Thinking about spending some time back in Chicago this summer for work or play?

Summer is also a great time to get ahead in your studies. Enclosed you will find an exciting list of course offerings this summer at Illinois Institute of Technology.

At IIT, we take summer seriously.

Some of our best courses are taught in summer by our best faculty—all with a low faculty-to-student ratio. If you are thinking about getting ahead in your major, or just exercising your mind under a shade tree, consider spending some time this summer at IIT.

It is easy to register.

Just visit summer.iit.edu and fill out the quick app by providing your contact information and uploading an unofficial transcript from your current school. Scholarships are available. Upon receipt of your quick app, you will receive an admission decision and financial aid package within one week.

We look forward to seeing you on campus this summer!

Questions?
Contact the IIT One Stop
Phone: 312.567.3810
Email: onestop@iit.edu
WE HAVE GREAT CLASSES TO CHOOSE FROM, TAKE A LOOK:

Please note that this course list is an abbreviated list of our summer classes. Access to our entire offerings can be found online at summer.iit.edu.

APPLIED MATHEMATICS

Calculus I

MATH 151-01, Lecture
Professor: George Zazi
TR / 10:00 a.m. to 12:20 p.m.
Main / Location TBA
B Session / June 1–July 25


Calculus II

MATH 152-01, Lecture
Professor: David Maslanka
TR / 10:00 a.m. to 12:20 p.m.
Main / Location TBA
B Session / June 1–July 25


Calculus II Lab

MATH 152-L01, Lab
Professor: David Maslanka
MW / 11:05 a.m. to 12:20 p.m.
Main / Location TBA
B Session / June 1–July 25


Multivariate and Vector Calculus

MATH 251-01, Lecture
Professor: Andre Adler
MWR / 10:00 a.m. to 12:05 p.m.
Main / Location TBA
B Session / June 1–July 25


Introduction to Differential Equations

MATH 252-01, Lecture
Professor: Fred Weening
MWR / 12:15 to 2:20 p.m.
Main / Location TBA
B Session / June 1–July 25


A KEY TO OUR COURSE LISTINGS

- = Course Number, Class Style
= Teaching Professor
= Class Meeting Days / Class Meeting Time
= IIT Campus Location / Building-Room Number
= Class Session Dates

PLEASE NOTE: IIT Main Campus building codes are labeled on the campus map located on the previous page of this booklet.

Learn online! Internet-based courses are also available.
Matrix Algebra and Complex Variables

**MATH 333-01, Lecture**
Professor: Arthur Lubin  
MW / 12:40 to 3:05 p.m.  
Main / Location TBA  
B Session / June 1–July 25

Vectors and matrices; matrix operations, transpose, rank, inverse; determinants; solution of linear systems; eigenvalues and eigenvectors. The complex plane; analytic functions; contour integrals; Laurent series expansions; singularities and residues.

Probability and Statistics

**MATH 474-01, Lecture**
Professor: Arthur Lubin  
MW / 10:00 a.m. to 12:25 p.m.  
Main / Location TBA  
B Session / June 1–July 25

Elementary probability theory including discrete and continuous distributions, sampling, estimation, confidence intervals, hypothesis testing, and linear regression. Credit not granted for both MATH 474 and MATH 475.

Case Studies and Project Design in Applied Mathematics

**MATH 523-01, Lecture**
Professor: Charles Tier  
MW / 10:00 a.m. to 2:50 p.m.  
Main / Location TBA  
B Session / June 1–July 25

The goal of the course is for students to learn how to use applied mathematics methods and skills to analyze real-world problems and to communicate their results in a non-academic setting. Students will work in groups of 2 or 3 to study and analyze problems and then provide useful information to a potential client. The time distribution is flexible and includes discussions of problems, presentation of needed background material and the required reports, and presentations by the teams. Several small projects will be examined and reported on.

**ARCHITECTURE**

Systems: Structural Analysis

**ARCH 230-01, Lecture**
Professor: Eric Ziegler  
TR / 6:00 to 8:25 p.m.  
Main / Location TBA  
B Session / June 1–July 25

The theory and concepts of structures are presented with a visual format and models to emphasize an intuitive comprehension of the fundamental principles of structural behavior including loading, shear and bending moments. Architectural examples of integrated structures then become format to introduce an understanding of materials and the design process to quantify the engineering. Masonry load-bearing walls and the arch are used as the initial examples to correlate intuition and engineering calculations.

Introduction to Digital Fabrication

**ARCH 433-01, Lecture/Lab**
Professor: Brett Balogh  
MW / 1:50 to 4:15 p.m.  
Main / CR-001  
B Session / June 1–July 25

This course offers a comprehensive exploration of computer-aided fabrication from concept development and modeling through digital file creation and cutting processes. Using CAD/CAM software, laser cutters, CNC mills, and 3D printers, students with a variety of interests can build the elements of detailed models, fabricate a range of finished objects, or even create landscapes incorporating highly articulated surfaces. The course stresses the integration of the complete thought process from concept development to pre-visualization to detailed modeling to fabrication setup and finishing. Students gain a solid understanding of the rapidly developing world of CAD/CAM techniques while acquiring specific long-term skills in software-based modeling and machine-assisted fabrication.

Digital Fabrication

**ARCH 435-01, Lecture/Lab**
Professor: Alphonso Peluso  
MW / 1:50 to 4:15 p.m.  
Main / TN-110  
B Session / June 1–July 25

This course explores the design and fabrication of components in contemporary practice. The class will investigate through the design and prototyping of a custom component. Survey of CAD/CAM/GIS use in practice and component manufacturing including modeling, simulation, and scripting. Behavioral models of components using simulation and analysis tools (flow, system dynamics, etc.). Use of CAD tools to model components for production (modeling for CNC considering toolpaths and jigs). Use of CAD tools to analyze properties of components. Material properties and related fabrication constraints. Current fabrication processes. Use of IIT-owned CNC tools to fabricate components. Rapid prototyping.

Advanced Modeling

**ARCH 436-01, Lab**
Professor: Alphonso Peluso  
MW / 10:00 a.m. to 12:25 p.m.  
Main / TN-110  
B Session / June 1–July 25

This course will focus on 3D modeling of complex geometric components in architecture and design. Concepts explored will concentrate on the advancement of digital design as an iterative process. Various modeling types covered are (1) Explicit Modeling, (2) Nurbs Surface Modeling, (3) Parametric Modeling, and (4) Generative Components and Response Modeling. Output will utilize digital fabrication methods as support of the iterative design process.

Design Visualization

**ARCH 438-01, Lecture/Lab**
Professor: Alphonso Peluso  
TR / 10:00 a.m. to 12:25 p.m.  
Main / TN-110  
B Session / June 1–July 25

This course is an in-depth exploration of new visualization techniques to support and express architectural design through 3D rendering. Topics covered will include 3D modeling, cameras, lighting, material mapping, and rendering output. Presentation concepts covered include storytelling, rendering style, visual mood, and image composition.
Architecture and Furniture

ARCH 447-01, Lecture/Lab
Professor: Paul Pettigrew
TR / 6:00 to 8:25 p.m.
Main / CR-UC2
B Session / June 1–July 25
Individually or in small groups, students will design and fabricate furniture as part of a collectively developed master plan. Students explore historic and contemporary furniture design, theory, materials, and fabrication techniques. Lectures and discussions will focus on the relationship between architecture and furniture in its 500-year history, the design process, fabrication technologies and techniques, drawing and modeling as a means of exploration, representation, presentation, and fabrication. Labs will allow students the opportunity to experience in a semester the traditional sequence of master plan, schematic design, design development, construction drawings, fabrication, and use.

Topics in Architecture: Map Theory Practice

ARCH 497-01, Lecture
Professor: Andrew Schachman
TR / 1:50 to 4:15 p.m.
Main / TN-TBA
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Comic Theory and Practice

ARCH 497-02, Lecture
Professor: Andrew Schachman
TR / 10:00 a.m. to 12:25 p.m.
Main / TN-TBA
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Architectural Robotics

ARCH 497-03, Lecture
Professor: Brett Balogh
TR / 10:00 a.m. to 12:25 p.m.
Main / CR-001
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Soft Drawings and Fantastic Realisteis

ARCH 497-04, Lecture
Professor: Andrew Santa Lucia
TR / 1:50 to 4:15 p.m.
Main / TN-110
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Color in Context

ARCH 497-05, Lecture
Professor: Amanda Williams
TR / 10:00 a.m. to 12:25 p.m.
Main / CR-UC2
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Fifth Year Studio:

Rural Hospital Development

ARCH 497-06, Lecture
Professor: Frank Flury
International Program
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Horizontal and Vertical Experimental Structures for the Future Self-Empower

ARCH 497-07, Studio
Professor: Peter Land
MWF / 12:10 to 6:40 p.m.
Main / TN-TBA
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Englewood Rebrand, Rebuild, Revitalize

ARCH 497-08, Studio
Professor: Monica Chadha
MWF / 12:10 to 6:40 p.m.
Main / TN-TBA
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Implementing Complete Streets in Chicago

ARCH 497-09, Lecture
Professor: TBA
TR / 6:00 to 8:25 p.m.
Main / CR-014
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.

Topics in Architecture: Fifth Year Studio: Re-Foresting the City

ARCH 497-10, Studio
Professor: Christopher Groesbeck
MWF / 12:10 to 6:40 p.m.
Main / Location TBA
B Session / June 1–July 25
Independent study of projects and problems. Students must be advised and have consent of the instructor and approval of the dean.
Entrepreneurship and Innovation in Architecture

**ARCH 561-01, Lecture**
Professor: Mark McKinney  
MW / 6:30 to 9:00 p.m.  
Main / TN-216  
B Session / June 1–July 25

The course teaches future architects the practical aspects of entrepreneurial small business management, to develop a comprehensive opportunity assessment and to develop the skills necessary to improve the odds of success. The course will consider strategies to leverage limited resources for maximum effect. The course will also cover small organization and group behavior, performance, leadership, and motivation in small business settings and will focus on the owner/manager as the principal success factor in the context of a small organization. Emphasis is placed on the circumstances and opportunities of the professional practice of architecture: practice as profession, process, organization, business, and evolving models of practice are covered. The course also provides a series of concepts, frameworks, and heuristics that enable the entrepreneur to anticipate and deal with the challenges that accompany growth of an existing business. Cases, exercises, lectures, and speakers are used to focus on choosing opportunities, allocating resources, motivating employees, and maintaining control while not stifling innovation. A key component of the course is how to sustain entrepreneurial thinking in mid-sized ventures as they continue to grow.

**Biomedical Engineering Application of MATLAB**

**BME 200-01, Lecture/Lab**
Professor: Bonnie Haferkamp  
MTW / 8:35 to 11:55 a.m.  
Main / WH-308  
A Session / May 18–June 27

This course will provide students an opportunity to learn how to use the MATLAB programming environment to solve biomedical engineering problems. Students will learn basic MATLAB functions for importing, analyzing, visualizing, and exporting data, as well as computational techniques for modeling and solving quantitative engineering problems. Examples will be taken from the three areas of specialization offered in the biomedical engineering department — cell and tissue engineering, neural engineering, and medical imaging.

Questions?
Contact the IIT One Stop
Phone: 312.567.3810  
Email: onestop@iit.edu
Predictive Analytics

**MAC 522-01, Lecture**  
Professor: Martin Bariff  
TR / 6:00 to 8:30 p.m.  
Downtown / DC-TBA  
B Session / June 1–July 25

The digital enterprise captures significantly more data about its customers, suppliers, and partners. The challenge, however, is to transform this vast data repository into actionable business intelligence. Both the structure and content of information from databases and data warehouses will be studied. Basic skills for designing and retrieving information from a database (e.g., MS Access) will be mastered. Data mining and predictive analytics can provide valuable business insights. A leading data mining tool, e.g., IBM/SPSS Modeler, will be used to investigate hypotheses and discover patterns in enterprise data repositories. Analysis tools include decision trees, neural networks, market basket analysis, time series, and discriminant analysis. Both data cleaning and analyses will be discussed and applied to sample data. Applications of data mining in a variety of industries will be discussed. Software exercises, case studies, and a major project will prepare the students to use these tools effectively during their careers.

Financial Statement Analysis

**MSF 506-01, Lecture**  
Professor: Michael Rybak  
MW / 6:00 to 8:30 p.m.  
Downtown / DC-470  
B Session / June 1–July 25

After reviewing the content of the major financial statements, the course examines ratios, inventories, long-lived assets, income taxes, debt, leases, and pensions, among other topics. U.S. practices are compared to practices in other major countries. This course is intended for those who will examine financial statements of outside organizations.

