Olin College Registration Booklet

Spring 2015

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Table of Contents

Important Advice Regarding YOUR Course Selections for Spring 2015

First Year Students: Two courses you must enroll in are Products and Markets AND Linearity I.   In addition to these two, it is STRONGLY suggested you complete your foundation physics requirement. Other topics available to you are Modern Biology, Materials Science, Chemistry (at Wellesley), Software Design, an AHS course … to name a few.

Important Note for Sophomores, Juniors and Seniors who need to complete their entrepreneurship foundation requirement: The spring offering of AHSE1515: Products and Markets, is for first year students only. There will likely be a Fall 2015 offering of Products and Markets open to all Olin students. You can also satisfy the entrepreneurship foundation requirement by taking the Babson course EPS3501: Entrepreneurship and Opportunity.

All Students: Reminder that you must complete your Biology requirement, your Materials Science / Chemistry requirement and POE by the end of your junior year.

Registration Deadlines
for Add ; Drop and Pass/No Credit ; Withdraw

Session	Add	Drop and Pass/No Credit	Withdraw
Full Semester (Jan 20 – April 30)	February 2, 2015	April 1, 2015	April 30, 2015
Session I (Jan 20 – Mar 9)	January 26, 2015	February 23, 2015	March 9, 2015
Session II (Mar 10 – April 30)	March 23, 2015	April 21, 2015	April 30, 2015

Frequently Asked Questions and Instructions

What do I register for?
Students are allowed to register for a maximum of 20 credits. All students have a minimum requirement of 12 degree credits to be eligible for the Olin tuition scholarship.

The maximum credits can be distributed between **degree** and **non-degree** activities.

> **Degree** activities are defined as counting toward graduation credit and course requirements (all students must have a minimum of 12 degree credits). Examples of registered degree activities are standard courses, cross-registered courses, independent study and research for degree credit. Consult the catalog for your specific degree requirements.

> **Non-degree** activities are defined as **not** counting toward degree and subject requirements. An example is a passionate pursuit. Non-degree activities are not graded and appear on your transcript if you have met all of your objectives for the activity. Remember these do not count in your minimum requirement of 12 degree credits but do count toward the 20 credit maximum.

How do I choose my activities for degree and non-degree credit?
Use this booklet as a tool to assist you in preparation for advising discussions. Meet with your adviser BEFORE your registration date. Your adviser will "clear" you to register. If you are not cleared, you will not be permitted to register.

I am doing a Study Away Program next semester. Do I need to register?
YES! Students in approved semester–away programs must register for a single course: **AWAY1000: Study Away Program**. This course will allow Olin to certify you as a full-time student during the semester you are away. Your approved course work will be transferred to your academic record upon receipt of a transcript from the host institution (provided you have received the minimum required grade). Note: All registrations will be cross-referenced with the Study Away Committee.

Olin Self Study, Independent Study and Research - - - How do I register?
- Olin Self Study – Please see information on the [StAR Center website](#) for details. You will need to complete a form with your OSS intention by the last day to add a course for the spring 2015 semester.
- Independent Study and Research - Students interested in doing research and/or independent study must complete a Cover Sheet for Independent Study and Research. This form can be found on the forms tab of the StAR Center website. All forms must be received by the add deadline for the spring 2015 semester. There are no exceptions.

I am interested in doing a Passionate Pursuit next semester. How do I register?
If you are interested in doing a Passionate Pursuit, consult the Student Handbook for FAQ's. Passionate Pursuits require approval from the Passionate Pursuit Board in addition to consent of a faculty sponsor and the student's adviser. Passionate Pursuit proposals should be brought to Campus Center 320. The deadline is 5 p.m. on February 23.

What is EG grading?
The 'EG' grade represents an "Experimental Grade" designation, implemented in a small number of courses during a curricular experiment that began in 2009. Each student may undertake no more than one "EG" course per semester. An 'EG' grade in a student's transcript indicates that a student completed the course's learning objectives and received instructor feedback based upon criteria that do not have direct mapping onto the ABCDF grading system. Students who do not complete the learning objectives will receive a "no credit" designation on their transcript (similar to the "no credit" option for pass/no credit courses).

CROSS-REGISTRATION
How do I participate in Cross-Registration with Babson, Brandeis or Wellesley (BBW)?
Olin students are allowed to take one course per school, per semester; with the exception of first semester freshmen. First semester freshmen are not permitted to participate in cross-registration.

When selecting a BBW course, keep in mind the time constraints of your Olin courses. Additionally, it is important to check for course prerequisites and the enrollment. Under most circumstances, if the course is full, you will not be able to register for the course. Enrollment is generally found under course "tally" or listed with the course info.
 All BBW courses will be noted on your Olin degree audit by 'color' (the area of discipline). It is the student's responsibility to review the ARB approved 'coloring' on the ARB website and note the color on the cross-reg form. If a course is not found on the 'list', the student must petition the CSTB for appropriate coloring.

In order to submit a cross-registration request, use the cross-registration portlet under the MyStAR tab at http://my.olin.edu. The StAR Center will work with the host school to facilitate the registration. The following dates reflect the dates that the host school will accept cross-registration requests from Olin's StAR Center. Olin students may submit requests to the StAR Center any time before the later of the dates listed below.

> **Babson College Cross Registration dates:**
> **November 17 – January 26 (4:30 p.m.)**
> You can find their offerings at
> https://fusionmx.babson.edu/CourseListing/index.cfm?fuseaction=CourseListing.DisplayCourseListing&blnShowHeader=true&program=Undergraduate&semester=Spring+2015&sort_by=course_number&btnSubmit=Display+Courses
>
> **Brandeis University Cross Registration dates:**
> **January 8 – 26, 2015**
> Courses that are closed or specifically state you need permission must have a permission code.
> You can find Brandeis offerings at http://registrar-prod.unet.brandeis.edu/registrar/schedule/classes/2015/Spring/100/UGRD
>
> **Wellesley College Cross Registration dates:**
> **November 24 – December 24; January 26 – February 6 (11 p.m.)**
> You can find their offerings at https://courses.wellesley.edu/.
> A Visiting Student Card is necessary for courses requiring the instructor's permission for any reason.

N.B. BBW **DROP** deadlines are earlier than Olin's. When cross-registering, you abide by the rules and deadlines established by the host school. Read your confirmation email very carefully and save it for future reference.

How do I Cross-Register to Olin College?
Olin welcomes students from Babson, Brandeis and Wellesley to register for Olin courses. In general, all courses except for some first year courses are eligible for cross-registration with the permission of the Olin faculty member. BBW students should send a request for a course through their Registrar's Office to the Student Accounts and Records (StAR) Center. Cross-registration request forms can be found at the home institution. Visit http://star.olin.edu for more information.

What About Co-Curriculars?
Registration and descriptions for Co-Curriculars will be released during the add period in January. If students have a particular interest in a co-curricular that they would like to see offered, they are encouraged to seek out a "faculty/staff" sponsor before the end of this semester and notify the Dean of Student Life. Co-Curricular offerings will be posted at http://star.olin.edu.

