COLLEGE OF INTEGRATIVE SCIENCES (CIS)

CIS115 Experiential Design and Application
This course, co-taught with Director of Physical Plant Operations Mike Conte, will allow students to work directly with Facilities employees to design and execute modifications and repairs to existing Wesleyan spaces. The specific projects will change from semester to semester, but could include designing and building informal learning spaces, and planning and carrying out repairs and modifications to mechanical and plumbing systems. Students will learn design and engineering by carrying out projects to improve Wesleyan's facilities. Students must be willing to work with tools and machinery with supervision. The grading in this quarter-credit repeatable course will be based primarily on active participation, and the class meetings will be held on location and at times built around participants' schedules. The first organizational meeting will be held in the Cady building at 170 Long Lane on Friday, January 27 at 2:50 pm; interested students who cannot attend the first meeting should e-mail the instructors.
Offering: Host
Grading: OPT
Credits: 0.25
Gen Ed Area: NSM-CIS, NSM-CIS, NSM-CIS
Prereq: None

CIS116 Designing Books
This intensive course will help students to understand how books are physically designed and created. Students will learn to use the book format in their work as a means of expanding, preserving, and restructuring ideas. After a visit to Special Collections and Archives to look at examples of artists' books and a review of 1200 years of Eastern and Western book binding types, students will make at least eight books, including an accordion book, a long-stitch book, a Coptic stitch book, side-sewn bindings including a Japanese four-hole stitch books, variations on pamphlet binding and a map fold book, as well as a simple box. The properties of bookbinding materials will be discussed in detail. No prior experience is necessary.
Offering: Host
Grading: Cr/U
Credits: 0.50
Gen Ed Area: NSM-CIS
Prereq: None

CIS121 Wesleyan Physical Sciences and Mathematics Scholars Colloquium
This weekly colloquium of participants in the Wesleyan Physical Sciences and Mathematics Scholars Program will be focused on exploring and understanding current trends in science and mathematics higher education. Strategies for retaining students in science and math fields, particularly for those from underrepresented groups, will be developed and implemented. Students will also be introduced to and given tools for navigating aspects of the hidden curriculum in higher education.
Offering: Host
Grading: Cr/U
Credits: 0.25
Gen Ed Area: NSM-CIS, NSM-CIS, NSM-CIS, NSM-CIS
Prereq: None

CIS122 Wesleyan Mathematics and Science Scholars Colloquium II
This weekly colloquium of participants in the Wesleyan Mathematics and Science Scholars (WesMaSS) Program will be focused on strategies for success in science and math higher education.
Offering: Host
Grading: Cr/U
Credits: 0.25

CIS135 Mindfulness
During this course, students will be introduced to various techniques of mindfulness practice and awareness, including sitting meditation and yoga. These modalities are designed to aid in stress and anxiety reduction, and when practiced diligently, may also offer opportunities for greater self-awareness and personal development. The goal is to give students not only a peer community but also a contemplative toolbox that is portable, replicable, and sustainable. Students will gain an understanding of the roles these practices can play in leading a happier, healthier, and more fulfilling life.
Offering: Host
Grading: Cr/U
Credits: 0.25
Gen Ed Area: SBS-CIS, SBS-CIS, SBS-CIS
Prereq: None

CIS150 The Art of Scientific Writing
Mastering the art of effectively communicating ideas and results in written form is vital for success in science. Clarity and simplicity are of paramount importance when communicating complex scientific ideas. This course provides an example-driven approach to developing these science writing skills. Example tasks will require students to master the ubiquitous abstract, and further expand on the styles needed for scientific articles, research proposals, theses, and writing about science for a broad, nonscience audience. Students will be pressed to grasp the importance of the iterative revision process of successful expository writing. Students will complete a final project that ideally connects to independent research work.
Offering: Host
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-CIS, NSM-CIS
Identical With: WRCT150, WRCT150, WRCT150, WRCT150
Prereq: None

