

OLD DOMINION UNIVERSITY
PROPOSAL FOR A NEW MINOR, NEW INTERDISCIPLINARY MINOR
OR SIGNIFICANT CHANGES TO AN EXISTING MINOR

A minor may be chosen by students to support the major, to offer greater job opportunities to the student on graduation, or to provide recognition of study in a second academic area. Completion of an approved minor will meet the upper-division General Education requirement. A minimum of 12 credit hours, normally at the advanced level (300-400) in a specified field of study is required.

Interdisciplinary minors require 12 credit hours of 300/400-level courses selected from at least two different disciplines with a maximum of six credits from any one discipline. Three credit hours in the interdisciplinary minor may be in the major, if a major course is listed as an option for the interdisciplinary minor. As such, it will be credited toward both the major and the interdisciplinary minor.

Please refer to the Undergraduate Catalog for the complete policy on minors.

Minimum enrollment expectations for minors are five graduates in five years or the minor will be discontinued.

Proposed Action (check one)

New Minor New Interdisciplinary Minor Significant Changes to an Existing Minor

1. Name of proposed minor or minor to be changed:

2. Description of proposed minor or change to an existing minor:

3. Rationale for proposal:
(address what the proposed minor will accomplish for students)

4. Majors likely to enroll in the minor (for new minors):

5. Projected enrollment and why (for new minors):

6. Proposed Effective Term:

7. Resources needed, including human resources, library resources, faculty resources, and funding resources:
8. Program requirements: [List below all courses required for the minor, the prerequisites, and the total hours required for the minor. Submit the appropriate information through the online Course Inventory Management (CIM) process in CourseLeaf (nextcatalog.odu.edu/courseadmin) for all new courses/course changes.]
9. Description (showing new copy or revised copy) for the next Undergraduate Catalog.
10. Schedule for offering courses (include whether the minor can be completed in two years and whether it will be available through Distance Learning) (for new minors):
11. Effect on current department course schedule (for new minors):

APPROVED

College Dean Date

Originator of Request

External Department Chair(s) Date
(If applicable)

Department Chair

Chair, Faculty Senate Date
Committee A

Chair, College Committee

Provost Date

ADMINISTRATIVE CODING

Effective Term _____

Major Code _____

College _____

Degree Code _____

Department _____

Uncrewed Systems Design and Development

Program Requirements

The minor will consist of both courses from the below Group A and two courses selected from the list in Group B for a total of at least 12 credit hours. Up to six credit hours in the minor may simultaneously be used to satisfy concurrent requirements of the major.

Group A (6 credits)

- Either ENGN 485 (3 cr) – Introduction to Uncrewed Aerial Systems
[Prerequisite [PHYS 112N](#)] or GEOG 409 (3 cr) – Drone Applications Proseminar [Prerequisite [GEOG 402](#) or permission of instructor]
- ENGN 486 (3 cr) – Multirotor UAS Design and Construction (3 Credit Hours)
[Prerequisite [PHYS 112N](#)]

Group B (Select two of the following, 6 credits)

- ENGN 487 (3 cr) – Fixed Wing and VTOL UAS Design and Construction (3 Credit Hours)
[Prerequisite [ENGN 486](#)]
- ENGN 488 (3 cr) – Autonomous Mission Platforms Systems Integration (3 credit hours)
[Prerequisite [ENGN 486](#)]
- MAE 406/506 (3 cr) – Flight Vehicle Aerodynamics
[Prerequisites: A grade of C or better in [MAE 303](#); [MAE 312](#) and [MAE 340](#)]
- MAE 403/503 (3 cr) – Flight Mechanics
[Prerequisites: [MAE 303](#) with a grade of C or better and [MAE 340](#); Pre- or corequisite: [MAE 436](#)]
- MAE 417/517 (3 cr) – Propulsion Systems
[Prerequisites: [MAE 312](#) or [MAE 414](#)]
- ECE 408/508 (3 cr) – Fundamentals of Electric Vehicles
[Prerequisites: [ECE 303](#) and a grade of C or better in [ECE 202](#) and [ECE 287](#)]
- ECE 445/545 (3 cr) – Introduction to Computer Vision
[Prerequisites: A grade of C or better in [ENGN 150](#) or [CS 150](#); Pre- or corequisite: [ECE 350](#)]
- ECE 463/563 (3 cr) – Design and Modeling of Autonomous Robotic Systems
[Prerequisites: [CS 150](#) or [ENGN 122](#) or [ENGN 150](#)]
- ECE 346 (3 cr) – Microcontrollers
[Prerequisites: a grade of C or better in [ECE 241](#)]
- MAE 438/538 (3 cr) – Applied Analog and Digital Controls
[Prerequisites: a grade of C or better in [MAE 436](#)]
- GEOG 402 (3 cr) – Geographic Information Systems
[Prerequisites: Junior standing, [GEOG 102T](#), or permission of instructor]

Total Credit Requirements: 12 credits

For completion of a minor, a student must have a minimum overall cumulative grade point average of 2.00 in all courses required for the minor exclusive of prerequisite courses. A minimum of six hours in upper-level courses in the minor must be completed through courses offered by Old Dominion University.

Tuesday, November 28, 2023 at 13:46:04 Eastern Standard Time

Subject: Re: UAS Minor

Date: Tuesday, November 28, 2023 at 1:25:10 PM Eastern Standard Time

From: Allen, Tom

To: Alberts, Thomas

CC: LaCombe, Jeffrey C., Leib, Jonathan I., Hutton Shannon, Nicole S.

Hi Thomas-

I am writing to confirm Geography's agreement to participate in the proposed UAS Minor and offer GEOG 402 Geographic Information Systems as an elective course.

This has been shared and approved by Dr. Jonathan Leib (Chair of Department of Political Science and Geography) and Dr. Nicole Hutton (Geography Program Director.)

We appreciate being included. Good luck with the proposal.

Sincerely,

Tom Allen

From: Alberts, Thomas <talberts@odu.edu>

Sent: Tuesday, November 28, 2023 12:18 PM

To: Allen, Tom <tallen@odu.edu>

Cc: LaCombe, Jeffrey C. <jlacombe@odu.edu>

Subject: FW: UAS Minor

Tom,

Thank you for your positive response yesterday. Attached is the information you requested for forwarding to your chair.

Best,

Thomas
