

## Master Syllabus

### AVT 2167 - Instrument Flight Rules (IFR) Navigation & Planning

**Division:** Science, Mathematics and Engineering

**Department:** Aviation Technology

**Credit Hour Total:** 2.0

**Lecture Hrs:** 2.0

**Prerequisite(s):** AVT 1119

**Date Revised:** March 2013

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#### Course Description:

Principles of aeronautical charts, national airspace system, aircraft navigation instruments, navigational systems and global differences in navigational operations. Air traffic control procedures and pilot responsibilities as they relate to enroute operations, terminal area and radar operations; including instrument departure and approach procedures.

#### General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Values/Citizenship/Community Competency

#### Course Outcomes:

##### Aeronautical Publications

Comprehend and apply aeronautical publications including Notices to Airmen (NOTAMs) and their applicability to the flight environment.

**Assessment Method:** Behavioral observations

**Performance Criteria:**

Mastery of competency at 100%

**Assessment Method:** Locally developed exams

**Performance Criteria:**

80% correct responses on exams

##### Instrument Flight Operations in the National Airspace System

Identify and apply federal aviation regulations related to aircraft dispatch when planning instrument flight operations in the national airspace system.

**Assessment Method:** Behavioral observations

**Performance Criteria:**

Mastery of competency at 100%

**Assessment Method:** Locally developed exams

**Performance Criteria:**

80% correct responses on exams

##### Navigational Systems and Instruments

Comprehend and apply principles of navigational systems including VOR, NDB, and GPS and limitations of flight instruments and navigational systems as it applies to flight planning.

**Assessment Method:** Behavioral observations

**Performance Criteria:**

Mastery of competency at 100%

**Assessment Method:** Locally developed exams

**Performance Criteria:**

80% correct responses on exams

##### Precision and Non-Precision Procedures for Departure, Enroute, and Arrival

Comprehend and apply the principles of precision and non-precision instrument flight procedures for departure, enroute, arrival and their relationship to weather in flight planning.

**Assessment Method:** Behavioral observations

**Performance Criteria:**

Mastery of competency at 100%

**Assessment Method:** Locally developed exams

**Performance Criteria:**

80% correct responses on exams

##### Air Traffic Control Procedures

Comprehend air traffic operations for enroute and terminal areas. Understand the use of radar and the execution of instrument departure and approach procedures.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

Mastery of competency at 100%

**Assessment Method:** Simulations

**Performance Criteria:**

Mastery of competency at 100%

**Outline:**

Aeronautical chart use  
Flight instrument systems  
Departure, enroute and arrival procedures  
Instrument navigation  
Federal Aviation Regulations  
Flight planning  
Notices to Airmen and their applicability to the flight environment  
Air traffic control procedures  
Instrument departure and approach procedures