Textbooks
Pursuant to the Higher Education Opportunity Act (HEOA) of 2008, information regarding required and recommended textbooks and supplemental course material may be viewed from the Olin's internet course schedule via https://my.olin.edu .

How and When Do I Register?
Registration is done online using https://my.olin.edu.

Here are some useful tips from Olin's Information Technology Department:

During course registration sessions, the IT Help Desk often receives reports about sis.olin.edu and my.olin.edu being slow or unresponsive. In almost all cases, this is due to an excessive and often unnecessary workload placed on the system. By following these guidelines, you can help minimize this load and increase system responsiveness:

I. Please use only one browser tab on one computer. In past sessions, some students were connecting from as many as four different computers or opening multiple sessions in multiple tabs. Each additional session consumes resources on the server and only serves to slow the system down.
II. Please be patient and do not refresh the page. This causes the background system processing for the same task to be executed multiple times, adding additional load to the system.
III. Please remember that everyone else in your group is trying to register at the same time. As much as we would like the system to be as responsive as it is during non-registration periods, this simply cannot happen when over 60 students are attempting to register for classes at the exact same moment. It takes time for the system to process all incoming requests and reconcile them with each other.
IV. Please avoid using the system during other groups' registration times. Again, this adds additional work to an already busy system.
V. With the exception of one session, we have seen the fewest slowdowns and smallest workloads on the registration system this semester that we have seen in several years thanks to many students following these guidelines.
VI. We do realize the importance of registration to every student on campus. If you encounter errors from my.olin.edu during the registration process, please take a screenshot of the error you receive and send it, along with a detailed description of what you were doing when it occurred, to helpdesk@olin.edu so that we can resolve the issue as quickly as possible.

REGISTRATION TIMES:
On-line registration will take place November 10-13 during the evening hours. Information regarding the groups is available via your registration login. In general, seniors will go Monday night, juniors Tuesday night, sophomores Wednesday night and first year students on Thursday night.

(Registration will be open to cleared and eligible students only. A cleared student is one who has met with his/her adviser and has an updated learning plan. An eligible student is one who does not have an outstanding financial balance with the college.)

When is the Add Period – the Drop Period – the last day to withdraw from a course? – REFERENCE HANDY CHART at beginning of this Booklet.
The Add period* is the first 10 class days of the semester. The Add period will begin on January 20, 2015 and end on February 2, 2015. Add requests can be processed in person at the StAR Center and on-line. Add/Drop forms can be found at http://star.olin.edu.

The Drop period begins January 20, 2015 and ends April 1, 2015 (for ½ session deadlines see chart). During this time, students can alter their schedule as long as they remain in a minimum of 12 credits of degree activities. A "drop" is removed from the student schedule and does not appear on transcripts. Drops and withdrawals after the add period require a hard copy form and must be processed by the

Registrar's Office. <u>There are no on-line drops after the add period ends.</u> The last day to withdraw from a course is the last day of instruction.

N.B. BBW drop deadlines are earlier than Olin's. When cross-registering, you abide by the rules and deadlines established by the host school. Read your confirmation email very carefully and save it for future reference.

(*Additionally, students wishing to participate in cross-registration will be allowed to alter their Olin schedule to accommodate cross-registration requests if the host schools' add/drop period extends beyond February 2, 2015. This will be done at the StAR Center once the confirmation of the cross-registered request is received. The reason for this is due to the variable times at which we can honor cross-registration requests depending on the host school's registration times.)

Waitlists
Waitlists are available on some courses. These are indicated in the offerings list at the end of this booklet and in the Course Catalog on MyStAR. A waitlist comment is included in the course catalog offering section by clicking on the "VIEW" button under requirements if there is indeed a waitlist.

Cancellations
Note that all courses listed each semester are subject to cancellation due to insufficient enrollment.

Textbooks
Pursuant to the Higher Education Opportunity Act (HEOA) of 2008, information regarding required and recommended textbooks and supplemental course material may be viewed from the Olin's internet course schedule via https://my.olin.edu .

Spring 2015 Supplement to Current Course Catalog

> **Degree requirements** may be found at http://www.olin.edu/course-catalog/program-descriptions/ .
>
> **Course descriptions** may be found at http://www.olin.edu/course-catalog/course-listings/ . Special Topics descriptions and courses for Spring 2015 that may not be listed on the Olin website are listed below.

Important Note for Sophomores, Juniors and Seniors who need to complete their entrepreneurship foundation requirement: The spring offering of AHSE1515: Products and Markets, is for first year students only. There will likely be a Fall 2015 offering of Products and Markets open to all Olin students. You can also satisfy the entrepreneurship foundation requirement by taking the Babson course EPS3501: Entrepreneurship and Opportunity. If you wish to enroll in this course this spring, please do so via cross-registration. The only caveat is that you cannot use this course as both your foundation and as part of an Entrepreneurship concentration.

EPS3501 Entrepreneurship and Opportunity – BABSON COLLEGE
This course satisfies the entrepreneurship foundation requirement for the class of 2015, 2016, and 2017. **Interested Olin students must cross-register.**
This course concentrates on identifying and evaluating opportunities for new business. The primary purpose is to investigate concepts tools and practices associated with identifying or creating new venture opportunities. Students will explore ways to shape and evaluate the viability of these opportunities by understanding key industry factors, market and competitive factors and customer needs. Students will gain a better understanding of personal entrepreneurial capacity, team building and management, and are augmented with readings, guest speakers, videos, and software simulations. Student teams will do at least two opportunity feasibility assessments.

AHSE 1515: Products and Markets
Instructors: Neeley, Brand, Hoover, Hopper, Lynch, Pratt
Credits: 4 AHSE
This course satisfies the Entrepreneurship Foundation requirement.
Entrepreneur: one who owns and manages a business; a person who takes the risk of profit or loss. – O.E.D. The same source also reveals a broader definition found in the French root, entreprendre, which means "to undertake." An entrepreneur is defined as one who assumes the opportunity and full responsibility of any pursuit. A champion.

In this course, students explore and begin to realize in themselves the entrepreneur in both forms: the practical and the profound. In this foundational course in business and entrepreneurship they will conceive, create and manage a real, profitable business. They will be exposed to traditional business tools such as accounting, marketing and finance as well as the personal and interpersonal tools requisite for high-performance teamwork, including project planning, giving feedback and persuasive pitching. This business experience and its associated challenges, will serve as the context in which we hope to develop broader self-awareness, productive self-reflection and courage. Broadly, these skills will apply to the bold imagining and realization of their lives at Olin and beyond.

AHSE 2199: Special Topics in Arts, Humanities, Social Sciences
Foundations of Psychology
Instructor: Adler
Credits: 4 AHS

Psychology is the scientific study of human behavior, thought, emotion, and motivation. Everything we do as people – from our work to our personal relationships to our sense of self – is impacted by psychological principles. This course will introduce you to some of the most significant insights that psychologists have produced about the human condition while teaching you how to think like a psychologist. You will have the opportunity to explore questions that you value in the way a psychologist would pursue them, via hands-on projects, data collection, and analysis. We will discuss such significant topics as: what it means to be normal, how identity develops, how stable mental health is and what to do to improve it, the intersection of

psychology and technology, the psychology of sustainability, the reasons we hold stereotypes and prejudice, sex differences between men and women, and many others.

