Schedule/Dept Overview

Undecided (EAS) and Industrial Engineers (IE): follow Anyssa/Lisa/Franz/Ayenoumou to **NSC 201** (Advisors: Erin MacDiarmid/Jane Sinclair)

Computer Science (CS) and Computer Engineers (CEN): follow Mike/David to **NSC 225** (Advisor: Jaynee Straw)

Biomedical (BE): follow Sean/Eric to **Talbert 115** (Advisor: Terri Miklitsch)

Chemical Engineers (CE): follow Sean/Eric to **Talbert 112** (Advisor: Dalene Aylward)

Civil (CIE) and Environmental Engineers (ENV): **SASEAS stay here**/EAS follow Sebastian to **101 Davis** (Advisor: Jon Bonebrake)

Electrical (EE) and Engineering Physics (EGP): follow Tyree/Samantha to **Knox 14** (Advisor: Dan La Rosa)

Aerospace (ASE) and Mechanical Engineers (ME): **EAS stay here**/ **SASEAS** follow Boom to **20 Knox** (Advisor: Kerry Collins-Gross)

It’s OK if you aren’t certain which group to proceed into today! Information presented is consistent, with only minor details added at the end for added interest.
Your 1st semester schedule

Step 1: Start Here

Completing your Orientation Data Form is your first step.

It gives us detailed information about your academic background, interests, and concerns so we can assign you an academic advisor, plan your orientation program and answer any questions you include on your Orientation Data Form. You will also have the opportunity to take the pledge to Finish in 4. It is very important that you complete the data form entirely, especially the questions regarding any AP and/or college courses which you have completed or are currently enrolled, as this will assist your Academic Advisor with helping you to plan your semester schedule properly.
Your 1st semester schedule

- UB Seminar - EAS 199 or CSE 199
- Chemistry requirement and/or Computer Programming requirement (CEN and CSE)
- Math Requirement
- UB Curriculum (General Education) Communication Literacy 1 and/or Pathway requirement

Total Credits: 14-18
EAS 199 (Principles), Sections A, B, C or D

- Project-based class that teaches how to “think like an engineer” on real world problems
  - Alternative energy theme
  - Engineering principles and analysis
  - Hands-on project
  - Interaction with engineering professionals
- Professional Development
  - Career Exploration
  - Academic Transition
- Required for all first-year engineering majors directly admitted to SEAS
- Seminars meet Mondays, Wednesdays, Fridays at noon

We do not accept Project Lead the Way credit for this course requirement.
EAS 199 (Principles) NOTE: First lecture class at 12 noon on Monday, August 29th meets in Lippes Concert Hall (aka Slee Hall), instead of your normally assigned classroom.

EAS 199 (Principles) Labs meet the first week of classes, beginning Monday August 29
EAS 199 (Challenges), Sections I, J, K, or L

> Students with an interest in engineering explore the engineering disciplines, and characteristics of good engineers:
  > Technical competence (technical knowledge, problem-solving skills, creativity)
  > Interpersonal skills (strong technical communication, effective teamwork)
  > Work ethic (attention to detail, diligence, persistence);
  > Moral standards: honesty, integrity.

> This exploration will be facilitated through team projects, individual assignments and a professional development and career planning portfolio.

> Recommended for all first year intended engineering majors

> Seminar times vary

We do not accept Project Lead the Way credit for this course requirement.
EAS 199 (Challenges) NOTE: First lecture class meets in your normally assigned classroom

EAS 199 (Challenges) Labs meet the first week of classes, beginning Monday August 29
CSE 199 - How the Internet Works: Fall Semester

- Provides an overview of how the Internet works by describing everything required to answer a single search query
- Reviews the Internet’s past and future, policy challenges, and societal implications
- Familiarity with the web and access to a personal computer are assumed, but no technical background is required
- **Required** for all directly admitted first-year CEN and CS majors
- **Recommended** for all intended first-year CEN and CS majors
1st Semester CSE Courses

> **CSE 115 Intro to Computer Science for Majors 1 (4 cr)**

Required for Computer Science and Computer Engineering majors

Provides the fundamentals of the field to computer science and computer engineering majors, introducing students to algorithm design and implementation in a modern, high-level programming language. Emphasizes problem solving by abstraction.

**Prerequisite:** No previous programming experience required. Students must have completed high school pre-calculus (algebra and trigonometry)

> **CSE 111 Great Ideas in Computer Science (4 cr)**

Students study algorithmic problem-solving techniques and the course has a mathematical and laboratory component. Topics include introduction to programming, software tools and more.

