

Spring 2021 Supplement and Course Offerings List

Vol19no1.3 (09Dec2020)

Information Contained in this Document

- 1) Course Tips & Info and Catalog Supplement (courses new to catalog for 2020-21 or special topics)
- 2) Cross-Registration Deadlines
- 3) Course Offerings List (you can also search here: [Course Browser](#))
- 4) Course Offerings Grid

General Registration Instructions and FAQs, please visit our Registrar's [web page](#).

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

Session	Add	Drop and Pass/No Credit	Withdraw
Full Semester (Jan 28 – May 5)	February 10, 2021	April 5, 2021	May 5, 2021
Session I (Jan 28 – Mar 16 [TR classes] OR Jan 28 – Mar 22 [MW classes])	February 3, 2021	March 2, 2021	Mar 16 [TR classes] OR Mar 22 [MW classes]
Session II (Mar 18 – May 5 [TR classes] OR Mar 24 – May 5 [MW classes])	March 29, 2021	April 23, 2021	May 5, 2021

Cross-Registration Deadlines

	Babson	Brandeis	Wellesley
Cross-registration open period	11/30/2020 – 1/25/2021 at 4:30 pm	12/16/2020 – 2/12/2021	11/30/2020 – 2/19/2021 at 11:59 pm
First day of classes	1/19/2021	2/01/2021	Term 3: 2/15/2021 Term 4: 4/12/2021
Drop deadline	1/25/2021 at 4:30 p.m.	3/16/2021	Term 3: 2/26/2021 at 11:59pm Term 4: 4/23/2021 at 11:59pm

Questions? Contact the Registrar's Office at registrar@olin.edu.

Course Tips & Curriculum Info

What does the category of Cross-listed mean? How do I choose my course?

Cross-listing is a term associated with two distinct course numbers for a single academic activity. The activity can be defined under two topics depending on what aspect of the course content a student focuses on during their enrollment. To this end, the student normally elects the path at the beginning of the course (no later than the last day to add) by selecting the appropriate course number.

During the spring semester we have two such offerings, Biomimicry (ENGR3235 or SCI2235) and Special Topics in Mathematics: *Service Learning: Mathematics Outreach for Adolescent Learners* (ENGR1199 or MTH1199). To enroll in Biomimicry, you decide which type of credit you want/need, no later than the last day to add a course. ENGR is for design depth credit, and SCI is for advanced science credit. To enroll in the Math Outreach course, use either number; adjustments will be made during the semester after projects are chosen.

Note for Capstone Registrations – ADE, EEC and SCOPE

- For students interested in taking ADE as their capstone, the process for registration has changed. Please select ENGR4290 and add yourself to the waitlist **if you are a first-time capstone enrollee**. Students who will be completing their ADE capstone in the spring will be preregistered by the Registrar's Office.
- The waitlists for capstone will be managed by the faculty involved in the capstone programs. If you are not selected for ADE capstone as a 2nd semester junior you will have an option to do the design depth (if you have not taken it before).
- Please DO NOT enroll yourself in ENGR3290 (design depth) if you are putting yourself on the waitlist for ENGR4290.
- EEC and SCOPE students from the fall will be preregistered for spring.

Note for First-years

All first-year students will be preregistered for ISIM, QEA, and Products and Markets.

Waitlists for Courses with Two Numbers

If you want to join a waitlist for Astrostats (MTH2136 and SCI2136), Neurotechnology, Brains and Machines (ENGR3635 and MTH2135), Engineering for Humanity (AHSE2141 and ENGR2141), Six Microbes that Changed the World (AHSE2150 and SCI1250), or The Intersection of Biology, Art and Technology (AHSE2160 and SCI1260) please email registrar@olin.edu after your registration period. We will maintain a waitlist as the system does not allow waitlists for connected courses.

Degree requirements are outlined in the course catalog: <http://olin.smartcatalogiq.com/2020-21/Catalog>

Looking for a **visual** representation? Check out Olin's [Curriculum Map](#)

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

New and Special Topics Courses to Note

AHSE0112-01: The Olin Conductorless Orchestra: Building a Community of Practice – FULLY REMOTE

Instructor: Diana Dabby

Credit: 1 AHS

New course description for Spring 2021 only: A community of practice has a social character whereby people work in tandem toward a goal, united by more than membership in a group. In OCO, we are united by the power of shared activity to create shared knowledge and shared ways of knowing. Here, the shared activity is music, a performing art that brings creative expression to life. OCO will offer a brand new teaching style in the coming semester. We'll be working in small groups on pieces written for those ensembles, as well as full orchestra pieces that feature instrumentalists in recorded roles. To accomplish this, all will be working weekly to produce recorded performances that can then be mixed together to produce both small group and full orchestral performances. Since OCO typically has an unusual instrumentation, every musician has a part written especially for them. When these parts are combined and played well, they create OCO's group sound. Our orchestra aspires to be a professional ensemble. As such, students are expected to practice their parts, come to rehearsals prepared, and contribute to an engaged musical community of practice. (A student can apply up to 4 OCO credits to the 28 required credits in AHSE, or can petition to apply up to 4 OCO credits to the AHS concentration. Any additional credits, i.e., more than 4, earned by a student enrolling in OCO will show up as additional AHS credits, but will not count toward satisfying the requisite 28 credits in AHSE.) Audition Required.

AHSE2199-01: Special Topics in Arts, Humanities and Social Sciences

Change the World: Personal Values, Global Impacts, and Making an Olin GCSP – FULLY REMOTE

Instructor: Alison Wood

Credits: 4 AHS

Registration note: Experimental grading; AHS elective

As individuals and engineers, how should we pose ethical questions and prepare to advocate for the values that we hold dear? How might we start to understand and react to larger global problems, causes, challenges, and opportunities that surround us, becoming active participants in our communities? And how should Olin modify its curriculum and continue to build a Grand Challenges Scholar's Program (GCSP) to help our students identify and act upon their values? In this course, students will serve as partners, helping the instructors identify and discuss readings, experiment with projects and in-class activities, and create personal statements of vision and mission. In addition, anyone who completes this course will (if they wish) receive the Grand Challenges Scholar designation. The course will use the "Experimental Grading" system to allow us to focus on detailed formative feedback throughout the semester. Students will have plenty of leeway to make progress on their own goals and explore their own interests, while the class as a whole will work together to understand our global context and build something great for Olin. Join us this spring, and let's make the world a better place!

