ASU Main to ASU West

Currently enrolled ASU Main degree seeking students who want to relocate to an ASU West degree program should contact the Admissions and Records Office at ASU West for the appropriate procedures. Acceptance to an ASU West degree program requires the student to meet the prerequisites for entry to the student's choice of major as stated

ASU West Graduate Degrees and Majors

Major	Degree	Concentration	Administered By
Business Administration	M.B.A.		School of Management
Communication Studies	M.A.		Department of Communication Studies
Criminal Justice	M.A.		Department of Administration of Justice
Educational Administration and Supervision	M.Ed.		Department of Graduate Studies and Professional Development
Elementary Education	M.Ed.	Bilingual education, educational technology, ESL education reading	Department of Graduate Studies and Professional Development
Interdisciplinary Studies	M.A.		College of Arts and Sciences
Secondary Education	M.Ed.	Educational technology	Department of Graduate Studies and Professional Development
Social Work	M.S.W.		Department of Social Work
Special Education	M.Ed.	Infants and young children	Department of Graduate Studies and Professional Development

in the appropriate catalog. Students should be aware that certain requirements, e.g., the minimum number of upper division semester hours to graduate, differ between ASU West and ASU Main. Students should therefore contact an academic advisor at ASU West before relocating to there.

Application of Course Credit. All courses completed on any ASU campus may fulfill the 120-semester-hour requirement for graduation with a baccalaureate degree. Every candidate for the baccalaureate degree is required to earn a minimum of 30 semester hours in resident credit courses at the ASU campus from which the student will graduate. Some degree programs have specific requirements that must be completed in the department of the major or through another department at the resident campus. The application of courses to the degree program is determined by the appropriate faculty member or academic advisor of the student's major. Because of these constraints, students should seek advice from the appropriate advisor for their major before registering for classes at another ASU campus.

Academic Advising

Effective academic advising is an essential aspect of the educational experience at ASU West. Prospective students should contact a general advisor as a first step in the admission process to make an appointment, call 602-543-7643, or visit the West Campus Advisory Center in UCB 201. A general counselor reviews admission requirements and processes and makes referrals to academic advisors as appropriate. A convenient alternative is to meet with an outreach advisor at an ASU West Transfer Center located on the campuses of local community colleges.

DEGREE PROGRAMS

Refer to the "ASU West Baccalaureate Degrees and Majors" table, page 690, and "ASU West Graduate Degrees and Majors" table, on this page.

The College of Education offers postbaccalaureate programs for teacher certification in elementary education and secondary education. Students who complete the approved program, including student teaching, are recommended for certification to the Arizona Department of Education. The following academic specializations for the B.A.E. degree are

Secondary Education require course work in the subject matter area not currently available at ASU West (but offered at ASU Main), business, chemistry, family resources and human development, physical education, physics, political science, and Spanish.

For more information on ASU West degree requirements, see the *ASU West Catalog*.

Minors and Certificates

ASU West offers an extensive selection of minors and certificate programs that may be taken in conjunction with a major. Other certificate programs may be taken independently. For the complete list, see the "ASU West Minors" table, page 692, and the "ASU West Certificates" table, page 692. For more information, refer to the individual department or college descriptions in the *ASU West Catalog*.

ASU Main Programs Hosted at ASU West. Courses for the Bachelor of Science in Nursing (B.S.N.) degree are offered at ASU West. For specific information on requirements, see "College of Nursing," page 473.

Course Information

For information on ASU West course offerings, see the current *ASU West Schedule of Classes*. For ASU West course descriptions and General Studies courses offered at ASU West, see the *ASU West Catalog*.

Library Services

The ASU West Library provides resources that support the curriculum of ASU West with a collection of 315,000 volumes, 1.4 million microforms, 7,500 videos, 15,000 slides, 23 electronic databases, and nearly 6,000 serial titles including 3,000 electronic full-text journals. Approximately 47% of electronic databases are available to ASU registered users from home computers.

The library is open seven days a week. Knowledgeable staff members are available to provide reference service and instruction in the use of the library's considerable resources. Individual consultations with subject specialist librarians are available by appointment. The Library Instruction Program provides introduction to the tools and resources available for research in academic disciplines, including Internet resources.

ASU WEST

ASU West Minors

Minor	Administered By
American Studies	Department of American Studies
Communication Studies	Department of Communication Studies
English	Department of American Studies
Ethnic Studies	College of Arts and Sciences
Film and Video Studies	Department of Interdisciplinary Arts and Performance
Gerontology	Gerontology Program
History	Department of American Studies
Interdisciplinary Arts and Performance	Department of Interdisciplinary Arts and Performance
Life Sciences	Department of Life Sciences
Mathematics	Department of Integrative Studies
Philosophy	Department of Integrative Studies
Political Science	Department of Social and Behavioral Sciences
Prelaw	College of Human Services
Psychology	Department of Social and Behavioral Sciences
Public Relations and Strategic Communications	Department of Communication Studies
Religious Studies	College of Arts and Sciences
Social and Behavioral Sciences	Department of Social and Behavioral Sciences
Sociocultural Anthropology	Department of Social and Behavioral Sciences
Sociology	Department of Social and Behavioral Sciences
Spanish	Department of American Studies
Special Events Management	Department of Recreation and Tourism Management
Tourism Management	Department of Recreation and Tourism Management
Women's Studies	Women's Studies Program

Numerous information and research tools most accessible from off campus are available through the ASU West Library Web site at www.west.asu.edu/library. For library hours and information, call 602 543 5717.

ASU EXTENDED CAMPUS

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and the region. The university wide college oversees the ASU Extended Campus and forms partnerships with other ASU colleges, including those at ASU

West, to meet the instructional and informational needs of a diverse community.

The ASU Extended Campus goes beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules, a vast network of off campus sites; classes scheduled days, evenings, and weekends; and innovative delivery technologies, including television, the Internet, and independent learning. The Extended Campus also offers a variety of professional continuing education and community outreach programs.

For more information, see "ASU Extended Campus," page 703, or access the Web site at www.asu.edu/xed.

ASU West Certificates

Certificate	Administered By
Accountancy Postbaccalaureate Certificate in Communication and Human Relations, Postbaccalaureate Certificate in	Department of Accounting and Information Systems Management Department of Communication Studies
Ethnic Studies, Certificate in	College of Arts and Sciences
Film and Video Studies, Certificate in	Department of Interdisciplinary Arts and Performance
Gerontology, Certificate in	College of Human Services
Professional Accountancy, Postbaccalaureate Certificate in	Department of Accounting and Information Systems Management
Women's Studies, Certificate in	Women's Studies Program
Writing, Certificate in	Department of American Studies

ASU West Directory

For the "ASU Main Directory," see page 540. For the "ASU East Directory," see page 685. For the "ASU Extended Campus Directory," see page 713.

Organization	Location	Telephone	Web Address
Admissions Services	UCB 120	602 543 8203	www.west.asu.edu/admissions
Arts and Sciences, College of	FAB N201	602/543 6000	www.west.asu.edu/coas
American Studies, Department of	FAB N220C	602 543-6090	www.west.asu.edu/amerstud
Ethnic Studies Program	FAB N204	602 543-6007	www.west.asu.edu/ethnic
Integrative Studies, Department of	FAB N279 1	602 543-6003	www.west.asu.edu/iasweb/index.htm
Interdisciplinary Arts and Performance, Department of	AB N230F	602 543 6057	www.west.asu.edu/iap
Life Sciences Department of	CLCC 210	602 543-6050	www.west.asu.edu/lifesc
M.A. Interdisciplinary Studies	FABN 201F	602 543 6241	www.west.asu.edu/ma_s
Social and Behavioral Sciences Department of	FAB N250	602 543 6058	www.west.asu.edu/social
Women's Studies Program	FAB N291	602 543 3300	www.west.asu.edu/wsteam
Associated Students of ASU West	UCB 221	602 543 8186	www.west.asu.edu/asasuw
ASU West		602 543 5500	www.west.asu.edu
Bookstore	UCB 140	602 543 6800	www.west.asu.edu/adaffauxs/bookstore
Career Services and Personal Counseling Center	UCB 320	602 543 8124	www.west.asu.edu/cspc
Collaborative Programs Division of	UCB 201	602 543 4600	www.west.asu.edu/dcp
Bachelor of Applied Science Program	UCB 201	602 543 4BAS	www.west.asu.edu/bas
Barrett Honors College	UCB 201	602 543 4503	www.asu.edu/honors
Learning Enhancement Center	FLHLB LL2	602 543 6151	www.west.asu.edu/ec
Research Consulting Center	UCB 201	602 543 3410	www.west.asu.edu/rcc_ab
Transition and Outreach Services	UCB 201	602 543 8217	www.west.asu.edu/tos
University College Center	UCB 201	602 543 4222	www.west.asu.edu/ucc
West Campus Advancing Center	UCB 201	602 543 WCAC	www.west.asu.edu/wcac
Disability Resource Center	UCB 130	602 543-8145	www.west.asu.edu/drc
TDD		602/543 8168	
Education, College of	FAB S210A	602 543 6300	www.west.asu.edu/coe
Elementary Education Department of	FAB S218	602 543 6315	www.west.asu.edu/coe
Graduate Studies and Professional Development, Department of	FAB S220	602 543 3634	www.west.asu.edu/coe/graduate
Secondary Education, Department of	FAB S251A	602 543 6445	www.west.asu.edu/coe
Special Education Department of	FAB S252	602 543 6380	www.west.asu.edu/coe
Financial Aid Services	UCB 120	602 543-8178	www.west.asu.edu/financialaid
Graduate Studies	FAB S 301	602 543 4567	www.west.asu.edu/graduate
Human Services, College of	FAB S105 A	602 543 6600	www.west.asu.edu/chs
Administration of Justice, Department of	FAB S270C 1	602 543 6607	www.west.asu.edu/chs/aoj
Communication Studies Department of	FAB S141C	602/543 6606	www.west.asu.edu/chs/comm
Gerontology Program	FAB S170 2	602/543-6642	www.west.asu.edu/chs/GRN
Nursing (ASU Main Program)	FAB N290A-2	602/543 6605	nursing.asu.edu
Recreation and Tourism Management, Department of	FAB S115A	602 543 6603	www.west.asu.edu/chs/RTM
Social Work, Department of	FAB S149	602 543 6602	www.west.asu.edu/chs/sw
Information Desk	FAB Lobby	602 543 5500	www.west.asu.edu/adaffauxs/info
Library	FLHLB	602 543 5717	www.west.asu.edu/library

Organization	Location	Telephone	Web Address
Management, School of	FAB N101	602-543-6200	www.west.asu.edu/som
Accounting and Information Systems	FAB S190-1	602-543-6275	www.west.asu.edu/som/acct
Management, Department of			
Economics, Finance, Marketing and Quantitative Business Analysis,	FAB N120-A	602/543-6101	www.west.asu.edu/som
Department of			
Management, Department of	FAB N120-D	602/543-6204	www.west.asu.edu/som
Master of Business Administration (MBA) Program	FAB N151	602/543-6201	www.west.asu.edu/som/MBA
Multicultural Student Services	UCB 220	602/543-8148	www.west.asu.edu/multicultural
Parking Services (Decals, Appeals)	Welcome Center	602/543-7275	www.west.asu.edu/adaff/auxs/parking
Provost, Office of the	FAB N303	602/543-7001	—
Residency Classification	UCB 120	602/543-8203	www.west.asu.edu/registrar/residency.htm
Student Employment	UCB 120	602/543-8178	www.west.asu.edu/financialaid/stdemply.htm
Student Health Services	UCB 170	602-543-8019	www.west.asu.edu/studenthealth
Student Life	UCB 220	602/543-8200	www.west.asu.edu/studentlife
Student Support Services Program	UCB 220	602/543-8121	www.west.asu.edu/sssp
Testing Services	UCB 120	602/543-8136	www.west.asu.edu/testing
Transition and Outreach Services (General Advising)	UCB 201	602/543-8217	www.west.asu.edu/tos
Veteran Student Services	UCB 120	602/543-8220	www.west.asu.edu/veteran
Vice Provost, Academic Affairs	FAB N301	602-543-4500	www.west.asu.edu/acadaffairs
West Campus Advising Center	UCB 201	602/543-WCAC	www.west.asu.edu/wcac
Women's Studies Resource Center	UCB 323	602/543-3421	www.west.asu.edu/wsteam/resource.htm



A view of ASU West campus with the University Center Building and Faculty and Administration Building in the foreground

Mark Boscia: photo

ASU West Faculty and Academic Professionals

A

- Abramson, Marianne** 1999, Visiting Assistant Professor of Psychology; B.A. Northern Arizona University; M.A., Ph.D. Arizona State University
- Achilles, Flayne R.** 1956, Associate Professor of Education; B.M.Ed., Temple University; M.M., Ed.D., Arizona State University
- Ackroyd, William S.** 2000, Lecturer of Social and Behavioral Sciences; B.A., M.A., M.S., Port and State University; Ph.D., University of Arizona
- Aleshire, Peter** (1993), Senior Lecturer of Professional Writing; B.A., M.A., Stanford University
- Amobi, Olufunmilayo A.** 2000, Assistant Professor of Secondary Education; B.A., University of Ibadan, Nigeria; M.Ed. Ed.D., Arizona State University
- Anastasi, Jeffery S.** (2011), Assistant Professor of Cognitive Psychology; B.A., M.A., Ph.D., State University of New York, Binghamton
- Andereck, Kathleen L.** 1993, Associate Professor of Recreation and Therapeutic Management; B.S., University of Wisconsin-Stevens Point; M.S., Texas A&M University; Ph.D., Clemson University
- Anders, Gary C.** 1989, Professor of Economics; Director, Institute for International Business; School of Management; B.S., West Texas State University; M.A., Ph.D., University of Notre Dame
- Anderson, Laurel A.** 1951, Associate Professor of Marketing; B.S.N., University of Minnesota, Twin Cities; M.N., University of Washington; Ph.D., Arizona State University
- Anovke, Akua Duku** 1999, Associate Professor of American Studies; Co-chair, Department of American Studies; B.A., Michigan State University; M.A., Federal City College, District of Columbia; M.A., Ph.D., City University of New York Graduate School and University Center
- Armstrong, Gaylene S.** 2000, Assistant Professor of Administration of Justice; B.A., University of Manitoba (Canada); M.A., Ph.D., University of Maryland
- Armstrong, Todd A.** 1979, Assistant Professor of Administration of Justice; B.A., M.A., Ph.D., University of Maryland College Park
- Atwater, Leanne E.** 1993, Professor of Management; Chair, Department of Management; B.A., M.A., San Diego State University; Ph.D., Cleveland Graduate School
- Avalos, Manuel** 1990, Associate Professor of Political Science; Associate Vice Provost for Research and Faculty Development; B.A., M.A., University of Arizona; Ph.D., University of New Mexico
- Awender, Michael A.** 2000, Professor of Education, Dean, College of Education; B.A., M.A., University of Windsor, Canada; M.Ed., University of Toronto, Canada; Ph.D., Clinton College Graduate School

B

- Baldwin, Bruce A.** 1989, Professor of Accounting; B.A., M.B.A., Michigan State University; Ph.D., Arizona State University
- Balthazard, Pierre A.** 1999, Associate Professor of Information Management Systems; B.S., M.Gi., University of Canada; M.S., Ph.D., University of Arizona
- Beckett, E. Carol** 1996, Assistant Professor of Bilingual Education; B.A., M.Ed., Ed.D., Arizona State University
- Bellizzi, Joseph A.** 1985, Professor of Marketing, Chair, Department of Economics, Finance, Marketing and Quantitative Business Analysis; B.S., M.A., Ph.D., University of Nebraska, Lincoln
- Bernat, Frances P.** 1991, Associate Professor of Administration of Justice; B.S., M.A., J.D., State University of New York, Buffalo; Ph.D., Washington State University
- Brawley, E. Allan** 1992, Professor of Social Work, Vice Provost for Academic Personnel, Certificate of Social Work, University of Stratford, United Kingdom; D.S.W., University of Pennsylvania
- Bredbenner, Candice D.** 1991, Associate Professor of American History; Assistant Dean, College of Arts and Sciences; B.A., Russell Sage College; M.A., Ph.D., University of Virginia
- Brett, Joan F.** 1999, Associate Professor of Management; B.A., B.S., Ohio State University; Ph.D., New York University
- Bristol, Terry L.** 2002, Assistant Professor of Marketing; B.S., M.S., San Diego State University; Ph.D., Virginia Polytechnic Institute
- Britt, Chester L. III** 1999, Associate Professor of Administration of Justice; B.S., University of Iowa; M.A., Washington State University; Ph.D., University of Arizona
- Broadus, Dorothy C.** 1991, Associate Professor of English; B.A., Eastern Kentucky University; M.Ed., Ph.D., University of Louisville
- Brown, Lee H.** (2011), Assistant Professor of Secondary Education; B.A., Union College; M.A., Ed.D., State University of New York, Albany
- Buenker, Joe L.** 2000, Assistant Librarian; B.A., University of Wisconsin, Parkside, M.S., University of Illinois, Urbana
- Burleson, Mary H.** (1977), Assistant Professor of Psychology; B.A., M.S., New Mexico State University; Ph.D., Arizona State University
- Buss, Ray R.** 1991, Associate Professor of Educational Psychology; Assistant Dean, College of Education; B.S., M.S., Ph.D., University of Wisconsin-Madison
- Byam, L. Dale** 1999, Visiting Assistant Professor of Interdisciplinary Arts and Performance; B.A., Concordia University, Canada; M.A., Ph.D., New York University

C

- Cardelle-Elawar, Maria** (1987), Professor of Educational Psychology, B.A., Universidad Experimental Libertador Venezuela; M.S., University of Southern California, Ph.D., Stanford University
- Cardenas, Lupe** 1986, Associate Professor of Spanish, B.A., M.A., Ph.D., Arizona State University
- Carey, James** 1995, Lecturer, School of Management, B.S., M.B.A., Ph.D., Arizona State University
- Carey, Jane M.** 1988, Associate Professor of Management Information Systems; B.S., M.B.A., Eastern Illinois University, Ph.D., University of Mississippi
- Carter, Wendy** 1997, Assistant Professor of Sociology; B.A. Stanford University, M.S., Carnegie Mellon University, M.S. Ph.D., University of Wisconsin Madison
- Champion, Kelly M.** 2001, Assistant Professor of Psychology, A.B., University of Michigan, Ann Arbor, M.S., Eastern Michigan University; Ph.D., University of Kansas
- Chang, Stanley Y.** 1992, Associate Professor of Accountancy; B.B.A., National Taiwan University, Taiwan; M.A., University of Missouri, Ph.D., Texas Tech University
- Chavez, Jose G.** 2000, Assistant Professor of Spanish; B.A., M.A., California State University, Sacramento; Ph.D., Arizona State University
- Chisholm, Ines M.** 1991, Associate Professor of Bilingual Education; B.A., M.Ed., University of Puerto Rico; Ph.D., University of Florida
- Christie, Alice A.** 1995, Associate Professor of Technology and Education; B.A., De Son University, M.Ed., Boston University, Ph.D., Arizona State University
- Cleland, Jo Ann V.** 1991, Associate Professor of Reading Language Arts, B.A., Saint Olaf College; M.A., Ed.D., Northern Arizona University
- Collins Chobanian, Shari C.** 1994, Associate Professor of Philosophy; B.A., Colorado State University, M.A., Ph.D., Washington University
- Corley, Ted L.** 2001, Lecturer in Mathematics, B.S., Grand Canyon University, M.A., Ed.D., Arizona State University
- Costantino, James** (1995), Lecturer of Accountancy, B.S., M.A., Arizona State University; M.A., University of Southern California
- Cuadraz, Gloria H.** 1994, Associate Professor of American Studies, Director, Ethnic Studies Program; B.A., University of California, Santa Cruz, M.A., Ph.D., University of California, Berkeley
- Cutrer, Emily F.** 1990, Associate Professor of American Studies; Interim Dean, College of Arts and Sciences, B.A., M.A., Ph.D., University of Texas, Austin
- Cutrer, Thomas W.** 1992, Professor of American Studies, Cochair, Department of American Studies; B.A., M.A., Louisiana State University, Ph.D., University of Texas, Austin

D

- Dallmus, John T.** 2000, Lecturer of Accountancy; B.S., Towson University, M.B.A., Loyola College in Maryland
- Davidson, Ronald** 1997, Associate Professor of Accountancy, B.Comm., University of Manitoba, Canada; M.B.A., York University, Canada; Ph.D., University of Arizona

De La Cruz, Yolanda 1999, Associate Professor of Mathematics Education; B.A., M.A., California State University, Northridge; Ed.D., University of California, Berkeley

Delgado, Fernando 1994, Associate Professor of Communication Studies, Associate Vice Provost for Academic Programs and Graduate Studies, B.A., San Jose State University; M.A., Ph.D., University of Iowa

Di Mare, Lesley 1992, Associate Professor of Communication Studies; Chair, Department of Communication Studies; B.A., California State University, Chico, M.A., California State University, Hayward, Ph.D., Indiana University Bloomington

Dix, Clarence L. 1979, Senior Lecturer of Social Work; B.A., Buena Vista College; M.S.W., University of Chicago

Duncan, William A. 1991, Associate Professor of Accountancy; Chair, Department of Accounting and Information Systems Management; B.S., Portland State University, Ph.D., University of Texas, Austin

E

Elenes, C. Alejandra 1992, Associate Professor of Women's Studies, Licenciada en Ciencias de la Información, University of Monterrey, Mexico; M.A., Ph.D., University of Wisconsin, Madison

F

Farone, Diane Weis (2001), Assistant Professor of Social Work; B.A., University of Colorado, Boulder, M.B.A., University of Tennessee, M.S., D.S.W., Columbia University; J.D., Vanderbilt University

Farrelly, deg (1991), Associate Librarian; B.A., Illinois State University; M.L.S., Rutgers The State University of New Jersey

Feezor Buttes, Barbara 1995, Assistant Professor of African American Studies; B.A., University of California, Berkeley, M.A., Ph.D., University of California, Los Angeles

Firat, A. Fuat 1990, Professor of Marketing; Licenciada en Economía, Istanbul University, Turkey; Ph.D., Northwestern University

Fitzpatrick, Tanya R. 2000, Associate Professor of Social Work; B.A., Clark University, M.S.W., Simmons School of Social Work; Ph.D., Boston College

Flint, G. David 1985, Lecturer of Management, B.A., Grand Canyon University, M.I.M., American Graduate School of International Management, Ph.D., Texas A&M University

Forster, Bruce A. (2000), Professor of Economics, Dean, School of Management, B.A., University of Guelph, Canada; Ph.D., Australian National University, Australia

Foster, Madison J. III 2000, Visiting Associate Professor of Social Work, B.A., Morehouse College; M.S.W., University of Michigan, Ann Arbor, Ph.D., Bryn Mawr College

Foster, Will 2001, Assistant Professor of Information Systems Management, B.A., Williams College, Ph.D., University of Arizona

G

Gaffney, Cynthia 2001, Instructor of Communication Studies; B.A., M.A., Arizona State University

Gallegos, Bee 1984, Associate Librarian; B.S., University of North Alabama, M.L.S., George Peabody College for Teachers

Gater, Helen 1970, Dean Emerita; B.A., Fort Hays University; M.A., University of Denver

ASU WEST FACULTY AND ACADEMIC PROFESSIONALS

George, Peggy J. 1972, Lecturer of Elementary Education; B.A., Arizona State University, M.Ed., E.D., University of Massachusetts-Amherst

Gilkesson, John S. 1991, Associate Professor of History; B.A., Amherst College, M.A., University of Oklahoma, Ph.D., Brown University

Gitelson, Richard 1994, Professor of Recreation and Tourism Management Chair, Department of Recreation and Tourism Management; B.A., M.A., M.S., University of North Carolina, Chapel Hill; Ph.D., Texas A&M University

Glass, Ronald D. 1996, Assistant Professor of Professional Center, B.A., Harvard College, M.A., Ph.D., Stanford University, Ed.M., Harvard University, C.Phil., University of California, Berkeley

Gonzalez-Jensen, Margaret 1994, Associate Professor of Bilingual Education; B.A., Our Lady of the Lake University, M.A., Ed.D., Texas A&M University

