

Fall 2017 Supplement and Course Offerings List

(vol16, no1.1, August 23, 2017)

Information Contained In this Document

- 1) Schedule of Deadlines
- 2) Cross-Registration Deadlines and Instructions
- 3) Course Tips & Curriculum Info and Catalog Supplement (courses new to catalog for 2017-18 or special topics)
- 4) Course Offerings List (you can also search this here: [Course Search](#))
- 5) Course Offerings Grid
- 6) Tentative Spring 2018 Courses

For General Registration Information and FAQs (formerly contained in the registration booklets), please visit our [web page](#).

Schedule of Deadlines for Add; Drop and Pass/No Credit ; Withdraw

| Session | Add | Drop and Pass/No Credit | Withdraw |
|-----------------------------------|--------------------|-------------------------|------------------|
| Full Semester (Aug 31 – Dec 8) | September 14, 2017 | November 3, 2017 | December 8, 2017 |
| Session I (Aug 31 – Oct 16) | September 7, 2017 | October 2, 2017 | October 16, 2017 |
| Session II (Oct 19 – Dec 8) | November 2, 2017 | November 17, 2017 | December 8, 2017 |

Cross-Registration Deadlines To find cross-registration instructions, click [here](#).

| | Babson | Brandeis | Wellesley |
|---------------------------------------|-----------------------------------|-----------------------|----------------------------------|
| Cross-registration open period | 4/10/2017 – 9/6/2017 at 4:30 p.m. | 8/22/2017 – 9/13/2017 | 4/24/2017 – 9/15/2017 at 11 p.m. |
| First day of classes | 8/30/2017 | 8/30/2017 | 9/5/2017 |
| Drop deadline | 9/6/2017 at 4:30 p.m. | 10/17/2017 | 9/29/2017 at 11 p.m. |

Questions? Contact the Registrar's Office at Olin College, Campus Center, Room 320; registrar@olin.edu 781-292-2340

Course Tips & Curriculum Info

ADE/SCOPE Info Session

Want to know more about the 2 engineering capstone options? Trying to figure out which one is for you? Want to know what being in capstone is like? Join Benjamin Linder and Alisha Sarang-Sieminski, the directors of ADE and SCOPE, respectively, on Wednesday, April 5th from 12:30-1:30pm in the Crescent room. Open to all students.

Design Depths – We have many!

In the fall, there are 4 offerings for design depths. They are: 1) Affordable Design and Entrepreneurship, 2) Integrated Product Design, 3) User Experience Design, 4) Biomedical Device Design. Also, keep in mind that in the spring, there will be at least 3, and possibly 4 offerings as well. You can find our tentative listing of spring in this booklet.

Bio, we have Bio – Read on:

In the fall we have 2 sections of foundational biology options and one advanced biology section. We also plan for two in the spring semester as well. Below is an updated policy about our foundational biology requirement. Please read through for clarity.

If you took an AP biology class in High School and received a score of “4” or “5”, you are automatically eligible to place into an intermediate or advanced biology class. Emerging Technologies in Cancer Research is an intermediate biology class that is being offered in the Fall that would satisfy the biology foundation requirement for eligible students.

Students who took an AP biology class in High School and received a score of “3”, or IB HL and received a comparable score have the option to take an oral assessment to determine if you are eligible to place into an advanced biology class.

If you meet the criteria to take the exam, please contact biology faculty Helen Donis Keller (Helen.Donis-Keller@olin.edu) and Joanne Pratt (Joanne.Pratt@olin.edu) to set up an appointment for the exam.

Foundational Materials Science & Chemistry – What are my choices?

We have 3 options for this in the fall and plan on at least 1, possibly 2 in the spring. This fall, you have a choice of Materials Science and Solid State Chemistry with a flavor or a) Deliberately Relevant for Engineers, or b) Environmental and Societal Impacts. If neither of these peak your interest, how about an Environmental spin? The course listed as “Environmental Analysis and Engineering” can count as your mat sci/chem requirement if you elect it as SCI2399. Still have questions? Review the catalog of descriptions in this supplement or the course catalog.

“Probability and Statistics” – What are my choices?

Once again, we are diversifying our probability and statistics offerings. This fall semester, we have two choices and both are new. They are listed below and both have descriptions further in this booklet.

- 1) Sam Michalka’s ENGR3699A/MTH2188A Special Topics in Bioengineering: Neurotechnology, Brains and Machines.
- 2) Theresa Wasylenko’s 2 credit, Session I offering of SCI2299: Special Topics in Biological Sciences: *Quantitative Biology*

Catalog Supplement

Degree requirements are outlined in the [Course Catalog](#)

Course descriptions can also be found in the catalog and in the portal course search. New, highlighted, and Special Topics course descriptions are listed below.

Topics Courses

AHSE1199-01: Arts, Humanities, Social Science Foundation Topic

From Dirt to Shirt

Instructor: Lynch

Credits: 4 AHS

Registration note: AHS FOUNDATION; restricted to first year students

This course is an intensive study of the global supply chain for clothing. It examines social, economic, political, environmental, and technological issues all along the supply chain. This includes historical and contemporary production of components such as cotton, wool, and Kevlar; textile processing and garment production; and the after-life of the clothes we dispose of. The class will include readings, discussions, and engagement with multimedia sources; first-person contact with local people involved in the industry; and student projects on a chosen node of the supply chain.

