# Olin College Registration Booklet

Spring 2010

Classes begin Tuesday, January 19, 2010

Volume 8, Number 2.2, November 6, 2009

## Olin College Registration Booklet Spring 2010

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# Registration Timelines for Add ; Drop and Pass/No Credit ; Withdraw

Session	Add	Drop and Pass/No Credit	Withdraw
Full Semester (Jan 19 - Apr 29)	February 1, 2010	March 30, 2010	April 29, 2010
Session I (Jan 19 - Mar 8)	January 25, 2010	February 19, 2010	March 5, 2010
Session II (Mar 8 – Apr 29)	March 12, 2010	April 16, 2010	April 29, 2010

## 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. Examples are passionate pursuits and shop. 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.

#### 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?

- NEW INFO HERE
- Olin Self Study The ARB made a change to this requirement beginning this academic year 2009-10. Please see information on the <u>StAR Center website</u> for details. You will need to complete a form with your OSS intention by the last day to add a course for the spring 2010 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 2010 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 Executive committee of the Passionate Pursuit Board in addition to consent of a faculty sponsor and the student's adviser. Passionate Pursuit proposals should be sent to the chair of the executive board, the Dean of Student Life. The deadline is mid-semester.

#### 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 pre-requisites 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.

#### **CROSS-REGISTRATION:**

In order to submit a cross-registration request, use the cross-registration portlet under the MyStAR tab at <a href="http://my.olin.edu">http://my.olin.edu</a>. 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**

You can find their offerings at .http://www.babson.edu/registrar/. Registration is November 3, 2009 through January 27, 2010.

#### **Brandeis University Cross Registration**

You can find Brandeis offerings at <a href="http://www.brandeis.edu/registrar/reg-sched/sch.html">http://www.brandeis.edu/registrar/reg-sched/sch.html</a>. Registration is open from January 12, 2010 through February 1, 2010. NOTE: All Brandeis registration requests must have 6 digit approval code from the instructing Brandeis faculty member. These codes are aviable from the faculty beginning January 12th. Registrations submitted without permission will not be processed.

#### **Wellesley College Cross Registration**

You can find their offerings at <a href="http://www.wellesley.edu/Registrar/Menupage8.html">http://www.wellesley.edu/Registrar/Menupage8.html</a> . You can register November 16, 2009 thru January 8, 2010. After January 8, 2010, you can only register via the visiting student card process. No requests will be sent from the StAR Center after January 8, 2010.

#### 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 <a href="http://star.olin.edu">http://star.olin.edu</a> for more information.

#### What About Co-Curriculars?

Registration and descriptions for Co-Curriculars will be released during the add period in January. If a student has 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 <a href="http://star.olin.edu">http://star.olin.edu</a>.

#### When Do I Register?

On-line registration will take place November 9-12, 2009 during the evening hours. Information regarding the groups will be sent **via email** no later than November 6, 2009.

(Registration will be open to cleared and eligible students only. A cleared student is one that 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 19, 2010 and end on February 1, 2010. Add requests can be processed in person at the StAR Center and on-line. Add/Drop forms can be found at <a href="http://star.olin.edu">http://star.olin.edu</a>.

The Drop period begins January 19, 2010 and ends March 30, 2010. 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 at the StAR Center. There are no on-line drops after the add period ends.

The last day to withdraw from a course is the last day of instruction.

(\*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 1, 2010. 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 most courses. In sis.olin.edu, 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.

### Spring 2010 Supplement to Current Course Catalog

Degree requirements are outlined in the Course Catalog. You may view the on-line catalog at 2009-10 Course Catalog

**Course descriptions** can also be found in the <u>2009-10 Course Catalog</u>. Changes to 2009-10 catalog courses or new course offerings for the spring 2010 semester are listed below.

#### AHSE 2199: Special Topics in Arts, Humanities, Social Sciences

What People Leave Behind, and What it Tells Us: An Introduction to Archaeology

Instructor: Watters Credits: 4 AHSE Hours: 4-0-8

How do we learn from the past? This course will examine theories and methods used for archaeological investigation, interpretation, and preservation. Based on these fundamentals, key moments in cultural development and world civilization will be studied, such as the ancient Maya, the Native American site of Cahokia, the Neolithic site of Çatalhöyük, and more. Archaeology also plays an important role in modern business and politics, which presents moral and ethical challenges. We will discuss issues such as the continuing black market trade of illegal artifacts, urban expansion and new construction at sites such as Teotihuacan and the Giza Plateau, and the threat to our world archaeological heritage by ongoing war. For a group project called "Garbology to Display," students will focus on excavating discarded remnants of everyday Olin activities. In the first half of this project, finds will be analysed, interpreted, and submitted in report form. For the second half of the project, students will develop a museum exhibit for the Olin community based on their excavation and finds. The class will include trips to current archaeological excavations and museums, guest lecturers, and discussion of current discoveries in world archaeology.

