



Northeastern University

College of Engineering

Congratulations on your acceptance to the Master of Science (MS) Computer Systems Engineering program at Northeastern University's Graduate School of Engineering!

As an incoming Fall 2020 student, there are some steps that you need to take this summer before the fall semester starts. **Please read this document thoroughly as it contains helpful information and can answer many of your questions before you start your first semester in your master's program.**

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Step 1: Confirm your enrollment.

You will not be able to register for classes (information below) until you confirm enrollment. You can confirm your enrollment by [logging into your application account](#) and paying the enrollment deposit. If you have any questions regarding this process, please reach out to the Graduate Admissions team. You may contact them at coe-gradadmissions@northeastern.edu.

Step 2: Know your faculty advisor and administrative contacts.

[Professor Kal Bugarra](#)

Program Director, Computer Systems Engineering

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Yalan Sun, Program Manager

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Erin Macri, Administrative Assistant

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Step 3: Complete your course registration.

As a Computer Systems Engineering student, you are **required to complete CSYE 6200: Concepts of Object Oriented Design and INFO 6205: Program Structure and Algorithms, in order to earn your degree. CSYE 6200 is a mandatory course for the Fall semester. It is strongly recommended that you take INFO 6205 as your second course; however, you may take it in the Spring if you decide to enroll in one of the recommended elective courses.** These are the only required courses in the Computer Systems Engineering program and are important building blocks for your subsequent courses. We have three different elective options for our first-year students that will help you develop the skills you will need to be successful throughout the rest of



Northeastern University
College of Engineering

your program.

Professor Bugrara has created the following advising guide for you to refer to as you choose your courses for this Fall.

CSYE 6200: Concepts of Object-Oriented Design

This class will focus on the ins-and-outs of the Java programming language. Students who have not programmed before will be asked to take this class in addition to Application Engineering (INFO 5100). The combination of these two courses is an excellent way for students to strengthen their development skills in preparation for the heavily programming courses such as the Algorithms, Web Methods and Tools, Big-Data Engineering classes during the Spring semester.

Sections Available:

Section 01: Monday 6:00 - 9:30 PM
CRN 13767

Section 02: Friday 6:00 - 9:30 PM
CRN 14339

Section 03: Monday 2:00 - 5:30 PM
CRN 15231

INFO 6205: Program Structure and Algorithms

This class is recommended for students who have had programming experience before, but lack the algorithmic approach to solving complex programming challenges. The class covers all kinds of data structures from stacks, queues, trees, graphs, and algorithmic performance complexity. In addition, the class covers various problem-solving techniques such as divide and conquer, dynamic programming, randomized and greedy algorithms, backtrack search, etc. After the completion of this class, you will be in a position of solve any programming problems. Though this class is optional, it is highly recommended for students aiming to be software developers. There is a lot of technical work involved here, so it will be a challenge along with the Application Engineering class (INFO 5100). Students with a strong technical background may wish to take up this challenging opportunity right away.

Sections Available:

Section 01: Tuesday & Friday 3:25 - 5:05 PM



Northeastern University
College of Engineering

CRN 15170

Section 02: Tuesday 11:45 AM - 1:25 PM & Thursday 2:50 - 4:50 PM

CRN 14346

Section 05: Wednesday 6:00 – 9:30 PM

CRN 16391

Section 06: Saturday 9:00 AM – 12:30 PM

CRN 16392

In addition to one of the required courses, we strongly recommend that you consider one of the following courses for your elective:

CSYE 7280: User Experience Design and Testing

Introduces user experience concepts while working on Web design projects. Offers students an opportunity to build the necessary skill sets to make better decisions when designing contemporary websites that cater to customer needs. Students practice interview techniques to understand user requirements while keeping user experience central to the effort. Uses wireframes and user scenarios to drive the creative design process. Various case studies are introduced and discussed in team settings to emphasize user perspectives. Uses quality assurance and usability testing to drive validation and user-acceptance testing and approvals.

Sections Available:

Section 01: Monday 6:00 – 9:30 PM

CRN 14340

INFO 6150: Web Design and User Experience Engineering

This course gets into the front-end design of web-based user interfaces using Javascript. You learn the latest tools, techniques, and frameworks for building attractive user interfaces that engage the user in meaningful ways. You'll learn about various ways that users interact with systems, color theory, and how to implement solid client-side user interfaces. Meant for students with minimal programming background but ready to program in Javascript and html. This class goes well with the Application Engineering class (INFO 5100). These two classes will prepare you well for becoming a front-end developer. Tools covered include Javascript, Typescript, AnglurJS, Node, and various aspects of the React framework. This is a popular course that we recommend highly due to its relevance



Northeastern University
College of Engineering

to co-op job opportunities.

Sections Available:

Section 01: Saturday 1:00 - 4:30 PM
CRN 14337

Section 02: Wednesday 6:00 - 9:30 PM
CRN 14531

INFO 6210: Data Management and Database Design

For the student who has no background in databases and wants to know what is involved in the design and programming of databases and wants to maximize technical skills. A good foundation for those who want to focus on data management, business intelligence, data science, etc. or who want to make these areas their career objectives. This class will prepare you well for Web Methods and Tools in the Spring semester.

