

COURSE TITLE AND NUMBER:

North Central Michigan College

NCMC MASTER COURSE SYLLABUS

Last Date Revised 5/13/2003

DIVISION/AREA: Business and Technology

DEPARTMENT:

DIVISION DIRECTOR: Robert J. Marsh, Ph.D.

ORIGINATOR:

DEAN OF INSTRUCTION: Timothy Dykstra, Ph.D.

TOTAL HOURS OF INSTRUCTION: 3 LECTURE: 3 LAB: 0 TOTAL CONTACT HOURS: 52.8

COURSE NUMBER: GS 115

CREDIT HOURS: 3

COURSE TITLE: BASIC AVIATION GROUND SCHOOL

TRANSFERABLE YES: NO: X TO:

PREREQUISITE(S)/COREQUISITE(S)/ADVISORY: None

CATALOG DESCRIPTION:

A preparatory course for the Federal Aviation Administration private pilot written examination covering the fundamentals of aircraft performance, meteorology, navigation and federal air regulations.

GENERAL EDUCATION OUTCOMES:

- Think critically and analytically
 - Independently acquire knowledge
 - Select and use mathematical tools for problem solving and decision making
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COURSE OBJECTIVES & OUTCOMES:

At the successful conclusion of this class, the student will:

- Become familiar with the airplane's major components
- Become familiar with airplane engine operations, electrical systems and flight instruments
- Learn the basics of aerodynamics
- Be familiar with the basic fundamentals of airport operations at controlled and uncontrolled airports
- Be familiar with weather reporting and briefing systems, weather reports, weather charts and their interpretation

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- Be familiar with the physiological and psychological hazards associated with flight
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METHODS OF INSTRUCTION: Lecture, field trips, assignments and practice FAA exams

METHODS OF EVALUATION: Through in class work, homework assignments, exams and FAA practice exams. The student must pass a practice exam to the instructor's satisfaction before being allowed to take the FAA exam.

REQUIRED TEXTS:

- Rod Machado's Private Pilot Handbook (ISBN: 0-9631229-9-1)
- Rod Machado's Private Pilot Workbook (ISBN: 0-9631229)
- Sectional plotter
- E6B Mechanical Flight Computer

OPTIONAL SUPPLEMENTARY MATERIALS: Instructor handouts

Reasonable accommodations may be provided for students with documented physical, sensory, cognitive, systemic, and/or psychiatric disabilities. Please contact the Education Opportunity Program (EOP) at (231) 348-6687 to arrange services for this course.

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TIME ALLOWANCE AND SEQUENCE OF INSTRUCTION:

Week	Chapter	Topics
1	1 & 2	Airplane components The four forces
2	3	Engine basics
3	4 & 5	Electricity and water Non gyro instruments
4	6	Intro to instrumentation Class and type ratings
5	7	Basic airport operations Runway lighting
6	8	Radio techniques and equipment Control tower communications
7	8 & 9	Emergency frequencies Controlled and uncontrolled airspace Air corridors
8	10	Aviation maps
9	11	VOR course intercepts VOR tracking ADF operation
10	12	Weather theory Temperature inversions
11	12 (cont'd)	High and low pressure areas Cold and warm fronts Turbulence and wind shear
12	13	Weather reporting systems, charts Pilot reports
13	14	Flight plans Dead reckoning techniques
14	15 & 16	Airplane performance computation Computing weight and balance
15	17	Aeronautical publications, NOTAM system Aeronautical Information Manual Review
16		FINAL EXAM

APPROVED FOR ADOPTION BY THE CRD/AP COMMITTEE ON _____