



University Bulletin

Undergraduate Degree Programs

Primary Navigation

Penn State Hazleton

Penn State Hazleton, a 125-acre campus, has historic and modern buildings that stand side by side as well as a garden, a scenic overlook, and nature trails. The land, in Sugarloaf Township, had been the residence of local coal baron Eckley B. Markle before being purchased by Penn State in 1948. The name Highacres, as the campus is known, carried over from Markle's day.

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 Hazleton 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 Hazleton and move on to the University Park campus or other appropriate Penn State campus in order to complete their degree. 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^[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 (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

Corporate Communication

*Abington College (CCBA)**University College: Penn State Fayette, Penn State Hazleton, Penn State Lehigh Valley, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton (CCCC)*PROFESSOR Roy Robson, *Head, Division of Arts and Humanities*

The Penn State Corporate Communication Bachelor of Arts (CCBA) program prepares students for various strategic communication roles inside and outside organizations. Graduates of the program hold titles such as public relations professional, social media strategist, speech and copywriter, political aide, marketing communication manager, organizational learning and development specialist, corporate recruiter, and event planner. Graduates have earned advanced degrees in areas such as Business, Law, and Corporate Communication.

The CCBA program is interdisciplinary. While providing depth of study in Corporate Communication, it also includes mandatory Business courses and courses focusing on web based competencies such as writing for the web and digital design. With its overall emphasis on the human and design aspects of contemporary organizations, the program is particularly well-suited to individuals seeking to develop and apply their analytical, verbal, and creative talents. Such talents foster aptitudes in strategic counseling and integrative praxis that, in part, make a Corporate Communication degree unique and highly sought after in the marketplace.

For the B. A. degree in Corporate Communication, a minimum of 120 credits is required.

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

GENERAL EDUCATION: 45 credits

(3-9 of these 45 credits are included in 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 or GENERAL EDUCATION courses)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5-9 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: 51-52 credits^[1]

(This includes 3-9 credits of General Education courses; 3-6 credits of GS courses; 0-3 credits of GH courses.)

PRESCRIBED COURSES (27 credits)

CAS 204(3), CC 200(3), COMM 100 GS(3) (Sem: 1-4)

MGMT 301(3) (Sem: 3-4)

MKTG 301(3) (Sem: 3-4)

CC 401(3), CC 402(3), CC 490W(3), CC 495A(3) (Sem: 7-8)

ADDITIONAL COURSES (24-25 credits)

Select 3 credits from: ECON 102 GS(3); ECON 104 GS(3) (Sem: 1-4)

Select 3-4 credits from: B A 243(4); PHIL 103 GH(3); PHIL 106 GH(3); PHIL 123 GH(3) (Sem: 1-4)

Select 3 credits from: ART 201(3); COMM 241(3); IST 110 GS(3) (Sem: 1-4)

Select 3 credits from: CAS 250(3); CAS 252(3); CAS 352(3); ENGL 211(3) (Sem: 3-7)

Select 3 credits from: CC 406(3); ENGL 420(3); ENGL 480(3) (Sem: 5-8)

Select 6 credits from: CAS 403(3); CAS 404(3); CAS 455/WMNST 455 US(3); CAS 471 US;IL(3); MGMT 433(3); MKTG 310(3) (Sem: 5-8)

Select 3 credits from: CC 404(3); CC 405(3); COMM 472(3) (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: Spring Semester 2016

Blue Sheet Item #: 44-06-000A

Review Date: 04/5/2016

Publications update of division head: 09/15/06

UCA Revision #1: 8/3/06

AB

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

1. Be employed by industry or government in fields, such as design, research and development, experimentation and testing, manufacturing, and technical sales.
2. Assume 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 understand global, environmental, social, and ethical contexts of

their work.

5. Progress to an advanced degree and certificate programs and be committed to lifelong learning to enhance their careers and provide flexibility in responding to changing social and technical environments.

Program Outcomes (Student Outcomes):

Graduates of the 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 Engineering, a minimum of 127 credits are required. This baccalaureate program in Engineering is accredited by the Engineering Accreditation Commission of ABET, 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): 64 credits

PRESCRIBED COURSES: 41 credits

CHEM 110 GN(3)[1], CHEM 111 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: 19 credits

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

Select 3 credits from: CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 1-2)

Select 3 credits from: ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

Select 3 credits from: CMPSC 121 GQ(3) or CMPSC 200 GQ(3) or CMPSC 201 GQ(3) (Sem: 3-4)

Select 3 credits from: ECON 102 GS(3) or ECON 104 GS(3) (Sem: 3-4)

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

Select 3 credits from: 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, in consultation with an advisor, from the program approved list.