**Prerequisite:** No previous programming experience required. For students not mathematically prepared to start in CSE115.
General University Requirements:
SEAS Office of Undergraduate Education
410 Bonner Hall
645-2775
ubengineer@buffalo.edu

CSE Program Specific Advisement:
CSE Undergraduate Advisor
Donna Grant
338R Davis Hall
645-4758
dmgrant3@buffalo.edu

Director of Undergraduate Studies
Dr. Atri Rudra
319 Davis Hall
atri@buffalo.edu

CSE Faculty Mentors
1st Semester Science

- CHE 100 Introduction to Chemistry (4 cr)
  Helps prepare students for General Chemistry (101 or 107)

- CHE 101 General Chemistry I (5 cr)
  For intended engineering majors

- CHE 105 Honors Chemistry I (5 cr)
  For students who are interested in majoring in a chemistry-related science.

- CHE 107 General Chemistry I for Engineers (4 cr)
  For admitted engineering majors
  *As indicated on the FAQ in your schedule packet:*

  CHE 101 and CHE 107 have a lecture, recitation, and a lab. Attendance at all components is required. Although the room locations for the lab component may be listed in your schedule as "Nsc Arr" (section ID ends with an "8"), a particular lab room will eventually be listed in your schedule.

  AP Chemistry 4 or 5 = elective credit unless complete CHE 114 lab at UB in spring 2017 or later with “C” grade or better.

  This option is not recommended in majors like chemical engineering and biomedical engineering.
PHY 107 General Physics I (4 cr):

A calculus-based introductory course primarily for chemistry, engineering, and physics majors. Covers kinematics, Newton's laws, energy, momentum, rotational motion, and oscillations.

Normally taken in spring term, unless majoring in engineering physics.

Engineering physics majors often take PHY 107 in the fall semester along with CHE 107, EAS 199, MTH 141, and one gen ed.

Computer Science majors are the only SEAS students with option to complete non-calc based PHY 101-102/151-152 sequence as science requirement, and often wait to begin science requirement until sophomore year.

“AP Physics 1 or 2” with 3, 4 or 5 = non-calc based courses that do not apply toward engineering majors, only computer science major, general education.

AP Physics C Mechanics 4 or 5 = PHY 107
AP Physics C Elec & Magnetism 4 or 5 = PHY 108 & PHY 158
1st Semester Mathematics

- ULC 147 Intermediate Algebra (4 cr)
  Helps prepare students for ULC 148

- ULC 148 Intermediate Algebra and Trigonometry (4 cr)
  Reviews precalculus algebra and trigonometry, emphasizing functions

- MTH 141 Calculus I (4 cr)

- MTH 142 Calculus II (4 cr)
  For students with transfer or AP credit for Calculus I

- MTH 241 Calculus III or MTH 306 Diff Equations (4 cr)
  For students with credit for Calculus I and II

AP Calculus AB 4 or 5 = MTH 141
AB subscore on BC exam 4 or 5 = MTH 141
AP Calculus BC 4 or 5 = MTH 142

Web-based Are You Ready quiz/reviews at:
http://www.math.buffalo.edu/rur_index.html
UB Orientation

1st Semester Mathematics: ALEKS

> Assessment and Learning in Knowledge Spaces (ALEKS): Math Placement Assessment
> UB requires an ALEKS PPL Assessment to determine readiness of any student enrolled in MTH 141
  » Web-based exam
  » About 30 questions
  » Average completion time is 90-minutes
  » You must achieve a score of 76 (out of 100) or better to demonstrate your readiness for MTH 141
  » Three attempts are allowed

**DEADLINE:** On Monday August 15, 2016, students registered for MTH 141 who have not obtained the required score of 76 or better will be removed from MTH 141 and open registration in MTH 141 will be closed. Students who achieve the required score between August 15, 2016 and September 6, 2016, can be added back to MTH 141 by force registration.
UB Orientation

UB Curriculum Requirements:
Handout was included in schedule packet and is also online

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Requirement Details</th>
<th>Credits</th>
</tr>
</thead>
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<tr>
<td>UB Seminar</td>
<td>EAS 199, CSE 199, or XXX 199</td>
<td>3</td>
</tr>
<tr>
<td>Communication Literacy</td>
<td>ENG 105 and EAS 360</td>
<td>4-7</td>
</tr>
<tr>
<td>Math and Quantitative Reasoning</td>
<td>SEAS students satisfy this requirement with MTH 141 (CS BA students may use MTH 121/MTH 131)</td>
<td></td>
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<tr>
<td>Scientific Literacy and Inquiry</td>
<td>Engineering majors satisfy this requirement with PHY 107 and CHE 107/CHE 101. CS students must complete at least 7 science credits, including a lab.</td>
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<tr>
<td>Diversity Learning</td>
<td>One course focusing on domestic diversity</td>
<td>3</td>
</tr>
<tr>
<td>Thematic Pathway</td>
<td>Three courses in a Thematic area</td>
<td>9</td>
</tr>
<tr>
<td>Global Pathway</td>
<td>Two or three courses in a Global area</td>
<td>9</td>
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<tr>
<td>UB Capstone</td>
<td>Culminating UB Curriculum course</td>
<td>1</td>
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UB Curriculum Communication Literacy Requirement

