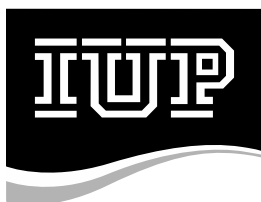


UNDERGRADUATE CATALOG 2016–17

Department of Safety Sciences
College of Health and Human Services
www.iup.edu/safetysciences

This document is a direct extract from the full 2016–17 *Undergraduate Catalog*. As a result, the original page numbering will appear.

For information on other colleges at IUP, or about specific courses, please consult the full 2016–17 catalog, available at www.iup.edu/registrar/catalog. Earlier catalogs are also available at this web address.



Indiana University of Pennsylvania

Department of Safety Sciences

Website: www.iup.edu/safetysciences

Lon H. Ferguson, Chairperson; Cekada, Janicak, Marin, Minnick, Nelson, Paschold, Rhodes, Wachter, Zreiqat; and professors emeriti McClay, Pacalo, Soule

The department offers a minor and a bachelor of science degree program in safety, health, and environmental applied sciences with a focus on occupational exposures. The program in safety, health, and environmental applied sciences prepares the student for professional, administrative, managerial, and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, construction, trade service industries, and others. There remains a need in Pennsylvania and the nation for university-educated occupational safety, health, and environmental professionals. As a minimum, the curriculum includes a major of 52 credits in safety, health, and environmental applied sciences.

Bachelor of Science—Safety, Health, and Environmental Applied Sciences

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 105

Natural Science: CHEM 101-102

Social Science: PSYC 101, global and multicultural awareness course

Liberal Studies Electives: 3cr, MATH 217

Major: 52-58

Required Courses:

SAFE 101	Introduction to Occupational Safety and Health	3cr
SAFE 111	Principles of Safety I—General Industry	3cr
SAFE 211	Principles of Safety II—Construction Industry	3cr
SAFE 212	Hazard Prevention Management I	3cr
SAFE 215	Safety, Health, and Environmental Communications	3cr
SAFE 220	Hazardous Materials and Emergency Management	3cr
SAFE 310	Environmental Safety and Health Regulations and Sustainability	3cr
SAFE 311	Fire Protection	3cr
SAFE 330	Recognition, Evaluation, and Control of Occupational Health Hazards I	4cr

SAFE 335	Industrial and Environmental Stressors	2cr
SAFE 345	Process and Systems Safety	3cr
SAFE 347	Ergonomics	3cr
SAFE 361	Air and Water Pollution	2cr
SAFE 412	Hazard Prevention Management II	3cr
SAFE 430	Recognition, Evaluation, and Control of Occupational Health Hazards II	4cr
SAFE 435	Ethics and Professionalism	1cr
SAFE 488/493	Internship	6-12cr

Other Requirements: 18

Additional Science and Mathematics:

BIOL 104	Human Biology: How the Human Body	
<i>or</i> 155	Works <i>or</i> Human Physiology and Anatomy	4cr
PHYS 111	Physics I Lecture	3cr
PHYS 112	Physics II Lecture	3cr
PHYS 121	Physics I Lab	1cr
PHYS 122	Physics II Lab	1cr

Business Electives: Two 3cr courses from the following: 6cr

ACCT 200	Foundations of Accounting
MGMT 300	Human Resource Management
MGMT 310	Principles of Management
MGMT 311	Human Behavior in Organizations
MGMT 434	Quality Management

Free Electives: 0-6

Total Degree Requirements: 120

The minor consists of 18 credits in safety, health, and environmental applied sciences courses as identified below. The minor has improved job opportunities for students in environmental geoscience, criminology, human resource management, international business, and management.

Minor—Safety, Health, and Environmental Applied

Sciences 18

Required Courses:

SAFE 101	Introduction to Occupational Safety and Health	3cr
SAFE 111	Principles of Safety I—General Industry	3cr
SAFE 220	Hazardous Materials and Emergency Management	3cr
SAFE 310	Environmental Safety and Health Regulations and Sustainability	3cr

Controlled Electives:

SAFE courses approved by department chair totaling at least 6cr with at least 3cr being in 300-level or higher course(s) 6cr

Certificate—Shale, Gas, and Energy (*) 18

Required Geoscience Courses: 6

GEOS 119	Geology of Energy Resources (1)	3cr
GEOS 409	Geology of Shale Gas Field Workshop	3cr

Required Geography Courses: 6

GEOG 109	Geographic Information Science and Systems for Energy Applications (1)	3cr
GEOG 409	Spatial Analysis Applications in the Energy Sectors Workshop	3cr

Required Safety Science Courses: 6

SAFE 104	Introduction to Safety in the Natural Gas Industry (1)	3cr
SAFE 204	Principles of Safety in the Natural Gas Industry	3cr

(*) Certificate pending Council of Trustees approval.

(1) With departmental permission, one 100-level introductory course may be substituted by an appropriate upper-division course.