REQUIREMENTS FOR THE OPTION: 45 credits

APPLIED MATERIALS OPTION: (45 credits)

PRESCRIBED COURSES: 42 credits

CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-2)

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)

ADDITIONAL COURSES: 3 credits

ME 300(3)[1]; EME 301(3)[1] (Sem: 3-4)

ALTERNATIVE ENERGY AND POWER GENERATION OPTION: (45 credits)

PRESCRIBED COURSES: 27 credits

CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-2)

EE 210(4)[1] (Sem: 3-4)

EE 314(3), EGEE 302(3), EME 303(3), ME 345(4) (Sem: 5-6)

EE 485(3), EGEE 420(3) (Sem: 7-8)

ADDITIONAL COURSES: 12 credits

ME 300(3)[1]; EME 301(3)[1] (Sem: 3-4)

Select 9 credits from NUCE 401(3); EE 488(3); EGEE 437(3); EGEE 438(3); EGEE 441(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS 6 credits

Select 6 credits in Engineering Technical Elective courses, any 400-level courses in the College of Engineering or any 400-level courses with the Energy and Geoenvironmental Engineering (EGEE) abbreviation. Other substitutions outside the approved list must be approved by petition. (Sem: 5-8)

MULTIDISCIPLINARY ENGINEERING DESIGN OPTION (45 credits)

PRESCRIBED COURSES: 35 credits

CMPEN 271(3), EE 210(4), EMCH 212(3)[1] (Sem: 3-4)

EDSGN 402(4), EE 310(4)[1], EE 316(3) (Sem: 5-6)

EDSGN 401(3), EDSGN 403(3), EDSGN 410(4)[1], EDSGN 495(1), ENGR 407(3) (Sem: 7-8)

ADDITIONAL COURSES 7 credits

CHEM 112 GN(3); or any GN(3) (Sem: 1-2)

CHEM 113 GN(1); or any GN(1) (Sem: 1-2)

ME 201(3)[1]; ME 300(3)[1]; EME 301(3)[1] (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS 3 credits

Select 3 credits in Engineering Technical Elective courses, in consultation with an advisor, from department list (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 2017

Blue Sheet Item #: 46-01-041

Review Date: 8/22/2017

R & T: Approved 5/24/2013

Information Sciences and Technology

*Abington College (ISSAB)**Berks College (ISSBL)**Capital College (ISSCA)**University College: Penn State Beaver, Penn State Brandywine, Penn State Greater Allegheny, Penn State Hazleton, Penn State New Kensington, Penn State Lehigh Valley, Penn State Mont Alto, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York (ISSCC)**World Campus (ISSWC_BS)**University Park, College of Information Sciences and Technology (ISTBS)**Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST*

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

This major is structured to provide students with the theoretical frameworks and skill sets necessary to compete and be productive in the information technology-intensive global context that defines the new "Information Age." Specifically, the degree will be focused on a program that will build an understanding of core information technologies and related areas of study; will prepare students for the practical application of various information sciences and related technologies; and engage students in sharpening their abilities to think critically and to work in teams. All this will be done with considerable interdisciplinary integration in order to expose students to the cognitive, social, institutional, and global environments of IST. Team projects in most courses, a required internship, and a senior capstone experience provide additional, focused venues for

involving students in the cutting-edge issues and technologies of the field.

INFORMATION CONTEXT: PEOPLE, ORGANIZATIONS, AND SOCIETY OPTION: This option focuses on how information technology affects social change and the delivery of information to the consumer. This includes the human-machine interface; organization and retrieval of information; digital libraries; information and telecommunications services; information and media industry structures; software services and intermediaries; telecommunications and information law and policy; sociological aspects of technology change; multimedia; and art, design, and aesthetics.

INFORMATION SYSTEMS: DESIGN & DEVELOPMENT OPTION: This option is focused on expanding the skills needed to develop advanced information technology systems using state-of-the-art tools and techniques. The emphasis is on providing the student with both knowledge in the design, implementation, testing and evolution of complex software systems as well as a set of project-oriented, team-programming experiences.

INFORMATION TECHNOLOGY: INTEGRATION & APPLICATION OPTION: This option is designed to prepare students to use information technology to realize a variety of system-based goals (e.g., reliability, accessibility, efficiency, etc.). It is focused on developing a theoretical foundation and the skill set needed for integrating information technology into different systems for the purpose of enhancing system performance. The emphasis is on providing the student with both the theoretical frameworks needed to use information technology as a system attribute as well as a set of application-oriented experiences and skills.

Entrance Requirements: To be eligible for entrance to the Information Sciences and Technology (ISTBS) major, students must:

1. have completed the following entrance-to-major requirements with a grade of C or better in each: IST 110(3); IST 140(3) (or equivalent CMPSC 101 GQ(3) or CMPSC 121 GQ(3)), IST 210(3), and IST 220(3).
2. have achieved a minimum cumulative grade point average of 2.00 prior to and through the end of the semester during which the entrance-to-major procedure is carried out.