ENGR3299: Special Topics in Design Engineering: Return Design/Shop Practicum

Return Design/Shop Practicum

Instructor: Sauder

Credits: 4 ENGR

Hours: 4-0-8

Prerequisite: ENGR2250, User-Oriented Collaborative Design

Registration note: registration by permission only – see Tim Sauder; may count for Design Depth

Return Design Studio/Shop Practicum is a class in which students will join projects running within Return Design, Tim Ferguson Sauder's lab which produces work in partnership with pro-social and non-profit projects and clients. Students will work through a creative process, both individually and in groups, which will:

- Develop their ability to effectively communicate about their designs with other designers in the studio/shop, as well as with external clients and partners.
- Build a culture in which student designers learn to both give constructive criticism of work as well as receive and respond to such criticism in a way that improves their final deliverables.
- Utilize the fundamental principles of visual design to leverage aesthetics in a way that effectively conveys a concept to an intended audience.
- Constantly consider and respond to ethical considerations implicit in the projects taking place within the studio/shop.

ENGR3699: Special Topics in Bioengineering

Biomedical Device Design

Instructor: Sarang-Sieminski

Credits: 4 ENGR

Hours: 4-0-8

Prerequisite: ENGR2250, User-Oriented Collaborative Design

Registration note: may count for Design Depth

In this course, we will briefly consider the range of artifacts that are considered (bio)medical devices, how they are used, and who they are used for. We will primarily focus on the unique design constraints of and methods used in developing medical devices. We will touch on topics such as regulation and approval of devices, writing user requirements, writing product requirements, manufacturing practices, bioethics, and the body's response to implanted materials and surgical interventions. The first half of the semester will be spent developing skills through a case study model. In the second half of the semester, students will complete a major design project, with an external partner, that is focused at a particular stage of product development.

**ENGR2999-01 OR SCI2399-01: Special Topics in Environmental Engineering and Science
Environmental Analysis & Engineering**

Instructors: Hersey, Wood

Credits: 4 SCI OR 4 ENGR; **course is cross-listed – see registration note below.**

Hours: 3-3-6 (with some "lab" hours being in the chem lab and some in studio/project work)

Prerequisites: Some chemistry background is recommended; high school chemistry should be sufficient. If you're generally familiar with acid/base chemistry, ionization, and other fundamental chemistry concepts, you should be suitably prepared. Some coding experience (in any language) is also recommended, as one project requires coding (shared among a team).

Registration notes: *students must choose ENGR2999 for ENGR credit or SCI2399 for SCI credit at time of registration. If SCI2399 chosen, will count as Mat Sci/Chem foundation.*

How do we measure what's happening in our environment, what do we do with that information, and why do we care? This hands-on, project-based course will introduce approaches that environmental engineers use to analyze complex environmental systems and design solutions to mitigate pollution. We will spend the semester making deep-dives into air quality and water quality, which are at the heart of the two leading causes of premature death in the world: chronic exposure to air pollution and lack of access to clean water. The class focuses on building hands-on skills with data research, data analysis, field sampling techniques and lab analysis skills through integrated projects like analyzing pollutant concentrations along the Charles River, and the course will incorporate elements of design through projects like assessing solutions to air pollution in major US cities. Throughout the course we will study pollution in its broader social, political, and economic context, considering the complex motivations for pollution mitigation and the broader implications of water and air treatment processes.

Activities and assignments will include field trips, field work on the Charles River, two major team projects, writing assignments to build toward final deliverables, a small number of problem sets, and a significant amount of in-class time, a lot of which is spent on project work.

**ENGR3699A /MTH2188A: Special Topics in Bioengineering AND Designated Alternative in Mathematics
Neurotechnology, Brains and Machines**

Instructor: Michalka

Credits: 2 ENGR, 2 MTH

Hours: 4-0-8

Registration note: This course may be used to satisfy the Probability and Statistics requirement.

Neurotechnology falls in the intersection of engineering, data science, and neuroscience. This area involves work in how humans can use machines to understand how we think and how to make machines that can think. Advances in neurotechnology will likely lead to new treatments for brain disorders, repair and augmentation of our sensory and motor systems, and shifts in computation strategies. In this course, students will learn about cutting-edge technologies used to understand and emulate the brain, develop statistical data analysis skills to conduct and understand neurotechnology research, and discuss the cultural and ethical implications of these advances. Course work will involve analysis of data from neuroscience, reading and synthesizing articles from research journals, and project work.

Warning: This class is being taught for the first time: your flexibility and constructive engagement will be key to its development. This class may also involve field trips.

SCI2299: Special Topics in Biological Sciences

Quantitative Biology

Instructor: Wasylenko

2 SCI credits

Registration note: Offered in Session I; Satisfies the ProbStat requirement.

Quantitative analysis has long been critical to the development of new biological understanding, from statistical modeling of phage resistance in the 1940s to the current analysis of whole genome sequencing. Our class will examine many of these quantitative techniques. Broadly, we will use MATLAB and R to statistically evaluate biological experiments, mine transcriptomic datasets, and apply genetic linkage principles to uncover disease-associated genetic variants. In addition to programming, the class will read and discuss relevant scientific papers. Through these exercises, students will develop their abilities to critically evaluate data and effectively communicate their scientific ideas.

Courses Changed, Renumbered or New to Catalog

AHSE2599: Special Topics in Entrepreneurship

Iterate

Instructor: Lawrence Neeley

Credits: 2 ENTRP

Hours: 2-0-4

Prerequisite(s): AHSE1515 Products and Markets

Registration notes: May be taken multiple times. AHSE2515 is Session I; AHSE2515A is Session II. Four credits of AHSE2515 (formerly AHSE2599: Iterate) may satisfy the entrepreneurship concentration or capstone requirement.

This course is about exploring the potential of ideas and their ability to create value “in the wild”. If you have the seed of an idea, an inkling, or even are just curious, this class offers an explicit structure for you to test and validate your ideas. Each offering of the course will consist of three two-week sprints. During each, you will be compelled to test a different question, hypothesis or assumption about your idea by getting in front of real people. Outside resources, mentors and advisors will be substantively engaged based upon the specific needs of each project.

Students may enter as either individuals or teams. You don't have to have a pre-existing idea or business before the course. This is a 2-credit course and may be taken multiple times for full credit. Four credits of this course may also be used to satisfy the project requirement as part of an entrepreneurship concentration.

