The graduate program in technology and humanities at Illinois Institute of Technology prepares students to make meaningful impacts on society through careers both inside and outside academia. Our graduates work as post-secondary faculty and in senior positions in business, government, and cultural institutions. Our students work closely with one or more faculty advisers to develop expertise in research and production in digital humanities. With programmatic roots in technical communication and a growing faculty in diverse areas broadly representative of the digital humanities, the graduate program in technology and humanities produces graduates who are skilled communicators as well as agile, innovative members and leaders of twenty-first century private, public, and academic workplaces.

Research Facilities

The department supports a number of research labs including:

- Humanities and Technology Lab (HaT Lab), with resources for conducting digital humanities research and teaching projects
- Collective Action and Social Media Lab (CASM Lab), conducting computational analysis of big social data
- Gewgaws Lab, a physical and virtual design production lab focused on open source
- Speech Analysis Lab, for applied research on natural and synthesized speech

The department also supports an editing center, Edit IIT, and writing center. Illinois Institute of Technology's Galvin Library subscribes to more than 120 electronic databases with more than 25,000 full-text journals and is part of CARLI, which through I-Share provides access to more than 32 million items across Illinois academic library collections. Students have access to computer labs across the university campus, some of which also serve as classrooms for graduate courses.

Research Areas

Humanities department faculty conduct research in a wide range of areas. Among those especially relevant to technology and humanities are civic impacts of social media; digital design and production; ethics and technology; games and gaming; gender and sexuality in technology; history of technology; science, technology, and society; and speech and text analysis.

Admission Guidelines - Certificate Programs

Applicants must have a four-year bachelor's degree from an accredited institution with a minimum cumulative GPA of at least 2.5/4.0 and must be admitted as a graduate certificate student. Certificate students who later apply to one of the department's M.S. programs or the Ph.D. program must meet the admission guidelines for that program. All coursework taken toward a certificate in technical communication or in instructional design and passed with a grade of "B" or better may also be applied to the M.S. in Technology and Humanities, the M.S. in Technical Communication and Information Architecture, or the Ph.D. in Technology and Humanities (for students who are admitted to one of those programs), as long as those courses were not applied to another degree. However, no more than nine credit hours of 400-level coursework may be counted toward a degree program.

Admission Guidelines - Master's Degrees

Applicants to the master's program come from a variety of backgrounds. Some students enter with strong writing or design ability and learn to apply those skills in technical and scientific areas, while other students enter with a technical or scientific background and learn to enhance their communication skills. The program's goal is to help students build upon existing strengths and develop new areas of expertise.

Applicants must have a bachelor's degree from an accredited four-year institution, with a minimum cumulative GPA of 3.0/4.0.
In addition to the application form, the applicant must submit the following:

1. Professional statement discussing the applicant's academic or professional goals and plans for graduate study
2. Two letters of recommendation from faculty or supervisors who can evaluate the applicant's potential for graduate-level work
3. Official transcripts, or certified copies thereof, of all academic work at the college-level or above
4. Required test scores

All applicants are required to submit Graduate Record Exam (GRE) scores of 144 in quantitative reasoning and 153 in verbal reasoning, and an analytical writing score of at least 4.0.

International students must submit TOEFL scores unless they are exempt as specified in the International Applicant Requirements section of this bulletin. The minimum TOEFL score is 95, with minimum section scores of 20 each in the listening, reading, and writing sections. Students submitting IELTS scores must have a minimum score of 7.0.

Note: Enrolling in courses does not guarantee later acceptance into a degree program, nor does meeting the minimum admission requirements. Students who enter as non-degree or certificate students should first discuss their plans with one of the co-directors of graduate studies.

Admission Guidelines - Ph.D. Program

Students enter the Ph.D. program from a wide range of fields, but should have substantial academic preparation or professional experience related to one or more humanities fields. Applicants must have completed a bachelor's or master's degree in a field that, in combination with the 30 credit hour technical core, would provide a solid basis for advanced academic work leading to original research in technology and humanities.