Investment Banking

**MSF 535-01, Lecture**  
Professor: John Szobocsan  
TR / 6:00 to 8:30 p.m.  
Downtown / DC-470  
B Session / June 1–July 25

This course covers the financing and formation process of private companies from product concept and angel investors to the Initial Public Offering. Exit strategies for private investments are discussed, including IPOs, mergers and acquisitions. Strategic and financial buyers play a key role in the valuation of a newly public or recently acquired firm. All of the players are discussed, including venture capitalists, entrepreneurs, investment bankers, attorneys, public shareholders, merger partners, institutional investors and private equity/buyout firms. Students will discuss business models; construct staffing and compensation schemes; practice valuation analysis; compare and contrast alternative financial sources; structure business plans; review the types of securities to offer; examine private placement processes; analyze negotiation strategies; and review the implications of financing terms and the role of venture capital and private equity investment in institutional portfolios. The challenges of completing mergers and integrating merged companies are also discussed. Sarbanes-Oxley, anti-trust requirements and other regulatory issues will be presented.

Structured Fixed Income Portfolios

**MSF 545-01, Lecture**  
Professor: Ricky Cooper  
TR / 6:00 to 8:30 p.m.  
Downtown / DC-475 (see map on page 7)  
B Session / June 1–July 25

This course will cover the characteristics, valuation and risk management of fixed income instruments. These instruments include bonds, repos, interest rate derivatives, inflation indexed securities, mortgage-backed and asset-backed securities, CDOs and default swaps. The focus will be on understanding how these instruments are structured and used. Term structure modeling and hedging techniques will be presented, with a minimum of mathematics.
Operations and Technology Management

MBA 513-01, Lecture
Professor: Joel Goldhar
TR / 6:00 to 8:30 p.m.
Downtown / DC-TBA (see map on page 7)
B Session / June 1–July 25

The course seeks to help the student develop an understanding of the concepts and skills needed for the design and control of operations in both services and manufacturing organizations. Students will take a strategic and general management approach to the design of an operating system and its supporting organizational structure and infrastructure including information systems, human resource management, and financial policies. The focus is on the strategic role of operations and technology decisions as a source of competitive advantage for the firm with an emphasis on the integration of R & D/Design/Engineering, operations and marketing within the context of the business unit's strategy, and the organizational structure and skills needed to execute and manage the operating system. The overall goal is to create, achieve, and sustain operational effectiveness. The course will emphasize the analytical tools and techniques that are useful in making decisions about projection facilities and capacity, choices of technology and equipment, task and process design, organizational architecture, human resources policies, and the physical and managerial control of operations. Students will gain an understanding of the economics of operations including trade-offs between fixed and variable costs, marginal/incremental analysis to identify relevant versus sunk costs, optimization, and productivity measurements for both capital and labor. Case studies will provide opportunities for students to develop their skills in process design and choice, process mapping, critical thinking, identification of problems versus symptoms, process improvement, and capacity measurement in the context of the business strategy while the simulations will provide an opportunity to practice the management of a particular operating system. Students will also gain an understanding of how human behavior and organizational design, along with quantitative optimization, forms the theoretical underpinning of operations management.

Negotiations and Strategic Decision Making

MBA 523-01, Lecture
Professor: Arjun Chakravarti
S / 10:00 a.m. to 4:00 p.m.
Downtown / DC-470 (see map on page 7)
A Session / May 18–June 27

This course is designed to foster an understanding of incentives and strategic decision-making as they apply to negotiations. The course has both theoretical and applied components with the objective of addressing both theory and skills as they apply to dyadic and multiparty negotiations, to buyer-seller transactions, to competitors’ interactions, to the resolution of disputes, and to the development of negotiation strategies. The theoretical component is focused on an analytical study of strategic interactions using game theory while the applied component is based on a series of simulated negotiations in a variety of contexts including one-on-one, multiparty, and team negotiations. The objectives of the course are to provide an analytical foundation, to show where practice and theory diverge, and to provide a forum where negotiation tools in a variety of business-oriented settings can be actively applied. Instructor permission is required.

Questions?
Contact the IIT One Stop

Phone: 312.567.3810
Email: onestop@iit.edu

Strategic Marketing Management

MBA 586-01, Lecture
Professor: Robert Nelson
MF / 6:00 to 8:30 p.m.
Downtown / DC-475 (see map on page 7)
B Session / June 1–July 25

In this course we will emphasize both marketing strategy formulation and execution and the management of the marketing function. This includes the integration of marketing mix decisions, the longer-term effects of marketing mix decisions, and changes in the mix over time. For example: “Price” becomes price policy, value-in-use, and price discrimination; “Product” becomes product line breadth and variety and product life cycle choices; “Place” becomes design and control of single or multiple channels of distribution; and “Promotion” becomes communications, customer loyalty, and brand equity. The course will emphasize segmentation of the market, positioning the marketing mix to meet the needs of the market segment, sustaining an integrated marketing mix over the product life cycle, and organizing the strategic business unit to implement the strategy. In addition to the development of a marketing strategy that positions the product/service to the needs of one or more target markets (segmentation), the execution of a marketing strategy will require a marketing plan that includes the economic and financial analysis of the costs and potential profits of the strategy and an implementation plan, including an organizational structure. This will often be an iterative process to find an optimal combination of costs, pricing, and volume to maximize profits. This course will use readings, simulations, and cases for about half its content. The other half of the course will be a team consulting project for an external client.

Leading and Managing Knowledge Intensive Organizations

PA 502-108, Lecture
Professor: Gregory Jackson
TR / 6:00 to 8:30 p.m.
Downtown / DC-TBA (see map on page 7)
B Session / June 1–July 25

PA 502 builds awareness and understanding of the behavior of individuals and groups in organizations, preparing managers to be more effective within their organizational contexts. Topics include individual differences in motivation, perception, culture and learning style, group and organizational dynamics, and the impact of organizational structure and culture on behavior. Leadership techniques for influencing other organizational members, creative problem-solving and decision-making, ethics and values-based managing are covered. This course helps students relate basic theories, concepts, and techniques to real-world situations through the extensive use of case studies.

Managing Public Financial Resources in a Changing World

PA 532-108, Lecture
Professor: Gregory Peters
TR / 10:00 a.m. to 12:40 p.m.
Main / Location TBA
B Session / June 1–July 25

Managing Public Financial Resources in a Changing World exposes students to fundamental concepts and strategies of public financial resource management in a rapidly changing fiscal environment. It provides students with the concepts and skills needed to evaluate budget processes and documents, understand the role of politics and planning in financial management, and to evaluate the financial condition of governments. Emphasizing best practice models and case studies, the course will focus primarily on local government finance with some reference to state government policies and practices. Some references also will be made to nonprofit budgeting accounting practices.

Special Problems: Bioterrorism Food Safety

PA 597-01, Lecture
Professor: Michael Fagel
S / 9:00 a.m. to 5:00 p.m.
Downtown / DC-TBA (see map on page 7)
B Session / June 1–July 25

The subject matter of this course will vary with the interests and the background of the students and the instructor, and the course may be taken more than once. Instructor permission is required.
Special Problems
**PA 597-110, Lecture**  
Professor: Roland Calia  
Day / Time TBA  
Main / Location TBA  
B Session / June 1–July 25  
The subject matter of this course will vary with the interests and the background of the students and the instructor, and the course may be taken more than once. Instructor permission is required.

**CHEMICAL AND BIOLOGICAL ENGINEERING**

Chemical and Biological Engineering Laboratory I  
**CHE 317-01, Lecture/Lab**  
Professor: Nader Aderangi  
MW / 5:00 to 8:40 p.m.  
Main / PH-218  
B Session / June 1–July 25  
Laboratory work in the unit operations of chemical engineering, fluid flow, heat transfer, and other selected topics.

Chemical and Biological Engineering Laboratory II  
**CHE 418-01, Lecture/Lab**  
Professor: Nader Aderangi  
TR / 5:00 to 7:40 p.m.  
Main / PH-218  
B Session / June 1–July 25  
Laboratory work in distillation, humidification, drying, gas absorption, filtration, and other areas.

Process Modeling and System Theory  
**CHE 433-01, Lecture**  
Professor: Donald Chmielewski  
MW / 12:10 to 2:50 p.m.  
Main / Location TBA  
B Session / June 1–July 25  

Process Modeling and System Theory  
**CHE 433-02, Lecture**  
Professor: Donald Chmielewski  
Internet  
B Session / June 1–July 25  

Computational Techniques in Engineering  
**CHE 536-01, Lecture**  
Professor: Dimitri Gidaspow  
MW / 12:00 to 1:35 p.m.  
Main / Location TBA  
D Session / May 18–August 8  

Computational Techniques in Engineering  
**CHE 536-02, Lecture**  
Professor: Dimitri Gidaspow  
Internet  
D Session / May 18–August 8  

**CHEMICAL SCIENCES**

Principles of Chemistry I Without Laboratory  
**CHEM 122-01, Lecture**  
Professor: TBA  
TR / 9:00 to 11:40 a.m.  
Main / Location TBA  
B Session / June 1–July 25  
Foundations of chemistry, atoms and molecules, stoichiometry of chemical reactions, thermo chemistry, properties of gases, states of matter, chemical solutions, kinetics. Molecular basis for chemical reactivity; atomic structure, periodicity, chemical bonding. Same as CHEM 124 except without the laboratory.

Principles of Chemistry I with Laboratory  
**CHEM 124-01, Lecture**  
Professor: TBA  
TR / 9:00 to 11:40 a.m.  
Main / Location TBA  
B Session / June 1–July 25  
Foundations of chemistry, atoms and molecules, stoichiometry of chemical reactions, thermo chemistry, properties of gases, states of matter, chemical solutions, kinetics. Molecular basis for chemical reactivity; atomic structure, periodicity, chemical bonding.

Principles of Chemistry I with Laboratory  
**CHEM 124-L01, Lab**  
Professor: TBA  
TR / 1:30 to 4:20 p.m.  
Main / WH-TBA  
B Session / June 1–July 25  
Foundations of chemistry, atoms and molecules, stoichiometry of chemical reactions, thermo chemistry, properties of gases, states of matter, chemical solutions, kinetics. Molecular basis for chemical reactivity; atomic structure, periodicity, chemical bonding.
Principles of Chemistry II with Laboratory

**CHEM 125-01, Lecture**
Professor: TBA
MW / 9:00 to 11:40 a.m.
Main / LS-TBA
B Session / June 1–July 25
Chemical equilibria, the chemistry of acids and bases, solubility and precipitation reactions. Introduction to thermodynamics and electrochemistry. Chemistry of selected elements and their compounds.

**CHEM 125-L01, Lab**
Professor: TBA
MW / 1:30 to 4:20 p.m.
Main / WH-TBA
B Session / June 1–July 25
Chemical equilibria, the chemistry of acids and bases, solubility and precipitation reactions. Introduction to thermodynamics and electrochemistry. Chemistry of selected elements and their compounds.

Principles of Chemistry II Without Laboratory

**CHEM 126-01, Lecture**
Professor: TBA
MW / 9:00 to 11:40 a.m.
Main / LS-TBA
B Session / June 1–July 25
Same as CHEM 125 except without the laboratory.

Organic Chemistry I

**CHEM 237-01, Lecture**
Professor: TBA
MW / 9:00 to 11:40 a.m.
Main / LS-TBA
B Session / June 1–July 25
The constitution and properties of the different classes of organic compounds, with considerable attention to stereochemistry, reaction mechanisms, synthetic organic and bio-organic chemistry, and spectroscopy. The laboratory work involves an introduction to the major synthetic and analytical techniques of organic chemistry including the preparation of representative organic compounds and the isolation of compounds from natural sources.

**CHEM 237-L01, Lab**
Professor: TBA
MW / 1:30 to 4:50 p.m.
Main / WH-213
B Session / June 1–July 25
Laboratory part of CHEM 239. Techniques for advanced organic preparations. Identification and characterization of organic compounds, including modern instrumental methods.

Physical Chemistry II

**CHEM 344-01, Lecture**
Professor: TBA
MW / 10:00 a.m. to 12:40 p.m.
Main / LS-TBA
B Session / June 1–July 25
Quantum theory, molecular structure and spectroscopy, chemical equilibrium constants from statistical mechanics, phenomenological and mechanistic chemical reaction kinetics, transport phenomena from molecular perspective. The laboratory will include experiments dealing with gases, thermochemistry, liquid solutions, phase equilibria, electrochemistry, chemical kinetics, spectra, molecular structure, and treatment of data.

Physical Chemistry II

**CHEM 344-L01, Lab**
Professor: TBA
MW / 1:30 to 4:50 p.m.
Main / WH-TBA
B Session / June 1–July 25
Quantum theory, molecular structure and spectroscopy, chemical equilibrium constants from statistical mechanics, phenomenological and mechanistic chemical reaction kinetics, transport phenomena from molecular perspective. The laboratory will include experiments dealing with gases, thermochemistry, liquid solutions, phase equilibria, electrochemistry, chemical kinetics, spectra, molecular structure, and treatment of data.