CIE 2017B-01: Curriculum Innovation Experiment

Quantitative Engineering Analysis I

Instructors: Coso Strong, Geddes, Govindasamy, Ruvolo, and instructor TBD

Credit: 8

Note: This is the second class of a two-class, 8-credit-each sequence. This two-class, 16-credit sequence is a designated alternative for the following courses: Linearity 1 and Linearity 2, the Physics Foundation course, Signals and Systems, and Dynamics. **Open only to students who took CIE 2017A in Spring 2017.**

The application of quantitative analysis of mathematical models and/or data can enable, improve, and speed up the engineering design process. Using quantitative analysis to answer engineering questions, you'll be able to make the choices necessary to successfully complete an engineering design. Whether you are selecting the best part from a catalog, choosing an appropriate material, sizing a component, determining the effect of certain influences on your design, or optimizing your design within a parameter space, you often need to obtain (through experiment or calculation) and interpret quantitative information to inform your decisions. There are many different approaches to getting and interpreting the data you need: you may conduct an experiment, do a rough estimation, perform a detailed calculation based on mathematical models, or create a computer simulation. If you want to engineer effectively, you must be able to choose and use appropriate quantitative tools for a given situation.

In this class, you will be introduced to various approaches to perform quantitative engineering analysis through real-world examples. You will learn how to *select* between different tools and different approaches within the context of an engineering challenge, how to *use* many different tools for quantitative analysis, and how to *acquire* new tools on your own in the future.

ENGR3220: User Experience Design

(formerly Human Factors and Interface Design)

Instructor: Millner

Credits: 4 ENGR

Registration notes: Design Depth option; ENGR major Core as applicable

A hands-on exploration of the design and development of user interfaces, taking into account the realities of human perception and behavior, the needs of users, and the pragmatics of computational infrastructure and application. Focuses on understanding and applying the lessons of human interaction to the design of usable applications that span connected devices of different scales and interaction methods; will also look at lessons to be learned from less-usable systems. This course will mix studio (open project working time) and seminar (readings and discussion) formats.

ENGR3430: Eelectronics

(formerly EE Prototyping)

Instructor: Minch

Credits: 4 ENGR

Prerequisite: ENGR2110 Principles of Engineering

Registration note: satisfies the ECE elective requirement.

Through a series of projects, students will learn all aspects of printed-circuit board (PCB) design at the prototype scale of manufacturing, including electronic circuit/system design, component selection, schematic capture, PCB layout, assembly, and testing. Familiarity with circuits, electronics, and firmware development at the levels of ISIM (ENGR 1125) and PoE (ENGR 2110) are required to take the course.

ENGR3540: Complexity Science

(formerly Computational Modeling)

Instructor: Downey

Credits: 4 ENGR

Prerequisite: Software Design

“The study of complex systems represents a new approach to science that investigates how relationships between parts give rise to the collective behaviors of a system and how the system interacts and forms relationships with its environment.”

[\[Wikipedia\]](#)

This class is about complexity science, data structures and algorithms in Python, and the philosophy of science:

1. Complexity science is an interdisciplinary field—at the intersection of mathematics, computer science and other disciplines such as physics and economics—that focuses on models of systems with many components, local interactions, and complex behavior. These models are often characterized by structure, rules and transitions rather than by equations.
2. Data structures and algorithms in Python: This class picks up where Software Design leaves off, introducing additional data structures, algorithms, language features, design patterns, and software engineering tools that are appropriate for modeling, simulating and analyzing complex systems.
3. Philosophy of science: The models and results in this class raise a number of questions relevant to the philosophy of science—including the nature of scientific laws, theory choice, realism and instrumentalism, holism and reductionism—which we will discuss as they arise, along with related readings.

Topics may include the structure and dynamics of complex networks; cellular automata, self-organized criticality, and generative systems; fitness landscape models of biological and technological evolution; and agent-based models of social and economic behavior.

SCI2215: Emerging Technologies in Cancer Research, Diagnosis and Treatment

Instructor: Pratt

Credits: 4 SCI

Hours: 2-2-8

Prerequisites: Foundation Biology, AP Biology score of 4 or 5 (or equivalent), or permission of the instructor

More than thirty years have passed since the declaration of a “War on Cancer”, yet nearly 600,000 Americans are predicted to die from cancer this year. This course will examine the environmental and biological causes of cancer. We will explore why traditional treatments (chemotherapy, surgery and radiation) and the early promise of biotechnology have not led to a significant improvement of life expectancy for most forms of cancer. Through analyses of journal articles and clinical trials, we will assess the diverse emerging technologies for cancer research, diagnosis and therapy. Some of the technologies to be explored are immune checkpoint inhibitors, CRISPR, angiogenesis inhibitors, microarrays, stem cell therapy, gene therapy, genomic analysis and biological and immunological modifiers. Class discussion and student presentation of primary literature will be integral parts of this course. The course will include a student-designed laboratory component.

Didn't find the course you're looking for? Check the course browser at
https://my.olin.edu/ICS/Course_Schedules.jnz

