Indiana University of Pennsylvania

IUP Graduate Handbook

Ph.D. in Safety Sciences

Department of Safety Sciences
and Environmental Engineering

Handbook Updated *2024*

Ph.D. in Safety Sciences

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Program Website: https://www.iup.edu/academics/find-your-degree/programs/safe/gr/safety-sciences-phd.html

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Introduction

Welcome to the Ph.D. in Safety Sciences program at Indiana University of Pennsylvania. The Department of Safety Sciences and Environmental Engineering offers a 54-credit distance education and summer workshop part-time program of study leading to a Doctor of Philosophy degree in Safety Sciences. This handbook documents important aspects of this program.

Indiana University of Pennsylvania

As an institution of higher learning, Indiana University of Pennsylvania (IUP) is committed to the preservation, expansion, and transmission of knowledge in all its forms. As a university within the Pennsylvania State System of Higher Education, IUP has primary responsibilities of providing high quality education at a reasonable cost and assessing and responding to the higher educational needs of the commonwealth; as a university, IUP has the responsibility of being concerned with the needs of the nation as a whole and those of the international community at large as far as its resources allow.

At the graduate level, IUP is committed to encouraging intellectual excellence, research, and scholarship, to provide in–depth study in each student's special field, and to stimulate continued cultural and intellectual growth for faculty and students.

IUP's Civility Statement

As a university of different peoples and perspectives, IUP aspires to promote the growth of all people in their academic, professional, social, and personal lives. Students, faculty, and staff join together to create a community where people exchange ideas, listen to one another with consideration and respect, and are committed to fostering civility through university structures, policies, and procedures. We, as members of the university, strive to achieve the following individual commitments:

To strengthen the university for academic success, I will act honestly, take responsibility for my behavior and continuous learning, and respect the freedom of others to express their views.

To foster an environment for personal growth, I will honor and take care of my body, mind, and character. I will be helpful to others and respect their rights. I will discourage intolerance, hatred, and injustice, and promote constructive resolution of conflict.

To contribute to the future, I will strive for the betterment of the community, myself, my university, the nation, and the world.

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Affirmative Action

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Title IX Reporting

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Department of Safety Sciences and Environmental Engineering

The Department of Safety Sciences and Environmental Engineering at Indiana University of Pennsylvania prepares highly qualified individuals for careers in safety, health, and environmental applied sciences. The program offers an ABET-accredited B.S degree in Safety, Health, and Environmental Applied Sciences, an M.S. in Safety Sciences, and a Ph.D. in Safety Sciences. Our graduate degrees in safety sciences are designed specifically for working professionals who wish to advance their career in this diverse field.

Mission Statement and Program Objectives

The Doctor of Philosophy in Safety Sciences prepares safety professionals with advanced skills in the anticipation, recognition, evaluation, control, and prevention of safety, health, and environmental hazards in the work environment. Another objective is to train individuals to teach safety sciences at academic institutions. Graduates of this degree program will be able to conduct independent research.

After completing the Ph.D. Program in Safety Sciences, the student will be able to:

1. Identify, recognize, evaluate, and control complex safety, health, and environmental hazards in the workplace.
2. Conduct and publish independent research in the safety, health, and environmental field.
3. Apply appropriate quantitative and qualitative research methods to safety, health and environmental problems, management systems, policy, and law.
4. Demonstrate an advanced knowledge level of safety, health, and environmental management techniques.
5. Effectively develop, implement, and evaluate a safety education curriculum.

Faculty and Staff

Doctoral Program Coordinator
Dr. Majed Zreiqat

Department Chairperson
Dr. Tracey Cekada

Faculty Member	Office	Phone Number	E-mail Address
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Admission

It is expected that students entering the Ph.D. program in safety sciences will already have completed a master's degree in safety sciences, occupational safety, industrial hygiene, or another closely related discipline. A highly qualified applicant may enter the doctoral degree program with a baccalaureate degree. Such students must meet IUP's Master of Science in Safety Sciences degree program admission requirements and complete IUP's Master of Science in Safety Sciences degree requirements en route to the Ph.D.

Students with a master's degree in safety or a closely related field seeking admission to the Doctor of Philosophy in Safety Sciences degree program must meet the following criteria:

- Have earned a master's degree from a regionally accredited college or university.
- Must have a master's degree in safety sciences or a closely related field such as industrial hygiene, environmental health, public health, or ergonomics. Students not possessing a master's degree in safety sciences or a closely related field but those possessing a master's degree in a technical field such as industrial engineering may be admitted to the program, provided they can demonstrate they meet competency areas in math, chemistry, physics, safety management, industrial hygiene, fire safety, and ergonomics. The competency areas can be met through prior coursework, certifications, work experience or taking additional coursework.
- Applicants will also be required to demonstrate an ability to conduct independent research through a thesis, published research article, report reflecting critical thinking skills, etc.
- Have a minimum graduate grade-point average of 3.0 (on a 4.0 scale).

Additionally, the doctoral coordinator, after consulting with the department screening committee if required, will submit a recommendation regarding applicants to the Office of Graduate Education and Academic Planning

- All official college transcripts
- Three letters of recommendation
- Statement of goals
- Resumé
- Example of written work, e.g., thesis, articles, reports, etc.