Chemical Modeling and Simulation

**CHEM 454-01, Lecture**
Professor: Andrey Rogachev
TR / 1:00 to 3:40 p.m.
Main / Location TBA
B Session / June 1–July 25
A computer applications course for chemists, chemical engineers, and scientists emphasizing software application rather than hardware. This class is intended to provide an introduction to computational chemistry for non-specialists and to demonstrate how these techniques can pragmatically impact the chemical industry. The subject matter is presented using practical industrial problems that emphasize scientific solutions. Class work involves “hands on” learning that extensively involves the interactive use of computers. Lectures emphasize the theoretical foundations for a particular topic and follow up practical assignments reinforce that material. Both the lectures and the home works demonstrate the power and limitations of modern molecular modeling by addressing the use of computers in the design of materials. By the end of the course, students will understand the basic concepts and language of chemistry modeling so that they may successfully incorporate it into their work.
Spectroscopic Methods II  
**CHEM 512-01, Lecture**  
Professor: Albert Snider  
Internet  
B Session / June 1–July 25  
A continuation of the study of optical methods covering atomic absorption spectroscopy, atomic and flame emission spectroscopy, chemiluminescence, fluorescence, phosphorescence, light scattering and refractometry.

Statistics for Analytical Chemists  
**CHEM 513-01, Lecture**  
Professor: Ali Oskouie  
Internet  
B Session / June 1–July 25  
A survey providing sufficient statistical background for scientists. The topics covered include probability, statistics, sampling estimation, regression analysis, experimental design, data analysis and signal enhancement.

Geodetic Science  
**CAE 105-01, Lecture/Lab**  
Professor: Laurence Rohter  
MW / 1:50 to 4:30 p.m.  
Main / Location TBA  
B Session / June 1–July 25  
Measurement of distances and angles. Theory of errors. Study of leveling, traversing, topographic mapping, route surveying, earthwork computation, photometry, and boundary surveys. Practice in the use of tapes, levels, total stations, and PC-based methodology.

Thermal-Fluids Engineering I  
**CAE 208-01, Lecture**  
Professor: Mark Snyder  
Internet  
A Session / May 18-June 27  
Basic principles of thermodynamics applied to engineering systems using pure substances and mixtures as working fluids. Direct application of the laws of thermodynamics to analysis of closed and open systems, mass and energy flow. Extensive analysis of isentropic processes in cycles, analysis of gas mixtures and psychrometrics in heating and cooling systems. Introduction to fluid mechanics and analysis of fluid statics problems.

Thermal-Fluids Engineering II  
**CAE 209-01, Lecture**  
Professor: Mark Snyder  
Internet  
C Session / June 29–August 8  
Complete the development of fluid mechanics and introduce and develop heat and mass transfer analysis techniques. Description and analysis of fluid kinematics, energy and momentum equations applied to internal/external flow in building engineering systems. Development and application of convection, conduction and radiation to one-, two- and three-dimensional systems in steady state and transient regimes of operation as applied to building materials and geometries.

Structural Analysis I  
**CAE 304-01, Lecture/Lab**  
Professor: A Longinow  
MW / 6:00 to 9:10 p.m.  
Main / Location TBA  
A Session / May 18-June 27  

Structural Design II  
**CAE 307-01, Lecture**  
Professor: Tongyan Pan  
MWR / 10:00 a.m. to 12:50 p.m.  
Main / Location TBA  
A Session / May 18-June 27  

Introduction to Geotechnical Engineering  
**CAE 323-01, Lecture**  
Professor: Jeff Budiman  
MW / 1:30 to 4:00 p.m.  
Main / Location TBA  
A Session / May 18-June 27  
Physical and mechanical properties of soil; elementary principles of soil identification and testing. Principles of soil permeability and seepage, consolidation, failure theories, earth pressures, and bearing capacity. Laboratory included.

Introduction to Geotechnical Engineering  
**CAE 323-L01, Lab**  
Professor: Jeff Budiman  
TR / 1:30 to 5:00 p.m.  
Main / Location TBA  
A Session / May 18-June 27  
Physical and mechanical properties of soil; elementary principles of soil identification and testing. Principles of soil permeability and seepage, consolidation, failure theories, earth pressures, and bearing capacity. Laboratory included.
Sprinklers, Standpipes, Fire Pumps, Special Suppression, and Detection Systems

CAE 422-01, Lecture
Professor: David DeBord
MW / 5:00 to 7:20 p.m.
Main / Location TBA
A Session / May 18–June 27
Review and introduction to fluid dynamics applied to sprinklers, standpipes, fire pumps, and special suppression systems; hydraulic design criteria and procedures for sprinklers requirements, standpipes, fire pumps, special suppression systems, and detection and alarm systems using nationally recognized design (National Fire Protection Association) standards, water supply requirement systems and distributions.

Fire Protection and Life Safety in Building Design

CAE 425-01, Lecture
Professor: David DeBord
TR / 5:00 to 7:20 p.m.
Main / Location TBA
C Session / June 29–August 8
Fundamentals of building design for fire and life safety, emphasis on a systematic design approach. Basic considerations of building codes, fire loading, fire resistance, exit design, protective systems, and other fire protection systems.

Steel Design

CAE 431-01, Lecture
Professor: A Longinow
TR / 6:00 to 8:25 p.m.
Main / Location TBA
B Session / June 1–July 25
Design of steel beams, plate girders, and beam columns. Bolted and welded connections. Design of typical frame systems.

Concrete and Foundation Design

CAE 432-01, Lecture
Professor: Jamshid Mohammadi
Internet
B Session / June 1–July 25
Design of reinforced concrete building frames and continuous structures. Design of girders, slabs, columns, foundations, and retaining walls.

Design of Masonry and Timber Structures

CAE 436-01, Lecture
Professor: Domingo Carreira
TR / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25
Design of unreinforced and reinforced masonry structural elements and structures. Serviceability and ultimate capacity design. Seismic response, resistance, and design. Design of wood columns and bending members. Mechanical fasteners and connectors. Instructor’s consent may be granted to students who do not meet the prerequisite.

Architectural Design

CAE 468-01, Lecture/Lab
Professor: Edoarda Corradi Dell’ Acqua
TR / 5:00 to 8:10 p.m.
Main / Location TBA
C Session / June 29–August 8
Architectural Design is the first of a two-part sequence of architectural design and planning for architectural engineers. Students learn the basic theory and practice of the architectural design process from the architect’s perspective. Topics include the logical process of architectural design development, integration of code requirement, design approach, and architectural presentation techniques taught through lecture and lab instruction.

Construction Contract Administration

CAE 473-01, Lecture
Professor: David Arditi
MW / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25

Prestressed Concrete

CAE 551-01, Lecture
Professor: Tongyan Pan
MWR / 6:25 to 9:15 p.m.
Main / Location TBA
A Session / May 18–June 27
Theory and design of prestressed concrete members and structure. Applications to both simple and continuous girder and frames subjected to stationary or moving loads. Prestressed cylindrical shells.

Learn online! Internet-based courses are also available.
Project closeout. Class exercise using computer program.

subcontractor applications for payment, labor time cards, unit completion reports, change
and budgeting. Recording and reporting procedures in construction projects--invoices,
invoicing, accounts receivable, general ledger, payrolls and indirect costs. Job costing
and budgeting. Recording and reporting procedures in construction projects--invoices,
subcontractor applications for payment, labor time cards, unit completion reports, change
Project closeout. Class exercise using computer program.

Engineering Behavior of Soil

CAE 562-01, Lecture
Professor: Jeff Budiman
MTW / 9:00 a.m. to 12:30 p.m.
Main / Location TBA
A Session / May 18–June 27
Soil mineralogy and soil fabric, soil-water electrolyte system, dispersive clay, stress and strain analyses, elastic equilibrium in soil masses, plastic equilibrium in soil masses, in situ and laboratory stress paths, shear strength of sands and clays, thermal properties of soils, critical state soil mechanics principles, nonlinear pseudo elastic and elastoplastic constitutive models.

Advanced Soil Mechanics Laboratory

CAE 563-01, Lecture/Lab
Professor: Jeff Budiman
F / 9:00 a.m. to 12:00 p.m.
Main / Location TBA
A Session / May 18–June 27
Advanced aspects of soil property measurement with application to design and analysis, system characteristics on soil sediment, pinhole test for identifying dispersive clays, consolidation, triaxial compression and triaxial extension with porewater measurement, cyclic triaxial test, permeability with back pressure, determination of critical void ratio.

Advanced Soil Mechanics Laboratory

CAE 563-01, Lecture/Lab
Professor: Jeff Budiman
F / 1:00 to 5:00 p.m.
Main / Location TBA
A Session / May 18–June 27
Advanced aspects of soil property measurement with application to design and analysis, system characteristics on soil sediment, pinhole test for identifying dispersive clays, consolidation, triaxial compression and triaxial extension with porewater measurement, cyclic triaxial test, permeability with back pressure, determination of critical void ratio.

Construction Cost Accounting and Control

CAE 572-01, Lecture
Professor: Raymond Lemming
S / 5:30 to 8:30 p.m.
Main / Location TBA
Short Course / May 11–30

Construction Management with Building Information Modeling

CAE 573-01, Lecture
Professor: Julide Demirdoven
TR / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25
Fundamentals and practical use of information technologies in the construction industry; basic concepts of building information modeling (BIM); review of software and technology available for BIM; practical use of BIM including design and clash detection; impact of BIM on construction management functions; construction scheduling and sequencing using BIM; cost estimating using BIM; facility management with BIM; integrated approach to navigate BIM as a multi-disciplinary design, analysis, construction, and facility management technology; class exercise to create a BIM model and to use it in scheduling, sequencing, cost estimating, management, and simulation of a construction project.

Construction Claims Management

CAE 578-01, Lecture
Professor: Raymond Lemming
TR, 05:30 PM to 07:55 PM
Main / Location TBA
B Session / June 1–July 25
This course provides a basic explanation of construction contract claims by types such as delays, acceleration, and scope issues, the underlying legal theories of the contract construction and claims, elements required for each claims type defenses to the claim, prophylactic claims measures. The claims process within the contract and extra-contractual basis’s for claims are examined. Resolution of claims by ADR techniques and the formal litigation process are explained. AIA, AGC, and federal claims provisions are described. In addition to construction contract claims other types of claims associated with construction projects are covered such as Surety bond claims and various insurance claims (CGL, Builder’s Risk, workers comp, etc).

Computer Graphics in Engineering

EG 419-01, Lecture/Lab
Professor: William Briggs
TR / 5:00 to 7:40 p.m.
Main / Location TBA
B Session / June 1–July 25
Techniques of PC-based (AutoCAD) computer-aided drawing and design. Study of computer graphic hardware and software systems through demonstrations and use. Both 2D and 3D representation of components and assemblies from various engineering disciplines. Requires junior standing.
Computer Graphics for Non-Engineers

**EG 425-01, Lecture/Lab**
Professor: William Briggs
TR / 5:00 to 7:40 p.m.
Main / Location TBA
B Session / June 1–July 25
Principles and applications of computer graphics in business and nontechnical fields. Study of computer graphics hardware and software systems. Use of computer in producing charts, graphs, and technical drawings. Use of PC-CAD in problem solving and design. Credit for this course is not applicable to an engineering degree. Requires junior standing.

Introduction to Building Information Modeling

**EG 430-01, Lecture**
Professor: Julide Demirdoven
MW / 5:30 to 7:55 p.m.
Main / Location TBA
B Session / June 1–July 25
Fundamentals and practical use of information technologies in design; basic concepts of building information modeling (BIM); review of software and technology available for BIM; practical use of BIM in design for a site, viewing a model, starting a project, working in the AutoDesk “Revit” Environment, adding building elements to a project, conceptual energy analysis, designing a preliminary layout, and presenting a project.

Industrial Waste Treatment

**ENVE 551-01, Lecture**
Professor: Krishna Pagilla
MW / 5:00 to 8:10 p.m.
Main / Location TBA
A Session / May 18–June 27
Industrial waste sources and characteristics, significance of industrial waste as environmental pollutants; applications of standard and special treatment processes, including physical, chemical and biological systems.

COLLEGE OF SCIENCE DEAN’S OFFICE

Project Management

**SCI 511-01, Lecture**
Professor: Kelly Cherwin
Internet
B Session / June 1–July 25
Successful project management links the basic metrics of schedule adherence, budget adherence, and project quality. But, it also includes the “people components” of customer satisfaction and effective management of people whether it is leading a project team or successfully building relationships with co-workers. Through course lectures, assigned readings, and case studies, the basic components of leading, defining, planning, organizing, controlling, and closing a project will be discussed. Such topics include project definition, team building, budgeting, scheduling, risk management and control, evaluation, and project closeout.

COMPUTER SCIENCE

Introduction to Computer Programming

**CS 105-01, Lecture**
Professor: Jon Hanrath
TR / 8:50 to 10:55 a.m.
Main / SB-108
A Session / May 18–June 27
Introduces the use of high-level programming language as a problem-solving tool, including basic data structures and algorithms, structured programming techniques, and software documentation. Designed for students who have had little or no prior experience with computer programming.

