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

As an incoming Spring 2022 student, there are some steps that you need to take before the Spring 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.

**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 Bugrara**
  Program Director, Software Engineering Systems
  - Sam Casey, Program Manager
    s.casey@northeastern.edu
  - Yalan Sun, Program Manager
    y.sun@northeastern.edu
  - Erin Macri, Administrative Assistant
    er.macri@northeastern.edu

**Step 3: Complete your course registration.**
As a Software Engineering Systems 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 Spring semester. It is strongly recommended that you take INFO 6205 as your second course; however, you may take it in the Fall if you decide to enroll in one of the recommended elective courses. These are the only required courses in the Software Engineering Systems 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
your program.

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

**CSYE 6200: Concepts of Object-Oriented Design**
This class will focus on the ins-and-outs of the Java programming language. The course introduces object-oriented design and programming via the Java programming language; the use of inheritance, composition, and interface classes in software design. The course is an excellent way for students to strengthen their development skills in preparation for the heavily programming courses that will be taken in later semesters.

**Sections Available:**
- **Section 01:** Monday 6:00 - 9:30 PM
  CRN 32147
- **Section 02:** Friday 6:00 - 9:30 PM
  CRN 32693
- **Section 01:** Monday 2:00 - 5:30 PM
  CRN 33249

**INFO 6205: Program Structure and Algorithms**
This class is 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. There is a lot of technical work involved here. Students with a strong technical background may wish to take up this challenging opportunity right away.

**Sections Available:**
- **Section 01:** Tuesday 11:45 AM-1:25 PM & Thursday 2:50 – 4:30 PM
  CRN 31859
- **Section 03:** Monday & Wednesday 2:50 - 4:30 PM
  CRN 33188
In addition to one of the required courses, we strongly recommend that you consider one of the following courses for your elective:

**CSYE 6220: Enterprise Software Design**
Designed to build on previous experience in concepts of object-oriented design courses with equal focus in the three areas of architecture, design, and implementation. Instruction and hands-on exercises cover both server-side and client-side web programming. Offers students an opportunity to build a conceptual understanding and to gain practical experience with popular frameworks (Spring MVC, Hibernate, and Dojo or jQuery) that increase productivity, empower developers, and greatly simplify web development. The goal is to be able to build the server side and client side of substantial web-based, client-server, database-intensive, multitier applications.

*If you need assistance registering for this section, email s.casey@northeastern.edu*

**Sections Available:**
- **Section 01:** Wednesday & Friday 11:45 AM – 1:25 PM
  CRN 31588 *(Livecast Instructional Method)*

**CSYE 7374: ST: Design Patterns**
Design patterns allow software engineers to use abstraction to design software that is extensible, maintainable, and cost effective. The class covers design patterns including Factory, Command, and Decorator. Each design pattern is implemented using industry best practices and shown to solve real-world problems. Students will learn from a pragmatic teach-by-example/learn-by-doing methodology. Lecture examples can be applied to any object-oriented language so students can master concepts, develop skills in a demystifying and easy to absorb format.

*If you need assistance registering for this section, email s.casey@northeastern.edu*

**Sections Available:**
- **Section 01:** Tuesday 6:00 – 9:30 PM
CRN 39011

DAMG 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.

Sections Available:
- Section 01: Monday 6:00 - 9:30 PM
  CRN 38545
- Section 02: Wednesday 6:00 - 9:30 PM
  CRN 38546
- Section 04: ONLINE
  CRN 38548
- Section 05: Thursday 6:00 – 9:30 PM
  CRN 38549
- Section 06: Saturday 2:30 - 6:00 PM
  CRN 38550

Frequently Asked Questions

How do I register?
Please enter the CRN numbers listed above directly into your registration worksheet. In some instances, these sections may not be available to view online as they are reserved for first-term students only. In these cases, 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 account please visit the Registrar’s website for 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.
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 Spring. 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 Software Engineering Systems program, at orientation before classes start.

Can I take courses from other departments?
The only departments SWES students can take courses from are DAMG (Data Architecture and Management), INFO (Information Systems), and CSYE (Software Engineering Systems).

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 Software Engineering Systems 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. 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?
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 Intro to MGEN Coop Education Registration guide found in the Course Registration Guidance section on the New Student Information website. 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 SWES/CSYE students. You can see this information in the course description on your registration portal under “Program Restrictions.”

For more details, the Graduate Co-op Eligibility and Requirements can be found HERE.

How long can I go on co-op?
Co-ops are a minimum of four months and a maximum of eight months.

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!