CIS160 Life in the Oceans in the Anthropocene and Beyond
Little is known about life in the deep-sea, the largest habitat on Earth, even about the largest animals living there, such as the giant squid. Humans, however, are severely affecting even these most remote areas of our planet, and wildlife populations in the oceans have been badly damaged by human activity. We will look at the amazing diversity of ocean life and the disparate building plans of its animals, and see how oceanic ecosystems are fundamentally different from land ecosystems. Then we will explore how human actions are affecting oceanic ecosystems directly, for instance by overfishing (especially of large predators and filter feeders), addition of nutrients (eutrophication) and pollutants, and the spread of invasive species, as well as indirectly, through emission of carbon compounds into the atmosphere. Rising atmospheric CO2 levels lead to ocean acidification and global warming, affecting the all-important metabolic rates of ocean life, as well as oceanic oxygen levels and stratification, thus productivity. We will try to predict the composition of future ecosystems by looking at ecosystem changes during periods of rapid warming in the geological past, and see whether future ecosystems will become dominated by jellyfish, as they were 600 million years ago.
Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-EES, NSM-EES, NSM-EES
Prereq: None
CIS170 Introduction to Design and Engineering
This course will provide a hands-on introduction to design and engineering. Students will engage in individual and team projects in a studio environment where we seek to develop a shared practice and understanding of the engineering design process. We will study biological organisms to find inspiration for design of hoppers, swimmers, and climbers. Students will build skills using computer-aided design (CAD) software and using tools for fabrication and prototyping including laser cutting and 3D printing. We will also hone skills in identifying which scientific and engineering principles need to be understood to achieve design goals.
Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-CIS, NSM-CIS, NSM-CIS
Identical With: IDEA170, PHYS170, PHYS170, PHYS170, IDEA170, PHYS170, PHYS170, PHYS170
Prereq: None

CIS173 Introduction to Sensors, Measurement, and Data Analysis
This course is an engineering fundamentals course supporting the Integrated Design, Engineering, and Applied Science (IDEAS) minor. It will involve a sequence of hands-on projects that introduce students to basic measurement devices and data analysis techniques using inexpensive modern sensors, a microprocessing platform (Arduino), and a computational software package (Matlab). The course will provide foundational knowledge of available resources and techniques that allow students to more confidently implement measurement systems in subsequent courses of the IDEAS minor and better understand experimental devices used in scientific research activities.
Offering: Host
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-CIS
Prereq: None

CIS175 Principles of Engineering
Students will learn about engineering mechanics, electronic control systems, and physical actuators (e.g., for movement) using a microprocessor platform, sensors and motors. The final project will require a student team to ideate, design, analyze, and optimize a mechatronic system. This course will allow students to better understand components, methods, and challenges in mechatronics systems commonly found in automation and robotics. This course fulfills the project-based Design & Engineering course requirement for the Integrated Design, Engineering and Applied Science (IDEAS) minor degree program.
Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-CIS
Identical With: IDEA175
Prereq: None

CIS221 Research Frontiers in the Sciences I
This seminar is designed to introduce students to interdisciplinary research projects in the Sciences. Each week, a faculty member and his or her research group will present a broadly accessible overview of research work, including a description of methodologies, problem-solving activities, and future directions.
Offering: Host
Grading: Cr/U
Credits: 0.50
Gen Ed Area: NSM-CIS, NSM-CIS
Prereq: None

CIS222 Research Frontiers in the Sciences II
This seminar is designed to introduce students to interdisciplinary research projects in the Sciences. Each week, a faculty member and his or her research group will present a broadly accessible overview of research work, including a description of methodologies, problem-solving activities, and future directions.
Offering: Crosslisting
Grading: A-F

CIS231 Introduction to Modeling: From Molecules to Markets
The development of models to describe physical or social phenomena has a long history in several disciplines, including physics, chemistry, economics, and sociology. With the emergence of ubiquitous computing resources, model building is becoming increasingly important across all disciplines. This course will examine how to apply modeling and computational thinking skills to a range of problems. Using examples drawn from physics, biology, economics, and social networks, we will discuss how to create models for complex systems that are both descriptive and predictive. The course will include significant computational work. No previous programming experience is required, but a willingness to learn simple programming methods is essential.
Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-PHYS, NSM-PHYS, NSM-PHYS, NSM-PHYS
Identical With: PHYS221, QAC221, PHYS221, QAC221, PHYS221, QAC221, PHYS221
Prereq: None