For this review, a "competitive applicant" would have these characteristics:

- Has at least 5-years of quality work experience in an occupational health and safety-related field
- Holds relevant professional certifications, such as CSP, CIH, CHMM, or PE
- Has generated a quality thesis or capstone report as a part of their MS degree and/or peer-reviewed publications.

International students must also meet Graduate Admissions requirements for international students. These requirements include:

- Submission of Test of English as a Foreign Language (TOEFL) scores for applicants from people whose native language is not English. The minimum TOEFL score for admission to the program is 540.
- Submit a Foreign Student Financial Statement. International students must document their ability to assume full responsibility for the cost of graduate education per The Office of Graduate Education and Academic Planning requirements.

Safety Sciences Doctoral Education and Research Fee. All doctoral students will be charged a onetime doctoral education and research fee of $1,500 on entry to the program. This one-time nonrefundable fee supports doctoral educational experiences. Examples of resources supported by these fees are:

1. Guest speaker honorariums
2. Enhancement of technology resources used for instruction (including computer programs and software)
3. Student research support funds
4. Travel and expenses for students to present at regional and national conferences
5. Support the purchase of items to enhance classroom/facilities environment.

Graduate Admissions: www.iup.edu/admissions/graduate/

For more information regarding Admission Classification and Provisional Admission for International Graduate Application, view the Graduate Catalog: https://catalog.iup.edu/index.php

Financial Assistance

Graduate Assistantships

The Department does not typically offer assistantships to graduate students due to the off-campus, distanced learning characteristics of the program. In rare instances where a specific need arises, graduate students who have been admitted to the Ph.D. program are eligible for part-time graduate assistant support. Part-time graduate students work 10 hours weekly, receive a stipend and a tuition waiver. Assistantships for part-time students are awarded on criteria such as academic merit, financial need, skill sets that match potential assignments, and ability to have an on-campus presence.

When funds are available, the Department does offer partial scholarships to students entering the program. Contact the Doctoral Program Coordinator for more information.

- o https://www.iup.edu/admissions/graduate/financialaid/index.html
- o Office of Financial Aid: www.iup.edu/financialaid/

Academic Advisement

The Doctoral Program Coordinator serves as the general advisor for all doctoral students. The advisor is responsible for assisting the student with developing and implementing a Program of Studies Plan and providing advice/mentorship during early stages of topic selection for dissertations. All students must complete their plan of study. This plan of study is designed to facilitate progress towards degree completion.

The advisor will help students plan their course schedule, select electives (if available), approve transfer credits, and provide guidance with program requests in a timely fashion. The Doctoral Program Coordinator is an additional resource for discussing University and Departmental policies and program requirements. The student maintains the responsibility for fulfilling program requirements, meeting deadlines, etc.

Students should interact with their advisor each semester prior to registering for course work. All changes in the student's Program of Studies Plan must be approved by the advisor before the student registers for classes.

In order to support early definition of dissertation topics, students (based on their academic interests) may also be assigned additional mentors after student discussion with the Doctoral Program Coordinator.

Campus Resources & Student Support

The Office of Graduate Education and Academic Planning (formally the School of Graduate Studies and Research): www.iup.edu/graduatestudies/
Graduate Catalog: https://catalog.iup.edu/index.php
Office of Student Billing: https://www.iup.edu/student-billing/
Office of the Registrar: www.iup.edu/registrar/
Department for Disability Access and Advising: https://www.iup.edu/disabilitysupport/
Office of Social Equity: www.iup.edu/socialequity/
IUP Libraries: www.iup.edu/library/
MyIUP: www.iup.edu/myiup/
IUP Navigators: https://www.iup.edu/life-at-iup/support/navigators.html
IT Support: www.iup.edu/itsupportcenter/
Veterans and Service Members: www.iup.edu/veterans/resource-center/
IUP Writing Center: www.iup.edu/writingcenter/

IUP Scholarly Editing and Writing Service: https://www.iup.edu/scholarlycommunication/index.html
Applied Research Lab: https://www.iup.edu/arl/index.html
IUP Career and Professional Development Center: www.iup.edu/career/
Parking Services: www.iup.edu/parking/
University Police: www.iup.edu/police/ 724-357-2141
Crisis Intervention 24/7 Hotline: 1-877-333-2470
Registration Resources: www.iup.edu/registrar/students/registration-resources/index.html

IUP Email

IUP offers an email account to all active students. Your IUP email address is the primary means by with the university will contact you with official information and you should use for all IUP official communications. It is your responsibility to check your IUP email regularly. Visit https://www.iup.edu/itsupportcenter/get-support/e-mail-and-calendar/index.html to learn more about setting up this account. For more information regarding university policy on email communications, view the Graduate Catalog: https://catalog.iup.edu/index.php

Graduate Student Assembly

The Graduate Student Assembly (GSA) represents the graduate student body's interests at IUP and within the Indiana community. The GSA makes recommendations related University-wide and graduate-specific policies and in areas of concern in the cultural, intellectual, and social life of the part- and full-time graduate student. Visit www.iup.edu/graduatestudies/gsa for more information.

