



# University Bulletin

## Undergraduate Degree Programs

### Primary Navigation

#### **Penn State DuBois**

Penn State DuBois, located along Route 225 at College Place in the city of DuBois, is easily accessible from Interstate 80 and Routes 119 and 219 in western Pennsylvania. The campus houses eight major buildings that give students, faculty, and staff space for classes, sporting events, and other activities. Students who attend Penn State DuBois live at home or in off-campus housing. Most students live within an hour's drive of the campus.

The campus serves a diverse population of students, both traditional and adult, who are from Pennsylvania, the United States, and other countries. Students can participate in sports teams for varsity, intramural, and club sports. Extracurricular clubs and organizations are available to serve the interests of students. The campus also has strong ties with the surrounding communities.

Penn State DuBois offers baccalaureate and associate degree programs, as well as the first two years of more than 160 Penn State baccalaureate programs. Students can begin their education at DuBois and move on to the University Park campus or other appropriate Penn State campus in order to complete their degree. Penn State DuBois also offers a master's degree program in conjunction with Penn State Harrisburg. Check the links along the side for available academic programs.

#### **RECOMMENDED ACADEMIC PLANS**

Recommended Academic Plans provide, in table form, the courses students might schedule semester by semester as they pursue a specific undergraduate degree. Each college or campus maintains Recommended Academic Plans for its own majors/degree programs. Links to these plans are on the Division of Undergraduate Studies website at: <http://www.dus.psu.edu/semplans.htm>. Questions concerning the Recommended Academic Plans should be directed to the college or campus involved or the Division of Undergraduate Studies.

#### **Baccalaureate Degrees**

#### **Administration of Justice**

*University College (AJACC): Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Schuylkill, Penn State Wilkes-Barre*

The Bachelor of Arts degree in Administration of Justice provides students with a broadly based liberal education focused on the understanding and analysis of justice systems. Having grappled with the many dilemmas and controversies presented by the problems of administering justice in a complex society, graduates of this program are given the background to be educated, thoughtful, and intelligent citizens.

For the B.A. degree in Administration of Justice, a minimum of 120 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits

(4-7 credits of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in this bulletin.)

**FIRST-YEAR SEMINAR:**

(Included in ELECTIVES or GENERAL EDUCATION course selection)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

**WRITING ACROSS THE CURRICULUM:**

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

**ELECTIVES:** 11-15 credits

**BACHELOR OF ARTS DEGREE REQUIREMENTS:** 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

**REQUIREMENTS FOR THE MAJOR:** 43-44 credits<sup>[1]</sup>

(This includes 4-7 credits of General Education courses; 0-3 credits of GH courses; 4 credits of GQ courses.)

**PRESCRIBED COURSES** (13 credits)

CRIMJ 012 GS(3), CRIMJ 100(3), CRIMJ 221(3), STAT 200 GQ(4) (Sem: 3-4)

**ADDITIONAL COURSES** (24-25 credits)

Select 3-4 credits in values and ethics from BA 243(4), or BA 241(2) and BA 242(2), CRIMJ 465(3), PHIL 003 GH(3), PHIL 103 GH(3), PHIL 105 GH(3), PHIL 106 GH(3), or PHIL/STS 107 GH(3), STS 100 GH(3), STS 101 GH(3) or STS/PHIL 107 GH(3) (Sem: 5-6)

Select 3 credits from CRIM J 451 US(3) or CRIM J 453 US(3) (Sem: 5-8)

Select 18 credits in CRIMJ, with at least 9 credits in the 400 level from: CRIMJ 013 GS(3), CRIMJ 083 GS(3), CRIMJ 113 US(3), CRIMJ 200(3), CRIMJ 201(3), CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), CRIMJ 234(3), CRIMJ 241(3), CRIMJ 296(1-18), CRIMJ 297(1-9), CRIMJ 300(3), CRIMJ 301(3), CRIMJ 302(3), CRIMJ 304(3), CRIMJ 310(3), CRIMJ 311(3), CRIMJ 345(3), CRIMJ 389(3), CRIMJ 406(3), CRIMJ 407(3), CRIMJ 408(3), CRIMJ 410(3), CRIMJ 412(3), CRIMJ 413(3), CRIMJ 414(3), CRIMJ 415(3), CRIMJ 420(3), CRIMJ 421(3), CRIMJ 422(3), CRIMJ 423(3), CRIMJ 424(3), CRIMJ 425(3), CRIMJ 426(3), CRIMJ 430(3), CRIMJ 431(3), CRIMJ 432(3), CRIMJ 435(3), CRIMJ 439(3), CRIMJ 441(3), CRIMJ 450(3), CRIMJ 460(3), CRIMJ 462(3), CRIMJ 467(3), CRIMJ 469(3), CRIMJ 471(3), CRIMJ 473(3), CRIMJ 482(3), CRIMJ 489(3), CRIMJ 497(3), CRIMJ 497A(3) (Sem: 5-8)

## **SUPPORTING COURSES AND RELATED AREAS** (6 credits)

Select 6 credits, in consultation with adviser, from University-wide offerings according to student's career plan (Sem: 5-8)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-099

Review Date: 01/10/2012

UCA Revision #2: 7/26/07

## **Administration of Justice**

*University College (AJSCC): Penn State Beaver, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre*

The Bachelor of Science degree is intended to prepare students for careers in the administration of justice. Two emphases are provided: (1) for students interested in entry-level employment in justice agencies; (2) for students interested in academic or research positions and who may seek graduate education before beginning employment.

For the B.S. degree in Administration of Justice, a minimum of 120 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits

(4-7 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

**FIRST-YEAR SEMINAR:**

(Included in ELECTIVES or GENERAL EDUCATION course selection)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

**WRITING ACROSS THE CURRICULUM:**

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

**ELECTIVES:** 14-18 credits

**REQUIREMENTS FOR THE MAJOR:** 64-65 credits[1]

(This includes 4-7 credits of General Education courses; 0-3 credits of GH courses; 4 credits of GQ courses.)

**PRESCRIBED COURSES** (13 credits)

CRIMJ 012 GS(3), CRIMJ 100(3), CRIMJ 221(3), STAT 200 GQ(4) (Sem: 3-4)

**ADDITIONAL COURSES** (39-40 credits)

(Some of the courses in this category may have prerequisites that are not included in the major.)

Select 3-4 credits in values and ethics from BA 243(4) or BA 241(2) and BA 242(2), CRIMJ 465(3), PHIL 003 GH(3), PHIL 103 GH(3), PHIL 105 GH(3), PHIL 106 GH(3), or PHIL/STS 107 GH(3), STS 100 GH(3), STS 101 GH(3) or STS/PHIL 107 GH(3) (Sem: 5-6)

Select 3 credits from CRIMJ 451 US(3) or CRIMJ 453 US(3) (Sem: 5-8)

Select 18 credits in CRIMJ, with at least 9 credits in the 400 level from: CRIMJ 013 GS(3), CRIMJ 083 GS(3), CRIMJ 113 US(3), CRIMJ 200(3), CRIMJ 201(3), CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), CRIMJ 234(3), CRIMJ 241(3), CRIMJ 296(1-18), CRIMJ 297(1-9), CRIMJ 300(3), CRIMJ 301(3), CRIMJ 302(3), CRIMJ 304(3), CRIMJ 310(3), CRIMJ 311(3), CRIMJ 345(3), CRIMJ 389(3), CRIMJ 406(3), CRIMJ 407(3), CRIMJ 408(3), CRIMJ 410(3), CRIMJ 412(3), CRIMJ 413(3), CRIMJ 414(3), CRIMJ 415(3), CRIMJ 420(3), CRIMJ 421(3), CRIMJ 422(3), CRIMJ 423 US(3), CRIMJ 424(3), CRIMJ 425(3), CRIMJ 426(3), CRIMJ 430(3), CRIMJ 431(3), CRIMJ 432(3), CRIMJ 435(3), CRIMJ 439(3), CRIMJ 441(3), CRIMJ 450(3), CRIMJ 460(3), CRIMJ 462(3), CRIMJ 467(3), CRIMJ 469(3), CRIMJ 471(3), CRIMJ 473(3), CRIMJ 482(3), CRIMJ 489(3), CRIMJ 497(3) (Sem: 5-8)

Select 15 credits -- emphasis a or b:

a. Field Research emphasis: CRIMJ 240(4), CRIMJ 290(1-3), CRIMJ 494(5), CRIMJ 495(5) (Sem: 5-8)

b. Research and Policy Analysis emphasis: Select 15 credits, at least 6 at the 400 level from: AMST 491W(3-6), CRIMJ 424W(3), any CMPSC (3), ECON 104 GS(3), LER 100 GS(3), LST 370(3), PLSC 002(3), PLSC 419 US(3), PLSC 490(3), SOC 409 US(3), SOC 419(3), SOC 422(3), or SOC 423(3) (Sem: 5-8)

### **SUPPORTING COURSES AND RELATED AREAS (12 credits)**

Select 12 credits, in consultation with adviser, from University-wide offerings according to student's career plan (Sem: 5-8)

**[1]** A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011

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## **Business**

*Abington College (BSBAB)*

*Altoona College (BSBAL)*

*Berks College (BSBBL)*

*University College (BSBCC): Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York University College (BSBIC) via the World Campus*

The Bachelor of Science in Business (B.S.B.) is a professionally oriented business degree program that combines the theoretical underpinnings of core business disciplines, notably management, marketing, finance, and supply chain management, with applied study in a practical setting. Through the choice of an 18-credit option, students specialize in a key business sector. Students also develop written and oral communication skills throughout the program, acquire contemporary technology skills, and engage in active and collaborative learning. The degree allows students to become familiar with the

unique business environments of their local communities, a design that sets the degree apart from other business degrees offered within the University and throughout the Commonwealth.