Gopalakrishnan, Mohan 1995, Associate Professor of Operations Production Management; B.E., Centre of Engineering (India), M.S., Ph.D., University of Alabama, Tuscaloosa

Graves, Joseph L. 1994, Professor of Evolutionary Biology; A.B., Oberlin College, Ph.D., Wayne State University

Greenhut, John G. 1989, Associate Professor of Finance; B.A., Ph.D., Texas A&M University

Greenstein, Marilyn 1970, Associate Professor of Accountancy; B.B.A., University of Houston, Ph.D., Temple University

Gregg, Dawn G. 1972, Visiting Assistant Professor of Information Systems; B.S., University of California, Irvine, M.B.A., Arizona State University West, M.S., Arizona State University

Griffin, Marie 1997, Assistant Professor of Administration of Justice; B.S., Santa Clara University, Ph.D., Arizona State University

Gruber, Diane 1995, Lecturer of Communication Studies; B.A., Rutgers-The State University of New Jersey, M.A., Purdue University

Gutierrez, Sara E. 1990, Associate Professor of Psychology; B.S., M.A., Ph.D., Arizona State University

H

Haarr, Robin N. 1994, Associate Professor of Administration of Justice; B.S., State University of New York, Brockport, M.S., Ph.D., Michigan State University

Haas, Nancy S. 1986, Associate Professor of Curriculum and Instruction, Chair, Department of Secondary Education; B.A., M.Ed., Ph.D., Arizona State University

Haasnoot, Richard 1972, Lecturer of Marketing; B.A., Pennsylvania State University

Haladyna, Thomas M. 1986, Professor of Educational Psychology; B.S., Illinois State University, M.A., San Jose State University, Ph.D., Arizona State University

Harken, Henry R. Jr. 1986, Associate Librarian; B.A., Hofstra University, M.S.L.S., Long Island University

Harris, Kathleen C. 1991, Professor of Special Education; B.A., M.Ed., Rutgers, The State University of New Jersey, Ph.D., Temple University

Hattenhauer, Darryl 1988, Associate Professor of American Literature; B.A., M.A., California State University, Ph.D., University of Minnesota-Twin Cities

Hay, Victoria 1993, Senior Lecturer of Writing; B.A., University of Arizona; M.A., Ph.D., Arizona State University

Hayden, Mary 1998, Lecturer of Management; B.A., M.B.A., Arizona State University

Hess, Robert K. 1999, Associate Professor of Measurement and Evaluation; B.A., M.Ed., University of Georgia, Ph.D., University of South Carolina

Hino, Jo Ann 2011, Lecturer of Elementary Education; B.S., State University of New York, Cort and M.A., Keene College; Ed.D., Rutgers University

Hultsman, John 1999, Professor of Recreation and Tourism Management, Director Partnerships for Community Development, College of Human Services, B.G.S., University of Kansas, M.S., University of Missouri, Re.D., Indiana University-Bloomington

Hultsman, Wendy Z. 1979, Associate Professor of Recreation and Tourism Management; B.S.E., State University of New York-Cort and M.S., Indiana University-Bloomington; Ph.D., Pennsylvania State University

Hurwitz, Sally 2001, Lecturer; B.A.E., M.Ed., Ph.D., Arizona State University

I

Irvin, Glenn W. 1997, Professor of English, Vice Provost for Academic Affairs; B.A., M.A., Ph.D., Arizona State University

Irwin, Leslie H. 1995, Assistant Professor of Professional Education Core; B.S., University of Wisconsin-Superior, B.Ed., M.Ed., University of Ottawa-Canada, Ed.D., Brian Young University

Isbell, Dennis 1991, Associate Librarian; B.S., M.A., Northern Arizona University, M.L.S., University of Arizona

J

Jacquette, Barbara L. 1999, Senior Lecturer of Curriculum and Instruction; B.S., Cornell University, M.A., Adelphi University, Ph.D., Arizona State University

Johnson, Carolyn R. 1995, Associate Librarian; B.A., Montclair State College, M.S.L.S., University of Illinois, M.B.A., University of Minnesota

Jones, Robert W. 1994, Associate Professor of Collaborative Programs; B.S., M.A., Middle Tennessee State University, Ph.D., Miami University

K

Kammerlocher, Lisa 1988, Associate Librarian; B.S., M.L.S., University of Oklahoma

Kassing, Jeffrey W. 1998, Assistant Professor of Communication Studies; B.A., William Jewell College, M.A., Murray State University, Ph.D., Kent State University

Katz, Charles 1997, Assistant Professor of Administration of Justice; B.S., Truman State University; M.A., Ph.D., University of Nebraska, Omaha

Keil, Thomas J. 1999, Professor of Sociology; B.A., King's College, M.A., Ph.D., Temple University

Kelley, Douglas L. 1994, Associate Professor of Communication Studies; B.A., Westmont College, M.C., Arizona State University; Ph.D., University of Arizona

Kelley, Michael F. 1990, Associate Professor of Early Childhood Education, Chair, Department of Elementary Education; B.S., M.S., Arizona State University, Ed.D., University of Georgia

Kennedy, Jeffery T. 2001, Fire Arts Specialist; B.A., California State University-Fullerton, M.A., New York University

ASU WEST FACULTY AND ACADEMIC PROFESSIONALS

Kirby, Andrew 1995, Professor of Social and Behavioral Sciences and Geography, Director, M.A. in Interdisciplinary Studies Program B.A., Ph.D., University of Newcastle United Kingdom

Kline, Elliot 1993, Lecturer of Management, B.A., M.B.A., Ph.D., University of Colorado

Knopf, Richard C. (1986) Professor of Recreation and Tourism Management, B.S., M.S., Ph.D., University of Michigan

L

Lash, Christine 1999, Academic Professional, Coordinator, Women's Studies Resource Center, B.S., M.C. Ph.D., Arizona State University

Lavitt, Melissa R. 1991, Associate Professor of Social Work, Chair, Department of Social Work, B.A., University of Chicago; M.S.W., Ph.D., Tulane University

Lentz, Daniel 1991 Associate Professor of Music Theory and Composition; B.A., Saint Vincent College; M.F.A., Ohio University, Athens

Lerman, Richard 1995, Professor of Media Arts B.A., M.F.A., Brandeis University

Levy, Emanuel 1990, Professor of Sociology; B.A., M.A., Tel Aviv University (Israel), M.Ph., Ph.D. Columbia University

Luken, Paul C. 1993, Senior Lecturer of Sociology; B.A. Quincy College; M.A., Ph.D., Ohio State University

M

Maimon, Elaine P. (1996), Professor of English Campus Chief Executive Officer and Provost ASU West; Vice President, ASU; B.A., M.A., Ph.D. University of Pennsylvania

Malian, Ida M. 1990, Professor of Special Education, Chair, Department of Special Education, B.A. Oakland University M.A., Ph.D., University of Michigan

McCabe, James (2000) Visiting Assistant Professor of Social Work B.A., St. Ambrose College, M.P.H. M.S.W. University of Hawaii; D.S.W., University of California, Berkeley

McGovern, Thomas V. 1990, Professor of Psychology, A.B., Fordham University M.A., Ph.D. Southern Illinois University, Carbondale

McKennon, Edward (2000) Assistant Librarian, B.A., Rutgers University M.A., University of Arizona

Medville, Karen K. 1995, Assistant Research Scientist in Life Sciences, B.A., Colorado College, M.S., Colorado State University

Mengesha, Astair Gebre Mariam 1991, Associate Professor of Women's Studies Chair, Women's Studies Program B.A., Purdue University M.A., Michigan State University Ph.D. Iowa State University

Meznar, Martin (1994), Associate Professor of International Business B.A., B.S., Bryan College; M.S. University of Texas Dallas, Ph.D., University of South Carolina

Midobuche, Eva 1996 Assistant Professor of Bilingual Education, B.S., M.A., Ed.D., Texas A&M University

Miller, Paul A. (1988), Associate Professor of Psychology, Chair, Department of Social and Behavioral Sciences, B.S., Saint Vincent College, M.S., North Carolina State University, Raleigh, M.A., Ph.D., University of Texas, Austin

Mizzi, Philip J. 1988 Associate Professor of Economics; B.A., Rockford College, Ph.D., Texas A&M University

Mohan, Srimathy 1999, Visiting Assistant Professor of Operations Production Management, B.S. M.S., University of Alabama Tuscaloosa, M.S. Massachusetts Institute of Technology; Ph.D., University of Montreal Canada

Montano, Henry (2000) Instructor of Social Work, B.A., California State University, Northridge, M.S.W. University of California, Los Angeles

Moore, David W. 1989, Professor of Reading, B.A., M.Ed., University of Arizona Ph.D., University of Georgia

Moore, Harold E. Jr. 1990, Lecturer of Administration of Justice, B.A., J.D., University of Denver

Morris, Richard 1999, Professor of Communication Studies, B.A., San Jose State University M.A., Ph.D., University of Wisconsin, Madison

Moulton, Ian F. 1995, Associate Professor of British Literature; B.A., University of Manitoba, Winnipeg (Canada), M.A., University of Western Ontario Canada, Ph.D., Columbia University

Mueller, Carol M. 1988, Professor of Sociology, B.A. University of California Berkeley, M.A., Rutgers, The State University of New Jersey Ph.D., Cornell University

Muller, Barbara J. (1991) Senior Lecturer of Accountancy; B.S., M.B.A., Arizona State University

Murphy Erfani, Julie A. 1989 Associate Professor of Political Science B.A., Knox College, M.A. Ph.D., University of Minnesota, Twin Cities

Myers, Marilyn 1987, Associate Librarian, Interim Dean ASU West Library, B.A. M.A., Kansas State University; M.S., University of Illinois

N

Nadesan, Majia H. 1994, Associate Professor of Communication Studies, B.A., M.A., San Diego State University; Ph.D. Purdue University

Nadir, P. Ancesah (1994), Lecturer of Social Work; B.S.W., Adelphi University, M.S.W., Arizona State University

Nahavandi, Afsaneh (1989) Professor of Management B.A., University of Denver; M.A. Ph.D. University of Utah

Nanez, Jose E. Sr. 1988, Associate Professor of Psychology; B.A., M.A. California State University Ph.D., University of Minnesota, Twin Cities

Nevin, Ann 1991, Professor of Special Education, B.A. Westminster College; M.Ed., University of Vermont, Ph.D. University of Minnesota, Twin Cities

Nichols, Mark Heitzler 2001, Lecturer in Elementary Education, B.A., Colorado College, M.A., Princeton Theological Seminary, M.A.P.P., Claremont Graduate School

Noronha, Gregory M. 1995, Associate Professor of Finance; B.S.E., University of Michigan, M.B.A., Ph.D., Virginia Polytechnic Institute and State University

Nucci, Christine 1998, Assistant Professor of Early Childhood Education, B.A., Hunter College City University of New York; M.S., Brooklyn College, City University of New York, Ph.D., City University of New York

O

Olander, George A. 2000, Lecturer of Finance B.S., Xavier University; M.B.A., Pepperdine University D.B.A., United States International University

ASU WEST FACULTY AND ACADEMIC PROFESSIONALS

Olson, Joel 2001, Visiting Assistant Professor of Political Theory, B.S., Arizona State University; M.S., Ph.D., University of Minnesota, Twin Cities

P

Painter, Suzanne R. 1995, Assistant Professor of Educational Administration, B.S., Eastern Oregon State College, M.Ed., Ph.D. University of Oregon

Pambuccian, Victor V. 1994, Associate Professor of Mathematics Baccalaureat, German Lyceum Romania, M.S. University of Bucharest Romania, Ph.D., University of Michigan

Pecuch-Herrero, Marta 1994, Assistant Professor of Mathematics M.S., Ph.D., University of Chicago

Perry, Eleanor A. 2006, Assistant Professor of Educational Administration, Chair, Department of Graduate Studies and Professional Development; B.A., Duquesne College; M.Ed. Rutgers, The State University of New Jersey; Ph.D., University of Oregon

Persau, Linda 1999, Lecturer of Integrative Studies, B.A. University of California, Davis, M.A., Ottawa University

Pisa, Rosaria Angela 2011, Visiting Assistant Professor of Social Sciences, B.A., University of Texas Dallas, M.A., Ph.D., Northeastern University

Pough, F. Harvey 1993, Professor of Integrative Biology, B.A., Anherst College, M.A., Ph.D. University of California, Los Angeles

Pulido, Alberto I. 1993, Associate Professor of American Studies; B.A., University of California San Diego; M.A., Ph.D. University of North Dakota

R

Ragle, Gael L. 1985, Senior Lecturer of Educational Psychology; B.S., Ed., M.A., Ed., Northern Arizona University; Ed.D. Arizona State University

Ramsey, R. Eric 1994, Associate Professor of Communication Studies; B.A., R. Tucker The State University of New Jersey; M.A., Ph.D. Purdue University

Reese, Ruth 1985, Senior Lecturer of Educational Psychology; B.S., University of Wisconsin, Madison; M.S., Ph.D., University of Wisconsin Milwaukee

Renne, Diane J. 2007, Lecturer of Special Education; B.S., M.S., University of Kentucky; Ed.D., University of Kentucky

Ridley, Dale Scott 1999, Associate Professor of Educational Psychology; B.S., New Mexico State University, M.A., Ph.D. University of Texas Austin

Rillero, Peter 1994, Associate Professor of Science Education, B.A., State University of New York Buffalo; M.A., Columbia University; Ph.D. Ohio State University

Rodriguez, Nancy 1995, Assistant Professor of Administration of Justice; B.S. San Houston University, Ph.D., Washington State University

Ryan, Joseph M. 1995, Professor of Education and Collaborative Programs, Director Research Consulting Center; A.B., M.Ed., Boston College; Ph.D., University of Chicago

S

Sabatini, Arthur J. 1999, Associate Professor of Performance Studies, B.A., M.A., Ohio University, Ph.D., New York University

Saffo, Mary Beth 1994, Professor of Psychology; B.A. University of California, Santa Cruz; Ph.D. Stanford University

Schmidtke, Paul C. 1998, Senior Lecturer of Astronomy, B.S., Rose Hulman Institute of Technology; Ph.D., Ohio State University

Schuett, Gordon W. 1995, Assistant Professor of Integrative Biology; B.A., University of Toledo; M.S., Central Michigan University, Ph.D., University of Wyoming

Searle, Mark S. 1995, Professor of Recreation and Tourism Management; Dean, College of Human Services; B.A., University of Winnipeg Canada, M.S., University of North Dakota; Ph.D., University of Maryland

Sen, Nilanjan 1992, Associate Professor of Finance, B.A., Jadavpur University, India; M.A., Ph.D. Virginia Polytechnic Institute

Shaffer, Dennis M. 2000, Assistant Professor of Social and Behavioral Sciences, B.S., Denison University; M.A., Ph.D., Kent State University

Shell, Leslee B. 2001, Assistant Librarian, B.A., Oklahoma State University, M.L.S., University of Arizona

Shirreffs, Janet H. 1977, Professor of Recreation and Tourism Management, Director, Gerontology Program; B.S., Ithaca College; M.S., Syracuse University; Ph.D. Texas Woman's University

Shome, Raka 1999, Assistant Professor of Communication Studies; B.A., University of Calicut India; Ph.D., University of Georgia, Athens

Silberman, Jonathan 1992, Professor of Economics, B.S. Bowling Green State University; M.S., Ph.D. Florida State University

Slotnick, Susan A. 1995, Assistant Professor of Operations Productions Management; A.B., Brandeis University; M.S., Ph.D., Carnegie Mellon University; M.A., M.Phil., Ph.D., Columbia University

Solovey, Mark 1996, Assistant Professor of History and Philosophy of Science, B.A., Rutgers College; M.A., Ph.D., University of Wisconsin, Madison

Sowell, Evelyn J. 1990, Professor of Education, B.A., Howard Payne College; M.Ed., Wichita State University; Ed.D., Northern Illinois University

St. Clair, Charles E. 1999, Fine Arts Specialist, B.F.A. Fairmount Center for Creative and Performing Arts

Stage, Sarah J. 1994, Professor of Women's Studies, B.A. University of Iowa, M.A., University of Massachusetts; M.Phil. Ph.D., Yale University

Stryker, Linda L. 1985, Associate Professor of Astronomy; Chair, Department of Integrative Studies, B.A., Whittier College, B.A., M.S., San Diego State University, M.A., California State University, Los Angeles; Ph.D. Yale University

Sullivan, Brian K. 1989, Associate Professor of Evolutionary Biology; B.A., University of California Berkeley, Ph.D. Arizona State University

Svoboda, William S. 1969, Professor Emeritus of Education, B.S., M.S., Ed.D., University of Kansas

Sweat, Ken Gunter 2000, Lecturer of Life Sciences, B.A., Claremont McKenna College; M.S. Arizona State University

Swenson, Daniel 2000, Associate Professor of Accountancy, B.A., Memphis State University; Ph.D. University of Mississippi

T

Taylor, Robert D. 1996, Associate Professor of Theatre Performance; Chair, Department of Interdisciplinary Art and Performance, B.A., Crewe and Age College, Manchester Metropolitan University United Kingdom; M.A., University of Essex United Kingdom; Ph.D., University of Kansas

Webb, Vincent J. 1996, Professor of Administration of Justice
 Chair, Department of Administration of Justice; B.A., University of
 Omaha, M.A., University of Nebraska, Omaha; Ph.D., Iowa State
 University

Wertheimer, Eric H. R. 1995, Assistant Professor of American
 Literature; B.A., Harvard College; M.A., Ph.D., University of
 Pennsylvania

Wetzel, Keith 1991, Associate Professor of Educational
 Technology; B.A., Graduate College; M.A., Goddard College,
 Vt. Ph.D., University of Oregon

Wilson, Denward J. 1989, Lecturer in Philosophy; B.A., Arizona
 State University; M.A., University of California, Davis

Wise, John Macgregor 1979, Assistant Professor of
 Communication Studies; B.A., Trinity University; M.A., Ph.D.
 University of Illinois, Urbana-Champaign

Wosinska, Wihelmina 1994, Senior Lecturer in Social
 Psychology; B.A., University of Warsaw, Poland; M.A., Ph.D.
 Jagiellonian University, Poland

Y

Yungbluth, Stephen C. 2001, Lecturer in Communication
 Studies; B.A., Xavier University; M.A., Ph.D., University of
 Kentucky

Z

Zambo, Ronald W. 1991, Associate Professor of Mathematics
 Education; B.S., Indiana University; B.Ed., M.A., Ph.D.,
 University of South Florida

Zorita, Paz Vandez-Bonito 1993, Associate Professor of Social
 Work; A.S., School of Social Work of Georgia State University;
 Ph.D., Case Western Reserve University

U

Upanah, Ime J. 2001, Assistant Professor of History; B.S.,
 M.A., Sam Houston State University; Ph.D., University of Houston

V

Van Fleet, David D. 1989, Professor of Management Director,
 Master of Business Administration Program; B.S., Ph.D.,
 University of Tennessee, Knoxville

Vaughan, Suzanne (1987), Associate Professor of Sociology,
 B.A. Roanoke College; M.A. University of New Mexico; Ph.D.
 Ohio State University

Vickrey, Don W. 1992, Professor of Accounting; B.A.
 University of Houston; M.B.A., Ph.D., University of Texas, Austin

Villarreal, Mary Ann 2000, Lecturer of History; B.A., Mount
 Holyoke College

W

Waldman, David A. 1995, Professor of Management; B.A.,
 University of Kentucky; M.S., Ph.D., Colorado State University

Waldron, Vincent R. (1992), Associate Professor of
 Communication Studies; Interim Dean, Division of Collaborative
 Programs; B.A., M.A., University of Arizona; Ph.D., Ohio State
 University

ASU West Administrative Personnel

Administration

Campus Chief Executive Officer and Provost, ASU West, Vice President ASU,
 Elaine P. Maamon

Executive Vice Provost,
 Gebehehu Ejiogu

Vice Provost for Academic Affairs,
 Clemm W. Irvin

Associate Vice Provost, Academic Programs and Graduate Studies,
 Fernando Delgado

Director, Curriculum and Academic Articulation,
 Julia R. Ramsden

Vice Provost for Academic Personnel,
 E. Allan Brawley

Associate Vice Provost, Research and Faculty Development,
 Manuel Avalos

Vice Provost for Planning and Budget,
 Barry R. Bruns

Vice Provost for Institutional Advancement,
 John E. Collins

Interim Dean, ASU West Library,
 Marilyn Myers

Interim Dean of Students,
 Jo Ann Madonna

University Offices

Vice Provost for Research,
 Jonathan Fink

Dean, College of Extended Education,
 Bette F. DeGraw

Dean, Craie and Barbara Barrett Honors College,
 Ted Humphrey

College of Arts and Sciences

Interim Dean, College of Arts and Sciences,
 Emily F. Curren

Assistant Dean,
 Candace Bredebenner

Cochair, Department of American Studies,
 A. Duku Anokye

Cochair, Department of American Studies,
 Thomas Curren

Chair, Department of Interative Studies,
 Linda L. Stricker

Chair, Department of Interdisciplinary Arts and Performance,
 Robert Taylor

ASU WEST FACULTY AND ACADEMIC PROFESSIONALS

Chair, Department of Life Sciences.....Harvey F. Pough
 Chair, Department of Social and Behavioral Sciences.....Paul A. Miller
 Chair, Women’s Studies Program.....Astaïr G. M. Mengesha
 Director, M.A. Interdisciplinary Studies Program..... Andrew Kirby

College of Education

Dean, College of Education.....Michael A. Awender
 Assistant Dean, College of Education..... Ray R. Buss
 Chair, Department of Elementary Education..... Michael F. Kelley
 Chair, Department of Graduate Studies and Professional Development..... Eleanor A. Perry
 Chair, Department of Secondary Education..... Nancy S. Haas
 Chair, Department of Special Education..... Ida M. Malian

College of Human Services

Dean, College of Human Services..... Mark S. Searle
 Chair, Department of Administration of Justice..... Vincent J. Webb
 Chair, Department of Communication Studies..... Lesley Di Mare
 Chair, Department of Recreation and Tourism Management..... Richard Gitelson
 Chair, Department of Social Work..... Melissa R. Lavitt
 Director, Gerontology Program..... Janet Shirreffs
 Director, Partnership for Community Development..... John T. Hultsman
 Liaison, Nursing (ASU Main Program).....Lasca Beck

Division of Collaborative Programs

Interim Dean, Division of Collaborative Programs..... Vincent R. Waldron
 Assistant Director, West Campus Advising Center..... Cynthia Rasmussen
 Coordinator, Bachelor of Applied Science Program..... Cynthia Rasmussen
 Coordinator, Transition and Outreach Services..... Deborah S. Moore
 Coordinator, University College Center..... Christina Hahn
 Director, Research Consulting Center..... Joseph M. Ryan
 Faculty Director, Barrett Honors College..... Eric Ramsey

School of Management

Dean, School of Management..... Bruce A. Forster
 Chair, Department of Accounting and Information Systems Management..... William Duncan
 Chair, Department of Economics, Finance, Marketing and Quantitative Business Analysis..... Joseph A. Bellizzi
 Chair, Department of Management..... Leanne E. Atwater



ASU West serves approximately 6,000 students on its growing campus in northwest Phoenix.

Art Hollaman photo

ASU Extended Campus

www.asu.edu/xed

Gary S. Krahenbuhl, Ed.D., Senior Vice President, ASU
Bette F. DeGraw, D.P.A., Dean, College of Extended Education

Undergraduate Degrees	703
Graduate Degrees	705
Winter Session (Main)	707
Certificate Programs	707
College Units by Program Area	708

PURPOSE

The College of Extended Education was created in 1990 to extend the resources of ASU throughout Maricopa County, the state, and the region. The College of Extended Education is a university-wide college that oversees the ASU Extended Campus and forms partnerships with other ASU colleges to meet the instructional and informational needs of a diverse community.

For the most current information, visit the college's Web site at www.asu.edu/xed.

ASU EXTENDED CAMPUS

The ASU Extended Campus goes beyond the boundaries of the university's three physical campuses to provide access to quality academic credit and degree programs for working adults through flexible schedules, a vast network of off-campus sites; classes scheduled days, evenings, and weekends; plus innovative delivery technologies including television, the Internet, and independent learning. The ASU Extended Campus also offers a variety of professional continuing education and community outreach programs.

