FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER:	ASC 2110
COURSE TITLE:	Advanced Air Navigation
PREREQUISITE(S):	None
COREQUISITE(S):	None
CREDIT HOURS:	3
CONTACT HOURS/WEEK:	3
CONTACT HOUR BREAKDOWN:	
Lecture/Discussion:	3
Laboratory:	
Other _____:	
FACULTY WORKLOAD POINTS:	3
STANDARDIZED CLASS SIZE ALLOCATION:	30

CATALOG COURSE DESCRIPTION: This course traces the history of navigation from early forms of celestial navigation to modern electronic navigation (Global Positioning Systems, Flight Management Systems). Major changes to navigation are investigated including the sextant, the magnetic compass, early and modern radio navigation systems as well as various types of chart and chart projections. Detailed emphasis will be given to modern aeronautical charts, and both VFR and IFR cross country flight planning, the use of GPS systems and "Glass Cockpit" systems. This course is designed for aviation students who desire to achieve a higher level of understanding about navigation than the minimum required to pass the various FAA Computer Based Pilot Knowledge Tests; this course is equally appropriate for Private Pilots flying VFR only, as well as pilots with advanced certificates and/or instrument ratings.

SUGGESTED TEXT(S): ADD>	Light Airplane Navigation Essentials, McGraw-Hill, 1997, ISBN: 0-07-013456-1
	Mastering GPS Flying, McGraw-Hill, 2005, ISBN: 0-07-141669-2
IMPLEMENTATION DATE:	Summer Term, 1990 (19904)
REVIEW OR MODIFICATION DATE:	Fall Term, 2002 (20031) Fall Term, 2008 (20091) Fall Term, 2008 (20091) – Outline Review 2007

COURSE TOPICS	CONTACT HOURS PER TOPIC
I. Navigation Terms/Definitions	3
II. Navigation Chart Construction	3
III. Navigation Computers	3
IV. Flight Planning	12
V. In-flight Navigation	15
VI. GPS Navigation	6
VII. Examinations	3
Total	45

PROGRAM TITLE: Professional Pilot Technology

COURSE TITLE: Advanced Air Navigation

CIP NUMBER: 1649.010200

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

07.0 SOLVE NAVIGATION PROBLEMS -- The student will be able to:

- 07.01 Define radio navigation.
- 07.02 Explain the magnetic compass.
- 07.03 Explain VOR navigation.
- 07.04 Explain the ADF.
- 07.05 Explain DME and RNAV principles.
- 07.07 Demonstrate and explain the flight computer.
- 07.08 Explain sectional charts and their use.
- 07.09 Explain enroute and terminal charts.
- 07.10 Explain lost communications emergency procedures VFR and IFR.
- 07.11 Read and interpret aircraft performance charts.
- 07.12 Plot and explain a cross country course.

PROGRAM TITLE: Aviation Operations

COURSE TITLE: Advanced Air Navigation

CIP NUMBER: 1649.010400

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

08.0 DEMONSTRATE APPROPIATE COMMUNICATIONS SKILLS -- The student will be able to:

08.02 Read and understand graphs, charts, diagrams and tables commonly used in this industry/occupation area.
08.03 Read and follow written and oral instructions.
08.04 Answer and ask questions coherently and concisely.
08.05 Read critically by recognizing assumptions and implications and by evaluating ideas.
08.06 Demonstrate appropriate telephone/communication skills.

DEMONSTRATE APPROPIATE UNDERSTANDING OF BASIC SCIENCE – The student will be able to:

12.01 Understand molecular action as a result of temperature extremes, chemical reaction, and moisture content.
12.02 Draw conclusions or make inferences from data.
12.04 Understand pressure measurement in terms of P.S.I., inches of mercury, and K.P.A.

Florida State College
At Jacksonville

Course Learning Outcomes & Assessment
For All College Credit Courses

NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

Section 1	
COURSE PREFIX AND NUMBER: ASC 2110	SEMESTER CREDIT HOURS: **3**
COURSE TITLE: **Advanced Air Navigation**	

Section 2

TYPE OF COURSE: (Click on the box to check all that apply)

- ☐ **AA Elective**
- ☒ **AS Required Professional Course**
- ☐ **College Prep**
- ☐ **AS Professional Elective**
- ☐ **AAS Required Professional Course**
- ☐ **Technical Certificate**
- ☐ **Other** _____
- ☐ **General Education: (For General Education courses, you must also complete Section 3 and Section 7)**

Section 3 (If applicable)

INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:

- ☐ **Communication**
- ☐ **Social & Behavioral Sciences**
- ☐ **Mathematics**
- ☐ **Natural Sciences**
- ☐ **Humanities**

Section 4

INTELLECTUAL COMPETENCIES:

- ☒ **Reading**
- ☒ **Speaking**
- ☒ **Critical Analysis**
- ☐ **Quantitative Skills**
- ☐ **Scientific Method of Inquiry**
- ☒ **Writing**
- ☒ **Listening**
- ☒ **Information Literacy**
- ☒ **Ethical Judgment**
- ☒ **Working Collaboratively**

Section 5 **LEARNING OUTCOMES**		**METHOD OF ASSESSMENT**
•	Identify the history of aerial navigation and charting	Written testing
•	Properly define Pilot age navigation	Written testing
•	Define Dead Reckoning navigation with the use of flight computers and plotters	Individual and group projects
•	Identify various types of radio navigation	Written testing
•	Explain the rules of various types of airspace control	Written testing
•	Demonstrate an understanding of GPS navigation and flight management systems.	Navigation project
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Section 6

Name of Person Completing This Form: David Dagenais