CIS239 Proseminar: GIS in Research
A geographic information system (GIS) is a powerful database that allows for the collection, manipulation, analysis, and presentation of spatially referenced data. GIS technologies facilitate natural and social science research and any other project that utilizes location-based data. The purpose of the course is to develop, support, and expand the GIS users on campus by enriching geospatial literacy and enticing faculty, staff, and students to incorporate spatial data in their endeavors. Participants will learn tips and skills helpful to their individual projects up to and including advanced techniques for more experienced GIS users. Meetings will also include outside speakers currently applying GIS to their scholarship and/or teaching, skills workshops to expose participants to GIS techniques (e.g., georeferencing, Google Fusion Tables), group consultation sessions, and individual consultation.
Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: None
Identical With: QAC239, QAC239, QAC239, QAC239, QAC239, QAC239, QAC239, QAC239
Prereq: COMP112 OR QAC155 OR QAC156

CIS241 Introduction to Network Analysis
This is an interdisciplinary hands-on course examining the application of network analysis in various fields. It will introduce students to the formalism of networks, software for network analysis, and applications from a range of disciplines (history, sociology, public health, business, political science). We will review the main concepts in network analysis, learn how to use the software (e.g. network analysis and GIS libraries in R), and will work through practice problems involving data from several sources (Twitter, Facebook, airlines, medical innovation, historical data). Upon completion of the course, students will be able to conduct independent research in their fields using network analysis tools.
Offering: Crosslisting
Grading: A-F
CIS250 Computational Media: Videogame Design and Development

This course examines the interplay of art and science in the development of contemporary video games using “game tool” applications to achieve a variety of purposes. It combines a detailed understanding of computational media, including legal and commercial aspects, with hands-on experience in the creative process. There will be discussions with invited industry leaders in various subject areas. Students will have the opportunity to work as part of development teams and create working prototypes to understand the challenges and rewards of producing video games in a professional context.

Offering: Crosslisting
Grading: A-F
Credits: 1.50
Gen Ed Area: NSM-MATH, NSM-MATH
Identical With: IDE250, FILM250, COMP350, FILM250, COMP350, FILM250, COMP250, FILM250, COMP250, IDE250, FILM250, COMP250, FILM250, COMP250, IDE250, FILM250, COMP250, FILM250, COMP250, IDE250, FILM250, COMP250, FILM250, COMP250, FILM250, COMP250, FILM250, COMP250, FILM250, COMP250
Prereq: None

CIS251 Data Visualization: An Introduction

This course will introduce students to the principals and tools necessary to present quantitative information in a visual way. While tables and graphs are widely used in our daily lives, it takes skill to deconstruct what story is being told. It also takes a perceptive eye to know when information is being misrepresented with particular graphics. The main goals of the course are for students to learn how to present information efficiently and accurately so that we enhance our understanding of complex quantitative information and to become proficient with data visualization tools. Beginning with basic graphing tools, we will work our way up to constructing map visualizations and interactive graphs. This course will require a substantial amount of computation in R. No prior programming experience is necessary, but learning does require willingness and time.

Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: SBS-QAC, SBS-QAC
Identical With: QAC251, QAC251, QAC251, QAC251, QAC251, QAC251, QAC251
Prereq: None

CIS265 Bioinformatics Programming

This course is an introduction to bioinformatics for students with interest in the life sciences. The course is similar to BIOL265 but only meets in the second half of the semester (with BIOL265) and is designed for students with programming background, ideally in Python. The course introduces problem areas and conceptual frameworks in bioinformatics and discusses programming approaches used in bioinformatics such as sequence matching and manipulation algorithms using dynamic programming, clustering analysis of gene expression data, analysis of genetic nets using Object Oriented Programming, and sequence analysis using Hidden Markov Models, Regular Expressions, and information theory.

Offering: Crosslisting
Grading: A-F
Credits: 0.50
Gen Ed Area: NSM-BIOL
Identical With: BIOL266, COMP266, MB&B266
Prereq: [MB&B181 OR BIOL181]

CIS284 Data, Art, and Visual Communication

This course looks at the ways the digital arts—broadly defined—can be used to explore the intersections of research, data, design, and art. Following a creative software “bootcamp,” students will execute projects intended to help them generate, manipulate, and remix data for the purposes of visual communication and art. Students will use Adobe Creative Suite and Processing, an open source programming language, and integrated development environment (IDE) built for electronic arts, new media, and visual design. In addition to working in the studio, seminars, readings, and student presentations will explore the role of data visualization, “big data,” and the web in culture and society today. No prior software knowledge or coding skills are required. Students working in STEM, humanities, and social sciences are encouraged to enroll.

Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: HA-ART
Identical With: ARST484
Prereq: None

CIS285 Generative Art, Computational Media, and Creative Coding

In this course, students will learn to use computers and software as platforms for creative expression. Following a series of intensive coding workshops, students will learn to execute projects involving chance operations, rule-based systems, simulated autonomy, and interactivity. These projects will emerge as animations, drawings, prints, and screen-based artworks. Students will work primarily with the creative coding applications Processing and Grasshopper. These are coding environments designed by artists to facilitate the use of data, mathematics, and computation in visual practice. In addition to learning to program, students will translate their code into physical artifacts using computer-driven hardware such as a CNC router, a laser cutter, and Arduinos. Additionally, students will be exposed to the history and practice of generative and computational art through lectures and student presentations. This conceptual work will emphasize the formal and critical paradigms of computational media and design beginning in the 1960s.

Offering: Crosslisting
Grading: OPT
Credits: 1.00

Credits: 1.00
Gen Ed Area: SBS-QAC, SBS-QAC, SBS-QAC
Identical With: QAC241, QAC241, QAC241, QAC241, QAC241, QAC241, QAC241
Prereq: None

CIS266 Bioinformatics

This course is an introduction to bioinformatics for students with interest in the life sciences. The course is similar to BIOL265 but only meets in the second half of the semester (with BIOL265) and is designed for students with programming background, ideally in Python. The course introduces problem areas and conceptual frameworks in bioinformatics and discusses programming approaches used in bioinformatics such as sequence matching and manipulation algorithms using dynamic programming, clustering analysis of gene expression data, analysis of genetic nets using Object Oriented Programming, and sequence analysis using Hidden Markov Models, Regular Expressions, and information theory.

Offering: Crosslisting
Grading: A-F
Credits: 0.50
Gen Ed Area: NSM-BIOL
Identical With: BIOL266, COMP266, MB&B266
Prereq: [MB&B181 OR BIOL181]

CIS284 Data, Art, and Visual Communication

This course looks at the ways the digital arts—broadly defined—can be used to explore the intersections of research, data, design, and art. Following a creative software “bootcamp,” students will execute projects intended to help them generate, manipulate, and remix data for the purposes of visual communication and art. Students will use Adobe Creative Suite and Processing, an open source programming language, and integrated development environment (IDE) built for electronic arts, new media, and visual design. In addition to working in the studio, seminars, readings, and student presentations will explore the role of data visualization, “big data,” and the web in culture and society today. No prior software knowledge or coding skills are required. Students working in STEM, humanities, and social sciences are encouraged to enroll.

Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: HA-ART
Identical With: ARST484
Prereq: None

CIS285 Generative Art, Computational Media, and Creative Coding

In this course, students will learn to use computers and software as platforms for creative expression. Following a series of intensive coding workshops, students will learn to execute projects involving chance operations, rule-based systems, simulated autonomy, and interactivity. These projects will emerge as animations, drawings, prints, and screen-based artworks. Students will work primarily with the creative coding applications Processing and Grasshopper. These are coding environments designed by artists to facilitate the use of data, mathematics, and computation in visual practice. In addition to learning to program, students will translate their code into physical artifacts using computer-driven hardware such as a CNC router, a laser cutter, and Arduinos. Additionally, students will be exposed to the history and practice of generative and computational art through lectures and student presentations. This conceptual work will emphasize the formal and critical paradigms of computational media and design beginning in the 1960s.