Programs and Degrees

Doctoral Programs

The Ph.D. program in Safety Sciences is a unique part-time 54-credit hybrid distance education and on-campus summer workshop program of study. The Ph.D. in Safety Sciences program is based on a cohort model in which a student group is admitted every odd-numbered year (i.e., 2025, 2027) into the degree program and progresses together through an established series of courses. The cohort begins with the Summer semester.

The program requires a minimum of 54 semester hours of graduate credits. Students are typically required to complete 24 credits through distance education courses and 18 credits in 6 one-week summer workshop courses. On-campus summer workshop courses are offered at IUP over three summers. There are 12 hours of dissertation supervision. The total minimum time to complete the degree including dissertation is ~3 years. Most complete within 4 to 8 years.

Each student must also satisfactorily complete a comprehensive written examination (in the form of a research proposal), an oral defense of their dissertation proposal, a dissertation, and an oral defense of their dissertation. The credits allocated for the program are as follows:

Required Course Work

Pedagogy Courses (6 semester hours)

SAFE 800	Pedagogical Practices in Safety Education	3 cr.
SAFE 808	Curriculum Evaluation in Safety Education	3 cr.

Advanced Applied Research Courses (9 semester hours)

SAFE 810	Applied Research I: Experimental Design	3 cr.
SAFE 811	Applied Research II: Multivariate Statistics	3 cr.
SAFE 812	Applied Research III: Tests and Measurements	3 cr.

Safety Management Courses (12 semester hours from the following list)

SAFE 802	Safety Management Systems	3 cr.
SAFE 804	Legal Aspects of Safety Sciences	3 cr.
SAFE 805	Strategies in Risk Control	3 cr.
SAFE 809	Human Performance and Organizational Safety Theory	3 cr.
SAFE 873	Disaster Preparedness	3 cr.

Technical Safety and Colloquium Courses (15 semester hours from the following list)

SAFE 801	Environmental Impact Assessment and Documentation	3 cr.
SAFE 803	Epidemiological Analysis in Safety Sciences	3 cr.
SAFE 806	Advanced Topics in Environmental Health and Safety	3 cr.
SAFE 807	Doctoral Colloquium in Safety Sciences	3 cr.
SAFE 814	Advanced Topics in Ergonomics	3 cr.
SAFE 815	Advanced Topics in Industrial Hygiene	3 cr.
SAFE 874	Fire Safety in Building Design	3 cr.

Dissertation (12 semester hours)

SAFE 995	Dissertation	1-12 cr.

Once a student has registered for the number of dissertation credits required, 12 credits, the student must register for one extended dissertation each semester (fall and spring) annually through the graduation of the student or until the time limit is exceeded (eight years after beginning IUP doctoral program course work).

An example Ph.D. Cohort VI course schedule is provided below.

	Spring (Jan-May)	Summer (May, June, or July)	Fall (Aug-Dec)
2025		IUP Workshop: SAFE 803 – Epidemiological Analysis in Safety Sciences SAFE 810 – Applied Research I: Experimental Design	Dist. Ed: SAFE 809 – Human Performance & Organizational Safety Theory SAFE 806 – Advanced Topics in Environmental Health & Safety

2026	Dist. Ed: SAFE 811 – Applied Research II: Multivariate Analysis SAFE804 – Legal Aspects of Safety Sciences	IUP Workshop: SAFE 800 – Pedagogical Practices in Safety Education SAFE 812 – Applied Research III: Tests and Measurements	Dist. Ed: SAFE 802 – Safety Management Systems SAFE 814 – Advanced Topics in Ergonomics
2027	Dist. Ed: SAFE 873 – Disaster Preparedness SAFE 808 – Curriculum Evaluation in Safety Sciences	IUP Workshop: SAFE 807 – Doctoral Colloquium in Safety Sciences SAFE 815 – Advanced Topics in Industrial Hygiene	SAFE 995
2028	SAFE 995	SAFE 995	SAFE 995

Red: Technical or colloquium safety course   Blue: Safety management course
Black: Advanced applied research course   Green: Pedagogy course

Course Descriptions

SAFE 800: Pedagogical Practices in Safety Education   3c-0l-3cr
Application of educational theories to the safety educator role in higher education will be explored. The course will review the role of the teacher in both the classroom and internship settings, teaching strategies, and student-centered learning outcomes as they pertain to safety sciences.
Prerequisites: None

SAFE 801: Environmental Impact Analysis and Documentation   3c-01-3cr
Using an environmental impact statement as a model, this course is designed to provide the student with various regulatory, scientific, mathematical, and risk-based approaches and tools to conduct environmental impact assessments for industrial technologies by analyzing affected environments and by determining the significant environmental consequences of industrial technologies on various resources (e.g., air, water, land, human health, etc.). The student is also provided with information on how to generate reports/forms based on implementing regulatory and other requirements to document information from environmental/risk assessments and analyses.
Prerequisites: None