The Integrated Undergraduate Graduate (IUG) program is available for strong undergraduate students who wish to pursue a bachelor's and master's degree in a shorter period of time than would be necessary if the degrees were pursued separately. Information Sciences and Technology undergraduates may apply for admission to the ISTBS/ISTMS IUG program as early as the end of their sophomore year but no later than the end of their junior year after completing a minimum of 60 credits, if they meet the following admission requirements:

1. Must be enrolled in the ISTBS undergraduate degree program.
2. Must have completed 60 credits of an ISTBS undergraduate degree program.
3. Must apply to the IUG program by the end of their junior year.
4. Must apply to and be accepted without reservation into the Graduate School and M.S. program in IST. Students must complete the **Graduate School application**.
5. Must have an overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
6. Must present an approved plan of study. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
7. Must present two letters of recommendation from faculty members. (Note: For Schreyer Honors College students, these can be the same two letters required by the Schreyer Honors College.)
8. Must meet with both the Director of Undergraduate Academic Affairs and the

Graduate Program Coordinator to declare interest and receive information about the IUG program.

For Schreyer Honors College students, students admitted to the IUG program may double-count a maximum of 12 credits toward their graduate and undergraduate degrees in Information Sciences and Technology. Thesis or scholarly paper credits may not double-count.

For the B.S. degree in Information Sciences and Technology, a minimum of 125 credits is required.

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

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

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

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

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

ELECTIVES: 8 credits

REQUIREMENTS FOR THE MAJOR: 84 credits
(This includes 12 credits of General Education courses: 6 credits of GQ courses; 3 credits of GS courses; and 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 60 credits

PRESCRIBED COURSES (26 credits)
IST 110 GS(3)[1], IST 210(3)[1], IST 220(3)[1], IST 230(3)[1] (Sem: 1-4)
STAT 200 GQ(4) (Sem: 3-6)
IST 495(1)[1] (Sem: 3-8)
IST 301(3)[1], IST 331(3)[1] (Sem: 5-8)
IST 440(3)[1] (Sem: 7-8)

ADDITIONAL COURSES (13 credits)
CMPSC 101 GQ(3)[1], CMPSC 121 GQ(3)[1], or IST 140(3)[1] (Sem: 1-4)
ECON 14 GS(3), ECON 102 GS(3), or ECON 104 GS(3) (Sem: 1-4)
ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 1-4)
MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (21 credits)
Attainment of third-level proficiency in a single foreign language (12 credits). Proficiency must be demonstrated by either examination or course work. See the admission section of the general information in this *Bulletin* for the placement policy for Penn State foreign language courses. (Sem: 1-4)
Select 6 credits of international courses in foreign culture from College-approved list (Sem: 5-8)
Select 3 credits[1] at the 400 level in emerging issues and technologies from College-approved list (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 24 credits

INFORMATION CONTEXT: PEOPLE, ORGANIZATIONS, AND SOCIETY OPTION: 24 credits

PRESCRIBED COURSES (6 credits)[1]

IST 431(3) and IST 432(3) (Sem: 5-8)

ADDITIONAL COURSES (6 credits)[1]

IST 240(3) or IST 242(3) (Sem: 1-4)

IST 302(3) or IST 413(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from College-approved list (at least 3 credits at the 400-level and no more than 6 credits below the 200-level.) (Sem: 5-8)

INFORMATION SYSTEMS: DESIGN & DEVELOPMENT OPTION: 24 credits**PRESCRIBED COURSES (6 credits)[1]**

IST 242(3) (Sem: 1-4)

IST 311(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)[1]

Select 3 credits from IST 261(3) or IST 361(3) (Sem: 5-8)

Select 6 credits from IST 411(3), IST 412(3), or IST 413(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from College-approved list (at least 3 credits must be at the 400-level.) (Sem: 5-8)

INFORMATION TECHNOLOGY: INTEGRATION & APPLICATION OPTION: 24 credits**PRESCRIBED COURSES (9 credits)[1]**

IST 302(3), IST 420(3), IST 421(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)[1]

IST 240(3) or IST 242(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from College-approved list (at least 3 credits at the 400-level and no more than 6 credits below the 200-level.) (Sem: 5-8)

Integrated B.S. in Information Sciences and Technology / M.S. in Information Sciences and Technology

The College of Information Sciences and Technology offers an integrated B.S./M.S. (IUG) program designed to allow academically superior students in the Information Sciences and Technology major to obtain both the bachelor's in Information Sciences and Technology and M.S. degree in Information Sciences and Technology in a shorter period of time than would be necessary if the degrees were pursued separately. The first two to three years of undergraduate coursework follow the same undergraduate curriculum that other students follow in the Information Sciences & Technology major. Interested students may apply for admission to the IUG program as early as the end of their sophomore year but no later than the end of their junior year after completing a minimum of 60 credits. If admitted to the IUG, the final years of study include two graduate courses, Foundations of Theories and Methods of Information Sciences and Technology Research (IST 504) in the fall and Foundations of Research Design in Information Sciences and Technology (IST 505) in the spring, plus six credits of research methods courses, twelve credits of graduate specialty courses, and six credits of graduate thesis (IST 600) or scholarly paper (IST 594).