**CS 105-02, Lecture**
Professor: George Koutsogiannakis
TR / 8:50 to 10:55 a.m.
Main / SB-108
C Session / June 29–August 8
Introduces the use of high-level programming language as a problem-solving tool, including basic data structures and algorithms, structured programming techniques, and software documentation. Designed for students who have had little or no prior experience with computer programming.

**CS 105-L01, Lab**
Professor: Jon Hanrath
TR / 11:00 a.m. to 12:00 p.m.
Main / SB-108
A Session / May 18–June 27
Introduces the use of high-level programming language as a problem-solving tool, including basic data structures and algorithms, structured programming techniques, and software documentation. Designed for students who have had little or no prior experience with computer programming.

**CS 105-L02, Lab**
Professor: George Koutsogiannakis
TR / 11:00 a.m. to 12:00 p.m.
Main / SB-108
C Session / June 29–August 8
Introduces the use of high-level programming language as a problem-solving tool, including basic data structures and algorithms, structured programming techniques, and software documentation. Designed for students who have had little or no prior experience with computer programming.

Object-Oriented Programming I

**CS 115-01, Lecture/Lab**
Professor: Jon Hanrath
TR / 1:00 to 4:10 p.m.
Main / SB-108
A Session / May 18–June 27
Introduces the use of a high-level object-oriented programming language as a problem-solving tool, including basic data structures and algorithms, object-oriented programming techniques, and software documentation. Designed for students who have had little or no prior experience with computer programming. For students in CS and CS-related degree programs.
Object-Oriented Programming II  
**CS 116-01, Lecture/Lab**  
Professor: George Koutsogiannakis  
TR / 1:00 to 4:10 p.m.  
Main / SB-108  
C Session / June 29–August 8  
Introduces more advanced elements of object-oriented programming, including dynamic data structures, recursion, searching and sorting, and advanced object-oriented programming techniques. For students in CS and CS-related degree programs.

Data Structures and Algorithms  
**CS 331-01, Lecture**  
Professor: Michael Choi  
MW / 6:00 to 8:05 p.m.  
Main / Location TBA  
A Session / May 18–June 27  
Implementation and application of the essential data structures used in computer science. Analysis of basic sorting and searching algorithms and their relationship to these data structures. Particular emphasis is given to the use of object-oriented design and data abstraction in the creation and application of data structures.

Data Structures and Algorithms Lab  
**CS 331-L01, Lab**  
Professor: Michael Choi  
TR / 6:00 to 8:05 p.m.  
Main / SB-108  
A Session / May 18–June 27  
Implementation and application of the essential data structures used in computer science. Analysis of basic sorting and searching algorithms and their relationship to these data structures. Particular emphasis is given to the use of object-oriented design and data abstraction in the creation and application of data structures.

Systems Programming  
**CS 351-01, Lecture**  
Professor: Michael Saelee  
MW / 1:00 to 4:10 p.m.  
Main / Location TBA  
A Session / May 18–June 27  
Examines the components of sophisticated multilayer software systems, including device drivers, systems software, applications interfaces, and user interfaces. Explores the design and development of interrupt-driven and event-driven software.

**CS 351-L01, Lab**  
Professor: Michael Saelee  
MW / 4:20 to 5:25 p.m.  
Main / SB-108  
A Session / May 18–June 27  
Examines the components of sophisticated multilayer software systems, including device drivers, systems software, applications interfaces, and user interfaces. Explores the design and development of interrupt-driven and event-driven software.

Introduction to Advanced Studies I  
**CS 401-01, Lecture**  
Professor: Michael Choi  
MW / 6:00 to 8:05 p.m.  
Main / Location TBA  
A Session / May 18–June 27  
First course in a two-course sequence that is designed to prepare students for graduate study in computer science. Explores the implementation and application of fundamental data structures and algorithms with an emphasis on object-oriented programming in Java. Examines the relationship between these elements and the mathematical structures that form the foundation of computer science. This course does not apply toward M.S./Ph.D. credit in Computer Science.

**CS 401-L01, Lab**  
Professor: Michael Choi  
TR / 6:00 to 8:05 p.m.  
Main / SB-108  
A Session / May 18–June 27  
First course in a two-course sequence that is designed to prepare students for graduate study in computer science. Explores the implementation and application of fundamental data structures and algorithms with an emphasis on object-oriented programming in Java. Examines the relationship between these elements and the mathematical structures that form the foundation of computer science. This course does not apply toward M.S./Ph.D. credit in Computer Science.

Database Organization  
**CS 425-01, Lecture**  
Professor: Omar Aldawud  
MW / 6:00 to 9:10 p.m.  
Main / Location TBA  
A Session / May 18–June 27  
Overview of database architectures, including the Relational, Hierarchical, Network, and Object Models. Database interfaces, including the SQL query language. Database design using the Entity-Relationship Model. Issues such as security, integrity, and query optimization.

**CS 425-02, Lecture**  
Professor: Omar Aldawud  
Internet  
A Session / May 18–June 27  
Overview of database architectures, including the Relational, Hierarchical, Network, and Object Models. Database interfaces, including the SQL query language. Database design using the Entity-Relationship Model. Issues such as security, integrity, and query optimization.

**CS 425-03, Lecture**  
Professor: Omar Aldawud  
India International Internet  
A Session / May 18–June 27  
Overview of database architectures, including the Relational, Hierarchical, Network, and Object Models. Database interfaces, including the SQL query language. Database design using the Entity-Relationship Model. Issues such as security, integrity, and query optimization.
<table>
<thead>
<tr>
<th>Course</th>
<th>Section</th>
<th>Professor</th>
<th>Days</th>
<th>Time</th>
<th>Location</th>
<th>Session</th>
<th>Start/end</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Systems</td>
<td>CS 450-01, Lecture</td>
<td>Michael Saelee</td>
<td>MW</td>
<td>6:00 to 9:10 p.m.</td>
<td>Main</td>
<td>A Session / May 18-June 27</td>
<td>Introduction to operating system concepts-including system organization for uniprocessors and multiprocessors, scheduling algorithms, process management, deadlocks, paging and segmentation, files and protection, and process coordination and communication.</td>
</tr>
<tr>
<td>Programming Languages and Translators</td>
<td>CS 440-01, Lecture</td>
<td>Alan Mattox Beckman</td>
<td>TR</td>
<td>8:50 a.m. to 12:00 p.m.</td>
<td>Main</td>
<td>B Session / June 1–July 25</td>
<td>Study of commonly used computer programming languages with an emphasis on precision of definition and facility in use. Scanning, parsing, and introduction to compiler design. Use of compiler generating tools.</td>
</tr>
<tr>
<td>Operating Systems</td>
<td>CS 450-02, Lecture</td>
<td>Michael Saelee</td>
<td>TR</td>
<td>12:10 to 2:50 p.m.</td>
<td>Internet</td>
<td>B Session / June 1–July 25</td>
<td>Study of commonly used computer programming languages with an emphasis on precision of definition and facility in use. Scanning, parsing, and introduction to compiler design. Use of compiler generating tools.</td>
</tr>
<tr>
<td>Programming Languages and Translators</td>
<td>CS 440-02, Lecture</td>
<td>Alan Mattox Beckman</td>
<td>TR</td>
<td>6:00 to 9:10 p.m.</td>
<td>Main</td>
<td>A Session / May 18-June 27</td>
<td>Introduction to operating system concepts-including system organization for uniprocessors and multiprocessors, scheduling algorithms, process management, deadlocks, paging and segmentation, files and protection, and process coordination and communication.</td>
</tr>
<tr>
<td>Programming Languages and Translators</td>
<td>CS 440-03, Lecture</td>
<td>Alan Mattox Beckman</td>
<td>TR</td>
<td>8:50 a.m. to 12:00 p.m.</td>
<td>Main</td>
<td>B Session / June 1–July 25</td>
<td>Study of commonly used computer programming languages with an emphasis on precision of definition and facility in use. Scanning, parsing, and introduction to compiler design. Use of compiler generating tools.</td>
</tr>
<tr>
<td>Operating Systems</td>
<td>CS 450-03, Lecture</td>
<td>Michael Saelee</td>
<td>TR</td>
<td>6:00 to 9:10 p.m.</td>
<td>Internet</td>
<td>A Session / May 18-June 27</td>
<td>Study of the principles and practices of software engineering. Topics include software quality concepts, process models, software requirements analysis, design methodologies, software testing and software maintenance. Hands-on experience building a software system using the waterfall life cycle model. Students work in teams to develop all life cycle deliverables: requirements document, specification and design documents, system code, test plan, and user manuals.</td>
</tr>
<tr>
<td>Data Communications</td>
<td>CS 455-01, Lecture</td>
<td>Edward Chlebus</td>
<td>MW</td>
<td>8:50 a.m. to 12:00 p.m.</td>
<td>Main</td>
<td>A Session / May 18-June 27</td>
<td>Introduction to data communication concepts and facilities with an emphasis on protocols and interface specifications. Focuses on the lower four layers of the ISO-OSI reference model.</td>
</tr>
<tr>
<td>Data Communications</td>
<td>CS 455-02, Lecture</td>
<td>Edward Chlebus</td>
<td>MW</td>
<td>1:00 to 4:10 p.m.</td>
<td>Main</td>
<td>A Session / May 18-June 27</td>
<td>Study of the principles and practices of software engineering. Topics include software quality concepts, process models, software requirements analysis, design methodologies, software testing and software maintenance. Hands-on experience building a software system using the waterfall life cycle model. Students work in teams to develop all life cycle deliverables: requirements document, specification and design documents, system code, test plan, and user manuals.</td>
</tr>
</tbody>
</table>
Software Engineering I
CS 487-03, Lecture
Professor: Dennis Hood
India International Internet
A Session / May 18-June 27
Study of the principles and practices of software engineering. Topics include software quality concepts, process models, software requirements analysis, design methodologies, software testing and software maintenance. Hands-on experience building a software system using the waterfall life cycle model. Students work in teams to develop all life cycle deliverables: requirements document, specification and design documents, system code, test plan, and user manuals.

Object-Oriented Analysis and Design
CS 521-03, Lecture
Professor: Atef Bader
India International Internet
A Session / May 18-June 27
This course describes a methodology that covers a wide range of software engineering techniques used in system analysis, modeling and design. These techniques integrate well with software process management techniques and provide a framework for software engineers to collaborate in the design and development process. The methodology features the integration of concepts, including software reusability, frame works, design patterns, software architecture, software component design, use-case analysis, event-flow analysis, event-message analysis, behavioral-life cycle analysis, feature, multiple-product, risk and rule analysis, and automatic code generation. (Credit will not be given for CS 521 if CS751 is taken.)

Learn online! Internet-based courses are also available.
Computer Networks I: Fundamentals

CS 542-02, Lecture
Professor: Edward Chlebus
Internet
A Session / May 18-June 27

This course focuses on the engineering and analysis of network protocols and architecture in terms of the Internet. Topics include content distribution, peer-to-peer networking, congestion control, unicast and multicast routing, router design, mobility, multimedia networking quality of service, security and policy-based networking.

Computer Networks I: Fundamentals

CS 542-03, Lecture
Professor: Edward Chlebus
India International Internet
A Session / May 18-June 27

This course focuses on the engineering and analysis of network protocols and architecture in terms of the Internet. Topics include content distribution, peer-to-peer networking, congestion control, unicast and multicast routing, router design, mobility, multimedia networking quality of service, security and policy-based networking.

Broadband Networks

CS 548-01, Lecture
Professor: Michael Choi
TR / 6:00 to 9:10 p.m.
Main / Location TBA
A Session / May 18-June 27

The course studies the architectures, interfaces, protocols, and services for broadband (high-speed) multimedia networks. The key principles of the protocols and technologies used for representative network elements and types of broadband network are studied. Specifically, cable modems, Digital Subscriber Lines, Power Lines, wireless 802.16 (WiMax), and broadband cellular Internet are covered for broadband access; for broadband Local Area Networks (LANs), Gigabit Ethernet, Virtual LANs and wireless LANs (802.11 WiFi and Bluetooth) are discussed; for broadband Wide Area Networks (WANs) the topics covered include optical networks (SONET/SDH,DWDM, optical network nodes, optical network nodes, optical switching technologies), frame-relay, ATM, wire-speed routers, IP switching, and MPLS. Also, quality of service issues in broadband networks and a view of the convergence of technologies in broadband networks are covered.

Broadband Networks

CS 548-02, Lecture
Professor: Michael Choi
Internet
A Session / May 18-June 27

The course studies the architectures, interfaces, protocols, technologies, products and services for broadband (high-speed) multimedia networks. The key principles of the protocols and technologies used for representative network elements and types of broadband network are studied. Specifically, cable modems, Digital Subscriber Lines, Power Lines, wireless 802.16 (WiMax), and broadband cellular Internet are covered for broadband access; for broadband Local Area Networks (LANs), Gigabit Ethernet, Virtual LANs and wireless LANs (802.11 WiFi and Bluetooth) are discussed; for broadband Wide Area Networks (WANs) the topics covered include optical networks (SONET/SDH,DWDM, optical network nodes, optical network nodes, optical switching technologies), frame-relay, ATM, wire-speed routers, IP switching, and MPLS. Also, quality of service issues in broadband networks and a view of the convergence of technologies in broadband networks are covered.