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

**ACCOUNTING OPTION:** This option prepares students to pursue careers in business with an emphasis on the areas of financial and managerial accounting, systems and controls, auditing, and taxation.

**ENTREPRENEURSHIP OPTION:** This option prepares students to pursue entrepreneurial careers with emphasis on idea generation, opportunity analysis, new product creation, and business plan development.

**FINANCIAL SERVICES OPTION:** This option prepares students to pursue careers in financial organizations with emphasis on wealth management, tax planning, risk management, and financial analysis.

**HEALTH SERVICES OPTION:** This option prepares students to pursue careers in the health services sector with emphasis on the financial and administrative aspects of health care enterprises.

**INDIVIDUALIZED BUSINESS OPTION:** This option provides the opportunity for students to pursue an approved business-focused interdisciplinary program of study.

**MANAGEMENT AND MARKETING OPTION:** This option prepares students to pursue careers in business organizations with an emphasis on the skills and knowledge necessary for the business professional to function in community and regional centers of commerce.

**Entrance Requirement:** Completion of MATH 022 or MATH 040, 041, 110, 140.

For the B.S. degree in Business, a minimum of 120 credits is required, 15 of which must be at the 400 level.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits  
(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in front of *Bulletin*.)

**FIRST-YEAR SEMINAR:**  
(Included in ELECTIVES or GENERAL EDUCATION course selection)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**  
(Included in ELECTIVES or GENERAL EDUCATION course selection)

**WRITING ACROSS THE CURRICULUM:**  
(Included in REQUIREMENTS FOR THE MAJOR)

**ELECTIVES:** 10 credits

**REQUIREMENTS FOR THE MAJOR:** 77 credits  
(This includes 12 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses.)

**COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS):** 59 credits

**PRESCRIBED COURSES** (41 credits)

ECON 102 GS(3) (Sem: 1-4)  
ACCTG 211(4), ECON 104 GS(3), MIS 204(3) (Sem: 3-4)  
BA 321(3)[1], BA 322(3)[1], BA 420(1)[1], FIN 301(3)[1], MGMT 301(3)[1], MKTG  
301(3)[1], SCM 301(3)[1] (Sem: 5-6)  
IB 303 IL(3)[1] (Sem: 5-8)  
BA 421(3)[1], BA 422(3)[1] (Sem: 7-8)

**ADDITIONAL COURSES** (15-18 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)  
SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-4)  
BA 243(4) or BA 241(2) and BA 242(2) (Sem: 3-4)  
Select 3 or 6 credits from BA 495A(3 or 6)[1], BA 495B(3 or 6)[1] (Sem: 7-8)

**SUPPORTING COURSES AND RELATED AREAS** (0-3 credits)

Select 0-3 credits from 400-level business courses from: ACCTG, BA, ECON, ENTR, FIN, FINSV, HPA, IB, MGMT, MIS, MKTG, RM, or SCM [1] (Sem: 7-8)

**REQUIREMENTS FOR THE OPTION:** 18 credits [1]

**ACCOUNTING OPTION:** (18 credits)

**PRESCRIBED COURSES** (9 credits)

ACCTG 404(3), ACCTG 471(3), ACCTG 472(3) (Sem: 5-6)

**ADDITIONAL COURSES** (6 credits)

ACCTG 403(3) or 403W(3) (Sem: 7-8)  
ACCTG 405(3) or FINSV 411(3) (Sem: 7-8)

**SUPPORTING COURSES AND RELATED AREAS** (3 credits)

Select 3 credits of 400-level courses from: ACCTG, BA, ECON, ENTR, FIN, FINSV, HPA, IB, MGMT, MIS, MKTG, RM, or SCM (Sem: 7-8)

**ENTREPRENEURSHIP OPTION:** (18 credits)

**PRESCRIBED COURSES** (9 credits)

ENTR 300(3), ENTR 320(3) (Sem: 5-6)  
ENTR 400(3) (Sem: 7-8)

**ADDITIONAL COURSES** (0-3 credits)

Select 0-3 credits in CAS 352(3) or ENGL 419(3) (Sem: 7-8)

**SUPPORTING COURSES AND RELATED AREAS** (6-9 credits)

Select 6 to 9 credits of 400-level ENTR courses in consultation with your advisor (Sem: 5-8)

**FINANCIAL SERVICES OPTION:** (18 credits)

**PRESCRIBED COURSES** (3 credits)

FIN 420(3) (Sem: 5-8)

**ADDITIONAL COURSES** (3 credits)

Select 3 credits from ACCTG 405 or FINSV 411 (Sem: 5-8)

**SUPPORTING COURSES AND RELATED AREAS** (12 credits)

Select 12 credits in 300 or 400-level (with at least 3 credits at the 400-level) from ACCTG, FIN, FINSV or RM (Sem: 5-8)

**HEALTH SERVICES OPTION:** (18 credits)

(Minimum 6 credits at the 400-level)

**PRESCRIBED COURSES** (6 credits)

HPA 101(3) (Sem: 5-6)

HPA 332(3) (Sem: 5-8)

**ADDITIONAL COURSES** (0-3 credits)

Select 0-3 credits from BBH 302(3), CAS 352(3), CAS 404(3), ENGL 416(3), ENGL 419(3), LER 424(3), LER 472(3), PSYCH 281 GS(3), PSYCH 484(3), or PSYCH 485(3) (Sem: 5-8)

**SUPPORTING COURSES AND RELATED AREAS** (9-12 credits)

Select 3-9 credits from 300 or 400-level HPA courses (Sem: 5-8)

Select 0-6 credits of 300-400-level courses from ACCTG, BA, ECON, ENTR, FIN, FINSV, HPA, IB, MGMT, MKTG, MIS, RM or SCM (Sem: 6-8)

**INDIVIDUALIZED BUSINESS OPTION:** (18 credits)

Select 18 credits of study (with at least 3 credits at the 400-level) as submitted by the student and approved by the campus BSB Program Coordinator (Sem: 5-8)

**MANAGEMENT AND MARKETING OPTION:** (18 credits)**ADDITIONAL COURSES** (0-6 credits)

Select 0-6 credits from the following: BA 250(3), ENGL 419(3), MKTG 220(3) or one of the following, CAS 250(3), CAS 252(3), CAS 352(3), CAS 404(3) (Sem: 5-8)

**SUPPORTING COURSES AND RELATED AREAS** (12-18 credits)

A minimum of 3 credits of supporting courses must be selected at the 400-level.

Select 3 credits from 300 or 400-level MGMT courses (Sem: 5-8)

Select 3 credits from 300 or 400-level MKTG courses (Sem: 5-8)

Select 6-12 additional credits in 300 or 400-level courses from MGMT or MKTG courses (Sem: 6-8)

**[1]** A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-04-065

Review Date: 01/14/2014

UCA Revision #1: 8/3/06

**Comments**

## Earth Sciences

*University Park, College of Earth and Mineral Sciences (EARTH)*PROFESSOR PETER J. HEANEY, *Associate Head for Undergraduate Programs*

This major provides a comprehensive program in environmental sciences based on a strong emphasis in earth sciences. It is especially directed toward study of the problems that arise from the complex interaction of man's technological and social activities with the natural environment. Graduates are in demand for positions in government, industry, and consulting. Professional activities include gathering and evaluating data on environments; management and coordination of specialized programs in environmental control and modification; and industrial and government planning. Suitable choices of courses may qualify students for graduate work in several fields.

For the B.S. degree in Earth Sciences, a minimum of 123 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in this bulletin.)

**FIRST-YEAR SEMINAR:**

(Included in REQUIREMENTS FOR THE MAJOR)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**

(Included in GENERAL EDUCATION course selection)

**WRITING ACROSS THE CURRICULUM:**

(Included in REQUIREMENTS FOR THE MAJOR)

**REQUIREMENTS FOR THE MAJOR:** 99-101 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GWS courses.)

**PRESCRIBED COURSES** (31 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), EMSC 100 GWS(3)**[71]**, MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-2)  
PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 1-4)  
BIOL 110(4) (Sem: 3-4)

**ADDITIONAL COURSES** (36 credits)

ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)

Select 15 credits of introductory earth science from the following list (courses may not double count with minor requirements): EARTH 002 GN(3), EARTH 101 GN(3), EARTH 103 GN(3), EARTH 105 GN(3), METEO 003 GN(3), METEO 022(2), GEOG 030 GS;IL(3), GEOG 110 GN(3), GEOG 111 GN(3), GEOG 115 GN(3), GEOG 160(3), GEOSC 001(3), GEOSC 021 GN(3), SOILS 101 GN(3) (Sem: 1-6)

Select 15 credits**[1]** of advanced earth science from the following list (courses may not double count with minor requirements): GEOG 430(3), GEOG 438(3), GEOG 412(3), GEOSC 204(4), GEOSC 320(3), GEOSC 340(3), GEOSC 402(3), GEOSC 416(3), METEO 300(4), METEO 431(3), METEO 475(3) (Sem: 3-8)

Select 3 credits of writing-intensive courses from within Earth and Mineral Sciences to include, but not limited to: GEOG 412(3), GEOG 310(3), GEOSC 402(3), GEOSC 470(3), METEO 471(3) (Sem: 7-8)

**SUPPORTING COURSES AND RELATED AREAS** (32-34 credits)

Select 3-4 credits of advanced math, statistics, computer science in consultation with an adviser (Sem: 5-8)