AHSE2199A-01: Special Topics in Arts, Humanities and Social Sciences

Contemplating Science – FULLY REMOTE

Instructor: Yevgeniya Zastavker

Credits: 4 AHS

Registration note: AHS elective

This course is a journey into learning a variety of physical and social science concepts – those ranging from Newtonian and Quantum Mechanics to Chemistry and Biochemistry to Education – through engagement in a range of contemplative pedagogies (e.g., compassion and loving kindness, contemplative movement and embodiment, deep listening, beholding, sensory meditation and visualization, contemplative videography, critical reflective practice). Used as sensory and modeling/simulation tools, these contemplative practices will then be leveraged towards accessing and making sense of new scientific concepts. While the first, more scaffolded part of the course, will be used as a way of practicing new learning tools, the second, self-directed part, will allow student teams to delve into a variety of topics aligned with their areas of interest. One Scholars-in-Residence and two affiliated scholars – 2 dancers/choreographers and 1 actor from the original Sketch Model project – will guide us in the process of development of contemplative practice tools and will help develop team projects with final deliverables that may include such artifacts as a play, an artistic installation, a musical performance, or an educational module for Olin courses. Students will use cognitive, procedural and organizational autonomy to select a final project that is consistent with course objectives, aligned with their interests and aspirations, and resonant with the Scholars' artistic media.

To a large extent, the course will leverage educational theory and practice to allow students to understand how contemplative pedagogies can be leveraged for authentic, purposeful, and holistic learning. In this way, this course may be particularly interesting for students considering an AHS Education concentration. For students pursuing this particular path, we will work together to design and implement projects consistent with this particular focus of their studies at Olin.

AHSE2199B-01: Special Topics in Arts, Humanities and Social Sciences

Context and Consequences – IN PERSON

Instructor: Alison Wood, Caitrin Lynch, Lynn Stein et al.

Credits: 2 AHS

Hours: 2-0-4

Registration note: AHS elective

This course leverages Olin students' other curricular experiences to support student construction of critical reflective practice. In other words, this is a place to think about the other courses you are taking and the implications of what you are learning there, in the context of existing systems and communities. Through a range of approaches and voices, we will explore basic concepts of critical theory and practice applying this framework to our experiences. By understanding the social and hierarchical structures that surround us and our work, we will begin to articulate the consequences of actions and the impact of what we do as students, as citizens of the world, and as engineers.

ENGR2199-01: Special Topics in Engineering:

Engineering Systems Analysis

ENGR2199A-01: Special Topics in Engineering:

Engineering Systems Analysis: Dynamics

ENGR2199B-01: Special Topics in Engineering:

Engineering Systems Analysis: Signals

The **Engineering Systems Analysis** courses are designated alternatives for ENGR 2410 Signals and Systems or ENGR 2340 Dynamics.

- These courses are scheduled so that students may take all three courses (for a total of 6 credits).
- ME majors must take both ENGR 2199 and 2199a;
- ECE majors must take both ENGR 2199 and 2199b, to satisfy their respective core course requirements.
- Engineering majors may take ENGR 2199 alone or with one or both of ENGR 2199a/b as part of their plan of study or for engineering credit.

ENGR2199-01: Special Topics in Engineering:

Engineering Systems Analysis – FULLY REMOTE

Instructors: Diana Dabby, Chris Lee

Credits: 2 ENGR

Hours: 4-0-8

Registration notes: Session I. Required course for ME and ECE students.

Engineering Systems Analysis involves building, developing, and practicing process-based quantitative analysis skills in the broad area spanning linear analysis of engineering systems. Concepts such as linearization, equilibrium, and stability will be applied to study dynamic response of electrical and mechanical systems in both the time and frequency domains through time-integration, transfer function, and state-space analysis. Ideas from feedback control are introduced. Coursework and projects will involve examples from robotics, communication systems, or aircraft/spacecraft.

ENGR2199A-01: Special Topics in Engineering:

Engineering Systems Analysis: Dynamics – FULLY REMOTE

Instructors: Diana Dabby, Chris Lee

Credits: 2 ENGR

Hours: 4-0-8

Pre-requisite: ENGR 2199 Engineering Systems Analysis

Registration notes: Session II. Required for ME majors. The combination of ENGR2199-01 and ENGR2199A-01 is a designated alternative for ENGR2340 Dynamics.

This half-course extends material from the first half-semester to focus on the derivation, analysis, and simulation of translational and rotational equations of motion for particles and rigid bodies in 3D using physics-based models.

ENGR2199B-01: Special Topics in Engineering:
Engineering Systems Analysis: Signals – FULLY REMOTE

Instructors: Diana Dabby, Chris Lee

Credits: 2 ENGR

Hours: 4-0-8

Pre-requisite: ENGR 2199 Engineering Systems Analysis

Registration notes: Session II. Required for ECE majors. The combination of ENGR2199-01 and ENGR2199B-01 is a designated alternative for ENGR2410 Signals and Systems.

As a half-course, Engineering Systems Analysis: Signals extends material from the first half-semester to focus on fundamental concepts from linear systems such as frequency response, impulse response, and system identification. The course introduces sampling and aliasing, as well as discrete-time linear operators, transforms, and filtering.