There are no prerequisites for this course. Having taken A.P. Psychology or psychology courses at Wellesley or Babson will give you a nice foundation for this course, but they will not be redundant with it.

AHSE 2199A: Special Topics in Arts, Humanities and Social Sciences and Science
Paradigms, Predictions, and Joules: A Historical and Scientific Approach to Energy and the Environment
Instructors: Martello, Brabander (Wellesley)
Credits: 3 AHSE and 3 SCI
Please note that this is a 6-credit course.

This interdisciplinary course, featuring faculty and students from both Olin and Wellesley colleges, will focus on "grand challenges" at the interface between energy and the environment through the disciplinary lenses of the history of technology and environmental science. We will study the changing relationship between human societies and their natural environment, focusing upon the consequences of human energy use (agricultural production, power generation, and other forms of energy) at the local, regional, and global scales. By combining the tools, analytical frameworks, and skills found in the history and environmental science fields, we will build first-order "hindcast" models that explain the observations and trends that we observe from historical case studies. By the end of the semester we will determine the key components required for assembling forecast-oriented energy use models that extrapolate the impacts of present environmental technologies and practices into the future.

This course will include equal numbers of Olin and Wellesley students, and will alternate class sessions at both campuses. Students will begin the semester with a series of readings and exercises that build skills and familiarity in the broad area of environmental studies: for example, we will work with framing environmental concept maps using environmental engineering principles (e.g. control volumes, flux, residence time) and environmental science concepts (energy conservation and energy density calculations), historical research and analysis, environmental ethics, and writing/presentation exercises centered around important case studies of interactions between societies, energy technologies, and the natural environment. We will use these skills and perspectives for the remainder of the semester as we conduct two research projects related to energy use, sustainability, and environmental impacts in both ancient societies and the modern day. This course involves extensive team project work and will offer many opportunities for students to identify their own goals and shape their studies in order to achieve those goals.

AHSE2199B: Special Topics in Arts, Humanities, Social Sciences
Digital Documentary Storytelling
Instructor: Vitols
Credits: 2 AHS (Session I)

In this workshop, students learn the basic principles of documentary filmmaking. Providing a brief introduction to the theory and history of documentary media production, class discussion will address the ethical, aesthetic, technological, and economic concerns of non-fiction film art. Students will put the "theory" into "practice" by creating their own short digital documentary. While no previous experience in filmmaking is required, this is NOT a technical course.

AHSE2199C: Special Topics in Arts, Humanities, Social Sciences
Hacktivism: Hacking for the Greater Good
Instructor: Vitols
Credits: 2 AHS (Session II)

This workshop focuses on one intersection of activism and technology: hacking. Students will explore the history, ethics, and philosophy of hacking, while also working in groups to use technology for political and social change. Prerequisites include creativity and the desire to use technology to make the world a better place. While no previous experience in coding is required, this is NOT a technical course.

AHSE 3599: Special Topics in Entrepreneurship
Intellectual Property Protection for Innovative Designs
Instructor: Covello
Credits: 2 AHSE
Prerequisite: AHSE1515
This is generally expected to be a junior and senior level course. Others may be allowed to enroll with permission of the instructor.

The objectives of this new course are to engage in the process of real-world innovation and to learn how to legally protect innovative solutions. The course begins with an overview of the types of intellectual property protection available in the United States for inventive products and processes. Students will design their own solutions to technical problems during the first few weeks of the course, or will come to class with a significant product/process innovation already in mind.   With guidance from the instructor, students will work individually or in small groups to research the "prior art" and then prepare the text and drawings for utility patent applications for their own inventions. The final exam for the class will be the e-filing of utility patent applications with the U.S. Patent and Trademark Office. Readings include prior art patents and articles relevant to student inventions, select portions of US laws and regulations relating to patents, and a 20-page poem about the life and work of an inventor from the1800's, Antonio Meucci. *If you would like more details about the class, or have questions about whether this class is right for you, please email the instructor at* dianecovello@sbcglobal.net.

ENGR 1199: Special Topics in Engineering
Introduction to the Microelectronics, Nanotechnology and MEMS Revolution
Instructors: Sherra Kerns, David Kerns
Credits: 4 ENGR

This course will develop your understanding and appreciation of the scientific and engineering underpinnings of microelectronics. nanotechnologies, and MEMS. We will examine how these technological revolutions influence a broad array of interdisciplinary fields (engineering, biology, biomedical engineering, material science, chemistry, physics, medicine, technology, management) and civilization as a whole (art, business, film, entertainment, politics). Special "widget deconstruction" topics will address common pieces of modern technology to answer the question, "How do they do what they do?"; "How do microelectronics & nanotechnology play in that functionality?"; and "Where is the technology going and how will it change the way we live our lives?" Student--led discussions will examine the transformational impact of the microelectronics, nanotechnology and MEMS revolution on modern society. You will complete and deliver a final project that enhances/expands understandings of your favorite topics. No special knowledge of electrical and computer engineering is assumed. The class will be highly interactive and student participation is key.

ENGR 1199A: Special Topics in Engineering
Linear Systems Laboratory
Instructor: Storey
Credits: 2 ENGR
Hours: 0-2-4
Prerequisite: SCI1111/MTH1111(ModSim); Co-requisite: MTH 2210 (Linearity I)

This course will provide a hands--on experimental lab experience for students co--registered in Linearity I. The course will bring the mathematical concepts of Linearity to life through a number of physical

experiments with mechanical, electrical, thermal, and chemical systems. The course will emphasize interpreting physical data through the lens of mathematical analysis.

ENGR 2199: Special Topics in Engineering
Applications of Microfluidics
Instructors: Irimia, Storey
Credits: 4 ENGR

Microfluidics systems can manipulate small volumes of fluids using small networks of channels, each of which are 10 to 100 microns in size. These devices offer the promise of integrating many laboratory processes onto a single chip, thereby increasing throughput and decreasing cost. Microfluidic technologies are proving to be a critical tool for research in drug development, genomics, proteomics, molecular diagnostics, and analytical chemistry. Further development of microfluidics is one key to future applications such as personalized medicine, integrated sensors for chemical and biological detection, inexpensive medical diagnostics, and massively parallel drug discovery. Just as microelectronics revolutionized computation by increasing capacity and decreasing the cost of performing calculations, microfluidics has the potential to do the same in biology and chemistry. In this course, we will cover some of the basic physics, chemistry, fluid mechanics, engineering and mathematics relevant to microfluidics. We will study existing microfluidics designs and functions. The course will be project based with students designing and building functional microfluidic devices relevant to global health projects.