DEGREE PROGRAMS

ASU offers degree programs through the ASU Extended Campus. Convenient times and locations as well as today's innovative technologies make it easier for working adults and other nontraditional students to earn a degree. The College of Extended Education facilitates the delivery of these programs. All courses and degrees are offered through the respective university academic departments. These courses are published each fall and spring semester in the *Extended Campus Catalog* and in the Schedule of Classes. All degree programs offered through the college are shown in the "Baccalaureate Degrees and Majors Offered Through the College of Extended Education" table, page 704, and the "Graduate Degrees and Majors Offered in Collaboration with the College of Extended Education" table, page 706.

Undergraduate Degrees

OFF-CAMPUS DEGREE PROGRAMS

Interdisciplinary Studies—B.I.S.

ASU Main. This interdisciplinary degree completion program enables students to take an active role in creating their educational plan and defining their career goals. The program is offered for selected corporate and municipal employees. It emphasizes self-assessment and appraisal of opportunities to support academic and career goals. For more information, call 480 965 9797 or write

COLLEGE OF EXTENDED EDUCATION
ACADEMIC AND PROFESSIONAL PROGRAMS
ARIZONA STATE UNIVERSITY
PO BOX 874001
TEMPE AZ 85287 4001

Housing and Urban Development—B.S.D.

ASU Main. The faculty in the School of Planning and Landscape Architecture in the College of Architecture and Environmental Design offer this degree primarily at the ASU Downtown Center, although some courses may be available at other locations and via cable television. See the fall and spring issues of the *Extended Campus Catalog* for complete scheduling information. For program information, call 480 965 7167 or write

SCHOOL OF PLANNING AND LANDSCAPE
ARCHITECTURE
ARIZONA STATE UNIVERSITY
PO BOX 872005
TEMPE AZ 85287-2005

Elementary Education—B.A.E.

ASU Main. This off-campus degree program is targeted to school district audiences. To learn more, call 480 965 1644.

Social Work—B.S.W.

ASU Main. The School of Social Work offers this degree in Tucson. This program is grant funded to a five-year period and offers a part-time curriculum designed to increase the number of trained child welfare social workers in the rural areas of Arizona. For more information, call 520 884 5507, extension 19.

ASU EXTENDED CAMPUS

Baccalaureate Degrees and Majors Offered Through the College of Extended Education

Major	Degree	Concentration	Administered By
Applied Science	B.A.S.	Aviation maintenance management technology, aviation management technology, computer systems administration, consumer products technology, digital media management, digital publishing, emergency management, fire service management, food safety, instrumentation, manufacturing technology and management, microcomputer systems, multimedia writing and technical communication, municipal operations management, operations management, resource team special studies, sym condutor technology, software technology applications, technical graphics	Bachelor of Applied Science Advisory Committee ASU E11
Communication	B.A., B.S.		Division of Collaborative Programs ASU West Hugh Downs School of Human Communication
Elementary Education	B.A.E.	Multilingual/nuticultural education	Division of Curriculum and Instruction
English	B.A.	Linguistics, literature	Department of English
History	B.A.		Department of History
Housing and Urban Development	B.S.D.		School of Planning and Landscape Architecture
Integrative Studies	B.A.	All minors available at ASU West, individualized concentration	Department of Integrative Studies
Interdisciplinary Studies	B.I.S.	See "B.I.S. Concentrations" table, page 116	Bachelor of Interdisciplinary Studies Advisory Committee
Political Science	B.A.		Department of Political Science
	B.S.	American public policy, civic education, international studies, public policy advocacy and global business, public policy analysis	Department of Political Science
Psychology	B.A., B.S.		Department of Psychology
Social Work	B.S.W.		School of Social Work
Sociology	B.A.		Department of Sociology

Applied Science (B.A.S.) and Integrative Studies (B.A.)

ASU West. Because of overlapping degree requirements and the flexibility built into each program, ASU West, working through the College of Extended Education, offers the same set of courses to meet the degree completion needs of students who bring differing educational experiences to the classroom. Thus, students who have completed an Associate of Applied Science (A.A.S.) degree can enroll in the B.A.S. degree program. Students enter the program with Associate of Arts (A.A.) degrees or some other combination of courses that totals 60 semester hours and can pass the equivalent of the ASU General Studies requirement could receive the B.A. degree in Integrative Studies upon program completion. Both sets of students follow the same program of study.

Both degree programs emphasize focused study in critical thinking, communication, and leadership skills and include individual and team problem solving experiences. Both

include courses designed to refresh students' academic skills and to develop the resources to succeed in their educational pursuits.

Concentration areas, under the Bachelor of Applied Science (B.A.S.) at ASU West, are developed by the advisor and student based on educational goals and interests. The West Campus B.A.S. core curriculum is focused on the arts, computers, writing, ethics, and career development. For more information on the West Campus B.A.S., call 620 543-4BAS or access the Web site at www.west.asu.edu/bas.

The Bachelor of Arts in Integrative Studies (B.A.) is an upper division arts and sciences degree. Students are expected to read, write, and think critically which enables them to pursue postbaccalaureate employment, or graduate and professional degrees, in the broadest possible array of fields and specialization. This is a classical liberal arts degree tailored by interdisciplinary choirs in a student-oriented and lifelong learning fashion. Small classes and systematic assessment and feedback are defining characteristics of the program. Students complete 21 semester hours,

including a gateway course in Adult Career Development, a capstone internship experience, and academic seminars in ethics, social and environmental theory; history and philosophy of sciences; mathematics; and multicultural perspectives on autobiographies, literature, and art. Students select one of the established minors or construct with a faculty advisor an area of academic concentration to complement the core curriculum with an additional 18 to 21 semester hours. For more information on the West Campus B.A., call 623 543 6000 or access the Web site at www.west.asu.edu/iasweb.

ASU East. Students hold an Associate of Applied Science (A.A.S.) degree from a regionally accredited community college can earn the Bachelor of Applied Science (B.A.S.) degree by completing 60 semester hours of upper division course work through ASU East.

This degree is practical and flexible. ASU East faculty and advisors work with students to match a 60 semester hour program of study to their individual interests and career goals, or students may select one of the concentrations shown in the "Baccalaureate Degrees and Majors Offered Through the College of Extended Education" table, page 704.

For more information call 480 727 1544

TECHNOLOGY-SUPPORTED DEGREE PROGRAMS

History—B.A.

ASU Main. The faculty of the Department of History offer the B.A. degree completion program in History via technology. Students are required to take at least two of the courses on campus in the evening. For more information, call 480 965 8364

ON-CAMPUS EVENING DEGREE PROGRAMS

CLAS Bachelor's Degree Programs

ASU Main. Students who enroll in the College of Liberal Arts and Sciences CLAS evening degree program typically have completed 60 lower division semester hours. They may pursue a Bachelor of Arts degree in English History, Political Science, Sociology, Psychology, or Religious Studies, or a Bachelor of Science degree in Political Science or Psychology. For more information, call 480 965 3956 and request "degree programs."

Communication—B.A. or B.S.

ASU Main. The faculty in the Hugh Downs School of Human Communication offer the B.A. and B.S. degrees in Communication through the College of Extended Education's Evening Degree Program. For more information call 480 965 5095

Graduate Degrees

DEGREE PROGRAMS

ASU offers degree programs through the ASU Extended Campus. Convenient times and locations as well as today's innovative technologies make it easier for working adults and other nontraditional students to earn a degree. The Col

lege of Extended Education facilitates the delivery of these programs. All courses and degrees are offered through the respective university academic departments. These courses are published each fall and spring semester in the *Extended Campus Catalog*, and in the *Schedule of Classes*. All graduate degree programs offered through the college are shown in the "Graduate Degrees and Majors Offered in Collaboration with the College of Extended Education" table, page 706

OFF-CAMPUS DEGREE PROGRAMS

Business Administration—M.B.A.

ASU Main. The technology M.B.A. is an evening program designed specifically for technology professionals. The degree program is offered at the ASU Research Park. Cases, applications, and examples emphasize technology, global competition, and rapid organizational change. For more information, call 480 965 3332.

The evening M.B.A. is offered at the ASU Downtown Center. It is designed to meet the needs of working professionals and combines theoretical concepts with practical applications. For more information, call 480 965 3332

ASU West. The Scottsdale M.B.A. degree program meets in the Scottsdale Airpark in north Scottsdale. Classes emphasize the development of critical learning skills, with practical application in analyzing local industries. Students, faculty, and industry experts work together on projects for local companies. The integrated curriculum provides a comprehensive understanding of interrelated business issues. For more information, call 602 543 6201.

Public Administration—M.P.A.

ASU Main. The School of Public Affairs offers this interdisciplinary program. The program is designed to provide professional training for careers in public administration and management. Opportunities for completing course work leading to the M.P.A. are offered during evening hours at ASU Main, the ASU Downtown Center, and various off-campus sites. For more information, call 480 965 3926 or write

SCHOOL OF PUBLIC AFFAIRS
ARIZONA STATE UNIVERSITY
PO BOX 870603
TEMPE AZ 85287 0603

Curriculum and Instruction—M.Ed.

ASU Main. The Master of Education degree in Curriculum and Instruction is offered with concentrations in either multicultural education or secondary education. This is an off-campus degree program targeted to school district audiences. For more information, call 480 965 1644.

Social Work—M.S.W.

ASU Main. The Master of Social Work program prepares social workers to respond effectively to the needs of the state and other populations of the Southwest. This program is offered in Tucson and Flagstaff. For more information about the Tucson component, call 520 884 5507. For more

ASU EXTENDED CAMPUS

Graduate Degrees and Majors Offered in Collaboration with the College of Extended Education

Major	Degree	Concentration	Administered By
Business Administration	M.B.A.		College of Business (ASU Main School of Management ASU West)
Curriculum and Instruction Education Administration and Supervision	M.Ed. E.I.D.	Secondary education	College of Education College of Education
Electrical Engineering	M.S.E.		Department of Electrical Engineering
Engineering Public Administration	M.E. M.P.A.	Public information management, public management, public policy analysis and evaluation, urban management and planning	School of Engineering School of Public Affairs
Social Work	M.S.W.	Advanced direct practice: planning, administration, and community practice	School of Social Work

This collaborative program is offered by the three state universities.

information about the Faculty component, call 480 965 3304

DELTA Doctorate

ASU Main. The DELTA Doctorate which leads to the Doctor of Education degree in Educational Administration and Supervision, is available as an off-campus degree program. The program is targeted to qualified public school administrators. For more information, call 480 965 6355.

TECHNOLOGY-DELIVERED DEGREE PROGRAMS

Electrical Engineering—M.S.E.

ASU Main. The faculty in the Department of Electrical Engineering offer the Master of Science in Engineering degree in Electrical Engineering via interactive television. This program meets the needs of the part-time student who is working full-time in industry. Ten graduate courses are required; six should constitute a major, two courses a minor, and two courses should be taken outside the Department of Electrical Engineering. After completing the required hours of course work, students in this program must pass a comprehensive examination covering topics in the major. Using the department's three-year schedule of courses, students are able to complete course requirements over the interactive television system. For more information, call 480 965 3590.

Business Administration—M.B.A.

ASU Main. The ASU MBA Online program leverages computer and communications technologies to offer the highly ranked ASU M.B.A. to managers and professionals who do not wish to attend a traditional, on-campus program. The program consists of on-site sessions, asynchronous technology-based materials, and electronic communication among faculty and students. This two-year program consists of 12 four-semester-hour courses. For more information, call 480 965 3332.

ASU West. The contract MBA from ASU West allows working professionals to complete a quality, AACSB International accredited M.B.A. without weekly attendance on campus. Course delivery combines classroom instruction every seventh weekend with self-paced, computer-assisted learning. The two-year program consists of 15 three-semester-hour courses. For more information, access the Web site at www.west.asu.edu/som/mba.

Engineering—M.E.

ASU Main. The tri-university Master of Engineering degree program is intended to meet the educational needs of Arizona's practicing engineers. With industry input, Arizona's three state universities—Arizona State University, Northern Arizona University, and University of Arizona—enhance the skills, knowledge, and understanding that are critical to today's practicing engineers. The courses are offered through a variety of distance delivery methods in flexible formats at any of the three universities.

The M.E. degree offers the practicing engineer opportunities to design, in conjunction with an advisory committee, a program of study that can reflect the increasingly interdisciplinary nature of engineering practice. The M.E. degree requires the completion of 30 semester hours of course work; students must complete a minimum of three hours in applied engineering mathematics as well as three hours of engineering management/business. Up to six semester hours from a practice-oriented project may be applied. A final examination is required.

For application information, call 480 965 1726, send email to m.eng@asu.edu, or access the program's Web site at triuniv.engr.arizona.edu.

Technology M.S.

ASU East. The faculty in the Department of Information and Management Technology offer this degree with a concentration in environmental management technology, which has three areas of study: environmental management, international environmental management, and emergency management. The program has a Web-based distance learning

format. Students in this program are part of a cohort group that begins each January and graduates 24 months later at the December ceremony.

Students in the distance learning cohort are expected to be working professionals in fields such as ES&H (environmental, health, and safety), environmental engineering, emergency management, national or local regulatory and permitting activities, environmental law, and environmental laboratories. A variety of undergraduate degree preparation is appropriate, but students should have at least one course in organic chemistry and one course in organic chemistry. For more information, access the Web site at www.cast.asu.edu/ctas/mt/etm/html/dmasters.htm.

ON-CAMPUS EVENING DEGREE PROGRAM

Public Administration—M.P.A.

ASU Main. The School of Public Affairs offers this interdisciplinary program. The program is designed to provide professional training for careers in public administration and management. Opportunities for completing course work leading to the M.P.A. are offered during evening hours at ASU Main, the ASU Downtown Center, and various off-campus sites. For more information, call 480-965-5976 or write

SCHOOL OF PUBLIC AFFAIRS
ARIZONA STATE UNIVERSITY
PO BOX 87060
TEMPE AZ 85287 0603

Winter Session (Main)

The College of Extended Education schedules the winter session courses in collaboration with academic departments. The condensed session is offered between the fall and spring semesters. For more information about winter session, call 480-965-9797.

Certificate Programs

Certificate programs provide opportunities for those seeking to advance their careers, to begin a new career, to reenter the workplace, or simply to develop new knowledge. A practical choice for career development, certificate programs are recognized by employers as evidence of professional skill or accomplishment.

Business English Certificate Program

Designed to help international students and professionals succeed in the world of business, this program offers five courses: international business, business decisions, business writing, business communication, and TOEIC test preparation. Once students successfully complete three certificate courses, they earn a Business English Certificate. If they wish to complete all five classes, they earn an Advanced Business English Certificate. Classes are ongoing and meet several hours a week for eight weeks.

For more information, call the American English and Culture Program at 480-965-2376, send e-mail to aecp@asu.edu or access the Web page at www.asu.edu/xed/aecp/aboutaecp.html.

This certificate is not for academic credit.

English as a Second Language Certificate

The American English and Culture Program offers a certificate in the study of English as a second language (ESL), comprising 21 hours a week for eight weeks of language and culture training. For more information, see "American English and Culture Program," page 709. Call 480-965-2376, send e-mail to aecp@asu.edu, or access the Web page at www.asu.edu/xed/aecp/aboutaecp.html.

Gerontology Certificate Program

The Gerontology Program's interdisciplinary, bring-together faculty from several disciplines to collaborate on gerontological research, to teach courses related to adult development and aging, and to participate in projects of service to older adults.

The Certificate in Gerontology, offered by the Graduate College, is available to graduate students enrolled in master's or doctoral degree programs in disciplines such as communication, exercise science, nursing, psychology, social work, and sociology. Unclassified graduate students may pursue the certificate. This program consists of 24 semester hours evenly divided between required and elective course work.

The Gerontology Program has an affiliated faculty of more than 60 members based in 22 different departments throughout the university. Students can work on independent study or participate with faculty in their aging-related research.

Because of increased longevity, there could be more than 30 million Americans over the age of 85 by 2040, a demographic change with many ramifications. The certificate is designed for individuals interested in learning more about the aging process. For more information, call 480-965-3225 (ASU Main) or 602-543-6642 (ASU West).

Human Performance Improvement Certificate Program

The Human Performance Improvement Certificate Program is offered at the Downtown Center by the College of Extended Education and the American Society of Training and Development. This program is designed to provide a well-rounded understanding of the human performance improvement field for those in a human resource capacity. Individuals can receive a Human Performance Improvement Certificate after completing the six courses of the program or may elect to enroll in one or more classes on a per class basis. For more information, call 480-965-9200.

This certificate is not for academic credit.

Maintenance Management Certificate Program

This program improves maintenance performance for organizations by exploring the latest technical, pricing, and cost-cutting ideas in the industry. This is a four-part, results-oriented seminar series. Participants can receive a Maintenance Management Certificate after completing all courses of the program or may elect to enroll in one or more classes on a per class basis. Courses are offered at the ASU Downtown Center. For more information, call 480-965-9200.

This certificate is geared toward professional development and Continuing Education Units (CEUs) are available. The certificate is not for academic credit.

ASU EXTENDED CAMPUS

Nonprofit Management Certificate Program

The Nonprofit Management Institute is offered by the College of Extended Education and the Valley of the Sun United Way. This program is designed to enhance the management skills of those who serve nonprofit human services groups, hospitals, government agencies, churches, private schools, art organizations, environmental groups, and others in the nonprofit sector.

Individuals can receive a Certificate in Nonprofit Management along with 13 Continuing Education Units after completing 130 hours of the program. The individual class option permits participants to enroll in one or more classes on a per class basis. Additional full and half day workshops are also provided to help those in the nonprofit sector achieve excellence in managing nonprofit organizations. For more information, call 480 965 9200.

This certificate is not for academic credit.

Professional Purchasing Certificate Program

This is a four part seminar series that covers the latest technical, profit making and cost cutting ideas to improve purchasing management. Enroll in the results oriented seminars individually or combine them to earn a National Association of Purchasing Managers approved Professional Purchasing Certificate. Each seminar is held at the ASU Downtown Center. For more information, call 480 965 9200.

This certificate is geared toward professional development and Continuing Education Units (CEUs) are available. This certificate is not for academic credit.

Spanish Language Court Interpreter Certificate Program

The program, developed and implemented by ASU and the Superior Court in Maricopa County, is designed to prepare students who are fluent in Spanish and English for a career in court interpreting. The program provides comprehensive training that focuses on interpretation, translation, and legal skills needed to be an effective court interpreter. The program is not designed to teach participants the language. Applicants fluent in English and Spanish must successfully complete oral and written examinations before acceptance into the program. For more information, call 480 965 9200.

This certificate is geared toward professional development and Continuing Education Units (CEUs) are available. This certificate is not for academic credit.

College Units by Program Area

Degree Programs and Credit Courses

The College of Extended Education facilitates the delivery of several degree programs and credit courses. Convenient times and locations as well as today's innovative technologies make it easier for working adults and other nontraditional students to earn a degree. All courses and degrees are offered through the respective university academic departments. These courses are published each fall and spring semester in the *Fall and Spring Catalog* and the *Schedule of Classes*.

Academic and Professional Programs. As a convenience to students, courses are conducted off campus in locations throughout the state, and on campus in the evening and during the Winter Session.

Academic credits earned off campus are recorded on a student's permanent record in the same manner as those earned on campus and are equivalent in all academic considerations. All academic standards of the university, including policies related to admission and registration, apply to off campus courses. It is the responsibility of the student to be aware of all applicable policies before registering. It is the responsibility of each dean to determine what courses to offer off campus and to make faculty assignments.

The tuition and fees for off campus credit courses are the same as for those offered on campus. See resident and non resident rates in the latest *Schedule of Classes*. Before the 21st calendar day of each semester any combination of on campus and off campus resident credit courses resulting in a combined registration of seven or more semester hours requires that the student pay full time tuition. Off campus credit courses and programs that commence on or after the 21st calendar day of the start of each semester require full time and part time students to pay tuition separate from (but in addition to) those courses starting before the 21st calendar day of the semester.

Professional continuing education activities focus on professional and personal development as well as lifelong learning. Programs are planned and developed to complement the missions of the college and the university. These programs can be customized and transported to reach numerous target populations and levels of need.

Distance Learning and Technology. Distance Learning and Technology uses a variety of technologies. Semester based courses are offered through Instructional Television Fixed Service, cable television, public television, satellite, microwave, videotape, and the Internet. In addition, independent learning courses are offered (print or Internet based). Distance Learning and Technology makes it possible for many people to access and share educational resources locally, regionally, nationally and internationally through a variety of electronic technologies and distribution systems. In addition to distance learning courses, other products and services are available, including teleconferencing and video production.

Many students are unable to attend class on campus due to schedule or commuting difficulties and prefer to participate in distance learning courses at convenient locations such as the work site or home. The distance learning course schedule consists of approximately 175 courses offered by various ASU colleges each semester, and these courses are available for credit at a variety of remote locations, including students' homes. Students participating in televised courses from the work site or home can interact with faculty and students in the classroom on campus while classes in session via teleconferencing technology. Videotapes of most courses are available through University Libraries Video Resources. Other student support services are available to assist off campus students.

Cable Public Television. ASU offers credit courses that require students to view televised class sessions and com-

plete work assignments at home. Exams usually are held on campus. Courses are available throughout the Phoenix area via KAET Channel 8, Cox Communications, Qwest, Digital Choice TV, and other cable providers. Televised courses are also available in university residence halls.

Interactive Instructional Television Program (IITP) Students employed by companies participating in the IITP may take courses for credit at the work site. A daily courier service circulates course materials between faculty on campus and their students at remote sites. Exams typically are held at the work site. Each company has an on-site coordinator to assist with registration, to provide information, and to proctor exams. A Master of Science in Engineering degree with a major in Electrical Engineering is available through the IITP. More information about the degree is available from the College of Engineering and Applied Sciences at 480 965 6738.

Interactive Television (Public Sites) Certain sites are open to the public. Students can participate in most televised courses at locations such as ASU Downtown Center, ASU East, ASU West, select community college campuses, Cactus Shadows High School, and the Gila River Indian Community. Each public site has an on-site coordinator to assist with registration, to provide information, and to proctor exams.

Internet Courses ASUonline is the university's gateway to an "online campus." Internet courses are offered by various departments through ASU Extended Campus, allowing students to participate from any location in the world. Through the Web, students can access lectures, participate in class assignments, interact with the instructor, collaborate with other students, and earn ASU credit at convenient times and locations. Students register for Internet courses through the normal university admissions and registration process. Certain computer hardware and software may be required for Internet courses. For more information about Distance Learning and Technology call 480 965 6738 or access the Web site at asuonline.asu.edu

Independent Learning These courses allow students to pursue ASU credit and to fulfill degree requirements or to enhance occupational, professional, and intellectual skills. Independent Learning courses are appropriate for students seeking flexibility in progressing through university courses. Any individual with a high school diploma or GED may enroll; however, enrollment in Independent Learning is not the same as admission to ASU. For ASU degree-seeking students, enrollment in these courses requires an advisor's and dean's approval. Generally, ASU students may take one course at a time—other students can participate in two. A maximum of 60 semester hours earned by independent learning and/or by comprehensive examination may be applied toward the baccalaureate degree at ASU. Independent Learning courses are not applicable toward graduate credit, and pass/fail options are not available. Grades earned are not calculated in the ASU Honors GPA. Students have up to one year to complete courses. Independent Learning courses may not be used to change a grade at ASU. An independent learning registration fee is required of all students, including full-time students who have paid registration fees and tuition. Tuition waivers do not apply to independent

learning. On-campus services and activities for students are not covered by independent learning fees. More information on registration, lesson formats, submission of assignments, correspondence with instructors, and other course details is available in a catalog from the Independent Learning office, at 480 965 6563.

Professional Continuing Education

Academic and Professional Programs provides professional continuing education programs throughout the Phoenix metropolitan area. These ongoing programs are intended to improve professional competence and address current issues and trends, and are offered to adult learners in collaboration with ASU colleges, other educational providers, professional associations, and public and private organizations. In addition, the Elderhostel Program, a series of challenging, thought-provoking college-level courses, is offered to people over 55. For more information, call 480 965 9200.

The Nonprofit Management Institute is offered by the College of Extended Education and the Valley of the Sun United Way. This program is designed to enhance the management skills of those who serve nonprofit human services groups, hospitals, government agencies, churches, private schools, art organizations, environmental groups, and others in the nonprofit sector. For more information, call 480 965 9200.