SAFE 802: Safety Management Systems   3c-01-3cr
This seminar examines administrative concepts and principles regarding organizing and managing safety performance within an organization. The course is designed to explore the current research topics in managing safety including dimensions of safety performance, management systems, culture & climate, decision-making & risk, leader-member relations, attitudes, and values, & international and cultural issues. The course focuses on identifying underlying theoretical and conceptual frameworks characterizing organizational safety research and helping students develop a sense of the issues and questions that the field addresses.
Prerequisites: None

SAFE 803: Epidemiological Analysis in Safety Sciences   3c-0l-3cr

The course will focus on epidemiological based test procedures commonly used in published safety research. Students will be required to formulate research hypotheses, test them using the appropriate quantitative research methodologies, and interpret results.
Prerequisites: None

SAFE 804: Legal Aspects of Safety Sciences   3c-0l-3cr
This course examines the legal framework within which the safety, health and environmental professional must perform. Consideration is given to the historical development of legal aspects of the profession, including current guidelines that impact on regulatory compliance and professional practice. Personal liabilities associated with professional practice, including the possibility of criminal sanctions for workplace injuries, are presented.
Prerequisites: None

SAFE 805: Strategies in Risk Control   3c-0l-3cr
Tools and strategies for the qualitative and quantitative assessment and management of environmental and occupational risks will be presented.
Prerequisites: None

SAFE 806: Advanced Topics in Environmental Health and Safety   3c-01-3cr
This course will present progressive topics in the environmental, health, and safety field. Leading edge applications in the areas of industrial hygiene, ergonomics, environmental safety, fire protection and safety management will be covered.
Prerequisites: None

SAFE 807: Doctoral Colloquium in Safety Sciences   3c-01-3cr
This graduate colloquium is designed to have the students work closely with their classmates and the instructor to explore and present various components of safety research. Colloquium students will explore and present details of various research methods in order to gain valuable practice with research and technical presentations.
Prerequisites: None

SAFE 808: Curriculum Evaluation in Safety Education   3c-0l-3cr
This course examines the various curriculum designs in safety at the undergraduate and graduate level. The student will analyze current accreditation standards in safety education with an emphasis on curriculum evaluation.   The students will learn methods for conducting ongoing curriculum revision based on a quality outcomes assessment plan.
Prerequisites: None

SAFE 809: Human Performance and Organizational Safety Theory   3c-0l-3cr
Presents advanced topics in the field of human performance and organizational safety theory. Evaluates human performance and organizational safety theory research methodology and research priorities. Applies safety theory and analytical, quantitative, and qualitative tools to tackle large-scale or complex human performance and organizational safety behavioral issues. Covers and promotes leading edge research, analysis and discussion as defined by recent and relevant published research.
Prerequisites: None

SAFE 810: Applied Research I: Experimental Design   3c-01-3cr

Covers experimental and advanced multivariate statistical procedures, including analysis of variance (ANOVA), multivariate analysis of variance (MANOVA), analysis of covariance (ANCOVA), post-hoc tests, planned comparisons, and randomized block designs.
Prerequisite: None

SAFE 811: Applied Research II: Multivariate Analysis   3c-0l-3cr
This course will explore multivariate analysis techniques commonly used in safety sciences research. Topics include multiple regression, exploratory and confirmatory factor analysis, and linear discriminant analysis.

Prerequisites: None
SAFE 812: Applied Research III: Tests and Measurements   3c-0l-3cr
Introduces students to testing and measurement topics as they specifically pertain to the field of occupational safety. Includes test validity and reliability, test and measurement interpretation, survey design and construction, sampling strategies and qualitative analysis of information. Describes the social, legal, and ethical aspects of occupational safety testing.
Prerequisites: None

SAFE 814: Advanced Topics in Ergonomics   3c-0l-3cr
Presents advanced topics in the field of ergonomics (physical, cognitive, and organizational). Evaluates research methodologies and priorities. Provides expertise and analytical, quantitative, and qualitative tools required to tackle complex ergonomic issues in the workplace. Covers and promotes leading edge research, analysis, and discussions by reviewing and analyzing published research.
Prerequisites: None

SAFE 815: Advanced Topics in Industrial Hygiene   3c-0l-3cr
Presents advanced topics in the field of industrial hygiene. Evaluates research methodologies and research priorities. Provides expertise and analytical, quantitative, and qualitative tools required to tackle complex industrial hygiene issues. Covers and promotes leading edge research, analysis, and discussions by reviewing published research.
Prerequisites: None

SAFE 873: Disaster Preparedness   3c-0l-3cr
Principles and techniques for preparing for various types of disasters. Students are acquainted with the requirements to develop workable plans for natural and industrial types of disasters. Loss prevention measures are discussed and directed toward preservation of organization resources.
Prerequisite: SAFE Major or Permission of Instructor

SAFE 874: Fire Safety in Building Design   3c-0l-3cr
Examines the fundamental principles for the safe design of buildings from a fire hazard standpoint. Emphasis is given to an understanding of the building codes, fire properties of building materials, building design criteria to limit the spread of fire and smoke, control of ignition sources, storage of combustibles and flammables, life safety, and active fire protection systems.
Prerequisite: SAFE Major or Permission of Instructor

SAFE 995: Dissertation   1-12 cr

SAFE 995: Extended Dissertation   1 cr.