#### AHSE 2199A: Special Topics in Arts, Humanities, Social Sciences

What is Change? Instructor: Adler Credits: 4 AHSE Hours: 3-0-9

There is a lot of discussion at Olin about change. As engineers, we strive to design and build tools to change the world. As engaged citizens, we strive to change our community (both at Olin and in our social contexts more broadly). And as individuals, we are constantly striving to change ourselves ever closer towards approximations of our personal ideals. While these change processes are implicitly embedded in much of the work of our daily lives, this course will take change as its explicit focus. In attempting to tackle the big question "What is change" we will consider the matter from a variety of scientific and philosophical perspectives. We will ask what makes a thing a thing (the study of entativity), how we should demarcate the boundaries when something has ceased to be itself and becomes something else, and how we can best understand the forces that drive change. Case examples will provide the fodder for this discussion-based course, with a special emphasis paid to the science of psychological development. In addition to reading, writing, and oral assignments, students will work in teams over the course of the semester to produce a Change Initiative, the primary deliverable. This project will involve the development and implementation of a project designed to produce meaningful and measurable change. The Change Initiative could be focused on social engineering topic, a personal development project, or some other topic and will be cleared by the professor before approved. Students will leave this course with a deeper understanding of the phenomenon of change and some hands-on experience in promoting it.

#### AHSE 2199B: Special Topics in Arts, Humanities, Social Sciences

Teaching and Learning in Undergraduate Science and Engineering

Instructor: Miller, Rebecca

Credits: 2 AHSE --- Taught during Session I

Hours: 3-0-9

This course will examine select topics in teaching and learning in undergraduate science, technology, engineering, and mathematics (STEM) courses. The goal of the course is to help participants become effective tutors, teaching assistants, mentors, and future instructors in these fields. In a seminar format, participants will discuss research on best practices in pedagogy and curriculum design, cognition and learning, student classroom experiences, diversity, and assessment. Participants will gain experience in instructional design, pedagogy, and assessment, and will develop a teaching portfolio.

#### AHSE 2199C: Special Topics in Arts, Humanities, Social Sciences

Beautiful, Good, Radical, Sustainable: Design and its Contexts Since 1900

Instructor: Bottinelli Credits: 4 AHSE Hours: 4-0-8

How do designers respond to historical traditions but also remain innovative? This course offers an overview of twentieth-century design history and theory, with a focus on furniture, textiles, appliances, landscape design, logos, and graphic and web design. We will analyze the production of individual artists, firms, groups and movements by considering:

- the cultural, political and social impact of design
- the role of technology on design choices
- economic issues related to industry, marketing and design
- aspects of reception: design and its publics.

We will cover the following movements and themes: Art Nouveau; Art Deco; Bauhaus; modernist design in the mid-twentieth century; the design of appliances and automobiles in the post-War period; Alvar Aalto and Scandinavian design; Radical design and architecture in the 1960s and 1970s; land art and landscape design; post-modernism in the late twentieth century. The course will culminate in an exploration of contemporary design, including sustainable design, web graphics, and furniture design of global companies such as Ikea. The course format will include short lectures, discussions, and student presentations. Students will keep a journal/blog with notes and thoughts inspired by the course. As a final experience, students will create a wiki or website on a specific topic related to the course materials. Field trips will include trips to the Gropius House in Lincoln, The Apple Store in Boston, and Ikea in Stoughton.

#### AHSE 3199: Special Topics in Arts, Humanities, Social Sciences

Issues in Leadership and Ethics

Instructor: Miller, Schlesinger; Bottomly

Credits: 2 AHSE Hours: 2-0-4

Pre-requisite: students in their final year of their undergraduate program

[NOTE: Special time considerations – For approximately five evenings during the semester, guest speakers will deliver a public lecture. On the evenings without guest lecturers, the course will meet from approximately 6:00-7:30pm.]

This course examines the intersection of leadership and ethics in business, engineering, and more general contexts. Readings will include material on the definition and history of ethics and morality in the U.S., the definition and development of leadership skills in a professional context, the role of ethics in the professions, and case studies involving the intersection of leadership and ethics. The course will be structured as a seminar, involving guest speakers and interactive case studies. Enrollment will be limited to 8 Babson students, 8 Olin students, and 8 Wellesley students in the final year of their undergraduate program.

#### AHSE 4190: Arts, Humanities Social Sciences Capstone Project

Course Capstones: Deadline for applying for approval for spring '09 "course capstones" is Thursday, November 5, 2009. Information on this process is available in the AHS policies information that will be emailed to all students around the time of the release of spring '10 registration information.

#### **Project Capstones**

- Music: Students wishing to do music capstone projects should register for AHSE 4190, sec. 01 (Dabby)
- All others: Students wishing to do capstone projects in fields other than Music should register for AHSE 4190, sec. 02 (Stein)

#### **ENGR 3199: Special Topics in Engineering**

**Project Management for Engineering Businesses** 

Instructor: Devaux Credits: 4 ENGR Hours: 4-0-8 Prerequisites:

Every significant engineering effort, from repairing a bridge to developing a system to harness a new energy source, is a project. As such, it represents an investment, sometimes of billions of dollars, and should be managed using the techniques and metrics of project management that have been developed and enhanced over the past century. This course will provide students with an understanding of the history, importance, current practice, and future directions of project management, including ROI, scope definition, work and resource scheduling, cost planning, risk management, and earned value tracking and control. Through readings, lectures, discussions, and extensive use of case studies, participants will become familiar with project management theory and techniques and learn how to apply them to real projects.