Offering: Crosslisting
Grading: OPT
Credits: 1.00
CIS307 Experimental Design and Causal Inference
The course provides the foundations and statistical thinking to design, collect, and analyze experimental data and introduces appropriate techniques for observational data when causal inference is the objective of the analysis. Throughout the course, we introduce and compare various experimental designs. We will discuss sample size and power calculations as well as the advantages and disadvantages of each of these designs. With observational data, we will explore difference-in-difference models, propensity score matching techniques, regression discontinuity designs. This course gives students the opportunity to develop further their computational skills as we learn how to describe, interpret, control, and draw inferences from experimental and observational data.
Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: HA-ART
Identical With: ARST285
Prereq: ARST131

CIS320 Genomics Analysis
This course is an introduction to genomics and analysis for students with interest in life sciences. It introduces current applications of genomics techniques, how to build a genomics workflow, and an introduction to statistical analyses in R programming language. This course assumes little or no prior programming experience and will provide hands on experience in taking raw next-generation sequencing data through a custom workflow and ending with analyses in R statistical software.
Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-QAC, SBS-QAC
Identical With: QAC307
Prereq: QAC201 OR PSYC200 OR MATH132 OR ECON300

CIS322 Senior Colloquium II: Integrative Sciences
This colloquium provides students the opportunity to discuss and present their research to their peers and mentors, as well as explore current topics of interest to the group. A key goal will be developing students’ presentation skills because this is the primary means of promoting research. Faculty and peers will provide insights and advice. The mentors from the primary department or programs will also be invited.
Offering: Host
Grading: Cr/U
Credits: 0.50
Gen Ed Area: NSM-QAC, SBS-QAC, NSM-QAC
Identical With: QAC323, QAC323, QAC323, QAC323
Prereq: MATH132 OR ECON300 OR [GOVT367 or QAC302] OR [MATH132 OR ECON300]

CIS323 Bayesian Data Analysis: A Primer
This course introduces the applied principles of Bayesian statistical analysis. The Bayesian paradigm is particularly appealing in research where prior research and historical data is available on parameters of interest. This course will teach students appropriate techniques for analyzing data of this nature as well as broaden computational skills in R. The course will lay the foundation for Bayesian data analysis, which students can use to further develop skills in decision making.
Offering: Crosslisting
Grading: A-F
Credits: 0.50
Gen Ed Area: NSM-QAC, SBS-QAC, NSM-QAC
Identical With: QAC323, QAC323, QAC323, QAC323
Prereq: MATH132 OR ECON300 OR [GOVT367 or QAC302] OR [MATH132 OR ECON300]

CIS327 Evolutionary and Ecological Bioinformatics
Bioinformatic analysis of gene sequences and gene expression patterns has added enormously to our understanding of ecology and evolution. For example, through bioinformatic analysis of gene sequences, we can now reconstruct the evolutionary history of physiology, even though no traces of physiology exist in the fossil record. We can determine the adaptive history of one gene and all the gene’s descendants. We can now construct the evolutionary tree of all of life. Bioinformatics is particularly promising for analysis of the ecology and biodiversity of microbial communities, since well over 99 percent of microorganisms cannot be cultured; our only knowledge of these organisms is through analysis of their gene sequences and gene expression patterns. For example, even when we cannot culture most of a microbial community, we can determine which metabolic pathways are of greatest significance through analysis of community-level gene expression. All these research programs are made accessible not only by breakthroughs in molecular technology, but also by innovation in the design of computer algorithms. This course, team-taught by an evolutionary biologist and computer scientist, will present how bioinformatics is revolutionizing evolutionary and ecological investigation and will present the design and construction of bioinformatic computer algorithms underlying the revolution in biology. Students will learn algorithms for reconstructing phylogeny, for sequence alignment, and for analysis of genomes, and students will have an opportunity to create their own algorithms.
Offering: Crosslisting
Grading: A-F
Credits: 0.50
Gen Ed Area: NSM-QAC, SBS-QAC, NSM-QAC
Identical With: QAC323, QAC323, QAC323, QAC323
Prereq: MATH132 OR ECON300 OR [GOVT367 or QAC302] OR [MATH132 OR ECON300]

CIS328 Senior Colloquium I: Integrative Sciences
This colloquium provides students the opportunity to discuss and present their research to their peers and mentors, as well as explore current topics of interest to the group. A key goal will be developing students’ presentation skills because this is the primary means of promoting research. Faculty and peers will provide insights and advice. The mentors from the primary department or programs will also be invited.
Offering: Host
Grading: Cr/U
Credits: 1.00
Gen Ed Area: NSM-QAC, SBS-QAC, NSM-QAC
Identical With: QAC323, QAC323, QAC323, QAC323
Prereq: MATH132 OR ECON300 OR [GOVT367 or QAC302] OR [MATH132 OR ECON300]
COMP327, BIOL527, COMP527, BIOL327, COMP327, BIOL527, COMP527, BIOL327, COMP327, BIOL527, COMP527, BIOL327, COMP327, BIOL527, COMP527, BIOL327, COMP327, BIOL527, COMP527, BIOL327, COMP327, BIOL527, COMP527, BIOL327, COMP327, BIOL527, COMP527, BIOL327, COMP327, BIOL527, COMP527