ENGR2199C-01: Special Topics in Engineering:
Mechanical Components and Systems – FULLY REMOTE

Instructor: Daniela Faas

Credits: 4 ENGR

Hours: 4-0-8

Registration note: Elective

The purpose of this course is to teach you the fundamentals of mechanical system design (and some prototyping). It is intended to familiarize you with the basic mechanical components that make up most mechanical systems and to train you to both design them and combine them into simple useful machines. The course will consist of developing professional skills in SolidWorks and some limited physical fabrication of prototyping will be explored. The course will include both individual and team design projects and will conclude with a final design project of significant complexity. A working knowledge of simple fabrication techniques such as laser cutting and 3d printing and the ability to generate part, assembly and detailed drawings in SolidWorks will be developed throughout the course. We will also focus on Free-Body diagrams to aid in the design of mechanical systems, in addition to building mechanisms with Lego Technic bricks.

ENGR3299-01: Special Topics in Design Engineering
Probabilistic Design Optimization – FULLY REMOTE

Instructor: Zachary del Rosario

Credits: 4 ENGR

Hours: 4-0-8

Prerequisite: QEA and UOCD

Registration notes: Design Depth, ME elective, OR ECE elective. Basic experience in Python required.

Optimization is ubiquitous in engineering practice: Structural engineers optimize structural layouts, control engineers use optimization to do path planning for robots and spacecraft, materials scientists use optimization for materials selection, and machine learning is enabled by a suite of highly-efficient optimization algorithms. However, optimization is not a silver bullet: Running a successful optimization requires experience to avoid pitfalls, and optimization that ignores uncertainty can select fragile designs. This course is about the tools and understanding necessary to do optimization under uncertainty.

In Probabilistic Design Optimization (PDO), students will learn to formulate and solve optimization problems and to model uncertainty with probability. Students will practice modeling engineering problems with objectives, constraints, and densities, and will see examples across many different fields. They will gain an intuitive and practical understanding of modeling challenges: necessary conditions for optimality, local minima, approximation challenges, problem rescaling, data sparsity, and modeling limitations.

This course will reinforce content through problem sets and a large project with significant student choice. Students will work on individual projects and will choose a system to model, analyze, and optimize under uncertainty. Students taking this course as an ME or ECE elective must select a simple system from an ME or ECE core topic---e.g. Thermodynamics, MechSolids, Transport, etc. for ME; Circuits, Signals and Systems, etc. for ECE---and communicate this choice to the instructor. High-level work on the project will begin with the first problem set, and students will iterate on their project throughout the course.

ENGR3399-01: Special Topics in Mechanical Engineering

Advanced Transport Phenomena – FULLY REMOTE

Instructor: Emily Tow

Credits: 4 ENGR

Hours: 4-0-8

Prerequisite: ENGR3310 Transport Phenomena

Corequisite: ENGR2350 Thermodynamics (students must have taken OR currently be

Registration note: ME elective

Join a group of transport enthusiasts to build on our understanding of transport phenomena as we create future Olin courses on the subject. We will choose areas of mutual interest to study from within the realms of heat and mass transfer and fluid mechanics. We will then select a series of sub-topics (such as boiling, surface tension-driven flows, potential flow, etc.), learn about them, and create, test, and refine related curricular materials. We will create learning activities that go beyond problem sets and involve modeling, measurement, visualization, and design and which align with the UN Sustainable Development Goals. My aim as the instructor will be to facilitate, co-create, and co-learn as we explore these topics and develop an intermediate/advanced transport curriculum together. In contrast to a traditional transport course, I will not provide you with problem sets, except as part of the co-creation process. As our deliverable, we will create one or more new fluids and/or heat transfer electives that can be offered regularly in the future.

ENGR3499-01: Special Topics in Electrical and Computer Engineering:

Digital Power Conversion – FULLY REMOTE

Instructor: Beat Arnet

Credits: 4 ENGR

Hours: 0-3-3

Registration note: ECE Elective

Prerequisite: Basic understanding of a programming language and electrical circuits

In this course, the student will learn to master the flow of electrons by means of embedded controls and power electronics. The theory is taught in a hands-on fashion through simulation-based analysis and lab work. A wide range of topics is covered, including basic power conversion topologies, architecture of interrupt-driven embedded control software, basic control algorithms, as well as debugging and testing techniques. Students will work as teams to control a low-voltage electric drive, similar to what propels electric scooters and bicycles. While the primary hardware building blocks of this course are off the shelf evaluation boards, the class does offer, to the motivated student, room for designing custom circuits boards and custom mechanical parts.

ENGR3599-01: Special Topics in Computing:

Web Development – FULLY REMOTE

Instructor: Riccardo Pucella

Credits: 4 ENGR

Registration note: E:C elective

This course is an introduction to the theory, design, and implementation of programming languages. Topics covered may include: semantics of programming languages, types, higher-order functions and lambda calculus, objects, laziness, continuations, monads, objects, and concurrency. Class work revolves around the implementation of interpreters for a variety of small programming languages.

ENGR3599A-SL: Special Topics in Computing
Data Structures and Algorithms – FULLY REMOTE

Student instructors: Dieter Brehm, Megan Ku, Duncan Mazza, Jane Sieving
Faculty advisors: Stephanos Matsumoto (content), Linda Vanasupa (pedagogy)
Credits: 4 ENGR

Registration notes: does not fulfill theory of computer science requirement for E:C degree; substitution dependent on post-course interview with faculty content advisor

This course offers students an introduction to foundational data structures and algorithms concepts such as linear data structures, sorting algorithms, trees, graphs, greedy algorithms, and dynamic programming. Throughout the course, students will develop and improve their approach to solving software engineering problems, learn to communicate and collaborate on data structure and algorithm design and implementation, and review their work through both technical and contextual lenses, invoking considerations of ethics; algorithmic complexity and efficiency; and more.

