GROSSMONT COLLEGE

COURSE OUTLINE OF RECORD

Curriculum Committee Approval: 02/22/2022

GCCCD Governing Board Approval: 03/08/2022

COMPUTER SCIENCE AND INFORMATION SYSTEMS 072-DRONE SURVEYING AND MAPPING

1. Course Number Course Title Semester Units

CSIS 072 Drone Surveying & Mapping 0

Semester Hours 80 lab hours 80 total hours

1. Course Prerequisites

Must have FAA 107 Drone Pilots License.

Corequisite

None

Recommended Preparation None

1. Catalog Description

This course presents the theory and operations of common sensors used by the operators of unmanned aircraft systems in different industrial applications. Theory is combined with operational scenarios, and flying actual missions. Ample flight time is provided in order to fully train the student with the ability to match specific sensors with anticipated missions. Operator will be versed in all operations as listed, and will be industry ready upon completion. This course teaches pilots how to do precision mapping missions and data collection for industry.

1. Course Objectives

The student will:

* 1. Learn how to do precision mapping missions and data collection for industry
  2. Participate in flight missions and apply flight theory
  3. Learn flight theory combined with operational scenarios
  4. Learn operations of common sensors used by operators of unmanned aircraft systems in different industrial applications

1. Instructional Facilities

An outdoors area with sufficient room for flying drones, approximately 40 yards square.

1. Special Materials required of Student

None

1. Course Content
   1. Learn flight theory with operational scenarios
   2. Match specific sensors with anticipated missions
   3. Precision mapping missions and data collection
2. Method of Instruction
   1. Lecture and demonstration in a traditional classroom or via electronic means.
   2. Hands on instruction using Flight Lab
   3. Discussion of current drone technology trends and issues
   4. Individual flying time
3. Methods of Evaluating Student Performance
   1. Students will be evaluated on their flight skills, maneuvering, and safety protocols.
   2. Students will be evaluated on the use of the drone camera
   3. Students will be evaluated ability to match specific sensors with anticipated missions
   4. There will possibly be a written Final Exam.
4. Outside Class Assignments

None

1. Representative Textbooks
   1. Representative Text(s):

None

* 1. Supplemental texts or Workbook:

None

Addendum: Student Learning Outcomes

Upon completion of this course, students will be able to do the following:

1. Students will know the theory and operations of common sensors used by the operators of unmanned aircraft systems.
2. Students will learn precision mapping missions and data collection for industry.
3. Students will have intermediate to advanced skills in drone flying and maneuvering.
4. Students will learn how to promote themselves, set-up a drone portfolio, and know how to apply for drone jobs