| Area | Course # | Section # | Course Title | Instructor / Teaching Team | Time | Location | Credits | Enroll Limits | Waitlist | Notes | Degree Requirement Note |
|-------------|------------------------|-----------|---|----------------------------------|----------------|---|---------|---------------|-----------|--|--|
| AHS | AHSE0112 | 01 | The Olin Conductorless Orchestra | Dabby | R 6:45-9:00pm | AC304; AC305; AC318 | 1 | 30 | | | |
| AHS | AHSE3130 | 01 | Advanced Digital Photography | Donis-Keller | TF 1:30-3:10pm | AC313 | 4 | 12 | Y, small | | |
| AHS | AHSE3190 | 01 | Arts Humanities Social Sciences Capstone Preparatory Workshop | Epstein | n/a | n/a | 1 | 25 | | | Prerequisite for AHSE4190 |
| AHS | AHSE4190 | 04 | Arts Humanities Social Sciences Capstone Project | Adler | M 10:50-1pm | AC417 | 4 | 45 | | | AHS Capstone |
| Crosslisted | ENGR2999 OR SCI2399 | 01 | Special Topics in Environmental Engineering and Science: Environmental Analysis & Engineering | Hersey; Wood | MTR 1-3:10pm | AC318; AC409 | 4 | 24 | Y, small | Must choose either ENGR2999 for ENGR credit or SCI2399 for SCI credit at time of registration | If SCI2399 Chosen; will count as Mat Sci/Chem foundation |
| DSN | ENGR3220 | 01 | User Experience Design | Millner | MR 1:30-3:10pm | AC213 | 4 | 35 | Y, medium | formerly Human Factors Interface Design (HFID) | Design Depth Option |
| DSN | ENGR3250 | 01 | Integrated Product Design | Neeley | R 3:30-6:30pm | AC213 when at Olin; also meets at Mass Art and Babson | 4 | 15 | Y, small | Shared course with Mass College of Art and Babson College; Will meet on all campuses throughout the semester | Design Depth Option |
| DSN | ENGR3290 | 01 | Affordable Design and Entrepreneurship | Hersey; Govindasamy; Mur-Miranda | T 3:30-6:30pm | AC213 | 4 | 15 | Y, small | | Design Depth Option |
| DSN | ENGR3299 | 01 | Special Topics in Design Engineering: <i>Return Design Studio/Shop Practicum</i> | Sauder | see instructor | | 4 | 6 | Y, small | See instructor to enroll; Offered as Experimental Grading | Design Depth Option |
| DSN OR E:BE | ENGR3699 | 01 | Special Topics in Bioengineering: Biomedical Device Design | Sarang-Sieminski | TF 1:30-3:10pm | AC326 | 4 | 15 | Y, small | | Core - BioE OR Design Depth |

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|--------|----------|-----------|--|----------------------------|------------------|----------|---------|---------------|----------|---------------------------------|--------------------------|
| E:C | ENGR2510 | 01 | Software Design | Steele | MR 10:50-12:30pm | AC128 | 4 | 25 | Y, small | | Core - E:C and ECE |
| E:C | ENGR3520 | 01 | Foundations of Computer Science | Pucella | R 4-6:30pm | AC326 | 4 | 32 | Y, small | | Core - E:C |
| E:C | ENGR3540 | 01 | Complexity Science | Downey | TF 9-10:40am | AC326 | 4 | 25 | Y, small | formerly Computational Modeling | Elective E:C |
| E:ROBO | ENGR3390 | 01 | Fundamentals of Robotics | Barrett | TF 1:30-3:10pm | AC128 | 4 | 25 | Y, small | | Elective - E:Robo; or ME |
| ECE | ENGR3410 | 01 | Computer Architecture | Hill | TF 10:50-12:30pm | AC304 | 4 | 32 | Y, small | | Core - ECE or E:C |
| ECE | ENGR3420 | 01 | Introduction to Analog and Digital Communication | Govindasamy | MR 10:50-12:30pm | AC304 | 4 | 28 | Y, small | | Core - ECE |
| ECE | ENGR3430 | 01 | Ecelectronics | Minch | MR 3:20-5pm | AC304 | 4 | 24 | Y, small | formerly EE Prototyping | Elective - ECE |
| ENGR | ENGR1330 | 01 | Fundamentals of Machine Shop Operations | Andruskiewicz | W 1-5:00pm | AC104 | 4 | 6 | Y, small | | |
| ENGR | ENGR2110 | 01 | Principles of Engineering | Faas; Hoover; Minch | TF 9-10:40am | AC306 | 4 | 25 | Y, small | | Core Requirement |
| ENGR | ENGR2110 | 02 | Principles of Engineering | Faas; Hoover; Minch | TF 9-10:40am | AC309 | 4 | 25 | Y, small | | Core Requirement |

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|---------------|-----------|-----------|--|--|-----------------------------|------------------|---------|---------------|-----------|--|----------------------------|
| ENGR | ENGR2110 | 03 | Principles of Engineering | Faas; Hoover; Minch | TF 10:50-12:30pm | AC306 | 4 | 25 | Y, small | | Core Requirement |
| ENGR | ENGR2110 | 04 | Principles of Engineering | Faas; Hoover; Minch | TF 10:50-12:30pm | AC309 | 4 | 25 | Y, small | | Core Requirement |
| ENGR Capstone | ENGR4190 | 01-13 | SCOPE: Senior Capstone Program in Engineering | Coso Strong; Michalka; Sarang-Sieminski; Woodard | W 9-6pm | SCOPE Team Rooms | 4 | 80 | | Enroll in '01 and team placements will be done in fall - also, don't forget to attend the info session during advising week. | |
| ENGR Capstone | ENGR4290 | 01 | Affordable Design and Entrepreneurship | Hersey; Govindasamy; Mur-Miranda | T 3:30-6:30pm | AC213 | 4 | 15 | Y, medium | | |
| ENTRP | AHSE2515 | 01 | Special Topics in Entrepreneurship: Iterate | Neeley | MR 9-10:40am | AC318 | 2 | 12 | Y, large | SESSION I; may be taken multiple times | ENTRP Concentration Option |
| ENTRP | AHSE2515A | 01 | Special Topics in Entrepreneurship: Iterate | Neeley | MR 9-10:40am | AC318 | 2 | 12 | Y, large | SESSION II; may be taken multiple times | ENTRP Concentration Option |
| FYR Seminar | OIE1000 | 01 | Olin Introductory Experience | Tatar | W 9-10:40am | CC209, 211, 213 | 1 | 90 | | | |
| FYR: AHS | AHSE1100 | 01 | History of Technology: A Cultural & Contextual Approach | Martello | TF 10:50-12:30pm | CC209 | 4 | 18 | | Reserved for First Years | AHS Foundation |
| FYR: AHS | AHSE1122 | 01 | The Wired Ensemble | Dabby | W 3:20-5pm; F 10:50-12:30pm | AC318; AC305 | 4 | 15 | | Reserved for First Years | AHS Foundation |
| FYR: AHS | AHSE1135 | 01 | The Digital Eye: Photography, Vision, and Visual Communication | Donis-Keller | TF 10:50-12:30pm | AC313 | 4 | 14 | | Reserved for First Years | AHS Foundation |