Select 3 credits of field, laboratory experience in consultation with an adviser (Sem: 5-8)

Select 8-9 credits in other approved courses (Students may apply 6 credits of ROTC) (Sem: 5-8)

Select 18 credits**[1]**, in consultation from an adviser, from one of the following Earth and Mineral Sciences interdisciplinary minors:

CLIMATOLOGY

MARINE SCIENCE

WATERSHEDS & WATER RESOURCES

EARTH SYSTEMS

GLOBAL BUSINESS STRATEGIES FOR EARTH AND ENVIRONMENTAL INDUSTRIES

**[1]** A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.



**[71]** The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EM SC 100S GWS.

Last Revised by the Department: Summer Session 2000

Blue Sheet Item #: 28-05-017

Review Date: 1/20/04

UCA Revision #1: 8/3/06

Department Head Change: 4/12/05

EM

## **General Engineering (G E)**

*Abington College*

*University College, Penn State Brandywine, Penn State DuBois, Penn State Hazleton*

*PROFESSOR SVEN BILÉN, Head of School of Engineering, Design, Technology and Professional Programs (SEDTAPP)*

*PROFESSOR IVAN E. ESPARRAGOZA, Director of Engineering Technology and Commonwealth Engineering*

*PROFESSOR ROBERT AVANZATO, Program Coordinator, Penn State Abington*

*PROFESSOR ASAD AZEMI, Program Coordinator, Penn State Brandywine*

*PROFESSOR DAUDI WARYOBA, Program Coordinator, Penn State DuBois*

*PROFESSOR KATHRYN W. JABLOKOW, Program Coordinator, Penn State Great Valley*

*PROFESSOR WIESLAW GREBSKI, Program Coordinator, Penn State Hazleton*

The General Engineering program provides students with a broad foundation in engineering with specialization in a technically and professionally relevant topic. Students must choose the Multidisciplinary Engineering Design option at Abington, Brandywine and Great Valley campuses, Applied Materials option at the DuBois campus or the Alternative Energy and Power Generation option at the Hazleton campus. From this degree program, students will acquire the ability to work as members of a team toward successful attainment of a common goal, thus preparing them to work in for-profit or nonprofit organizations, or to further their studies in graduate school. Typical employment for General Engineering graduates includes positions such as engineer, product engineer, process engineer, manufacturing engineer, development engineer, and materials engineer. With employment opportunities such as these and others, graduates of the General Engineering program can attain professional and economically sustaining employment in their desired regional area. This degree program develops written and oral communication skills, culminating in a two-semester senior design course sequence consisting of a project based largely on student interest and faculty input.

### **Program Educational Objectives:**

The educational objectives of the General Engineering program are designed to prepare graduates who, during the first few years of professional practice will

1. Be employed in public or private sectors in fields such as design, research and

- development, experimentation and testing, manufacturing, and technical sales.
2. Demonstrate a level of competence and expertise that may lead to an increasing level of responsibility and leadership within their respective organizations.
  3. Communicate effectively and work collaboratively in multidisciplinary and multicultural work environments
  4. Recognize and grow an appreciation of the global, environmental, social, and ethical contexts of their work.
  5. Be committed to lifelong learning to enhance their careers and provide flexibility in responding to changing social and technical environments, which will enable graduates to pursue advanced degrees or certificate programs.

### **Program Outcomes (Student Outcomes):**

Graduates of the General Engineering program shall be able to:

- a) Apply knowledge of mathematics, science, and engineering
- b) Design and conduct experiments, as well as to analyze and interpret data
- c) Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d) Function on multidisciplinary teams
- e) Identify, formulate, and solve engineering problems
- f) Demonstrate an understanding of professional and ethical responsibility
- g) Communicate effectively
- h) Demonstrate the understanding of the impact of engineering solutions in a global, economic, environmental, and societal context
- i) Recognize the need for, and an ability to engage in life-long learning
- j) Demonstrate knowledge of contemporary issues
- k) Use the techniques, skills, and modern engineering tools necessary for engineering practice.

In addition to the minimum grade point average (GPA) requirements\* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in General Engineering, a minimum of 127 credits are required. This baccalaureate program in General Engineering is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in front of *Bulletin*.)

**FIRST-YEAR SEMINAR:**

(Included in REQUIREMENTS FOR THE MAJOR.)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**

(Included in GENERAL EDUCATION course selection.)

**WRITING ACROSS THE CURRICULUM:**

(Included in REQUIREMENTS FOR THE MAJOR.)

**REQUIREMENTS FOR THE MAJOR:** 109 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

**COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 71 credits**

**PRESCRIBED COURSES: 45 credits**

CHEM 110 GN(3)[1], CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), EDSGN 100(3), MATH 140 GQ(4)[1], MATH 141 GQ(4)[1], PHYS 211 GN(4)[1] (Sem: 1-2)  
EMCH 211(3)[1], EMCH 213(3), MATH 231(2), MATH 251(4)[1], PHYS 212 GN(4)[1], PHYS 214 GN(2) (Sem: 3-4)  
ENGR 490(1), ENGR 491W(3) (Sem: 7-8)

**ADDITIONAL COURSES: 22 credits**

Select 1 credit of First-Year Seminar (Sem:1-2)  
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 1-2)  
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)  
CMPSC 121 GQ(3) or CMPSC 201 GQ(3) (Sem: 3-4)  
ECON 102 GS(3) or ECON 104 GS(3) (Sem: 3-4)  
ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 3-4)  
ME 300(3)[1] or EME 301(3)[1] (Sem: 3-4)  
ENGR 350(3)[1], EMCH 407(3)[1], or EMCH 461(3)[1] (Sem: 5-6)

**SUPPORTING COURSES AND RELATED AREAS: 4 credits**

Select 4 credits in General Technical Electives from the program approved list.

**REQUIREMENTS FOR THE OPTION: 38 credits**

**APPLIED MATERIALS OPTION: (38 credits)**

**PRESCRIBED COURSES: 38 credits**

EMCH 212(3), ENGR 320(3), MATSE 201(3)[1], MATSE 400(3), MATSE 413(3), STAT 200 GQ(4) (Sem: 5-6)  
ENGR 421(4), ENGR 450(3), MATSE 402(3), MATSE 411(3), MATSE 417(3), MATSE 430(3) (Sem: 7-8)

**ALTERNATIVE ENERGY AND POWER GENERATION OPTION: (38 credits)**

**PRESCRIBED COURSES: 38 credits**

EE 210(4)[1] (Sem: 3-4)  
EE 314(3), EGEE 302(3), EME 303(3), ME 345(4), NUCE 401(3) (Sem: 5-6)  
EE 485(3), EE 488(3), EGEE 420(3), EGEE 437(3), EGEE 438(3), EGEE 441(3) (Sem: 7-8)

**MULTIDISCIPLINARY ENGINEERING DESIGN OPTION (38 credits)**

**PRESCRIBED COURSES: 38 credits**

CMPEN 271(3), EE 210(4), EMCH 212(3)[1] (Sem: 3-4)  
CMPEN 331(3), CMPEN 472(3), EE 310(4)[1], EE 352(4)[1] (Sem: 5-6)  
CMPEN 454(3), EDSGN 401(3), EDSGN 410(4)[1], EDSGN 495(1), ENGR 407(3) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-03-033

Review Date: 11/08/2011

R & T: Approved 5/24/2013

# Human Development and Family Studies

*Penn State Altoona (HFSAL)*

*Penn State Harrisburg (HFSCA)*

*University College (HFSCC): Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Mont Alto, Penn State Shenango, Penn State Worthington-Scranton, Penn State York*

*College of Health and Human Development (HD FS)  
World Campus*

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR DOUGLAS M. TETI, *Head of the Department*

This major is a multidisciplinary program that examines the development of individuals and families across the life span. It enables students to prepare for professional, managerial, or scientific roles in health and human services professions, in public and nonprofit agencies, and in business and industry, as well as for advanced professional or graduate study. Students obtain a broad background in individual and family development across the life span. Courses emphasize biological, psychological, social/cultural, and economic aspects of development. Through course work and undergraduate internships or research projects, students develop skills relevant to career objectives, such as counseling, human assessment, program planning and evaluation, and research.

Two options are available within the major: (1) Life Span Human Services option and (2) Life Span Developmental Science option. The introductory paragraph to each of the options includes a brief list of career opportunities. More extensive descriptions of career opportunities in both public and private sectors are available for the program.

**LIFE SPAN HUMAN SERVICES OPTION:** This option focuses on the acquisition and application of scientific knowledge about development and family functioning across the life span for the purposes of enhancing personal and family development. Courses emphasize: (1) understanding the biological, psychological, and social development across the life span, and the structuring and functioning of families; (2) understanding basic theoretical and methodological issues; and (3) the development of applied skills in intervention and evaluation, prevention, and in the formulation of social policy. An approved field experience in a setting that serves children, youth, adults, or the aged is required for this option. Typical employment settings include preschools, daycare centers, hospital programs for children, youth, and families, institutional and community mental health programs for individuals and families, programs for abused or neglected children and adolescents, women's resource centers, human resources programs, employee assistance programs, nursing homes, area agencies on aging and other community settings for older adults, and public welfare and family service agencies. Typical postgraduate pursuits of students completing this option include graduate study in human development, family studies, psychology, or sociology, or advanced professional training in psychology, law, behavioral health, counseling or social work.

