

COURSE OUTCOME MATRIX

COURSE SYLLABUS

PART 2 of 3

Course Number and Title	IT136 UAV Systems and Safety
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Credit Hours	3
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Course Description	This course explores the key technology used in Unmanned Aircraft Systems to give the learner a deeper understanding of how the unmanned aircraft are able to navigate and perform amazing tasks. This course focuses on the three major physical components of a UAS to include the unmanned aircraft, the payload, the control station, as well as the data link that relays information in between each of these components. Additionally, this course focuses on the four pillars of a safety management system to include: safety policy, safety risk management, safety assurance, and safety promotion.
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Prerequisite(s) and/or Corequisite(s)	None
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Course Prerequisites/Co-Requisites/Restrictions:
None.

	General Education Outcomes
1	Utilize written and verbal language to discuss and comprehend information, incorporating a variety of technologies, such as text, data, and images (written language, verbal language, and information technology).
2	Identify and interpret relevant information in order to formulate an opinion or conclusion (critical thinking).
3	Demonstrate and communicate computational methods and mathematical reasoning in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate) (quantitative literacy and fluency).
4	Communicate in appropriate ways with those who are culturally diverse (intercultural competence).

	Program/Department Outcomes
1	Discuss and evaluate potential technology related ethical dilemmas and apply decision-making techniques to resolve them.
2	Demonstrate proficiency in selecting, implementing, and operating information technology solutions to meet project requirements.
3	Apply essential IT support skills in order to install, configure, secure, and troubleshoot operating systems, programs, networks, and pc hardware.
4	Prepared to take and pass industry standard certification exams.
5	Develop the ability to use oral and written communication effectively with clients and other industry professionals.
6	Engage in teams to develop and/or implement IT-based project solutions.
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	Course Outcomes (CO)	Bloom's Domain for CO (C, A, P), Category, and Level	Program/Department Outcome(s)	Written Language	Verbal Language	Information Technology	Critical Thinking	Quantitative Literacy and Fluency	Intercultural Competence
1	Identify important UAS technologies, platforms, and systems.	Cognitive Remembering (1)	1,2	2	1	2	2	1	0
2	Explore the key concepts and theories associated with remote sensing.	Cognitive Analyzing (3)	1,2,4,5	2	1	2	2	1	0
3	Discuss the ethics and privacy considerations in the operation of unmanned aircraft.	Cognitive Understanding (2)	1,2,4,5	2	2	2	2	1	0
4	Interpret aviation rules and regulations as they pertain to UAS.	Cognitive Understanding (2)	1,2,4,5	2	0	2	2	1	0
5	Plan for powered flight in the National Airspace System (NAS).	Cognitive Applying (3)	1,2,4,5,6	2	0	2	2	1	0
6	Prepare to communicate with air traffic control and conflict aircraft.	Cognitive Applying (3)	1,2,5,6	2	2	2	2	1	0
7	Identify the appropriate attitudes and behaviors associated with commercial aviation	Cognitive Evaluating (5)	1,4,5,6	2	2	2	2	1	0
8	Recall regulation mandated remote pilot standards and restrictions.	Cognitive Remembering (1)	1,4	2	1	2	2	1	0
9	Relate Crew Resource Management (CRM) principles to UAS operations.	Cognitive Applying (1)	1,3,4,5,6	2	2	2	2	1	0
10	Develop attitudes and behaviors associated with aviation safety.	Cognitive Creating (6)	1,4,5,6	2	1	2	2	2	0

Bloom's Domain Legend

C = Cognitive
A = Affective
P = Psychomotor

General Education Outcome Legend

2 = Included and Measurable
1 = Introduced and/or Minimally Addressed and Not Measurable
0 = Not included

Approved: May 2021
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