#### **ENGR 3199A: Special Topics in Engineering**

Instrumentation: Sensors and Signals

Instructor: Lundberg Credits: 4 ENGR Hours: 4-4-4

Prerequisites: ENGR 2340 or ENGR 2410 Note: Can be used as an ECE or ME Elective

Science requires data, and gathering good data requires interfacing useful circuitry to useful sensors. This course is an introduction to the science and practice of instrumentation. Measurement of the real world is the basis of science, engineering, manufacturing, and design. Topics covered include surveys of sensors and transducers, the design of interface circuitry, and techniques for data acquisition. The course will contain significant open-ended laboratory projects in measurement and data collection, as well as discussion of how modern scientific instruments are enabled by novel sensors. Students will be expected to independently research topics related to instrumentation and metrology and to present case studies and projects to the class.

#### **ENGR 3399 Special Topics in Mechanical Engineering**

Mechanical and Aerospace Systems II

Instructor(s): Lee, Prechtl

Hours: 4-0-8

Prerequisites: ENGR3385 or permission of instructor

This course involves the design, fabrication and experimental evaluation of a mechanical or aerospace system. Building upon the analytical skills developed in Part I teams of students will complete a comprehensive multi-component system design to satisfy a number of stringent specifications. Detailed simulations will be employed to evaluate design performance. Analytical modeling will transition into hardware fabrication and test. Sub-assemblies will be built, evaluated and refined, if necessary, to meet performance objectives. They will then be integrated into a final system. Testing will be done to evaluate whether the system meets the original performance specifications. Advanced topics in Mechanical and Aerospace Engineering will be included.

#### **ENGR 3499: Special Topics in Electrical and Computer Engineering**

**Principles of Wireless Communications** 

Instructor: Govindasamy Credits: 4 ENGR Hours: 4-0-8

Prerequisites: ENGR 3420, familiarity with basic Linear Algebra and Probability

This course teaches students the main principles of modern wireless communications systems. Students will learn about the propagation and modeling of wireless signals, communications concepts particularly applicable to wireless channels such as channel coherence, diversity, and outage capacity, multiple-input-multiple-output (MIMO) channels using multiple antennas, and multi-user communications. Students will be required to do a substantial, simulation or in exceptional cases hardware-based design project.

#### ENGR 3499A: Special Topics in Electrical and Computer Engineering

#### **Mobile Application Development**

Instructors: Chang Credits: 4 ENGR Hours: 4-0-8

Prerequisites: "Suggested"- Software Design or programming experience, FBE or equivalent experience, UOCD or design experience. Please contact Mark if you have questions.

Mobile Application Development is an experimental course offered this Spring. The objective of the course is to investigate the mobile marketplace through the lenses of design, entrepreneurship, and engineering. In the final project for the course, students will work in teams to develop commercially viable mobile applications. We draw inspiration for this course from Hal Abelson's Building Mobile Applications at MIT, Stanford's CS 193P iPhone Application Programming, and Maneesh Agrawala's CS160 Introduction to Human Computer Interaction at Berkeley.

This course aims to offer an experience at the intersection between design, engineering, and entrepreneurship. Mobile Application Development leverages required coursework at Olin in software design, user-oriented design, and business and entrepreneurship, and applies these concepts in the mobile space. Technically, students will be learning about all aspects of programming mobile devices. Students, through Design, will engage in ideation, user study, and lightweight rapid prototyping. Using Entrepreneurship, students will unpack the mobile market space to find points of opportunity.

#### **ENGR 3599: Special Topics in Computing**

Six Topics in Computing Instructors: Downey; Sheldon

Credits: 4 ENGR Hours: 4-0-8

Prerequisite: ENGR2510; or equivalent

This course will be organized as a series of two-week modules covering a variety of topics in computer science. One of the goals of this course is to give students an opportunity to learn material and skills they are likely to find useful. Another goal is to develop material that might become part of future courses. Students will have the opportunity (and will be expected) to shape the content of this class and help develop materials.

The following is a tentative list of topics, although it is likely that we will work with students to refine this list during the semester:

- 1) Software engineering in Java: Students will learn Java on an accelerated schedule and practice using software engineering tools like Subversion (for version control) and Rietveld (for code review).
- 2) Formal language specification: Students will learn to understand and write specifications for common and novel programming language features in a formal semantics (such as SOS).
- 3) Web programming: An introduction to web-based programming in Java, probably using Google's AppEngine and GWT.
- 4) Interpreter implementation: Students will investigate several programming language features in the context of an interpreter implementation project.
- 5) Software control systems and computer security: Students will be introduced to control systems, to computer and network security facilities, and to current practice and problems in these areas; they will learn basic control system specification and programming in a control systems language such as Labview.
- 6) Design patterns: Introduction to software design patterns and UML, possibly using Head First Design Patterns.

Other topics might include parallel and distributed systems, multicore systems, ...