ENGR3599B-SL: Special Topics in Computing
Advanced Algorithms – FULLY REMOTE

Student instructors: Cassandra Overney, Xierui Shen, Shashank Swaminathan
Faculty advisors: Sarah Spence Adams (content), Rob Martello (pedagogy)
Credits: 4 ENGR

Prerequisites: DSA (faculty or student led) and Discrete Math or permission of instructor; students cannot take DSA and Advanced Algorithms simultaneously.

Advanced Algorithms will provide an in-depth look into certain advanced algorithms that are beyond the scope of a traditional data structures and algorithms course. The topics this course would cover are: network flow, linear programming, NP-completeness, heuristic algorithms, integer programming, SAT, and approximation algorithms. Throughout this course students will: develop and iterate on an approach to solving software engineering problems, learn to communicate and collaborate on advanced algorithm application and implementation, understand why specific advanced algorithms are used, and effectively and efficiently solve problems by using advanced algorithms.

ENGX2005-01: Quantitative Engineering Analysis 2 (formerly 1b) – FULLY REMOTE

Instructors: Jeff Dusek, John Geddes, Melinda Malley
Credit: 4 (content & credit distribution breakdown: 2 MTH, 2 SCI)
Hours: 4-0-8

Registration notes: General degree requirement

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

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

This course fulfills the multivariable calculus requirement. Coupled with Quantitative Engineering Analysis II 3, this course is also a designated alternative for the physics foundation.

MTH1199-01 OR ENGR1199-01: Special Topics in Mathematics

Service Learning: Mathematics/Engineering Outreach for Adolescent Learners – FULLY REMOTE

Instructor: Sarah Spence Adams

Credits: 4 MTH, 4 ENGR, or 2MTH+2ENGR, depending on project

Hours: 4-0-8

Registration notes: Elective, no prerequisites. Experimental grading. Students may register for MTH1199-01 or ENGR1199-01; credit adjustments will be made once projects have been chosen.

In this new service-learning course, students will engage in the design, development, and deployment of engaging and effective mathematical and/or engineering experiences for adolescent learners. Teams of students will likely work with a specific group of adolescents in order to supplement the adolescents' remote/hybrid learning experiences. Alternatively, teams might consider other ways to support adolescents' mathematical literacy, for example through the invention of mathematical games or the development of workshops to empower parents/guardians to engage in mathematical conversations/games with their children. Teams might also or instead choose to focus on introducing engineering to adolescents, including hands-on projects and other activities analogous to those described above. This work will be grounded in the literature on the teaching and learning of mathematics/engineering, particularly literature on out-of-school learning, as well as literature on adolescents' social/emotional needs. Through thinking creatively about how to improve mathematical/engineering literacy and engagement, students will deepen their own mathematical/engineering intuition and insights, while hopefully having a positive impact on the broader community. This course will be graded using Experimental Grading (EG). Once students have chosen their projects, they will be able to earn a total of four credits under MTH1199 and/or ENGR1199.

SCI1399-01: Special Topics in Chemistry

Paper Panacea: Part Pandemic! – FULLY REMOTE

Instructor: Linda Vanasupa

Credit: 4 SCI

Hours: 6-0-6

Registration note: Chemistry/Mat Sci foundation course

Imagine you live in a world where anyone who wanted to could collect real scientific data on the toxics in their environment and contribute it to a national database; imagine that this database served to radically shift public policy and industry practices toward a sustainable future. This world doesn't exist yet and this course is squarely aimed at building a path toward it. The detection platform, paper microfluidics, is a technology that is in its infancy. We can move this technology forward. In this Pandemic version of the course, we will be exploring together the science that makes this technology run. As a remote lab class, you'll also be learning through hands-on discovery. You'll also have an opportunity to pursue your own (or a team) paper discovery project after we cover the foundations. Each person will receive a kit and will need a way to make hot water. I'm looking forward to learning with you!

Area	Course #	Sect #	Course Title	Instructor / Teaching Team	Time	Delivery Mode	Location for Instr Delivery or Staging of Materials	Credits	Enroll Limits	Waitlist	Notes	Curriculum Category
AHS	AHSE0112	01	AHSE0112: The Olin Conductorless Orchestra: <i>Building a Community of Practice</i>	Dabby, Diana	R 6:30-8:00pm	Fully Remote	NA	1	30	yes		AHS
AHS	AHSE2112	01	AHSE2112: Six Books that Changed the World	Martello, Rob	TR 2-3:30pm	Fully Remote	NA	2	75	yes	Session I; 2 credits	AHS
AHS	AHSE2114	01	AHSE2114: Science Fiction and Historical Context	Martello, Rob	TR 2-3:30pm	Fully Remote	NA	2	75	yes	Session II; 2 credits	AHS
AHS	AHSE2199	01	AHSE2199: Special Topics in Arts, Humanities and Social Science: <i>Change the World: Personal Values, Global Impacts, and Making an Olin GCSP</i>	Wood, Alison	MW 10-11:30am	Fully Remote	NA	4	75	yes	Experimental Grading	AHS Elective
AHS	AHSE2199A	01	AHSE2199A: Special Topics in Arts, Humanities and Social Science: <i>Contemplating Science</i>	Zastavker, Yevgeniya; Venkatesh, Madhvi J.	TR 12-1:30pm	Fully Remote	NA	4	18	yes	4 AHS elective credit; Experimental Grading	ELECTIVE
AHS	AHSE2199B	01	AHSE2199B: Special Topics in Arts, Humanities and Social Science: <i>Context and Consequences</i>	Lynch, Caitrin; Stein, Lynn; Wood, Alison;	F 10-11:30am	In Person	MAC 113	2	16	yes	2 credits; Experimental Grading	AHS Elective
AHS	AHSE3190	01	AHSE3190: Arts, Humanities, Social Science Preystone	Epstein, Gillian	N/A	Fully Remote	NA	1	25	yes		AHS Cap
AHS	AHSE4190	01	AHSE4190: AHS Capstone Project	Epstein, Gillian	MW 10-11:30am	Fully Remote	NA	4	25	yes		AHS Cap
CAPSTONE	ENGR4190	01	ENGR4190: SCOPE: Senior Capstone Program in Engineering	Ferzoco, Alessandra; Hersey, Scott; Sarang-Sieminski, Alisha; Stein, Lynn; Woodard, Jason	TR 8-10:00am F 12-5:00pm	Hybrid	CC Crescent Rooms	4	NA	NA	Students will be pre-enrolled based on Fall20 assignment	CAPSTONE
CAPSTONE	ENGR4290	01	ENGR4290: Affordable Design and Entrepreneurship CAPSTONE	Graeff, Erhardt; Hersey, Scott; Johansen, Elizabeth; Linder, Ben; Taha, Kofi	T 3:30-6:30pm R 3:30-5:30pm	Hybrid	MAC 306/309	4	15	NA		Capstone