In addition to the application form, the applicant must submit the following:

1. A short (two pages) research statement
2. Writing or production sample
3. Three letters of recommendation
4. Official transcripts, or certified copies thereof, of all academic work at the college-level or above
5. GRE scores
6. TOEFL or IELTS scores (if applicable)

The research statement should articulate the applicant's research interests including what the applicant is interested in studying and why, who the applicant may be interesting in studying with, and how the applicant's prior education and/or experience has provided reasonable training in the particular field of interest.

Applicants submitting writing samples should choose a sample that demonstrates the applicant's analytical abilities and is in the applicant's declared field of interest. The sample should include a works cited list that enables the admissions committee to evaluate the applicant's familiarity with a field. Applicants submitting production samples or portfolios should submit materials that demonstrate their existing production skills and practice.

All applicants are required to submit Graduate Record Exam (GRE) scores of 144 in quantitative reasoning and 153 in verbal reasoning, and an analytical writing score of at least 4.0.

International students must submit TOEFL scores unless they are exempt as specified in the International Applicant Requirements section of this bulletin. The minimum TOEFL score is 95, with minimum section scores of 20 each in the listening, reading, and writing sections. Students submitting IELTS scores must have a minimum score of 7.0.

Note: Enrolling in courses does not guarantee later acceptance into a degree program, nor does meeting the minimum admission requirements. Students who enter as non-degree or certificate students should first discuss their plans with one of the co-directors of graduate studies.
Degrees Offered

- Master of Science in Technical Communication and Information Architecture
- Master of Science in Technology and Humanities
- Doctor of Philosophy in Technology and Humanities

Certificate Programs

- Instructional Design
- Technical Communication
Course Descriptions

COM 501
Introduction to Linguistics
An introduction to the systematic study of language. Focus on the core areas of linguistics such as sound patterns of language (phonology), form (syntax, morphology), and meaning (semantics, pragmatics) as well as applied areas such as language variation, language acquisition, psychology of language, and the origin of language.
Lecture: 3 Lab: 0 Credits: 3

COM 503
Analyzing and Communicating Quantitative Data
An introduction to statistics and data analysis tailored to the needs of communication and information professionals. Emphasis is placed on developing intuition as to which analyses are appropriate given one’s questions of interest as well as how to interpret and communicate the results of analyses. Students will analyze real data sets using SPSS in the computer lab.
Lecture: 0 Lab: 3 Credits: 3

COM 506
World Englishes
Analysis of the variations of the English language throughout geographic and cultural regions of the world.
Lecture: 3 Lab: 0 Credits: 3

COM 508
Structure of Modern English
Analysis of English grammar from four major perspectives: prescriptive, descriptive, transformational-generative, and contextual perspectives. Different methods for analyzing sentences, ways of applying each method to problems in editing and writing, and contributions of linguists such as Noam Chomsky. While focusing on sentence structure, students also look at the structure of words (morphology) and larger units of text (discourse) at various points in the semester.
Lecture: 3 Lab: 0 Credits: 3

COM 509
History of the English Language
Study of the origins and development of key features of the English language through its important stages, including Old, Middle, and Early Modern English.
Lecture: 3 Lab: 0 Credits: 3

COM 510
The Human Voice: Description, Analysis, and Application
Analysis of human and synthetic speech intended for technology mediated environments and devices. Focus on talker characteristics that affect speech intelligibility and social factors that affect talker characteristics. Attention to design characteristics of technology mediated speech and how humans react to it.
Lecture: 3 Lab: 0 Credits: 3

COM 511
Linguistics for Technical Communication
This course examines linguistic theory as it relates to everyday problems. The course is divided into four sections, each of which expose students to an application of these topics to broader issues. Topics include sound patterns of speech, sentence structure, meaning and language and society.
Lecture: 3 Lab: 0 Credits: 3