Broadband Networks

CS 548-03, Lecture
Professor: Michael Choi
India International Internet
A Session / May 18-June 27

The course studies the architectures, interfaces, protocols, technologies, products and services for broadband (high-speed) multimedia networks. The key principles of the protocols and technologies used for representative network elements and types of broadband network are studied. Specifically, cable modems, Digital Subscriber Lines, Power Lines, wireless 802.16 (WiMax), and broadband cellular Internet are covered for broadband access; for broadband Local Area Networks (LANs), Gigabit Ethernet, Virtual LANs and wireless LANs (802.11 WiFi and Bluetooth) are discussed; for broadband Wide Area Networks (WANs) the topics covered include optical networks (SONET/SDH,DWDM, optical network nodes, optical network nodes, optical switching technologies), frame-relay, ATM, wire-speed routers, IP switching, and MPLS. Also, quality of service issues in broadband networks and a view of the convergence of technologies in broadband networks are covered.

Cryptography and Network Security

CS 549-01, Lecture
Professor: XiangYang Li
MW / 1:00 to 4:10 p.m.
Main / Location TBA
A Session / May 18-June 27

This course provides an introduction to the theory and practice of cryptography and network security. The course covers conventional encryption such as classical encryption techniques, modern encryption techniques and encryption algorithms. Students are introduced to the basic number theory, which is used as the foundation for public-key encryption. The public-key cryptography such as encryption methods and digital signatures is covered. Message authentication and hash functions are also discussed. Students will learn techniques of key management, secret sharing and conducting interactive proofs. In addition, the practical network and security protocols are discussed.

Cryptography and Network Security

CS 549-02, Lecture
Professor: XiangYang Li
Internet
A Session / May 18-June 27

This course provides an introduction to the theory and practice of cryptography and network security. The course covers conventional encryption such as classical encryption techniques, modern encryption techniques and encryption algorithms. Students are introduced to the basic number theory, which is used as the foundation for public-key encryption. The public-key cryptography such as encryption methods and digital signatures is covered. Message authentication and hash functions are also discussed. Students will learn techniques of key management, secret sharing and conducting interactive proofs. In addition, the practical network and security protocols are discussed.

Cryptography and Network Security

CS 549-03, Lecture
Professor: XiangYang Li
India International Internet
A Session / May 18-June 27

This course provides an introduction to the theory and practice of cryptography and network security. The course covers conventional encryption such as classical encryption techniques, modern encryption techniques and encryption algorithms. Students are introduced to the basic number theory, which is used as the foundation for public-key encryption. The public-key cryptography such as encryption methods and digital signatures is covered. Message authentication and hash functions are also discussed. Students will learn techniques of key management, secret sharing and conducting interactive proofs. In addition, the practical network and security protocols are discussed.
design patterns. Use. Also discussed is the impact of post-object oriented software development on designing and contracting complex software systems. The catalog of design patterns also provides a pragmatic reference to a well-engineered set of existing patterns currently in use. Also discussed is the impact of post-object oriented software development on design patterns.

Software Project Management

CS 587-01, Lecture
Professor: Atef Bader
TR / 6:00 to 9:10 p.m.
Main / Location TBA
C Session / June 29–August 8
Concepts of software product and process quality. Role of TQM in software project management. Use of metrics, feasibility studies, cost and effort estimates. Discussion of project planning and scheduling. The project team and leadership issues. The Capability Maturity Model: basic tenets and application of process evaluation.

Software Project Management

CS 587-02, Lecture
Professor: Atef Bader
Internet
C Session / June 29–August 8
Concepts of software product and process quality. Role of TQM in software project management. Use of metrics, feasibility studies, cost and effort estimates. Discussion of project planning and scheduling. The project team and leadership issues. The Capability Maturity Model: basic tenets and application of process evaluation.

Software Project Management

CS 587-03, Lecture
Professor: Atef Bader
India International Internet
C Session / June 29–August 8
Concepts of software product and process quality. Role of TQM in software project management. Use of metrics, feasibility studies, cost and effort estimates. Discussion of project planning and scheduling. The project team and leadership issues. The Capability Maturity Model: basic tenets and application of process evaluation.

Data Science Practicum

CSP 572-01, Practicum
Professor: Shlomo Argamon
MW / 1:00 to 6:10 p.m.
Main / Location TBA
A Session / May 18–June 27
Students will work in small groups to solve real-world data analysis problems for actual scientific or industrial clients. Innovation and clarity of presentation will be key elements of evaluation. Students will also have an option to fulfill course requirements through a data analytics internship with an industry partner.

Circuit Analysis I

ECE 211-01, Lecture
Professor: Suresh Borkar
MW / 2:30 to 5:10 p.m.
Main / Location TBA
B Session / June 1–July 25
Ohm’s Law, Kirchhoff’s Laws, and network element voltage-current relations. Application of mesh and nodal analysis to circuits. Dependent sources, operational amplifier circuits, superposition, Thévenin’s and Norton’s Theorems, maximum power transfer theorem. Transient circuit analysis for RC, RL, and RLC circuits. Introduction to Laplace Transforms. Laboratory experiments include analog and digital circuits; familiarization with test and measurement equipment; combinational digital circuits; familiarization with latches, flip-flops, and shift registers; operational amplifiers; transient effects in first-order and second-order analog circuits; PSpice software applications. Concurrent registration in MATH 252 and ECE 218.

Circuit Analysis I

ECE 211-L01, Lab
Professor: Suresh Borkar
TR / 3:40 to 6:20 p.m.
Main / Location TBA
B Session / June 1–July 25
Ohm’s Law, Kirchhoff’s Laws, and network element voltage-current relations. Application of mesh and nodal analysis to circuits. Dependent sources, operational amplifier circuits, superposition, Thévenin’s and Norton’s Theorems, maximum power transfer theorem. Transient circuit analysis for RC, RL, and RLC circuits. Introduction to Laplace Transforms. Laboratory experiments include analog and digital circuits; familiarization with test and measurement equipment; combinational digital circuits; familiarization with latches, flip-flops, and shift registers; operational amplifiers; transient effects in first-order and second-order analog circuits; PSpice software applications. Concurrent registration in MATH 252 and ECE 218.

Object-Oriented Design Patterns

CSP 585-01, Lecture
Professor: Omar Aldawud
TR / 6:00 to 9:10 p.m.
Main / Location TBA
A Session / May 18–June 27
This course introduces the principles of design patterns for Object-Oriented software systems. A catalog of design patterns is shown, to illustrate the roles of patterns in designing and contracting complex software systems. The catalog of design patterns also provides a pragmatic reference to a well-engineered set of existing patterns currently in use. Also discussed is the impact of post-object oriented software development on design patterns.

Object-Oriented Design Patterns

CSP 585-02, Lecture
Professor: Omar Aldawud
Internet
A Session / May 18–June 27
This course introduces the principles of design patterns for Object-Oriented software systems. A catalog of design patterns is shown, to illustrate the roles of patterns in designing and contracting complex software systems. The catalog of design patterns also provides a pragmatic reference to a well-engineered set of existing patterns currently in use. Also discussed is the impact of post-object oriented software development on design patterns.

Object-Oriented Design Patterns

CSP 585-03, Lecture
Professor: Omar Aldawud
India International Internet
A Session / May 18–June 27
This course introduces the principles of design patterns for Object-Oriented software systems. A catalog of design patterns is shown, to illustrate the roles of patterns in designing and contracting complex software systems. The catalog of design patterns also provides a pragmatic reference to a well-engineered set of existing patterns currently in use. Also discussed is the impact of post-object oriented software development on design patterns.
Circuit Analysis II

**ECE 213-01, Lecture**
Professor: Suresh Borkar
MW: 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25

Sinusoidal excitation and phasors. AC steady-state circuit analysis using phasors. Complex frequency, network functions, pole-zero analysis, frequency response, and resonance. Two-port networks, transformers, mutual inductance, AC steady-state power, RMS values, introduction to three-phase systems and Fourier series. Design-oriented experiments include counters, finite state machines, sequential logic design, impedances in AC steady-state, resonant circuits, two-port networks, and filters. A final project incorporating concepts from analog and digital circuit design will be required. Prerequisites: ECE 211 with a grade C or better.

Circuit Analysis II

**ECE 213-L01, Lab**
Professor: Suresh Borkar
TR: 3:40 to 6:20 p.m.
Main / SH-311
B Session / June 1–July 25

Sinusoidal excitation and phasors. AC steady-state circuit analysis using phasors. Complex frequency, network functions, pole-zero analysis, frequency response, and resonance. Two-port networks, transformers, mutual inductance, AC steady-state power, RMS values, introduction to three-phase systems and Fourier series. Design-oriented experiments include counters, finite state machines, sequential logic design, impedances in AC steady-state, resonant circuits, two-port networks, and filters. A final project incorporating concepts from analog and digital circuit design will be required. Prerequisites: ECE 211 with a grade C or better.

Circuit Analysis I

**ECE 215-01, Lecture**
Professor: Suresh Borkar
MW: 2:30 to 5:10 p.m.
Main / SB-225
B Session / June 1–July 25


Circuit Analysis II

**ECE 216-01, Lecture**
Professor: Suresh Borkar
MW: 6:25 to 9:05 p.m.
Main / PH-109
B Session / June 1–July 25

Sinusoidal excitation and phasors. AC steady-state circuit analysis using phasors. Complex frequency, network functions, pole-zero analysis, frequency response, and resonance. Two-port networks, transformers, mutual inductance, AC steady-state power, RMS values, introduction to three-phase systems and Fourier series. Note: ECE 216 is for non-ECE majors.

Signals and Systems

**ECE 308-01, Lecture**
Professor: Guillermo Atkin
MTW / 9:00 to 11:40 a.m.
Main / Location TBA
A Session / May 18–June 27

Time and frequency domain representation of continuous and discrete time signals. Introduction to sampling and sampling theorem. Time and frequency domain analysis of continuous and discrete linear systems. Fourier series convolution, transfer functions. Fourier transforms, Laplace transforms, and Z-transforms.

Computer Organization and Design

**ECE 485-01, Lecture**
Professor: Suresh Borkar
TR / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25

This course covers basic concepts and state-of-the-art developments in computer architecture: computer technology, performance measures, instruction set design, computer arithmetic, controller and datapath design, memory systems, pipelining, array processing, parallel processing, multiprocessor, abstract analysis models, input-output systems, relationship between computer design and application requirements, and cost/performance tradeoffs. Students will complete a project implementing a version of multiple-cycle processor. Credit will be given for either ECE 485 or CS 470, but not both.

Computer Organization and Design

**ECE 485-02, Lecture**
Professor: Suresh Borkar
TR / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25

This course covers basic concepts and state-of-the-art developments in computer architecture: computer technology, performance measures, instruction set design, computer arithmetic, controller and datapath design, memory systems, pipelining, array processing, parallel processing, multiprocessor, abstract analysis models, input-output systems, relationship between computer design and application requirements, and cost/performance tradeoffs. Students will complete a project implementing a version of multiple-cycle processor. Credit will be given for either ECE 485 or CS 470, but not both.

Computer Organization and Design

**ECE 485-03, Lecture**
Professor: Suresh Borkar
Main / Location TBA
B Session / June 1–July 25

This course covers basic concepts and state-of-the-art developments in computer architecture: computer technology, performance measures, instruction set design, computer arithmetic, controller and datapath design, memory systems, pipelining, array processing, parallel processing, multiprocessor, abstract analysis models, input-output systems, relationship between computer design and application requirements, and cost/performance tradeoffs. Students will complete a project implementing a version of multiple-cycle processor. Credit will be given for either ECE 485 or CS 470, but not both.

Analysis of Random Signals

**ECE 511-01, Lecture**
Professor: Guillermo Atkin
MTW / 1:00 to 3:40 p.m.
Main / Location TBA
A Session / May 18–June 27

Probability theory, including discrete and continuous random variables, functions and transformations of random variables. Random processes, including correlation and spectral analysis, the Gaussian process and the response of linear systems to random processes.
Analysis of Random Signals

ECE 511-02, Lecture
Professor: Guillermo Atkin
Internet
A Session / May 18–June 27
Probability theory, including discrete and continuous random variables, functions and transformations of random variables. Random processes, including correlation and spectral analysis, the Gaussian process and the response of linear systems to random processes.

Analysis of Random Signals

ECE 511-03, Lecture
Professor: Guillermo Atkin
India International Internet
A Session / May 18–June 27
Probability theory, including discrete and continuous random variables, functions and transformations of random variables. Random processes, including correlation and spectral analysis, the Gaussian process and the response of linear systems to random processes.

