



MASTER COURSE OUTLINE

Prepared By: Ethan Tonnemaker

Date: April 2021

COURSE TITLE

Unmanned Aerial Systems (UAS) Mission Planning

GENERAL COURSE INFORMATION

Dept.: UMS

Course Num: 208

(Formerly:)

CIP Code: 15.0405

Intent Code: 21

Program Code: 640

Credits: 6

Total Contact Hrs Per Qtr.: 88

Lecture Hrs: 44

Lab Hrs: 44

Other Hrs:

Distribution Designation: General Elective (GE)

COURSE DESCRIPTION (as it will appear in the catalog)

Using mission planning software, students will plan a variety of UAS missions in support of simulated operations. This will include (but not limited to) operations in support of agriculture, real estate marketing, search and rescue (SAR), law enforcement, construction, avalanche control, natural disaster response, power line and transportation infrastructure inspection, including both night flight and beyond line of sight (BLOS) operations.

PREREQUISITES

N/A

TEXTBOOK GUIDELINES

N/A (students will be introduced to several types of UAS mission planning software throughout the course)

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.

1. Select the correct mission planning software for specific types of operations
2. Plan an operational mission in support of assigned tasking, including both day and night operations
3. Compare and contrast alternative mission plans to meet user/customer requirements
4. Illustrate and explain how your mission plan will meet operational objectives
5. Construct a complete beyond line of sight (BLOS) UAS mission plan
6. Brief notional audiences on your assigned mission plan(s)
7. Demonstrate the proficient use of assigned mission planning software/reporting tools

INSTITUTIONAL OUTCOMES

IO3 **Human Relations/Workplace Skills:** Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

COURSE CONTENT OUTLINE

1. Mission planning software
2. Pre-operation information/data requirements
3. Preflight planning/flight approval processes

4. Customer/user product requirements
5. Operational mission planning development
6. Operational mission planning briefings and reports

DEPARTMENTAL GUIDELINES *(optional)*

The syllabus must contain evaluation/grading guidelines, class environment/expectations/rules, course learning outcomes, and a disability services statement. A schedule must be provided to students that contains content covered (text chapters, topics, etc.), tentative test dates (to include final date/time).

DIVISION CHAIR APPROVAL

DATE