Evaluation of Students

For information regarding graduate policies on grading, view the Graduate Catalog:
https://catalog.iup.edu/index.php

Purpose and Description of Department of Safety Sciences-Specific Comprehensive Examination. The purpose of the comprehensive exam is to ensure that each student has achieved a fundamental knowledge base and can demonstrate an ability to apply that knowledge accurately and appropriately before proceeding to the relatively independent scholarship involved in dissertation research. Knowledge, integration, and application of scholarship are essential for successful scholarly work. Comprehensive examinations serve as developmental learning and assessment opportunities.

The comprehensive exam will consist of a <u>scholarly essay (constituting in most cases a research proposal similar to or acting as that represented in the first three chapters of dissertation) on a research topic of the students' choosing</u>. Polished academic writing is expected. A good comprehensive exam includes both review and integration of knowledge. Therefore, the student must formulate compelling and convincing arguments based on scholarly knowledge and cite scholarly literature (i.e., peer reviewed articles) in the essay. The essay should demonstrate that the student knows, understands, and can apply scholarly knowledge.

The completed exam must demonstrate the student's mastery and ability to apply concepts from the program's core courses and intended areas of research. The exam must also demonstrate the student's knowledge and effective application of research methods.

The structure for each student's exam will be based on the judgment of the student's dissertation committee. A *suggested* structure is noted below as a general guide.

Examination Structure Guide. The exam will take the form of a preliminary, yet inclusive, <u>research proposal</u> (similar to or acting as that represented in the first three chapters of dissertation) where the student may choose to propose a qualitative, quantitative, or mixed methods study. Exam essays will then consist of two basic parts: (1) introduction and literature review; and (2) proposed methodology (showcasing experimental and statistical research methods). Each part may run approximately 15 to 20 pages culminating in a 30 to 40-page document excluding references. The exam must follow the most current APA publication style and include full bibliographic citations.

The first half of an exam essay will include an introduction that may also contain:
- a statement declaring the study as (1) quantitative, (2) qualitative, (3) mixed methods or (4) an evaluation/characterization
- a statement of the research problem and the significance of the research problem
- a succinct research question or set of research questions, and
- a discussion outlining the study's contribution to a specified body of knowledge.

The student is expected to present a literature review that addresses and integrates associated theoretical and scholarly perspectives thereby providing an overview of existing studies and foundational arguments relevant to the student's chosen research topic and demonstrating a working knowledge of the core topics presented throughout the program. This section of the essay will culminate in a synthesis of knowledge. Depending on the type of research (e.g., quantitative, qualitative,

mixed methods or an evaluation), the student will locate the proposed research (1) within a conceptual framework, (2) within the context of defined theoretical gaps, contradictions, and/or predicaments relative to the research focus; (3) a preliminary concept map, and/or (4) a logic model.

The second half of the exam essay addresses anticipated methods for the proposed study. This section will start off by discussing the pertinent perspectives or research paradigms and how they influence the student's proposed methods, research design, and rationale. The following methodological points also require discussion and justification relative to the student's chosen topic, introduction and literature sections, and proposed design:

1. Research proposal essays should address:
        a. The research design's overall strengths and limitations
        b. Potential data sources
        c. Sampling strategy including criteria and rationale
        d. Data collection plans
        e. Plans for analysis
        f. Ethical aspects of the study
        g. Form of representation of findings

2. Essays focused on quantitative studies, certain mixed methods studies, and/or evaluations, as stipulated by the student's committee, should address:
        a. Identification of dependent and independent variables
        b. Measures of variables including scales, indices, and reliability and validity
        c. Validity issues of causes and effects

3. Essays focused on qualitative studies, certain mixed methods studies, and/or some evaluations, as stipulated by the student's committee, should address:
        a. Assurance of quality and credibility of the study

4. Essays focused on evaluations, as stipulated by the student's committee, should address:
        a. Identification of stakeholder groups and relevant stakeholder interests pertaining to the evaluation

Exam Procedures. To take the comprehensive exam, students should have completed all required coursework (Note: exemptions are granted on this course completion requirement) and have a dissertation committee approved by the doctoral coordinator. Students may then request to take the comprehensive exam. Basic research, applied research, evaluation, policy and management research, or other types of safety studies as determined by the committee are acceptable. Note: Once all required course work is completed, students will need to begin to register for at least one dissertation credit (SAFE 995) in the fall and spring terms regardless of when the comprehensive examinations are taken.

The student must first meet with their committee to discuss their research idea. The research topic must be approved by the student's dissertation committee prior to starting the comprehensive exam. If, in the judgment of the committee, a different exam structure to the one noted above is deemed more valuable, a structure may be negotiated between the student and their committee as long as the comprehensive exam essay includes (1) a review of literature and (2) theoretical synthesis.

Students may contact their committee members and request direction during the exam process. The student-committee relationship and interactivity should resemble that of the dissertation process.