COM 515
Discourse Analysis
Analysis of spoken and written texts on the intersentential and metalinguistic levels (e.g. semantic roles; given-new information; deixis and anaphora; presupposition and entailment; direct and indirect speech acts; schema theory). Applications to social and professional issues such as intercultural communication; sociopolitical discourse; discourse in educational, legal, and medical settings; narratives and literary texts.
Lecture: 3 Lab: 0 Credits: 3

COM 521
Theory in Technology and Humanities
Broad coverage of concepts and issues in current and classic scholarship in the field of technical communication. Intensive work in bibliographic research methods for academic genres.
Lecture: 3 Lab: 0 Credits: 3

COM 522
Wireframing and Prototyping
Wireframing and Prototyping focuses on the development, validation, and use of wireframes and prototypes for UX. Essentially, students will learn how to use wireframing and prototyping practices to communicate and test UX design ideas.
Lecture: 3 Lab: 0 Credits: 3

COM 523
Communicating Science
This course focuses on strategies for communicating scientific information in professional settings. Students develop a literature review, proposal, and feasibility study; learn how to adapt scientific information to various audiences; and complete exercises on style, grammar, and other elements of effective professional communication. Emphasis on usability, cohesion, and style in each assignment.
Lecture: 3 Lab: 0 Credits: 3

COM 525
User Experience Research and Evaluation
An introduction to principles of user-centered design and to methods for conducting user experience research. Students will learn how to plan and conduct projects that evaluate the design, interface, and experience of a product or service. Course work includes designing studies, collecting and interpreting data, and reporting findings and recommendations from the perspective of user-centered design.
Lecture: 3 Lab: 0 Credits: 3
Satisfies: Humanities (H)
COM 526  
Graphic Design  
Graphic Design introduces students to key concepts in visual rhetoric and logic, the graphic design process, and the use of professional graphic design tools. This course additionally covers aspects of graphic design history as relevant to course topics.  
Lecture: 3  Lab: 0  Credits: 3

COM 528  
Document Design  
Principles and strategies for effective document and information design focusing on print media and familiarizing students with current research and theory as well as with practices in document design. Students design, produce, and evaluate documents for a variety of applications, such as instructional materials, brochures, newsletters, graphics, and tables.  
Lecture: 3  Lab: 0  Credits: 3

COM 529  
Technical Editing  
Principles and practical applications of editing at all levels, working with both hard and soft copy and including copymarking, copyediting, proofreading, grammar and style, and comprehensive editing. Attention primarily to documents from science, technology, and business.  
Lecture: 3  Lab: 0  Credits: 3

COM 530  
Standards-Based Web Design  
Theory and practice of structuring and designing information for web-enabled devices. This course emphasizes web standards, accessibility, and agile design methods.  
Lecture: 3  Lab: 0  Credits: 3

COM 531  
Web Application Development  
A production-intensive course in applied theory and practice of developing web-based applications emphasizing interface and experience design using emerging Web standards and backend development using Ruby-based web application frameworks.  
Prerequisite(s): COM 530 with min. grade of C  
Lecture: 3  Lab: 0  Credits: 3

COM 532  
Rhetoric of Technology  
A course that explores the theoretical and applied intersections of the rhetorical tradition and digital communication technologies.  
Lecture: 3  Lab: 0  Credits: 3

COM 533  
Application Programming Interfaces  
A production-intensive course in the theory and applied practice of working with application programming interfaces (APIs), especially Web-available APIs for exchanging and mashing up content and data.  
Prerequisite(s): COM 530 with min. grade of C  
Lecture: 3  Lab: 0  Credits: 3

COM 534  
User Interface Design  
User Interface Design introduces students to the design of human interfaces to technologies, products, and tools. Students use user-centered design principles to develop, assess, and prototype user interfaces for a variety of projects, including web sites and mobile apps.  
Lecture: 3  Lab: 0  Credits: 3

COM 535  
Instructional Design  
Teaches the essentials for the development of instructional materials, including analysis of human performance problems, strategic interventions, specified learning tasks, and validation instruments.  
Lecture: 3  Lab: 0  Credits: 3