(Note: For Schreyer Honors College students, those who complete the graduate thesis for the Master's requirement may use the graduate thesis, itself, to fulfill the undergraduate honors thesis requirement, as well. Honors students who opt for the Master's scholarly paper must also complete an undergraduate honors thesis.)

The integrated B.S. in Information Sciences and Technology /M.S. in Information Sciences and Technology (IUG) degree meets the needs of the most academically talented students in the Information Sciences and Technology undergraduate major. A proportion of these successful students wish to pursue graduate studies sometime after graduation. Offering the IUG benefits these students by offering an accelerated path to a graduate degree. Additionally, the IUG program can provide these students with a more cohesive program of study with opportunities to engage in more comprehensive research leading to both the Bachelor's and Master's degree.

For the B.S. in Information Sciences & Technology/M.S. in Information Sciences & Technology IUG program, a minimum of 125 credits are required for the bachelor's degree and 30 credits for the M.S. degree. Students admitted to the IUG program may double-count a maximum of 12 credits to their graduate and undergraduate degrees. The required 6 credits of IST 504 and IST 505 will apply to both the graduate program and the undergraduate program. Students may choose an additional 6 credits to double-count for both the undergraduate and graduate degrees from the following: IST 411, IST 412, IST 413, IST 420, IST 421, IST 431, IST 432. Graduate thesis or scholarly paper credits may not double-count.

The objectives of the Integrated Undergraduate Graduate Program include:

1. To offer highly qualified students the opportunity to earn two degrees in less time than it would take to do two sequential degrees. In particular, IUG students may count up to 12 credits towards both their B.S. and M.S. degree requirements.
2. To permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
3. To introduce undergraduate students to the rigors of both graduate study and graduate faculty.
4. To make the resources of the Graduate School available to IUG students.
5. To allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.

Admission Requirements

To initiate the application process, students must submit an *Integrated Undergraduate-Graduate (IUG) Degree in Information Sciences and Technology Form*, a transcript, and two letters of recommendation (both from faculty members) to the IST Graduate Programs Office. The Director of Undergraduate Academic Affairs, in consultation with the Graduate Programs Coordinator, will help undergraduate candidates determine a proposed sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. Acceptance into the IST IUG program will be determined by the Graduate Recruitment Committee.

Information Sciences and Technology undergraduate majors may apply for admission no earlier than February 15th of their sophomore year and no later than the February 15th of their junior year after completing a minimum of 60 credits, if they meet the following admission requirements:

1. Must be enrolled in the ISTBS undergraduate degree program.
2. Must have completed 60 credits of an ISTBS undergraduate degree program.
3. Must apply to the IUG program by the end of their junior year.
4. Must apply to and be accepted without reservation into the Graduate School and M.S. program in IST. Students must complete the **Graduate School application**.
5. Must have an overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a

- minimum GPA of 3.5 in all coursework completed for the major.
6. Must present an approved plan of study. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
 7. Must present two letters of recommendation from faculty members. (Note: For Schreyer Honors College students, these can be the same two letters required by the Schreyer Honors College.)
 8. Must meet with both the Director of Undergraduate Academic Affairs and the Graduate Program Coordinator to declare interest and receive information about the IUG program.

For Schreyer Honors College students, students must also follow guidelines and procedures for applying for IUG in the Schreyer Honors College:

<http://www.shc.psu.edu/students/iug/program/>

In addition, applicants must apply to and be admitted to the Graduate School of the Pennsylvania State University at the time of their application to the IUG degree program. These admission standards are high, as it is thought the program will only be appropriate for students with high levels of academic skills. The program area does have discretion in admitting Information Sciences and Technology majors into the integrated program, and extenuating circumstances can always be considered in terms of possible admission. Individuals who are unable to be admitted into the integrated program of study can apply for regular admission to the graduate program when they complete their undergraduate program of study.