> SAT Read 400-600/ACT English 17-26
  » ENG 105 - Writing and Rhetoric (4 cr)
  » EAS 360 - STEM Communication (3 cr)

> SAT Read 610+/ACT English 27+
  » EAS 360 - STEM Communication (3 cr)

AP English Lang & Comp 4 or 5 = ENG 105
UB Orientation

UB Curriculum: Pathway Requirements

➢ Students take both a **Thematic** and a **Global** Pathway.

➢ Each Pathway requires a minimum of nine credit hours of study.

➢ The Pathways connect classes by theme or concept, allowing you to pursue ideas across a broad range of disciplines, methodologies, and modes of experience.

➢ The Pathways invite you to approach learning as a continuum, and to actively make connections between classes by drawing various strands together to create a larger whole.
How will I know if I need to take a Pathway course this fall?

- Some students are advised to take a Pathway course in their first semester.
- The decision is based upon major, first semester load, and other factors.
- Some first-year students complete a significant amount of AP, Transfer, A-Level, or other college credit prior to starting UB this fall. This credit can impact your need for a Pathway course, regardless of major. It is critical that you report ALL of this credit on the Orientation Data Form so that your advisors can determine if a Pathway is right for you.
- You will find a bright green flyer in your schedule packet, if you are advised to register for a pathway course during the first semester.
First Semester Classes

ENG 105, Writing and Rhetoric 4
EAS 199/CSE 199 UB Seminar 3
MTH 141 College Calculus I 4
CHE 107 General Chemistry for Engineers (not CS majors) 4 (101 = 5)
UB Curriculum Pathway Requirement 3-5

Total Credits: 15-19 max

> 12 credits (minimum) are necessary to be a full-time student; full-time students are billed a full-time rate, not a per-credit rate, so tuition charges do not accrue for additional credits beyond 12
> 15 credits (minimum) are necessary to be eligible for dean’s list: http://undergrad-catalog.buffalo.edu/policies/grading/deans-list.html
> 15-18 credits are typically necessary to graduate in 4 years with an SEAS major
> 19 credits is the maximum permitted per semester without special permission; first semester non-honors engineering students are not granted special permission
FAQ: What if I want to change my schedule? Do I have to talk to an advisor?

Each class in your schedule was recommended by your academic advisor to fulfill a specific requirement in your major and/or the university (based on on your math/science/English placements and the data you provided on the orientation data form).

In most cases the same exact schedule was also given to several other students so that it will be easier for you to meet and study with other SEAS students.

Changes to your schedule are possible, but will mean that this continuity will not be as effective for you. Although you can attempt to make schedule changes on your own, we strongly recommend that you get assistance with changes.

There may be issues regarding prerequisites, limited course offerings (sometimes courses look open when they aren’t), etc. that an advisor should give you input on. Since some course changes are more complex than others we prefer that you submit your request through our online form so that we can help determine the best way to proceed:

http://www.eng.buffalo.edu/freshman-schedule

NO LATER THAN FRIDAY, AUGUST 5!
FAQ: I want to change my major. How do I do this and do I have to change my schedule?

If you are changing between two engineering majors and neither of these is computer engineering or engineering physics, you will not need to change your first-semester schedule.

However, if you are switching to or from Computer Science, Computer Engineering, or Engineering Physics, your requirements may change and you should contact an advisor.

Use the comment section of our form to request a change in your major: http://www.eng.buffalo.edu/freshman-schedule
Important Dates for Fall 2016

> Classes Begin: Monday, August 29

> Last Day to Add/Drop: Tuesday, September 6, 11:59 pm EST
   (changes will not appear on transcript; no financial liability)

> Last Day to Resign: Friday, November 11, 11:59 pm EST
   (Grade of “R” permanently on transcript; affects attempted credits/financial aid;
   full financial liability; several academic implications)

> Last Day of Classes: Friday, December 9

All orientation presentations will be online via Advisement/New Freshman Info

Use the new student checklist to make sure you are doing all that you need to before classes start:

http://orientation.buffalo.edu/checklist.php

HAVE A GREAT SUMMER! SEE YOU IN AUGUST!