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 2019 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**.

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 through the Graduate Admissions Support Center. You can contact the Graduate Admissions team at support@husky.desk-mail.com.

Step 2: Know your faculty advisor and administrative contacts.
Professor Kal Bugrara
Program Director, Information Systems

Sam Casey, Program Manager
s.casey@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 offered in following semesters.**

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 eco-system 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 11397**
> >
> > Section 02: Thursday 1:30 - 5:00 PM
> > **CRN 13587**

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 teachers 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 01-09: Sunday 9:00 AM - 12:00 PM
> > **CRNs 13592, 15238, 15239, 15240, 15241, 15242, 15245, 15246, 15243**
> >
> > Section 10-15 & 18-19: Sunday 1:00 – 4:00 PM
> > **CRNs 15244, 15247, 18802, 18803, 18801, 18804, 18805, 18806**

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 11:45 AM - 1:25 PM & Thursday 2:50 - 4:50 PM
CRN 16827

Section 04: Monday & Wednesday 2:50 -4:30 PM
CRN 17944

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 to co-op job opportunities.

Sections Available:
Section 01: Saturday 1:00 - 4:30 PM
CRN 15214

Section 02: Wednesday 6:00 - 9:30 PM
CRN 15513

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 programing, 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: Wednesday & Friday 11:45 AM-1:25 PM
> > **CRN 16763**
> >
> > Section 02: Tuesday 11:45 AM - 1:25 PM & Thursday 2:50 - 4:50 PM
> > **CRN 15232**
> >
> > Section 05: Wednesday 6:00 – 9:30 PM
> > **CRN 18447**
> >
> > Section 06: Saturday 9:00 AM– 12:30 PM
> > **CRN 18448**

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 01: Thursday 6:00 - 9:30 PM
> > **CRN 15215**

Section 02: Monday 6:00 - 9:30 PM
CRN 18683

Section 03: **ONLINE**
CRN 13204

Section 04: Wednesday 6:00 - 9:30 PM
CRN 18684

Section 07: Saturday 1:00 - 4:30 PM
CRN 18685

Section 09: Friday 5:30 - 9:00 PM
CRN 18852

Section 10: Friday 6:00 - 9:30 PM
CRN 18851

INFO 6215: Business Analysis and Information Engineering

This class provides an over view of the software life-cycle with special emphasis on client engagement, requirements gathering, use-case development, UML class diagrams, etc. This is an excellent class for students who are new to the software industry and want to take their time in building their programming skills. The class complements the Application Engineering class very well. The class runs as a combination of online lectures and classroom discussions.

Sections Available:
Section 01: **ONLINE**
CRN 11791 (highly advanced digital product approach)

Section 03: Tuesday 6:00 - 9:30 PM
CRN 16774

Section 05: Thursday 6:00 - 9:30 PM
CRN 18641

INFO 7385: Managerial Communications for Engineers
This course focuses on managerial communication strategies and tactics for engineers at the interpersonal, team, and organizational level.

Course topics include forms (oral and written), styles, and differences in communication; coaching and giving feedback to staff; building teams, managing conflict, and special topics in organizational communication (engineering communication skills, leadership and change). The primary goal of this course is to increase your communication and managerial effectiveness to help you progress along your engineering career path.

Sections Available:
Section 01: Monday 6:00 - 9:30 PM
CRN 15384

CSYE 6200: Concepts of Object-Oriented Design
This class will focus on the ins-and-outs of the Java programing 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 14465

Section 02: Friday 6:00 - 9:30 PM
CRN 15217

Section 03: Monday 2:00 - 5:30 PM
CRN 16857

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**. 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 seven 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 later in the Spring or Summer?
No, you must take INFO 5100 this Fall. The class is only available in the Fall terms and 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 department Information Systems (IS) students can take classes from is CSYE (Computer Systems Engineering). CSYE is a sister program to IS and is being repositioned to focus exclusively on big-data technologies and programming platforms. Courses such as Java, multi-threading, managing big-data projects, advanced big-data programming, as well as Scala/Spark programming will be available to IS students after your first term in the program.

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."

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!