For more information about Academic and Professional Programs, call 480 965 9797.

Global and Community Outreach

American English and Culture Program. The American English and Culture Program (AECPC) features an intensive course of study designed for adult international students who want to become proficient in English as a second language for academic, professional, or personal reasons. Applicants must be at least 18 years of age and must have a high school diploma or its equivalent. All conditions of the U.S. Immigration and Naturalization laws pertaining to full-time study in the United States must be met by all applicants. Students are required to take an English placement test before the beginning of classes. Certificates of achievement are awarded on completion of the course. Admission to the program does not constitute regular admission to ASU.

Beginning, intermediate, and advanced courses provide instruction in listening, reading, speaking, grammar, and writing. Academic advising and orientation to Arizona and the United States are integral parts of the program.

The program provides a wide variety of social, cultural, and recreational activities including field trips, sports, parties, arts and crafts, concerts, and visits to museums and historical sites.

Advanced level students may be permitted to enroll concurrently in up to two ASU credit classes with the approval of the director. Several special classes are offered through the AECPC: business English, pronunciation, conversation, TOEFL and TOEIC preparation, grammar and idioms.

The fall and spring semesters are divided into two eight-week cycles. Students may enroll for one or more cycles. An eight-week summer session of study is also offered.

ASU EXTENDED CAMPUS

Four week sessions are offered in January and July. AECP also offers evening English classes and business English certificates.

Inquiries concerning admission requirements, enrollment, and fee schedules should be sent to

AMERICAN ENGLISH AND CULTURE PROGRAM
ARIZONA STATE UNIVERSITY
PO BOX 873504
TEMPE AZ 85287 3504

For more information, call 480 965 7376, send e-mail to aecp@asu.edu, or access the Web page at www.asu.edu/aecp/aboutaecp.html.

Extended Campus Programs. Extended Campus Programs was established in response to the rapidly expanding demand for educational services in Maricopa County and throughout Arizona. Analyzing community needs for course offerings, workshops and seminars, the unit oversees the planning, organizing, and staffing necessary to satisfy these educational needs.

A primary goal of this unit is to ensure that qualified students have access to effective, appropriate university programs. Extended Campus Programs focuses on developing and maintaining education, business, government, professional, and community links to further the university's and college's missions.

The major components of Extended Campus Programs are the lectures and events at the ASU Downtown Center and emerging programs in the east Valley, Scottsdale, and Ahwatukee. For more information, call 480 965 3046.

ASU Downtown Center. The ASU Downtown Center is a university-wide resource located in downtown Phoenix that serves as an educational, applied research, and community service facility.

Responding to the needs of business, industry, and state and local governments, the center offers traditional and interdisciplinary upper division and graduate level courses. The center also offers professional and continuing education programs, lectures, and community forums, and serves as a meeting location for conferences, workshops and seminars.

ASU faculty, staff, and students may take advantage of the center's computer lab. A lab assistant is available during posted hours. Faculty, staff, and students also can access the ASU library online catalog and ASU library information and resources. Library books may be ordered and returned through the center, and copied materials may be ordered as well. Textbooks for all courses held at the center are available during the first week of classes.

Accommodations for small or large meetings or conferences are available at attractive rates and can include beverages, food service, and professional equipment. Meeting rooms include conference rooms, a board room, and two computer classrooms. Most meeting rooms can be configured in a variety of styles and setups. In addition, break-out areas are conveniently located throughout the facilities. Advice in logistics planning is available as are a wide range of related services. The center is available for use by outside organizations, subject to the limits of university policies and procedures. Contact the center's facility scheduler for details.

For more information about the programs and services provided at the center, call 480 965 3046 or write

ASU DOWNTOWN CENTER
502 E MONROE ST
PHOENIX AZ 85004 2337

Several ASU programs and partnerships are located at the ASU Downtown Center.

Academic and Professional Programs. As part of ASU Extended Campus and the College of Extended Education, Academic and Professional Programs brings the resources of ASU to many who may not be pursuing a traditional degree but are seeking professional and personal enrichment. See "Academic and Professional Programs," page 708, for a description.

Joint Urban Design Program. The Joint Urban Design Program, located in the ASU Downtown Center, is a partnership between the Colleges of Architecture and Environmental Design and Extended Education. The program directs institutional and public resources toward developing an understanding of issues that affect the urban quality of Phoenix. For more information, call 480 727 5146.

Urban Data Center. The Urban Data Center, a partnership with the College of Public Programs, serves as a resource for analysis and implementation of public policy in the Phoenix metropolitan area. The center works closely with ASU researchers and organizations such as the Joint Urban Design Program, the Morrison Institute for Public Policy, University Libraries, local governments, state agencies, and other independent organizations to build a comprehensive database on policy issues for urban planners and community leaders. For more information, call 480 727 5195.

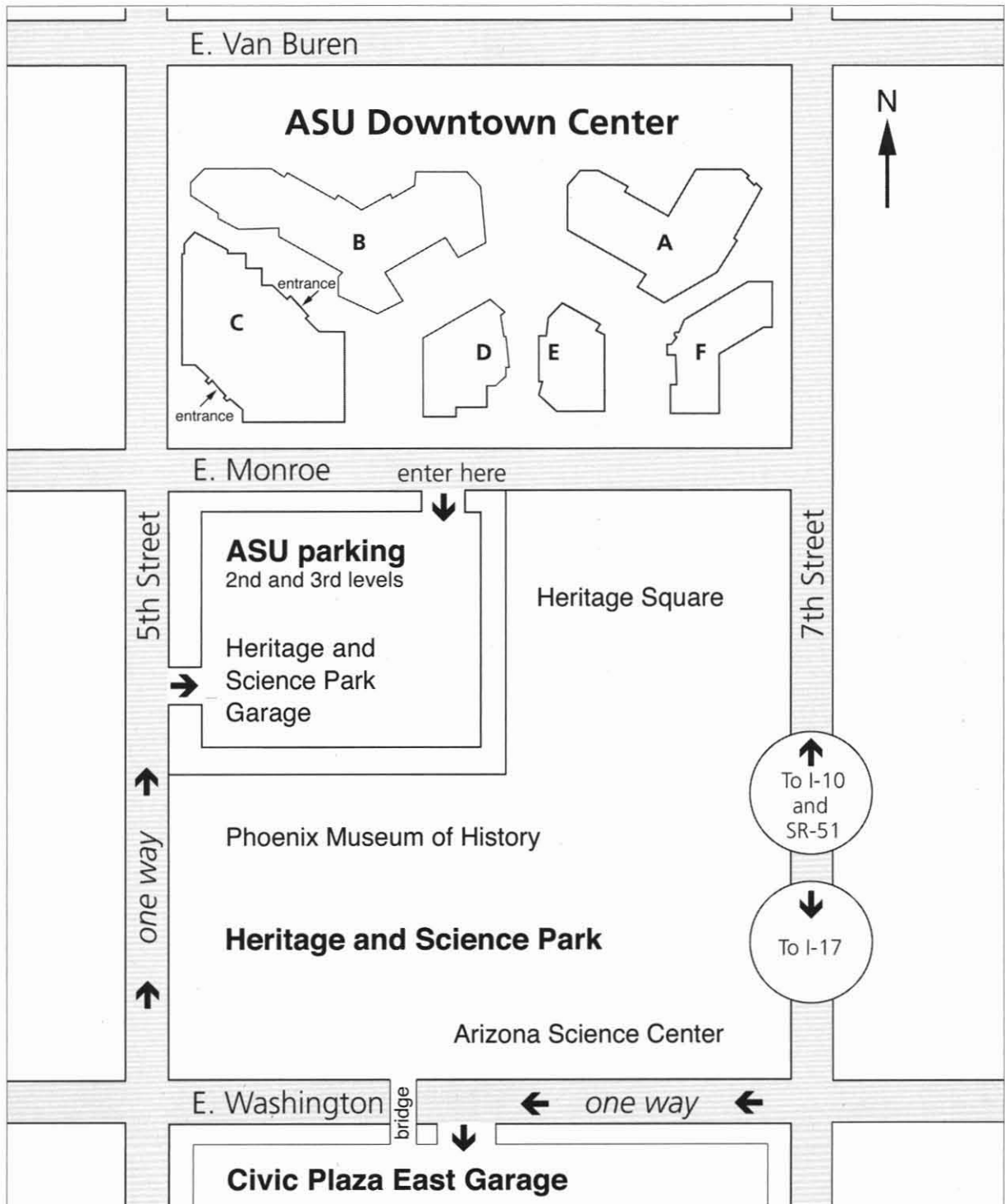
Advanced Public Executive Program. The Advanced Public Executive Program of the College of Public Programs is housed at the ASU Downtown Center. This program is designed to provide public managers and administrators with analytical approaches and skills through short courses and seminars to help mobilize ideas, people, and resources in support of public programs. For more information, call 480 965 4006.

Office of Youth Preparation and Project PRIME. The Office of Youth Preparation and Project PRIME (Project to Improve Minority Education) are housed at the Downtown Center with evaluation support services located at the Hispanic Research Center. The programs are designed to increase the pool of college eligible minority students, who have historically been underrepresented in higher education by providing instructional and support services to seventh through 12th grade students and their families at targeted Arizona schools. For more information, call 480 965 8510.

Arizona Drug and Gang Prevention Resource Center. The Arizona Drug and Gang Prevention Resource Center serves as a centralized source for individuals, schools, and communities throughout Arizona to support, enhance, and initiate prevention efforts.

For information about planning, mobilizing, training, and evaluating community prevention efforts, call the center at 480 727 2772.

ASU Downtown Center Map



ASU Extended Campus Faculty and Academic Professionals

B

Backer, Linda R. 1997, Assistant Instructional Professional, College of Extended Education Manager Interdisciplinary Programs, Academic and Professional Programs, College of Extended Education, B.A., University of Colorado; M.S., Colorado State University

C

Caglan, Janet 1977, Lecturer, College of Extended Education, B.A., M.A. Arizona State University

Cole, Tom 195, Lecturer, College of Extended Education, Associate Director, American English and Culture Program, College of Extended Education B.S. Northern Arizona University, M.A., Arizona State University

Craft, Elizabeth H. (1982), Administrative Professional, College of Extended Education, Director Distance Learning and Technology College of Extended Education, B.F.A., Ohio University M.A., Arizona State University

D

DeGraw, Bette F. 1986, Administrative Professional College of Extended Education Associate Professor of Public Affairs, Director, College of Extended Education, Director Downtown Center, College of Extended Education, B.A. The College, M.S.W., Rutgers, The State University of New Jersey D.P.A., Arizona State University

Dehghanpisheh, Elaine 1983, Lecturer College of Extended Education; B.A., M.A., Palmyra University Iran

E

Edwards, Regina 1995, Assistant Instructional Professional College of Extended Education, Associate Director Academic and Professional Programs, College of Extended Education B.S., M.A., University of Nebraska, L.M.C., Ph.D., University of Hawaii, Ma'oa

F

Feldman, Patricia A. 1990, Associate Administrative Professional, College of Extended Education, Director Academic and Professional Programs College of Extended Education B.S., M.Ed., Colorado State University

Felix-Sol, Carol 1974, Lecturer, College of Extended Education B.A., M.A., University of Colorado

Fountaine, Steven 1990, Lecturer, College of Extended Education B.A., Shepherd College, M.A., Temple University, Ph.D., Arizona State University

G

Graham, Andrea 2000, Instructor, College of Extended Education; B.A., M.A., Arizona State University

J

Jones, Dawnell 2001, Instructional Specialist College of Extended Education, International Student Advisor, American English and Culture Program, College of Extended Education; B.A., M.A., Brigham Young University

K

Kegelman, Jan 1988, Lecturer, College of Extended Education, Coordinator, International Teaching Assistants Program, American English and Culture Program B.S., University of Massachusetts M.A., Arizona State University

Kyselka, Christine K. 1990, Associate Administrative Professional, College of Extended Education Assistant Director, Extended Campus Programs, College of Extended Education B.S., M.P.A., Arizona State University

L

Lindeman, Mary 1988, Lecturer, College of Extended Education, B.A. St. Mary's University, M.A., University of Houston

Livingston, Mary 1978, Lecturer, College of Extended Education B.A., M.A., Arizona State University

M

Mitchell, Marie 1980, Lecturer, College of Extended Education, B.A., Fort Hays State University, M.A., School for International Training

P

Parker, Denise 1997, Instructor, College of Extended Education, B.A., Miami University M.A., University of Virginia

Pope, Donna 1999, Assistant Instructional Professional, College of Extended Education Manager, Nonprofit Management Program, Academic and Professional Programs College of Extended Education B.S.W., Texas Women's University M.S.S.W. University of Texas Arlington

R

Rentz, Mark D. 1984, Lecturer College of Extended Education, Director, American English and Culture Program College of Extended Education, B.A. Butler College M.A. Wilbur Cross International University

Robinson, Antoniette 1974, Instructor, College of Extended Education, B.A., M.A., State University of New York

S

Schlather, Erica 1993, Instructional Specialist, College of Extended Education, Marketing Coordinator American English and Culture Program, College of Extended Education, B.A., M.A., Northern Arizona University

ASU EXTENDED CAMPUS FACULTY AND ACADEMIC PROFESSIONALS

T

Thursby, Gayle 1994, Lecturer, College of Extended Education, B.A., University of Colorado, M.A., University of California, Los Angeles

V

Verdini, William A. 1976, Associate Professor of Supply Chain Management; Associate Dean, College of Extended Education, B.S., Case Western Reserve University, M.B.A., D.B.A., Kent State University

Vicens, Wendy 1977, Senior Lecturer, College of Extended Education, B.A., M.A., Northern Arizona University

W

Wagy, Scott 2001, Instructional Specialist, College of Extended Education, Coordinator for Cultural Activities and Programs, American English and Culture Program, College of Extended Education, B.A., M.A., West Virginia University

ASU Extended Campus Administrative Personnel

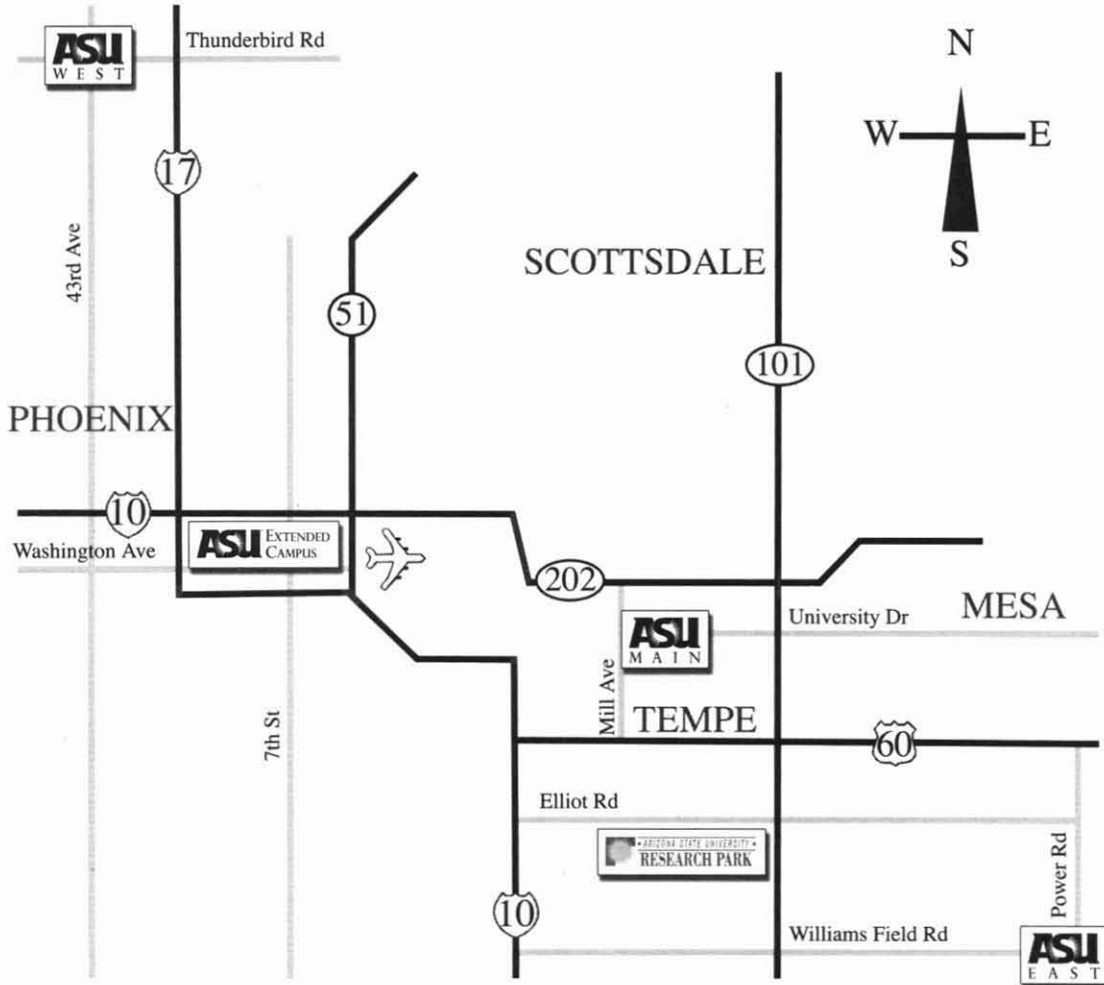
Senior Vice President ASU	Gary S. Krahenbuhl
Dean, College of Extended Education	Bette F. DeGraw
Associate Dean	William A. Verdini
Assistant Dean	Elaine Sweet
Director, Academic and Professional Programs	Patricia A. Feldman
Director, American English and Culture Program	Mark D. Rentz
Director, Communications and Marketing	Randy Bailey
Director, Development and Outreach	Scott Sheldon
Director, Distance Learning and Technology	Elizabeth H. Craft
Director, Downtown Center	Bette F. DeGraw
Director, Extended Campus Programs	Jim Patzer
Director, Property Administration	Cathie Fox

ASU Extended Campus Directory

For the "ASU Main Directory," see page 540. For the "ASU East Directory," page 683. For the "ASU West Directory," see page 694.

Organization	Location	Telephone	Web Address
Extended Education, College of	ASUDC C319	480-965-3046	www.asu.edu/xed
Academic and Professional Programs	RITT B132	480/965-9797	—
	ASUDC	480-965-9200	—
American English and Culture Program	MAR P	480-965-2376	www.asu.edu/xed/aecp/es.htm
ASU Downtown Center	ASUDC	480/965-3046	www.asu.edu/xed/dtc
Communications and Marketing	ASUDC C319	480-965-9696	—
Development and Outreach	ASUDC C250	480/727-5330	—
Distance Learning and Technology	RITT A129	480-965-6738	www.d.t.asu.edu
Extended Campus Programs	ASUDC C250	480/965-3046	—
Independent Learning	RITT B132	480-965-6563 or 1-800-533-4806	www.d.t.asu.edu/info/ndlearn.htm
Planning and Business Services	ASUDC C319	480/727-5338	—
Property Administration	ASUDC C319	480-965-9696	—

ASU Vicinity Map



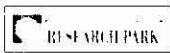
Near Downtown Tempe



Monroe and Fifth Streets, Phoenix



Power and Williams Field Roads, Mesa



Price and Elliot Roads, Tempe



43rd Avenue and Thunderbird Road



Phoenix Sky Harbor International Airport

Accreditation and Affiliation

ASU Main and ASU East. Arizona State University Main is accredited by the Higher Learning Commission and is a member of the North Central Association (NCA). Arizona State University East is recognized by the Higher Learning Commission as a full service campus and is accredited under the ASU Main umbrella. Programs in the various colleges, schools, divisions, and departments are accredited by, affiliated with, or members of national bodies as described in the “Academic Accreditation at ASU Main and East” table below: “Academic Affiliation” table, page 716; and “Academic Membership” table, page 717. Some programs in the College of Education are approved by the State Board of Education (Arizona) and the National Association of School Psychologists.

ASU West. ASU West is separately accredited by the Higher Learning Commission. Professional programs in the various academic areas are accredited by national bodies as described in the “Academic Accreditation at ASU West” table, page 716.

Academic Accreditation at ASU Main and East

Unit or Program	Accredited By
College of Architecture and Environmental Design	
B.S.D., Graphic Design, Industrial Design	National Association of Schools of Art and Design
B.S.D., Interior Design	Foundation for Interior Design Education Research
B.S.L.A.	Landscape Architectural Accreditation Board
M.Arch	National Architectural Accrediting Board
M.E.P.	Planning Accreditation Board
M.S.D., Design, with concentrations in graphic design and industrial design.	National Association of Schools of Art and Design
College of Business	
All programs	AACSB International, the Association to Advance Collegiate Schools of Business
M.H.S.A., School of Health Administration and Policy	Accrediting Commission on Education for Health Services Administration
School of Accountancy and Information Management	AACSB International, the Association to Advance Collegiate Schools of Business
College of Education	
M.C., Counseling	Council for Accreditation of Counseling and Related Educational Programs
Ph.D., Counseling Psychology; Educational Psychology, with a concentration in school psychology	American Psychological Association
College of Engineering and Applied Sciences	
B.S., Computer Science	Computer Science Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc.
B.S., Construction	American Council for Construction Education
B.S.E., Aerospace Engineering; Bioengineering; Chemical Engineering; Civil Engineering; Computer Systems Engineering; Electrical Engineering; Industrial Engineering; Materials Science and Engineering; Mechanical Engineering	Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc.
College of Law	
J.D.	American Bar Association
College of Liberal Arts and Sciences	
B.S., Clinical Laboratory Sciences	National Accrediting Agency for Clinical Laboratory Sciences
M.S., Communication Disorders	American Speech Language Hearing Association

* This program is accredited through the ASU Main College of Business

ACCREDITATION AND AFFILIATION

Academic Accreditation at ASU Main and East (continued)

Unit or Program	Accredited By
College of Liberal Arts and Sciences (continued) Ph.D. Psychology, with a concentration in clinical psychology	American Psychological Association
College of Nursing B.S.N., M.S., Nursing	Arizona State Board of Nursing Commission on Collegiate Nursing Education, initial approval National League for Nursing
College of Public Programs B.S., Recreation	Council on Accreditation of the National Recreation and Park Association
B.S.W., M.S.W., School of Social Work	Council on Social Work Education
Walter Cronkite School of Journalism and Mass Communication	Accrediting Council on Education in Journalism and Mass Communications
M.P.A.	National Association of Schools of Public Affairs and Administration
College of Technology and Applied Sciences B.S., Aeronautical Engineering Technology; Electronics Engineering Technology; Manufacturing Engineering Technology	Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc.
B.S., Aeronautical Management Technology, with concentrations in professional flight and air transportation management	Council on Aviation Accreditation
East College B.S., Business Administration*	AACSB International, the Association to Advance Collegiate Schools of Business American Dietetic Association
B.S., Nutrition (didactic program in dietetics), M.S., Nutrition (dietetic internship)	
Herberger College of Fine Arts Department of Theatre School of Music	National Association of Schools of Theatre American Music Therapy Association National Association of Schools of Music

* This program is accredited through the ASU Main College of Business

Academic Accreditation at ASU West

Unit or Program	Accredited By
College of Human Services B.S.W., Department of Social Work Department of Recreation and Tourism Management	Council on Social Work Education National Recreation and Park Association American Association for Leisure and Recreation Council on Accreditation
School of Management All programs	AACSB International, the Association to Advance Collegiate Schools of Business

Academic Affiliation

Unit or Program	Affiliated With
Barrett Honors College	National Collegiate Honors Council
College of Architecture and Environmental Design School of Architecture	American Institute of Architects, Central Arizona and Rio Salado Chapters Architectural Research Centers Consortium Association for Computer Aided Design in Architecture

ACCREDITATION AND AFFILIATION

Academic Affiliation (continued)