**LIFE SPAN DEVELOPMENTAL SCIENCE OPTION:** This option focuses on the understanding of contemporary methodological approaches to the acquisition of scientific knowledge about individual development over the life span and about family development. This option provides preparation for advanced training in careers in developmental or family research, teaching at a college or university, or for professional careers that require graduate training. Courses within this option emphasize a thorough understanding of the theory and methods of developmental and family theory and research. An approved, multi-semester research practicum is an integral component of this option. Typical postgraduate pursuits of students completing this option include graduate study in human development, family studies, psychology, or sociology, or advanced professional training in psychology, law, behavioral health, social work, or in other programs related to services for individuals and families.

For the B.S. degree in Human Development and Family Studies, a minimum of 120 credits is required.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. HD FS requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits  
(3-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in this bulletin.)

**FIRST-YEAR SEMINAR:**  
(Included in ELECTIVES or GENERAL EDUCATION course selection)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**  
(Included in ELECTIVES, GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

**WRITING ACROSS THE CURRICULUM:**  
(Included in REQUIREMENTS FOR THE MAJOR)

**ELECTIVES:** 3-5 credits

**REQUIREMENTS FOR THE MAJOR:** 73-76 credits  
(This includes 3-4 credits of General Education GQ courses.)

**COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS):** 30-31 credits

**PRESCRIBED COURSES** (18 credits)**[1]**  
HDFS 129 GS(3), HDFS 301(3), HDFS 311(3), HDFS 312(3), HDFS 315 US(3)**[93]**, HDFS 418(3) (Sem: 3-6)

**ADDITIONAL COURSES** (12-13 credits)**[1]**  
Select 6 credits from HDFS 229 GS(3), HDFS 239 GS(3), HDFS 249 GS(3) (Sem: 1-4)  
STAT 200 GQ(4) or EDPSY 101 GQ(3) (Sem: 1-4)  
Select 3 credits of United States Cultures (US)**[92]** (Sem: 4-8)

**REQUIREMENTS FOR THE OPTION:** 43-45 credits

**LIFE SPAN HUMAN SERVICES OPTION:** (43-45 credits)

**PRESCRIBED COURSES** (9 credits)[1]  
HDFS 411(3), HDFS 414(3), HDFS 455(3) (Sem: 5-8)

**ADDITIONAL COURSES** (22-24 credits)[1]  
Select 3 credits from HDFS 428(3), HDFS 429(3), HDFS 433(3) or HDFS 445(3) (Sem: 5-8)  
Select 6 credits from 300- or 400-level HDFS courses (Sem: 5-8)  
Select 13-15 credits from (a) or (b)  
(a) Approved field practice in a human service setting: HDFS 490(2), HDFS 495A(9), HDFS 495B(3) (Sem: 5-8)  
(b) Approved group project or field practice in human service setting: HDFS 401(3), HDFS 402(4), HDFS 495C(6-8) (Sem: 5-8)

**SUPPORTING COURSES AND RELATED AREAS** (12 credits)  
Select 12 credits (minimum of 6 credits at the 400 level) in consultation with adviser from University-wide offerings that develop competency in the option (a grade of C or better is required in any HDFS course taken to satisfy this requirement) (Sem: 5-8)

**LIFE SPAN DEVELOPMENTAL SCIENCE OPTION:** 45 credits

**PRESCRIBED COURSES** (6 credits)[1]  
HDFS 494(6) or HDFS 494H(6) (Sem: 5-8)

**ADDITIONAL COURSES** (21 credits)[1]  
Select 6 credits from HDFS 428(3), HDFS 429(3), HDFS 433(3), HDFS 445(3) (Sem: 5-8)  
Select 15 credits (minimum of 9 credits at the 400-level) from HDFS courses (Sem: 5-8)

**SUPPORTING COURSES AND RELATED AREAS** (18 credits)  
Select 18 credits (minimum of 9 credits at the 400 level) in consultation with adviser from University-wide offerings that develop competency in option (a grade of C or better is required in any HD FS course taken to satisfy this requirement) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[92] This course is in addition to the 6 credits of United States Cultures and International Cultures.

[93] This course fulfills the University's United States Cultures requirement.

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-02-111

Review Date: 10/11/05

HH

## Letters, Arts, and Sciences

*Abington College (LASAB)*

*Altoona College (LASAL)*

*University College (LASCC): Penn State Brandywine, Penn State DuBois, Penn State Greater Allegheny, Penn State Hazleton, Penn State Mont Alto, Penn State Shenango, Penn State Worthington Scranton*

*University Park, College of the Liberal Arts (LAS)*

*World Campus*

Letters, Arts, and Sciences is a multi-disciplinary, theme-oriented, and student-designed

major leading to a bachelor of arts degree. The major consists of 36 credits, divided into two sections. The core (12 credits) consists of 3 credits each in the following: research methods/projects; communication skills; theory/application; and critical analysis. The additional courses (24 credits) consist of courses directed toward the student's theme, 15 credits of which must be at the 400 level.

In order to be eligible for entrance to the major, the student must submit a proposal. In consultation with an LAS adviser, the student formulates a proposal designing a program that investigates a theme from the viewpoint of at least three different subject areas. Students may not duplicate existing majors from any academic area. An important standard for entrance to the Letters, Arts, and Sciences major is the student's ability to design a program with academic integrity worthy of a bachelor of arts degree.

For the B.A. degree in Letters, Arts, and Sciences, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

**Early Admission Program for Professional Schools:** If a student is accepted and enrolled as a degree candidate in a professional postgraduate degree program requiring three years or more to complete (such as medical school, dental school, law school, theological seminary, etc.) and if that student completes 94 undergraduate credits at Penn State including General Education, B.A. requirements, and the LAS 12-credit core requirements, that student may use up to 30 credits from the professional school to complete the B.A. in LAS.

It must be emphasized that only top students are accepted into professional school programs on such an early admission basis and that not every professional school has such a policy. Students must have enrolled in LAS prior to attending the professional school to request graduation in LAS.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits  
(See description of General Education in this bulletin.)

**FIRST-YEAR SEMINAR:**  
(Included in ELECTIVES or GENERAL EDUCATION course selection)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**  
(Included in ELECTIVES or GENERAL EDUCATION course selection)

**WRITING ACROSS THE CURRICULUM:**  
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

**ELECTIVES:** 15 credits

**BACHELOR OF ARTS DEGREE REQUIREMENTS:** 24 credits  
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)  
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

**REQUIREMENTS FOR THE MAJOR:** 36 credits **[1]**

**ADDITIONAL COURSES** (24 credits)

In consultation with adviser, select 24 credits from University-wide offerings to include:  
a) 12 credits at the 400 level representing at least three different subject areas;  
b) a 3 credit 400-level capstone course (to be selected in consultation with adviser);  
c) at least 9 credits (of the 24 total) from the humanities and social sciences. (Sem: 1-8)

### **SUPPORTING COURSES AND RELATED AREAS (12 credits)**

In consultation with adviser, select 3 credits in research methods/projects from courses that involve research methodology or that focus on a research project; select 3 credits in communication skills from courses that focus on expression including those in verbal, symbolic, and written skills; select 3 credits in theory/application from courses that focus on theory, principle, central concepts, or fundamental issues; select 3 credits in critical analysis from courses that focus on evaluation, synthesis, and analysis. (Sem: 1-8)

**[1]** A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2008

Blue Sheet Item #: 36-04-042

Review Date: 1/15/08

Reviewed by Publications: 06/23/06

LA

## **Associate Degrees**

# **Business Administration**

*Abington College (2BAAB)*

*Altoona College (2BAAL)*

*Berks College (2BABL)*

*Capital College (2BACA)*

*University College (2BACC): Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Hazleton, Penn State Mont Alto, Penn State New Kensington, Penn State Lehigh Valley, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York*

*University College (2BACC): Via World Campus*

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

The associate degree program in Business Administration provides an introductory foundation to core aspects of the business environment that prepares graduates for future baccalaureate study in business or for direct entry into the work place. The primary objective of this major is to provide a business-oriented program with sufficient communicative and mathematical skills, socially relevant course work, and specific business specialties to develop a well-rounded and knowledgeable graduate.

Students should work closely with academic advisers to schedule course work required to transition to baccalaureate business programs.

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.



For the Associate in Science degree in Business Administration, a minimum of 60 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits

(9 credits of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in this bulletin.)

**REQUIREMENTS FOR THE MAJOR:** 48-50 credits

(This includes 3 credits of GQ General Education courses and 6 credits of GWS General Education courses.)

**PRESCRIBED COURSES** (13 credits)

CAS 100 GWS(3) (Sem: 2-4)

ACCTG 211(4), ENGL 202D GWS(3)[1], MIS 204(3) (Sem: 2-4)

**ADDITIONAL COURSES** (23-24 credits)

ENGL 15 GWS(3)[1] or ENGL 30 GWS(3)[1] (Sem: 1-2)

MATH 21 GQ(3), MATH 22 GQ(3), or MATH 110 GQ(4) (Sem: 1-2)

BA 243(4) or BA 241(2) and BA 242(2) (Sem: 1-4)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-4)

MGMT 301(3)[1] or MGMT 301W(3)[1] (Sem: 3-4)

MKTG 301(3)[1] or MKTG 301W(3)[1] (Sem: 3-4)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

**SUPPORTING COURSES AND RELATED AREAS** (12-13)

Select 12-13 credits from: BA 100(3); BA 250(3); BA 364(3); CAS 250(3) or CAS 252(3); CAS 352(3); MATH 22 GQ(3); MATH 110 GQ(4); ACCTG 300 to 399(3); ECON 100 to ECON 399(3); ENTR 100 to 399(3); FIN 100 to 399(3); HPA 100 to 399(3); IB 303 IL(3); LER 100 to 399(3); MGMT 100 to 399(3); MKTG 100 to 399(3); MIS 100 to 399(3); RM 100 to 399(3); or SCM 200 to 399(3) (Sem: 1-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-001

Review Date: 1/10/17

UCA Revision #1: 8/9/06

UCA Revision #2: 7/26/07

UC

## Human Development and Family Studies

*Altoona College (2FSAL)*

*University College (2FSCC): Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Mont Alto, Penn State Schuylkill, Penn State Shenango, Penn State Worthington Scranton, Penn State York*

*University Park, College of Health and Human Development (2EHFS): offered via World Campus*

Not all options are available at every campus. Contact the campus you are interested in

attending to determine which options are offered.

