

## Master Syllabus

### AVT 2211 - Advanced Navigation Science

**Division:** Science, Mathematics and Engineering

**Department:** Aviation Technology

**Credit Hour Total:** 2.0

**Lecture Hrs:** 2.0

**Prerequisite(s):** AVT 1170

**Other Prerequisite(s):** AND Approval of Department

**Date Revised:** October 2013

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### Course Description:

Study of advanced navigational systems used in commercial and corporate flight operations. Global Positioning Systems (GPS), Flight Management Systems (FMS) and automated flight planning programs will be demonstrated and practiced. Study of long range navigational procedures.

### General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Values/Citizenship/Community Competency
- ▣ Computer Literacy Competency
- ▣ Information Literacy Competency

### Course Outcomes:

#### Long range navigation

Demonstrate and construct a North Atlantic flight plan incorporating proper procedures using plotting charts, track messages and notices to airmen (NOTAMS).

**Assessment Method:** Portfolios  
**Performance Criteria:**

Score 80% or higher

#### Automated flight planning

Comprehend and prepare a flight utilizing an automated flight planning program using arrival and/or departure procedures.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

Score 80% or higher on exams

#### Integrated navigational system operation

Identify the functions of an integrated navigation system and apply techniques to load, verify and modify a flight plan.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

Score 80% or higher

### Outline:

US enroute, arrival and departure procedures  
Flight instrument systems  
North Atlantic Track System  
Instrument navigation  
Federal Aviation Regulations  
Garmin GNS430 Operations  
Automated flight planning operations