Big Bend
COMMUNITY COLLEGE

MASTER COURSE OUTLINE
Prepared By: Byron Will-Noel   Date: November 2019

COURSE TITLE
Unmanned Aerial Systems (UAS) Flight Lab

GENERAL COURSE INFORMATION

Dept.: UMS	Course Num: 142	(Formerly:)
CIP Code: 15.0405	Intent Code: 21	Program Code: 640
Credits: 6		
Total Contact Hrs Per Qtr.: 121		
Lecture Hrs: 11	Lab Hrs: 110	Other Hrs:

Distribution Designation: General Elective (GE)

COURSE DESCRIPTION (as it will appear in the catalog)
This course provides students with extensive hands-on flight experience of both rotary wing and fixed wing UAS. Focus in on safety of flight, preflight/post-flight inspection, pilot-in-command (PIC) and observer communications requirements, flight control techniques, precision flight maneuvers, runaway/emergency flight procedures, and execution of flight profiles for successful sensor/data collection.

PREREQUISITES
Any UMS course or Instructor Permission

TEXTBOOK GUIDELINES
Introductory textbook determined by unmanned systems faculty (Example: The Pilot's Manual - Ground School, ASA, (2016)).

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

1. 1. Demonstrate proper preflight, inflight, and post-flight procedures
2. 2. Apply the correct rules and regulations to assigned UAS operations
3. 3. Display effective aviation communications procedures
4. 4. Execute precision flight maneuvers
5. 5. Plan and perform sensor/data collection operations
6. 6. Demonstrate proper aeronautical decision making and judgment
7. 7. Properly respond to simulated (and real) runaway UAS/emergency flight situations

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. Preflight/post-flight inspection

2. Pilot-in-command (PIC) / observer communications

3. Runaway UAS/emergency flight procedures

4. Flight control techniques

5. Precision flight maneuvers

6. Sensor/data collection planning

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).

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DIVISION CHAIR APPROVAL   **DATE**