#### **ENGR 3620: Cellular Bioengineering**

Instructor(s): Sieminski Credits 4 ENGR Hours 4-0-8 Prerequisites:

This course aims to give students an appreciation of the power of using quantitative approaches to increasing our understanding of biological phenomena. Receptor-ligand binding will be considered and compared to experimental data to discuss mechanisms in cell signaling studies. Basic binding models will be expanded to consider the effect of forces in situations such as white blood cells rolling, detaching, and adhering during surveillance of blood vessels. We will consider the effects of forces from the molecular to the whole-cell level. How do cells exert force? And how can we measure those forces? How do the properties of the substrates cells attach to affect their behaviors? How can we translate observations made in the 2D environment to the 3D environment? And how are these similar and different? These concepts will be explored to study the effect of forces in cellular processes such as migration, traction generation, differentiation, signaling and gene expression.

#### **ENGR 3899: Special Topics in Materials Science**

**Process Engineering in Materials Science** 

Instructor: Neal Credits: 4 ENGR Hours: 4-0-8

Prerequisite: SCI 1410

The Design Nature course focuses on experiencing the engineering design process. This course will be about the engineering design of a process. 'Process' being the systematic method for reproducibly producing all or part of a product. Those who design, develop, enhance and maintain manufacturing processes are often called process engineers. This is more a job description than an engineering discipline as process engineers can be scientists or engineers from any discipline. In any case, all can design and develop processes more effectively when they integrate materials science knowledge and principles into their work. This course will be a team-based project-oriented experience that integrates materials science concepts with systematic experiment design methodologies and applied statistical analysis. Experimentation plays an important role in all phases of product realization, and here we will focus on the process development and improvement part of that. Student project teams will learn and use design of experiments methodologies and statistical analysis techniques to develop and optimize processes. Students will acquire and apply new materials science knowledge throughout the process development projects.

# ENGR 3899A: Special Topics in Materials Science Metals and Alloys: From Microstructure to Global Impact

Instructor: Stolk Credits: 2 ENGR Hours: 2-0-4

Prerequisite: SCI 1410 and permission of the instructor

Although they are often overlooked in favor of more fashionable modern materials, metals and alloys still play critical roles in our daily lives. From automobile chassis to hip prostheses to microelectronics conductors to iPod shells, we rely on metals for their functional, interactive, and aesthetic properties. In this course, you will have the opportunity to deeply explore metals and alloys. The course will adopt a flexible, project-based approach that emphasizes student self-direction and alignment of learning strategies with personal goals. Individuals or small teams will create a self-designed project to investigate a topic in the production, processing, properties, applications, or broader context/impact of metals and alloys. To complement the project stream, we will survey a range of topics in modern metals and alloys. We will start the semester by considering the source of metals: our natural environment. We will examine the processes of metal mining, extraction of metals from ore, and conversion of raw metals into usable forms; and we will investigate the economic, ecological, and environmental costs of our societal reliance on metallic materials. Next, we will focus on the materials science theory that helps us explain and predict phase transformations in metals and alloys. Since the properties of alloys are largely determined by the intrinsic characteristics of the individual metal components and the interaction of these components to form different microstructures, we will take a closer look at how free energy of mixing, diffusion, phase equilibria, nucleation and growth, surface and interfacial energy, and transformation kinetics contribute to microstructural development. Finally, we will use the semester-long projects to tie together the materials science theory, engineering applications, and broader contextual considerations. Since this is a new course, we will have the opportunity to test a variety of different readings and assignments. Your feedback throughout the semester will not only shape your own experience, but also that of students in future offerings of the course.

#### **SCI 2199: Special Topics in Physics**

#### **Biomechanics**

Instructor: Zastavker Credits: 4 SCI Hours: 4-0-8

Prerequisite: Completion of Olin's first year curriculum, or one full year of calculus-based college-level physics and 1 year of college-level calculus, or permission of instructor.

Why is giraffe's head so small in comparison to the rest of its body? Why do babies' heads flatten when they sleep in the same position? Why do knees bend only in one direction? Why are people taller in the morning? In this course, we will study the nature and function of human body and its movement with specific emphasis on movements produced in sport, dance, and every day physical activities. The principles of Newtonian mechanics, statics, and dynamics will be applied to discuss behavior of bone, tendon, ligaments, and other biological materials during human movement.

# SCI 2299: Special Topics in Biology Microbial Diversity

Instructor: Huang Credits: 4 SCI Hours: 4-0-8

Prerequisite: SCI 1210

This course is an introduction to the tremendous diversity of the microbial world. The focus will be on the study of environmental bacteria and their metabolic, physiological and genetic diversity. Topics will include: bacterial growth, energy metabolism, nutrient cycling, symbiosis, bioremediation, culture techniques and molecular methods to work with bacteria. The laboratory will encourage student exploration of the microbial world through individual and group projects. Students will gain experience with techniques to culture and study a variety of environmental bacteria and use bioinformatics tools. A goal of this course is to enable students to understand the great potential of the microbial world and to begin to develop a working knowledge of microbiology that may enable development of sustainable biological solutions.

# SCI 2399: Special Topics in Chemistry Organic Chemistry II with Lab

Instructor: Morse Credits: 4 SCI Hours: 4-4-4

Prerequisite: SCI 2320

After undertaking the introductory course in organic chemistry, students will be able to learn more advanced topics and master the reactions of the more biologically-relevant functional groups. Some of the topics this will include are sugars and carbohydrates, the chemistry of enolates and carbonyls, advanced NMR techniques, and pericyclic reactions. At the end of the course, there will be an introduction to biochemistry from an organic perspective. This course will culminate in a large organic laboratory synthesis that the students will research and plan themselves for half of the semester.