*For more information, contact 119 Health and Human Development Building, University Park campus.*

This major integrates practical and academic experiences to provide the student with entry-level professional competence in the human service field. The objective of the major is to offer a general education background, a knowledge base in life span and family development, and a core of professional skills that may be applied in program planning and service delivery activities. The major is offered part-time, in the evening, and through independent learning.

**ADULT DEVELOPMENT AND AGING SERVICES OPTION:** This option is designed to prepare students for a wide variety of service roles in mental health facilities, nursing homes and other institutions for the aged, area agencies on aging, public welfare and family service agencies, women's resource centers, human relations programs, employee assistance programs and customer services and consumer relations programs in business and industry. An improved field experience in any of a wide variety of settings that serve adults, the aged, and their families, is required for this option.

**CHILDREN, YOUTH, AND FAMILY SERVICES OPTION:** This option is designed to prepare students for service roles in preschools; day care centers; hospitals; institutional and community programs for emotionally disturbed, abused, or neglected children and adolescents; as well as a variety of public welfare and family service agencies. An approved field experience in a children, youth, or family services setting is required for this option.

**EARLY CHILDHOOD CARE AND EDUCATION OPTION:** This option is designed to increase professional capabilities in child care training in regard to issues of quality, affordability, and accessibility of programming. The primary foci are on language, literacy, and science reasoning. In the course work, there is a blending of theory and practice that requires experience in a group setting with young children. Courses concentrate on infants and toddlers as well as older preschoolers. Each course has a strong parent/family communications component and stresses observation techniques appropriate for assessing and evaluating the development of young children.

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Human Development and Family Studies, a minimum of 60 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits  
(15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in this bulletin.)

**ELECTIVES:** 0-3 credits

**REQUIREMENTS FOR THE MAJOR:** 51-55 credits  
(This includes 15 credits of General Education courses; 6 credits of GWS courses; 3 credits of GS courses; 3 credits of GN courses; and 3 credits of GQ courses.)

**COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS):** 30-31 credits

**PRESCRIBED COURSES** (21 credits)  
CAS 100 GWS(3), ENGL 015 GWS(3), HDFS 129 GS(3)[11], HDFS 301(3)[11], PSYCH 100 GS(3)  
(Sem: 1-2)

HDFS 395(6) (Sem: 3-4)

**ADDITIONAL COURSES** (9-10 credits)

EDPSY 101 GQ(3)[1], STAT 100 GQ(3)[1], or STAT 200 GQ(4)[1] (Sem: 1-2)

HDFS 315 US(3)[1] or SOC 030 GS(3) (Sem: 3-4)

BIOL 141 GN(3), BIOL 155 GN(3), or BISC 004 GN(3) (Sem: 3-4)

**REQUIREMENTS FOR THE OPTION:** 21-24 credits

**ADULT DEVELOPMENT AND AGING SERVICES OPTION:** (21 credits)

**PRESCRIBED COURSES** (6 credits)

HDFS 249 GS(3)[1], HDFS 311(3)[1] (Sem: 1-4)

**SUPPORTING COURSES AND RELATED AREAS** (15 credits)

Select 15 credits in consultation with the adviser from University-wide offerings that enhance competence in the option (Sem: 1-4)

**CHILDREN, YOUTH, AND FAMILY SERVICES OPTION:** (24 credits)

**PRESCRIBED COURSES** (9 credits)

HDFS 229 GS(3)[1], HDFS 239 GS(3)[1], HDFS 311(3)[1] (Sem: 1-4)

**SUPPORTING COURSES AND RELATED AREAS** (15 credits)

Select 15 credits in consultation with the adviser from University-wide offerings that enhance competence in the option (Sem: 1-4)

**EARLY CHILDHOOD CARE AND EDUCATION OPTION:** (24 credits)

**PRESCRIBED COURSES** (24 credits)

HDFS 229 GS(3)[1], HDFS 230(3)[1], HDFS 231(3)[1], HDFS 311(3)[1] (Sem: 1-2)

HDFS 232(3)[1], HDFS 233(3)[1], HDFS 234(3)[1], HDFS 330(3)[1] (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-013B

Review Date: 1/10/17

UCA Revision #1: 8/8/06

HH

## Information Sciences and Technology

*Berks College (2ISBL)*

*Continuing Education, University Park (2 IST)*

*University College: Penn State DuBois, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York (2ISCC)*

*World Campus*

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR MARY BETH ROSSON, *Associate Dean for Graduate and Undergraduate Studies*

This associate degree major is structured to prepare graduates for immediate and continuing employment opportunities in the broad disciplines of information science and technology. This includes positions such as application programmers, associate systems designers, network managers, Web designers and administrators, or information systems support specialists. Specifically, the major is designed to ensure a thorough knowledge of information systems and includes extensive practice using contemporary technologies in the creation, organization, storage, analysis, evaluation, communication, and transmission of information. The major fosters communications, interpersonal, and group interaction skills through appropriate collaborative and active learning projects and experiences. Technical material covers the structure of database systems, Web and multi-media systems, and considerations in the design of information systems. Team projects in most courses, a required internship, and a second-year capstone experience provide additional, focused venues for involving students in the cutting-edge issues and technologies in the field.

The Associate of Science in IST degree will be offered at multiple campuses within the Penn State system of colleges and campuses. Note that not all options will be available at all locations.

**Baccalaureate Option:** This option provides maximum articulation with the baccalaureate degree. Students who complete this option will meet all lower division requirements for the baccalaureate degree. This is not the case with the remaining options, although the degree of articulation is quite high for all associate degree options.

**Generalized Business Option:** This option enables students to specialize in the general business areas of accounting, marketing, and management.

**Individualized Option:** This option enables students to work closely with an adviser to develop a plan of study that meets the dual objectives of allowing a flexible academic program and providing breadth of technical specialization. An example would be a program where a student would take some of the courses listed in the Web Administration option and the remainder in the Software option.

**Software Option:** This option prepares graduates for entry-level programming support positions in industry. Students take courses in Web programming, database programming, and other contemporary programming environments.

**Networking Option:** This option prepares graduates for positions as entry-level computer network administrators. Students take courses in personal computer hardware, networking essentials, and network administration.

**Telecommunications Option:** This option prepares graduates for entry-level positions in the telecommunications industry. Students take courses in voice and data communications, protocols, networks, and wireless systems.

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in IST, a minimum of 60 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits  
(9-12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See the description of General Education in this bulletin.)

**ELECTIVES:** 4-7 credits

**REQUIREMENTS FOR THE MAJOR:** 44-46 credits

(This includes 9-12 credits of General Education courses, i.e., ALL options: 3 credits of GQ courses; 6 credits of GWS courses. The Baccalaureate Option also includes 3 credits of GS courses to equal a total of 12 credits that double count; the General Business Option also includes 0-3 credits of GS courses to equal 9-12 credits that double count.)

**COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS):** 29 credits

**PRESCRIBED COURSES** (25 credits)

CMPSC 101 GQ(3)[1] (Sem: 1-2)

CAS 100B GWS(3), IST 110 GS(3)[1], IST 111S(1)[1], IST 210(3)[1], IST 220(3)[1], IST 250(3)[1], ENGL 015 GWS(3) (Sem: 1-2)

IST 260(3)[1] (Sem: 3-4)

**ADDITIONAL COURSES** (4 credits)

ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 3-4)

IST 295A(1)[1] or IST 295B(1)[1] (Sem: 3-4)

**REQUIREMENTS FOR THE OPTION:** 15-17 credits

**BACCALAUREATE OPTION:** (17 credits)

**PRESCRIBED COURSES** (13 credits)

IST 230(3)[1] and IST 240(3)[1] (Sem: 3-4)

ECON 102 GS(3) (Sem: 3-4)

STAT 200 GQ(4) (Sem: 3-4)

**ADDITIONAL COURSES** (4 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)

**GENERALIZED BUSINESS OPTION:** (15-16 credits)

**ADDITIONAL COURSES** (15-16 credits)

Select 15 credits in consultation with the adviser from the following list: (Sem:1-4)

ACCTG 151(3), ACCTG 152(3), ACCTG 153(3), ACCTG 160(3), ACCTG 170(3), ACCTG 211(4), BA 250(3), MKTG 220(3), MKTG 221(3), MKTG 310(3), MKTG 327(3), MGMT 100(3), MGMT 150(3), MGMT 321(3), MGMT 341(3)

ECON 102 GS(3), ECON 104 GS(3), or ECON 014 GS(3)

MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3)

**INDIVIDUALIZED OPTION:** (15 credits)

**SUPPORTING COURSES AND RELATED AREAS** (15 credits)

Select 15 credits in consultation with an adviser that follow a coherent theme in information sciences and technology with a grade of C or better required for all IST[1] courses. (Sem: 1-4)

**SOFTWARE OPTION:** (15 credits)

**PRESCRIBED COURSES** (12 credits)

CMPSC 302(3) (Sem: 2-4)