Prereq: [BIOL182 or MB&B182] OR [BIOL196 or MBB196] OR COMP112 OR COMP211

CIS331 Videogames as/and the Moving Image: Art, Aesthetics, and Design
Videogames are a mess. As a relatively new medium available on a range of platforms and in contexts ranging from the living room to the line for the bathroom, they make new but confusing contributions to the meaning and possibilities of the moving image. We will work to understand what games are, what they can do, and how successful games do what they do best. Students will complete game design exercises, create rapid prototypes, playtest their games, and iteratively improve their games with play and their players in mind. They will complete analyses of games and game design projects both alone and in groups, and participate in studio-style critiques of one another’s work. Experience with computer programming is helpful but not essential.

Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: HA-FILM, HA-FILM, HA-FILM
Identical With: FILM331, FILM331, FILM331, FILM331, FILM331, FILM331, FILM331, FILM331

Prereq: None

CIS375 Mass Extinctions in the Oceans: Animal Origins to Anthropocene
Geoscientists are debating whether we are living in the Anthropocene, defined as a period during which humans are having a significant effect on atmospheric, geologic, hydrologic, and biospheric earth system processes. There is considerable discussion whether we are indeed affecting the biosphere to such an extent that life on Earth will suffer an extinction similar in magnitude to those that have occurred during earth history. Studies of the fossil record provide unique evidence that is used to evaluate the large extinctions of the past and compare them to ongoing extinction processes, extinctions rates and patterns, and magnitude. Organisms with hard skeletons are most easily and most abundantly preserved in the rock record. Many of these are invertebrates that lived in the oceans (e.g., clams, sea urchins, corals). In the first part of this course, students will become familiar with the nature of the fossil record, the most common marine animals in the fossil record, and their evolution and diversification. Lectures will be combined with studying fossils. In the second part of the course, possible causes for mass extinction will be considered, together with their specific effects on environments and biota, and these predicted effects will be compared to what has been observed. Potential causes include asteroid and comet impacts, large volcanic eruptions, "hypercanes," and "methane ocean eruptions," and more exotic processes. Students will present in class on these topics, and we will compare rates and magnitude of environmental change with severity and patterns of extinction.

Offering: Crosslisting
Grading: A-F
Credits: 1.00
Gen Ed Area: NSM-EES
Identical With: E&ES236
Prereq: E&ES101 OR E&ES115 OR E&ES199 OR ASTR155 OR MB&B181

CIS401 Individual Tutorial, Undergraduate
Offering: Host
Grading: OPT

CIS402 Individual Tutorial, Undergraduate
Offering: Host
Grading: OPT

CIS411 Group Tutorial, Undergraduate
Offering: Host

Grading: OPT

CIS412 Group Tutorial, Undergraduate
Offering: Host
Grading: OPT

CIS420 Student Forum
Offering: Host
Grading: Cr/U

CIS423 Advanced Research Seminar, Undergraduate
Offering: Host
Grading: OPT

CIS424 Advanced Research Seminar, Undergraduate
Offering: Host
Grading: OPT

CIS492 Teaching Apprentice Tutorial
The teaching apprentice program offers undergraduate students the opportunity to assist in teaching a faculty member’s course for academic credit.

Offering: Host
Grading: OPT

CIS520 Academic Writing for Graduate Students
This graduate-level course is designed to help students' master basic expository writing skills in order to successfully communicate their research in the published literature, to complete their theses, and to write grant proposals. The course will use an example-driven approach emphasizing an iterative-revision process. Students will be encouraged to focus on their own independent research work as subject matter of writing exercises.

Offering: Host
Grading: OPT
Credits: 1.00
Gen Ed Area: NSM-CIS, NSM-CIS
Identical With: CIS320, MUSC525, CIS320, MUSC525
Prereq: None