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|-----------|----------|-----------|--|-------------------------------|---------------------------|-------------------------|---------|---------------|----------|--------------------------|-------------------------|
| FYR: AHS | AHSE1155 | 01 | Identity from the Mind & Brain: Who Am I and How Do I Know | Adler | TF 9-10:40am | AC328 | 4 | 18 | | Reserved for First Years | AHS Foundation |
| FYR: AHS | AHSE1155 | 02 | Identity from the Mind & Brain: Who Am I and How Do I Know | Adler | TF 10:50-12:30pm | AC328 | 4 | 18 | | Reserved for First Years | AHS Foundation |
| FYR: AHS | AHSE1199 | 01 | AHS Foundation Topic: From Dirt to Shirt | Lynch | TF 10:50-12:30pm | AC128 | 4 | 18 | | Reserved for First Years | AHS Foundation |
| FYR: DSN | ENGR1200 | 01 | Design Nature | Chachra; Sauder; Hoover; Koff | MR 9:50-12:30pm | AC204; MH120 | 4 | 32 | Y, small | | Core Requirement |
| FYR: DSN | ENGR1200 | 02 | Design Nature | Chachra; Sauder; Hoover; Koff | MR 9:50-12:30pm | AC206; MH120 | 4 | 32 | Y, small | | Core Requirement |
| FYR: DSN | ENGR1200 | 03 | Design Nature | Chachra; Sauder; Hoover; Koff | MR 9:50-12:30pm | AC209; MH120 | 4 | 32 | Y, small | | Core Requirement |
| FYR: ENGR | ENGR1125 | 01 | Introduction to Sensors, Instrumentation and Measurement | Dusek; Hill; Michalka; Storey | M 1:30-3:10pm; T 1-3:10pm | Mondays in MH120; AC428 | 4 | 24 | | | Core Requirement |
| FYR: ENGR | ENGR1125 | 02 | Introduction to Sensors, Instrumentation and Measurement | Dusek; Hill; Michalka; Storey | M 1:30-3:10pm; W 1-3:10pm | Mondays in MH120; AC428 | 4 | 24 | | | Core Requirement |
| FYR: ENGR | ENGR1125 | 03 | Introduction to Sensors, Instrumentation and Measurement | Dusek; Hill; Michalka; Storey | M 1:30-3:10pm; R 1-3:10pm | Mondays in MH120; AC428 | 4 | 24 | | | Core Requirement |
| FYR: ENGR | ENGR1125 | 04 | Introduction to Sensors, Instrumentation and Measurement | Dusek; Hill; Michalka; Storey | M 1:30-3:10pm; F 1-3:10pm | Mondays in MH120; AC428 | 4 | 24 | | | Core Requirement |

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| FYR: Interdisciplinary | MTH1111 SCI1111 | 01 | Modeling and Simulation of the Physical World | Downey; Lee; Wood; Woodard | MTR 3:20-5:00pm | AC204; MH120 | 4 | 30 | | | Core Requirement |
| FYR: Interdisciplinary | MTH1111 SCI1111 | 02 | Modeling and Simulation of the Physical World | Downey; Lee; Wood; Woodard | MTR 3:20-5:00pm | AC206, MH120 | 4 | 30 | | | Core Requirement |
| FYR: Interdisciplinary | MTH1111 SCI1111 | 03 | Modeling and Simulation of the Physical World | Downey; Lee; Wood; Woodard | MTR 3:20-5:00pm | AC209; MH120 | 4 | 30 | | | Core Requirement |
| Interdisciplinary | CIE2017B | 01 | Curriculum Innov Experiment: Quantitative Engineering Analysis II | Coso Strong, Geddes Govindasamy, Ruvolo | MR 1:30-5pm | AC113 | 8 | 36 | | Opt-In for Students Who Enrolled in CIE2017A in SP17 | |
| Interdisciplinary | ENGR3699A MTH2188A | 01 | Special Topics in Bioengineering: Neurotechnology, Brains and Machines | Michalka | T 3:20-6:40pm | AC326 | 2+2 | 21 | Y, small see below | | Core Option: BioE OR Prob/Stat Requirement |
| ME | ENGR2340 | 01 | Dynamics | Anders | TF 1:30-3:10pm | AC328 | 4 | 24 | Y, small | | ME Core |
| ME | ENGR3310 | 01 | Transport Phenomena | Storey | MR 10:50-12:30pm | AC326 | 4 | 28 | Y, small | | Core - ME |
| ME | ENGR3330 | 01 | Mechanical Design | Barrett | TF 9-10:40am | AC128 | 4 | 25 | Y, small | | Core - ME |
| ME/ECE | ENGR3370 | 01 | Controls | Mur-Miranda | TF 9-10:40am | AC304 | 4 | 24 | Y, small | | Elective - ME or ECE |
| MTH | MTH2110 | 01 | Discrete Math | Adams | MR 9-10:40am | AC326 | 4 | 33 | Y, large | | ECE; E:C Adv Mathematics |