ENGR 3199: Special Topics in Engineering
Designing Resources for Empowerment and Making (DREAM)
Instructor: Amon Millner
Credit: 4 ENGR

The DREAM course will engage students in designing multiple types of resources for making, those related to: space, tools, and activities. Students enrolled in the course will leave empowered to passionately pursue making in contexts that enable others to make in ways that they may not have otherwise been able to. The course will entail rethinking the ways in which spaces are designed to facilitate young people creating physical objects; extending toolkits that afford hands-on exploration of making in technical domains such as programming and electronics design; and developing activities that take advantage of what new tools and spaces for making have to offer. The ideal offering being experiences that compel pre-college learners to feel empowered to extend their own (and their peers') engagement in science, technology, engineering, art, and math (STEAM) endeavors.

This project-based course is running for the first time at Olin College in the Spring of 2015. The early weeks will expose students to principles and practices for transforming living rooms, community centers and cities into areas conducive to making, and situate the ways in which doing so can empower groups to redefine their relationship with information and individuals around them. The following weeks entail exploring existing tools for making interactive systems (e.g., microcontroller-powered development boards with sensing and actuation modules geared toward integrating with clothing or outdoor environments). Students will have opportunities to extend the kits based on an open-hardware design ethos, which could entail adding a "bit" to the library of LittleBits (littlebits.cc). Students will then grapple with experience design to envision what should become possible at the intersection of new spaces and new tools. After prototyping experiences, students will contribute their curricular resources to appropriate online outlets (such as instructables.com).

ENGR 3199A: Special Topics in Engineering
Elecanisms
Instructors: Minch, Hoover
Credits: 4 ENGR

Pre-requisites: ENGR 2210 (POE) and at least one of ENGR 2330 (Mech Proto), ENGR 3330 (Mechanical Design), ENGR 2420 (Circuits), or ENGR 3410 (Comp. Arch.)
This course can be used to satisfy either the ME and ECE advanced elective requirements.

Mechatronics involves the synergistic integration of mechanical engineering with electronics and intelligent computer control in the design of products. In this course, we will develop topics critical to the engineering of modern mechatronic systems including electromechanical actuators (e.g., DC motors, stepper motors, and solenoids), practical electronics design including interfacing sensors and actuators to embedded processors, and embedded software design in the C programming language. During the first part of the course, students will work in small groups on a series of miniprojects to gain experience with course concepts and develop core engineering competencies. During the second part of the course, students will work in teams to engineer a mechatronic system of their choosing subject to realistic constraints.

ENGR 3299: Special Topics in Design
Investigating Normal: Adaptive and Assistive Technologies
Instructor: Hendren
Credit: 4 ENGR
Prerequisites: ENGR 2250 (UOCD)
This course satisfies the Design Depth Requirement.

Assistive technologies usually refer to prosthetics and medical aids: tools, devices, and other gear that either restore or augment the functioning of body parts. Historically, these have been designed for people with diagnosable disabilities. In this course, we look at medical as well as cultural tools that investigate the "normal" body and mind, and we design our own devices—high-tech, low-tech, digital or analog—with these ideas in mind. Through readings, site visits, guest speakers, and projects, we investigate both traditional and unusual prosthetics and assistive technologies, broadly defined. We talk to end-users, to engineers and industrial designers, to artists, and to others whose technologies assist with visible and invisible needs, externalize hidden dynamics, and create capacities far beyond or outside ordinary functionality. The course is organized to facilitate both functional projects in design-engineering and projects that are much more speculative and experimental.

ENGR 3345 Mechanical and Aerospace Systems
Instructor: Lee
Credits: 4 ENGR
Hours: 4-0-8
Prerequisites: one of ENGR 2340, ENGR 2330, ENGR 2320, or permission of instructor

This semester, the course is centered on the design, analysis, fabrication, and testing of handheld, powered (possibly RC controlled) ornithopters or flapping-wing aircraft. For background, we'll begin with three introductory modules on mechanism synthesis and simulation, inertial sensors (e.g., accelerometers and gyroscopes), and structural analysis of airframes and wings. Teams will then work on creating and flying their own ornithopters.

ENGR3430: EE Prototyping
Instructor: Lundberg
Credits: 4 ENGR
Hours: 3-3-6
Prerequisite: ENGR 2210

Through a series of projects, we will learn to design, build, and debug electronic prototype systems. We will cover multiple aspects of the prototyping process, including circuit and system design, soldering, deadbugging, troubleshooting, component selection, schematic capture, printed-circuit board (PCB) layout,

PCB fabrication, PCB assembly, and thermal analysis. We will discuss the tradeoffs among "faster, better, cheaper", and explore examples in the realms of analog, digital, RF, and power. In addition to hands-on reverse engineering and fabrication experience, students will learn technical communication through design documentation. This course is approved for use as an advanced ECE elective.

ENGR 3450 Semiconductor Devices
Instructors: Sherra Kerns, David Kerns
Credits: 4 ENGR
Prerequisites: ENGR 1125 (ISIM); SCI 1410 (MatSci) or SCI 2130 (Quantum Physics)
This course can be used to satisfy the ECE advanced elective requirement.

Introduction to semiconductor device fabrication, operation, and design. Emphasis on diodes and transistors, with significant exploration of speculative technologies. The course is conducted in a seminar/independent study format, with focus on your interests and learning style. Students will conduct a project of their own choosing involving analyses of the prospects for potential new technologies to become viable in next-generation systems. This course and what you learn will be an expected part of preparation for many engineering graduate programs, especially in ECE. The course also provides bases for new ventures that rely on modern technology. It will make you a better person!

ENGR 3599: Special Topics in Computing
Computer Networks
Instructor: Morrow
Credits: 4 ENGR
Prerequisite: Experience with object oriented programming (i.e. java or python) or permission of instructor

Computer Networks is a laboratory class in the design and implementation of … computer networks. This Spring 2015 class is the fourth iteration of an Olin educational research project originally sponsored by Juniper Networks. The goal of this iteration is to teach computer networking as an Olin lab- and project-based class. Students will implement computer networks on Raspberry pi B+ computers using the Python programming language. This is a good way to discover that computer networks are more computer than network. The postal service, telegraphs and telephones were all networks. Each had its own physical plants. Gmail, Twitter and Skype are versions of the postal service, the telegraph and the telephone. However, they are all just application programs sharing the same physical network of bridges, routers, gateways and services. The class will first create teams of three or four which will develop their own internet. Each team will begin from the bottom of the stack by creating their own physical layer; they will then create their own data link layer and from both of those, their own local area networks. Teams will then work from the stop of the stack down, each creating a UDP application on the standard Python/Linux socket interface. Finally, the teams will get together to create a common network layer and routers – an internet. The teams will then study the actual TCP/IP stack by creating TCP applications on the standard Python/Linux socket interface. They will then study basic network cryptography and implement simple symmetric and asymmetric cyphers in Python. The final part of the class will be dedicated to student networking projects.

MTH2188A/ENGR2199A: Designated Alternative in Mathematics and Special Topics in Computing
Data Science
Instructor: Downey
Credits: 2 ENGR/2 MTH
Prerequisite: ENGR 2510 (Software Design)
This course may be used to satisfy the Probability and Statistics requirement.