## Other Registration Opportunities or Notes

**MEC 1000** 

**Fundamentals of Machine Shop Operations** 

Instructor(s): Anderson

Credits: 4 Non Degree (will not meet degree requirements)

Hours: 6-0-6

Pre-requisites: Preference will be given those with prior machining and CAD experience

The course focuses on the fundamentals of machine shop operations, the foundations for all classical machining techniques. In addition, we will cover necessary mechanical design elements and CAD techniques to equip you with the skills to help other students. No basics will be skipped!

We will cover topics in proper breadth and depth to ensure that you come away with a sound understanding of machine shop safety, bench work, measurement, part layout, machine setup, operation and maintenance. We will also focus on design techniques and drawing creation using SolidWorks. Projects will be assigned to enforce these concepts and also provide many hours of machine time. There will be incentives to entice you to work professionally, learn how to interpret and establish appropriate design requirements and make parts to specification. Additionally you will learn how to inspect parts to ensure they meet specification. Time permitting - there will be field trips to local establishments to expand your horizons.

Area	Course #	Sec #	Course Title	Instructors	Credits	Time	Location	Enroll Limits	Note			
AHS	AHSE 0112	01	The Olin Conductorless Orchestra	Dabby	1	R 6:45-9:00p	AC305; AC318	none	Audition Required; See Description			
AHS	AHSE 2131	01	Responsive Drawing and Visual Thinking	Donis-Keller	4	MR 1-2:50p	AC313	12				
AHS	AHSE 2199	01	Special Topics in Arts, Humanities, Social Sciences: What People Leave Behind, and What it Tells Us: An Introduction to Archaeology	Watters	4	MR 1-2:50p	AC218	25				
AHS	AHSE 2199A	01	Special Topics in Arts, Humanities, Social Sciences: What is Change?	Adler	4	M 3-5:50p	AC328	20				
AHS	AHSE 2199B	01	Special Topics in Arts, Humanities, Social Sciences: Teaching and Learning in Undergraduate Science and Engineering	Miller, Rebecca	2	F 9-11:50a	AC326	25	Session I; Waitlist Available			
AHS	AHSE 2199C	01	Special Topics in Arts, Humanities, Social Sciences: Beautiful, Good, Radical, Sustainable: Design and its Contexts Since 1900	Bottinelli	4	TF 10-11:50a	AC218	25				
AHS	AHSE 3190	01	AHS Capstone Preparatory Workshop	Epstein	1	n/a		40				
AHS	AHSE 3199	01	Special Topics in Arts, Humanities, Social Sciences: Leadership and Ethics	Miller, Richard	2	R 6:00-8:15pm	Board Room	8	Seniors ONLY			
AHS	AHSE 4190	01	Arts, Humanities, Social Sciences Capstone	Dabby	4	T 3-5:50p	AC305	30	For Students in areas of music			
AHS	AHSE 4190	02	Arts, Humanities, Social Sciences Capstone	Stein	4	T 3-5:50p	AC109	30	For Students in areas outside of music			
AHS / SCI	AHSE 2110	01	The Stuff of History: Materials and Culture in Ancient, Revolutionary and Contemporary Times	Martello	4	TF 1-2:50p	AC218 + AC413	21	Concurrent requisite of SCI 1410A, sec A1; Students cannot enroll in SCOPE and this activity			
AHS / SCI	SCI 1410A	A1	Materials Science and Solid State Chemistry with Lab: Historical Context	Stolk	4	T 3-5:50p; W 1- 3:50p	AC218 + AC413	21	Concurrent requisite AHSE 2110; Students cannot enroll in SCOPE and this activity.			
DSN	ENGR 2250	01	User Oriented Collaborative Design	Eris; Downey	4	MR 3-5:50p	MH120; AC204	30				
DSN	ENGR 2250	02	User Oriented Collaborative Design	Neeley; Townsend	4	MR 3-5:50p	MH120; AC206	30				
DSN	ENGR 2250	03	User Oriented Collaborative Design	Somerville; Ben-Ur	4	MR 3-5:50p	MH120; AC209	30				
DSN	ENGR 3240	01	Distributed Engineering Design	Eris	4	TF 1-2:50p	AC318	8	Permission Req'd by attending Info Session			
E!	AHSE 1500	01	Foundations of Business and Entrepreneurship	Gold	4	TF 10-11:50a	AC213	40				
E!	AHSE 4590	01	Entrepreneurship Capstone	Zolot	4	T 1-2:50p	AC113	10				
E!	AHSE 4590	02	Entrepreneurship Capstone	Gold	4	T 8-9:50a	AC113	10				
E:C	ENGR 2510	01	Software Design	Sheldon	4	TF 1-1:50p; lab W 4-5:50p	AC328	25	Waitlist Available			
E:C	ENGR 3599	01	Special Topics in Computing: Six Topics in Computing	Downey; Sheldon	4	MR 1-2:50p	AC213	20	Waitlist Available			
E:BE	ENGR 3620	01	Cellular Bioengineering	Sieminski	4	TF 1-2:50p	AC213	25				