Sample Sequence of Graduate Coursework in Addition to Undergraduate Courses

Year	Fall	Spring	MS Credits
Year 1 (Senior Undergraduate Year)	IST 504: Foundations 3 Methods course (3)**	IST 505: Research Design (3) Methods course (3)**	30*
Year 2 (Super Senior Undergraduate Year)	IST 600 or IST 594 Thesis Research (3) Grad Speciality Course (3)** Grad Speciality Course (3)**	Methods course (3)** IST 600 or IST 594 Thesis Research (3) Grad Speciality Course (3)** Grad Speciality Course (3)**	

* Students admitted to the IUG program may double-count a maximum of 12 credits toward their graduate and undergraduate degrees in Information Sciences and Technology. In their senior year, IUG students will take 6 credits of specified graduate work, courses IST 504 and IST 505, and 6 credits of methods courses. These 6 credits of IST 504 and IST 505 will apply to both the graduate program and the undergraduate IST/B.S. support of option requirement. In their super senior year, students may choose an additional 6 credits to double-count for both the undergraduate and graduate degrees. These courses must be at the 400-level or above. Students may choose any 400-level undergraduate option course (IST 411, IST 412, IST 413, IST 420, IST 421, IST 431, IST 432) that they are using to fulfill an undergraduate option requirement and apply

the credits to both the undergraduate option requirement and the graduate specialty course requirement. Credits associated with the thesis or culminating scholarly paper, i.e., IST 600 and IST 594, may not be double-counted. However, for Schreyer Honors College students, the Master's thesis deliverable, itself, may double-count for the undergraduate thesis deliverable requirement.

** Choose graduate level methods course after consultation in advance with the student's faculty adviser.

*** Choose any 400 or 500 level course that contributes to the student's chosen area of specialty with a maximum of six credits at the 400 level.

The total resulting credits will be a minimum of 155 credits, with 125 credits completed for the undergraduate IST degree. Twelve graduate credits will be completed in the senior year, and the remaining 18 graduate credits will be completed in the super senior year.

If for any reason a student admitted to the B.S./M.S. program is unable to complete the requirement for the Master of Science degree program in Information Sciences and Technology, the student will be permitted to receive the Bachelor's degree assuming all degree requirements have been satisfactorily completed.

Student performance will be monitored on an on-going basis by the student's adviser and Graduate Programs. Students admitted to the integrated program must maintain a minimum cumulative GPA of a 3.3 overall and a minimum 3.0 GPA in all courses used toward the M.S. degree in order to maintain good academic standing and meet graduation requirements. (See information on Grade-Point Average in the Graduate Bulletin:<http://bulletins.psu.edu/graduate/degree requirements/masters#>) For Schreyer Honors College students in the IUG program, students must maintain a minimum cumulative GPA of 3.4 overall and a minimum 3.0 GPA in all courses used toward the M.S. degree in order to maintain good academic standing and meet graduation requirements. Successful completion of a Schreyer Scholar's Master's thesis will be accepted as completion of the honors thesis requirement.

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

[2] Students in the Information Systems: Design and Development Option are expected to take IST 242 prior to taking the prescribed and additional courses for that option.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-087

Review Date: 8/22/2017

IS

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

Psychology

Altoona College (PSCBA)

University College (PYACC) - Penn State Beaver, Penn State Brandywine, 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 Worthington Scranton; Penn State York

The Psychology major will combine the knowledge, skills, and values of psychology with a liberal arts foundation. Students should develop a knowledge base consisting of concepts, theory, empirical findings, and trends within psychology; understand and apply basic research methods in psychology; use critical thinking and the scientific approach to solve problems related to behavior and mental processes; apply psychological principles to personal and social issues; and be able to understand the gender, sexual orientation, race, ethnicity, culture, and class issues in psychological theory, research, and practice. Students should also develop information and computer competence, communication skills, and develop realistic ideas about how to implement their psychology education in occupational pursuits in a variety of settings. The major may lead to either a Bachelor of Arts or a Bachelor of Science degree. The B.A. degree incorporates a broad exposure to the many facets of the field of psychology, in addition to the B.A. requirements. The B.S. degree provides the same exposure to the field of psychology and adds options in Science and Business to prepare students for more specific career directions. Students in both degree programs may also prepare for graduate school; research experience with faculty members is encouraged for such students.

For the B.A. degree in Psychology, a minimum of 124 credits is required.

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

GENERAL EDUCATION: 45 credits

(0-4 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 selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14-18 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: 41 credits^[1]

(This includes 0-4 credits of General Education GQ courses.)

PRESCRIBED COURSES (7 credits)

PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 301(4) (Sem: 3-6)

ADDITIONAL COURSES (34 credits)

(Must include 15 credits at 400-level.)

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

Select 18 credits--a minimum of 3 credits from each of the following six categories