Sections Available:

Section 02: Monday 6:00 - 9:30 PM
CRN 16619

Section 03: **ONLINE**
CRN 12757

Section 07: Saturday 2:30 - 6:00 PM
CRN 16621



Frequently Asked Questions

How do I register?

Please enter the CRN numbers listed above directly into your registration worksheet. These sections are not available to view online as they are reserved for first-term students only. You will not be able to register for these classes using the search classes feature and **MUST** enter the CRNs directly. If you need help navigating to your registration worksheet on your [my.Northeastern](https://my.northeastern.edu) account please watch the following webinars for instructions on how to register using your [my.Northeastern](https://my.northeastern.edu) account:

[Course Search Webinar](#)

[Course Add/Drop Webinar](#)

[General Registration Instructions](#)

What if I already registered for classes?

Please drop them immediately--unless they are the courses listed above. **As a first-term student, you should only take the sections of the classes listed above.** There are specific sections set aside for first-term students that are not visible on the online schedule. If you are registered in a section whose CRN number does not match with a number above, you are in the wrong section.

What if I do not get the elective I wanted?

If your first preference does not have any seats available, please sign up for your second preference (and so on). The schedule is dynamic, and students will continue to change their registrations up until the start of the term so there is still an opportunity for you to get into your first-choice elective this Fall. Please make sure you are always registered for **8 SH** if you are a full-time student.

Can I take an elective other than the three listed above?

No. These classes were chosen because they are appropriate for first-term students. Please refer to the advising guide to select the class most relevant to your interests.

How do I meet with Professor Bugrara?

You will have an opportunity to meet with Professor Bugrara, the Director of the Computer Systems Engineering program, at orientation before classes start.

Can I take courses from other departments?

The only other department Computer Systems Engineering students are allowed to take classes from is IS (Information Systems). IS is a sister program to CSYE



Northeastern University College of Engineering

and focuses on the space where computer engineering and business skills merge. Courses such as Data Sciences, Business Process Engineering, etc. are available to CSYE students through this program in later terms.

Can I transfer credit from other universities?

No. Professor Bugrara firmly believes that all 32SH should be taken within the program at Northeastern University to uphold the integrity and continuity of the program.

What is the duration of the Computer Systems Engineering Program?

You are required to take eight courses for a total of 32 credits. The program takes a minimum of three semesters to complete. The typical student takes 2.5 years to complete the program, which includes an eight-month co-op.

Is there funding or Teaching Assistant jobs available for first year students?

Unfortunately, there are no funding options in your first year. TA positions are filled by second year students only. You are expected to be fully dedicated to achieving academic success in the first year of the program.

Am I required to bring a laptop?

Yes. You must bring a high-quality laptop with a minimum of 8 GB memory AND a strong (4 hour) batter life- this is required.

Am I eligible for co-op?

You are not eligible for co-op the first two semesters of your program, during which your focus will be strictly academic. You can begin your first co-op after the Spring semester ends. During your last semester of study (in your second year), you must be fully on campus as a full-time student, even if you are eligible to be on co-op. According to government rules and regulations, co-op is an educational opportunity to strengthen your engineering skills--not a job pursuit.

How do I register for the co-op course?

One of the requirements to becoming eligible to go on co-op is to take ENCP 6000, Career Management for Engineers. You can register for this course just as you do with your academic courses, but you need to make sure that you register for a section only for CSYE students. You can see this information in the course description on your registration portal under "Program Restrictions."

We are offering **ENCP 6000: Career Management for Engineers** course virtually this Fall 2020 semester, and we highly encourage you to register if you are



Northeastern University College of Engineering

interested in searching for a co-op in the upcoming semesters (Spring 2021 or Summer 2021). The **ENCP 6000: Career Management for Engineers** course is required to be eligible for co-op and to obtain access to Northeastern's co-op job platform, to search for co-op positions. Please see the suggested registration information below.

For more details, the Graduate Co-op Eligibility and Requirements can be found [HERE](#).
Suggested Registration Information:

CRN	Day	Time	Inst. Method	Campus	Programs
16284	T	9:50 - 11:25	Online	Boston	CSYE,TNET,IOT,CYPS
14503	R	9:50 - 11:25	Online	Boston	CSYE,TNET,IOT,CYPS

How long can I go on co-op?

Co-ops are a minimum of four months and a maximum of eight months. You can start a co-op in May after the Spring term ends or in December after the Fall term of your second year in the program ends.

Will I get a bill from registering?

Yes, your first e-bill is generated when you register for your courses. You will receive an e-bill from the University with instructions on how to pay the e-bill. If you have questions about payment, please contact the Student Financial Services office directly: <http://www.northeastern.edu/financialaid/contact/>.

How do I get a my.Northeastern account?

If you have not set up your my.Northeastern account, please follow the instructions [here](#).

For more information about beginning your program at Northeastern University, please read your acceptance letter in full.

We look forward to welcoming you to the Graduate School of Engineering!