IST 211(3)[1], IST 247(3)[1], and IST 256(3)[1] (Sem: 3-4)

**ADDITIONAL COURSES** (3 credits)

MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3) (Sem: 1-2)

**NETWORKING OPTION:** (15 credits)

**PRESCRIBED COURSES** (12 credits)

IST 225(3)[1], IST 226(3)[1], IST 227(3)[1], and IST 228(3)[1] (Sem: 3-4)

**ADDITIONAL COURSES** (3 credits)

MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3) (Sem: 1-2)

**TELECOMMUNICATIONS OPTION:** (15 credits)**PRESCRIBED COURSES** (12 credits)

IST 221(3)[1], IST 222(3)[1], IST 223(3)[1], and IST 224(3)[1] (Sem: 3-4)

**ADDITIONAL COURSES** (3 credits)

MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3) (Sem: 1-2)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-069A

Review Date: 1/10/2017

UCA Revision #2: 7/27/07

IS

## Letters, Arts, and Sciences

*Abington College (2LAAB)*

*Altoona College (2LAAL)*

*Penn State Erie, The Behrend College (2LABC)*

*Berks College (2LABL)*

*Penn State Harrisburg (2LACA)*

*University College (2LACC): Penn State Brandywine, Penn State DuBois, Penn State Fayette,*

*Penn State Hazleton, Penn State Mont Alto, Penn State New Kensington, Penn State*

*Schuylkill, Penn State Shenango Valley, Penn State Wilkes-Barre, Penn State*

*Worthington-Scranton*

*University Park, College of the Liberal Arts (2 LAS)*

*World Campus*

The objectives of the Letters, Arts, and Sciences major are to broaden the student's understanding, interests, and skills; to help the student become a more responsible, productive member of the family and community; and to offer a degree program with sufficient electives to permit some specialization according to the student's interests or career plans. Letters, Arts, and Sciences is a complete two-year degree major. However, graduates who later seek admission to baccalaureate degree majors may apply baccalaureate credits toward the new degree.

In addition to a wide variety of baccalaureate majors offered at University Park campus, graduates of the Letters, Arts, and Sciences major may qualify for admission to the baccalaureate degree majors in Behavioral Sciences, Elementary Education, Humanities, or Public Policy offered at Penn State Harrisburg. Or they may qualify for any of a large number of baccalaureate degree majors offered by Penn State Erie, The Behrend College,

in business, the liberal arts, and sciences.

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Arts degree in Letters, Arts, and Sciences, a minimum of 60 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits  
(6 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in this bulletin.)

**ELECTIVES:** 15 credits

**REQUIREMENTS FOR THE MAJOR:** 30 credits#**[1]**  
(This includes 6 credits of General Education GWS courses.)

**PRESCRIBED COURSES** (6 credits)

ENGL 015 GWS(3) (Sem: 1-2)

CAS 100 GWS(3) (Sem: 3-4)

**ADDITIONAL COURSES** (3 credits)

ENGL 202A GWS(3), ENGL 202B GWS(3), ENGL 202C GWS(3), or ENGL 202D GWS(3) (Sem: 3-4)

**SUPPORTING COURSES AND RELATED AREAS** (21 credits)

Select 3 credits in any course designated as arts\* (Sem: 1-4)

Select 3 credits in any course designated as humanities\* (Sem: 1-4)

Select 3 credits in any course designated as social and behavioral sciences\* (Sem: 1-4)

Select 3 credits in any course designated as physical, biological, or earth sciences\* (Sem: 1-4)

Select 9 credits in any one of the following areas\*: arts, humanities, social and behavioral sciences, natural sciences and quantification, and foreign language skills. (If foreign language courses are chosen, it is recommended that these courses be in one foreign language sequence.) (Sem: 1-4)

**[1]**A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

#The required credits of General Education and Requirements for the Major must be baccalaureate-level courses. For students intending to seek admission to a baccalaureate program upon graduation, it is recommended that most, if not all, of the courses be at the baccalaureate level. For those students who will seek a bachelor of arts degree upon graduation from Letters, Arts, and Sciences, it is strongly recommended that a foreign language be taken since admission to a bachelor of arts program in the College of the Liberal Arts requires one college-level course, or the equivalent, in a foreign language.

\*Courses that will satisfy the arts, humanities, social and behavioral sciences, natural sciences, and quantification requirements are defined on the Letters, Arts, and Sciences checklist, which may be obtained from the College of the Liberal Arts associate dean for undergraduate studies at the University Park campus or from any Letters, Arts, and Sciences representative at other locations.

Last Revised by the Department: Spring Session 2017

Blue Sheet Item #: 45-04-071B

Review Date: 1/10/17

Reviewed by Publications: 06/23/06

LA

# Mechanical Engineering Technology

*Penn State Erie, The Behrend College*

*University College: Penn State DuBois, Penn State York (2 MET)*

*PROFESSOR SVEN BILÉN, Head, School of Engineering Design, Technology, and Professional Programs, Penn State University Park*

*PROFESSOR IVAN ESPARRAGOZA, Director of Engineering Technology and Commonwealth Engineering, Penn State University Park*

*PROFESSOR FREDRICK NITTERRIGHT, Program Coordinator, Penn State Erie, The Behrend College*

*PROFESSOR DOUGLAS MILLER, Program Coordinator, Penn State DuBois*

*PROFESSOR MARSHALL COYLE, Program Coordinator, Penn State York*

This major helps graduates prepare for technical positions in manufacturing, machine and tool design, computer drafting and design, computer integrated manufacturing, materials selection and processes, technical sales, and other related industries in mechanical applications. The primary objective of the program is to provide a broad foundation in mechanical systems and applications; computer systems in drafting (CAD), manufacturing (CAM), and automation and robotics (CIM); production and product design; mechanics, dynamics, and strength of materials.

## PROGRAM EDUCATIONAL OBJECTIVES

Graduates of the Associate Degree in Mechanical Engineering Technology program will:

1. Practice in the areas of applied design, manufacturing, testing, evaluation, technical sales, or 2D and 3D modeling.
2. Communicate effectively and work collaboratively in multi-disciplinary teams.
3. Learn and adapt to changes in a professional work environment.
4. Demonstrate a high standard of professional ethics and be cognizant of social concerns as they relate to the practice of engineering technology.

## STUDENT OUTCOMES

To support the achievement of educational objectives, the following student outcomes were established for the 2MET program. Students graduating from the 2MET program will

1. Be able to apply the knowledge, techniques, skills, and modern tools of mechanical engineering technology to narrowly defined mechanical engineering technology activities.
2. Be able to apply a knowledge of mathematics, science, engineering, and technology to mechanical engineering technology problems that require limited application of principles but extensive practical knowledge.
3. Be able to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
4. Be able to function effectively as a member of a technical team.
5. Be able to identify, analyze, and solve narrowly defined engineering technology



- problems.
6. Be able to communicate effectively regarding narrowly defined mechanical engineering technology activities.
  7. Be able to recognize the need for and an ability to engage in self-directed continuing professional development.
  8. Demonstrate an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
  9. Demonstrate a commitment to quality, timeliness, and continuous improvement.

#### Additional Program Specific criteria for 2MET

A. The application of applied mechanics, computer-aided drafting/design, experimental techniques/procedure to the fabrication, test, operation, or documentation of basic mechanical systems

B. The application of physics or chemistry to mechanical systems in a rigorous mathematical environment at or above the level of algebra and trigonometry

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Engineering Technology degree in Mechanical Engineering Technology, a minimum of 65 credits is required. This program is accredited by the Engineering Technology Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits

(12-15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in front of *Bulletin*.)

**REQUIREMENTS FOR THE MAJOR:** 54-64 credits

(This includes 12-15 credits of General Education courses: 3 credits of GN courses; 3 credits of GQ courses; 6 credits of GWS courses, 0-3 credits of GH or GS.) A First-Year Seminar is required for students at Penn State Behrend.

**PRESCRIBED COURSES** (23 credits)

CAS 100 GWS(3), IET 101(3)[1], MCHT 111(3)[1] (Sem: 1-2)

IET 215(2), IET 216(2), MCHT 213(3), MCHT 214(1)[2], MET 206(3)[1], MET 210(3), (Sem: 3-4)

**ADDITIONAL COURSES** (31-41 credits)

ENGL 015 GWS(3); ENGL 030 GWS(3) (Sem: 1-2)

MATH 022 GQ(3), MATH 026 GQ(3); MATH 040 GQ(5)[2][3]; MATH 081 GQ(3)[2][3], MATH 082 GQ(3)[2][3] (Sem: 1-2)

PHYS 150 GN(3); PHYS 211 GN(4); PHYS 250 GN(4) (Sem: 1-2)

PHYS 151 GN(3); PHYS 212 GN(4); PHYS 251 GN(4) (Sem: 1-2)

Select at least 19-24 credits from one of the following three tracks: a. General Track, b. Baccalaureate Electro-Mechanical Engineering Technology (EMET) Track, or c. Baccalaureate Mechanical Engineering Technology (METBD or M E T) Track.

#### **a) General Track**

EDSGN 100(3), EET 105(3), MET 107(3) (Sem: 1-2)

EDSGN 110(2); EGT 114(2) (Sem: 1-2)

STS 200 GS(3); STS 233 GH(3); STS 245 GS;IL(3) (Sem: 3-4)

Select at least 6 credits from the approved supporting course list for Track a.