Renewable Energies

ECE 538-01, Lecture
Professor: Mahesh Krishnamurthy
TR / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25
Various renewable energy sources such as solar systems, wind powered systems, ocean tides, ocean waves, and ocean thermal are presented. Their operational principles are addressed. Grid connected interfaces for such systems are explained. Research and Simulation mini-projects with emphasis on either machine design, or power electronic circuit analysis, design, and controls, or grid connected renewable systems are assigned to student groups.

Renewable Energies

ECE 538-02, Lecture
Professor: Mahesh Krishnamurthy
Internet
B Session / June 1–July 25
Various renewable energy sources such as solar systems, wind powered systems, ocean tides, ocean waves, and ocean thermal are presented. Their operational principles are addressed. Grid connected interfaces for such systems are explained. Research and Simulation mini-projects with emphasis on either machine design, or power electronic circuit analysis, design, and controls, or grid connected renewable systems are assigned to student groups.

Renewable Energies

ECE 538-03, Lecture
Professor: Mahesh Krishnamurthy
India International Internet
B Session / June 1–July 25
Various renewable energy sources such as solar systems, wind powered systems, ocean tides, ocean waves, and ocean thermal are presented. Their operational principles are addressed. Grid connected interfaces for such systems are explained. Research and Simulation mini-projects with emphasis on either machine design, or power electronic circuit analysis, design, and controls, or grid connected renewable systems are assigned to student groups.

Food Biotechnology

FPE 504-01, Lecture
Professor: Wei Zhang
Internet
B Session / June 1–July 25
Introduction of biotechnology in the food industry including genetic engineering of microorganisms. Fundamentals of microbial genomics and proteomics. Practice of a variety of software and bioinformatics tools including database search, sequence alignment, phylogenetic and cluster analysis, gene prediction, genomic map construction, and structural and functional prediction of proteins. Applications of DNA fingerprinting techniques in food safety and public health. Prerequisite: Biology or Microbiology.

Food Biotechnology

FPE 504-02, Lecture
Professor: Wei Zhang
Internet
B Session / June 1–July 25
Introduction of biotechnology in the food industry including genetic engineering of microorganisms. Fundamentals of microbial genomics and proteomics. Practice of a variety of software and bioinformatics tools including database search, sequence alignment, phylogenetic and cluster analysis, gene prediction, genomic map construction, and structural and functional prediction of proteins. Applications of DNA fingerprinting techniques in food safety and public health. Prerequisite: Biology or Microbiology.

Food Law and Regulation

FPE 511-01, Lecture
Professor: Richard Schell
TR / 10:00 a.m. to 12:40 p.m.
Main / Location TBA
B Session / June 1–July 25
Legal and scientific issues in regulating the nation’s food supply and nutritional status. Role of regulatory agencies; Federal Food, Drug, and Cosmetic Act; definitions and standards for food and adulterated foods. Manufacturing processed foods in compliance with regulations.

Food Law and Regulation

FPE 511-02, Lecture
Professor: Richard Schell
Internet
B Session / June 1–July 25
Legal and scientific issues in regulating the nation’s food supply and nutritional status. Role of regulatory agencies; Federal Food, Drug, and Cosmetic Act; definitions and standards for food and adulterated foods. Manufacturing processed foods in compliance with regulations.

Advanced Food Process Engineering

FPE 522-01, Lecture
Professor: Kathiravan Krishnamurthy
MW / 10:00 a.m. to 12:40 p.m.
Main / Location TBA
B Session / June 1–July 25
Process calculations for food processing methods such as canning, aseptic processing, ohmic heating, microwave processing, and pulsed energy processing. Extrusion techniques in food processing. Discussion of new food processing techniques and safety implications. Instructor permission is required.
Advanced Food Process Engineering

FPE 522-02, Lecture
Professor: Kathiravan Krishnamurthy
Internet
B Session / June 1–July 25
Process calculations for food processing methods such as canning, aseptic processing, ohmic heating, microwave processing, and pulsed energy processing. Extrusion techniques in food processing. Discussion of new food processing techniques and safety implications. Instructor permission is required.

Food Biotechnology

FST 504-01, Lecture
Professor: Wei Zhang
MW / 5:00 to 7:30 p.m.
Main / Location TBA
B Session / June 1–July 25
Introduction of biotechnology in the food industry including genetic engineering of microorganisms. Fundamentals of microbial genomics and proteomics. Practice of a variety of software and bioinformatics tools including database search, sequence alignment, phylogenetic and cluster analyses, gene production, genomic map construction, and structural and functional prediction of proteins. Applications of DNA fingerprinting techniques in food safety and public health. Prerequisite: Biology or Microbiology.

Food Law Regulations

FST 511-01, Lecture
Professor: Richard Schell
TR / 10:00 a.m. to 12:40 p.m.
Main / Location TBA
B Session / June 1–July 25
Legal and scientific issues in regulating the nation’s food supply and nutritional status. Roles of regulatory agencies; Federal Food, Drug and Cosmetic Act; definitions and standards for food and adulterated foods. Manufacturing processed foods in compliance with regulations.

HUMANITIES

Persuasion

COM 371-01, Lecture
Professor: Gregory Pulliam
TR / 1:30 to 4:10 p.m.
Main / SH-TBA
B Session / June 1–July 25
The study of covert and overt persuasion and their influences on society and individuals.

Topics in Communication: Entrepreneurship: The Lean Launchpad

COM 381-01, Lecture
Professor: Libby Hemphill
TR / 11:00 a.m. to 2:10 p.m.
Institute of Design / ID-201
A Session / May 18–June 27
An investigation into a topic of current interest in communication, which will be announced by the instructor when the course is scheduled.

Technical Communication

COM 421-01, Lecture
Professor: Edward Scott
Internet
D Session / May 18–August 8
Principles and practice in the communication of technical materials. Students work on the design, writing, and revising of reports, articles, manuals, procedures, proposals, including the use of graphics. Works by modern writers are analyzed.

Entrepreneurship in Technical Communication

COM 538-01, Lecture
Professor: Libby Hemphill
TR / 11:00 a.m. to 2:10 p.m.
Institute of Design / ID-201
A Session / May 18–June 27
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.
Persuasion
**COM 571-01, Lecture**
Professor: Gregory Pulliam
TR / 1:30 to 4:10 p.m.
Main / SH-TBA
B Session / June 1–July 25

The study of covert and overt persuasion and their influences on society and individuals.

Topics in History: Imperial Rome
**HIST 380-01, Lecture**
Professor: Laurie Perlini
MW / 9:00 to 11:40 a.m.
Main / Location TBA
B Session / June 1–July 25

An investigation into a topic of current or enduring interest in history, which will be announced by the instructor when the course is scheduled.

Topics in History: Medieval Europe
**HIST 380-02, Lecture**
Professor: Keith Green
MW / 12:50 to 4:00 p.m.
Main / Location TBA
C Session / June 29–August 8

An investigation into a topic of current or enduring interest in history, which will be announced by the instructor when the course is scheduled.

Topics in Humanities: Science Fiction and Pop Culture
**HUM 200-01, Lecture**
Professor: Andrew Roback
TR / 12:50 to 4:00 p.m.
Main / Location TBA
C Session / June 29–August 8

One-time or initial versions of course topics equivalent to HUM 202, 204, 206, and 208. Topics will introduce students to the humanities at IIT and to provide intensive instruction in writing.

Topics in Humanities: International Cinema
**HUM 380-01, Lecture**
Professor: Carly Kocurek
International Program
C Session / June 29–August 8

An investigation into a topic of current or enduring interest in the humanities, which does not fit neatly into standard categories.

Aesthetics
**PHIL 363-01, Lecture**
Professor: John Snapper
MW / 1:30 to 4:10 p.m.
Main / Location TBA
B Session / June 1–July 25

The philosophy of the fine arts, including an analysis of the concepts of beauty, representation, expression and the purpose of art.

Topics in Philosophy: Scientists in Film
**PHIL 380-01, Lecture**
Professor: Laura Seger
TR / 12:50 to 4:00 p.m.
Main / Location TBA
A Session / May 18–June 27

An investigation into a topic of current interest in philosophy; which will be announced by the instructor when the course is scheduled.

**INDUSTRIAL TECHNOLOGY AND MANAGEMENT**

Facilities and Construction Administration
**INTM 413-01, Lecture**
Professor: David Arditi
MW / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25

This course covers fundamentals of project administration and characteristics of the construction industry. Pre-construction discussion includes technical and economic feasibility, project delivery systems, documents, bonding, and bidding. Duties and liabilities of parties at pre-contract stage and during contract administration to include scheduling and time extensions, payments, retainage, substantial and final completion, change orders, suspension of work, contract termination, and dispute resolution. Labor law, labor relations, safety, and general management of a construction company.

Facilities and Construction Administration
**INTM 413-02, Lecture**
Professor: David Arditi
Internet
B Session / June 1–July 25

This course covers fundamentals of project administration and characteristics of the construction industry. Pre-construction discussion includes technical and economic feasibility, project delivery systems, documents, bonding, and bidding. Duties and liabilities of parties at pre-contract stage and during contract administration to include scheduling and time extensions, payments, retainage, substantial and final completion, change orders, suspension of work, contract termination, and dispute resolution. Labor law, labor relations, safety, and general management of a construction company.

Applied Strategies for the Competitive Enterprise
**INTM 420-01, Lecture**
Professor: William Maurer
MW / 6:25 to 8:05 p.m.
Main / TS-4000
B Session / June 1–July 25

Course covers the application of proven management principles and operational practices. Learn how high performance companies create a competitive advantage despite economic challenges and a transitional customer base. Factors covered include strategy deployment, financial analysis, new product development, quality, customer service, and attaining market leadership. Case studies illustrate variable impacts on business situations.

Applied Strategies for the Competitive Enterprise
**INTM 420-02, Lecture**
Professor: William Maurer
MW / 6:25 to 8:05 p.m.
Viewed Only at Rice / RC-150
B Session / June 1–July 25

Course covers the application of proven management principles and operational practices. Learn how high performance companies create a competitive advantage despite economic challenges and a transitional customer base. Factors covered include strategy deployment, financial analysis, new product development, quality, customer service, and attaining market leadership. Case studies illustrate variable impacts on business situations.
Examines the concept of sustainability and its application in the industrial environment. Identifies underlying stresses on natural and human environments and the resultant problems for business and society including legal, ethical, and political issues related to sustainability. Global warming, peak oil, and commodity pricing are considered as indicators of the need for improvements in sustainability. Industrial ecology will be discussed as well as strategies for developing sustainable practices in manufacturing, power generation, construction, architecture, logistics, and environmental quality. Coverage includes case studies on businesses that have developed successful sustainability programs.

Learn how high performance companies create a competitive advantage despite economic challenges and a transitional customer base. Factors covered include strategy deployment, financial analysis, new product development, quality, customer service, and attaining market leadership. Case studies illustrate variable impacts on business situations.

Learn online! Internet-based courses are also available.
Issues in Industrial Sustainability

INTM 559-02, Lecture
Professor: Blake Davis
TR / 6:25 to 8:05 p.m.
Viewed Only at Rice / RC-150
B Session / June 1–July 25
Examines the concept of sustainability and its application in the industrial environment. Identifies underlying stresses on natural and human environments and the resultant problems for business and society including legal, ethical, and political issues related to sustainability. Global warming, peak oil, and commodity pricing are considered as indicators of the need for improvements in sustainability. Industrial ecology will be discussed as well as strategies for developing sustainable practices in manufacturing, power generation, construction, architecture, logistics, and environmental quality. Coverage includes case studies on businesses that have developed successful sustainability programs.

INTM 559-03, Lecture
Professor: Blake Davis
Internet
B Session / June 1–July 25
Examines the concept of sustainability and its application in the industrial environment. Identifies underlying stresses on natural and human environments and the resultant problems for business and society including legal, ethical, and political issues related to sustainability. Global warming, peak oil, and commodity pricing are considered as indicators of the need for improvements in sustainability. Industrial ecology will be discussed as well as strategies for developing sustainable practices in manufacturing, power generation, construction, architecture, logistics, and environmental quality. Coverage includes case studies on businesses that have developed successful sustainability programs.

Introduction to Contemporary Operating Systems and Hardware I

ITM 301-01, Lecture/Lab
Professor: William Slater
MW / 5:30 to 9:05 p.m.
Main / TS-2033
B Session / June 1–July 25
Students study the basics of computer architecture and learn to use a contemporary operating system. Hardware requirements, hardware components, software compatibility, and system installation topics are covered along with post-installation, storage, security and system diagnosis, and repair. Topics also include discussion of current and future technology industry trends.

ITM 301-02, Lecture/Lab
Professor: Louis McHugh
MW / 5:00 to 8:35 p.m.
Rice / RC-244
B Session / June 1–July 25
Students study the basics of computer architecture and learn to use a contemporary operating system. Hardware requirements, hardware components, software compatibility, and system installation topics are covered along with post-installation, storage, security and system diagnosis, and repair. Topics also include discussion of current and future technology industry trends.

