EMBRY-RIDDLE AERONAUTICAL UNIVERSITY
Department of Computing and Mathematics
COURSE OUTLINE FOR

Course No.: MSE500 **Title: Introduction to Personal and Team Software Process**

Cr Hrs: 3

Lecture Hours: 3 **Laboratory Hours: 0**

COURSE DESCRIPTION:

This course introduces students to the fundamental principles and methodologies of software engineering. It presents the cost and benefit of a Personal Software Process (PSP). It provides a framework for a statistically managed software engineering discipline. Students gain experience in developing software engineering skills. Prerequiste:

GOALS:

Introduce the student to the principles, concepts and methods of sotware project management, and software quality management of the software engineering process.

PERFORMANCE OBJECTIVES:

1. Understand the cost and benefit of a personal software process.
2. Know how to model the software development process.
3. Know how to measure and estimate software size.
4. Know how to perform Resource and Schedule planning.
5. Understand the concept of software design and principles of softwre design evaluation.
6. Know how to use a defined process to develop software.
7. Know how to collect metrics.
8. Know how to apply your data to improve your software development process.
9. Know how to communicate effectively within a team.

Department of Computing and Mathematics
COURSE OUTLINE FOR MSE500, Continued

TEXTBOOK

Humphrey, Watts S., *A Discipline for Software Engineering*, Addison-Wesley, 1995.

SUGGESTED SUPPLEMENTAL MATERIALS:

a. Humphrey, Watts S., *Introduction to the Team Software Process*, Addison-Wesley, 1995.

PREREQUISITE KNOWLEDGE BY TOPIC:

1. Programming in a high-level language.
2. Data structures and file systems.

	TOPIC	CLASS HOURS	COURSE OBJECTIVES
1.	Introduction to Software Engineering		
2.	Introduction to Personal Software Process		
3.	Measuring Software Size.		
4.	Estimating Software Size.		
5.	Resource and Schedule Planning		
6.	Measuring the Personal Software Process		
7.	Code Reviews		
8.	Error Analysis and Planning		
9.	A Design Framework		
10.	Detail Design Review		
11.	The Cyclic Personal Software Process		
12.	The Team Process		

13. Developing a Process

14. The Project Process

15. The Personal Software Process in Real World

LABORATORY:

COMPUTER USAGE:

GRADING SYSTEM:

1. Each student will work on an individual basis to gain hands-on experience about the development of personal software process. Each person is required to write the assigned programs, as well as collect and record the associated measurements. Since an important aspect of the course is collection of metrics, it is imperative for each student to perform the data collecting and recording, associated with each program, as rigorously as possible.

   If you have not completed the home work correctly, do not turn it in until you have corrected it. While it is important to turn your work in on time, it is much more important that it be correct. Mostly, homework will be assigned on Wednesday and will be due the following Wednesday. The following grading policy will be applied to late homework:

If 1(day)	<=	lateness <= 5(days)	Then 20% deduction
If 5(days)	<=	lateness <= 7(days)	Then 50% deduction
If 7(days)	<	lateness <= 12(days)	Then no grade will be assigned
If 12(days)	<	lateness	Negative grade

   An important aspect of the MSE500 assignments is that they must be completed, and failure to complete and submit an assignment will result in a negative grade equivalent to the maximum grade of the assignment. This policy is due to the fact that the assignments are related to each other in terms of their reusability and collection of metrics that are required to improve the process.

   Exercises will be corrected but no grade will be assigned. No late exercise will be accepted. You must turn in at least 90% of all the exercises to receive the 5% allocated in the final grade. There are a total of 6 exercises during the semester. This means 5 out of 6 exercises must be turned in on time to receive the 5% allocated grade. No partial percentage will be given, that is, if you do not turn in at least 90% of the exercises, you will receive no credit for the exercises.

2. A mid-term exam will be given.

3. For final grade, points will be distributed as follows:

Assignments	70%
Exercises	5%

Exam 25%

Each assignment will have 100 points and the following distribution will be used in grading:

Assignments:

Program 30%
Report 70%

Note: For Report Only assignments, the 100% grade will be based on the quality of the report.

ESTIMATED CONTENT:

Skills: %
Content: %