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

As an incoming Fall 2021 student, there are some steps that you need to take 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.

**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, Information 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 an Information Systems student, you are required to complete INFO 5100: Application Engineering Development and the accompanying lab, INFO 5101: Lab for INFO 5100, in your first term. This is the only required course in the Information Systems program and it is an important building block for your subsequent courses. Your second course will be the first elective course in your program. We have six 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. **It is strongly recommended that you take one of the seven elective courses listed below in addition to INFO 5100 and INFO 5101, as some of these courses are prerequisites to other courses that will be**
Professor Bugrara has created the following advising guide for you to refer to as you choose your courses for this Fall.

INFO 5100 (required): Application Engineering and Development
Students will learn innovative software programming techniques that will enable them to design and build any kind of application properly and quickly. Through hands-on weekly lab sessions, students practice the development of applications as an assembly of components. Object-oriented techniques for building business architectures that map to software applications will be introduced. You will learn how to master ways of taking vague requirements and turn them into systems of ecosystem scale. This class was designed to meet the needs of engineering students with a limited programming background. Students who do have a programming background will learn how to design and architect software the right way. This class with its emphasis on solid design of socio-technical systems is the corner stone of what we do in Information Systems.

Sections Available:
- Section 01: Thursday 8:00 - 11:30 AM
  CRN 11093

- Section 02: Thursday 1:30 - 5:00 PM
  CRN 12653

INFO 5101 (required): Lab for INFO 5100
This is a required two-hour class session is complementary to the main lectures of INFO 5100. The lab will cover the syntax and semantics of programming in the Java programming language. The teacher will emphasize all aspects of the Java programming language in depth to ensure students are ready to tackle complex problems. The lab will be especially useful for students with minimum programming background.

Sections Available:
- Section 01-10: Sunday 9:00 AM - 12:00 PM
  CRNs 12656, 13723, 13724, 13725, 13726, 13727, 13730, 13731, 13728, 13729

- Section 11-15 & 18-19: Sunday 1:00 – 4:00 PM
  CRNs 13732, 15136, 15137, 15135, 15138, 15139, 15140
INFO 6105: Data Science Engineering Methods and Tools (Machine Learning)
This class is for students who are planning to build a career in engineering machine learning and data science applications. The class covers the fundamentals of probability and statistics, data analysis and engineering, classification and clustering techniques, statistical inferencing, machine learning methods and tools. In a step-by-step manner, students will learn how to code in and make extensive use of the python programming language. Minimum expertise in programming is required to take this class. Though very demanding, this class is a good fit with the Application Engineering class (INFO 5100) for students with prior development experience.

Sections Available:
Section 01: Tuesday & Thursday 11:45 AM - 1:25 PM
CRN 14345

Section 02: Tuesday & Friday 1:35 - 3:15 PM
CRN 14348

Section 04: Monday & Wednesday 2:50 – 4:30 PM
CRN 14732

Section 07: Thursday 6:00 - 9:30 PM
CRN 15086

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, AnglrJS, Node, and various aspects of the React framework. This is a popular course that we recommend highly due to its relevance to co-op job opportunities.

Sections Available:
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
CRN 14304

Section 02: Tuesday 11:45 AM-1:25 PM & Thursday 2:50 – 4:30 PM
CRN 13718

Section 05: Wednesday 6:00 - 9:30 PM
CRN 14963

Section 06: Monday & Wednesday 2:50 - 4:30 PM
CRN 14964

INFO 6255: Software Quality Control and Management
This class examines techniques for the management and evolution of software systems. Topics include managing software as an asset; lifecycle development and rapid development technologies; maintainability; quality assurance of software systems including testing strategies and problem analysis; software risk analysis; analysis of software project
failures; process models; configuration management; and the impact of new development technologies on software management.

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

Sections Available:
Section 01: Tuesday 6:00 - 9:30 PM
CRN 14448

Section 02: Thursday 6:00 - 9:30 PM
CRN 14731

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 18468

Section 02: Wednesday 6:00 - 9:30 PM
CRN 18469

Section 04: ONLINE
CRN 18471

Section 05: Thursday 6:00 – 9:30 PM
CRN 18472

Section 06: Saturday 2:30 - 6:00 PM
CRN 18473

Section 07: Wednesday & Friday 11:45 AM – 1:25 PM
CRN 18474

Section 08: Tuesday 11:45 AM-1:25 PM & Thursday 2:50 – 4:30 PM
CRN 18475
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 13244

Section 02: Friday 6:00 - 9:30 PM
CRN 13712

Section 01: Monday 2:00 - 5:30 PM
CRN 14357

Frequently Asked Questions

How do I register?
Please enter the CRN numbers listed above directly into your registration worksheet. There 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 account please watch the following webinars for instructions on how to register using your my.Northeastern 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.

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 six 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 Information Systems program, at orientation before classes start.

**Can I skip the Application Engineering class (INFO 5100) or take it in a later semester?**
No, you must take INFO 5100 this Fall. The class is essential for advancing yourself through the program and engaging in a successful co-op experience.

**Am I allowed to take three courses?**
No. Information Systems students are limited to two courses each term. Based on feedback from our students, we found that three courses were too demanding, especially in terms of final exams and projects. All courses require projects that count as much as 30% of your final grade and it is extremely hard to complete three of these in one term. **No exceptions to this policy will be considered until after your first year.**

**Can I take courses from other departments?**
The only other departments INFO students are allowed to take classes from are CSYE (Computer Systems Engineering) and DAMG (Data Architecture & Management).

**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 Information 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 (four-hour) batter life. This is required for the Application Engineering course.

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 IS students. You can see this information in the course description on your registration portal under “Program Restrictions.”

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:

<table>
<thead>
<tr>
<th>CRN</th>
<th>Day</th>
<th>Time</th>
<th>Inst. Method</th>
<th>Campus</th>
<th>Programs</th>
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<td>T</td>
<td>9:50am – 11:25am ET</td>
<td>Traditional</td>
<td>Boston</td>
<td>IS</td>
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<td>13599</td>
<td>W</td>
<td>11:45am – 1:25pm ET</td>
<td>Traditional</td>
<td>Boston</td>
<td>IS</td>
</tr>
</tbody>
</table>
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!