Introduction to Contemporary Operating Systems and Hardware I

ITM 311-01, Lecture/Lab
Professor: Sheikh Shamsuddin
MW / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25
A broad introduction to object-oriented programming and the related knowledge necessary to program in a contemporary programming language. This would include coverage of an Application Development Kit, a standard integrated Development environment, and the use of GUI components.

Open Source Programming

ITMD 413-01, Lecture/Lab
Professor: James Papademas
TR / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25
Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network, and web programming. Dynamic scripting languages are covered using object-oriented, concurrent, and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project.

ITMD 413-02, Lecture/Lab
Professor: James Papademas
Internet
B Session / June 1–July 25
Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network, and web programming. Dynamic scripting languages are covered using object-oriented, concurrent, and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project.

ITMD 413-03, Lecture/Lab
Professor: Omar Aldawud
MW / 1:50 to 5:00 p.m.
Main / Location TBA
A Session / May 18–June 27
Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network, and web programming. Dynamic scripting languages are covered using object-oriented, concurrent, and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project.
Open Source Programming  
**ITMD 413-04, Lecture/Lab**  
Professor: Omar Aldawud  
Internet  
A Session / May 18–June 27  
Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network, and web programming. Dynamic scripting languages are covered using object-oriented, concurrent, and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project.

Data Modeling and Applications  
**ITMD 421-01, Lecture/Lab**  
Professor: Luke Papademas  
MW / 6:25 to 9:05 p.m.  
Main / Location TBA  
B Session / June 1–July 25  
Basic data modeling concepts are introduced. Hands-on database design, implementation, and administration of single-user and shared multi-user database applications using a contemporary relational database management system.

Internet Technologies and Web Design  
**ITMD 461-01, Lecture/Lab**  
Professor: Katherine Papademas  
MW / 6:25 to 9:05 p.m.  
Main / Location TBA  
B Session / June 1–July 25  
This course will cover the creation of Web pages and sites using HTML, CSS, Javascript and graphical applications. Networked multimedia distribution technologies are also explored. The design of effective Web site including page layout, user interface design, graphic design, content flow and site structure as well as management of Web site resources including intranet management and design considerations are addressed. Students design and create a major Web site with multiple pages and cross-linked structures.

Internet Technologies and Web Design  
**ITMD 461-02, Lecture/Lab**  
Professor: TBA  
Internet  
B Session / June 1–July 25  
This course will cover the creation of Web pages and sites using HTML, CSS, Javascript and graphical applications. Networked multimedia distribution technologies are also explored. The design of effective Web site including page layout, user interface design, graphic design, content flow and site structure as well as management of Web site resources including intranet management and design considerations are addressed. Students design and create a major Web site with multiple pages and cross-linked structures.

Open Source Programming  
**ITMD 513-01, Lecture/Lab**  
Professor: James Papademas  
TR / 6:25 to 9:05 p.m.  
Main / Location TBA  
B Session / June 1–July 25  
Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network and web programming. Dynamic scripting languages are covered using object-oriented, concurrent and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project.

Data Modeling and Applications  
**ITMD 513-03, Lecture/Lab**  
Professor: Omar Aldawud  
MW / 1:50 to 5:00 p.m.  
Main / Location TBA  
A Session / May 18–June 27  
Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network and web programming. Dynamic scripting languages are covered using object-oriented, concurrent and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project.

Open Source Programming  
**ITMD 513-04, Lecture/Lab**  
Professor: Omar Aldawud  
TR / 6:25 to 9:05 p.m.  
Main / Location TBA  
B Session / June 1–July 25  
Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network and web programming. Dynamic scripting languages are covered using object-oriented, concurrent and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project.

Data Warehousing  
**ITMD 526-01, Lecture**  
Professor: William Slater  
TR / 5:45 to 9:05 p.m.  
Main / Location TBA  
A Session / May 18–June 27  
This class will introduce the student to concepts needed for successfully designing, building and implementing a data warehouse. The class will provide the technological and managerial knowledge base for data modeling approaches such as the star schema and database de-normalization issues. Topics such as loading the warehouse, performance considerations, and other concepts unique to the data warehouse environment will be discussed demonstrated in detail.

Data Warehousing  
**ITMD 526-02, Lecture**  
Professor: William Slater  
MW / 6:25 to 9:05 p.m.  
Main / Location TBA  
A Session / May 18–June 27  
This class will introduce the student to concepts needed for successfully designing, building and implementing a data warehouse. The class will provide the technological and managerial knowledge base for data modeling approaches such as the star schema and database de-normalization issues. Topics such as loading the warehouse, performance considerations, and other concepts unique to the data warehouse environment will be discussed demonstrated in detail.
Fundamentals of Management for Technology Professionals

**ITMM 470-01, Lecture**
Professor: Madeleine England
TR / 1:50 to 5:00 p.m.
Main / Location TBA
A Session / May 18-June 27
This course explores fundamentals of management for professionals in high-technology fields. It addresses the challenges of the following: managing technical professionals and technology assets; human resource management; budgeting and managerial accounting; management of services, infrastructure, outsourcing, and vendor relationships; technology governance and strategy; and resource planning.

**ITMM 470-02, Lecture**
Professor: Madeleine England
Internet
A Session / May 18-June 27
This course explores fundamentals of management for professionals in high-technology fields. It addresses the challenges of the following: managing technical professionals and technology assets; human resource management; budgeting and managerial accounting; management of services, infrastructure, outsourcing, and vendor relationships; technology governance and strategy; and resource planning.

**Project Management for Information Technology and Management**

**ITMM 471-01, Lecture**
Professor: Dennis Hood
MW / 8:50 a.m. to 12:00 p.m.
Main / Location TBA
A Session / May 18-June 27
Basic principles of project management are taught with a particular focus on project planning for information technology hardware, software and networking project implementation. Management of application development and major Web development projects will also be addressed.

**ITMM 471-02, Lecture**
Professor: Dennis Hood
Internet
A Session / May 18-June 27
Basic principles of project management are taught with a particular focus on project planning for information technology hardware, software and networking project implementation. Management of application development and major Web development projects will also be addressed.

**Introduction to Open Source Operating Systems**

**ITMO 456-01, Lecture/Lab**
Professor: Raymond Trygstad
TR / 3:00 to 5:40 p.m.
Rice / RC-244
B Session / June 1–July 25
Students learn to set up and configure an industry-standard open source operating system including system installation and basic system administration; system architecture; package management; command-line commands; devices, filesystems, and the filesystem hierarchy standard. Also addressed are applications, shells, scripting and data management; user interfaces and desktops; administrative tasks; essential system services; networking fundamentals; and security, as well as support issues for open source software. Multiple distributions are covered with emphasis on the two leading major distribution forks.

Questions?
Contact the IIT One Stop

Phone: 312.567.3810
Email: onestop@iit.edu
Introduction to Open Source Operating Systems

**ITMO 456-02, Lecture/Lab**
Professor: Raymond Trygstad
Internet
B Session / June 1–July 25

Students learn to set up and configure an industry-standard open source operating system including system installation and basic system administration; system architecture; package management; command-line commands; devices, filesystems, and the filesystem hierarchy standard. Also addressed are applications, shells, scripting and data management; user interfaces and desktops; administrative tasks; essential system services; networking fundamentals; and security, as well as support issues for open source software. Multiple distributions are covered with emphasis on the two leading major distribution forks.

Topics in Information Security: Computer Security and Incident Response

**ITMS 479-01, Lecture**
Professor: Bonnie Goins
Internet
Main / Location TBA
A Session / May 18–June 27

This course will cover a particular topic in Information Security, varying from semester to semester, in which there is particular student or staff interest. This course may be taken more than once but only 9 hours of ITMS 479/579 credit may be applied to a degree.

Topics in Information Security: Advanced Cyber Security Management

**ITMS 479-03, Lecture**
Professor: Bonnie Goins
Internet
Main / Location TBA
C Session / June 29–August 8

This course will cover a particular topic in Information Security, varying from semester to semester, in which there is particular student or staff interest. This course may be taken more than once but only 9 hours of ITMS 479/579 credit may be applied to a degree.

Topics in Information Security: Computer Security and Incident Response

**ITMS 579-01, Lecture**
Professor: Bonnie Goins
MW / 5:45 to 9:05 p.m.
Main / Location TBA
A Session / May 18–June 27

This course will cover a particular topic in Information Security, varying from semester to semester, in which there is particular student or staff interest. This course may be taken more than once but only 9 hours of ITM 479/579 or ITMS 479/ITMS 579 credit may be applied to a degree.

Topics in Information Security: Advanced Cyber Security Management

**ITMS 579-03, Lecture**
Professor: Bonnie Goins
MW / 5:45 to 9:05 p.m.
Main / Location TBA
C Session / June 29–August 8

This course will cover a particular topic in Information Security, varying from semester to semester, in which there is particular student or staff interest. This course may be taken more than once but only 9 hours of ITM 479/579 or ITMS 479/ITMS 579 credit may be applied to a degree.

Topics in Information Security: Advanced Cyber Security Management

**ITMS 579-04, Lecture**
Professor: Bonnie Goins
Internet
C Session / June 29–August 8

This course will cover a particular topic in Information Security, varying from semester to semester, in which there is particular student or staff interest. This course may be taken more than once but only 9 hours of ITM 479/579 or ITMS 479/ITMS 579 credit may be applied to a degree.
Teacher Education/Professional Development in Science

**MSED 530-100, Lecture**
Professor: Norman Lederman  
F / 5:00 to 7:40 p.m.  
Main / TS-4036  
A Session / May 18-June 27

A course that stresses the empirical research on best practices in teacher education and professional development in science.

Teacher Education/Professional Development in Mathematics

**MSED 531-100, Lecture**
Professor: Norman Lederman  
F / 5:00 to 7:40 p.m.  
Main / TS-4036  
A Session / May 18-June 27

A course that stresses the empirical research on best practices in teacher education and professional development in mathematics.

Informal Education Practicum

**MSED 540-01, Lecture/Lab**
Professor: Judith Lederman  
T / 5:00 to 7:40 p.m.  
Main / TS-4036  
A Session / May 18-June 27

Placement in an informal educational setting such as museums and outdoor education. The focus of this course is on the use of informal setting to supplement classroom instruction.

Informal Education Practicum

**MSED 540-100, Lecture**
Professor: Judith Lederman  
T / 5:00 to 7:40 p.m.  
Main / TS-4036  
A Session / May 18-June 27

Placement in an informal educational setting such as museums and outdoor education. The focus of this course is on the use of informal setting to supplement classroom instruction.

Middle and Secondary Level Science Curriculum

**MSED 554-100, Lecture**
Professor: Judith Lederman  
MW / 1:00 to 3:20 p.m.  
Main / TS-4036  
C Session / June 29–August 8

This course will develop a functional understanding of various factors that influence the development and direction of middle and secondary science curricula. Students will become familiar with strategies to integrate language arts, reading, and writing in the content area of science. Students will apply knowledge of subject matter, curriculum development, and curriculum theory to construct a hypothetical curriculum. Current trends, history of these trends, and rationales for science curriculum reform will be examined.

Middle and Secondary Level Mathematics Curriculum

**MSED 555-100, Lecture**
Professor: Judith Lederman  
MW / 1:00 to 3:20 p.m.  
Main / TS-4036  
C Session / June 29–August 8

This course will develop a functional understanding of various factors that influence the development and direction of middle and secondary mathematics curricula. Students will become familiar with strategies to integrate language arts, reading, and writing in the content area of mathematics. Students will apply knowledge of subject matter, curriculum development, and curriculum theory to construct a hypothetical curriculum. Current trends, history of these trends, and rationales for mathematics curriculum reform will be examined.

Action Research I

**MSED 562-100, Lecture**
Professor: Norman Lederman  
MW / 3:30 to 5:30 p.m.  
Main / TS-4036  
C Session / June 29–August 8

Reviewing, designing, and conducting research studies within the context of the students’ own teaching.

Leadership

**MSED 597-100, Lecture**
Professor: Norman Lederman  
R / 5:00 to 7:40 p.m.  
Main / TS-4036  
A Session / May 18-June 27

Current problems in science/mathematics education. May be repeated for credit with different topics.
Materials Science

**MS 201-01, Lecture**
Professor: Ozgur Keles
MT / 10:00 a.m. to 1:10 p.m.
Main / Location TBA
A Session / May 18-June 27

The scientific principles determining the structure of metallic, polymeric, ceramic, semiconductor and composite materials; electronic structure, atomic bonding, atomic structure, microstructure and macrostructure. The basic principles of structure-property relationships in the context of chemical, mechanical and physical properties of materials.

