PHOT 0090U - DRONE PHOTOGRAPHY AND VIDEOGRAPHY

Catalog Description

Prerequisite: FAA (Remote Pilot - Small UAS under 14 CFR Part 107) certification must be completed
Hours: 13 (7 lecture, 6 activity) per .5 unit
Description: Camera operation and flight maneuvers used by photographers and cinematographers to capture still and motion footage from UAV's (drones). Topics covered include equipment selection, flight controls, safety, image capture and business opportunities. Students may utilize their own equipment or department provided equipment. This course is designed for those already certified by the FAA (Remote Pilot - Small UAS under 14 CFR Part 107). (CSU)

Course Student Learning Outcomes

- CSLO #1: Safely operate common Unmanned Aerial Systems (UAS).
- CSLO #2: Capture still and video images from a UAV (drone).
- CSLO #3: Investigate the commercial opportunities for drone operators.

Effective Term

Fall 2022

Course Type

Credit - Degree-applicable

Contact Hours

13-52

Outside of Class Hours

17-68

Total Student Learning Hours

30-120

Course Objectives

Lecture Objectives:
1. define terminology related to UAS (Unmanned Aerial System) technology;
2. differentiate among different kinds of drones;
3. compare features of popular drone models;
4. appraise the results of different equipment for UAS photography;
5. discuss the safety and ethical issues related to drone photography;
6. analyze the potential of operating a dedicated UAS photography business, diversifying a photography business by offering UAS photography as one of its services, and employment opportunities;
Laboratory/Activity Objectives:
7. recommend appropriate takeoff and landing sites at a particular site;
8. demonstrate pre-flight safety protocols;
9. create and execute a flight plan;
10. critique still and video images captured while flying a UAV.

General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

Articulation Information

- CSU Transferable

Methods of Evaluation

- Classroom Discussions
  - Example: Classroom peer critiques (discussions) are an integral part of deepening student understanding of how others react to their images and to gain insight into how they can improve their work. Students are evaluated on participation, their ability to actively engage in the discussion and to provide and receive valuable feedback from their peers.
- Objective Examinations
  - Example: A multiple choice exam will be given covering terminology related to UAS (Unmanned Aerial System) technology. Standard grading.
- Projects
  - Example: A digital portfolio of still photographs presented as a digital slide show will be evaluated for photographic technique, composition, presentation, lighting, and visual communication. The components of the grade and their weight will be provided to the students as part of a grading rubric.
- Reports
  - Example: Students will research current business opportunities in drone photography and write a report detailing their findings. An outline of expected points to be covered will be included in a rubric provided to students.
- Skill Demonstrations
  - Example: Based upon lectures, readings and in-class demonstrations, students will demonstrate pre-flight safety protocols. Students will be evaluated on the selection of safety protocols and adherence to them. Evaluation will be based upon a weighted rubric provided to the students.

Repeatable

No

Methods of Instruction

- Activity
- Lecture/Discussion
- Distance Learning

Activity:

1. Instructor will assign chapter and/or handouts on subject tracking while flying a drone. Instructor will then lecture on the topic and demonstrate subject tracking techniques. An instructor led discussion will take place on the application of this technique to various subjects and situations. Students will be given an assignment to complete two different tracking clips. After the assignment has

been completed, instructor will lead class in a critique of the video clips completed by the students.

Lecture:

1. Instructor will assign the chapter on the laws and ethics related to drone photography and videography. The instructor will lecture on the topic and then students will engage in an instructor led discussion where a wide variety of situations will be discussed. Students will then apply these concepts and laws when in the field.

Distance Learning

1. Instructor will create a video on the advantages and disadvantages of different drone types. Instructor will also provide the appropriate chapter in the textbook or a link to an OER on the subject for students to read. Student will seek any necessary clarifications through discussion boards or office hours. Student will then be assessed through an online quiz.

Typical Out of Class Assignments Reading Assignments

1. Read the chapter on creating a pre-flight checklist and create a modified version suited to the specific drone you will be flying. 2. Read the handouts on camera sensor types and lenses and come prepared to discuss the advantages and disadvantages of each.

Writing, Problem Solving or Performance

1. Create a written flight plan for a specific location and objective. Execute the plan and reflect on the successes and improvements that could be made. 2. Research current business opportunities in drone photography and write a paper detailing your findings making sure to reference your sources.

Other (Term projects, research papers, portfolios, etc.)

1. Create a digital portfolio of 10-12 still images and a 2-3 minute video produced during the course showcasing a variety of angles, techniques and styles common in the industry.

Required Materials

- Drone Photography Basics: Your Guide to the Camera in the Sky
  - Author: Justin Moore
  - Publisher: Amherst Media
  - Publication Date: 2019
  - Text Edition: 1st
  - Classic Textbook?:
  - OER Link:
  - OER:
- Small-Format Aerial Photography and UAS Imagery
  - Author: James Aber
  - Publisher: Elsevier
  - Publication Date: 2019
  - Text Edition: 2nd
  - Classic Textbook?:
  - OER Link:
  - OER:
- Drone Photography: Art and Techniques
  - Author: Jake Sugden
  - Publisher: Crowood Press
  - Publication Date: 2020
  - Text Edition: 1st
  - Classic Textbook?:
  - OER Link:
  - OER:

Other materials and-or supplies required of students that contribute to the cost of the course.

Students must supply digital storage media.