Data Science lies at the intersection of statistics, machine learning, database design, and data visualization. The goal of this class is to prepare students to work on data science projects that involve collecting data or finding data sources, exploratory data analysis and interactive visualization, statistical analysis and machine learning, predictive analytics, model selection, and validation. Class

work includes a substantial project on a real world application of the students' choice; projects might involve work with a social change organization like those on DataKind, or participating in a competition like those on Kaggle.

MTH2199: Special Topics in Mathematics
A Mathematical Introduction to Cryptography
Instructor: Patel
Credits: 4 MTH
Hours: 4-0-8

Public key encryption systems are the cornerstone of secure electronic communication. At their heart is the notion of an asymmetric key: roughly speaking, mathematical operations that are easy to carry out, but hard to "undo". In this course, we'll develop some of the beautiful mathematics -- from areas such as number theory and algebra -- that underlie these methods, and see how they lead to the Diffie-Hellman key exchange, the RSA cryptosystem, Elliptic Curve Cryptography, and other such systems. There are no mathematical prerequisites but some experience with abstract mathematical reasoning, such as in a course on Discrete Mathematics, may be useful.

This is an expanded version of the 2-credit cryptography course offered in Spring 2014.

MTH2199A: Special Topics in Mathematics
Structure in Randomness: A Mathematical Perspective
Instructor: Patel
Credits: 2 MTH
Hours: 4-0-8 (Session II)

An intriguing phenomenon in mathematics is the occurrence of patterns and order in situations that seem inherently disordered. Within any large network, there are clusters that show uniform behavior; among the prime numbers, we can find arbitrarily long sequences that are evenly spaced; even chaotic dynamical systems, such as those giving rise to fractal images, are fundamentally deterministic. In this course we will survey some mathematical results that illustrate the phenomenon of 'structure in randomness', and explore their causes and applications. There are no prerequisites for taking the course except curiosity about the subject matter. Student input is strongly encouraged; if you have questions or suggestions, please email the instructor.

SCI 1130-A1: Mechanics: Theoretical/Experimental Approach
Credits: 4 SCI
Instructor: Zastavker
This course may be used to satisfy the Physics Foundation Requirement.

This class will venture to understand the nature of motion from an analytical perspective allowing you to reinforce your previous knowledge from ModSim and previously taken Mechanics courses as well as further developing your analysis competency. This class will use a mixture of more traditional pedagogy, i.e., interactive lectures and "problem set"-like homework assignments, and non-traditional physics classrooms pedagogy, i.e., discussions and group work. In addition, several other components typical of Olin culture will be also introduced into the course; specifically, student autonomy will be explored through a choice of final project, more traditional final exam, presentation, etc. as a way of both learning and formative assessment. A large team-work component will be also introduced through both the homework assignments and project, should students choose the latter. For students who choose their final deliverable to be in the form of a project, intermediate level of faculty-supported scaffolding will be provided as it will be expected that the students choosing this route are at least somewhat familiar with the self-directed environment and have intermediate level of sophistication as

autonomous learners. Additionally, this course will support and allow for further development and honing of students' analytical writing skills.

SCI 1130-C1: Mechanics: Modeling and Simulation Approach
Credits: 4 SCI
Instructor: Somerville
This course may be used to satisfy the Physics Foundation Requirement.

This class is intended to help improve command of mechanics in the realm of "big" and "slow" stuff (i.e, the world of things that are larger than 10^{-10} meters and slower than 10^7 meters per second, which covers pretty much everything we deal with on a daily basis). We'll also be reinforcing some of the skills introduced in ModSim (abstracting models, implementing, validating, and using the models to do work). On the communication front, this flavor will focus on technical writing skills — so expect to be doing some writing! The mixture of work will include some relatively focused problem solving, some more ambiguous open-ended diagnostics, some writing practice, some reflecting and mind mapping, and a major project at the end of the course. Because students generally come in with a wide range of backgrounds, and a wide range of interests, this class will be designed to allow students customize their learning while, at the same time, making sure that everyone gets the core knowledge that will be needed in future courses.

SEMINAR COURSES

We are offering a small number of 1-credit seminar courses intended to give focused opportunities for students to learn and hone skills or increase understanding or appreciation of a new field. These seminar courses are meant to enhance the current curriculum, and are not intended to replace any current course. Each 1-credit seminar course is offered during the evening and are often taught by alumni instructors. To allow the greatest flexibility in coordinating these opportunities and making them available to all students, they are offered on a P/NC grading scale, cannot be used for a student's major or distribution requirements, and do not count towards disciplinary credit.

SEM 101-S1: Seminar: Product Management
Instructor: Ellen Chisa
Credit: 1
Grading: Pass/No Credit

Looking to land (or already landed) that PM internship or full-time job? Product Management helps ties your Olin education together with some more practical skills for day-to-day Product Management. We'll look at the connections between Engineering-Design-Business, how to start and finish projects well, and how to convince coworkers that your Product ideas are the right ones. Meets Wednesdays 6:30-9pm in AC318.

SEM 102-S1: Seminar: Olin Workshop on the Library
Instructor: Jeff Goldenson
Credit: 1
Grading: Pass/No Credit

The library is reinventing itself. We are scrutinizing every aspect -- the things we provide, the services we offer, the rules we maintain -- everything is up for grabs.

Olin Workshop on the Library will be a focused research, design and build seminar dedicated to expanding the role, reach and relevance of the library in the Olin community. Projects may take the form of software, hardware, furniture, services and beyond.

Seminar Phases:
I) Research & Context: To limber up, we'll start with some brief design exercises. Concurrently we'll engage in discussion of the theory and practice of libraries.
II) Project Development: Projects may be of your own creation or drawn from the library's project wish list. Using different strategies, we will hone, illustrate and pitch each project idea.
III) Build: Seminar time will be devoted to building and iterating!

This is an opportunity to take hold of a sleepy dimension of Olin and wake it up. We've got over 10,000 sq. ft., a staff, a budget -- let's experiment! Meets Thursdays, 6:30-8:30pm in The Library.

SEM 103-S1: Seminar: Big Ideas in Pedagogy and Educational Technology Trends
Instructor: Marco Morales
Credit: 1
Grading: Pass/No Credit

An exploration of big ideas in education, focusing primarily on some of the major ideas put forward by cross disciplinary authors in the past thirty years (Dweck, Christensen, Selingo, Gardner, etc.). By reviewing how these ideas are received in educational systems as well as how they are integrated into products and educational tools, their effectiveness can be explored in context. Meets Tuesdays, 6:30-8:30p in AC318.