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Area	Course #	Sec #	Course Title	Instructors	Credits	Time	Location	Enroll Limits	Note
E:MS	ENGR 3899	01	Special Topics in Materials Science: Process Engineering in Materials Science	Neal	4	TF 10-11:50a	AC413	15	
E:MS	ENGR 3899A	01	Special Topics in Materials Science: Metals and Alloys: From Microstructure to Global Impact	Stolk	2	M 7-9:00p	AC413	15	Pre-Req: SCI1410 AND Permission of Instructor
ECE	ENGR 2410	01	Signals and Systems	Mur-Miranda	4	MR 1-2:50p	AC304	32	Waitlist Available
ECE	ENGR 2420	01	Introduction to Microelectronic Circuits	Minch	4	MR 10-10:50a; F 8-9:50a	AC109	44	
ECE	ENGR 3415	01	Digital Signal Processing	Dabby	4	TF 1-2:50p	AC304	12	
ECE	ENGR 3427	01	Mixed Analog-Digital VLSI II	Chang; Minch	4	TF 10-11:50a	AC304	25	
ECE	ENGR 3499	01	Special Topics in Electrical and Computer Engineering: Principles of Wireless Communications	Govindasamy	4	MR 10-11:50a	AC304	15	
ECE	ENGR 3499A	01	Special Topics in Electrical and Computer Engineering:  Mobile Application Development	Chang	4	TF 1-2:50p	AC109	16	Small Waitlist Available
ENGR	ENGR 1120	01	Introduction to Modeling and Control: Engineering of Spatially Distributed Systems	Storey; Spjut	3	W 10-10:50a; M 3-4:50p	MH120 W; AC126	30	
ENGR	ENGR 1120	02	Introduction to Modeling and Control: Engineering of Spatially Distributed Systems	Storey; Spjut	3	W 10-10:50a; W 1-2:50p	MH120 W; AC126	30	
ENGR	ENGR 1120	03	Introduction to Modeling and Control: Engineering of Spatially Distributed Systems	Storey; Spjut	3	W 10-10:50a; R 3-4:50p	MH120 W; AC126	30	
ENGR	ENGR 2210	01	Principles of Engineering	Minch	4	MR 1-2:50p	AC306	30	
ENGR / E!	ENGR 3199 AHSE 3599	01	Special Topics in Engineering (or Entrepreneurship): Project Management for Engineering Businesses	Devaux	4	M 4-6p & 7-9p	AC218	25	NOTE: Enroll in ENGR3199 for ENGR credit; or AHSE3599 for Entrepreneurship Credit Course time includes a dinner break
ENGR	ENGR 3199A	01	Special Topics in Engineering: Instrumentation: Sensors and Signals	Lundberg	4	MR 11-12:50p	AC318	25	NOTE: Can be used as an ECE or ME Elective
ENGR	ENGR 4190	01-'13	Senior Capstone Program for Engineering (SCOPE)	SCOPE Faculty	4	W 8-10:50a; 1- 5:50p			Seniors enroll in the section number for your respective Scope Team Number 1-13
ENGR	ENGR 4190	А	Senior Capstone Program for Engineering (SCOPE)	Lee; Chang	4	W 8-10:50a; 1- 5:50p		8	Off Cycle SCOPE Project; Spring/Fall Commitment
ENGR	ENGR 4190A	01	Senior Capstone Program for Engineering (SCOPE)	SCOPE Faculty	4	W 8-10:50a; 1- 5:50p		10	open to non-Olin students
IS / Res	ENGR, SCI, MTH 0097, AHSE 0197; AHSE 0597		Undergraduate Research Activity		varied				Submit a Form to be Enrolled
IS / Res	ENGR, SCI, MTH 0098, AHSE 0198; AHSE 0598		Independent Study Activity		varied				Submit a Form to be Enrolled
ME	ENGR 2320	01	Mechanics of Solids and Structures	Lee	4	T 3-4:50p; W 10- 10:50a; F 2-2:50p	AC328	35	
ME	ENGR 2330	01	Introduction to Mechanical Prototyping	Barrett	4	T 9-11:50a; F 10-11:50a	AC309	20	
ME	ENGR 2350	01	Thermodynamics	Townsend	4	MR 8-9:50a	AC318	35	