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|------|-----------|-----------|---|----------------------------|---------------------------------|------------------|---------|---------------|----------|--|------------------------------|
| MTH | MTH2220 | 01 | Linearity II | Hoffman | MR 1:30-3:10pm | AC328 | 4 | 42 | Y, small | | Core Requirement |
| SCI | SCI1121 | 01 | Electricity and Magnetism | Mur-Miranda | TF 10:50-12:30pm | AC326 | 4 | 24 | Y, small | | Physics Foundation |
| SCI | SCI1230 | 01 | Think Like a Biologist with Laboratory | Huang | MR 1:30-3:10pm | AC417 | 4 | 36 | Y, small | select either L1 or L2 of SCI1230 L for the required lab | Biology Foundation |
| SCI | SCI1230 L | L1 | Lab: Think Like a Biologist | Huang | W 12:30-3:10pm | AC406 | 0 | 18 | Y, small | LAB only; must be taken with SCI1230, sec 01 | Lab only |
| SCI | SCI1230 L | L2 | Lab: Think Like a Biologist | Huang | R 3:20-6pm | AC406 | 0 | 18 | Y, small | LAB only; must be taken with SCI1230, sec 01 | Lab only |
| SCI | SCI1240 | 01 | Designing Better Drugs with Laboratory | Pratt | TF 1:30-3:10pm; T 3:20-6pm | AC417; AC406 lab | 4 | 24 | Y, small | | Biology Foundation |
| SCI | SCI1410 | 01 | Materials Science and Solid State Chemistry (with laboratory): <i>Deliberately Relevant for Engineers</i> | Neal | MR 3:20-6pm | AC413 | 4 | 24 | Y, small | | Materials Science Foundation |
| SCI | SCI1410 | B1 | Materials Science and Solid State Chemistry (with laboratory): <i>Environmental and Societal Impacts</i> | Stolk | TW 3:20-6pm | AC413 | 4 | 24 | Y, small | Offered using Experimental Grading | Materials Science Foundation |
| SCI | SCI2050 | 01 | Art of Approximation in Science and Engineering | Mahajan | TF 10:50-12:30pm | AC109 | 4 | 48 | Y, small | | |
| SCI | SCI2215 | 01 | Emerging Technologies in Cancer Research, Diagnosis and Treatment with Laboratory | Pratt | T 10:50-12:30pm; F 9:50-12:30pm | AC406; AC417 | 4 | 15 | Y, small | May be taken in lieu of Biology foundation if AP Bio score of 4 or 5; or by placement test | Adv Biology |

| Area | Course # | Section # | Course Title | Instructor / Teaching Team | Time | Location | Credits | Enroll Limits | Waitlist | Notes | Degree Requirement Note |
|-------|----------|-----------|--|----------------------------|------------------|---|---------|---------------|-----------|---|--|
| SCI | SCI2299 | 01 | Special Topics in Biological Sciences: <i>Quantitative Biology</i> | Wasylenko | MR 10:50-12:30pm | AC318 | 2 | 18 | Y, small | Session I | Prob Stat Designated Alternative |
| SUST | SUST2201 | 01 | Introduction to Sustainability | Edmonds | W 3:30-6:30pm | at Olin AC213; also meets at Babson and Wellesley | 4 | 15 | Y, medium | | CORE requirement for 3CollegesBOW Sustainability Certificate |
| ADMIN | AWAY1000 | 01 | Study Away Program | Administration | n/a | n/a | 12 | n/a | | Enroll in this course block to confirm your Study Away Semester | |
| ADMIN | OIP1000 | 01 | The Olin Internship Practicum | Phelps | n/a | n/a | 1 | n/a | | See Post Graduate Planning to Enroll | |