Area	Course #	Sec #	Course Title	Instructor	Time	Location	Credits	Enroll Limits	Notes
AHS	AHSE 0112	01	The Olin Conductorless Orchestra	Dabby	R 6:45-9:00pm	AC304, AC305, AC318	1	25	
AHS	AHSE 2131	01	Responsive Drawing and Visual Thinking	Donis-Keller	TF 10:50-12:30p	AC313	4	15	
AHS	AHSE 2199	01	Special Topics in Arts, Humanities and Social Sciences: *Foundations of Psychology*	Adler	TF 10:50-12:30p	AC128	4	24	Waitlist Available
AHS	AHSE 2199B	01	Special Topics in Arts, Humanities and Social Sciences: *Digital Documentary Storytelling*	Vitols	MR 10:50-12:30p	AC326	2	15	Session I
AHS	AHSE 2199C	01	Special Topics in Arts, Humanities and Social Sciences: *Hacktivism: Hacking for the Greater Good*	Vitols	MR 10:50-12:30p	AC326	2	15	Session II
AHS	AHSE 3100	01	Issues in Leadership and Ethics	Miller, R.	R 6-8:00pm	AC326	2	8	
AHS	AHSE 3190	01	Arts, Humanities, Social Sciences Capstone Preparatory Workshop	Epstein	n/a	n/a	1	20	
AHS	AHSE 4190	01	Arts, Humanities, Social Sciences Capstone	Epstein	T 9:10-10:40a	CC214	4	15	
AHS	AHSE 4190	02	Arts, Humanities, Social Sciences Capstone	Epstein	T 10:50-12:20p	CC214	4	15	
DSN	ENGR 2250	01	User Oriented Collaborative Design	Linder; Stolk; Mur-Miranda; Hendren; Ben Ur; Staff	MR 3:20-6:00p	AC204; MH120	4	32	
DSN	ENGR 2250	02	User Oriented Collaborative Design	Linder; Stolk; Mur-Miranda; Hendren; Ben Ur; Staff	MR 3:20-6:00p	AC206; MH120	4	32	
DSN	ENGR 2250	03	User Oriented Collaborative Design	Linder; Stolk; Mur-Miranda; Hendren; Ben Ur; Staff	MR 3:20-6:00p	AC209; MH120	4	32	
DSN	ENGR 3210	01	Sustainable Design	Linder	TF 1:30-3:10p	AC213	4	25	
DSN	ENGR 3260	01	Design for Manufacturing	Tong	MR 9-10:40a	AC128	4	25	Tentative Offering
DSN	ENGR 3290	01	Affordable Design and Entrepreneurship	Linder	T 3:30-6:30p	AC213	4	12	Note: enroll in this section if you are taking the course as a design depth; WAITLIST Available
DSN	ENGR 3299	01	Special Topics in Design Engineering: *Investigating Normal: Adaptive and Assistive Technologies*	Hendren	MR 10:50-12:30p	AC213	4	22	Waitlist Available
E!	AHSE 1515	01	Products and Markets	Neeley; Hoover; Lynch; Pratt; Brand; Hopper	T 9-12:30p; R 9-10:40a	AC318; MH120	4	28	Note: non-standard pattern
E!	AHSE 1515	02	Products and Markets	Neeley; Hoover; Lynch; Pratt; Brand; Hopper	T 9-12:30p; R 9-10:40a	AC326; MH120	4	28	Note: non-standard pattern

Area	Course #	Sec #	Course Title	Instructor	Time	Location	Credits	Enroll Limits	Notes
E!	AHSE 1515	03	Products and Markets	Neeley; Hoover; Lynch; Pratt; Brand; Hopper	T 9-12:30p; R 9-10:40a	AC328; MH120	4	28	Note: non-standard pattern
E!	AHSE 3599	01	Special Topics in Entrepreneurship: *Intellectual Property Protection for Innovative Designs*	Covello	R 3:20-5:00p	AC318	2	15	Full Semester Offering
E!	AHSE 4590	01	Entrepreneurship Capstone	Brand	TF 1:30-3:10p	AC328	4	20	Waitlist Available
E:BE	ENGR 3640	01	Tissue Engineering	Sarang-Sieminski	MR 1-3:10p	AC404; AC417	4	12	Waitlist Available
E:C	ENGR 3599	01	Special Topics in Computing: Computer Networks	Morrow	MR 10:50-12:30p	AC128	4	25	
E:C	ENGR 2510	01	Software Design	Ruvolo; Hill	MR 1:30-3:10p	AC326	4	35	
E:C	ENGR 2510	02	Software Design	Ruvolo; Hill	MR 3:20-5:00p	AC326	4	35	
E:C	ENGR 3520	01	Foundations of Computer Science	Pucella	MR 6:30-8:10pm	AC128	4	30	Waitlist Available
E:MS	ENGR 3610	01	Biomedical Materials	Chachra	MR 9:00-10:40p	AC406; AC413; AC417	4	20	
ECE	ENGR 2410	01	Signals and Systems	Mur-Miranda; Downey; Govindasamy	MR 10:50-12:30p	AC304	4	32	
ECE	ENGR 2420	01	Introduction to Microelectronic Circuits with LAB	Minch	TRF 9-10:40a	AC304	4	48	
ECE	ENGR 3415	01	Digital Signal Processing	Dabby	TF 1:30-3:10p	AC304	4	25	
ECE	ENGR 3430	01	EE Prototyping	Lundberg	MR 3:20-6:00p	AC304	4	24	
ECE	ENGR 3450	01	Semiconductor Devices	Kerns, S; Kerns, D	TF 10:50-12:30p	AC126	4	20	
ENGR	ENGR 1199	01	Special Topics in Engineering: *Introduction to the Microelectronics, Nanotechnology and MEMS Revolution(s)*	Kerns, S; Kerns, D	TF 1:30-3:10p	AC126	4	12	
ENGR	ENGR 1199A	01	Special Topics in Engineering: *Linear Systems Lab*	Storey	R 3:20-5:30pm	AC428	2	25	Full Semester Offering
ENGR	ENGR 1330	01	Fundamentals of Machine Shop Operations	Andruskiewicz	W 12:30-4:30p	AC104	4	6	
ENGR	ENGR 2199	01	Special Topics in Engineering: Applications of Microfluidics	Irimia; Storey	T 3:20-6:00p	AC428	4	25	Note: contingent on demand