Area	Course #	Sect #	Course Title	Instructor / Teaching Team	Time	Delivery Mode	Location for Instr Delivery or Staging of Materials	Credits	Enroll Limits	Waitlist	Notes	Curriculum Category
CAPSTONE	ENGR4599	01	ENGR4599: Engineering Capstone Alternative: Entrepreneurship	Harris, Scott; Miller, Scott	NA	NA	NA	4	NA	NA		
Crosslisted	ENGR3235_or_SCI2235	01	ENGR3235_or_SCI2235: Biomimicry	Huang, Jean; Linder, Ben	MW 2-3:30pm	Fully Remote	MAC 306/309	4	30	yes	Register for ENGR3225 for DesignDpth Credit or SCI2235 for Science Credit	DESIGN Dpth_or_Adv Bio
Crosslisted	MTH1199_or_ENGR1199	01	MTH1199_or_ENGR1199: Service Learning: Mathematics/Engineering Outreach for Adolescent Learners	Spence Adams, Sarah	MW 12-1:30pm	Fully Remote	NA	4	30	yes	one of the recommendations for first year students; Experimental Grading; Register for MTH1199 for Math Credit or ENGR1199 for Engineering Credit	ELECTIVE
DSN	ENGR2250	01	ENGR2250: User-Oriented Collaborative Design	Adler, Jon; Bloomer, Sarah; Chachra, Debbie; Hendren, Sara; Sauder, Tim; Zastavker, Yevgeniya	TR 1:45-4:15pm	Fully Remote	NA	4	75	yes	required of all sophomores	DESIGN Fnd
DSN	ENGR3210	01	ENGR3210: Sustainable Design	Edmonds, Tess; Linder, Ben	TR 10-11:30am	Faculty Remote/Hybrid	MAC 306/309	4	30	yes		DESIGN Dpth
DSN	ENGR3232	01	ENGR3232: Biomedical Device Design	Sarang-Sieminski, Alisha	MW 10-11:30am	Hybrid	MAC 113	4	16	yes		DESIGN Dpth_or_ME Elective
DSN	ENGR3290	01	ENGR3290: Affordable Design and Entrepreneurship DESIGN DEPTH	Graeff, Erhardt; Hersey, Scott; Johansen, Elizabeth; Linder, Ben; Taha, Kofi	T 3:30-6:30pm R 3:30-5:30pm	Hybrid	MAC 306/309	4	15	yes		DESIGN Dpth
DSN	ENGR3299	01	ENGR3299: Special Topics in Engineering: <i>Probabilistic Design Optimization</i>	del Rosario, Zach	MW 2-3:30pm	Fully Remote	NA	4	20	yes		Design Depth, ME elective, OR ECE elective
E:C	ENGR2510	01	ENGR2510: Software Design	Graeff, Erhardt; Matsumoto, Steve; Nugent, Carrie	MW 2-3:30pm	Fully Remote	NA	4	75	yes	one of the recommendations for first year students	Core E:C, Core ECE
E:C	ENGR3525	01	ENGR3525: Software Systems	Matsumoto, Steve	MW 10-11:30am	Fully Remote	NA	4	40	yes		Core E:C

Area	Course #	Sect #	Course Title	Instructor / Teaching Team	Time	Delivery Mode	Location for Instr Delivery or Staging of Materials	Credits	Enroll Limits	Waitlist	Notes	Curriculum Category
E:C	ENGR3599	01	ENGR3599: Special Topics in Computing: Web Development	Pucella, Riccardo	TR 2-3:30pm	Fully Remote	NA	4	40	yes		E:C Elective
E:Robo	ENGR3390	01	ENGR3390: Fundamentals of Robotics	Barrett, Dave	MW 12-1:30pm	Hybrid	MAC 226/228	4	30	yes		Core E:Robo_or_ME Elective
E:Robo	ENGR3392	01	ENGR3392: Robotics Systems Integration	Malley, Melinda; with Dusek, Jeff	TR 12-1:30pm	Fully Remote	NA	4	30	yes		Core E:Robo_or_ME Elective
ECE	ENGR3426	01	ENGR3426: Mixed Analog-Digital VLSI	Minch, Brad	TR 10-11:30am	Fully Remote	NA	4	30	yes		ECE Elective
ECE	ENGR3440	01	ENGR3440: Principles of Wireless Communication	Lohmeyer, Whitney	TR 12-1:30pm	Fully Remote	NA	4	25	yes		ECE Elective
ECE	ENGR3499	01	ENGR3499: Special Topics in Electrical and Computer Engineering: Digital Power Conversion	Arnet, Beat	MW 4-5:30pm	Fully Remote	NA	4	15	yes		ECE Elective
ENGR	ENGR2199C	01	ENGR2199C: Special Topics in Engineering: <i>Mechanical Components and Systems</i>	Faas, Daniella	TR 12-1:30pm	Fully Remote	NA	4	25	yes	one of the recommendations for first year students	ELECTIVE
ENGR	ENGR3599A	SL	ENGR3599A: Special Topics in Computing: <i>Data Structures and Algorithms</i>	Matsumoto, Steve; Ku, Megan; Brehm, Dieter; Sieving, Jane; Mazza, Duncan	MW 4-5:30pm	Fully Remote	NA	4	30	yes	Does not fulfill E:C theory of CS requirement; substitution dependent on post-course interview with faculty content advisor	Student Led Course, E:C elective
ENGR	ENGR3599B	SL	ENGR3599B: Special Topics in Computing: <i>Advanced Algorithms</i>	Spence Adams, Sarah; Overney, Cassandra; Shen, Xierui; Swaminathan, Shashank	MW 12-1:30pm	Fully Remote	NA	4	30	yes	Prerequisites: DSA(faculty or student led) and Discrete Math or with permission of instructor; Students cannot take DSA and Adv Algorithms simultaneously	Student Led Course, E:C elective