Introduction to Mechanics

**MMAE 200-01, Lecture**
Professor: John Cesarone
MW / 1:00 to 4:10 p.m.
Main / Location TBA
A Session / May 18-June 27


Mechanics of Solids

**MMAE 202-01, Lecture**
Professor: Roberto Cammino
MW / 10:00 a.m. to 12:50 p.m.
Main / Location TBA
A Session / May 18-June 27


Advanced Mechanics of Solids

**MMAE 302-01, Lecture**
Professor: Roberto Cammino
TR / 10:00 a.m. to 12:50 p.m.
Main / Location TBA
A Session / May 18-June 27


Dynamics

**MMAE 305-01, Lecture**
Professor: Samer Khanafseh
TR / 9:15 a.m. to 12:25 p.m.
Main / Location TBA
A Session / May 18-June 27


Fluid Mechanics

**MMAE 313-01, Lecture**
Professor: Bruno Monnier
TR / 10:00 a.m. to 12:25 p.m.
Main / Location TBA
B Session / June 1–July 25

Basic properties of fluids in motion. Langrangian and Eulerian viewpoints, materials derivative, streamlines, etc. Continuity, energy, and linear and angular momentum equations in integral and differential forms. Integration of equations for one-dimensional forms and application to problems. Incompressible viscous flow; Navier-Stokes equations, parallel flow, pipe flow, and the Moody diagram. Introduction to laminar and turbulent boundary layers and free surface flows.

Thermodynamics

**MMAE 320-01, Lecture**
Professor: Francisco Ruiz
MW / 10:00 a.m. to 1:10 p.m.
Main / Location TBA
A Session / May 18-June 27

Introduction to thermodynamics including properties of matter; First Law of Thermodynamics and its use in analyzing open and closed systems; limitations of the Second Law of Thermodynamics; entropy.

Applied Thermodynamics

**MMAE 321-01, Lecture**
Professor: Sahar Hendabadi
TR / 12:00 to 3:00 p.m.
Main / Location TBA
A Session / May 18-June 27

Analysis of thermodynamic systems including energy analysis; analysis and design of power and refrigeration cycles; gas mixtures and chemically reacting systems; chemical equilibrium; combustion and fuel cells.

Heat and Mass Transfer

**MMAE 323-01, Lecture**
Professor: Sahar Hendabadi
TR / 8:00 to 11:00 a.m.
Main / Location TBA
A Session / May 18-June 27

Basic laws of transport phenomena, including: steady-state heat conduction; multi-dimensional and transient conduction; forced internal and external convection; natural convection; heat exchanger design and analysis; fundamental concepts of radiation; shape factors and network analysis; diffusive and convective mass transfer; phase change, condensation and boiling.

Design of Machine Elements

**MMAE 332-01, Lecture**
Professor: Roberto Cammino
TR / 1:00 to 3:30 p.m.
Main / Location TBA
B Session / June 1–July 25

Students will gain an understanding of the basic elements used in machine design. These include the characteristics of gears, bearings, shafts, keys, couplings, fasteners, springs, electric motors, brakes and clutches, and flexible elements. Students will also learn mechanism types, linkage analysis, and kinematic synthesis.
Systems Analysis and Control
MMAE 443-01, Lecture
Professor: Mathieu Joerger
MW / 2:00 to 4:25 p.m.
Main / Location TBA
B Session / June 1–July 25

Computer-Aided Design
MMAE 445-01, Lecture
Professor: TBA
MWF / 3:30 to 5:35 p.m.
Main / Location TBA
A Session / May 18-June 27

PHYSICS

General Physics I: Mechanics
PHYS 123-01, Lecture
Professor: Omid Ahmadi
MW / 6:25 to 9:05 p.m.
Main / Location TBA
B Session / June 1–July 25

General Physics II: Electricity and Magnetism
PHYS 221-01, Lecture
Professor: Yuriy Shlynov
MW / 10:00 a.m. to 12:40 p.m.
Main / Location TBA
B Session / June 1–July 25

PHYSICS

General Physics III for Engineers
PHYS 224-01, Lecture
Professor: Yuriy Shlynov
TR / 10:00 a.m. to 12:40 p.m.
Main / Location TBA
B Session / June 1–July 25

Radiation Biophysics
PHYS 561-01, Lecture
Professor: Andrew Howard
TR / 10:00 a.m. to 12:40 p.m.
Main / Location TBA
B Session / June 1–July 25
Radiation Biophysics

**PHYS 561-02, Lecture**
Professor: Andrew Howard
Internet
B Session / June 1–July 25


Radiation Biophysics

**PHYS 561-03, Lecture**
Professor: Andrew Howard
India International Internet
B Session / June 1–July 25


Environmental Health Physics

**PHYS 566-01, Lecture**
Professor: Shih-Yew Chen
TR / 3:30 to 5:10 p.m.
Rice / Location TBA
B Session / June 1–July 25

Impact of ionizing radiation and radionuclides on the environment. Identifying environmental effects of specific natural and artificial nuclides. Models for deposition and transport of nuclides, including air and water disbursement. Environmental dosimetry and remediation. Facility decommissioning and decontamination.

Instrumentation for Health Physics

**PHYS 770-01, Accelerated Course**
Professor: Steven Butala
MTWRF / 8:00 a.m. to 5:00 p.m.
Main / LS-130
B Session / June 1–July 25

Detecting and measuring radioactive material and radiation levels depends upon many types of detectors and instrumentation. Theory of detectors ranging from chambers operating in pulse and current producing modes to solid state detectors is applied to measuring and monitoring systems. Electronics ranging from simple rate meters and scalers to high speed multi-channel analyzers is used. Computer linked instrumentation and computer based applications are applied to practical problems.

Instrumentation for Health Physics

**PHYS 770-01, Accelerated Course**
Professor: Steven Butala
Day / Time TBA
Main / Location TBA
B Session / June 1–July 25

Detecting and measuring radioactive material and radiation levels depends upon many types of detectors and instrumentation. Theory of detectors ranging from chambers operating in pulse and current producing modes to solid state detectors is applied to measuring and monitoring systems. Electronics ranging from simple rate meters and scalers to high speed multi-channel analyzers is used. Computer linked instrumentation and computer based applications are applied to practical problems.

PSYCHOLOGY

**Topics in Psychology: Sport Psychology**

**PSYC 380-01, Lecture**
Professor: Kelly Kazuakauskas
MW / 12:10 to 2:50 p.m.
Main / Location TBA
B Session / June 1–July 25

An investigation into a topic of current interest in psychology. The specific topic will be announced by the instructor when the course is scheduled.

**Topics in Psychology: Human Sexuality**

**PSYC 380-02, Lecture**
Professor: Amanda Easton
TR / 12:10 to 2:50 p.m.
Main / Location TBA
A Session / May 18–June 27

An investigation into a topic of current interest in psychology. The specific topic will be announced by the instructor when the course is scheduled.

**Topics in Psychology: Media Depiction of Disability**

**PSYC 380-03, Lecture**
Professor: Lindsay Sheehan
MTW / 3:00 to 4:35 p.m.
Main / Location TBA
B Session / June 1–July 25

An investigation into a topic of current interest in psychology. The specific topic will be announced by the instructor when the course is scheduled.

**Ethics and Professional Issues I**

**PSYC 508-01, Lecture**
Professor: Joyce Hopkins
TR / 12:10 to 1:50 p.m.
Main / Location TBA
B Session / June 1–July 25

This is an introductory course designed around ethical issues confronting clinical psychologists. It is offered to incoming first year clinical students to allow them to think about ethical issues in treatment, assessment, and professional behavior. Using the APA ethics code as a guide, students present and respond to ethical dilemmas that they may face as they embark upon their career as clinical psychologists. Other professional issues are also discussed including the transition to graduate school, course selection decisions, and any other general graduate school questions that may arise.

**Basic Clinical Skills**

**PSYC 518-01, Lecture**
Professor: Joyce Hopkins
T / 2:00 to 3:40 p.m.
Main / Location TBA
B Session / June 1–July 25

This course covers introductory therapy skills including intake, suicide assessment, case formulation, and differential diagnosis.
Psychopathology

**PSYC 526-01, Lecture**  
Professor: Alissa Haedt Matt  
TR / 8:50 to 11:30 a.m.  
Main / Location TBA  
B Session / June 1–July 25  
Critical examination of clinical and experimental research in psychopathology and diagnostic classification systems.

Practicum in Rehabilitation and Mental Health Counseling

**PSYC 549-01, Practicum**  
Professor: Kelly Kazuakauskas  
W / 5:00 to 7:40 p.m.  
Main / Location TBA  
D Session / May 18–August 8  
Seminar and supervised experience in rehabilitation and mental health counseling with an emphasis on development of individual counseling skills. Students work in a field-based rehabilitation and mental health counseling capacity carrying a small client caseload while participating in weekly individual and group supervision. Includes topics related to counseling processes, procedures, and theories; ethics; and crisis prevention, assessment, and intervention.

Applied Counseling Techniques: Group Counseling

**PSYC 561-01, Lecture**  
Professor: Eun-Jeong Lee  
S / 9:00 a.m. to 4:00 p.m.  
Main / Location TBA  
B Session / June 1–July 25  
Methods and techniques in the group counseling process including group facilitation and leadership. Provides a theoretical and experiential understanding of group purpose, development, dynamics, theories, methods, skills, and other group approaches in a multicultural society with an emphasis on working with persons with disabilities within a family/systems framework.

Assessment Centers

**PSYC 714-01, Lecture**  
Professor: George Langlois  
T / 5:00 to 8:00 p.m.  
Main / Location TBA  
B Session / June 1–July 25  
This course will develop the knowledge and skills needed for the design and implementation of assessment centers and other individual assessment methods.

Questions?

**Contact the IIT One Stop**

Phone: 312.567.3810  
Email: onestop@iit.edu

---

**SOCIAL SCIENCES**

Topics in Political Science: Scottish Politics

**PS 285-01, Lecture**  
Professor: Rebecca Steffenson  
International Program  
C Session / June 29–August 8  
Investigates a topic of current interest at the introductory level. Topic will be announced by instructor at scheduling time. There are no prerequisites for this course. Course may be taken multiple times provided the topic is different each time.

Politics and Public Policy

**PS 306-01, Lecture**  
Professor: Matthew Shapiro  
MW / 1:00 to 4:10 p.m.  
Main / Location TBA  
A Session / May 18-June 27  
Analyzes public policy processes with a primary focus on the United States and a secondary focus on cross-country comparisons involving the U.S. The overarching concern is the effectiveness of government intervention given our market-based system. The student will become familiar with models and determinants of policy making. Beyond theories of policy making, the course also surveys a number of timely policy issues. In this way, a balance is reached between theory and application. There will be an underlying focus on the American political economy and public policy making, but students do not need an extensive background in either economics or policy making.

Politics and Public Policy

**PS 385-01, Lecture**  
Professor: Rebecca Steffenson  
International Program  
C Session / June 29–August 8  
Investigates a topic of current interest in Political Science, which will be announced by the instructor when the course is scheduled.

Social Science Research Methods

**SSCI 209-01, Lecture**  
Professor: Matthew Shapiro  
MW / 1:00 to 4:10 p.m.  
Main / Location TBA  
C Session / June 29–August 8  
Introduces students to explanation in the social sciences and both qualitative and the quantitative research methods. Topics covered include the formulation of research questions, measurement, data collection, survey research, significance tests, experimental and quasi-experimental design, sampling, and various techniques of qualitative research.

Global Chicago

**SSCI 220-01, Lecture**  
Professor: Rebecca Steffenson  
TR / 9:00 a.m. to 12:10 p.m.  
Main / Location TBA  
A Session / May 18-June 27  
Through readings, lectures, and field trips to local neighborhoods, this course will look at the ways that Chicago has become a global city and what that means for local government, businesses, educators, and the non-profit sector. The course explores how Chicago has become a node in the global economy and a gateway to immigrants from all over the world.
Introduction to the Sociology of Space

SOC 211-01, Lecture
Professor: Ullica Segerstrale
TR / 5:30 to 8:40 p.m.
Main / Location TBA
A Session / May 18-June 27

This introductory sociology course deals with people’s general experience of space and how space and spatial arrangements affect people, social interaction, and the sense of community. It is designed to develop knowledge and understanding as well as analytical and perceptive skills. Our experiences of the spatial dimension of reality will be examined from various perspectives: emotional; cognitive; functional; symbolic; and cross-cultural. Our study objects range from everyday experiences to questions of community and city planning. Basic sociological concepts and research methods will be introduced and related to the topics covered. This course is required for SOC 311 (Social Use of Space).

Social Use of Space

SOC 311-01, Lecture
Professor: Ullica Segerstrale
MW / 5:30 to 8:40 p.m.
Main / Location TBA
A Session / May 18-June 27

Gives students basic insights into people’s experience of space and the effect of spatial arrangements on people’s behavior. The course explores the differences in conceptions between planners and users and the need to take the user into account in spatial design.

Computational Science

SCI 111-01, Lecture
Professor: Keith Pedersen
MWF / 9:00 a.m. to 12:00 p.m.
Main / Location TBA
Short Course, JUL 20-AUG 07

This course will integrate math, physics, and chemistry with computation as the unifying concept. Students will participate in hands-on activities with the goal of learning “big ideas” and using computation to explore optimization and patterns in science and nature.