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Area	Course #	Sec#	Course Title	Instructors	Credits	Time	Location	Enroll Limits	Note
ME	ENGR 3370	01	Controls	Lundberg	4	MR 1-2:50p	AC318	25	
ME	ENGR 3380	01	Design for Manufacturing	Sabin	4	MR 4-5:50p	AC213	25	
ME	ENGR 3399	01	Special Topics in Mechnical Engineering: Mechanical and Aerospace Systems II	Lee; Prechtl	4	TF 10-11:50a	AC328	12	
MTH	MTH 1120	01	Vector Calculus	Geddes	2	MR 8-9:50a	MH120	90	Session I
мтн	MTH 2120	01	Linear Algebra	Gospodinov	2	W 8-9:50a	AC213	30	Full Semester
мтн	MTH 2130	01	Probability and Statistics	Soares	2	TF 8-9:50a	AC213	30	Session I
мтн	MTH 2140	01	Differential Equations	Gospodinov	2	MR 9-9:50a	AC213	30	Full Semester
MTH	MTH 3170	01	Nonlinear Dynamics and Chaos	Geddes	4	MR 10-11:50a	AC213	25	
oss	ENGR, SCI, MTH, AHSE 4198; AHSE 4598		Olin Self Study		2;4				Submit a Form to be Enrolled if you choose this OSS option
SCI	SCI 1121	01	Electricity and Magnetism: A Modeling and Simulation Approach	Somerville	4	MR 1-2:50p	AC109	40	
SCI	SCI 1121	02	Electricity and Magnetism: A Theoretical Approach	Zastavker	4	MR 10-11:50a	AC326	40	
SCI	SCI 1130	B1	Mechanics: Experimental Mechanics with Lab	Christianson	4	MR 10-11:50a;W 9- 9:50a	AC218	24	Waitlist Available
SCI	SCI 1210	01	Principles of Modern Biology with Lab	Huang	4	MR 1-2:50p; W 1-3:50p	AC417; W AC406	22	
SCI	SCI 1210	02	Principles of Modern Biology with Lab	Pratt, J	4	TF 1-2:50p; T 3 5:50p	AC417; T AC406	22	
SCI	SCI 1310	01	Intro Chemistry with Lab	Morse	4	TF 1-2:50p	AC326	30	
SCI	SCI 1310 L	Α	Intro Chem LAB	Morse	0	M 3-5:50p	AC409	15	
SCI	SCI 1310 L	В	Intro Chem LAB	Morse	0	W 3-5:50p	AC409	15	
SCI	SCI 1410	C1	Materials Science and Solid State Chemistry with Lab: Biomaterials, Polymers and Mechanical Properties	Chachra	4	MW 4-6:50p	AC417 + AC413	21	
SCI	SCI 2140	01	Relativity	Holt	2	MR 10-11:50a	AC113	15	Session I
SCI	SCI 2199	01	Special Topics in Physics: Biomechanics	Zastavker	4	MR 1-2:50p	AC326	30	Waitlist Available
SCI	SCI 2299	01	Special Topics in Biology: Microbial Diversity	Huang	4	MR 10-11:50a	AC417 + AC404	15	
SCI	SCI 2399	01	Special Topics in Chemistry: Organic Chemistry II with Lab	Morse	4	TF 10-11:50a; T 4-6:50p	AC417; T AC409	15	Waitlist Available

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#### SP 2010 Course Offerings

ı	Area	Course #	Sec#	Course Title	Instructors	Credits	Time	Location	Enroll Limits	Note
		AWAY 1000	01	Study Away Program		12				Registration Required for those with APPROVED programs.
Ī		MEC 1000	01	Fundamentals of Machine Shop Operations	Anderson	4 non-degree	tba	AC104	tba	

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Key:	ENGR / DSN Courses	ME	ECE	Genl Req	Math	AHSE	SCI	Integrated Offering				Academic Schedule			
			M	(on				Т	ues		Wed				
8:00		MTH 1120 Vector Calculus		ENGR 2350 Thermodyna		Prob Stats	AHSE 4590 sec 02				MTH 2120 Linear Algebra		ENGR 4190		
8:50 9:00	MTH 2140	Session I		mics		AC213	Entreprene urship Captsone	ENGR			213 FULL SCI		SCOPE		
9:00	Diff Equat'ns	MH120		318		-	113	2330 Intro to			Semester sec 1	11130 B1 chanics	JCOIL		
9:50	Full Sem							Mechanical Prototyping			218	1			
10:00	SCI 2140 Relativity	Nonlinear Dynamics	ENGR 3499 Spec Top ECE:  ENGR 2420 Microelectronic s Circuits	SCI 2299 Spec Topics in Biology: Microbial	SCI 1121 SCI 1130 sec B1  Electricity Mechanics	AHSE 1500 342 MA Found. Of	GR ENGR 33 Spec Topi Mech Eng Mech &	ics gr:	ENGR 3899 Spec Topics in MatSci:Proc Spec Topics	SCI 2399 Spec Topics	ENGR1120; all sect Engineering of Spat Distributed Systems MH120	cially Mech Solids Struct			
10:50 11:00	Sess I		Prin Wireless Comm	Diversity	and Magnetism	Bus. And E-ship	Aerospace Sys II	-	ess Engr in Materials Science  AHS: Design & Its Context	Chemi Orgo II w/					
	113	213	304	3199 Spec Topics in 417 + 404	326 218	213	328	309	413 since 1900 218	LAB 417	-				
11:50 12:00				Engr: Instrumenta tion- Sensors and							-	Open Meeting Time			
12:50				Signals 318											
1:00	-01	2410	ENGR ENGR 3599 2210 -01	ENGR 3370 Controls	SCI 1121- sec 01 AHSE 2199 AHSE 2131 Spec Topics	SCI 1210 SCI 1 -02 Prin Intro	2510	ENGR 3415 3240 Digital Si	SCI 1410A ENGR 3620 and AHSE2110 Cellular	AHSE ENGR 4590 3499 sec 01 Spec Top	ENGR SCI 1 1120 01	SCI 1410A and AHSE2110	ENGR 4190		
1:50 2:00	Bio Phy	sics: Systems mechan	Spec Topics in Prin of Engineering'	Controis	Electricity and AHS: Intro to Responsive Archaelogy Drawing & Visual Thinking	Modern Chen	nistry Design	Engineering Design Processing	PAUL REVERE: Mat Sci and Stuff of History	sec 01 Spec Top ECE: Entreprene urship Application Captsone Developme nt	Engineering of Spacially Distributed Systems Prin Mode Bio LAB	PAUL REVERE: Mat Sci and	SCOPE		
2:50	417 326	304	213	318	109 218 313	417 326		318	413 + 218	113 109	126 406	413			
3:00		1120 - 01	ENGR 2250 all Special Special Topics AHS:		SCI 1310 L sec A LAB: Intro	SCI 1210 -02 Prin		AHSE 4190 AHSE 4190 Section Section	SCI 1410A ENGR 2320 And Mech Solids AHSE2110 Struct PAUL 328			SCI 1310 L sec B			
3:50		of Spacially Distributed	UOCD What is Change?		Chemistry	Modern Bio		01 DABBY STEIN	REVERE: Mat Sci and			Chemistry			
4:00	ENGR 3380 Design for	126	MH120; AC204, 206, 209	ENGR 3199 / AHSE3599 Spec Topics	LAB A 409 SCI 1410 sec B1 Materials	LAB SCI Orgo LAB	П	AHS Captsone Captson  305  AHS Captson	Stuff of History 413		ENGR 2510 Software Design	SCI 1410 sec B1  Materials  LAB B			
4:50 5:00	Manufactu ring 213		328	ENGR and ENTRP: Proj Management for Engr Businesses	Science and Solid State Chemistry	406		-			LAB	Science and Solid State Chemistry 409	_		
5:50 6:00				4-6p and 7-9p includes dinner break	417						310	413 and 417			
6:50	ENGR 3899A Spec Topics in M	IatSci:Metals/Alloys	Meets Mon 7-9pm; 2credits 413	218		409									