Area	Course #	Sect #	Course Title	Instructor / Teaching Team	Time	Delivery Mode	Location for Instr Delivery or Staging of Materials	Credits	Enroll Limits	Waitlist	Notes	Curriculum Category
ENTRP	AHSE2515	01	AHSE2515: Iterate	Neeley, Lawrence	TR 2-3:30pm	Fully Remote	NA	2	15	yes	Session I	ENTRP
ENTRP	AHSE2515A	01	AHSE2515A: Iterate	Neeley, Lawrence	TR 2-3:30pm	Fully Remote	NA	2	15	yes	Session II	ENTRP
ENTRP	AHSE3515	01	AHSE3515: Launch	Neeley, Lawrence	TR 2-3:30pm	Fully Remote	NA	4	15	yes	Full Semester Offering	ENTRP
ENTRP	AHSE1515	01	AHSE1515: Products and Markets	Chachra, Debbie; Lynch, Caitrin; Neeley, Lawrence; Pratt, Joanne	TR 9-11:30am	Fully Remote	NA	4	86	yes	required of all first year students	ENTRP
FYR	ENGR1125	01-03	ENGR1125: Introduction to Sensors, Instrumentation and Measurement	Minch, Brad; Storey, Brian; Vanasupa, Linda	TR 2-3:30pm	Hybrid	MAC 204, 206, 304 MAC428 staging	4	NA	yes	required of all first year students; students will be pre-enrolled	Required Foundation
FYR	ENGR1125	04-06	ENGR1125: Introduction to Sensors, Instrumentation and Measurement	Minch, Brad; Storey, Brian; Vanasupa, Linda	TR 4-5:30pm	Hybrid	MAC 213, 218, 209 with MAC428 staging	4	NA	yes	required of all first year students; students will be pre-enrolled	Required Foundation
FYR	ENGR1125	07-10	ENGR1125: Introduction to Sensors, Instrumentation and Measurement	Minch, Brad; Storey, Brian; Vanasupa, Linda	MW 8-9:30am	Hybrid	MAC 313, 318, 326, 328 with MAC428 staging	4	NA	yes	required of all first year students; students will be pre-enrolled	Required Foundation
Interdisciplinary	AHSE2150_and_SCI1250	01	AHSE2150_and_SCI1250: Six Microbes that Changed the World with Laboratory	Martello, Rob; Huang, Jean	TR 10-11:30am F 10-11:30am (Lab)	Remote, labs will be adapted for both remote and hybrid engagement	MAC 404, 406 for labs	4+4	30	yes	8 credit Offering; Bio Foundation	Bio_and_AHS
Interdisciplinary	AHSE2160_and_SCI1260	01	AHSE2160_and_SCI1260: The Intersection of Biology, Art and Technology	Donis-Keller, Helen	TR 2-3:30pm F 10-11:30am (Lab)	Fully Remote	NA	4+4	24	yes	8 credit Offering; Bio Foundation	Bio_and_AHS
Interdisciplinary	ENGR2141_and_AHSE2141	01	ENGR2141_and_AHSE2141: Engineering for Humanity	Lynch, Caitrin; Ben-Ur, Ela	MW 4-7:30pm	Fully Remote	MAC 113 project work	2+2	30	yes	one of the recommendations for first year students	AHS_and_ENGR Elective

Area	Course #	Sect #	Course Title	Instructor / Teaching Team	Time	Delivery Mode	Location for Instr Delivery or Staging of Materials	Credits	Enroll Limits	Waitlist	Notes	Curriculum Category
Interdisciplinary	ENGR2199	01	ENGR2199: Special Topics in Engineering: <i>Engineering Systems Analysis</i>	Dabby, Diana; Lee, Chris	TR 10-11:30am	Fully Remote	NA	2	60	yes	Session I; ENGR2199/ENGR2199A/ENGR2199B: all 3 courses can be taken for 6 credits	Core ECE; Core ME
Interdisciplinary	ENGR2199A	01	ENGR2199A: Special Topics in Engineering: <i>Engineering Systems Analysis with Dynamics</i>	Dabby, Diana; Lee, Chris	TR 10-11:30am	Fully Remote	NA	2	30	yes	Session II: required for sophomores in ME or relevant Engineering majors; ENGR2199/ENGR2199A/ENGR2199B: all 3 courses can be taken for 6 credits	Core ME
Interdisciplinary	ENGR2199B	01	ENGR2199B: Special Topics in Engineering: <i>Engineering Systems Analysis with Signals</i>	Dabby, Diana; Lee, Chris	TR 5-6:30pm	Fully Remote	NA	2	30	yes	Session II: required for sophomores in ECE or relevant Engineering majors; ENGR2199/ENGR2199A/ENGR2199B: all 3 courses can be taken for 6 credits	Core ECE
Interdisciplinary	ENGX2005	01	ENGX2005: Quantitative Engineering Analysis 2 (formerly 1b)	Geddes, John; Malley, Melinda; Dusek, Jeff; delRosario, Zach	MW 10-11:30am	Fully Remote	NA	4	86	yes	required of all first year students	Required Foundation
Interdisciplinary	MTH2135_and_ENGR3635	01	MTH2135_and_ENGR3635: Neurotechnology, Brains and Machines	Michalka, Sam	MW 2-3:30pm	Fully Remote/Hybrid	MAC 417	2+2	30	yes		ProbStat_and_Bioengr
Interdisciplinary	MTH2136_and_SCI2136	01	MTH2136_and_SCI2136: Astrostats	Nugent, Carrie	MW 12-1:30pm	Fully Remote	NA	2+2	25	yes		ProbStat_and_SCI
ME	ENGR2350	01	ENGR2350: Thermodynamics	Townsend, Jessica	TR 12-1:30pm	Fully Remote	NA	4	25	yes		Core ME
ME	ENGR3350	01	ENGR3350: Finite Element Analysis	Lee, Chris	MW 10-11:30am	Fully Remote	NA	4	25	yes		ME Elective
ME	ENGR3370	01	ENGR3370: Controls	Barragan, Patrick	MW 5-6:30pm	Fully Remote	NA	4	25	yes		ECE Elective_or_ME Elective
ME	ENGR3399	01	ENGR3399: Special Topics in Mechanical Engineering: <i>Advanced Transport Phenomena</i>	Tow, Emily	TR 2-3:30pm	Fully Remote	NA	4	15	yes		ME Elective