Unit or Program	Affiliated With
College of Architecture and Environmental Design (continued) School of Architecture (continued) School of Design	Association of Collegiate Schools of Architecture American Society of Interior Designers Human Factors and Ergonomics Society Industrial Designers Society of America Interior Design Educators Council International Interior Design Association Society of Environmental Graphic Designers
School of Planning and Landscape Architecture	American Planning Association American Society of Landscape Architects Association of Collegiate Schools of Planning Council of Educators in Landscape Architecture
College of Education	American Association of Colleges for Teacher Education American Educational Research Association American Psychological Association University Council for Educational Administration
College of Nursing Continuing and Extended Education Programs	Arizona Nurses Association (American Nurses Credentialing Center's Commission on Accreditation)
Morrison School of Agribusiness and Resource Management B.S., M.S., Environmental Resources Morrison School of Agribusiness and Resource Management	Society for Range Management Soil and Water Conservation Society Wildlife Society

Academic Membership

Unit or Program	Membership With
Barrett Honors College College of Education	National Collegiate Honor's Council American Association of Colleges for Teacher Education American Educational Research Association University Council for Educational Administration
Ph.D., Educational Psychology, with a concentration in school psychology	National Association of School Psychologists
College of Law	Association of American Law Schools
College of Liberal Arts and Sciences Department of Anthropology	American Anthropological Association Council for Museum Anthropology
Department of Biology	American Institute of Biological Sciences American Society of Naturalists American Society of Zoologists Animal Behaviorists' Society Sigma Psi
Department of Chemistry and Biochemistry	American Association for the Advancement of Science American Chemical Society
Department of Exercise and Wellness	American Society for Advancement of Science American Academy of Kinesiology and Physical Education American Alliance for Health, Physical Education, Recreation and Dance American Association of Health Education American College of Sports Medicine Association of Worksite Health Promotion Committee on Allied Health Education

ACCREDITATION AND AFFILIATION

Academic Membership (continued)

Unit or Program	Membership With
Department of Exercise and Wellness (continued)	Council on Physical Education for Children National Association for Physical Education in Higher Education National Strength and Conditioning Association National Wellness Association North American Society for Sports Psychology and Physical Activity North American Society for the Study of Obesity
Department of Exercise Science and Physical Education	American Academy of Kinesiology and Physical Education American Alliance for Health, Physical Education, Recreation and Dance American College of Sports Medicine American Society of Biomechanics Committee on Allied Health Education Council on Physical Education for Children International Society of Biomechanics National Association for Physical Education in Higher Education North American Society for Sports Psychology and Physical Activity Physiological Society Society for Experimental Biology Society for Neuroscience
Department of Geography	Association of American Geographers
Department of Geological Sciences	American Association of Petroleum Geologists American Geophysical Union American Institute of Professional Geologists Geological Society of America Mineralogical Society of America Society of Economic Paleontologists and Mineralogists
Department of History	American Association for State and Local History American Association of Museums American Historical Association Coordinating Committee for History in Arizona Institute of Historical Research National Council on Public History Western History Association
Department of Languages and Literatures	American Council on Teaching Foreign Language International Studies Association Modern Language Association
Department of Mathematics and Statistics	American Mathematical Society Mathematical Association of America Rocky Mountain Mathematics Consortium Society for Industrial and Applied Mathematics
Department of Microbiology	American Association of Immunologists American Association of Immunology American Society for Virology American Society of Microbiology Society for Neuroscience
Department of Military Science	Association of U.S. Army
Department of Philosophy	American Philosophical Association
Department of Physics and Astronomy	Acoustical Society of America American Association of Physicists in Medicine American Association of Physics Teachers American Astronomical Society American Crystallographic Association American Physical Society American Vacuum Society

Academic Membership (continued)

Unit or Program	Membership With
Department of Physics and Astronomy (continued)	International Astronomical Union Materials Research Society Optical Society of America
Department of Plant Biology	American Chemical Society American Institute of Biological Sciences American Society for Biochemistry and Molecular Biology American Society for Photobiology American Society of Cell Biology American Society of Horticultural Science American Society of Plant Physiologists American Society of Plant Taxonomy Arizona-Nevada Academy of Science Botanical Society of America Botanical Society of Japan California Botanical Society Ecological Society of America International Association for Study of Plant Succulents International Association of Landscape Ecology International Association of Plant Taxonomy International Association of Wood Anatomists International Organization of Paleobotany International Photosynthesis Society International Phycological Society International Society of Arboriculture International Society of Ecological Modeling International Society of Plant Molecular Biology International Society of Plant Propagators International Union of Woody Plant Physiologists Microscopy Society of America Mycological Society of America Phycological Society of America Phytochemical Society of North America Sigma Xi Society for Economic Botany Society of Ecological Restoration Society of Wetlands Scientists Soil Science Society of America Southwestern Association of Naturalists
Department of Political Science	American Political Science Association Inter-university Consortium for Political and Social Research
Department of Psychology	American Society of Clinical Psychologists
Department of Sociology	American Sociological Association
M.S., Ph.D., Molecular and Cellular Biology	American Society of Medical Technology
Women's Studies Program	Association for Women in Science National Women's Studies Association
College of Nursing	American Association of Colleges of Nursing Western Institute of Nursing
College of Public Programs	
Walter Cronkite School of Journalism and Mass Communication	Association of Schools of Journalism and Mass Communication Broadcast Education Association
Department of Recreation Management and Tourism	American Humanics, Inc. Arizona American Indian Tourism Association Arizona Heritage Alliance Arizona Park and Recreation Association Arizona State Therapeutic Recreation Association

ACCREDITATION AND AFFILIATION

Academic Membership (continued)

Unit or Program	Membership With
Department of Recreation Management and Tourism (continued)	Association for Research on Nonprofit Organizations and Voluntary Action Association for Volunteer Administration Learning Institute National Center for Nonprofit Boards National Park and Recreation Association National Society of Fund Raising Executives National Training Institute for Community Youth Work Nonprofit Academic Centers Council Nonprofit Risk Management Center Peter F. Drucker Foundation for Nonprofit Management Society for Nonprofit Organizations Travel Tourism Research Association
Hugh Downs School of Human Communication	National Communication Association Western States Communication Association
School of Justice Studies	Arizona Justice Educators Association of Criminal Justice Doctoral Programs National Academic Advising
School of Public Affairs	Onati International Institute for the Sociology of Law National Association of Schools of Public Affairs and Administration
School of Social Work	Baccalaureate Program Directors Association Council on Social Work Education Group for the Advancement of Doctoral Education National Association of Deans and Directors of Social Work National Association of Social Workers
East College Department of Nutrition	American Dietetic Association
Graduate College Herberger College of Fine Arts Department of Theatre	Council of Graduate Schools American Alliance for Theatre and Education Association for Theatre in Higher Education
Morrison School of Agribusiness and Resource Management B.S., Agribusiness with a concentration in professional golf management	Professional Golfer's Association of America



Family Weekend festivities during halftime of a game at Sun Devil Stadium

Tim Trumble photo

Index

A

- Abbreviations
for buildings 743
for course prefixes 6
for General Studies courses 85
- Academic Access Program 161
- Academic Advising *See* Advising.
- Academic Affairs 715
- Academic calendar 15
- Academic definitions, 19
- Academic freedom policies 21
- Academic integrity, 77
- Academic membership unit and program lists, 717
- Academic organization 8
- Academic and professional programs, 708
- Academic recognition at graduation 82
- Academic renewal 70
- Academic Services, Division of Undergraduate, 113
- Academic standards, 75
- Academic Success at the University course descriptions 113
- Academic Support Program (ASP) 520
- Accountancy
course descriptions 165
postbaccalaureate certificate in, 112
- Accountancy and Information Management School of 163
- Accountancy B.S. 164, 690
- Accreditation
academic, 715
of Agribusiness and Resource Management, Morrison School of, 720
of Architecture and Environmental Design College of, 715
of ASU East, 623, 715
of ASU West, 716
of Business, College of 715
of De E Webb School of Construction 214
of East College 716
of Education, College of 715
of Engineering and Applied Sciences College of, 221 715
of Fine Arts Herberger College of 716
of Human Services College of, 716
of Law, College of, 715
of Liberal Arts and Sciences College of, 715 716
of Management, School of 716
of Nursing, College of 716
of Public Programs, College of, 716
of Social Work School of, 720
of Technology and Applied Sciences, College of 716
- ACMRS Arizona Center for Medica and Renaissance Studies, 33
- ACT (American College Test), 59
- Actuarial science concentration 420
- Add courses, 73
- ADGPRC Arizona Drug and Gang Prevention Resource Center, 46, 710
- Administration of Justice B.S. 690
- Admissions *See also* Readmissions specific colleges and schools.
advanced placement and, 65
to Agribusiness and Resource Management Morrison School of 628
to Architecture and Environmental Design College of, 122
for ASU East, 623
for ASU West, 689
to Barrett Honors College, 119
to Business, College of 155
Disability Resources for Students 64
to Education, College of 186
to Fine Arts, Herberger College of 275
to Graduate College, 521
before high school graduation, 64
of international students 63
to Law College of, 324
nondegree 64
to Nursing, College of 473
procedures 58
to Public Programs, College of, 484
requirements for, 60
standards, 59
before transcript receipt 59
of transfer applicants, 61
appeals procedure 63
- Adult Re-entry Program 42
- Advanced placement credit 65
for General Studies credit, 83
- Advanced Public Executive Program 710
- Advanced Purchasing Studies Center for, 31
- Advancement of Small Business, Center for CASB, 30
- Advancing
Academic Advising Services 115
for Architecture and Environmental Design College of 123
for ASU East 624
for ASU West, 691
for Business, College of 156
for Education, College of 187
for Fine Arts Herberger College of 275
for Graduate College 520, 525
for Liberal Arts and Sciences, College of, 327
for Nursing, College of 475
for preprofessional programs 328
for Technology and Applied Sciences, College of. 657
- Advocacy and Assistance Student, 43
- AIEP American English and Culture Program, 63, 709
- Aerodynamics emphasis 266
- Aeronautical Engineering Technology B.S., 678
- Aeronautical Engineering Technology course descriptions, 679
- Aeronautical Management Technology
course descriptions 662
Department of, 659

INDEX

- Aeronautica Management Technology B.S. 659
Aerospace Engineering B.S.E. 265
 emphas s areas, 265
 programs of study 266
Aerospace Studies
 course descriptions, 341
 Department of, 340
Affiliations, academic, 716
Affirmative action policies, 21
African American Studies
 certificate 343
 course descriptions 344
African American Studies B.A. 344
 minor, 343
AFROTC Air Force Reserve Officers' Training Corps 340
AGEC Arizona General Education Curriculum 62, 85
Agriculture and Resource Management, Morrison School
 of 627, 634
 academic affiliations of 717
 accreditation of 720
 admission to 628
 degree programs of, 627
 Sustainable Technologies Agriculture and Resources
 Center STAR, 38
Agriculture B.S. 628
 concentrations of 629
Agriculture course descriptions, 634
Agriculture finance concentration 629
Air Force Reserve Officers' Training Corps AFROTC, 340
Air transportation management concentration 660
Alumni Act on 22
Alternative Energy collection, 122
Alternative Spring Break 41
Alumni Association 29
American Chemical Society certification 360
American College Test ACT 59
American English and Culture Program AECIP 63, 7, 9
American Humanities Program 37, 507. *See also* Nonprofit
 Leadership and Management Program
American Indian *See also* Native Americans
American Indian Studies B.S., 488
American Indian Studies Program 488
 course descriptions 489
American Public Policy certificate 449
American Studies B.A. 690
Analysis and systems course description 221
Anthropology B.A. 346
 course requirements 346
 for interdisciplinary Studies majors, 347
 minor, 347
Anthropology course descriptions 348
Appeal procedures
 for basic competencies, 76
 for Graduate College, 525
 for grades 74
 for reinstatement, 77
 for transfer credits 63
Applications *See also* specific colleges and degree
 programs
 for admission 59
 to Graduate College, 521
 for financial aid 52
 for graduation 81
 from Graduate College, 528
Applied Ethics Joan and David L. Nicon Center for 36
Applied Exercise Physiology Lab 36
Applied Psychology B.S. 642
 Faculty of East College 642
Applied Science B.A.S.
 in Aeronautica Management Technology, Department of
 661
 in Agriculture and Resource Management Morrison
 School of, 633
 in Electronics and Computer Engineering Technology,
 Department of, 666
 in Information and Management Technology, Department
 of 671
 in Manufacturing and Aeronautica Engineering
 Technology, Department of, 678
 through ASU West 690
 through Extended Education, College of 704
Apprentice Teacher Program ATP 188
Aptitude requirements
 for freshmen 61
 for transfer 62
Arabic course descriptions 405
Arboretum 25
Architecture Administration and Management, 131
Architecture communications course descriptions, 131, 134
Architecture design and technology studio course
 descriptions, 131
Architecture philosophy and history course descriptions 131,
 133
Architecture Studies B.S.D.
 programs of study 129, 130
Architecture Studies minor 130
Architecture technology course descriptions 131, 134
Architecture and Environmental Design College of 122 *See*
 also specific academic units and degree programs
 academic affiliations of 715
 academic standards of 125
 accreditation of, 126, 715
 admission to, 122
 Architecture School of 127
 associations of 126
 degree programs of 123
 through Extended Education College of, 703
 Design School of 135
 Gallery of Design for 26, 122
 Herberger Center for Design Excellence 30, 122, 302
 library for 25, 122
 organization of, 122
 Planning and Landscape Architecture School of 145
 study abroad programs, 118, 125
Architecture and Environmental Design Library, 25, 122
Architecture professional studies course descriptions 131,
 133
Architecture School of 127
 admission to 127
 application to 128
 course descriptions, 131
 degree programs of, 127

- graduate degrees 131
- portfolio requirements for 128
- programs of study, 129
- Archives University 26
- Arizona Board of Regents, 613
- Arizona Center for Medieval and Renaissance Studies
ACMRS, 33
- Arizona Collection 25
- Arizona Drug and Gang Prevention Resource Center, 46-710
- Arizona General Education Curriculum AGECE,
General Studies transfer credit, 85
- Arizona Hispanic Business Survey 36
- Arizona Historical Foundation Library 35
- Arizona Prevention Resource Center APRC 45
- Arizona Real Estate Center 30
- Arizona State Board of Nursing requirements, 474
- Arizona Students' Association ASAFee, 47
- Arizona Studies in the Middle Ages and the Renaissance
book series, 34
- Art auxiliary course descriptions 286
- Art B.A./B.F.A. 279 *See also* Art School of
- Art Education
 - concentration 282
 - course descriptions 286
- Art History
 - concentration, 280
 - course descriptions, 287
 - minor, 281
- Art Museum ASU 26
- Art School of 279
 - Bachelor of Arts degree in Art *See also* specific
concentrations
 - art history concentration 280
 - digital art concentration 280
 - museum studies concentration, 280
 - studio art concentration 281
 - Bachelor of Fine Arts degree in Art *See also* specific
concentrations
 - art education concentration 282
 - ceramics concentration, 283
 - drawing concentration 283
 - fibers concentration 284
 - intermedia concentration 284
 - metals concentration 284
 - painting concentration 285
 - photography concentration 285
 - printmaking concentration 285
 - sculpture concentration, 286
 - graduate programs in, 286
 - special programs of, 277
- Arts Center J. Russell and Bonita Nelson, 27
- ASASU Associated Students of Arizona State University, 42
- Asian languages 399
- Asian Lead Academy, 43
- Asian Pacific American Studies Program, 490
- Asian Studies, Center for, 34
- Asian Studies certificate, 402
 - with Asian Languages major, 402
 - with Geography major 381
 - with History major, 390
 - with Political Science major, 449
 - with Religious Studies major 460
- ASP Academic Support Program, 520
- Assistantships in Graduate College 516
- Associated Students of Arizona State University ASASU 42
- Astronomy 437
 - course descriptions, 439
- ASU Art Museum 26
- ASU baccalaureate degrees, 10. *See also* Bachelor's
degrees specific degree programs and courses
- ASU Downtown Center 24-26, 710 *See also* Extended
Education College of
- ASU East 38-622. *See also* specific academic units and
degree programs
 - accreditation of 623-715
 - administrative personnel, 688
 - admission to 623
 - Aeronautics Management Technology, Department of, 659
 - Agriculture and Resource Management Morrison School
of, 627
 - campus and student services, 624
 - degree programs of 10-624
 - through Extended Education, College of, 706
 - directory of, 683
 - East College 64
 - Electronics and Computer Engineering Technology
Department of 664
 - faculty and academic professionals 684
 - Freshman Year Experience, 626
 - history of, 622
 - housing and residential life 40-626
 - Information and Management Technology, Department of
670
 - library services 624
 - Manufacturing and Aeronautics Engineering Technology,
Department of 677
 - map of, 682
 - organization of 8, 623
 - Physics Activity Center 625
 - Technology and Applied Sciences College of 655
- ASU Extended Campus *See* Extended Education College of
- ASU Foundation 619
- ASU Main 24
 - academic organization of 8
 - administrative personnel, 613, 713
 - degree programs of 10
 - through Extended Education, College of, 703
 - directory of, 540-713
 - faculty and academic professionals 548
- ASU Report Card 29
- ASU Research Park, 24
- ASU West, 24, 689
 - academic organization of, 8-689
 - accreditation of, 689
 - administrative personnel 701
 - admission to 689
 - certificates of, 692
 - degree programs of 10, 690-691
 - directory 694
 - faculty and academic professionals 696
 - Fletcher Library 25-689
 - map of, 693

INDEX

minors of, 692
ASU Online, 709
Athletics, 24
ATP Apprentice Teacher Program 188
Audit enrollment 72
 in Liberal Arts and Sciences College of, 333
 to Graduate College 524
Auditions
 for Department of Dance, 296
 for School of Music, 301
Auditorium, Gammage Memorial, 27
Aviation maintenance management technology
 concentration 661
Aviation management technology concentration 661
Awareness areas in General Studies requirements 85
AZB Arizona Business, 31

B

Bachelor's degrees 10
 Accountancy B.S. 164, 690
 Administration of Justice B.S., 690
 Aeronautics Engineering Technology B.S. 678
 Aeronautics Management Technology B.S. 659
 Aerospace Engineering B.S.E., 265
 African American Studies B.A. 343
 Agriculture B.S. 628
 American Indian Studies B.S., 488
 American Studies B.A., 690
 Anthropology B.A. 346
 Applied Psychology B.S., 642
 Applied Science B.A.S. 633, 661, 666, 671, 678, 690, 704
 Architecture Studies B.S.D. 129
 Art B.A. B.F.A., 279, 281
 Biochemistry B.S. 360
 Biological Engineering B.S.E. 223
 Biology B.S. 352
 Business Administration B.S. 643
 Chemical Engineering B.S.E. 228
 Chemistry B.A. B.S. 359
 Chicana and Chicano Studies B.A. 364
 Civil Engineering B.S.E. 239
 Cinematic Laboratory Sciences B.S. 427
 Communication B.A. B.S., 491, 690, 705
 Computational Mathematics Sciences B.S. 419
 Computer Engineering Technology B.S. 665
 Computer Information Systems B.S. 164
 Computer Science B.S. 246
 Computer Systems Engineering B.S.E., 247
 Conservation Biology B.S., 353
 Construction B.S. 214
 Dance B.F.A. 296
 Economics B.A. B.S. 168, 367
 Education B.A.E., 187
 Electrical Engineering B.S.E. 253
 Electronics Engineering Technology B.S. 664
 Elementary Education B.A.E. 690, 703
 Engineering Special Studies B.S.E. 273
 English B.A. 368, 690, 704
 Environmental Resources B.S., 632
 Exercise and Wellness B.S. 646
 Exercise Science Physical Education B.S. 375, 646
 Family and Human Development B.S., 378
 Finance B.S. 171
 Foreign Languages B.A., 399
 Geography B.A., B.S. 381, 382
 Geological Sciences B.S., 387
 Global Business B.S. 690
 Graphic Design B.S.D. 135
 History B.A., B.S. 390, 690, 705
 Housing and Urban Development B.S.D., 145, 703
 Humanities B.A. 397
 Industrial Design B.S.D. 135
 Industrial Engineering B.S.E. 259
 Industrial Technology B.S. 670
 Integrated Studies B.A. B.S. 336
 Integrative Studies B.A., 69, 704
 Interdisciplinary Arts and Performance B.A. 690
 Interdisciplinary Studies B.S. 114, 641, 703
 Interior Design B.S.D. 135
 Journalism B.A. 496
 Justice Studies B.S., 500
 Landscape Architecture B.S.L.A. 145
 Life Sciences B.S. 690
 Management B.S. 176
 Manufacturing Engineering Technology B.S. 677
 Marketing B.S. 180
 Materials Science and Engineering B.S.E., 231
 Mathematics B.A. B.S. 417, 418
 Mechanical Engineering B.S.E., 267
 Microbiology B.S., 426
 Multimedia Writing and Technical Communication B.A.S.
 B.S. 649
 Music B.A., B.M., 302
 Nursing B.S.N. 475
 Nutrition B.S. 651
 Philosophy B.A., 433
 Physics B.S., 436
 Plant Biology B.S. 443
 Political Science B.A. B.S., 448
 Politics B.A. B.S., 690
 Psychology B.A. B.S., 455, 690, 704
 Real Estate B.S. 182
 Recreation and Tourism Management B.S. 690
 Recreation B.S. 5, 6
 Religious Studies B.A., 459
 second, 82
 Social and Behavioral Sciences B.A. B.S. 690
 Social Work B.S.W. 510, 690, 703
 Sociology B.A. B.S., 463, 690, 704
 Spanish B.A. 401, 690
 Speech and Hearing Science B.S., 467
 Supply Chain Management B.S., 182
 Theatre B.A., 317
 Urban Planning B.S.P., 145
 Women's Studies B.A., B.S. 471, 690
Bank One Economic Outlook Center EOC 30
Barrett Honors College *See* Honors College, Barrett.
Basic competency requirements, 59, 60, 77
Behavioral Sciences in General Studies requirements 84
Benedict Visual Literacy Connection 25
Bicycles 49
Bike Copier Repair Service 49

- B ngua educat on
 course descr pt ons 194
 Navajo 188
B lingua Review Press, 36
 Bochem ca eng neering emphasis 230
 Bochem stry B.S. , 360
 Bochem stry course descr pt ons 361
 Boe ctr ca eng neer ng emphas s 224
 Bioeng neer ng B.S.E. 223
 programs of study, 226
 Boeng neer ng course descr pt ons, 226
 Boeng neer ng Department of, 223
 Bioogy
 course descr pt ons, 354
 Department of, 352
 minor 354
 Bioogy and soc ety concentration 353
 Biology B.S. 352
 Bomater a s eng neer ng emphas s 224, 233
 Bomechanica eng neer ng emphas s 224
 Bomed ca eng neer ng emphas s, 230
 Bomedica mag ng eng neer ng emphasis 225
 Bosystems eng neer ng emphasis 225
 Buck ey Amendment, 77
 Budgets typ ca student, 53
 Bu d ng construct on concentr on, 216
 Burroughs W l iam S. , Co ect on, 25
 Bus transportation 48
 Bus ness Adm n strat on B.S. M.B.A. 167, 643, 705, 706
 Facu ty of East Co ege 643
 Bus ness, College of 155
 academ c standards of, 161
 Accountancy and Informat on Management, Schoo of 163
 accreditat on of, 715
 adm ss on to 155
 centers of, 31
 degree programs of 158
 Econom cs, Department of 168
 F nance Department of, 171
 graduate programs in, 158
 Hea th Adm n strat on and Po cy, 173
 Hea th Adm n strat on and Po cy, Schoo of, 173
 honors program, 162
 Internat ona Bus ness Studies cert f cate 174
 Management, Department of 176
 Market ng, Department of 179
 m nors, 156
 organ zat on of 155
 programs of study 156, 160
 spec a programs of, 161
 Small Bus ness Program, 181
 Supp y Cha n Management, Department of 182
 Bus ness course descr pt ons, 183
 Bus ness Eng sh cert f cate 707
 Bus ness Research Center for CBR , 31
- C**
 Cab e pub c te ev s on courses 708
 Ca endar, academ c 15
 Camp Tontozona 25
 Campus Ch dren's Center 40
 Campus Env ronment Team 22
 Campus Match program, 113
 Campus W de Programm ng, 40
 Cancer Research Inst tute, 34
 CAP LTER (Centra Ar zona Phoen x Long Term Eco ogica
 Research project , 38
 CAPS Research Center for Advanced Purchas ng Stud es ,
 31
 Career Serv ces, 45
 for Graduate Co ege 520
 CARO Commun ty Art and Research Outreach , 36
 CASB (Advancement of Sma Bus ness Center for , 30
 Cataiog year determ nat on, 79
 CBR Bus ness Research, Center for) 31
 CCNS Co ege Council of Nurs ng Students 479
 CCP Co Curr ular Programs , 40
 Center s and nst tute s
 for Advanced Purchas ng Studies CAPS Research , 31
 for the Advancement of Sma Bus ness (CASB , 30
 App ed Eth cs Joan and Dav d L ncoln Center for 36
 of Architecture and Env ronmenta Des gn, Co ege of, 122
 Ar zona Center for Med eva and Rena ssance Stud es
 ACMRS 33
 Arizona Drug and Gang Prevent on Resource Center
 (ADGPRC), 46, 710
 Ar zona Rea Estate, 30
 for As an Stud es. 34
 of ASU East, 38
 Bank One Econom c Outlook (EOC), 30
 of Bus ness Co ege of, 30
 for Bus ness Research CBR 31
 Cancer Research Institute, 34
 Course or Train ng 186
 Customer Ass stance 28
 Dance Mu t med a Learn ng 26
 Deer Val ey Rock Art Center 25
 Downtown ASU) 24 710
 for Educat on, College of 32 185
 for Educat on Equity and Language Divers ty, Southwest,
 32
 Educat ona Opportun ty Center, 42
 of Eng neering and App ed Sc ences, Co ege of 32
 Environmenta Research and Po cy, Southwest Center for
 SCERP , 38
 for Env ronmental Stud es 37
 Exerc se and Sport Research Inst tute ESR 35
 of F ne Arts, Herberger Co ege of, 37
 Go dwater Materia s Sc ence Laborator es GMSL , 34
 Herberger Center for Des gn Exce ence, 30, 122
 for H gh Resolut on Electron M croscopy CHREM 34
 Hispanic Research (HRC), 36
 nd an Data, Labro a Nat ona American 25
 for Ind an Educat on 32 186
 nst tute for Studies n the Arts SA 37
 nst tute of Human Or g ns (HO), 36
 ntergroup Re at ons Center RC , 22
 J. Russe l and Bonita Ne son F ne Arts Center 27
 Joan and Dav d L ncoln Center for App ed Eth cs LCAE
 36

