Undergraduate Programs in Engineering

Steve Barrett
Associate Dean for Academic Programs
UW College of Engineering and Applied Science
Outline

- Center for Student Success
- Engineering Science (ES) Program
- Departmental Programs
- University Studies
- Advising
- Key UW Offices
Center for Student Success
“one stop shopping”

CSS Team

- Steve Barrett, Associate Dean for Academic Programs
- Laurie Bonini, Advising Coordinator
- Kenya Johnson, Recruiting, Student Visits, Ambassadors, TEAMs, MathCounts, ESP
- Teddi Hofmann, K-14 Programs
- Len Lutz, Job Placement & Industry Relations
- Ann Jones, Center for Advising and Career Services

Services: advising undeclared students, tours, ES instruction, scholarships, etc.…see handout
Engineering Science

- Core (service) courses in engineering
- Taught by faculty throughout the College
- Not all courses are required by all programs
### Table 1. Subscriptions to Engineering Science Courses by Discipline

*R* = required, *E* = elective

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>ARE</th>
<th>CHE</th>
<th>CVL</th>
<th>CPEN</th>
<th>EE</th>
<th>ME/ESE</th>
<th>PET</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES 1000 (1)</td>
<td>Orientation to Engineering Study (through Fall 2014)</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td>ES 1101 (3)</td>
<td>Introduction to Engineering Study (beginning Spring 2015)</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>E</td>
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<tr>
<td>ES 1060</td>
<td>Introduction to Engineering Computing</td>
<td>R²</td>
<td>R²</td>
<td>R²</td>
<td>COSC 1010</td>
<td>R</td>
<td>R</td>
<td>R²</td>
</tr>
<tr>
<td>ES 2110</td>
<td>Statics</td>
<td>R</td>
<td>E</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<td>R</td>
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<tr>
<td>ES 2120</td>
<td>Dynamics</td>
<td>R</td>
<td>E</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td>ES 2210</td>
<td>Electric Circuit Analysis</td>
<td>R</td>
<td>E</td>
<td>R</td>
<td>R</td>
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<tr>
<td>ES 2310</td>
<td>Thermodynamics I</td>
<td>R</td>
<td>R²</td>
<td>R</td>
<td>E</td>
<td>E</td>
<td>R</td>
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<td>ES 2330</td>
<td>Fluid Dynamics</td>
<td>R</td>
<td>R²</td>
<td>R</td>
<td>E</td>
<td>E</td>
<td>R</td>
<td>R</td>
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<tr>
<td>ES 2410</td>
<td>Mechanics of Materials</td>
<td>R</td>
<td>E</td>
<td>R</td>
<td></td>
<td>E</td>
<td>R</td>
<td>R</td>
</tr>
</tbody>
</table>

**Notes:**

1. Beginning Fall 2015, department will provide an alternate course to ES1060.
2. Beginning Spring 2017, department will provide alternate course for ES2310 and ES2330.
Departmental Programs

- Curriculum is controlled within each department

- Credit requirements:
  - 127 hours – COSC
  - 128 hours – CHE, ESE, ME, PETE
  - 132 hours – ARE, CE, CPEN, EE

- Degree checks
  - Prepared by student/faculty advisor
  - Reviewed and signed by student, advisor, department representative
  - Reviewed by the Dean’s office
University Studies

- AKA: Core Curriculum
- AKA: General Education Requirement
- Original program established in 1991
  - Uses letter/number codes (C1, C2, …)
- Major revision effective Fall 2003
  - Uses letter codes (CA, CH, …)
- Major revision – Fall 2015
University Studies - 2003

Core Components:
- Intellectual Community (I)
- Oral Communication (O)
- Written Communication (WA)
- Quantitative Reasoning (Q)
- Science (SB, SP, SE, S)
- Cultural (CH, CS, CA, C)
- US & Wyoming Constitution (V)
- Physical Education (P)
University Studies - 2003

Embedded Components:
- Information Literacy (L)
- Global Awareness (G)
- Diversity in the US (D)
- Written Communication (WB & WC)
Most requirements are satisfied through required courses

Electives are normally selected for:

- CA – Visual and performing arts
- CH – Humanities
- CS – Social Science
- G – Global
- D – Diversity
- WB – Mid-level writing
UW USP 2015 Overview

**Foundation**

*Freshman Composition* (Communication 1) + *First Year Seminar* + *Quantitative Reasoning* [9 hrs]

*Courses to be completed freshman year.
*Students may take any FYS of their choosing.

**Communication Skills**

*Communication 2* (intermediate skills) + *Communication 3* (advanced skills) [6 hrs]

*Writing/speaking/digital communication combined as appropriate.
*These courses may be embedded in majors.

**Human Culture**

*Coursework in the arts, humanities, languages, social sciences, and histories* [6 hr *minimum*]

*Departments will be given the opportunity to designate courses as H or PN.
*A course cannot fulfill the requirement for both categories.
* Courses can be required for the major, but not those taken from the major department.

**Physical and Natural World**

*Coursework in science, technology, engineering and mathematics* [6 hr *minimum*]

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*A course cannot fulfill the requirement for both categories.
* Courses can be required for the major, but not those taken from the major department.

**US/WY Constitution** [3 hrs]

*Course mandated by statute.

**Total:** [30 hrs]
USP 2015 Details

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+ First Year Seminar
+ Quantitative Reasoning
  [9 hrs]

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USP 2015 Details

**US/ WY Constitution**

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**Total:** [30 hrs]
Advising

- Students are advised by regular faculty.
- Senior faculty in each department are the best source of advising help.
- College-wide and non-Engineering support is provided by the Dean’s office.
  - Steve Barrett
  - Laurie Bonini
Advising

- Advising week for Spring 2016
- November 2-6, 2015
- Brown-bag lunch seminar on advising
  - Shortly before advising week
Key UW Offices

- Admissions
- Registrar
  - Banner
  - WyoWeb
  - CAPP
- Student Financial Aid
- Career Services
- ECTL – Ellbogen Center for Teaching and Learning