Area	Course #	Sect #	Course Title	Instructor / Teaching Team	Time	Delivery Mode	Location for Instr Delivery or Staging of Materials	Credits	Enroll Limits	Waitlist	Notes	Curriculum Category
MTH	MTH3120	01	MTH3120: Partial Differential Equations	Geddes, John	TR 4:30-6:00pm	Fully Remote	NA	4	24	yes		ADV MATH
SCI	SCI1399	01	SCI1399: Special Topics in Chemistry: <i>Paper Panacea: Part Pandemic!</i>	Vanasupa, Linda	MW 2-3:30pm	Fully Remote	MAC 409 for labs	4	25	yes	one of the recommendations for first year students; Matsci_Chem Foundation	MATSCI_CHEM
SCI	SCI1420	01	SCI1420: Metals, Mining, and the Environment	Neal, Matt	MW 4-6:00pm	Fully Remote	MAC 413 for labs	4	25	yes	one of the recommendations for first year students; Matsci_Chem Foundation	MATSCI_CHEM
ADMIN	AWAY1000	01	AWAY1000: The Study Away Program	Administration	NA	NA	NA	12	NA	NA	Enroll in this course if you will be studying away in the spring 2021 semester	
ADMIN	OIP1000	01	The Olin Internship Practicum I	Phelps, Sally	NA	NA	NA	1	NA	NA	See Post Graduate Planning to Enroll	
ADMIN	OIP1001	01	The Olin Internship Practicum II	Phelps, Sally	NA	NA	NA	1	NA	NA	See Post Graduate Planning to Enroll	

Color Key- Offering Blocks/ Del Mode	ECE		ME			ENGR / DSN Courses			ENGR/Foundation Requirement			Delivery Modes								
	FULLY REMOTE	FACULTY REMOTE	IN PERSON	HYBRID	FULLY REMOTE	FACULTY REMOTE	IN PERSON	HYBRID	FULLY REMOTE	FACULTY REMOTE	IN PERSON	HYBRID	FULLY REMOTE	FACULTY REMOTE	IN PERSON	HYBRID				
Monday						Tuesday						Wednesday								
8:00 AM				ENGR 1125 sections: 07-09 Intro Sensors, Instru, Measurement						ENGR 4190 SCOPE 8-10:00am						ENGR 1125 sections: 07-09 Intro Sensors, Instru, Measurement				
9:30 AM				HYBRID			AHSE 1515 Products & Markets T/TH 9am-11:30pm			HYBRID						HYBRID				
10:00 AM	AHSE 2199 Spec Top AHS: Change the World: Personal Values FULLY REMOTE	AHSE 4190 AHS Capstone FULLY REMOTE	ENGR 2000 Quantitative Engineering Analysis 2 FULLY REMOTE	ENGR 3350 Finite Element Analysis FULLY REMOTE	ENGR 3232 Biomedical Device Design HYBRID	ENGR 3525 Software Systems FULLY REMOTE		ENGR 3210 Sustainable Design FACULTY REMOTE	Session I ENGR2199 Engr Systems Analysis (ESA) Session II ENGR2199A: ESA: Dynamics FULLY REMOTE	SCI 1250&AHSE 2150 Six Microbes that Changed the World w/ Lab FULLY REMOTE	ENGR 3426 Mixed Analog-Digital VLSI FULLY REMOTE		AHSE 2199 Spec Top AHS: Change the World: Personal Values FULLY REMOTE	AHSE 4190 AHS Capstone FULLY REMOTE	ENGR 2000 Quantitative Engineering Analysis 2 FULLY REMOTE	ENGR 3350 Finite Element Analysis FULLY REMOTE	ENGR 3232 Biomedical Device Design HYBRID	ENGR 3525 Software Systems FULLY REMOTE		
11:30 AM																				
12:00 PM		MTH 1199 or ENGR 1199 Special Topics in Math: Service Learning: Mathematics Outreach for Adolescent Learners FULLY REMOTE	MTH 2136& SCI 2136 Astro Stats FULLY REMOTE	ENGR 3599B-SL Advanced Algorithms FULLY REMOTE	ENGR 3390 Fundamentals of Robotics HYBRID			ENGR 2350 Thermodynamics FULLY REMOTE	ENGR 3392 Robotics Systems Integration FULLY REMOTE	ENGR 2199C Mechanical Components and Systems FULLY REMOTE	AHSE 2199A Contemplating Science FULLY REMOTE	ENGR 3440 Principles of Wireless Communication FULLY REMOTE			MTH 1199 or ENGR 1199 Special Topics in Math: Service Learning: Mathematics Outreach for Adolescent Learners FULLY REMOTE	MTH 2136& SCI 2136 Astro Stats FULLY REMOTE		ENGR 3599B-SL Advanced Algorithms FULLY REMOTE	ENGR 3390 Fundamentals of Robotics HYBRID	
1:30 PM																				
2:00 PM	MTH 2135& ENGR 3635 Neurotech, Brains & Machines FULLY REMOTE	ENGR 3299 Probabilistic Design Optimization FULLY REMOTE	ENGR 2510 Software Design FULLY REMOTE	ENGR 3235 or SCI 2235 Biomimicry FULLY REMOTE	SCI 1399 Paper Panacea: Part Pandemic! FULLY REMOTE		ENGR 2250 User-Oriented Collaborative Design T/TH 1:45pm-4:15pm FULLY REMOTE	ENGR 3599 Web Development FULLY REMOTE	Session I AHSE 2515 Iterate Session II AHSE 2515A Iterate Full Semester AHSE 3515 Launch FULLY REMOTE	Session I AHSE 2112 Six Books that Changed the World Session II AHSE 2114 Science Fiction and Historical Context FULLY REMOTE	SCI 1260& AHSE 2160 The Intersection of Biology, Art and Technology FULLY REMOTE	ENGR 3399 Advanced Transport Phenomena FULLY REMOTE	ENGR 1125 sections: 01-03 Intro Sensors, Instru, Measurement HYBRID		MTH 2135& ENGR3635 Neurotech, Brains & Machines FULLY REMOTE	ENGR3299 Probabilistic Design Optimization FULLY REMOTE	ENGR 2510 Software Design FULLY REMOTE	ENGR3235 or SCI2235 Biomimicry FULLY REMOTE	SCI1399 Paper Panacea: Part Pandemic! FULLY REMOTE	
3:30 PM																				
4:00 PM			AHSE 2141 & ENGR 2141 Engineering for Humanity FULLY REMOTE	ENGR 3599A-SL Data Structures and Algorithms FULLY REMOTE	SCI 1420: Metals, Mining, and the Environment M/W 4pm-6pm FULLY REMOTE	ENGR 3499 Digital Power Conversion FULLY REMOTE		ENGR 3290 & 4290 Affordable Design & EI T 3:30-6:30pm R 3:30-5:30pm HYBRID	MTH 3120 Partial Differential Equations T/Th 4:30-6:00pm FULLY REMOTE	Session II ENGR2199B ESA: Signals T/Th 5pm-6:30pm FULLY REMOTE			ENGR 1125 sections: 04-06 Intro Sensors, Instru, Measurement HYBRID		ENGR 3370 Controls M/W 5pm-6:30pm FULLY REMOTE	AHSE 2141 & ENGR 2141 Engineering for Humanity FULLY REMOTE	ENGR 3599A-SL Data Structures and Algorithms FULLY REMOTE	SCI1420 Metals, Mining, and the Environment M/W 4pm-6pm FULLY REMOTE	ENGR 3499 Digital Power Conversion FULLY REMOTE	
5:30 PM																				
6:00 PM																				
7:30 PM																				