| Color Key- Offering Blocks | ECE | | | | ME | | | | ENGR / DSN Courses | | | | ENGR or General Requirement | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|---|--|--|--|---|--|---|--|--|--|--|---|-------|---|--|--|--|--|--|
| | Monday | | | | | | | | Tuesday | | | | | | | | Wednesday | | | | | | | | | | | | | | | | | | |
| 9:00 AM | MTH 2110 Discrete Math | | AC326 | | ENGR 1200 ALL Sections Design Nature | | AHSE 2515 and AHSE2515A Spec Top in ENTRP: Iterate SESS I and SESS II AC318 | | ENGR 3370 Controls AC304 | | ENGR 3330 Mechanical Design AC128 | | ENGR 3540 Complexity Science AC326 | | AHSE 1155-01 Identity of the Mind AC328 | | ENGR 2110, sec 01 Principles of Engineering AC306 | | ENGR 2110 sec 02 Principles of Engineering AC309 | | OIE 1000 Olin Intro Experience CC209, 211, 213 | | ENGR 4190 SCOPE | | | | | | | | | | | | |
| 10:40 AM | ENGR 3420 Analog and Digital Communication AC304 | | 9:50-12:30pm MH120; AC204 AC206 AC209 | | ENGR 3310 Transport Phenomena AC326 | | ENGR 2510 Software Design AC128 | | SCI 2299 SESS I Spec Top in Bio Sci: Quantitative Biology AC318 | | AHSE 4190 AHS Capstone M 10:50-1pm AC417 | | SCI 1121 Electricity and Magnetism AC326 | | SCI 2050 Art of Approximation AC109 | | SCI 2215 Emerging Tech in Cancer Res T 10:50-12:30; F 9:50-12:30pm AC417; 406 | | ENGR 3410 Computer Architecture AC304 | | AHS Foundation AHSE1100: Hist of Tech AHSE1135: Digital Eye AHSE1199: Dirt to Shirt AHSE1155-02: Identity of the Mind CC209; AC313; AC328; AC128 | | | ENGR 2110, sec 03 Principles of Engineering AC306 | | ENGR 2110 sec 04 Principles of Engineering AC309 | | Open Meeting Time 10:50-12:30pm | | | | | | | |
| 12:30 PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1:30 PM | SCI 1230 Think Like a Biologist AC417 | | ENGR 1125 ALL Sec Intro Sensors, Instru, Measurement MH 120 | | MTH 2220 Linearity II AC328 | | CIE2016B Quantitative Engineering Analysis II MR 1:30-5pm AC113 | | ENGR 3220 User Experience Design AC213 | | ENGR2999 OR SCI2399 Spec Topics in Env'tal Engr and Science: Environmental Analysis Engineering 1-3:10pm AC318 and AC409 | | ENGR 1125 sec 01 Intro Sensors, Instru, Measurement 1-3:10p AC428 | | SCI 1240 Designing Better Drugs Lecture AC417 | | ENGR 3390 Fundamentals of Robotics AC128 | | ENGR 2340 Dynamics AC328 | | ENGR2999 OR SCI2399 Spec Topics in Env'tal Engr and Science: Environmental Analysis Engineering 1-3:10pm AC318 and AC409 | | | AHSE 3130 Advanced Digital Photography AC313 | | ENGR 3699 Spec Top in BioEngr: Biomedical Device Design AC326 | | ENGR 1125 sec 02 Intro Sensors, Instru, Measurement 1-3:10p AC428 | | SCI1230 L-1 LAB Think Like a Biologist LAB AC406 | | ENGR 1330 Fnd Machine Shop Operations 1-5:00p | | | |
| 3:10 PM | ENGR 3430 Electronics AC304 | | MTH 1111/ SCI 1111 All Sections Modeling and Simulation MH120 AC204 AC206 AC209 | | | | SCI 1410 - 01 Materials Science and Solid State Chemistry: Deliberately Relevant for Engineers AC413 | | | | | | SCI1240 Designing Better Drugs LAB AC406 | | SCI 1410 - B1 Materials Science and Solid State Chemistry: Env't'l and Societal Impacts AC413 | | MTH 1111/ SCI 1111 All Sections Modeling and Simulation MH120 AC204 AC206 AC209 | | ENGR 3290 and 4290 Affordable Design & Entrp 3:30-6:30p AC213 and Babson | | ENGR 3699A & MTH2188 A Spec Top in BioEngr: and Math Neurotechnology Brains and Machines 3:20-6:40pm AC326 | | SUST2201 Intro to Sustainability : Babson, Olin, Wellesley Initiative 3:30-6:30 AC213 | | SCI 1410 - B1 Materials Science and Solid State Chemistry: Env't'l and Societal Impacts AC413 | | AHSE 1122 Wired Ensemble W 3:20-5p; F 10:50-12:30pm AC318, 305 | | AC104 | | | | | | |
| 5:00 PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6:00 PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9:00:00 PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| AHSE | | SCI | | | Math | | | INTEGRATED OFFERING (colored via discipline blending) | | | | Color Key- Offering Blocks | |
|---|--|---|---|--|--|--|---|---|---|--|--|--|-----------------------|
| Thursday | | | | | Friday | | | | | | | | |
| MTH 2110 Discrete Math AC326 | | AHSE 2515 and AHSE2515A Spec Top in ENTRP: Iterate SESS I and SESS II AC318 | | | ENGR 3370 Controls AC304 | ENGR 3330 Mechanical Design AC128 | | ENGR 3540 Complexity Science AC326 | | AHSE 1155-01 Identity of the Mind AC328 | ENGR 2110, sec 01 Principles of Engineering AC306 | ENGR 2110 sec 02 Principles of Engineering AC309 | 9:00 AM |
| ENGR 3420 Analog and Digital Communication AC304 | ENGR 1200 ALL Sections Design Nature 9:50-12:30pm MH120; AC204 AC206 AC209 | ENGR 3310 Transport Phenomena AC326 | ENGR 2510 Software Design AC128 | SCI 2299 SESS I Spec Top in Bio Sci: Quantitative Biology AC318 | SCI 1121 Electricity and Magnetism AC326 | SCI 2050 Art of Approximation AC109 | SCI 2215 Emerging Tech in Cancer Res T 10:50-12:30; F 9:50-12:30pm AC417; 406 | ENGR 3410 Computer Architecture AC304 | | AHS Foundation AHSE1100:Hist of Tech AHSE1122: Wired Ensemble AHSE1135: Digital Eye AHSE1155-02: Identity of the Mind AHSE1199: Dirt to Shirt CC209; AC318; AC313; AC128 | ENGR 2110, sec 03 Principles of Engineering AC306 | ENGR 2110 sec 04 Principles of Engineering AC309 | 10:40 AM 10:50 AM |
| ENGR 1125 sec 03 Intro Sensors, Instru, Measurement 1-3:10p AC428 | SCI 1230 Think Like a Biologist AC417 | MTH 2220 Linearity II AC328 | CIE2016B Quantitative Engineering Analysis II MR 1:30-5pm AC113 | ENGR 3220 User Experience Design AC213 | ENGR2999 OR SCI2399 Spec Topics in Evtal Engr and Science: Environmental Analysis Engineering 1-3:10pm AC318 and AC409 | | ENGR 1125 sec 04 Intro Sensors, Instru, Measurement 1-3:10p AC428 | SCI 1240 Designing Better Drugs Lecture AC417 | ENGR 3390 Fundamentals of Robotics AC128 | ENGR 2340 Dynamics AC328 | AHSE 3130 Advanced Digital Photography AC313 | ENGR 3699 Spec Top in BioEngr: Biomedical Device Design AC326 | 12:30 PM 1:30 PM |
| ENGR 3430 Electronics AC304 | SCI1230 L-L2 LAB Think Like a Biologist LAB AC406 | | ENGR 3520 Fnd Computer Science 4-6:30pm AC326 | ENGR 3250 Integrated Product Design 3:30-6:30p Location: all 3 campuses ; when at Olin AC213 | SCI 1410-01 Materials Science and Solid State Chemistry: Deliberately Relevant for Engineers AC413 | MTH 1111/ SCI 1111 All Sections Modeling and Simulation MH120 AC204 AC206 AC209 | "Do Something" Dedicated Time | | | | | 3:10 PM 3:20 PM | |
| | | | | | | | | | | | | 5:00 PM | |
| | | AHSE 0112 Olin Conductorless Orchestra 6:45-9pm 304 + 305 + 318 | | | | | | | | | | | 6:00 PM 9:00:00 PM |