INDEX

- Kerr Cultura Center 27
 L. W. Lam Seaman Research Institute, 31, 163
 Laboratory of National American Indian Data 25
 for Latin American Studies 36, 162
 Law, Science, and Technology, Center for the Study of 324
 for Learning and Teaching Excellence, 29
 Learning Resource Center (LRC), 40
 of Liberal Arts and Sciences College of 33, 340
 Louise Lincoln Kerr Cultura 27
 for Low Power Electronics (CLPE), 32
 Institute for Manufacturing Enterprise Systems (IMES) 33
 Materials Faculty (MF) 34
 Materials Research Science and Engineering Center
 (MRSEC), 34
 Media and Renaissance Studies Arizona Center for
 ACMRS, 33
 for Meteorite Studies, 34
 Morrison Institute for Public Policy 37
 Nelson Fine Arts Center 27
 for Nonprofit Leadership and Management (CNLM) 37, 488
 Nonprofit Youth and Human Service Administration 507
 of Education College of, 32
 for Professional Development, 207
 of Public Programs, College of 37
 for Research on Education in Science, Mathematics,
 Engineering and Technology (CRESMET), 30
 Seaman Research Institute (L. W. Lam), 31
 for Services Leadership (CSL) 31
 for Solid State Electronics Research (CSSER), 33
 for Solid State Science 34
 Southwest Center for Education Equity and Language
 Diversity, 32
 Southwest Center for Environmental Research and Policy
 (SCERP) 38
 Student Organization on Resource Center 41
 for Studies in the Arts (SA) 37
 for the Study of Early Events in Photo Synthesis, 35
 for the Study of Law, Science, and Technology, 33
 Sun Development Center 41
 Sundome for the Performing Arts, 27
 for Sustainable Technologies, Agriculture, and Resources
 (STAR) 38
 for System Science and Engineering Research (SSERC)
 33
 Telecommunications Research 33
 for Urban Inquiry 37, 488
 Writing Center 114
 Central Arizona Phoenix Long Term Ecological Research
 (CAP LTER) project, 38
 Ceramic materials emphasis 233
 Ceramics
 concentration 283
 course description 290
 Certificates 108, 111, 112 *See also specific titles of*
 certificates
 in Accountancy, 112
 of admission, 64
 in African American Studies 343
 from American Chemical Society 360
 in American Humanities 507
 in American Indian Studies, 489
 in American Public Policy, 449
 in Asian Pacific American Studies 490
 in Asian Studies, 390
 offered by ASU West, 692
 offered by Business College of, 161
 Business English 707
 in Civic Education, 449
 in class certificates 336
 in Communication and Human Relations 112
 in English as a Second Language, 707
 Enriched College Degree, 336
 in Ethics, 434
 offered by Extended Education College of, 707
 in Gerontology 518, 707
 offered by Graduate College, 519
 in Hazardous Materials and Waste Management, 671
 in Health Physics 337
 in History and Philosophy of Science 338, 434
 in Human Performance Improvement 707
 International Baccalaureate Diploma/Certificate 65
 in International Business Studies, 174
 in International Studies, 449
 in Jewish Studies, 338
 in Latin American Studies 338
 offered by Liberal Arts and Sciences College of, 337
 Maintenance Management, 707
 Multimedia Writing and Technical Communication 650
 in museum studies 338
 in Nonprofit Management, 708
 Nonprofit Youth and Human Service Administration, 507
 Professional Purchasing 708
 Public Administration and Public Management 504
 in Quality Analysis, 161
 in Russian and East European Studies 338
 in Scandinavian Studies, 339
 in Small Business and Entrepreneurship 181
 in Southeast Asian Studies 339
 Spanish Language Court Interpreter, 708
 symbolic systems 339
 in Translation, 402
 in Transportation Systems, 519
 in Women's Studies, 339
 in Writing, 369
 Certificate for teachers, 645
 CFS Child and Family Services, 40
 Chandler Gilbert Community College Partnership
 Baccalaureate Education 640
 Channel Television (KAET) 27
 Chemical and Materials Engineering Department of, 228
 graduate degrees, 234
 Chemical Engineering (B.S.E.), 228
 programs of study, 231
 Chemical engineering course descriptions, 234
 Chemistry
 course descriptions, 362
 minor, 360
 Chemistry and Biochemistry
 Department of 359
 graduate degrees 361
 Chemistry (B.A., B.S.), 359

- Chicana and Chicano Studies
 course descriptions 365
 Department of, 364
 minor, 365
 Chicana and Chicano Studies B.A. 364
 Chicano Research Collection 25
 Child and Family Services (CFS), 40
 Child development course descriptions 379
 Child Development Laboratory, 40
 Child Drama Collection, 25
 Child Study Laboratory, 41
 Chinese
 course descriptions, 405
 minor, 402
 Chinese B.A., 400
 Chora—general concentration, 302
 Choreography concentration, 297
 CHREM Center for High Resolution Electron Microscopy 34
 Civic Education certificate, 449
 Civil and Environmental Engineering
 course descriptions 242
 Department of, 238
 graduate degrees, 242
 Civil Engineering B.S.E., 239
 degree requirements, 239
 programs of study, 240
 Civil Practice Clinic, 324
 Class standing, 75
 Classificational code, 40
 Classica Studies certificate 336
 Clearinghouse, Co-curricular Service Learning Opportunity 41
 CLEP (College Level Examination Program) 65
 Clinical Laboratory Sciences B.S.), 427
 course descriptions, 427
 Clinics of Law, College of 324
 CLPE Center for Low Power Electronics, 32
 CNLM Nonprofit Leadership and Management Center for
 37
 Co-curricular Programs CCP, 40
Code of Conduct, Student, 58
 Codes
 for course prefixes, 6
 Honor Code 325
 Collections and galleries 25
 Alternative Energy Collection, 122
 Arizona Collection 25
 at ASU Downtown Center, 26
 Chicano Research Collection, 25
 Child Drama Collection 25
 Computing Commons Gallery 26
 Gallery 26
 Gallery of Design 26, 122
 Harry Wood Gallery, 27
 Map Collection 26
 Nelson Fine Arts Center 27
 1907 Gallery, 26
 Northlight Gallery 27
 Patten Herbarium Collection, 25
 Thomas Mosher Collection 25
 University Archives, 26
 Video Resources, 26
 Visual Literacy Collection 25
 William S. Burroughs Collection 25
 College Council of Nursing Students CCNS 479
 College Level Examination Program CLEP 65
 General Studies credit and, 83
 Communication B.A. B.S. 491 704 705
 Communication Hugh Downs School of Human
 activity programs through, 46
 course descriptions 492
 degree programs of 491
 through Extended Education College of 705
 Community Art and Research Outreach CARO 36
 Community colleges
 ASU East and 622
 Chandler Gilbert Community College Partnership and
 640
 continuous enrollment and, 79
 General Studies credit and 85
 transfers from 60 *See also* Credits academic
 Community health practice course descriptions 480
 Community Health Services Clinic 479
 Community Service Program 41
 Compassionate withdrawal 74
 Competency requirements, 60
 Composition First Year, requirements for 79
 Composition Music concentration 307
 Comprehensive examinations, 65
 fees for 48
 Computational Biosciences M.S. 366
 Computational Mathematics Sciences B.S.), 419
 Computational sciences concentration, 419
 Computer Accounts 28
 Computer Engineering Technology B.S., 665
 Computer engineering technology course descriptions, 667
 Computer hardware technology concentration, 665
 Computer Information Systems B.S. 164
 Computer information systems course descriptions 166
Computer Science and Engineering
 course descriptions, 249
 Department of, 245
 Computer Science B.S. 246
 programs of study, 247
 Computer systems administration concentration 667
 Computer Systems Engineering B.S.E., 247
 Computer statistics quantitative applications in General
 Studies requirements, 83
 Computing Commons 28
 Gallery 26
 Computing facilities and services
 at ASU Downtown Center, 28
 at ASU East, 625
 at ASU Main 27
 Concurrent and dual degree programs
 graduate programs in, 82, 534
 restrictions, 333
 Conservation Biology B.S.), 353
 Construction B.S. M.S. 214
 Construction course descriptions, 216
 Construction De E Webb School of 214
 admission, 214
 programs of study, 214

INDEX

- Construction engineering concentration 241
Consumer products technology concentration 633
Continuing and Extended Education Program for nurses 478
Continuing education 56
Cooperative Education programs, 71
 in Engineering and Applied Sciences College of, 212
Coor, Lattie F. 3, 23
Council for Design Excellence, 126
Course or education course descriptions 203
Course or Training Center, 186
Course Appropriability System 62, 79
Course *See also* specific degree programs and courses
 classification of 55
 General Studies
 listing 86
 linked 114
 minimum loads 71
 for Graduate College, 525
 numbering system of, 55
 omnibus, 56
 prefix index 6
 repeating, 75
 reserving for graduate credit. *See* Credits) academic
 special fees for 47
 University Success, 113
Creative Writing M.F.A., 278, 518
Credit cards for tuition payments 49
Credit enrollment, 72
Credits) academic
 advanced placement, 65
 College Level Examination on Program, 65
 from foreign institutions, 63
 options in, 333
 requirements for graduation, 79
 transfer, 61
 appeals procedure, 63
 application for 61
 for Architecture and Environmental Design College of,
 122
 to ASU East, 623
 to Business College of 157
 to Engineering and Applied Sciences, College of 208
 to Fine Arts, Herberger College of, 275
 to Graduate College 526
 to Journalism and Mass Communication, Walter
 Cronkite School of, 496
 to Justice Studies, School of 501
 to Liberal Arts and Sciences, College of, 327
 to Nursing, College of, 473
 to Public Programs College of, 484
 to Social Work School of, 511
 to Technology and Applied Sciences College of, 656
 undergraduate for graduate programs, 71 526
 for Fine Arts, Herberger College of, 279
 for Public Programs, College of, 486
 for Social Work School of 513
Credits), tax, 53
CRESMET Center for Research on Education in Science
 Mathematics Engineering and Technology, 30
Critical Inquiry in General Studies requirements 83
CSL (Services Leadership Center for), 31
CSSER Center for Solid State Electronics Research 33
Cultural diversity in the United States, 85
Cultural geography courses, 383
Curriculum and Instruction
 course descriptions, 196
 Division of, 194
Curriculum and Instruction M.Ed., Ph.D. 518 705
Curriculum Development and Support, 114
Customer Assistance Center, 28
- ## D
- Dance 46
 course descriptions, 298
 Department of 296
 degree programs of 296
 graduate programs in, 298
 minor 298
 preprofessional program, 297
 special programs of 277
Dance B.F.A., 296
Dance education concentration 297
Dance history course descriptions 298
Dance Multimedia Learning Center, 26
Dance studies concentration 297
Dance Studio Theatre 26
Danforth Chapel 42 46
DANTES Defense Activity for Nontraditional Education
 Support 110
DAP Diversity Assistantship Program 520
DARS Degree Audit Reporting System, 115
Deans list, 76
Debit cards for tuition payments 49
Deer Valley Rock Art Center 25
Defense Activity for Nontraditional Education Support
 DANTES, 110
Definitions
 academic, 19, 523
 of academic standing, 76
 of courses, 55
 of credit unit, 72
 in Graduate College 523
 for Engineering and Applied Sciences, College of 213
 of grades 72
 of records, 77
 for tuition 47
Degree Audit Reporting System DARS 81, 115
Degree programs 10. *See also* specific degree programs.
Dee Webb School of Construction 214
DELTA Doctorate 706
Design
 as Aerospace emphasis 266
 course descriptions 142
Design (B.S.D.), 135
 Graphic Design 135
 course descriptions 142
 programs of study in, 137
 Industrial Design 135
 course descriptions, 143
 programs of study in, 138

nter or Design, 135
 course descriptions 144
 programs of study n, 140
 Design School of, 135
 admission to 136
 degree programs of, 135
 graduate degrees, 136
 portfolio requirements for, 137
 Design Studies B. S. 139
 Design Studies minor 139
 Dietetics concentration, 652
 Digital art concentration, 280
 Digital media management concentration 672
 Digital publishing concentration 672
 Dine Teacher Education Program, 188
 Direct Student Loan, 54
 Directories
 ASU East, 683
 ASU Extended Campus, 713
 ASU Main, 540
 ASU West 694
 Directory information, 78
 Disability Resources for Students (DRS), 28, 42
 application and, 64
 Discriminatory harassment policies 21
 Dishonesty academic 77
 Disqualification, academic, 76
 Dissertations
 fees for, 48
 formats for, 521
 for Graduate College, 527
 Distance Learning Technology 708
 Diversity Assistantship Program (DAP), 520
 Doctoral degrees *See* Graduate degrees
 Downtown Center 24. *See also* Extended Education, College of
 computer lab 28
 galleries 26
 Drama City 26-37
 Drawing
 concentration, 283
 course descriptions, 291
 Drop add courses 73
 DRS Disability Resources for Students, 64
 Dual degree programs. *See* Concurrent and dual degree programs.
 Durham, G. Homer, 23

E

Early childhood education course descriptions, 196
 Early Childhood Interprofessional Program (ECD), 188
 Early Events in Photosynthesis, Center for the Study of, 35
 East College 640
 academic memberships of 720
 accreditation of, 716
 Applied Psychology Faculty of 642
 Business Administration Faculty of, 643
 Elementary Education, Faculty of, 644
 Exercise and Wellness, Department of 646
 Multimedia Writing and Technical Communication, Faculty of, 649

Nutrition, Department of 651
 Ecology concentration 632
 E-commerce concentration (Agribusiness) 629
Economic Forecasts 30
 Economic Outlook Center, Bank One 30
 Economics
 Department of, 168
 graduate degrees, 367
 minors in, 367
 Economics (B.A./B.S.) 168, 367
 Education B.A.E., 187
 Education, College of 32-185
 academic affiliation of, 715
 academic memberships of, 717
 academic standards for, 192
 admission to, 186
 Course or education courses, 203
 Course or Training Center 186
 Curriculum and Instruction
 Division of 185, 194
 degree programs of
 through Extended Education 703
 graduate 189
 undergraduate, 186-187
 Education Leadership and Policy Studies, Division of 202
 Education psychology courses 204
 organization of, 185
 Professional Field Experiences, Office of, 186
 Psychology in Education, Division of, 203
 Social and Philosophical foundations courses 202
 Student Services, Office of 186
 teacher certification programs 186-193. *See also* In-
 Teacher Certification (TC) Program
 Education Equity and Language Diversity, Southwest Center
 for, 32, 185
 Education, Faculty of East College, 644
 Education Psychology Studies Laboratory (EPSL) 32, 185
 Education record. *See also* Records.
 definition of, 77
 fees for, 48
 Education Support Services, 113
 Education Leadership and Policy Studies, Division of, 202
 Education Opportunity Center 42
 Education psychology course descriptions 204
 Education technology course descriptions, 206
 Edrhoste Program, 709
 Electrical Engineering
 course descriptions 255
 Department of, 252
 Electrical Engineering B.S.E./M.S.E., 253-706
 programs of study, 253
 Electronic Classroom, 278
 Electronic Music Studio, 278
 Electronic systems concentration, 664
 Electronics and Computer Engineering Technology
 Department of, 664
 Electronics Engineering Technology B.S., 664
 concentrations, 664
 Electronics engineering technology course descriptions, 669

INDEX

- Elementary Education B.A.E., 690, 703
at East College, 644
course descriptions, 197
- Elementary Education Partnership Program EED, 188
- Embedded systems technology concentration, 665
- Emergency management concentration, 672
- Employment
financial aid and, 54
residency classification policy for transfers, 50
student, 54
- Energy studies, interdisciplinary programs of, 108, 114
- Engineering and Applied Sciences College of, 207 *See also*
specific degree programs and courses
academic standards of, 211
accreditation of, 715
admissions, 207
Biomechanical Engineering, Department of, 223
Chemical and Materials Engineering, Department of, 228
Civil and Environmental Engineering, Department of, 238
Computer Science and Engineering, Department of, 245
Construction, Deane Webb School of, 214
degree programs of, 209
degree requirements of, 211
Electrical Engineering, Department of, 252
Engineering School of, 218
graduate programs in, 210
Industrial Engineering, Department of, 259
integrated bachelor's and master's programs, 210
Mechanical and Aerospace Engineering, Department of, 264
research centers and institutes of, 32, 207
special opportunities of, 212
Student Academic Services, 212
- Engineering B.S.E., M.E., 219, 706
programs of study, 220, 418, 420
- Engineering core courses, 221
- Engineering, School of, 218 *See also* specific degree programs and courses.
accreditation, 221
admission, 218
programs of study in, 220
- Engineering Special Studies B.S.E., 273
- Engineering technology core course descriptions, 658
- Engineering, Trinity University Master of, 706
- English
Business English certificate, 707
competency for international students, 63
course descriptions, 369
Department of, 368
graduate degrees, 369
minor, 368
placement examinations, 68
- English as a Second Language ESL,
in American English and Culture Program, 709
certificate in, 707
as elementary education concentration, 190
- English (B.A.), 368, 690, 704
- English Spanish translation certificate, 402
- Enriched College Degree certificate, 336
- Enrollment
continuous, 79
types of, 72
verification guidelines for graduate, 525
verification guidelines for undergraduate, 71
- Environmental analysis and programming courses, 131
- Environmental engineering
as emphasis in Chemical Engineering, 230
as option in Civil Engineering, 241
- Environmental Research and Policy Southwest Center for SCERP, 38
- Environmental Resources B.S., 632
course descriptions, 637
minor, 633
- Environmental Science and Ecology
concentration, 443
course descriptions, 446
- Environmental studies
Center for, 37
interdisciplinary programs of, 108
- Environmental technology management
concentration in, 670
course descriptions, 673
- EOC Bank One Economic Outlook Center, 30
- EPSL Education Policy Studies Laboratory, 32, 185
- Equi-opportunity affirmative action policies, 21
- ESR Exercise and Sport Research Institute, 35
- Essential functional abilities of the undergraduate nursing student, 475
- Ethics certificate, 434
- Ethics, Joan and David Lincoln Center for Applied LCAE, 36
- Evaluation, Office of University, 29
- Examinations
for admission, 58
comprehensive, 65
entrance, 65
placement, 65, 68
proficiency, 68
- Exchange programs, 535. *See also* international programs,
Study abroad programs
- Exercise and Sport Research Institute ESR, 35
- Exercise and Wellness
course descriptions, 647
Department of, 646
graduate degrees, 647
- Exercise and Wellness B.S., 646
- Exercise Biochemistry Lab, 36
- Exercise Endocrinology Lab, 36
- Exercise Science Ph.D., 518
- Exercise Science Physical Education
course descriptions, 376
Department of, 375
graduate degrees, 376
minor, 375
- Exercise Science Physical Education B.S., 375, 646
- Expos, 77
- Extended Education, College of
academic and professional programs, 708
administrative personnel, 713
American English and Culture Program AECF, 707
ASU Downtown Center, 24, 710
certificate programs of, 707
degree programs of

ASU East, 706
 ASU Main, 703
 ASU West, 692
 graduate, 705
 off campus, 705
 on campus, 705, 707
 technology developed, 706
 technology-supported, 705
 undergraduate 703
directory 713
 distance learning and technology, 708
 faculty and academic professions, 712
 flagstaff component, 705
 Global and Community Outreach 709
 map of 711
 organization of, 9
 professional continuing education, 708, 709
 Tucson component 511
 winter session, 707
 Extended Education Program for nurses, 478

F

Facilities *See also* Centers and institutes .
 ASU Downtown Center Computer Lab 28
 Center for High Resolution Electron Microscopy (CHREM), 34
 Goldwater Materials Science 34
Goldwater Materials Visualization GMVF 35
 for High Pressure Research 35
 Instruction Support Lab ILS 28
 on Beam Analysis of Materials BeAM Faculty, 34
 Materials Faculty MF, 34
 Materials Science Electron Microscopy MSEM 34
 performing and fine arts 26
 Secondary Ion Mass Spectrometry SIMS, 35
 University Dance, 27
 Faculty and academic professions
 ASU East, 684
 ASU Extended Campus, 712
 ASU Main, 548
 ASU West, 696
 Faculty Fellows 40
 FAFSA Free Application for Federal Student Aid 52
 Failure prevention emphasis in Mechanical Engineering, 268
 Fair Service Pledge, 41
 Family and Human Development
 course descriptions, 380
 Department of 378
 minor 379
 Family and Human Development (BS), 378
 Family Educational Rights and Privacy Act of 1974, 77
 Family studies course descriptions 379
 Farmer, Hiram Bradford, 22
 Federal Pell Grant, 53
 Federal Perkins Loan 54
 Federal Supplemental Educational Opportunity Grant
 SEOG 53
 Federal Work Study Program, 54
 Fees
 for application, 59
 for delinquent payments, 50
 for dissertations 48, 527
 for instrument rental, 48
 for Nursing, College of 478
 for private music instruction, 48
 for returned checks 48
 special 47
 for theses, 48, 527
 Fellers
 concentration 284
 course descriptions, 291
 Film studies interdisciplinary programs 108
 Finance
 agr business concentration, 629
 course descriptions, 171
 Department of, 171
 Finance B.S., 171
 Financial aid, 52
 noncooperative programs 72
 employment 54
 for Graduate College, 520
 grants 53
 loans 54
 scholarships 52
 taxability of, 54
 for tuition payments 49
 Financial aid trust fee, 47
 Fine Arts Center J. Russell and Bonita Nelson, 27
 Fine Arts facilities, 26
 Fine Arts, Herberger College of, 275 *See also* special degree
 programs and courses.
 academic standards 277
 accreditation of 716
 admission to, 275
 Art, School of, 279
 course descriptions, 279
 Dance Department of, 296
 degree programs of, 276, 277
 graduate programs in, 276
 Institute for Studies in the Arts, 37
 minors 276
 Music, School of 301
 organization of, 275
 special programs of 277
 Theatre Department of 317
 Fine Arts, minimum General Studies requirement, 84
 Fire service management
 concentration 672
 course descriptions, 675
 First Year Composition requirements, 79, 370
 First Year Seminar, 56
 Flagstaff component of School of Social Work 705
 FLASH bus, 48
 Fletcher Library, 25
 Flight concentration, professional, 660
 Food and nutrition management concentration, 652
 Food retailing concentration 634
 Food science concentration 629
 Foreign languages *See also* Languages and Literatures,
 Department of
 course descriptions, 404
 Department of, 399