COM 536  
Proposal and Grant Writing  
Course covers all aspects of federal and foundation proposal cycle, from proposal development through review and decision-making process. Emphasis on research proposals incorporating quantitative and qualitative methods, but activity-based proposals addressed as well.  
Lecture: 3  Lab: 0  Credits: 3

COM 538  
Entrepreneurship in Technical Communication  
Corporate and independent roles of technical communicators. Concepts and techniques needed to market services or to address the marketing needs of clients. Modes, goals, and strategies for verbal and written interaction with clients, corporate decision-makers, and communications staff, with attention to presentation technologies.  
Lecture: 3  Lab: 0  Credits: 3

COM 541  
Information Structure and Retrieval  
An examination of conceptual foundations and applied uses of structured languages and databases for structuring information with an emphasis on approaches to single-sourcing materials for presentation in digital and print formats.  
Lecture: 3  Lab: 0  Credits: 3

COM 542  
Knowledge Management  
Analysis of the nature and uses of knowledge in organizations and groups with attention to technical communicators’ roles and tasks in collecting, codifying, storing, retrieving, and transferring information within organizations. Emphasis on web-based strategies, techniques, and tools.  
Lecture: 3  Lab: 0  Credits: 3
COM 545  
**Academic Writing**  
This course familiarizes graduate students with both reading and writing academic texts across disciplines. Students will practice reading, analyzing, and developing written and spoken academic genres (e.g., reviews, articles, conference papers and talks, CVs, cover letters). Special attention is paid to analyzing and evaluating academic journals and conferences; submitting items to journals and conferences; navigating the research, writing, and publication process; revising work and providing feedback to others; and mastering the conventions of academic writing.  
**Prerequisite(s):** PESL 041  
**Lecture:** 3  
**Credits:** 3

COM 552  
**Gender and Technological Change**  
Have you ever wondered why more men choose to portray themselves as women online than the reverse? Or why there are more boys than girls in China? Or why vibrator technology was seen as a medical necessity in the 19th century? Have you ever thought about how the interplay between technology and gender constructs everything from our modern military to how we choose to spend our free time? To where we work? This course explores the history of technology by using gender as a category of analysis. It also looks at how technological objects and tools participate in molding elements of our culture that we may take for granted as logical or timeless. By looking at change over time, we will analyze the different ways technology affects how we live and see ourselves and how gender defines technological priorities.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 553  
**Media and Globalization**  
The course covers the social, cultural, economic, and political dimensions of globalization and explores the role that communication and media technologies (newspapers, magazines, film, television, and digital media) play in shaping an interconnected, interdependent globalized world and in constituting our identities as global audiences, citizens, workers, consumers, and activists.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 554  
**Science and Technology Studies**  
This course focuses on the latest work in science and technology studies and the history of technology from ethics in genetic engineering to the social dimensions of computing. Other topics include the intersection of gender and sexuality with new technologies, the role of communications media in “rewiring” our brains and our social connections, and the role of the world wide web in constructing national and global technocracy. In the course, students will read and discuss works by academics as well as journalists in order to offer grounding in the historical, social, and economic background of key technical topics and the presentation of technical topics for wider audiences. The course will also focus on the ways in which authors leverage different information technologies to communicate to wider audiences and how those methods are evolving.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 561  
**Teaching Technical Communication**  
Principles, strategies, and resources for teaching technical communication and for developing and assessing technical communication curricula, especially at the postsecondary level.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 571  
**Persuasion**  
The study of covert and overt persuasion and their influences on society and individuals.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 574  
**Communications in Politics**  
This course introduces students to the general theories and practices of political campaign communication today. It investigates how those rules and types apply in the current presidential campaign. More generally, the course teaches students to produce written and oral discourse appropriate to the humanities.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 577  
**Communication Law and Ethics**  
This course explores ethical and legal issues concerning communication in diverse contexts, such as: the mass media - e.g. print, broadcast, and electronic; government and politics; organizational hierarchies - e.g. public and private sector workplaces; academic life - e.g. the classroom, student, and faculty affairs; and interpersonal relations - e.g. love, friendship, marriage. Students will research and write an article length paper, and may also do additional research and/or classroom work.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 580  
**Topics in Communication**  
This course has variable content depending on the topic in communication chosen by the instructor. Topics may include the technical and cultural history of digital media, video games, academic writing, and humanities research methods.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 582  
**Social Media and Society**  
This course will discuss the development and trends of social media as well as their impacts on individuals and society. It will draw from a broad range of studies related to social media to learn how social media have impacts on interpersonal relationships, psychological well-being, privacy, politics, entertainment, and so on.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3