Each student must submit their exam essay to their committee in MS-Word or in a form agreed upon by the committee. The dissertation committee members will read and evaluate the exam. Evaluation of the exam is based on the following criteria:

- Evidence of ability to apply knowledge: The student demonstrates a practical application of knowledge by citing examples, setting responses within an applied context, providing practical realistic problem solutions, and addressing related technical, scientific, political, social, organizational, and leadership nuances as appropriate.
- Evidence of ability to synthesize: The student demonstrates an ability to not simply report and analyze facts, but to integrate them as a supportive base and weave them through an innovative argument resulting in a logical cohesive formulation relative to the issues and questions at hand.
- Completeness and thoroughness: The student addresses all specific issues asked by the student's committee; the literature review and experimental/statistical methods sections are thorough and complete; each subpart given appropriate attention; uses specific detail and concrete examples to illustrate points; discusses alternative explanations regarding a line of discourse.
- Organization and clarity of writing: The student uses precise, clear statements throughout; well organized; one line of reasoning completed before another begins; well written.
- Conceptual clarity: The student incorporates relevant terminology from the field of safety as appropriate; demonstrates an understanding of the language of the field and an ability to think conceptually and clearly.
- Accuracy: The student demonstrates an accurate understanding of the subject matter in question; accurately and appropriately draws on relevant research findings, conceptual schemes, theoretical paradigms, etc.

Exam Feedback. After the committee members read the exam, they may jointly meet with the student for an oral defense (of the proposal). This oral defense can occur on-line for students who are not local. Based on the consensus of the dissertation committee members, a comprehensive exam is graded as (1) pass, (2) conditional pass, (3) revise and resubmit, or (4) fail. See below information in the section Evaluation Outcome for Dissertation for additional information.

A "pass" would indicate that there is clear demonstration that the student's exam essay shows evidence of the ability to apply knowledge and to synthesize information, is complete, thorough, organized, logical, and accurate, and reflects clear writing and conceptual clarity.

A "conditional pass" would indicate that while most of the initial specified conditions have been met in the essay, the committee would like to see some modifications. In the event of a conditional pass, the committee will specify the modifications and any time conditions in writing to the student. The committee members may choose to leave the final decision to the chair or request to review the modifications themselves. The student must meet the specified conditions in order to receive a pass.

However, in some cases, a grade decision may be "revise and resubmit." A revise and resubmit decision would typically reflect that the essay met some of the evaluation criteria and the committee saw strong evidence of potential success, but the essay contains substantial deficiencies that warrant revision in order for the student to demonstrate sufficient mastery of the relevant literature and adequate skills for

dissertation work. In the event of a revise and resubmit decision, the student is provided with written feedback from the committee and has two months (60 days) from the time they receive all feedback from their committee to revise and resubmit the exam. The committee members may exercise their option to request the student to sit for another oral exam. The committee members then decide on a grade of pass, conditional pass, or fail based on the revised essay. A student may revise and resubmit only one time. However, they may receive a conditional pass multiple times provided forward progress is evidenced by the committee.

Students who "fail" the comprehensive exam are dismissed from the program. The committee chair must report all exam outcomes to the doctoral coordinator.

Comprehensive/Candidacy Examinations

This examination is given, usually upon the candidate's completion of coursework, to determine the student's progress in the degree field and fields related to it and the student's likelihood of success in his/her research-dissertation phase. The examination may be written, oral, or both and is not necessarily limited to areas in which the candidate has taken course work. In addition to having written procedures for taking the comprehensive exam, departments must also have written procedures regarding providing feedback for comprehensive exams.

Program Level Examination Appeals

Appeals for Program Level Exams such as, candidacy, comprehensive, or qualifying examinations, are made to the Associate Provost of the Office of Graduate Education and Academic Planning based on policy and/or procedural violations. The appeal can be based only on policy and/or procedural violations, and not simply on the outcome of the examination. Procedural violations would be cases in which the program/department failed to follow program/department and/or University policies and/or procedures relating to the administration and/or evaluation of the exam.

The appeal must be made in writing to the Associate Provost of the Office of Graduate Education and Academic Planning. Documentation of the policy(ies)/procedures in question must be provided, along with a detailed description of the alleged violation(s). All evidence supporting the alleged violation should also be provided. The student must submit the written appeal to the Associate Provost in the Office of Graduate Education and Academic Planning within 30 days of receipt of the outcome of the examination. Upon receipt of the written appeal the Associate Provost, will conduct an investigation of the allegation, review the documentation and render a final decision which completes the appeal process. The final decision rendered by the Associate Provost may not be appealed.

If it is found that policy/and/or procedure has been violated, the Associate Provost will instruct the program/department to allow the student to retake the exam, fully adhering to policy and procedures. In the event of a finding in support of the student allegation, the reexamination may not be counted as one of the attempts permitted under the University or Department's Reexamination Policy.

Reexamination Policy

No student is permitted a "third" examination without a recommendation to that effect from the degree program's sponsoring department per their adopted written procedures and the approval of the Associate Provost of the Office of Graduate Education and Academic Planning. Exceptions to this policy for programs can be made only with the approval of the Office of Graduate Education and Academic Planning. In the event a student does not successfully complete the comprehensive re-examination according to program requirements and the failure results in program dismissal, the program must notify the Office of Graduate Education and Academic Planning of the dismissal in writing. The Associate Provost of the Office of Graduate Education and Academic Planning will send an official notification of the dismissal to the student.

