### Space Sciences and Engineering Sample Schedule

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<th>Term</th>
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<tbody>
<tr>
<td><strong>Total</strong></td>
<td>85</td>
<td>16</td>
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#### Required Core Subjects (55 hours)
- **Mathematics**
  - 115, 116, 215, and 216
- **Engineering**
  - 100, Introduction to Engineering
  - 101, Introduction to Computers
- **Chemistry**
  - 125/126 and 130 or Chemistry 210 and 211
- **Physics**
  - 140 with Lab 141; Physics 240 with Lab 241

#### Intellectual Breadth (16 hours)

#### Required Core Subjects (30 hrs.)
- **SPACE 320**, Earth and Space System Evolution
- **SPACE 321**, Earth and Space System Dynamics
- **SPACE 323**, Earth System Analysis
- **SPACE 370**, Solar-Terrestrial Relations
- **SPACE 324**, Instrumentation for Atmos & Space Science
- **SPACE 478**, Space Environment
- **SPACE 423**, Data Analysis and Visualization
- **SPACE 495/595** (Note 2)

#### Concentrations:

##### Space Science (43 hrs. total)
- **PHYSICS 340**, Waves Heat and Light
- **SPACE 380**, Introduction to Radiative Transfer
- **PHYSICS 405**, Intermediate Electricity and Magnetism (Note 5)
- **PHYSICS 390**, Modern Physics (Note 5)
- **PHYSICS 390**, Lab
- **NERS 471**, Introduction to Plasmas
- **SPACE 499/455** Capstone Research (Note 3) or **SPACE 584**

##### Space Instrumentation (43 hr. total)
- **Engineering Breadth (programming or EECS 215 Intro to Electronic Circuits)** (Note 4)
- **SPACE 310**, Small Satellite Design
- **SPACE 371**/**SPACE 431**, Radiowave Propogation (Note 8)
- **Sensors/Data/Stats Course/AERO 305** (Note 7)
- **SPACE 471**, Space Instrumentation (Note 1 and 6)
- **SPACE 477**, Space Weather Modeling

##### Technical Electives (10/11 hours)

##### General Electives (10 Hours)

### Notes:
1. New Course.
2. Students should take one of these courses (each offered every other year).
3. New Course. Students may take either year-long (2 CR each term) **SPACE 499** Directed Study as a Senior Thesis option or **SPACE 455** Senior Capstone Design.
5. Students need to request waiver to Physics 351 for 405 or take 351 as a Tech Elective.
6. The Instrumentation course is a useful for our PhD students to learn about techniques in “Theory” course.
7. **CEE 575** Sensing for Civil Infrastructure Systems (4 cr) and Data, **STATS 632** Introduction to Probability and Statistics (3 cr) or **AERO 305**, AeroEngineering Lab (4 cr), if **AERO 305** is taken reduce Unrestricted Elective from 12 to 11 credits. Have discussed AERO 305 option with instructor.
8. **SPACE 405** and 431 are Every-other-year courses. If 431 is taken, reduce Tech Elective requirement from 11 to 10 credits.

### Revised:
March 24

Candidates for the Bachelor of Science in Engineering in Space Sciences and Engineering must complete the program listed above. This sample schedule is an example of one leading to graduation in eight terms.

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- 2. Students should take one of these courses (each offered every other year).
- 3. New Course. Students may take either year-long (2 CR each term) **SPACE 499** Directed Study as a Senior Thesis option or **SPACE 455** Senior Capstone Design.
- 5. Students need to request waiver to Physics 351 for 405 or take 351 as a Tech Elective.