



AVI 241
Course Number

Flight IV
Course Title

2
Credits

Hours: 1 / 85.1
Lecture / Field Hours

Pre-requisite: AVI 240

Implementation
Fall 2023

Catalog description: Students develop a high degree of proficiency in single-engine commercial maneuvers and instrument flying. Students gain the necessary flight skills required to successfully complete the FAA Instrument Rating and Commercial Certificate as outlined in the FAA Instrument and Commercial Airmen Certification Standards. Consists of 48.8 flight hours, 17.0 preflight planning hours, and 19.3 hours of ground/pre/post instruction. Fee required (see Mercer County Community College's Aviation Policies and Procedures Manual).

General Education Category:
Not GenEd

Course coordinator:
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Required texts & Other materials:

1. Owner's or Operator's Manual of Aircraft used in training
2. Airplane Flying Handbook (ISBN 1619545128)
3. Instrument Flying Handbook (ISBN 979-8776640544)
4. Instrument Rating Airman Certification Standards (ISBN 1619549115)
5. Commercial Pilot Airman Certification Standards (ISBN 1619549077)
6. The Instrument Flight Manual by William K. Kershner (ISBN 1619548666)
7. The Advanced Pilot's Flight Manual by William K. Kershner (ISBN 1644250101)
8. Guided Flight Discovery Instrument/Commercial by Jeppesen Sanderson (ISBN 0884872785)

Flight Training Content:

Commercial course and Instrument course are being conducted concurrently.

This course consists of Blocks 8 through 10 of the Commercial Pilot Certification Course as well as Blocks 3 through 6 of the Instrument Rating Course. Details can be found in the latest version of the FAA-approved Training Course Outlines (TCO).

Flight Training Course Objectives:

The objectives of this flight training course are to provide the student with the aeronautical skills and experience necessary to meet the requirements for a commercial instrument pilot certificate with an airplane category rating and single engine land class rating.

Flight Training Course Completion Standards:

The course completion standards are based upon the Commercial and Instrument Airman Certification Standards as outlined by the Federal Aviation Administration. To meet the flight training course completion standards, the student must demonstrate, through flight tests and school records, that he/she meets the requirements for a commercial instrument pilot certificate with airplane category and single engine land class rating. Periodic progress check may include material covered in any previous lesson.

*** ADDITIONAL TIME MAY BE NEEDED TO MEET COMPLETION STANDARDS AND PROFICIENCY.**

Course Student Learning Outcomes (SLO):

At the completion of the course, the student will be able to:

1. Demonstrate a complete understanding of all VFR and IFR knowledge, procedures, and maneuvers required of a commercial and instrument pilot.
(ILG 1,2,3,4,5,10,11) (PLO 1,4,6)
2. Exceed the minimum requirements outlined in the current FAA Commercial and Instrument Airmen Certification Standards and. **(ILG 1,2,3,4,5,10,11) (PLO 1,4,6)**

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 1. Written and Oral Communication in English. Students will communicate effectively in both speech and writing.

Institutional Learning Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

Institutional Learning Goal 3. Science. Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.

Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Institutional Learning Goal 5. Social Science. Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.

Institutional Learning Goal 10. Information Literacy: Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.

Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Program Learning Outcomes for Aviation Technology (PLO)

Students will be able to:

1. Demonstrate the knowledge and skills required to obtain the private and commercial certificates and instrument rating, including aeronautical technical skills and decision making, while demonstrating safety as their primary focus.
4. Demonstrate effective and correct written and verbal communication.
6. Demonstrate an awareness of the ethical and professional issues associated with the aviation industry, including the importance of becoming a life-long learner in the aviation world.

Units of study in detail – Unit Student Learning Outcomes:

Unit I Instrument Block 3 [Supports Course SLOs 1 and 2]

Learning Objectives

The student will be able to:

- Conduct IFR cross-country flights and completes the final stage of instrument training.

Unit II Instrument Block 4 [Supports Course SLOs 1 and 2]

Learning Objectives

The student will be able to:

- Continue to build their skills to meet or exceed the requirements for the Instrument Airman Certification Standards.

Unit III Commercial Block 8 [Supports Course SLOs 1 and 2]

Learning Objectives

The student will be able to:

- Continue to build their skills to meet or exceed the requirements of the Commercial Pilot Airman Certification Standards.

Unit IV Instrument Block 5 [Supports Course SLOs 1 and 2]

Learning Objectives

The student will be able to:

- Continue to build their skills to meet or exceed the requirements for the Instrument Airman Certification Standards.

Unit V Commercial Block 9 [Supports Course SLOs 1 and 2]

Learning Objectives

The student will be able to:

- Continue to build their skills to meet or exceed the requirements of the Commercial Pilot Airman Certification Standards.

Unit VI Instrument Block 6 [Supports Course SLOs 1 and 2]

Learning Objectives

The student will be able to:

- Meet the requirements for the Instrument Airman Certification Standards of the Instrument Rating.

Unit VII Commercial Block 10 [Supports Course SLOs 1 and 2]

Learning Objectives

The student will be able to:

- Meet or exceed the requirements of the Commercial Pilot Airman Certification Standards.

Evaluation of student learning:

The grade in AVI 241 will be determined by an Oral and Practical Examination as outlined in both the Commercial and Instrument Airman Certification Standards.

The final evaluations consist of questions applicable in two separate sessions on Commercial and Instrument flight operations, planning and knowledge. There will be two flights consisting of commercial maneuvers and instrument procedures. The procedures for these evaluations will be found in the latest issue of the Airman Certifications Standards.

Specific Grading:

A	Completes all progress checks on first attempt with a Satisfactory grade, perfect attendance in flight class, and participates as per MCCC policy.
B	Completes 2 out of 3 progress checks on first attempt with a satisfactory grade, perfect attendance in flight class, and participates as per MCCC policy.
C	Completes at least 2 out of 3 progress checks on first attempt with as satisfactory, no more than 2 absences from flight class, and participates as per MCCC policy.
D	Completes at least 1 out of 3 progress checks on first attempt with a satisfactory grade, no more than 2 absences from flight class, and participates as per MCCC policy
F	Does not complete progress checks on first attempt, does not attend class regularly and does not participate in class and/or student does not complete final progress check within time period designated.