## Astronautics Concentration

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>AERO 351</td>
<td>Introduction to Orbital Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>AERO 355</td>
<td>Space Environments I</td>
<td>3</td>
</tr>
<tr>
<td>AERO 356</td>
<td>Space Environments II</td>
<td>3</td>
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<tr>
<td>AERO 402</td>
<td>Spacecraft Propulsion Systems</td>
<td>5</td>
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<tr>
<td>AERO 421</td>
<td>Spacecraft Attitude Dynamics and Control</td>
<td>4</td>
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<tr>
<td>AERO 446</td>
<td>Spacecraft Electrical and Electric Systems</td>
<td>4</td>
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<tr>
<td>AERO 447</td>
<td>Spacecraft Design I</td>
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</tr>
<tr>
<td>AERO 448</td>
<td>Spacecraft Design II</td>
<td>3</td>
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<tr>
<td>AERO 449</td>
<td>Spacecraft Design III</td>
<td>3</td>
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</tbody>
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### Astronautics Approved Electives

Select from the following: 8 units

1. AERO 306 Aerodynamics and Flight Performance
2. AERO 360 Creative Problem Solving in Engineering Design
3. AERO 405 Supersonic and Hypersonic Aerodynamics
4. AERO 406 Applied Computational Fluid Dynamics
5. AERO 407 Reentry Aerodynamics
6. AERO 408 Plasma Applications in Aerospace
7. AERO 409 Flight Test
8. AERO 420 Aircraft Dynamics and Control
9. AERO 425 Aircraft Performance
10. AERO 432 Advanced Composite Structures Analysis
11. AERO 434 Aerospace Structural Analysis III
12. AERO 435 Aerospace Numerical Analysis
13. AERO 450 Introduction to Aerospace Systems Engineering
14. AERO 452 Spaceflight Dynamics II
15. AERO 455 Introduction to Human Spaceflight
16. AERO 470 Selected Advanced Topics
17. AERO 471 Selected Advanced Laboratory
18. AERO 512 Aerospace Vehicle Software Application
19. AERO 513 Applications of Unmanned Aircraft Systems
20. AERO 515 Continuum Mechanics
21. AERO 517 Multidisciplinary Design and Optimization
22. AERO 519 Fundamentals of Vehicle Dynamics and Control
23. AERO 522 Boundary-Layer Theory
24. AERO 525 Computational Fluid Dynamics
25. AERO 526 Spacecraft Thermal/Fluid Control
26. AERO 528 Laminar Flow Aircraft Development

### Total Units

40

1. Consultation with advisor is recommended prior to selecting Approved Electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals. Only 4 units of 300-level coursework is allowed as an Approved Elective.

2. May require a petition depending on the topic. Please consult with your advisor.