INDEX

for Graduate College, 527
for international professions 403
majors 399
minors n, 402
placement examinations in 68-404
requirements for
 in Liberal Arts and Sciences College of 403
Foreign study programs *See* Study abroad programs.
Forensics 46
Foundation Coalition 212
Fraternities 41
Free Application for Federal Student Aid FAFSA, 52
Freedom of speech policies 21
French B.A. 400
 course descriptions, 406
 minor 402
Frequently Asked Questions, 18
Freshman Year Experience, 40

G

Gaerath The 26
Gaerath *See* Colectors and galleries
Gaiety of Design, 26
Gavin Payhouse, Paul V., 26
Gammage Grady, 22
Gammage Memorial Auditorium, 27
General aptitude requirements, 61
General information 21
General military courses GMC, 341
General Studies 79-83
 abbreviations for, 85
 awareness areas 85
 courses, 86
 requirements 83
Geography
 course descriptions 383
 Department of, 381
 minor, 383
Geography B.A., B.S. 381
Geogocia Sciences
 course descriptions 387
 Department of 387
 graduate degrees, 387
 minor 387
Geogocia Sciences B.S. 387
Geotechnical engineering emphasis, 238
 degree requirements, 239
German B.A., 400
 course descriptions 408
 minor 402
Gerontology certificate, 108, 518
 through Extended Education, College of 707
Global awareness, 85
Global Business B.S. 690
GMAT Graduate Management Admission Test tutoring 44
GNO Graduate Nurse Organization GNO, 479
Goddwater Materials Visualization GMVF 35
Golf management concentrations, 630
Good standing, 75
GPM Golf and facilities management concentration, 630
Grade point average GPA calculation of 72. *See also*
 Grades
Grades
 academic standards and, 75, 522
 definition of 72
 optional systems 72, 333
 Pass Fail, 211, 333
 requirements for graduation 79
Grading system 72
Graduate College 516
 academic integrity, 528
 academic membership of, 720
 admission to, 521
 Appeals Board 528
 certificates offered by 519
 classification of courses, 55-526
 degree requirements, 525
 degrees offered by 529
 diversity programs of, 520
 dual degrees 534
 fees for 47
 foreign language requirements 527
 format office 521
 grading 525
 interdisciplinary programs of 518
 international scholarly research and creative activities
 528
 nondegree study, 517
 offices of 521
 procedures, 524
 professional degrees offered, 517
 research programs of, 519
 student support services, 520
 supervisory committees of 527
 theses and dissertations, 527
Graduate Council 521
Graduate degrees 529 *See also* specific schools and
 departments.
 at ASU East, 529, 631-642-657
 at ASU Main 529
 at ASU West 529
 offered by Architecture and Environmental Design, College
 of 123
 offered by Business, College of 158
 offered by Engineering and Applied Sciences, College of
 210
 offered by Fine Arts Herberger College of, 276
 offered by Graduate College 516
 offered by Law, College of 325
 offered by Liberal Arts and Sciences, College of, 705
 offered by Nursing College of, 476
Graduate Management Admission Test GMAT tutoring 44
Graduate Nurse Organization GNO, 479
Graduate Record Exam GRE tutoring 44
Graduation
 application from Graduate College, 528
 declaration of 81
 fees for 50
 requirements for 79
Grady Gammage Memorial Auditorium 27
Grants, 53

- Graph c Design (B.S.D. , 135
 course descr ptions, 142
 programs of study n, 137
 Graph c nformation techno ogy
 concentrat on, 671
 course descr pt ons, 672
 Graph cs, techn ca , concentrat on, 672
 Greek
 course descr pt ons, 409
 foreign language requ rement for 403
 Greek L fe 41
 Guitar concentrat on 304
- ## H
- Harassment pol cies 21
 Harry Wood Ga ery 27
 Hayden Library 25
Hayden's Ferry Review, 45
 Hazardous Mater a s and Waste Management Program
 cert f cate, 671
 Hea th Adm nstrat on and Po cy, School of 173
 Hea th and Wei ness Center, Student, 44
 Hea th care related course descr pt ons, 480
 Hea th educat on, 44
 Hea th insurance 44
 Hea th Phys cs certificate, 337
 Hea th science course descr pt ons 378
 Hea th serv ces adm n strat on course descr ptions, 173
 Heavy construct on concentration, 216
 Hebrew course descr pt ons, 409
 He p Desk/Consu tng, 28
 Herba Co ect on Patten, 25
 Herberger Center for Des gn Exce ence, 122
 Herberger Co ege of F ne Arts. *See* F ne Arts, Herberger
 Co lege of 275
 High Pressure Research Fac ty, 35
 High Resolut on E lectron M croscopy, Center for (CHREM), 34
 Hispanic Mother Daughter Program, 43
 Hispanic Research Center (HRC), 36
 Histor ca awareness 85
 History
 course descr pt ons, 391
 Department of 390
 graduate degrees 391
 m nor, 390
 History and Ph osophy of Science
 cert ficate in, 338 434
 course descr pt ons, 434
 H story (B.A. B.S.), 390 690, 705
 techno ogy supported degree program 705
 Home econom cs educat on course descr ptions, 380
Honor Code 325
 Honors Col ege, Barrett, 118
 adm ss on to 119
 course descr ptions, 121
 programs for 118
 n Architecture and Environmental Des gn Co ege of,
 126
 n Bus ness, Co lege of 162
 n Eng neer ng and Applied Sc ences, Co lege of, 213
 n L bera Arts and Sc ences, Co ege of, 336
 n Nurs'ng Co ege of 478
 n Pub c Programs Co lege of, 487
 n Soc al Work, Schoo of, 511
 n Techno ogy and Applied Sc ences, Co ege of, 658
 retention, 119
 transcript recogn t on for 120
 Hope Scholarship, 53
 Housing and Urban Deve opment B.S.D. , 145 703
 course descr ptions, 150
 programs of study, 150
 HRC (Hispanic Research Center), 36
 Human nutr t on concentrat on, 652
 Human Orig ns, nst tute of HO , 36
 Human Performance Improvement cert f cate 707
 Human Serv ces, College of, 689, 716
 Human ties
 course descr pt ons 397
 n Genera Stud es requ rements 84
 Humanities B.A. 397
- ## I
- BeAM (on Beam Ana ysis of Mater a s Fac ty 34
 D card 48
 GERT (Integrative Graduate Educat on and Research
 Tra ning , 38
 HO (nst tute of Human Or g ns 36
 MES nstitute for Manufactur'ng Enterpr se Systems , 33
 mmun zat on requirement 64
 for Nurs'ng, Co lege of 474
 mprovisat on concentrat on, 297
 NC TE (Integrated Cert f cat'on in Teacher Educat on , 188
 ncomp ete grade, 72
 ndependent earn ng courses, 193 333 709
 nd an American . *See also* Nat ve Amer cans
 nd an Data Center Labrora Nat onal Amer can 25
 nd an Educat on, Center for, 32, 186
 nd an Lega Program, 324
 Journa of American Indian Educat on 32
 nd an educat on course descr pt ons 198
 ndones an course descr pt ons 409
 Industria Des gn (B.S.D.), 135
 course descr pt ons, 143
 programs of study for, 139
 Industria Engineer ng
 course descr pt ons, 262
 Department of 259
 programs of study n 261
 Industria Engineer ng (B.S.E. , 259
 Industria Technology (B.S.) 670
 Industria techno ogy management
 concentrat on, 671
 course descr pt'ons, 675
 Informat on and Management Techno ogy
 Department of, 670
 Informat on Techno ogy (IT , 27
 In tita Teacher Certif cat on (ITC) program, 186 *See also*
 Educat on B.A.E. .
 academ c spec al zat ons, 190 191
 academ c standards for, 192
 adm ss on to, 187
 Apprent ce Teacher Program ATP 188

INDEX

certification 193
Dine Teacher Education Program, 188
Early Childhood Interprofessional Program ECD 188
Elementary Education on Partnership Program EED 188
endorsements, 190
field experience requirements 191
Integrated Certification in Teacher Education INCITE , 188
multilingual multicultural ML/MC) program, 188
postbaccalaureate programs, 192
Secondary Education SED 188
Special Education SPE 188
Teacher Education for Arizona Mathematics and Science TEAMS , 190
Teaching for a Diverse Future TDF 188
Native Teacher Preparation Programs 194
Institute for Manufacturing Enterprise Systems MES , 32
Institute s . *See* Centers and Institutes
Instruction Support S and Lab, 28
Instructor Initiated Drop of Courses 73
Instrumental Concentration, 3 3
Instrumentation Concentration, 667
Insurance
 medical, 44
 for nursing college of, 475
Integrated Certification in Teacher Education INCITE , 188
Integrated Curriculum Materials Emphasis 233
Integrated Studies BA BS 336
Integrative Graduate Education and Research Training GERT , 38
Integrative Studies BA , 690 704
Intermediate Stage, 27, 37
Interactive Instructional Television Program ITP 709
Interactive Nano Visualization for Science and Engineering Education N VSEE project, 34
Interdisciplinary Arts and Performance BA , 690
Interdisciplinary Studies
 Business Emphasis 156
 Extended Education College of, 703
 Graduate College, 518
 Liberal Arts and Sciences, College of
 Computational Biosciences MS , 366
 Humanities program 397
 Small Business Program and 181 644
Interdisciplinary Studies B I S , 114 641 703
 anthropology concentration n 347
 at ASU East, 641
 Language Concentration n 403
Intergroup Relations Center IRC 22
Interior Design B S D 140
 course descriptions 144
 programs of study for 140
Interior Design History minor, 141
Intermediate
 concentration 284
 course descriptions, 291
International Agribusiness Concentration 630
International Baccalaureate Diploma/Certification, 65
International Business Studies Certification, 174
International Business Studies Course Descriptions, 175
International Student Programs, 43 *See* also Study abroad programs

International Programs Office IPO 118 535, 543
International Student Office ISO , 43
International Students Admissions of 63
 to Graduate College, 521
International Studies Certification 449
Internet courses, 709
Internships 113
 in Barrett Honors College, 118
 in Business, College of, 162
 in Public Programs College of, 492
N VSEE Interactive Nano Visualization for Science and Engineering Education 34
on Beam Analysis of Materials IBeAM Faculty 34
PO International Programs Office 535
RC Intergroup Relations Center , 22
S (Instruction Support and Lab 28
 Sams Studies, 110
SO International Student Office 43
Italian BA), 401
 course descriptions 410
 minor, 402
liter, 34

J

J. Russett and Bonita Nelson Fine Arts Center 27
Japanese BA , 399
 course descriptions, 410
 minor 402
Jazz Concentration 305
Jewish Studies Certification, 338
 with History major, 390
 with Religious Studies major 460
Joan and David L. Nicos Center for Applied Ethics LCAE 36
John J. Ross William C. Bakley Law Library, 25, 323
Joint Urban Design Program 30 710
Journal of American Indian Education, 32
Journalism and Mass Communication Course Descriptions 497
Journalism and Mass Communication, Walter Cronkite School of 495
 admissions to 496
 degree programs of, 496
Journalism BA , 496
Judicial Affairs Student 43
Jurimetrics Journal of Law, Science and Technology 33
Justice Studies B.S. Ph.D), 500, 519
Justice Studies School of 499
 admissions to, 500
 course descriptions 501

K

KAET Television, 27
Katherine K. Herberger College of Fine Arts. *See* Fine Arts Herberger College of 275
Katz Concert Hall 27
Kerr Cultural Center, 27
Keyboard Concentration 305
Korean Course Descriptions, 411

L

- L. William Seidman Research Institute, 31-163
- Laboratories) *See also* Centers and Institutes and Faculties
- Applied Exercise Physiology Lab, 36
 - ASU Downtown Center Computer Lab, 28
 - Center for High Resolution Electron Microscopy (CHREM), 34
 - Education Policy Studies (EPSL), 32
 - Exercise and Sport Research Institute (ESRI), 35
 - Exercise Biochemistry, 36
 - Exercise Endocrinology, 36
 - Groundwater Materials Science, 34
 - Instruction Support Services Lab, 28
 - on Beam Analysis of Materials* (BeAM Faculty), 34
 - Materials Faculty (MF), 34
 - Materials Science Electron Microscopy Laboratory (MSEML), 34
 - Motor Control, 36
 - Research Support (RS), 28
 - Scanning Probe Microscopy (SPM), 35
 - Secondary Ion Mass Spectrometry (SIMS), 35
 - Sport and Exercise Psychology, 36
 - University Dance, 27
- Labrora National American Indian Data Center, 25
- Landscape Architecture (B.S.L.A.), 145
- Landscape architecture course descriptions, 151
- Landscape Studies minor, 123
- Languages and Literatures, Department of, 399. *See also*
- Foreign languages
 - certificates offered by, 402
 - graduate degrees, 403
 - majors, 399
- Last Lecture Series, 40
- Latin
- course descriptions, 411
 - foreign language requirement for, 403
- Latin American Studies
- Center, 36
 - certificate in, 338
 - with Anthropology major, 347
 - with Economics major, 367
 - with Geography major, 382
 - with History major, 390
 - with Political Science major, 450
 - with Religious Studies major, 460
 - with Spanish major, 402
- Law College of, 323
- academic memberships of, 717
 - accreditation of, 715
 - admission to, 324
 - Center for the Study of Law Science and Technology, 33, 324
 - Clinical Program, 324
 - degree program of, 325
 - bar, 25, 323
 - special programs of, 324
- Law Library, 323
- Law preprofessional advising, 328
- Law School Admission Test (LSAT) tutoring, 44
- Law, Science, and Technology Center for the Study of, 33, 324
- LCAE (Joan and David Lincoln Center for Applied Ethics), 36
- Leadership development classes, 41
- LEAP (Leveraging Educational Assistance Partnership), 53
- Learning and Teaching Excellence Center for, 29
- Learning and teaching excellence course descriptions, 30
- Learning Center, at ASU East, 624
- Learning Resource Center (LRC), 40
 - for Nursing students, 479
- Legal and Ethical Studies, 182
 - course descriptions, 183
- Legal Assistance, Student, 43
- Leveraging Educational Assistance Partnership (LEAP), 53
- Libera Arts and Sciences College of, 326
 - academic memberships of, 717
 - academic standards for, 333
 - accreditation of, 715-716
 - admission to, 327
 - advising, 327, 328
 - Aerospace Studies, Department of, 340
 - African American Studies program, 342
 - Biology Department of, 352
 - centers of, 340
 - certificate programs of, 337
 - Chemistry and Biochemistry, Department of, 359
 - Chinese and Chinese Studies Department of, 364
 - concentrations of, 329
 - degree programs of, 328
 - graduate, 334
 - through Extended Education College of, 705
 - undergraduate, 329
 - degree requirements for, 330
 - English, Department of, 368
 - Exercise Science and Physical Education, Department of, 375
 - Geography Department of, 381
 - Geographic Sciences, Department of, 387
 - History Department of, 390
 - Interdisciplinary Humanities, 397
 - Languages and Literatures Department of, 399
 - majors of, 329
 - Mathematics Department of, 417
 - Microbiology Department of, 426
 - Maritime Science, Department of, 429
 - Molecular and Cellular Biology, 432
 - Molecular Biosciences and Biotechnology, 432
 - organization of, 326
 - Philosophy, Department of, 433
 - Physics and Astronomy, Department of, 436
 - Plant Biology Department of, 443
 - Political Science Department of, 448
 - Psychology Department of, 455
 - Religious Studies Department of, 459
 - Sociology, Department of, 463
 - special programs in, 336
 - Speech and Hearing Science, Department of, 467
 - Women's Studies, 470
- Library Instruction Systems, and Technology (L.I.S.T.), 25
- Library science course descriptions, 198

INDEX

Library(es) 25
 of Architecture and Environmental Design, College of, 25, 122
 ASU East services, 624
 ASU West services, 25 691
 of Institute of Human Origins, 36
 of Law College of, 323
Life Sciences B.S. 690
Lifetime Learning tax credits, 53
Linguistics
 course descriptions 374
 interdisciplinary program 110
L. S.T. Library Instruction, Systems, and Technology, 25
Loans 54
Louise Licon Kerr Cultural Center 27
Low Power Electronics CLPE, Center for, 32
LRC Learning Resource Center 40
LSAT Law School Admissions Test tutoring, 44
Lyceum Theatre 27

M

Ma'n Campus Standards Committee 81
Maintenance Management certificate 707
Majors *See* specific degree programs and courses
Management
 Department of, 176
 graduate degrees, 177
Management B.S. 176
 programs of study n, 176
Management of agribusiness concentration, 629
Management, School of, 695
Manufacturing and Aeronautics Engineering Technology,
 Department of, 677
Manufacturing and materials processing emphasis 233
Manufacturing Engineering Technology B.S. 677
 concentration, 678
 course descriptions 680
Map Collection, 26
Maps
 of ASU Downtown Center, 711
 of ASU East, 682
 of ASU Ma'n, 744
 of ASU vicinity, 714
 of ASU West, 693
Marketing
 course descriptions 180
 Department of, 179
Marketing B.S. 180
Martin Luther King Jr. Day of Service, 41
Mass communication course descriptions, 498
Master's degrees *See* Graduate degrees
Materials as Mechanical Engineering emphasis 268
Materials engineering emphasis, 230
Materials Research Science and Engineering Center
 MRSEC, 34
Materials Science and Engineering B.S.E., 231
 course requirements, 232
 programs of study, 234
Materials science and engineering course descriptions, 236
Materials Science Electron Microscopy Laboratory MSEM L,
 34
Mathematics and Statistics
 course descriptions, 421
 Department of, 417
 in General Studies Requirement 79, 83
 graduate degrees, 421
 minor 420
 placement examinations in, 69
Mathematics B.A., B.S. 417, 418
 Actuarial science concentration, 420
 Statistics concentration, 420
Mathematics education course descriptions, 425
Matthews Arthur John, 22
Mechanical and Aerospace Engineering
 course descriptions, 268
 Department of, 264
Mechanical Engineering (B.S.E.), 267
 emphasis areas 267
 programs of study, 268
Mechanical engineering technology concentration 678
Mechanical metallurgy emphasis 233
Medication Clinic 324
Medical technology courses 427
Medical withdrawal 74
Medical and Renaissance Studies certificate, 338
 with History major, 390
Medical and Renaissance Texts and Studies MRTS 34
Mediterranean Studies, 34
Memorandum MU 42
Metac materials systems emphasis 233
Metals
 concentration, 284
 course descriptions 292
Meteorite Studies, Center for, 34
Meteorology climatology concentration 382
Microbiology
 course descriptions, 428
 Department of, 426
 graduate degrees, 427
 minor 427
Microbiology B.S., 426
Microcomputer systems concentration, 667
Microelectronics concentration 667
Microelectronics engineering technology course descriptions
 669
Midterm report, 75
Military members and residency certification 51
Military officer training 110 336
Military Science Army ROTC *See also* ROTC Studies
 course descriptions, 431
 Department of, 429
Minority Engineering Program, 213
Mnors 82 108, 109 *See also* specific degree programs
Misconduct in scholarly research and creative activities 528
Molecular and cellular bioengineering emphasis 225
Molecular and Cellular Biology 432
Molecular Biosciences and Biotechnology B.S. 432
Morrison Institute for Public Policy 37
Moshier, Thomas Blvd, Press, 25
Motor Control Lab, 36
MRSEC Materials Research Science and Engineering
 Center, 34

MRTS Medeval and Renaissance Texts and Studies), 34
 MSC (Multicultural Student Center), 43
 MSEML Materals Science Electron Microscopy Laboratory
 34
 MU Memorial Union), 42
 Multicultural education course descriptions, 199
 Multicultural Student Center (MSC), 43
 Multilingual multicultural ML/MC program, 188
 Multimedial Writing and Technical Communication
 certificate, 650
 Faculty of, 649
 Multimedial Writing and Technical Communication B.A.S.,
 B.S., 649
 Municipal operations management concentration, 672
 Museum Studies certificate, 337, 338
 Museum studies concentration, 280
 Music
 course descriptions, 316
 student activities, 46
 Music B.A. B.M. 302
 Music Education major, 302
 Music history literature course descriptions 309
 Music performance course descriptions 312
 Music, School of, 301
 admission to, 301
 degree programs of, 302
 diagnostic examinations, 302
 graduate programs in 309
 instrument rental fee, 48
 library of, 25
 minor 308
 Music Education major 302
 Music Therapy major 304
 Performance major 304
 private instruction fee, 48
 special programs of, 277
 Theory and Composition major, 308
 Music Theatre, 27
 concentration in 306
 Music Theory and Composition
 course descriptions, 310
 major, 307
 Music Therapy major, 304

N

National Food and Agricultural Policy Program 627
 National Scholarship Advisement, Office of, 118
 Native American Achievement Program 43
 Native American Summer Institute, 43
 Native Americans
 American Indian Studies B.S. 488
 American Indian Studies Program 488
 Dine Teacher Education Program, 188
 Indian Education, Center for 32 186
 Indian Legal Program, 324
Journal of American Indian Education 32
 Labrora National American Indian Data Center, 25
 residency classification policy for, 51
 Natural Sciences in General Studies requirements, 84
 Navajo teacher program, 188
 NCLEX RN requirements, 474

Nelson Fine Arts Center, 27
 1907 Gallery, 26
 Noble Science and Engineering Library, 25
 Nondegree undergraduate admission 64
 Nonprofit Leadership and Management, Center for (CNLM),
 37, 488
 Nonprofit Leadership and Management Program, 488 507
 Nonprofit Management Certificate Program, 708
 Nonprofit Youth and Human Service Administration certificate,
 507
 Norma School of Arizona, 22
 Northlight Gallery, 27
 Norwegian course descriptions 412
 Notification of admission, 59
 Nursing B.S.N. M.S. 475, 476
 Nursing College of 473
 academic membership of 719
 academic standards of, 478
 accreditation of, 716
 admission to 473
 course descriptions 480
 degree programs of 476
 fees for 478
 grading policy, 478
 organization of, 473
 Public Health M.P.H., 476
 Registered Nurse R.N. programs, 476
 admission to 474
 degree requirements, 477
 special programs, 478
 Nursing Students for Ethnic and Cultural Diversity 479
 Nutrition
 course descriptions, 653
 Department of 651
 minor, 652
 Nutrition (B.S.) 651

O

OASIS, 624
 Office of University Evaluation 29
 Office of Youth Preparation and Project PRIME, 710
 Online courses, 709
 Opera option, 306
 Operations management course descriptions, 179
 Operations management technology concentration, 672
 Orchestra instrument concentration, 306
 Organ Hall, 27

P

Painting
 concentration, 285
 course descriptions 292
 Parent Loan for Undergraduate Students PLUS 54
 Parking fees, 48
 refunds of, 50
 Partnership in Baccalaureate Education 623, 640
 Pass fail enrollment 73
 in Engineering and Applied Sciences, College of, 211
 in Liberal Arts and Sciences, College of 333
 Patten Herbarium Collection 25