1. Learning and Cognition: PSYCH 256 GS(3), PSYCH 261 GS(3), PSYCH 268(3), PSYCH 426(3), PSYCH 427(3), PSYCH 452(3), PSYCH 456(3), PSYCH 457(3), PSYCH 458(3), PSYCH 459(3), PSYCH 461(3) (Sem: 2-8)
2. Social and Personality Psychology: PSYCH 221 GS(3), PSYCH 231 GS;US(3), PSYCH 232 GS;US;IL(3), PSYCH 238 GS(3), PSYCH 419(3), PSYCH 420(3), PSYCH 421(3), PSYCH 423(3), PSYCH 424(3), PSYCH 432 US(3), PSYCH 438(3), PSYCH 479 US(3) (Sem: 2-8)
3. Biological Bases of Behavior: PSYCH 253 GS(3), PSYCH 260(3), PSYCH 269(3), PSYCH 441(3), PSYCH 460(3), PSYCH 462(3), PSYCH 463(3), PSYCH 464(3), PSYCH 475(3), PSYCH 478(3) (Sem: 2-8)
4. Developmental Psychology: PSYCH 212 GS(3), PSYCH 410(3), PSYCH 412(3), PSYCH 413(3), PSYCH 414(3), PSYCH 415(3), PSYCH 416(3)/HDFS 445(3), PSYCH 474(3) (Sem: 2-8)
5. Applied and Clinical Psychology: PSYCH 243 GS(3), PSYCH 244 GS(3), PSYCH 270(3), PSYCH 281 GS(3), PSYCH 370 US(3), PSYCH 404(3), PSYCH 408(3), PSYCH 443(3), PSYCH 444(3), PSYCH 445(3), PSYCH 470(3), PSYCH 471(3), PSYCH 473(3), PSYCH 476(3), PSYCH 477(3), PSYCH 481(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3) (Sem: 2-8)
6. Capstone Experience: PSYCH 439(3), PSYCH 490(3), PSYCH 493(3-6), PSYCH 494(3-18), PSYCH 495(6-15), PSYCH 496(3-18) (Sem: 7-8)

Select 12 credits of additional Psychology courses from any offered for a total of 30 credits of Psychology courses beyond PSYCH 100 and PSYCH 301 (Sem: 2-8)

[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: Spring Semester 2012

Blue Sheet Item #: 40-05-071

Review Date: 02/21/2012

UCA Revision #1: 9/1/06

AL

Psychology

Altoona College (PSCBS)

University College (PYSCC) - Penn State Beaver, Penn State Brandywine, 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 Worthington Scranton, Penn State York

The Psychology major will combine the knowledge, skills, and values of psychology with a liberal arts foundation. Students should develop a knowledge base consisting of concepts, theory, empirical findings, and trends within psychology; understand and apply basic research methods in psychology; use critical thinking and the scientific approach to solve problems related to behavior and mental processes; apply psychological principles to personal and social issues; and be able to understand the gender, sexual orientation, race, ethnicity, culture, and class issues in psychological theory, research, and practice. Students should also develop information and computer competence, communication skills, and develop realistic ideas about how to implement their psychology education in occupational pursuits in a variety of settings. The major may lead to either a Bachelor of Arts or a Bachelor of Science degree. The B.A. degree incorporates a broad exposure to the many facets of the field of psychology, in addition to the B.A. requirements. The B.S. degree provides the same exposure to the field of psychology and adds options in Science and Business to prepare students for more specific career directions. Students in both degree programs may also prepare for graduate school; research experience with faculty members is encouraged for such students.

For the B.S. degree in Psychology, a minimum of 124 credits is required.

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

GENERAL EDUCATION: 45 credits

(0-4 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 selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14-18 credits

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

(This includes 0-4 credits of General Education GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 41 credits

PRESCRIBED COURSES (7 credits)

PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 301(4) (Sem: 3-6)

ADDITIONAL COURSES (34 credits)

(Must include 15 credits at the 400-level.)

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

Select 18 credits--a minimum of 3 credits from each of the following six categories:

1. Learning and Cognition: PSYCH 256 GS(3), PSYCH 261 GS(3), PSYCH 268(3), PSYCH 426(3), PSYCH 427(3), PSYCH 452(3), PSYCH 456(3), PSYCH 457(3), PSYCH 458(3), PSYCH 459(3), PSYCH 461(3) (Sem: 2-8)
2. Social and Personality Psychology: PSYCH 221 GS(3), PSYCH 231 GS;US(3), PSYCH 232 GS;US;IL(3), PSYCH 238 GS(3), PSYCH 419(3), PSYCH 420(3), PSYCH 421(3), PSYCH 423(3), PSYCH 424(3), PSYCH 432 US(3), PSYCH 438(3), PSYCH 479 US(3) (Sem: 2-8)
3. Biological Bases of Behavior: PSYCH 253 GS(3), PSYCH 260(3), PSYCH 269(3), PSYCH 441(3), PSYCH 460(3), PSYCH 462(3), PSYCH 463(3), PSYCH 464(3), PSYCH 475(3), PSYCH 478(3) (Sem: 2-8)
4. Developmental Psychology: PSYCH 212 GS(3), PSYCH 410(3), PSYCH 412(3), PSYCH 413(3), PSYCH 414(3), PSYCH 415(3), PSYCH 416(3)/HDFS 445(3), PSYCH 474(3) (Sem: 2-8)
5. Applied and Clinical Psychology: PSYCH 243 GS(3), PSYCH 244 GS(3), PSYCH 270(3), PSYCH 281 GS(3), PSYCH 370 US(3), PSYCH 404(3), PSYCH 408(3), PSYCH 443(3), PSYCH 444(3), PSYCH 445(3), PSYCH 470(3), PSYCH 471(3), PSYCH 473(3), PSYCH 476(3), PSYCH 477(3), PSYCH 481(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3) (Sem: 2-8)
6. Capstone Experience: PSYCH 439(3), PSYCH 490(3), PSYCH 493(3-6), PSYCH 494(3-18), PSYCH 495(6-15), PSYCH 496(3-18) (Sem: 7-8)