Degree Completion

The program requires a minimum of 54 semester hours of graduate credits with at least 12 credits associated with dissertation work. Each student must also satisfactorily complete a comprehensive written examination (research proposal), an oral defense of their dissertation proposal, a dissertation, and an oral defense of their dissertation. Additional aspects associated with the process of degree completion are provided below, including the completion of a research topic approval form.

Research Topic Approval Form (RTAF). In terms of timing, once the student has completed their comprehensive exam, they should prepare a scholarly, polished 1-2-page summary of the research topic, including the method of study, materials, any equipment that might be used, and an estimated time frame to complete the process. The process to submit the information is through an electronic RTAF. Note: A student may elect to prepare and have approved an RTAF prior to completion of comprehensive exam or proposal defense, but this could result in having to revise the RTAF based on comprehensive examination or proposal defense feedback. Regardless of when the RTAF is completed, students will still need to continue to register for at least one dissertation credit (SAFE 995) in each fall and spring term after required course work has been completed until they graduate.

The abstract (summary) should be an accurate, clear representation of the proposed study—an extended abstract of the proposal—that includes the nature and scope of the issue, a succinct summary of the literature, and the proposed method of study. It will be reviewed for approval by the program coordinator, dissertation committee members, the dean of the John J. and Char Kopchick College of Natural Sciences and Mathematics, and the key administrators in the of the Office of Graduate Education and Academic Planning; therefore, it should be well-written, scholarly, fully referenced, and free of grammatical and spelling errors. The student should always have their dissertation chair review their summary before submission. Once the student has had their summary reviewed by their dissertation chair, and if the student has questions about the quality of his/her three-page summary, we recommend the student email an advance copy to the program coordinator who can provide additional feedback (if needed) prior to the official submission. You may begin writing the dissertation after you receive written notice approving the research topic from of the Office of Graduate Education and Academic Planning.

Should changes occur, a new RTAF is required to be completed and approved by your committee and the of the Office of Graduate Education and Academic Planning. No student can graduate without an

up-to-date RTAF on file with the Thesis/Dissertation Office.

If the project requires review by either the university's Institutional Review Board for the Protection of Human Subjects (IRB) or the Institutional Animal Care and Use Committee (IACUC), final approval of the Research Topic Approval Form will not be forthcoming from the of the Office of Graduate Education and Academic Planning until either the IRB or IACUC has reviewed and approved the research project.

The of the Office of Graduate Education and Academic Planning requires you to file a Research Topic Approval Form at least two academic terms before you expect to graduate. If the form is not filed by the required deadline, the candidates' graduation will be delayed until the next semester.

It is the student's responsibility to ensure that their RTAF form is approved by the of the Office of Graduate Education and Academic Planning. Once the RTAF form is approved, the student should receive a letter of confirmation indicating approval. If the student does not receive that letter, it is up to the student to follow up and determine the status of the RTAF.

NOTE: The student cannot begin dissertation research activity beyond preliminary steps (such as background research, IRB/IACUC approved pilot study, or three-chapter writing/review) until notice of approval has been received from the of the Office of Graduate Education and Academic Planning. If RTAF approval is marked "conditional pending outside reader approval," the student may commence dissertation research, but cannot defend or graduate until the outside reader is approved.

Institutional Review Board (IRB). For any research involving human subjects, dissertation research proposals must be submitted to the Institutional Review Board (IRB) for review and approval prior to initiating any research. The IRB process is a requirement of the federal government and is in place to assure that human research subjects are protected from risks of harm or abuse in research.

You will need to submit to the IRB a proposed protocol for conducting your dissertation research AND RECEIVE APPROVAL before engaging in any research (data collection) activities. Students should carefully read the IRB information, guidelines, forms, and submission deadlines available at http://www.iup.edu/irb/. Your RTAF will not be approved by the Office of Graduate Education and Academic Planning until your IRB proposal has cleared the IRB review process.

Securing IRB approval does not have to be a difficult or lengthy process. The following tips should assist you in moving easily through it:
- Read the directions very carefully and be sure that you follow them fully. (This includes numbering pages of the documents you attach to the form.) In developing your protocol narrative, be sure to address all the points indicated on the form. If a point is not applicable to you, state that rather than simply skipping the point.
- Be mindful of any potential ways in which you might have a "power-over" relationship with human subjects and be sure to address how you will protect against coercion.
- Include all related documents, such as a copy of recruitment letter, advertisements, surveys, interview guide, consent form, etc.
- Your committee chair will need to sign the IRB application so be sure to allow for enough time to make needed revisions based on your chair's feedback.
- Telephone surveys can be done. The IRB will expect that you will obtain consent over the phone and will ask you to include the 'script' of what you will say to introduce yourself, the study,

inform the participant of their rights and obtain their consent. Include this script as an appendix to the form.