COM 583  
**Social Networks**  
This course will discuss a variety of measures and properties of networks, identify various types of social networkds, describe how position within and the structure of networks matter, use software tools to analyze social network data, and apply social network analysis to areas such as information retrieval, social media, and organizational behavior.  
**Lecture:** 3  
**Lab:** 0  
**Credits:** 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Lecture</th>
<th>Lab</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 584</td>
<td>Humanizing Technology</td>
<td>This course will investigate and experiment with both conceptual and applied efforts to humanize technology, especially computer technology. We will question the goals of humanization and its relationships to concepts such as design ethics and user-centered and emotional design. While the focus of the class will be on computer technology and programming languages, we will also look at humanization with regard to industrial design, engineering, architecture, and nanotechnologies.</td>
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<tr>
<td>COM 585</td>
<td>Internship</td>
<td>The internship is a cooperative arrangement between IIT and industry. It provides students with hands-on experience in the field of technical communication and information design.</td>
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<tr>
<td>COM 589</td>
<td>Research and Thesis for Master's Degree</td>
<td>Permission of instructor required.</td>
<td></td>
<td></td>
<td>Variable</td>
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<tr>
<td>COM 594</td>
<td>Project</td>
<td>Projects will require students to complete a theoretically based analysis of a practical communication situation, create a document appropriate to the situation, and write and analysis of or commentary on the choices made in the production of the document. (Credit: Variable. Most M.S. students take 6 credits of project studies)</td>
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<tr>
<td>COM 597</td>
<td>Special Problems</td>
<td>Permission of instructor required.</td>
<td></td>
<td></td>
<td>Variable</td>
</tr>
<tr>
<td>COM 601</td>
<td>Research Methods and Resources</td>
<td>This course addresses the logic of research design. The first part of the course focuses on formulating clear research questions and hypotheses. The second part addresses various designs (surveys, correlations, experiments, mixed designs, etc.) and their potential to test hypotheses.</td>
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<tr>
<td>COM 602</td>
<td>Qualitative Research Methods</td>
<td>This course is intended for graduate students in technical communication and related fields who are planning to conduct qualitative research in a variety of settings. Prerequisite(s): COM 601 with min. grade of C</td>
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<td>3</td>
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<tr>
<td>COM 603</td>
<td>Quantitative Research Methods</td>
<td>This course is for doctoral students of technical communication who have a command of general research methods but who require a deeper understanding of methods for the collection and analysis of quantitative data.</td>
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<tr>
<td>HIST 580</td>
<td>Topics in History</td>
<td>A course for graduate students on a topic in history.</td>
<td>3</td>
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<tr>
<td>HIST 597</td>
<td>Special Problems: History</td>
<td>Advanced topics in the study of history, in which there is special student and faculty interest. Variable Credit: 1-6.</td>
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<td>Variable</td>
</tr>
<tr>
<td>HIST 691</td>
<td>Research and Thesis PhD</td>
<td>This course is for PhD students whose dissertation requires working with a historian.</td>
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<td>Variable</td>
</tr>
<tr>
<td>HUM 601</td>
<td>Teaching Assistant Seminar</td>
<td>Required of all teaching assistants at IIT, this course introduces students to classroom and course management issues, strategies, and ethics. In addition, students give classroom-lecture style presentations using basic instructional visual aids.</td>
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<td>Variable</td>
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<tr>
<td>HUM 602</td>
<td>TA Seminar II</td>
<td>This course helps prepare teaching assistants for their duties. TAs read and discuss articles sensitizing them to issues attendant to effective teaching. They practice teaching skills and techniques needed as they relate to undergraduates in their specific disciplines.</td>
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<tr>
<td>HUM 610</td>
<td>Technology and Humanities Seminar</td>
<td>This seminar emphasizes professional skills and practices to aid students in completing their degrees and transitioning into professional careers, whether those are inside or outside the academy.</td>
<td>3</td>
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</tbody>
</table>
PHIL 550
Science and Method
This course serves as an introduction to the history and philosophy of science, analyzing the issues and arguments in science from ancient astronomy up through the end of the nineteenth century. It will be cross-listed with Phil 350.
Lecture: 3 Lab: 0 Credits: 3