Select 12 credits of additional Psychology courses from any offered for a total of 30 credits of Psychology courses beyond PSYCH 100 and PSYCH 301 (Sem: 2-8)

REQUIREMENTS FOR THE OPTION: 24 credits

SCIENCE OPTION: (24 credits)

ADDITIONAL COURSES (15 credits)

Select 15 credits from: ANTH 21 GN(3); ANTH 22 GN(3); BBH 101 GHA(3) any BIOL course; any CHEM course; any MICRB course; any PHYS course (Sem: 2-8)

SUPPORTING COURSES (9 credits)

Select 6 credits in natural sciences/quantification from department list (Sem: 2-8)

Select 3 credits in social and behavioral sciences from department list (Sem: 2-8)

BUSINESS OPTION: (24 credits)

ADDITIONAL COURSES (15 credits)

Select 15 credits from: Any ACCTG course; BA 100 GS(3); BA 241(2), BA 242(2) or BA 243(4); Any ECON course; any FIN course; any HPA courses; any IB course; any MGMT course; any MKTG course; any SCM except 200 (Sem: 2-8)

SUPPORTING COURSES (9 credits)

Select 6 credits in natural sciences/quantification from department list (MATH 22 or MATH 110 recommended) (Sem: 2-8)

Select 3 credits in social and behavioral sciences from department list (Sem: 2-8)

[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: Spring Semester 2012

Blue Sheet Item #: 40-05-072

Review Date: 02/21/2012

UCA Revision #1: 8/31/06

AL

Rehabilitation and Human Services

Penn State Abington (RHSAB)

Penn State Berks (RHSBL)

University College: Penn State Hazleton, Penn State Lehigh Valley, Penn State Wilkes-Barre (RHSCC)

University Park, College of Education (RHS)

PROFESSOR JAMES HERBERT, *Undergraduate Program Coordinator*

This major helps prepare students for entry-level positions in a variety of human service settings, particularly settings that provide services to persons with physical, emotional, or mental disabilities. Graduates pursue employment in a variety of settings including rehabilitation centers, drug and alcohol programs, senior citizens centers, community mental health programs, mental retardation programs, corrections systems, and hospitals. Increasing opportunities are available in private for-profit insurance programs for the industrially injured, and in employee assistance programs within business and industry. Well-planned use of electives and internships allows for specialization. The full-semester (15-credit) internship is provided under the supervision of professionals in human service agencies. These intensive "hands-on" experiences are frequently avenues for employment since the internship is completed during the senior year. Students may not go on internship until they have successfully completed all other course work. Students are encouraged to participate in volunteer experiences that provide opportunities to work with people with disabilities. Students are encouraged to declare a minor in a related area and should be discussed with the student's adviser. The major also helps prepare students for graduate study in many human service professional disciplines such as rehabilitation counseling, school counseling, occupational therapy, physical therapy and social work.

Baccalaureate degree candidates must have a minimum 2.0 GPA to be admitted to the Rehabilitation and Human Services (RHS) major; thereafter, students must earn a C or better in all RHS required courses.

For the B.S. degree in Rehabilitation and Human Services, a minimum of 120 credits is required.

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

GENERAL EDUCATION: 45 credits

(12-14 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 or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 17-20 credits

REQUIREMENTS FOR THE MAJOR: 70-72 credits

(This includes 12-14 credits of General Education courses; 6 credits of GS courses; 3-4 credits of GQ courses; 3-4 credits of GN courses.)

PRESCRIBED COURSES (55 credits)

PSYCH 100 GS(3), RHS 100 GS;US(3) (Sem: 1-4)

PSYCH 270(3), SOC 1 GS(3), SOC 119(4) (Sem: 1-6)

RHS 300(3)[1], RHS 301(3)[1], RHS 302(3)[1], RHS 303(3)[1], RHS 400(3)[1], RHS 401(3)[1], RHS 402(3)[1], RHS 403(3)[1], RHS 495A(15) (Sem: 5-8)

ADDITIONAL COURSES (9-11 credits)

EDPSY 10 GS(3), HDFS 239 GS(3), or PSYCH 212 GS(3) (Sem: 1-2)