INDEX

- Pau V Ga v n Payhouse, 26
Payments, tuition 49
Pe Grant 53
Performance
 Dance concentration, 298
 Music concentrations 304
Performing arts facilities, 26
Perkins Loan 54
Personally identifiable information, 78
Petition for variance 81
PGM Professional Golf Management 630
Philosophy
 course descriptions, 434
 Department of, 433
Philosophy (B.A.) 433
Photography
 course descriptions, 293
 specialization 285
Photography courses, 293
Photosynthesis Center for the Study of Early Events n, 35
Physical geography course descriptions 385
Physical sciences course descriptions, 439
Physics
 course descriptions 440
 minor 438
Physics and Astronomy, Department of, 436
Physics B.S., 436
Piano accompanying concentration, 306
Placement auditions
 for dance, 296
 for music, 301
Placement examination, 68
 for foreign language requirements 404
Planning and Landscape Architecture, School of, 145
 admission to, 146
 degree programs of 145
 graduate degrees, 146
 portfolio requirements for 147
Plant biochemistry and molecular biology
 concentration 444
 course descriptions 447
Plant Biology
 concentrations, 443
 course descriptions 445
 Department of 443
 graduate degrees 445
 minor, 445
Plant Biology B.S., 443
PLUS Parent Loan for Undergraduate Students 54
Political Science
 course descriptions 451
 Department of 448
 minor, 450
Political Science B.A., B.S. 448, 704
Polymers and composites engineering emphasis 233
Portuguese
 course descriptions 412
 foreign language requirement for, 404
Postbaccalaureate certificates, 112
Prehealth professions advising 328
Prelaw advising, 328
Prelaw studies, 162
Premedical studies
 and biomedical engineering emphasis 231
 and Engineering Special Studies B.S.E., 273
Preparing Future Faculty Program 516
Preprofessional advising 328
Preschool of College of Education 41
Preveterinary medicine concentration, 630
PRIME Project to Improve Minority Education 710
Printing
 course descriptions 294
 specialization, 285
Prism Theatre, 27
Probation academic 76
Process engineering emphasis, 231
Professional Continuing Education 709
Professional Development Center for 207
Professional Field Experiences Office of 186
Professional flight concentration, 660
Professional golf management PGM concentration, 630
Professional Nursing Program See Nursing College of.
Professional officer courses POC 341
Professional Purchasing certificate 708
Professional Teacher Preparation Program. *See* nta
 Teacher Certification program
Programming and Visual Arts PVA 42
Programs
 Academic Access 161
 Academic and professional programs, 708
 Adult Reentry, 42
 Advanced Public Executive Program 710
 African American Studies, 342
 American English and Culture Program AECPC, 709
 American Humanics Program 37, 507
 American Indian Studies 488
 Asian Pacific American 490
 Asian Studies 161
 assessment of 29
 of Barrett Honors College, 118
 for children, 40
 Cinemas, of Law, College of 324
 Curricular Programs Office of, 40
 Community Service 41
 Distance Learning Technology, 708
 of Engineering and Applied Sciences College of 212
 Extended Campus Programs, 710
 Indian Legal Program 324
 International, 535
 Joint Urban Design Program 30 710
 Minority Engineering, 213
 National Food and Agricultural Policy 627
 Nonprofit Leadership and Management 488
 of Nursing College of, 478
 of Graduate College, 517
 of Law, College of 324
 of Liberal Arts and Sciences College of, 336
 Preparing Future Faculty 516
 of Public Programs College of, 487
 Small Business Program, 161
 Student Leadership Program 41
 Traveling Scholar, 72

Upward Bound, 43
 Washington Semester, 336
 Women in Applied Sciences and Engineering 213
 Project 1000, 36
 Proposals on emphasis 266
 Prosecutor Conc, 324
 Psychology
 course descriptions 456, 643
 Department of, 455
 Psychology, Applied B.S., 642
 Psychology B.A., B.S., 455, 690-704
 Psychology Education Division of, 203
 Public Administration and Public Management certificate, 504
 Public Administration M.P.A. 705, 707
 Public Affairs School of 504
 course descriptions 504
 programs at Extended Education, College of 705, 707
 Public Defender Conc, 324
 Public Health M.P.H., 476
 Public Policy Advocacy and Lobbying Concentration, 448
 Public Policy Analysis Concentration, 448
 Public Programs, College of 484. *See also* specific degree programs and courses.
 academic membership of 719
 academic standards of 487
 admission to, 484
 American Indian Studies Program, 488
 Asian Pacific American Studies Program 490
 Communication, Hugh Downs School of Human 491
 degree programs of 486
 graduation requirements, 485
 Journalism and Mass Communication, Walter Cronkite School of 495
 Justice Studies School of 499
 Morrison Institute for Public Policy, 37
 organization of 484
 Public Affairs, School of, 504
 Recreation Management and Tourism, Department of, 506
 Social Work, School of, 509
 special programs of 487
 Publications program, 521

Q

Quality Analysis certificate, 161
 Quantitative Business Analysis course descriptions 170

R

Reading education course descriptions, 199
 Readmission, 70
 to Graduate College 523
 Real Estate (B.S.), 182
 Real estate course descriptions, 183
 Recta Hall 27
 Records 77
 access to 78
 holds on, 75
 Recreation and Tourism Management (B.S.) 690
 Recreation B.S. 506
 Recreation Management and Tourism
 course descriptions 507

Department of 506
 graduate degrees 507
 minor, 507
 Recreation management concentration 506
 Recreational sports 45
 Refugees, residency classification policy, 51
 Refunds 49
 Regents Professors, 547
 Registered Nurse (R.N.) programs
 admission to, 474
 course requirements 476
 Registration 39-70
 counting, 56
 fees for, 70
 late fee for 47
 Reinstatement 77
 Religious accommodations, 42
 Religious Studies
 course descriptions 460
 Department of, 459
 Religious Studies B.A., 459
 Remediation 73
 Reports. *See also* Grades, Records
 ASU Report Card 29
 midterm 75
 Research
 centers, institutes, and laboratories, 30
 facilities, 520
 programs, 519
 Research Office, Undergraduate 118
 Research on Education in Science, Mathematics
 Engineering and Technology, Center for (CRESMET), 30
 Research Park, 24
 Research Support RS Lab, 29
 Residence halls. *See* Residential Life
 Residency classification 50
 Residential construction concentration, 216
 Residential Life 58
 at ASU East 40-626
 housing fees 48
 programming, 40
 Resource management concentration 631
 Resource team special student concentration, 634
 Restricted withdrawal, 73
 Retention 75
 Roman
 course descriptions, 412
 foreign language requirement for 404
 ROTC studies
 in Engineering and Applied Sciences College of, 213
 in Liberal Arts and Sciences, College of
 Air Force 341
 Army, 430
 Nursing College of, 479
 Technology and Applied Sciences College of, 658
 RS (Research Support Lab) 29
 Russian and East European Studies certificate, 338
 with History major 390
 with languages major, 402
 with Religious Studies major 460

INDEX

Russian B.A. 401
course descriptions 412
minor, 402

S

SAM Social and Academic Mentor Program 520
SAT Scholastic Aptitude Test 59
Satisfactory academic progress 76
Satisfactory grade, 72
Scandinavian course descriptions, 413
Scandinavian Studies certificate 339
with languages major 402
Scanning Probe Microscopy Laboratory (SPM), 35
SCERP Southwest Center for Environmental Research and Policy, 38
Schedule of Classes, 71
Scholarships, 52
for Air Force ROTC, 341
for Army ROTC, 431
for Technology and Applied Sciences College of, 658
Scholastic Aptitude Test (SAT), 59
Science and Engineering Library Daniel E. Noble 25
Science and Engineering of Materials (Ph.D.), 519
Science, history and philosophy of, courses 434
Sculpture
concentration, 286
course descriptions 294
Secondary Education B.A.E.
specializations
biological sciences, 354
chemistry 361
economics, 367
English, 369
family and human development 379
foreign languages 403
geography 383
history, 391
mathematics, 420
physical education, 375
physics 438
potter science 450
social studies, 347 464
Secondary education course descriptions, 200
Secondary Education (SED) 188
Secondary Ion Mass Spectrometry (SIMS) Laboratory 35
Sedman Research Institute, 32
Semiconductor processing emphasis 231
Semiconductor technology concentration, 667
SEOG Federal Supplemental Educational Opportunity Grant 53
Service Learning Program, 113. *See also* Internships.
Service programs
short term projects 41
Services Leadership Center for (CSL), 31
Supplemental Instruction, 40
Sigma Theta Tau, 479
SIMS (Secondary Ion Mass Spectrometry) 35
Small Business and Entrepreneurship certificate, 161 181
Small Business (B.S.) 181
Small Business Programs, 181
SNA Student Nurses' Association, 479
Social and Academic Mentor Program (SAM), 520
Social and Behavioral Sciences (B.A., B.S.), 690
Social and philosophical foundations course descriptions 202
Social Sciences
in General Studies requirements, 85
in Secondary Education program area, 347, 464
Social Work (B.S.W., M.S.W.) 510 690, 703, 705
Social Work, School of, 509
academic standards, 513
accreditation of, 716
admission to 510
course descriptions, 515
degree programs of, 487 511 703
field instruction, 513
Flagstaff component, 705
honors program in 511
organization of, 510
Tucson component, 703
Society, values, and technology course descriptions, 222
Sociology
course descriptions, 464
Department of, 463
minor, 464
Sociology (B.A., B.S.), 463 690 704
Software engineering technology concentration, 665
Software technology applications concentration, 667
Software technology concentration, 666
Solid State Electronics Research (CSSER) Center for 33
Solid State Science Center for, 34
Sorority(ies) 41
Southeast Asian Studies certificate 339
with Geography major, 381
with History major, 390
with languages major, 402
with Religious Studies major, 460
Southwest Center for Education Equity and Language Diversity, 32, 185
Southwest Center for Environmental Research and Policy (SCERP), 38
Spanish B.A.), 401 690
course descriptions 414
minor, 402
Spanish Language Court Interpreter certificate, 708
Spanish English translation certificate 402
Sparky's Den, 42
Special Education Professional Teacher Preparation (SPE), 188
Special education course descriptions, 200
Specialty construction concentration, 216
Speech and Hearing Science
course descriptions, 468
Department of, 467
Speech and Hearing Science (B.S., Ph.D.) 467, 519, 659
SPM (Scanning Probe Microscopy Laboratory) 35
Sport and Exercise Psychology Lab, 36
SSERC Center for System Science and Engineering Research) 33
STAR (Sustainable Technologies, Agriculture, and Resources Center), 38
State Press, 44
Statistics and probability course descriptions, 425

- Statistics concentration 420
 Statistics M.S. 519
 Steps from admission to registration, 64
 Stress analysis emphasis, 268
 String concentration 303
 Structural Engineering
 area of study, 238
 degree requirements, 239
 Student Advocacy and Assistance 43
 Student Aid Trust Grant, 53
Student Code of Conduct, 43-58
 Student Counseling, at ASU East 625
 Student Health
 at ASU East, 625
 at ASU Main 44
 Student Judicial Affairs, 43
 Student Leadership Programs, 41
 Student Legal Assistance 43
 Student Nurses' Association (SNA), 479
 Student Organization Resource Center 41
 Student Recreation Complex (SRC), 47
 Student services 39
 departments, 39
 Adult Re-entry, 42
 Associated Students of Arizona State University
 ASASU, 42
 Disability Resources for Students, 42
 Educational Development, 42
 programming 40
 Student Health and Wellness Center 44
 Testing Support Services 44
 for Graduate College, 517
 Student Services, Office of 186
 Student teaching 191
 postbaccalaureate, 193
 Studies in the Arts Institute for 37
 Studio Art
 concentration, 281
 course descriptions 295
 Study abroad programs, 63
 Architecture and Environmental Design College of, 125
 Business College of, 174
 Honors College Barrett, 118
 International Programs Office, 118-535
 Success at the University courses, Academic, 113
 Summer Bridge program 113
 Summer sessions, 539
 course load for, 71
 fee for 47
 refunds for, 49
 Sun Card 48
 Sun Development Center, 41
 SunDance, 39
 Sundome Center for the Performing Arts 27
 Supplemental instruction (S.I.), 40, 113
 Supply Chain Management
 course descriptions 184
 Department of, 182
 Supply Chain Management (B.S.), 182
 Suspensions 77
 Sustainable Technologies, Agriculture and Resources
 Center for STAR 38
 Swedish course descriptions, 416
 Swetman Ralph W., 22
 Symbolic Systems certificate 339
 System Science and Engineering Research Center for, 33
- ## T
- Taxes
 on financial aid 54
 choices and 53
 TDF Teaching for a Diverse Future 188
 Teacher certification, 191, 645 *See also* Education, College
 of in the Teacher Certification (TC) program, specific
 degree programs
 Teacher Education for Arizona Mathematics and Science
 (TEAMS) 190
 Teaching for a Diverse Future (TDF) 188
 TEAMS Teacher Education for Arizona Mathematics and
 Science 190
 Technological concentrations, 672
 Technology and Applied Sciences, College of, 655
 academic standards of, 657
 accreditation of, 716
 admission to
 Bachelor of Applied Science degree, 661
 Bachelor of Science degree, 655
 advising for 657
 Aeronautics Management Technology, Department of, 659
 degree programs of 655
 Electronics and Computer Engineering Technology,
 Department of 664
 Information and Management Technology, Department of,
 670
 Manufacturing and Aeronautics Engineering Technology
 Department of 677
 organization of, 655
 special programs of 658
 Technology M.S., 706
 Technology supported degree programs, 705
 Telecommunications concentration 664
 Telecommunications Research Center, 33
 Television courses 708
 Television Station KAET Channel 8 27
 Test of English as a Foreign Language (TOEFL), 63
 Testing Support Services (TSS), 44
 Tests *See* Examinations.
 Theater course descriptions 417
 Theatre
 course descriptions, 318
 Department of 317
 graduate programs in 318
 special programs of, 277
 student activities in, 46
 Theatre (B.A.), 317
 Theatre facilities, 26
 Theatre performance and production course descriptions, 319
 Theory Music concentration, 308
 Therapeutic Recreation 506
 Thermoscience courses, 268

INDEX

Theses

- binding fee for, 527
- formats of 521
- TOEFL Test of English as a Foreign Language 63
- Tourism concentration, 506
- Transcripts
 - admission and, 59
 - fees for, 48, 50
 - requests for, 75
- Transfer credits *See* Credits, academic
- Transfer General Education Core Curriculum TGECC
 - General Studies transfer credit and 85
- Transportation certificate 402
- Transportation and Materials Engineering 238
 - degree requirements 239
- Transportation Systems certificate, 519
- Transportation to campus 48
- Traveling Scholar Program 72
- TRIO student support services, 42
- Tri University Master of Engineering 706
- TSS Testing Support Services 44
- Tucson component of School of Social Work, 703
- Tuition, 47
 - deadlines for, 49
 - delinquent payments, 50
 - payments for 49
 - refunds for, 49
 - veterans deferred, 49

U

- Undergraduate Academic Services, Division of, 113
- Undergraduate admissions 39
- Undergraduate Research Office, 118
- United States Patent and Trademark Depository, 26
- University
 - campuses and sites of, 24
 - equi-opportunity affirmative action policies of 21
 - general information about, 21
 - grants 53
 - history of 22
 - libraries and collections of 25
 - organization of, 21
 - scholarship programs of 52
- University Archives 26
- University Art Museum 26
- University Center, 15
- University Dance Laboratory, 27
- University success courses, 113
- Unrestricted course withdrawal, 37
- Upward Bound Program 43
- Urban and environmental planning course descriptions, 152
- Urban Data Center 710
- Urban horticulture
 - concentration 444
 - course descriptions 447
- Urban Inquiry, Center for 37, 488
- Urban Planning B.S.P., 145
- Urban Planning minor, 146
- Urban studies concentration 382

V

- Verification guidelines for enrollment
 - graduate, 525
 - undergraduate, 71
- Veterans services, 39
 - admissions standards and, 61
 - tuition payment and 49
 - Upward Bound Program for 43
- Veterinary medicine 630
- Vice Provost for Research, Center for Environmental Studies 37
- Video Resources collections 26
- Vietnamese course descriptions, 417
- Vista Literacy Coalition, 25
- Vista Station Services, 29
- Voice concentration 307
- Voces of Discovery 22

W

- Water Cronkite School of Journalism and Mass Communication. *See* Journalism and Mass Communication, Water Cronkite School of.
- Washington Semester Program 336
- Waste Management and Hazardous Materials certificate program 671
- Water resources engineering 238
 - degree requirements 239
- Watershed ecology concentration 632
 - Web Dev I*, 45
- Web-based courses 709
- Wenness Foundations minor, 647
- West Campus, ASU, 689
- Western Alliance to Expand Student Opportunities, 36
- Western Interstate Commission for Higher Education WICHE 111
- Wildlife habitat management concentration 632
- William D. Ford Direct Student Loan 54
- William S. Burroughs Collection 25
- Williams Campus. *See* ASU East
- Winter Session, 707
- Withdrawal
 - from Graduate College 524
 - from the University, 73
 - medical compassionate, 74
- Women in Applied Sciences and Engineering Program, 213
- Women's Studies B.A., B.S. 471, 690
- Women's Studies certificate 339 471
 - with History major, 390
 - with Religious Studies major 460
- Women's studies course descriptions 472
- Work study program 54
- WordFest Video Archive 26
- Writing Across the Curriculum WAC, 114
 - course descriptions 374
- Writing Center 114
- Writing certificate 369

Building Abbreviations

Buildings are located at ASU Main unless otherwise noted. For the ASU Main map, see the inside back cover. For other locations, see the “ASU East Map,” page 682; “ASU West Map,” page 693; and “ASU Downtown Center Map,” page 711

ADM	Administration wings A B)	ECG	Engineering Center G Wing
AED	College of Architecture and Environmental Design/North	ECANX	Engineering Center Annex
AG	Agriculture Building	ED	Hiram B. Farmer Education Building
AGB1-4	ASU East Agribusiness Quads 1-4 ¹	EDB	Ira D. Payne Education Hall
AIP	ASU East American Indian Programs ¹	EDC	Education Lecture Hall
ALTCH	ASU East Altitude Chamber ¹	ELAB	Electronics Laboratory Building ³
ANTH	Anthropology Building	ENGRC	Engineering Research Center
ANX	Visual Arts Annex	ENVIR	Environmental Lab
AQUAT	Mona Plummer Aquatics Center wings A B)	FAB	Faculty and Administration Building ³
ARCH	College of Architecture and Environmental Design South	FABNX	Faculty and Administration Building Annex ³
ARCV	University Archives	FAC	Nelson Fine Arts Center
ART	Art Building	FDSC1	ASU East Agribusiness Food Science Lab
ARWH	Art Warehouse	FIELD	University Field Lab
ASUDC	Downtown Center ²	FLHLB	Fletcher Library ³
BA	Business Administration Building	GGMA	Grady Gammage Memorial Auditorium
BAC	Business Administration C Wing	GHALL	Dixie Gammage Hall
BkSTR	ASU Bookstore	GWC	Barry M. Goldwater Center for Science and Engineering Research
CERA	Ceramics Annex (wings A B)	HSC	ASU East Health Sciences Center ¹
CFS	Center for Family Studies	HSC2	ASU East Health Sciences Center Research ¹
CHAPL	Danforth Chapel	IAPNX	Interdisciplinary Arts and Performance Annex ³
CLCC	Classroom Laboratory Computer Classroom Building ³	ICA	Intercollegiate Athletics
CLRB	ASU East Classroom Building ¹	IRISH	Frederick M. Irish Hall wings A-C)
CMPIN	Campus Inn	LAW	John S. Armstrong Hall
CNTR	ASU East Academic Center Building ¹	LAWLB	John J. Ross William C. Blakley Law Library
COMM2	ASU East Communications Building ¹	LIB	Charles T. Hayden Library
COWDN	Cowden Family Resources Building	LL	G. Homer Durham Language and Literature Building
CP	Central Plant	LSA	Life Sciences A Wing
CPCOM	Computing Commons Building	LSC	Life Sciences C Wing
CRI	Cancer Research Institute	LSE	Life Sciences E Wing
CRNX	Classroom Annex ³	LYC	Lyceum Theatre
CSAC	Nadine and Ed Carson Student Athlete Center	MAIN	Old Main
CSB	Community Services Building	MANZH	Manzanita Hall
CSC	Central Services Complex ³	MARIP	Mariposa Hall
DPSMN	Department of Public Safety Main	MB	M. O. Best Hall
EAW2	ASU East Exercise Instructional Lab Building ¹	MCENT	A. J. Matthews Center
ECA	Engineering Center A Wing	MCL	James H. McCintock Hall
ECB	Engineering Center B Wing	MHALL	Carrie Matthews Hall
ECC	Engineering Center C Wing		
ECD	Engineering Center D Wing		
ECE	Engineering Center E Wing		
ECF	Engineering Center F Wing		

¹ This building is located at ASU East.

² The ASU Downtown Center is located at 502 E. Monroe Street in Phoenix.

³ This building is located at ASU West.

BUILDING ABBREVIATIONS

MOEUR	B.B. Moeur Administration	SRC	Student Recreation Complex
MTCHL	Mitchell School - Tempe	SS	Social Sciences Building
MU	Memorial Union	SSV	Student Services Building
MUR	John Murdock Lecture Hall	STAD	Sun Devil Stadium
MUSIC	Music Building - wings E - W	STAUF	Charles Stauffer Communication Arts Building - wings A - B)
NEEB	L.S. Neeb Hall	TC	Technology Center
NOBLE	Daniel E. Noble Science and Engineering Library	TCB	Aeronautics Building
NUR	Nursing Building	TCC	Technology Center Annex
PAC	ASU East Physical Activity Center ¹	TECH	ASU East Technology Center
PBS	Packard Baseball Stadium	TECH2	ASU East Technology Center Annex ¹
PEBE	Physical Education Building East	THWH	Theatre Warehouse
PEBW	Physical Education Building West	TMPCT	Tempe Center
PGM	ASU East Professional Golf Management ¹	TOWER	University Tower Center (wings A - B)
PPS	Physical Plant Shops	TRACK	Joe Selleh Track
PRNT	ASU East Technology Print Building ¹	UASB	Undergraduate Academic Services Building
PS	George M. Bateman Physical Sciences Center - wings A - G	UCB	University Center Building
PSH	Physical Science H Wing	UCLUB	University Club
PSY	Psychology Building	UNION	ASU East Williams Campus Union Building ¹
PVE	Palo Verde East	UVCMN	University Commons
PVM	Palo Verde Main	VISIT	ASU Visitor's Information Center
PVW	Palo Verde West	WFA	Wells Fargo Arena
RITT	Ritter Building - wings A - B	WFLD	ASU West Alternate Locations ³
SANDS	Sands Classroom Building ³	WH	Warehouse
SCOB	John W. Schwada Classroom Office Building	WHALL	West Hall
SCRED	Sonora Center Residence Education Center	WILSN	George W. Wilson Hall
SDF	Solar Demonstration Facility	WTC	Whiteman Tennis Center
SHS	Student Health Service - wings A - B)		
SIM	ASU East Flight Simulator Building ¹		
SOLAR	ASU East Photovoltaics Testing Laboratory ¹		

¹ This building is located at ASU East

² The ASU Downtown Center is located at 5th E. Monroe Street in Phoenix.

³ This building is located at ASU West

ASU MAIN MAP



Parking structure



Surface parking lot

Building abbreviations, which are used throughout the catalog and shown on pages 743-744, are used to label buildings on this map.



Adelphi Commons
(new student housing area)



Front Cover

(clockwise from left)
 Manzanilla Hall is a Freshman Year Experience residential community. Amenities include front desk services, computer labs, tutoring centers, and academic advising. *(Photograph by Dave Lewis)*
 The computer lab in the American Indian Institute, located in the Engineering Center Annex at ASU Main, provides a quiet place to work between classes. *(Photograph by Dave Lewis)*
 Students show their ASU colors at the sign at the corner of Rio Salado Parkway and Rural Road. The sign marks the northern edge of ASU Main campus. *(Photograph by Dave Lewis)*
 ASU offers diverse architecture, including West Hall, on the ASU Main campus, which houses the School of Social Work. *(Photograph by Dave Lewis)*

Students enjoy features of resident life, including smoke-free housing and rooms equipped with Ethernet connections and basic cable. *(Photograph by Dave Lewis)*
 Communication majors attend a lecture in the Life Sciences building. *(Photograph by Dave Lewis)*

Back Cover

Students visit one of the courtyard entrances of Charles Frankel Hayden Library, located on Cady Mall. The library houses the largest multidisciplinary collection at ASU. *(Photograph by Dave Lewis)*

Above

(clockwise from left)
 Students flash their Sun Cards. The Sun Card is the official photo ID of ASU and allows students to access the Student Recreation Complex and services offered by the university libraries. *(Photograph by Dave Lewis)*
 The ASU Main campus provides many meeting areas to study and relax. *(Photograph by Dave Lewis)*
 ASU Marching Band tuba players continue the tradition of playing the Fight Song in the fountain on Cady Mall. *(Photograph by Dave Lewis)*
 Freshmen enjoy the annual "whitewashing of the A" on Tempe Butte. *(Photograph by Dave Lewis)*



www.asu.edu/aad/catalogs