Aerospace

Master of Engineering: 30 Credits / 10 Courses

Some core courses in the Aerospace Master of Engineering program may be replaced by the technical electives listed below and by other approved technical courses that meet the student's professional interests. Technical electives must be approved by the academic advisor. There is no research or thesis required for this degree.

### Aerospace Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Offering Frequency</th>
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<tbody>
<tr>
<td>ENAE601</td>
<td>Astrodynamics</td>
<td>(every fall)</td>
</tr>
<tr>
<td>ENAE602</td>
<td>Spacecraft Attitude Dynamics and Control</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE641</td>
<td>Linear System Dynamics</td>
<td>(every fall)</td>
</tr>
<tr>
<td>ENAE642</td>
<td>Atmospheric Flight Control</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE651</td>
<td>Smart Structures</td>
<td>(every fall)</td>
</tr>
<tr>
<td>ENAE652</td>
<td>Computational Structural Mechanics</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE654</td>
<td>Mechanics of Composite Structures</td>
<td>(every other spring)</td>
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<tr>
<td>ENAE655</td>
<td>Structural Dynamics</td>
<td>(every fall)</td>
</tr>
<tr>
<td>ENAE684</td>
<td>Computational Fluid Dynamics I</td>
<td>(every fall)</td>
</tr>
<tr>
<td>ENAE696</td>
<td>Spacecraft Thermal Design</td>
<td>(every other fall)</td>
</tr>
<tr>
<td>ENAE741</td>
<td>Interplanetary Navigation and Guidance</td>
<td>(every other fall)</td>
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### Aerospace Pre-approved Technical Electives:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Offering Frequency</th>
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<tbody>
<tr>
<td>ENPM652</td>
<td>Applied Finite Element Methods</td>
<td>(every summer)</td>
</tr>
<tr>
<td>ENPM671</td>
<td>Advanced Mechanics of Materials</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE631</td>
<td>Helicopter Aerodynamics I</td>
<td>(every fall)</td>
</tr>
<tr>
<td>ENAE632</td>
<td>Helicopter Aerodynamics II</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE633</td>
<td>Helicopter Dynamics</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE634</td>
<td>Helicopter Design</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE635</td>
<td>Helicopter Stability and Control</td>
<td>(every spring)</td>
</tr>
<tr>
<td>ENAE653</td>
<td>Nonlinear Finite Element Analysis of Continua</td>
<td>(every other fall)</td>
</tr>
<tr>
<td>ENAE656</td>
<td>Aeroelasticity</td>
<td>(every other spring)</td>
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<tr>
<td>ENAE663</td>
<td>Intro. to Plasmas for Space Propulsion and Power</td>
<td>(every other spring)</td>
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<tr>
<td>ENAE665</td>
<td>Advanced Airbreathing Propulsion</td>
<td>(every other spring)</td>
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<tr>
<td>ENAE667</td>
<td>Advanced Space Propulsion and Power</td>
<td>(every other fall)</td>
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<tr>
<td>ENAE672</td>
<td>Low Reynolds Number Aerodynamics</td>
<td>(every fall)</td>
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<tr>
<td>ENAE674</td>
<td>Aerodynamics of Compressible Fluids</td>
<td>(every other spring)</td>
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ENAE676 Turbulence (every spring)
ENAE681 Engineering Optimization (every other fall)
ENAE682 Hypersonic Aerodynamics (every other fall)
ENAE683 High Temperature Gas Dynamics (every other spring)
ENAE685 Computational Fluid Dynamics II (every spring)
ENAE691 Satellite Design (every other spring)
ENAE692 Introduction to Space Robotics (every other fall)
ENAE694 Spacecraft Communications (every other fall)
ENAE697 Space Human Factors and Life Support (every other spring)
ENAE742 Robust Multivariable Control (every other spring)
ENAE743 Applied Nonlinear Control of Aerospace Vehicles (every other spring)
ENAE757 Advanced Structural Dynamics (every other spring)
ENAE791 Launch and Entry Vehicle Design (every other spring)

**NOTE:** Any courses not listed above must be approved by the Senior Academic Advisor PRIOR to registration.

**Disclaimer:** All offerings are tentative and subject to change. Updated 12/17/2018
Student Name (Last, First): ___________________________    Student ID ________________________
Beginning Term: __________________    Anticipated Graduation: ____________________

Background (Educational, Training, Career, etc.):

Objective (Career Field, Areas of Interest, etc.):

Aerospace Required Core:

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<th>Course</th>
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Choose from: ENAE601, ENAE602, ENAE641, ENAE642, ENAE651, ENAE652, ENAE654, ENAE655, ENAE684, ENAE696, ENAE741

Aerospace Technical Electives:

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Preapproved Electives: ENPM652, ENPM671, ENAE631, ENAE632, ENAE633, ENAE634, ENAE635, ENAE653, ENAE656, ENAE663, ENAE665, ENAE667, ENAE672, ENAE674, ENAE676, ENAE681, ENAE682, ENAE683, ENAE685, ENAE691, ENAE692, ENAE694, ENAE697, ENAE742, ENAE743, ENAE757, ENAE791

Comments:

NOTE: Any courses not listed above must be approved by the Senior Academic Advisor PRIOR to registration.

Student Signature ___________________________ Date _______________    Advisor Signature ___________________________ Date _______________

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