Select 3-4 credits from ANTH 21 GN(3), BISC 1 GN(3), BISC 2 GN(3), BISC 3 GN(3), BISC 4 GN(3), BIOL 133 GN(3), BIOL 110 GN(4), or BIOL 141 GN(3) (Sem: 1-6)

STAT 100 GQ(3) or STAT 200 GQ(4) or EDPSY 101 GQ(3) (Sem: 1-6)

SUPPORTING AND RELATED COURSES (6 credits)

Select 6 credits from CRIM, BBH, HDFS, KINES, PSYCH, or SOC (Sem: 3-8)

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

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-082

Review Date: 02/19/2013

UCA Revision #1: 9/1/06

PIC updated: 2/13/12

ED

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 Greater Allegheny, 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

Information Sciences and Technology

Berks College (2ISBL)

Continuing Education, University Park (2 IST)

University College: Penn State DuBois, Penn State Great Allegheny, 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 checksheet, 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

Medical Laboratory Technology

University College (2 MLT): Penn State Hazleton

This two-calendar-year Medical Laboratory Technology major (four semesters, two summer sessions) is designed to provide the necessary general and technical training for hospital personnel between the level of the medical laboratory technician (certificate program) and the medical technologist (baccalaureate program). The course of study includes one year of intensive clinical experience at an affiliated hospital and the theoretical background necessary for the clinical procedures performed by the certified medical laboratory technician (associate degree program). Upon completion of program requirements, the student receives the associate degree and is eligible to sit for examinations leading to certification and registry as a medical laboratory technician.

The Medical Laboratory Technology Program at Penn State Hazleton is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS, 5600 N. River Rd, Suite 720, Rosemont, IL 60018-5119, Phone 847-939-3597 Website: <http://www.naacls.org>).

Graduates of this accredited MLT program are eligible to take national certification examinations such as the American Society of Clinical Pathology (ASCP) Board of Certification exam, to become certified as an MLT (ASCP).

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 Medical Laboratory Technology, a minimum of 72 credits is required. (Scheduling of courses in summer session depends on campus location.)

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

GENERAL EDUCATION: 21 credits

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

REQUIREMENTS FOR THE MAJOR: 63-65 credits

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

PRESCRIBED COURSES (56 credits)

BIOL 141 GN(3), BIOL 142(1), CHEM 110 GN(3), CHEM 111 GN(1), MICRB 201(3), MICRB 202(2) (Sem: 1-2)

CAS 100 GWS(3), CHEM 202(3), ENGL 015 GWS(3), MICRB 150(4)[1], MIS 103(3) (Sem: 1-2, Summer)

MICRB 151A(5)[1], MICRB 151B(5)[1], MICRB 151C(4)[1], MICRB 151D(2)[1], MICRB 151E(2)[1], MICRB 151F(2)[1], MICRB 151G(2)[1], MICRB 151W(5)[1] (Sem: 3-4)

ADDITIONAL COURSES (7-9 credits)

BIOL 110 GN(4) or BIOL 129 GN(4) (Sem: 1-2, Summer)

MATH 021 GQ(3), MATH 022 GQ(3), MATH 026 GQ(3), MATH 040 GQ(5), MATH 081 GQ(3), MATH 110 GQ(4), MATH 140 GQ(4); or STAT 200 GQ(4); or STAT 250 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 #: 45-04-076

Review Date: 1/10/2014

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

UC

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; 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). 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.

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UCA Revision #1: 8/9/06

DS/MA/HN/SV

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)

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UCA Revision #1: 8/3/06

Comments

AB/BK/UC

Information Sciences and Technology Minor

Abington College - contact: Joe Oakes, jxo19@psu.edu

Berks College

Capital College

University College: Penn State Beaver, Penn State Brandywine, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State New Kensington, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York, World Campus

University Park, College of Information Sciences and Technology (IST)

This minor is structured to provide students with the theoretical frameworks and skill sets necessary to compete and be productive in the information technology-intensive global context that defines the new "Information Age." Specifically, the minor will be focused on a program that will build an understanding of core information technologies and related areas of study; will prepare students for the practical application of various information sciences and related technologies; and engage students in sharpening their abilities to think critically and to work in teams. All this will be done with the intent to expose students to the cognitive, social, institutional, and global environments of Information

Sciences and Technology and to then apply that knowledge as a supplement to their major.

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

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

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

IST 110 GS(3), IST 210(3), IST 220(3) (Sem 1-6)

ADDITIONAL COURSES (9 credits)

Select 3 credits from IST 140(3), IST/COMM 234 GS(3), IST/WMNST 235 US(3), IST 250(3), IST 301(3), or IST 302(3) (Sem 5-8)

Select 6 credits from IST 402(3), IST 431(3), IST 432(3), IST 442 IL(3), IST 445(3), IST 452(3), IST 453(3) (Sem 5-8)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-06-037

Review Date: 4/4/2017

IS

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