**b) Baccalaureate Electro-Mechanical Engineering Technology (EMET) Track**

CMPET 117(3)[2], CMPET 120(1)[2], EDSGN 100(3), EET 105(3) (Sem: 1-2)

EDSGN 110(2); EGT 114(2) (Sem: 1-2)

EET 114(4)[2], EET 118(1)[2] (Sem: 3-4)

STS 200 GS(3); STS 233/PHIL 233 GH(3); STS 245 GS;IL(3) (Sem: 3-4)

**c) Baccalaureate Mechanical Engineering Technology (METBD or M E T) Track**

EGT 120(3), EGT 121(3), MET 107(3) (Sem: 1-2)

EET 100(3) (Sem: 3-4)

Select 1 credit of First-Year Seminar (Sem: 1-2)

Select 6 credits from the approved supporting course list for Track c (Sem: 3-4)

**[1]** A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

**[2]** Students pursuing the baccalaureate track must take MATH 022 and MATH 026

**[3]** Students who choose to take MATH 081 and MATH 082 must select MATH 083.

Students who choose to take MATH 022 and MATH 026 must select MATH 140.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-048C

Review Date: 1/10/2017

UCA Revision #1: 8/3/06

UCA Revision #2: 7/30/07

**Comments**

EN

## Occupational Therapy

*Berks College (2OTBL)*

*University College (2OTCC): Penn State DuBois, Penn State Mont Alto, Penn State Shenango*

This major helps graduates prepare to be occupational therapy assistants who are qualified to be employed by agencies that provide occupational therapy and related services. The goal of occupational therapy is to enable the client to be as independent as possible in the daily performance of self-care, productive, and leisure occupations. General education, basic science, and occupational therapy courses are followed by supervised field experience. Upon successful graduation from the program, students must sit for and successfully pass the National Board for Certification in Occupational Therapy (NBCOT) national certification examination to practice. Most states also require licensure as a condition for employment. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination and obtain licensure. NBCOT may be contacted at NBCOT, 12 South Summit Avenue, Suite 100, Gaithersburg, MD 20877. 301-990-7979 or on the Web at [www.NBCOT.org](http://www.NBCOT.org).

To enter this major, students must have a high school diploma or its equivalent. To be admitted to degree candidacy, the applicant must have completed educational

background requirements called Carnegie Units or Secondary School Units. Students are responsible for proof of liability insurance and other requirements specified by the facility providing supervised field experience.

The size of each entering class is limited so that optimal clinical experiences and practical application situations can be maintained. Students are expected to progress through the program in the prescribed manner. Fieldwork affiliations are maintained over a wide geographical area. Students may be required to make special housing and transportation arrangements during the fieldwork phase. Students must complete all Level II fieldwork within eighteen months of successful completion of OTA didactic course work. The 2OTCC and 2OTBL curricula are delivered in five semesters.

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

The Penn State Occupational Therapy program is fully accredited by ACOTE which can be reached at: Accreditation Council for Occupational Therapy Education, 4720 Montgomery Lane, Bethesda, MD 20814, 301-652-2682 or on the Web at [www.aota.org](http://www.aota.org).

For the Associate in Science degree in Occupational Therapy, a minimum of 69 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits  
(12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)  
(See description of General Education in this bulletin.)

**REQUIREMENTS FOR THE MAJOR:** 60 credits  
(This includes 12 credits of General Education courses; 3 credits of GWS courses; 6 credits of GS courses; 3 credits of GN courses.)

**PRESCRIBED COURSES** (60 credits)  
BIOL 129 GN(4)[1], BIOL 141 GN(3)[1], BIOL 142(1)[1], ENGL 015 GWS(3), HDFS 129 GS(3), OT 100(1), OT 101(2)[1], OT 195A(1)[1], PSYCH 100 GS(3) (Sem: 1-2)  
OT 103 US(3)[1], OT 105(3)[1], OT 107(3)[1] (Sem: 2-3)  
KINES 013 GHA(1), OT 109(3)[1] (Sem: 3-4)  
OT 195B(1)[1], OT 201(3)[1], OT 202(3)[1], OT 204(3)[1], OT 206(4)[1] (Sem: 4)  
OT 295A(6)[1], OT 295B(6)[1] (Sem: 5)

**[1]** A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-037A

Review Date: 1/10/2017

UCA Revision #1: 8/9/06

## Physical Therapist Assistant

*University College (2 PTA): Penn State DuBois, Penn State Fayette, Penn State Hazleton, Penn State Mont Alto, Penn State Shenango*

PROFESSOR RENEE L. BORROMEO, *Director, Penn State Mont Alto*

PROFESSOR BARBARA E. REINARD, *Coordinator, Penn State DuBois*  
PROFESSOR STACY A. SEKELY, *Coordinator, Penn State Fayette*  
PROFESSOR ROSE PETRILLA, *Coordinator, Penn State Hazleton*  
PROFESSOR GIZELLE DEAN, *Coordinator, Penn State Shenango*

This major helps prepare individuals to become skilled technical health workers who assist the physical therapist in patient treatment. Students develop knowledge and skills in the appropriate use of equipment and exercise associated with various physical therapy treatment interventions. In order to accomplish these tasks, the curriculum combines general education, science, and technical courses specifically designed for the physical therapist assistant. The program culminates with full-time clinical experiences.

The size of each entering class is limited so that optimal clinical experiences and practical application situations can be maintained. Students must progress through the PTA program as prescribed in the Recommended Academic Plan for their campus of admission. Clinical affiliations are maintained over a wide geographical area. Students may be required to make special housing and transportation arrangements during the clinical phase. In order to accommodate the clinical practicum, this major requires five semesters to satisfy graduation requirements.

In addition to a PTA certification/licensure, many state licensing boards and clinical facilities require a criminal background check, child abuse clearance, and a drug screening. PTA students are required to complete clinical requirements that may include FBI fingerprint check, child abuse clearance, state background check and drug screening prior to the beginning of the clinical practicum. Students will be responsible for completion and purchase of the necessary checks/clearances through a University approved vendor and providing results to the clinical sites. Students with criminal records should contact the physical therapy licensing board in the state they plan to practice prior to applying for admission to the PTA Program to inquire about potential restrictions for licensure.

The Associate of Science degree in Physical Therapist Assistant at Penn State is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703-706-3245; email: [accreditation@apta.org](mailto:accreditation@apta.org); website: <http://www.capteonline.org>. Graduation from a physical therapist assistant education program accredited by CAPTE is necessary for eligibility to sit for the licensure examination, which is required in all states.

Effective April 30, 2014 The physical therapist assistant program at The Pennsylvania State University, DuBois Campus has been granted Candidate for Accreditation status by the Commission on Accreditation in Physical Therapy Education (1111 North Fairfax Street, Alexandria, VA, 22314; phone: 703-706-3245; email: [accreditation@apta.org](mailto:accreditation@apta.org)). Candidate for Accreditation is a pre-accreditation status of affiliation with the Commission on Accreditation in Physical Therapy Education that indicates that the program may matriculate students in technical/professional courses and that the program is progressing towards accreditation. Candidate for Accreditation is not an accreditation status nor does it assure eventual accreditation.

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Physical Therapist Assistant, a minimum of 68 credits is required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits  
(9-12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

**REQUIREMENTS FOR THE MAJOR:** 59-61 credits

(This includes 9-12 credits of General Education courses; 3-6 credits of GWS courses; 3 credits of GN courses; 3-6 credits of GS courses.)

**PRESCRIBED COURSES** (45 credits)

BIOL 129 GN(4)[1], BIOL 141 GN(3)[1], BIOL 142(1)[1], ENGL 015 GWS(3), P T 100(3)[1], PSYCH 100 GS(3) (Sem: 1-2)

PT 290 (1)[1], PT 384(4)[1], PT 395E(3)[1]\* (Sem: 3-4)

PT 150(2)[1], PT 160(3)[1], PT 250(4)[1], PT 260(3)[1] (Sem: 3-5)

PT 395F(4)\*[1], PT 395G(4)\*[1] (Sem: 5)

**ADDITIONAL COURSES** (14-16 credits)

Select 1 credit from KINES 013(1) or KINES 303 GHA(3) (Sem: 1-4)

Select 3 credits from CAS 203 GS(3), ENGL 202C GWS(3) or PSYCH 212 GS(3) (Sem: 1-5)

Select 2-3 credits from any PT course not listed above in prescribed or additional courses.[1] (Sem: 1-5)

Select 4 credits from PT 270(3-4)[1] or PT 270W(4)[1] (Sem: 2-4)

Select 4-5 credits from PT 280(4-5)[1] or PT 280W(4-5)[1]; or PT 281(2)[1] and PT 282(3)[1] or PT 282W(3)[1] (Sem: 3-4)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

\*Courses that include clinical education experiences may require the student to travel long distances or obtain housing near the assigned clinic. Housing and transportation arrangements are the responsibility of the student.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-078

Review Date: 1/10/2017

UCA Revision #1: 8/9/06

DS/MA/HN/SV

## Wildlife Technology

*University College: Penn State DuBois*

*University Park, College of Agricultural Sciences (2 WLT)*

PROFESSOR AARON STOTTLEMYER, *in charge, Penn State DuBois*

The Wildlife Technology major helps prepare students in the techniques of wildlife management. Personnel trained in this field are needed to assist in the applied phases of natural resource management, wildlife biology, range management, and the care, maintenance, and propagation of animals. Graduates should be able to support professionals in wildlife biology, park managers, game refuge managers, and laboratory technicians in research. The Wildlife Technology Program is accredited by the North American Wildlife Technology Association (NAWTA).

**ENTRANCE REQUIREMENTS:** Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Wildlife Technology, a minimum of 65 credits is

required.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 21 credits

(9 of these 21 credits are included in REQUIREMENTS FOR THE MAJOR.)