PHIL 551
Science and Values
This course will consider questions such as: What role should values play in scientific inquiry? Should scientists consider only epistemic or cognitive values, or should they take into account social and cultural values? Could science be objective and make progress if it is shaped by social and cultural values?
Lecture: 3 Lab: 0 Credits: 3

PHIL 560
Ethics
A study of the fundamental issues of moral philosophy.
Lecture: 3 Lab: 0 Credits: 3

PHIL 570
Engineering Ethics
A study of moral and social responsibility for the engineering profession including such topics as safety, confidentiality, and government regulation.
Lecture: 3 Lab: 0 Credits: 3

PHIL 571
Ethics in Architecture
A study of the moral problems architects must resolve in the practice of their profession, including problems of confidentiality, candor, esthetics, and economy, arising from the special responsibilities of architects to the public, client, employer, and colleagues.
Lecture: 3 Lab: 0 Credits: 3

PHIL 573
Business Ethics
Ethical issues relating to individual and corporate responsibility, self and governmental regulation, investment, advertising, urban problems, the environment, and preferential hiring.
Lecture: 3 Lab: 0 Credits: 3

PHIL 574
Ethics in Computer Science
Moral problems that confront professionals in computer-related fields, including questions raised by the concept of intellectual property and its relationship to computer software, professional codes of ethics for computer use, and responsibility for harm resulting from the misuse of computers.
Lecture: 3 Lab: 0 Credits: 3

PHIL 580
Topics in Philosophy
An investigation into a topic of current or enduring interest in philosophy, which will be announced by the instructor when the course is scheduled. Graduate standing required.
Lecture: 3 Lab: 0 Credits: 3

PHIL 581
Artificial Intelligence, Philosophy and Ethics
In the course, we will discuss philosophical and ethical questions related to artificial intelligence (AI) and reflect about possible future developments. The course gives an introduction to the way ethical arguments, concepts and principles are used in debates relating to AI and robots. Topics to be discussed include: What is artificial intelligence? What is the role of algorithmic bias in hiring processes and facial recognition? What would it mean for AI to have capabilities like sentience, emotions, consciousness, or a mind? What are good rules for decision-making in self-driving cars? How do we perceive and talk about AI and robots? What is the moral and legal status of robots?
Lecture: 3 Lab: 0 Credits: 3

PHIL 582
Bioethics
How should researchers and society proceed with gene editing technologies, stem cell research, neurotechnology, human enhancement, and the challenges of climate change? In this course we will investigate ethical aspects and social implications of recent developments in the life sciences, biomedical engineering and biomedicine. The course gives an introduction to ethical theories, concepts and principles and the way ethical arguments are used in current debates relating to science and technology.
Lecture: 3 Lab: 0 Credits: 3

PHIL 597
Special Problems in Philosophy
Advanced topics in the study of philosophy, in which there is special student and faculty interest. Variable Credit: 1-6 Prerequisite: Instructor permission required.
Credit: Variable

PHIL 691
Research and Dissertation
This a research hours course for PhD candidates who need to consult with a philosopher on their dissertation.
Credit: Variable