TENTATIVE SPRING 2018 Course Listing

| Discipline | Course Number | Course Title | Credits | Staffing | Comments |
|-------------|-----------------------|---|---------|---|---------------------------|
| AHS | AHSE0112 | The Olin Conductorless Orchestra | 1 | Dabby | |
| AHS | AHSE2112 | Six Books that Changed the World | 2 | Martello | |
| AHS | AHSE2114 | SciFi and Historical Context | 2 | Martello | |
| AHS | AHSE3190 | Arts Humanities Social Sciences Capstone Preparatory Workshop | 1 | Epstein | |
| AHS | AHSE4190 | Arts Humanities Social Sciences Capstone Project | 4 | Epstein | |
| Capstone | ENGR4290 | Affordable Design and Entrepreneurship | 4 | Hersey; Linder; Mur-Miranda | |
| Capstone | ENGR4190 | SCOPE: Senior Capstone Program in Engineering | 4 | Coso Strong; Michalka; Sarang-Sieminski | |
| Crosslisted | AHSE or ENGR2199/2299 | Special Topics: Tell the Story of What You Make | 4 | Sauder | |
| DSN | ENGR2250 | User-Oriented Collaborative Design | 4 | Hersey; Linder; Sarang-Sieminski; TBD | |
| DSN | ENGR3290 | Affordable Design and Entrepreneurship | 4 | Hersey; Linder; Mur-Miranda | Design Depth |
| DSN | ENGR32XX | DESIGN DEPTH: Topic TBD | 4 | Sauder | Design Depth |
| DSN | ENGR3XXX | Biomimicry | 4 | Huang; Linder | Will satisfy Design Depth |
| E:BE | ENGR3810 | Structural Biomaterials | 4 | Chachra | |
| E:C | ENGR2510 | Software Design | 4 | Hill; Millner; Ruvolo | |
| E:C | ENGR3525 | Software Systems | 4 | Downey | |
| E:C | ENGR3599 | Special Topics in Computing: Computer Networks | 4 | Morrow | |
| E:C | ENGR3599 | Special Topics in Computing: Hacking the Library | 4 | Steele | |
| E:C | ENGR3XXX | Accessible Technology and Technology for Access | 4 | Paul Ruvolo | MAY satisfy Design Depth |
| E:ROBO | ENGR3392 | Robotics Systems Integration | 4 | Barrett | |

TENTATIVE SPRING 2018 Course Listing

| Discipline | Course Number | Course Title | Credits | Staffing | Comments |
|-------------------|----------------------|--|---------|---------------------------|-----------------------------|
| ECE | ENGR2410 | Signals and Systems | 4 | Mur-Miranda | |
| ECE | ENGR2420 | Intro Microelectronic Circuits with Lab | 4 | Minch | |
| ENGR | ENGR1330 | Fundamentals of Machine Shop Operations | 4 | Andruskiewicz | |
| ENGR | ENGR2199 | Special Topics in Engineering : DREAM Designing Resources for Empowerm | 4 | Amon | |
| ENGR | ENGR3110 | Elecanisms | 4 | Hoover; Minch | |
| ENTRP | AHSE1515 | Products and Markets | 4 | Bowen; Lynch; Neeley, TBD | |
| ENTRP | AHSE2599A | Special Topics in Entrepreneurship: Iterate | 2 | Neeley | May be taken multiple times |
| ENTRP | AHSE3599 | Special Topics in Entrepreneurship: Launch | 4 | Neeley | |
| Interdisciplinary | AHSE2114 ENGR2114 | Engineering for Humanity | 4 | Lynch; TBD | |
| Interdisciplinary | CIE2018A | Curriculum Innov Experiment: Quantitative Engineering Analysis I | 8 | Somerville; Dusek; TBD | |
| Interdisciplinary | ENGR3531 MTH2131 | Data Science | 2+2 | Downey | |
| Interdisciplinary | MTH2132 SCI2032 | Bayesian Inference and Reasoning | 2+2 | Mahajan | |
| ME | ENGR2320 | Mechanics of Solids and Structures | 4 | Lee | |
| ME | ENGR2330 | Introduction to Mechanical Prototyping | 4 | Barrett; Faas | |
| ME | ENGR2350 | Thermodynamics | 4 | Storey | |
| ME | ENGR3399 | ME Elective or Design Depth | 4 | Lee | |
| MTH | MTH2210 | Linearity I | 4 | Hoffman | |
| MTH | MTH3120 | Partial Differential Equations | 4 | Hoffman | |
| MTH | MTH31XX | Numerical Methods and Scientific Computing OR Nonlinear Dynamics and Chaos | 4 | Geddes | |

TENTATIVE SPRING 2018 Course Listing

| Discipline | Course Number | Course Title | Credits | Staffing | Comments |
|------------|---------------|---|---------|-----------|----------|
| SCI | SCI1130 | Mechanics | 4 | Mahajan | |
| SCI | SCI1240 | Designing Better Drugs with Laboratory | 4 | Pratt | |
| SCI | SCI12XX | Foundation Biology Topics (with laboratory): TOPIC TBD | 4 | Wasylenko | |
| SCI | SCI1410 | Materials Science and Solid State Chemistry (with laboratory) | 4 | Chachra | |
| SCI | SCI1410 | Materials Science and Solid State Chemistry (with laboratory) | 4 | Stolk | |
| SCI | SCI2130 | Quantum Physics | 4 | Holt | |
| SCI | SCI2140 | Relativity | 2 | Holt | |
| SUST | SUST3301 | Sustainability Synthesis | 4 | Wood | |