**REQUIREMENTS FOR THE MAJOR:** 53 credits

( This includes 9 credits of General Education courses: 3 credits of GN and 6 credits of GWS.)

**PRESCRIBED COURSES** (46 credits)

BIOL 110 GN(4), FORT 150(3), FORT 160(3), ENGL 202C GWS(3), WILDL 101(3)**[1]**, WILDL 103(4)**[1]**, WILDL 106(4) (Sem: 1-2)

AG 113(1), CAS 100 GWS(3), FOR 242(3), KINES 013 GHA(1), WILDL 207(3), WILDL 208(3)**[1]**, WILDL 211(4), WILDL 213(4) (Sem: 3-4)

**ADDITIONAL COURSES** (7 credits)

Select 3 credits from: ENGL 015 GWS(3) or ENGL 030 GWS (3) (Sem: 1-2)

Select 4 credits from: WILDL 204(4) or STAT 200 GQ(4) (Sem: 3-4)

**[1]** A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-004C

Review Date: 1/10/2017

AG

## Minors

### Business Minor

Penn State Abington, Dr. Feng Zhang, fzz34@psu.edu  
University College via World Campus, Lehigh Valley

*Contacts: Business Minor Contact at campuses offering the BSB major or University College at: sah43@psu.edu; Lehigh Valley - Maung Min*

The Business minor is a strong complement to virtually any major. Courses prescribed for the minor are taught by Penn State faculty providing courses to the B.S. in Business and the A.S. in Business Administration. It provides students with the opportunity to develop and apply skills appropriate to the business contexts of their chosen majors. Students pursuing the Business minor must complete thirteen credits of prescribed course work and six credits of additional course work. A grade of C or better is required for all courses in the minor. The prescribed thirteen credits of coursework presents students with a critical foundation of core business disciplines: accounting, management, marketing, and either macro- or micro-economics. The six credits of additional coursework must be taken at the 400-level.

The additional coursework enables students to expand on the core foundation in one of two ways. They may choose to solidify their business knowledge base by exploring six credits of 400-level business courses in the following disciplines: Accounting; Business Administration; Business Law; Energy Business and Finance; Economics; Entrepreneurship; Finance; Financial Services; Health Policy and Administration; International Business;

Labor Studies and Employment Relations; Management Information Systems; Management; Marketing; Risk Management; Supply Chain Management; or Statistics. Alternately, students can augment three credits of 400-level coursework in one of the above listed business disciplines with three credits of 400-level work from an approved list of specific business-related course in disciplines such as Communication Arts and Sciences; Corporate Communication; Communications; Criminal Justice; Engineering; English; Human Development and Family Studies; History; Hospitality Management; Information Sciences and Technology; Kinesiology; Philosophy; Political Science; Psychology; Recreation, Park and Tourism Management; or Sociology.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**REQUIREMENTS FOR THE MINOR:** 19 credits

**PRESCRIBED COURSES:** (10 credits)

ACCTG 211(4) (Sem: 1-5)

MGMT 301(3), MKTG 301(3) (Sem: 5-8)

**ADDITIONAL COURSES:** (3 credits)

Select 3 credits from ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-5)

**SUPPORTING COURSES AND RELATED AREAS:** (6 credits)

Select 3-6 credits at the 400 level from:

ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER, MIS, MGMT, MKTG, RM, SCM, or STAT (Sem: 5-8)

Select 0-3 credits at the 400-level from:

CAS 404(3), CAS 452(3), CAS 483(3), CC 401(3), CC 403(3), COMM 421W(3), COMM 427(3), COMM 471(3), CRIMJ 408(3), CRIMJ/SOC 467(3), ENGL 419(3), ENGL 420(3), ENGR 425(3), HDFS 401(3), HDFS 424(3), HDFS 425(3), HDFS 455(3), HIST 458(3), HM 435(3), HM 471(3), HM 484(3), IST 402(3), IST 420(3), IST 425(3), IST 431(3), IST 432(3), IST 461(3), KINES 438(3), KINES 492(3), PHIL 406(3), PLSC 440 US;IL(3), PSYCH 404(3), PSYCH 408(3), PSYCH 423(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3), RPTM 410(3), RPTM 415(3), RPTM 470(3), SOC 455(3), SOC 456(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-174

Review Date: 11/18/2014

UCA Revision #1: 8/3/06

### **Comments**

AB/BK/UC

## **Gerontology Minor**

*Intercollege Program (GERON)*

*University College: Penn State Brandywine, Penn State DuBois, Penn State Shenango*

*Contact: College of Health and Human Development, Devon M. Thomas,*

**[dmc233@psu.edu](mailto:dmc233@psu.edu)**

The intercollege minor in Gerontology is designed for students to gain an in-depth understanding of the aging process and old age. With the growth of the number of older people in the population, increased need has arisen for people with knowledge of the

aging process in a variety of professional and occupational roles. In conjunction with the student's major, the minor prepares students for entry-level human service positions working with the elderly, or for graduate or professional school programs including communication disorders, counseling, health planning and administration, medicine, psychology, recreation and park management, and social work where knowledge of the aging process and problems of older people is relevant. Eighteen credits are required for the minor, including at least 6 credits at the 400 level. Advising is available through Mrs. Devon M. Thomas, 315 Health and Human Development Building, University Park, PA 16802 (814-863-8000, [dmc233@psu.edu](mailto:dmc233@psu.edu)).

A grade of C or better is required for all courses in the minor.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**REQUIREMENTS FOR THE MINOR:** 18 credits

**PRESCRIBED COURSES** (3 credits)

HDFS 249 GS(3) (Sem: 3-8)

**ADDITIONAL COURSES** (6 credits)

BIOL 155 GN(3) or SOC 35(3) and SOC 435 (HDFS 434) (3) or HDFS 445 (PSYCH 416) (3) (Sem: 1-7)

**SUPPORTING COURSES AND RELATED AREAS** (9 credits)

Select 9 credits from: ADTED 460(3), AYFCE/CIED 845(3) (must be approved by the graduate school), BBH 316(3), BBH 410(3), BBH/HPA 440 US;IL(3), BIOL 155 GN(3), CAS 421(3), HPA 101(3), HPA 332(3), HPA 442(3), HDFS 413(3), HDFS 445 (PSYCH 416)(3), HDFS 446(3), HDFS 447(3), HM 306(3), KINES 465(3), KINES 481(3), NURS 115(1), NURS 310(3), NURS 464(3), RM 401(3), SOC 35(3), SOC 423(3), SOC 435(3) (Sem: 3-8)

*Note:* Students may enroll in special topics courses (297, 497) that focus on aging or old age, with faculty permission. With faculty approval, students may also enroll for independent studies in their major department to write a senior thesis focused on an issue of aging.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-004

Review Date: 8/23/16

UCA Revision #1: 8/16/06

UE

## **Natural Resources Minor**

*University College, Penn State DuBois (NAT R)*

The natural resources minor can complement majors in the earth sciences and life sciences, and provides an introduction to field techniques and technical writing. Areas of specialized study can include, but are not limited to, environmental assessment, forest and wetland evaluation and management, and wildlife management. Professional opportunities include work in environmental monitoring, such as endangered species and wetland delineation, restoration of disturbed land, and management of forested lands



and wildlife areas.

A grade of C or better is required for all courses in the minor.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**REQUIREMENTS FOR THE MINOR:** 18 credits

**SUPPORTING COURSES AND RELATED AREAS** (18 credits)

In consultation with a natural resources adviser:

Select 3 credits in 100-level forest technology (Sem: 1-2)

Select 3 credits in 100-level wildlife technology (Sem: 1-2)

Select 6 credits of 200-level forest technology or wildlife technology (Sem: 3-4)

Select 6 credits of 400-level geography or geosciences courses (Sem: 5-8)

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-04-068

Review Date: 1/17/06

UC

## Women's Studies Minor (WMNST)

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This interdisciplinary minor is designed to develop a broad understanding of the study of women and women's perspectives in all areas of academic scholarship. The primary focus is on feminist analyses of women's lives, women's social, cultural, and scientific contributions, and the structure of sex/gender systems. The interdisciplinary and inclusive nature of the field is reflected in a curriculum that includes courses cross-listed with a wide variety of departments, courses that deal with aspects of women's lives throughout history, and courses that recognize the diversities of culture, race, religion, ethnicity, age, disability, and sexual orientation. The Women's Studies minor emphasizes the development of critical and analytical skills, creative approaches to problem solving, and the ability to articulate productive alternatives.

Women's Studies minors have a definite career advantage, and can be successful in a wide variety of career paths. Some of these include legal advocacy, counseling, journalism, public relations, management, nonprofit administration, teaching, medicine, politics, or art. In addition, many alumnae/i are currently studying in professional, law, or graduate schools.

A grade of C or better is required for all courses in the minor.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**REQUIREMENTS FOR THE MINOR:** 18 credits

**PRESCRIBED COURSES** (3 credits)

WMNST 301 GH(3) (Sem: 1-4)

**ADDITIONAL COURSES** (3 credits)

WMNST 100 GS;US;IL(3) or WMNST 106 GS;US;IL (Sem: 1-4)

**SUPPORTING COURSES AND RELATED AREAS** (12 credits)

Select 12 credits in Women's Studies or from the program-approved list; at least 6 credits must be at the 400-level

--3 credits from each of the following categories: (Sem: 1-8)

- a. arts or humanities
- b. natural or social sciences
- c. focusing on non-Western women or on women of color in the United States

Last Revised by the Department: Spring Semester 2002

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