

**CS 176.2 Course Outline as of Fall 2026****CATALOG INFORMATION**

Dept and Nbr: CS 176.2 Title: APPLIED DRONE PROJECTS

Full Title: Applied Drone Projects

Last Reviewed: 9/15/2025

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.50	17.5	Lecture Scheduled	43.75
Minimum	3.00	Lab Scheduled	1.50	8	Lab Scheduled	26.25
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 87.50

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: CS 176.12

**Catalog Description:**

Students will use drone technology to complete real-world projects including photography/videography and basic mapping.

**Prerequisites/Corequisites:**

Course Completion of CS 76.11

**Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: Students will use drone technology to complete real-world projects including photography/videography and basic mapping.

(Grade or P/NP)

Prerequisites/Corequisites: Course Completion of CS 76.11

Recommended:

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Effective:	Inactive:
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<b>UC Transfer:</b>	Effective:	Inactive:
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**CID:**

**Certificate/Major Applicable:**

Certificate Applicable Course

## **COURSE CONTENT**

**Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Determine correct drone equipment to complete the requirements of a given project
2. Manage drone-related projects, including working in teams

**Objectives:**

At the conclusion of this course, the student should be able to:

1. Choose appropriate drone-related equipment for a given situation
2. Work in a team setting
3. Develop project parameters and plans
4. Provide deliverables which meet project needs
5. Assess project results in order to improve workflow

**Topics and Scope:**

- I. Different Types of Drones
  - A. Consumer-level toys
  - B. Consumer-level
  - C. Professional-level
- II. Drone Payloads
  - A. Cameras
    1. Visible light
    2. Infrared (thermal)
    3. Near-infrared
  - B. Other sensors and equipment
- III. Example Drone Projects
  - A. Photography/videography
    1. Capturing images and video

- 2. Editing images and video
- B. 2D and 3D mapping
- C. Conducting research
  - 1. Sampling
  - 2. Gathering visual data
  - 3. Using other sensors
- IV. Completing Projects
  - A. Project planning
    - 1. Defining project parameters
    - 2. Developing requirements
    - 3. Creating teams
  - B. Teamwork
    - 1. Team member selection
    - 2. Team roles and responsibilities
    - 3. Post-project assessment
  - C. Project completion
    - 1. Meeting deadlines
    - 2. Preparing deliverables
    - 3. Assessing results

All Topics are covered in the lecture and lab portions of the course.

**Assignment:**

Lecture-Related Assignments:

- 1. Reading of 10-20 pages per week
- 2. Team project requirement plans (1 - 3)
- 3. Team project timelines (1 - 3)
- 4. Project assessments (1 - 3)
- 5. Quizzes (2 - 4)
- 6. Final exam
- 7. Participation

Lecture- and Lab-Related Assignments:

- 1. Completed project deliverables (1 - 3)

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Project plans, timelines, deliverables, and assessments	Writing 10 - 20%
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**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Project plans, timelines, deliverables, and assessments	Problem solving 20 - 50%
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**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Project deliverables

Skill Demonstrations  
20 - 30%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, final exam

Exams  
10 - 20%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation

Other Category  
10 - 15%

**Representative Textbooks and Materials:**

Instructor prepared materials