Area	Course #	Sec #	Course Title	Instructor	Time	Location	Credits	Enroll Limits	Notes
ENGR	ENGR 2210	01	Principles of Engineering	Govindasamy	MR 1:30-3:10p	AC306	4	28	
ENGR	ENGR 3199	01	Special Topics in Engineering: *Designing Resources for Empowerment and Making (DREAM)*	Millner	TF 1:30-3:10p	AC109	4	25	
ENGR	ENGR 3199A	01	Special Topics in Engineering: *Elecanisms*	Hoover; Minch	M 9-12:30p; R 10:50-12:30p	AC306	4	25	Waitlist Available
ENGR	ENGR 4190	01-14	Senior Capstone Program in Engineering (SCOPE)	Sarang-Sieminski; Minch; Bennett; Barrett; Lee; Govindasamy; Ruvolo; Coats; Downey; Stein; Christianson; Millner	W 9-10:40a; 12:30-6:00p	varies	4	n/a	Note: enroll in the same section you are presently in for Fall 2014
ENGR	ENGR 4290	01	Affordable Design and Entrepreneurship	Linder	T 3:30-6:30p	AC213	4	15	Note: enroll in this section if you are taking this course as your capstone
INTEGRATED	AHSE 2141 / ENGR 2141	01	Engineering for Humanity	Ben Ur; Lynch	M 1:30-3:10p; W 1-4:00p	AC109	2+2	18	
INTEGRATED	AHSE 2199A / SCI 2099A	01	Special Topics in AHS and Science: *Paradigms, Predictions and Joules - Historical and Scientific Approach to Energy and the Environment*	Martello	T 3:30-8:00pm	at Olin: AC326 / will also meet at Wellesley	3+3	9	Waitlist Available
INTEGRATED	MTH 2188A / ENGR 2199A	01	Designated Alternative in Engineering and Mathematics: *Data Science*	Downey	TF 10:50-12:30p	AC417	2 + 2	25	Note: satisfies ProbStat requirement; WAITLIST Available
ME	ENGR 2320	01	Mechanics of Solids and Structures	Lee	M 9-10:00a; WF 9-10:40a	AC328	4	42	Waitlist Available
ME	ENGR 2330	01	Introduction to Mechanical Prototyping	Barrett	TF 1:30-3:10p	AC309	4	25	Waitlist Available
ME	ENGR 2350	01	Thermodynamics	Townsend; Manno	MR 1:30-3:10p	AC318	4	25	Waitlist Available
ME	ENGR 3330	01	Mechanical Design	Barrett	TF 10:50-12:30p	AC309	4	25	Waitlist Available
ME	ENGR 3345	01	Mechanical and Aerospace Systems	Lee	MR 10:50-12:30p	AC109	4	15	Waitlist Available
ME	ENGR 3370	01	Controls	Lundberg	MR 1:30-3:10p	AC304	4	25	
ME	ENGR 3392	01	Robotics Systems Integration	Bennett	MR 10:50-12:30p	AC309	4	25	
MTH	MTH 2130	01	Probability and Statistics	Patel	MR 9-10:40a	AC213	2	25	Session I
MTH	MTH 2199	01	Special Topics in Mathematics: *A Mathematical Introduction to Cryptography*	Patel	MR 1:30-3:10p	AC128	4	25	
MTH	MTH 2199A	01	Special Topics in Mathematics: *Structure in Randomness: A Mathematical Perspective*	Patel	MR 9-10:40a	AC213	2	25	Session II

Area	Course #	Sec #	Course Title	Instructor	Time	Location	Credits	Enroll Limits	Notes
MTH	MTH 2210	01	Linearity I	Adams; Hoffman; Storey	W 9-10:40a; F 9-12:30p	2nd Floor Campus Center; CC209, 210, 211, 213, 214	4	90	Note: non-standard pattern
MTH	MTH 3120	01	Partial Differential Equations	Hoffman	TF 1:30-3:10p	AC326	4	28	
SCI	SCI 1130	A1	Mechanics: Theoretical / Experimental Approach	Zastavker	MR 10:50-12:30p	AC318	4	30	Waitlist Available
SCI	SCI 1130	C1	Mechanics: Modeling and Simulation Approach	Somerville	MR 10:50-12:30p	AC328	4	30	Waitlist Available
SCI	SCI 1130	C2	Mechanics: Modeling and Simulation Approach	Somerville	MR 1:30-3:10p	AC328	4	30	Waitlist Available
SCI	SCI 1210	01	Principles of Modern Biology (with Lab): *Human Genetics and Genomics*	Donis-Keller	TF 1:30-3:10p; W 12:30-3:10p	AC318; AC406	4	24	Waitlist Available
SCI	SCI 1210	02	Principles of Modern Biology (with Lab)	Huang	TF 1:30-3:10p; T 3:20-6p	AC417; AC406	4	24	Waitlist Available
SCI	SCI 1410	01	Materials Science and Solid State Chemistry (with Lab)	Christianson	MR 3:20-6:00p	AC413	4	21	Waitlist Available
SCI	SCI 1410	B1	Materials Science and Solid State Chemistry (with Lab): *Environmental and Societal Impact of Materials*	Stolk	TW 3:20-6:00p	AC413	4	21	Waitlist Available
SCI	SCI 2130	01	Quantum Physics	Holt	TF 1:30-3:10p	AC113	4	25	
SCI	SCI 2145	01	High Energy Astrophyics	Holt	TF 10:50-12:30p	AC113	2	25	Session I
SCI	SCI 3130	01	Advanced Classical Mechanics	Zastavker	MR 1:30-3:10p	MH373	4	30	
SEM	SEM 101	S1	Seminar: Product Management	Chisa	W 6:30-9:00p	AC318	1	25	
SEM	SEM 102	S2	Seminar: Olin Workshop on the Library	Goldenson	R 6:30-8:30p	The Library	1	25	
SEM	SEM 103	S2	Seminar: Big Ideas in Pedagogy and Educational Technology Trends	Morales	T 6:30-8:30p	AC318	1	25	
SUST	SUST 3301	01	Sustainability Certificate Synthesis Course	Linder; Higgins, Monica (Wellesley)	R 3:30-6:30p	AC213	4	15	
	AWAY 1000	01	Study Away Program	Administration	n/a	n/a	12	n/a	
	OIP 1000	01	The Olin Internship Practicum	Phelps	n/a	n/a	1	n/a	

Row 1

- MTH 2130 Probability & Statistics Sess I AC213
- MTH 2199A Spec Top Math: "Structure in Randomness" SESS II AC213
- ENGR 3610 Biomedical Materials AC406 AC413 AC417
- ENGR 3260 Design for Manufacturing AC128
- ENGR 3199A Spec Topics Engr: Elecanisms M 9-12:30; R 10:50-12:30p AC 306
- ENGR 2320 Mechanics Solids Structures M 9:-10:00a AC328
- ENGR 2420 Intro MicoElectronic Circuits (Tues Thurs & Fri) AC304
- AHSE 4190 Sec 01 AHS Capstone 9:10-10:40a CC214
- AHSE 1515 All Sections Products & Markets AC318 AC326 AC328
- ENGR 2320 Mechanics Solids Structures M-W-F AC328
- MTH 2210 Linearity I 2nd Flr Campus Center; CC209, 210, 211, 213, 214
- ENGR 4190 SCOPE

Row 2

- SCI 1130- A1 Mechanics: Theoretical Approach AC318
- SCI 1130-C1 Mechanics: Mod Sim Apporach AC328
- ENGR 2410 Signals and Systems AC304
- ENGR 3345 Mech Aero AC109
- ENGR 3392 Robotics Sys Integration AC309
- ENGR 3299 Spec Top in Design: Investigating Normal AC213
- ENGR 3599 Spec Top Computing: Computer Networks AC128
- AHSE 2199B Spec Topic AHS: Digital Documentary SESS I AC326
- AHSE 2199C Spec Topic AHS: Hacktivism SESS II AC326
- AHSE 2131 Resp Drawing Visual Thinking AC313
- SCI 2145 High Energy Astrophysics SESS I AC113
- MTH 2188A & ENGR 2199A: Spec Top Math/Engr: Data Science AC417
- ENGR 3450 Semiconductor Devices AC126
- ENGR 3330 Mechanical Design AC309
- AHSE 2199 Spec Topic AHS: Fnd of Pyschology AC128
- AHSE 4190 Sec 02 AHS Capstone 10:50-12:20 pm CC214