SP 2010 Course Offerings

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				ENGR / I Courses	OSN	ME		ECE		Genl Req		Mat	th		AHSE		SCI			Upper Level Integrated Offering
				T	hurs					Fri										
		Ve	TH 1120 ctor lculus		ENGR 2350 Thermodyna					MTH 2130 Prob Stats		ENGR 2420								8:00
			ssion I		mics					Sess I		Micro- electronic Circuits								8:50
	MTH 2140 Diff Equat's Full Sem	ns	H120		318					213	AHSE 2199B									9:00
	213		1120							213	Special Topics AHS:	109								9:50
SCI 2140 Relativity		MTH 3170 Nonlinear Dynamics and Chaos	ENGR 3499 Spec Top ECE:	ENGR 2420 Microelectron cs Circuits	i	SCI 2299 Spec Topics in Biology: Microbial		SCI 1121- sec 02 Electricity	SCI 1130 sec B1 Mechanics	AHSE 1500 Found. Of Bus. And E-	Teach/Lea rn SESS I	ENGR 3427 MADVLSI	Mech &	s 2330 Intro to	3 S T	Spec S Topics in T	199C Spec Copics	SCI 2399 Spec Topics		10:00
Sess I			Prin Wireless Comm	109		Diversity		and Magnetism		ship -	2credits		Aerospace Sys II	Mechanical Prototyping	c	MatSci:Pro A	Design &	Chemistry		10:50
113		213	304		ENGR 3199 Spec Topics in	417 + 404		326	218	213	326	304	AC328	AC309	N S	Materials Science	Since 1900	Orgo II w/ LAB 417		11:00
					Engr: Instrumenta											2	:18			11:50
					Sensors and Signals 318					-										12:00
		ENICD	1	1			SCI 1121-				SCI 1310	ENGR	1		ENGR 362	ENCD				12:50
SCI 1210 -01 Prin Modern Bio	Spec	ENGR 2410 Signals & Systems	ENGR 3599 Spec Topics in	ENGR 2210 +01 Prin of		ENGR 3370 Controls	sec 01  Electricity and	Spec Topics AHS: Intro to	2131	-02 Prin Modern	-01	2510 Software Design 328	ENGR 3240 Distr Engr	SCI 1410A and AHSE2110 PAUL REVERE:	Cellular Bioenginee	3415 Digital	ENGR 3499 Spec Top ECE: Mobile			1:00
	Biomechan jics	304	Computing: Six Topics	Engineerin g 306		318	Magnetism 109	Archaelogy 218	Visual Thinking		326		Dsn 318	Mat Sci and Stuff of History  413 + 218	213	304	Application Development	ne ENGR	2320 Solids Struct	1:50 2:00
417	326			306		318			313	417				413 + 218	<u> </u>	304	109	328		2:50
		ENGR 1120 - 03 Engineering	ENGR 2250 all sections							-										3:00
ENGR		of Spacially Distributed Systems	UOCD							-				Community	Service					3:50 4:00
3380 Design for		126								_										4.00
Manufactu ring			_			-														4:50 5:00
213			MH120; AC204, 206 209	ō,																3.00
AHSE 3199				-		-														5:50 6:00
Issues in Le	adership and ome nights 6-	Ethics 7:45p)																		0.00
0.0.15p (sc	me inglies 0*	, Эр)	AHSE 0 305 + 31		nductorless Ord	chestra 6:45	-9pm													6:50