- Consider the readability and accessibility of the language in your consent forms, scripts, and data collection instruments, ensuring that the language matches characteristics of your sample.
- If you have a tricky or unusual element to your study, consider requesting an advance meeting for you and Chair with the IRB Chair to get suggestions on how best to address these challenges.
- Be aware of IRB Committee schedules and deadlines for submitting your materials (usually, 10 days in advance of a review.) A calendar of IRB deadlines and meetings is available at the IUP Office of Graduate Education and Academic Planning web site.
- Your IRB protocol may receive an expedited review if your study qualifies (see the IRB Protocol guidelines for more details), but in the case it does require a full board review *you must attend the hearing with your committee chair*. (Attendees who are not local can attend via the internet.) Members of the IRB will share their questions and concerns with you directly, allowing you the opportunity to respond. They may also offer suggestions to help you address ethical issues responsibly. You will also be able to make any necessary revisions immediately following the review and feedback and resubmit it to the IRB, allowing you to begin your research more quickly.

The Office of Graduate Education and Academic Planning has (1) established deadlines for submitting research topic approval forms and submitting dissertations, (2) established deadlines and process for applying for graduation, and (3) provided student forms for their completion relative to dissertation process.

For more information, view the Graduate Catalog: https://catalog.iup.edu/index.php

Dissertation Completion

Upon acceptance of the dissertation by the dissertation advisor, the candidate shall then request a formal meeting of the dissertation committee for a formal dissertation defense. The meeting will be scheduled at a time convenient to all committee members. The candidate must place the dissertation in the hands of all committee members at least two weeks in advance of the scheduled dissertation defense. The student will be required to defend the completed dissertation during an oral examination conducted by the dissertation committee. This oral examination does not have to be conducted in person, although it is preferred. It is the responsibility of the student to electronically arrange for the oral defense if conducted on-line. During the defense, the candidate is expected to respond to substantive and methodological questions related to the dissertation.

The dissertation defenses are open to members of the University community. It is the responsibility of the dissertation advisor to make known to the relevant University community the occurrence of a dissertation defense, including student's name, title of dissertation, and the date and other logistics regarding the dissertation defense.

Evaluation Outcome for Dissertation

The dissertation must be approved by each member of the committee (typically via email), as well as by The Office of Graduate Education and Academic Planning. Results from the dissertation defense can include passing the defense, failing the defense, or passing the defense based upon required revisions.

A "pass the defense" result indicates that the dissertation has successfully addressed the research questions posed, showing clear evidence of the ability to apply knowledge and to synthesize information, is complete, thorough, organized, logical and accurate, and reflects clear writing and conceptual clarity.

A "fail the defense" result indicates that there are major structural deficiencies in the dissertation that cannot be corrected through revisions, resulting in the dissertation not successfully addressing research questions posed. These deficiencies could be in areas such as flawed experimental design, insufficient or incorrect information collection and analysis, and unsubstantiated or illogical findings and conclusions.

A "pass the defense based upon required revisions" result indicates that the dissertation successfully has addressed the research questions posed but its quality could be improved, through revision, in one or more of the following areas: completeness, thoroughness, organization, accuracy, clear writing and conceptual clarity.

For students admitted after Fall 2017 – Dissertation and thesis credits will be assigned Pass or Fail as the final evaluation outcome for the taken credits and carry no quality points weighted towards a student's CGPA.

For students admitted prior to Fall 2017 – Dissertation and thesis credits will be assigned a letter grade as the final evaluation outcome for the credits taken and carry quality points weighted towards a student's CGPA for the number of dissertation credits required for the program. "Extended" dissertation credits are not calculated into a student's CGPA.

For more information, view the Graduate Catalog: https://catalog.iup.edu/index.php

University Policies and Procedures

University policy is the baseline policy. Programs may have policy that is more stringent than the University baseline policy; however, not less stringent than the University baseline policy. For questions regarding this statement, please contact [Program Coordinator] or the Office of Graduate Education and Academic Planning.

Academic Calendar
View the IUP Academic Calendar: www.iup.edu/news-events/calendar/academic/

The following university and graduate policies can be found at https://catalog.iup.edu/index.php
Academic Good Standing
Academic Integrity

Bereavement-Related Class Absences
Continuous Graduate Registration for Dissertation and Thesis
Grade Appeal Policy
Graduate Fresh Start Policy
Graduate Residency Requirement
Leave of Absence Policy
Time Limitations
Time-to-Degree Masters/Doctoral Dismissal Appeal Policy
Time-to-Degree Extensions for Master's Thesis and Doctoral Dissertation
Transfer of Credits Policy

Research

Insert any information regarding research support for your students.

Graduate Catalog: https://catalog.iup.edu/index.php
Research and Innovation: www.iup.edu/research/
Applied Research Lab (ARL): https://www.iup.edu/arl/index.html

Signature Page

Insert text as necessary

[Example] My signature below indicates that I am responsible for reading and understanding the information provided and referenced in this department/program student handbook.

_____[please initial] I understand my program coordinator may share this document with the Office of Graduate Education and Academic Planning.

_____
Print Name

_____
Signature

_____
Date

Submit to _____ by [Date]

The [department/program] will keep this signed document on file.