Row 3

- SCI 3130 Adv Classical Mechanics MH373
- ENGR 2350 Thermodynamics AC318
- MTH 2199 Spec Top Math: "Cryptography" AC128
- ENGR 2510, sec 01 Software Design AC326
- ENGR 2210 Principles of Engineering AC306
- ENGR 3370 Controls AC304
- SCI 1130-C2 Mechanics: Mod Sim Apporach AC328
- ENGR 3640 Tissue Engineering MR 100-3:10p AC404 AC417
- AHSE & ENGR 2141 Engineering for Humanity AC109
- SCI 1210 sec 01 Prin of Modern Biology: Human Genetics. AC318
- SCI 1210 sec 02 Prin of Modern Biology AC417
- SCI 2130 Quantum Physics AC113
- ENGR 3415 Digital Signals Processing AC304
- MTH 3120 Partial Differential Equations AC326
- ENGR 2330 Mechanical Prototyping AC309
- ENGR 3199 Spec Topic Engr: DREAM AC109
- ENGR 1199 Spec Top in Engr: MicroNano Revolution AC126
- AHSE 4590 Entrepreneurship Capstone AC328
- ENGR 3210 Sustainable Desgin AC213
- SCI 1210 sec 01 Prin of Modern Biology: Human Genetics LAB AC406
- AHSE & ENGR 2141 Engineering for Humanity M 1:30-3:10; W 1-4p AC109
- ENGR 1330 Fnd Machine Shop Oper AC104 12:30-4:30p
- ENGR 4190

Row 4

- ENGR 2250 Sec 01, 02, 03 User-Oriented Collaborative Design AC 204, 206, 209 MH120
- ENGR 3430 EE Prototyping AC304
- SCI 1410 sec 01 Materials Science and Solid State Chemistry: AC413
- ENGR 2510, sec 02 Software Design AC326
- SCI 1210 sec 02 Prin of Modern Biology LAB AC406
- SCI 1410 sec B1 Materials Science and Solid State Chemistry: Societal and Envt'al Impact TW 3:20-6 AC413
- AHSE 2199A / SCI2099A Special Topics in AHS & Sci: Hist/Sci Appr to Energy and Environment 3:30-8pm when at Olin: AC 326
- ENGR 3290 and 4290 Affordable Design & E! Tues 3:30-6:30p AC213
- ENGR 2199 Spec Top in Engr: Appl of Microfluidics 3:20-6 AC428
- SCI 1410 sec B1 Materials Science and Solid State Chemistry: Societal and Envt'al Impact TW 3:20-6 AC413

Row 5

- ENGR 3520 Foundations of Computer Science FOCS 6:30-8:10p AC128
- SEM 103 Pedagogy and Educ Tech Trends 6:30-8:30 AC318
- SEM 101 Product Management 6:30-9:00 AC318

AHSE	SCI	Math	INTEGRATED OFFERING (colored via discipline blending)	Color Key-Offering Blocks

Thursday / Friday

9:00 AM – 10:40 AM

- ENGR 2420 Intro MicoElectronic Circuits (Tues Thurs & Fri) AC304
- ENGR 3260 Design for Manufacturing AC128
- ENGR 3610 Biomedical Materials AC406 AC413 AC417
- MTH 2130 Probability & Statistics Sess I AC213
- MTH 2199A Spec Top Math: "Structure in Randomness" SESS II AC213
- AHSE 1515 All Sections Products & Markets AC318 AC326 AC328
- ENGR 2320 Mechanics Solids Structures AC328
- ENGR 2420 Intro MicoElectronic Circuits (Tues Thurs & Fri) AC304
- MTH 2210 Linearity I

10:50 AM – 12:30 PM

- SCI 1130-A1 Mechanics: Theoretical Approach AC318
- SCI 1130-C1 Mechanics: Mod Sim Apporach AC328
- ENGR 2410 Signals and Systems AC304
- ENGR 3345 Mech Aero AC109
- ENGR 3392 Robotics Sys Integration AC309
- ENGR 3299 Spec Top in Design: Investigating Normal AC213
- ENGR 3199A Spec Top Engr: Elecanisms M 9:50-12:30; R 10:50-12:30p AC 306
- ENGR 2599 Spec Top in Computing: Computer Networks AC128
- AHSE 2199B Spec Topic AHS: Digital Documentary SESS I AC326
- AHSE 2199C Spec Topic AHS: Hacktivism SESS II AC326
- AHSE 2131 Resp Drawing Visual Thinking AC313
- SCI 2145 High Energy AstroPhysics SESS I AC113
- MTH 2188A & ENGR 2199A: Spec Top Math/Engr: Data Science AC417
- ENGR 3450 Semiconductor Devices AC126
- ENGR 3330 Mechanical Design AC309
- AHSE 2199 Spec Topic AHS: Fnd of Pyschology AC128
- 2nd Flr Campus Center; CC209, 210, 211, 213, 214

1:30 PM – 3:10 PM

- SCI 3130 Adv Classical Mechanics MH373
- ENGR 2350 Thermodynamics AC318
- MTH 2199 Spec Top Math: "Cryptography" AC128
- ENGR 2510, sec 01 Software Design AC326
- ENGR 2210 Principles of Engineering AC306
- ENGR 3370 Controls AC304
- SCI 1130-C2 Mechanics: Mod Sim Apporach AC328
- ENGR 3640 Tissue Engineering MR 1:00-3:10p AC404 AC417
- SCI 1210 sec 01 Prin of Modern Biology: Human Genetics AC318
- SCI 1210 sec 02 Prin of Modern Biology AC417
- SCI 2130 Quantum Physics AC113
- ENGR 3415 Digital Signals Processing AC304
- MTH 3120 Partial Differential Equations AC326
- ENGR 2330 Mechanical Prototyping AC309
- ENGR 3199 Spec Topic Engr: DREAM AC109
- ENGR 1199 Spec Top in Engr: MicroNano Revolution AC126
- AHSE 4590 Entrepreneurship Capstone AC328
- ENGR 3210 Sustainable Desgin AC213

3:20 PM – 6:00 PM

- ENGR 2250 Sec 01, 02, 03 User-Oriented Collaborative Design AC 204, 206, 209 MH120
- ENGR 3430 EE Prototyping AC304
- SCI 1410 sec 01 Materials Science and Solid State Chemistry: AC413
- ENGR 2510, sec 02 Software Design AC326
- ENGR 1199A Spec Top in Engr: Linear Sys Lab 3:20-5:30p AC428
- SUST 3301 3 College Sustainability Synthesis R 3:30-6:30p Location: all 3 campuses when at Olin AC213
- AHSE 3599 Spec Topic Entreprnshp: Intellectual Prop.. AC318

Community Service

6:00 PM – 9:00 PM

- AHSE 3100 Issues in Leadership and Ethics 6-8:00p @ Olin Campus AC326
- AHSE 0112 Olin Conductorless Orchestra 6:45-9pm 305 + 304 + 318
- ENGR 3520 Foundations of Computer Science FOCS 6:30-8:10p AC128
- SEM 102 Workshop on the Library 6:30-8:30 The Library