AHSE		SCI			Math		INTEGRATED OFFERING (colored via discipline blending)		Color Key- Offering Blocks		
Thursday					Friday						
					ACADEMIC LIFE MTGs 8:30-10am					8:00 AM	
AHSE 1515 Products & Markets T/TH 9am-11:30pm FULLY REMOTE					ENGR 4190 SCOPE 8-10:00am HYBRID					9:30 AM	
ENGR 3210 Sustainable Design FACULTY REMOTE HYBRID		Session I ENGR2199 Engr Systems Analysis (ESA) Session II ENGR2199A: ESA: Dynamics FULLY REMOTE	SCI 1250& AHSE 2150 Six Microbes that Changed the World w/ Lab FULLY REMOTE	ENGR 3426 Mixed Analog-Digital VLSI FULLY REMOTE	AHSE 2199B Context and Consequences IN PERSON		SCI 1250& AHSE 2150 Six Microbes that Changed the World w/ Lab FULLY REMOTE HYBRID	SCI 1260& AHSE 2160 The Intersection of Biology, Art and Technology FULLY REMOTE			10:00 AM
ENGR 2350 Thermodynamics FULLY REMOTE	ENGR 3392 Robotics Systems Integration FULLY REMOTE	ENGR 2199C Mechanical Components and Systems FULLY REMOTE	AHSE 2199A Contemplating Science FULLY REMOTE	ENGR 3440 Principles of Wireless Communication FULLY REMOTE						11:30 AM	
ENGR 2250 User-Oriented Collaborative Design T/TH 1:45pm-4:15pm FULLY REMOTE	ENGR 3599 Web Development FULLY REMOTE	Session I AHSE 2515 Iterate Session II AHSE 2515A Iterate Full Semester AHSE 3515 Launch FULLY REMOTE	Session I ASHE 2112 Six Books that Changed the World Session II AHSE 2114 Science Fiction and Historical Context FULLY REMOTE	SCI 1260& AHSE 2160 The Intersection of Biology, Art and Technology FULLY REMOTE	ENGR 3399 Advanced Transport Phenomena FULLY REMOTE	ENGR 1125 sections: 01-03 Intro Sensors, Instru, Measurement FULLY REMOTE	ENGR 4190 SCOPE F 12-5:00pm HYBRID			12:00 PM	
ENGR 3290 & 4290 Affordable Design & EI T 3:30-6:30pm R 3:30-5:30pm HYBRID	MTH 3120 Partial Differential Equations T/Th 4:30-6:00pm FULLY REMOTE	Session II ENGR 2199B ESA: Signals T/TH 5pm-6:30pm FULLY REMOTE	ENGR 1125 sections: 04-06 Intro Sensors, Instru, Measurement HYBRID						1:30 PM		
									2:00 PM		
									3:30 PM		
									4:00 PM		
									5:30 PM		
									6:00 PM		
									7:30 PM		