

 FLORIDA ATLANTIC UNIVERSITY	NEW/CHANGE PROGRAM REQUEST Undergraduate Programs		UUPC Approval <u>11-03-25</u> UFS Approval _____ Banner _____ Catalog _____
	Department College		
Program Name Aerospace Engineering Certificate and Robotics Engineering Certificate	New Program* Change Program*	Effective Date (TERM & YEAR)	
Please explain the requested change(s) and offer rationale below or on an attachment.			
*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.			
Faculty Contact/Email/Phone	Consult and list departments that may be affected by the change(s) and attach documentation		
Approved by Department Chair <u>Pierre Philippe Beaujean</u> College Curriculum Chair <u>Galan Liu</u> College Dean <u>[Signature]</u> UUPC Chair <u>Korey Sorge</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____			Date <u>10/15/2025</u> <u>10/21/25</u> <u>11/03/25</u> <u>11-03-25</u> <u>11-03-25</u> _____ _____

Undergraduate Certificate Program in Aerospace Engineering

This undergraduate certificate program in aerospace engineering offered by the OME Department is designed to combine broad engineering disciplines with knowledge of engineering principles specific to aerospace engineering. This program is in support of preparing students to work at aerospace companies and governmental agencies such as the National Aeronautics and Space Administration.

Old Curriculum (a total of 15 credits)

To earn this certificate, a student must successfully complete the following:

- 1) Three courses (9 credits) in the field of aerospace engineering as follows:
 - EAS 4101 Aerodynamics (3 credits)
 - EML 4401 Principles of Turbomachinery /6402 Turbomachinery (3 credits)
 - EAS 4105 Flight Dynamics (3 credits)
- 2) A faculty-mentored design/research project with elements of Aerospace Engineering (3 credits), carried out either as part of:
 - A capstone design project (EML 4551) course (3 credits)Or as a
 - EGN 4915 Directed Independent Research (3 credits)
- 3) One course (3 credits) from the following:
 - EGN 3365 Engineering Materials I (3 credits)
 - EML 3701 Fluid Mechanics (3 credits)
 - EGM 4350 Finite Element Analysis for Engineers (3 credits)
 - EML 4500 Machine Design (3 credits)
 - EGN 4432 Dynamic Systems (3 credits)
 - EML 4127 Applied Thermal Fluid Systems (3 credits)

New Curriculum (a total of 12 credits)

To earn this certificate, a student must successfully complete the following:

- 1) Three courses (9 credits) in the field of aerospace engineering from the following list:
 - EAS 4101/6930 Aerodynamics (3 credits)
 - EML 4401 Principles of Turbomachinery /6402 Turbomachinery (3 credits)
 - EAS 4105/6930 Flight Dynamics (3 credits)
 - EML 4930/6930 Rocket Propulsion (3 credits)
 - EGN 4915 Directed Independent Research (with Elements of Aerospace Engineering) (3 credits)
- 2) A faculty-mentored design project with elements of Aerospace Engineering (3 credits), carried out as part of
 - RI: EML 4551 Design Project (3 credits)

Undergraduate Certificate Program in Robotics Engineering

This undergraduate certificate program in robotics engineering offered by the OME Department is designed to combine broad engineering disciplines with knowledge of engineering principles specific to robotics engineering. This program is in support of preparing students to work at a broad range of engineering companies.

Old Curriculum (a total of 15 credits)

To earn this certificate, a student must successfully complete the following:

- 1) Three courses (9 credits) in the field of robotic engineering from the following list:
 - EML 4800 Introduction to Robotics (3 credits)
 - EIN 5603C Industrial Automation (3 Credits)
 - EML 4804C Mechatronics (3 credits)
 - EGN 4670C Innovative Sensing and Actuation Technologies (3 credits)
- 2) A faculty-mentored design/research project with elements of Robotics Engineering (3 credits), carried out either as part of:
 - A capstone design project (EML 4551) course (3 credits)Or as a
 - EGN 4915 Directed Independent Research (3 credits)
- 3) One course (3 credits) from the following:
 - EGN 3365 Engineering Materials I (3 credits)
 - EML 4312 Mechanical Control Systems (3 credits)
 - EML 4500 Machine Design (3 credits)

New Curriculum (a total of 12 credits)

To earn this certificate, a student must successfully complete the following:

- 1) Three courses (9 credits) in the field of robotic engineering from the following list:
 - EML 4800/6930 Introduction to Robotics (3 credits)
 - EIN 5603C/6930 Industrial Automation (3 Credits)
 - EML 4804C/6930 Mechatronics (3 credits)
 - EGN 4670C/6930 Innovative Sensing and Actuation Technologies (3 credits)
 - EML 4312/6930 Mechanical Control Systems (3 credits)
 - EGN 4915 Directed Independent Research (with Elements of Robotics Engineering (3 credits)
- 2) A faculty-mentored design project with elements of Robotics Engineering (3 credits), carried out as part of:
 - RI: EML 4551 Design Project (3 credits)