

# Syllabus CSC 563 Fall 2019

## Software Metrics and Process Management

### Professor Contact Information

**Dr. Chen Huo**

**Office Hours:** As listed below, and by appointment.

Monday	1:00 - 3:00
Tuesday	11:00 - 1:00
Thursday	1:00 - 2:00

**Office:** MCT 150

**Email:** [chuo@cs.ship.edu](mailto:chuo@cs.ship.edu)

### Course Description

The course will develop the students' understanding of statistical process control in software engineering. A variety of control charts will be used for assessing process stability and estimation of process capability. We will also study how engineers design experiments based on statistical quality control for the purpose of controlling, improving, and optimizing the software engineering process.

### Textbooks

**Measuring the Software Process** by *William A. Florac and Anita D. Carleton*

**The Deadline** by *Tom DeMarco*.

The tentative schedule for this class shows the readings required for each week. The assumption will be that you have COMPLETED those readings by that class (with the obvious exception of the first week of class). We will use Piazza for discussion.

### Readings

Additional readings will be required. Some will be handed out in class and some will be posted in the google classroom. They are considered at least as important as reading the textbook.

### Homework

Homework will be of two types: short term and longer term. Short term homework's purpose is to ensure that you are keeping up with the reading (and may take the form of IN CLASS QUIZZES). Longer term homework will take a week or more to complete and will be carefully graded. Note - longer term homework will include short papers.

## Grades

Your grade will be calculated as follows:

Homework	10%
Team Project	10%
First Exam	25%
Second Exam	25%
Final Exam	25%
Attendance/Participation	5%

## Tentative Schedule

Date	Topic	Reading(Before class)
08/29/2017	Course Overview	
08/31/2017	Improving Software Process	CMMI-DEV
09/05/2017	Measurement Goals	Chapter 1-3/Ramasubbu Paper/Deadline chapter 1-3
09/07/2017	Randomness	
09/12/2017	Change Point Analysis	Change Point Analysis Paper/Deadline chapter 4-6
09/14/2017	Control Charts	Chapter 4/Deadline chapter 7-9
09/19/2017	Control Charts	
09/21/2017	Control Charts	Deadline chapter 10-12
09/26/2017	Exam 1	
09/28/2017	More Sophisticated Analysis	Chapter 5 through 5.1.3/Deadline chapter 13-15
10/03/2017	More Sophisticated Analysis	Chapter 5.1.4-5.1.5
10/05/2017	More Sophisticated Analysis	Chapter 5.1.6-5.1.8/Deadline chapter 16-18
10/10/2017	Code Metrics	Chapter 5.2
10/12/2017	Function Points	Function Points material
10/17/2017	Fall break	
10/19/2017	What should we measure?	Chapter 6 and 7
10/24/2017	Exam 2	
10/26/2017	Working on Team Project	
10/31/2017	Working on Team Project	

11/02/2017	3-sigma Control Limits	Appendix B
11/07/2017	Working on Team Project	
11/09/2017	Statistical Significance	
11/14/2017	Working on Team Project	
11/16/2017	Effect Size	
11/21/2017	Working on Team Project	
11/23/2017	Thanksgiving Break	
11/28/2017	Working on Team Project	
11/30/2017	Working on Team Project	
12/05/2017	Team Presentations	
12/07/2017	Team Presentations	
12/12/2017	Final (3:30pm-5:30pm)	

## Policies

### Attendance/Participation

All students are expected to attend class, read all materials, come prepared to discuss ideas and questions, and encourage their own and others' learning during class time. You can have one unexcused absence and three excused absences. After that, each absence will cost 1% of your total grade until the 5% attendance grade runs out.

### Make Up Exams

If you miss either of the first two exams (for excused absence), your final exam grade will be used to replace the missing exam grades.

### Academic Dishonesty

The university has a strong academic dishonesty policy which I will strictly enforce. Guard your work to be sure that no one else "borrows" it. You should be certain to read the definitions of academic dishonesty and the university's policy in the Swatanev. In addition, our department has an academic dishonesty policy you can find at <http://www.cs.ship.edu/undergradforms.html>. Both are fair game for exam questions!

### Social Equity Accommodations

If you are registered with the Office of Social Equity as needing special accommodations like extra time on exams (or quizzes!), please come see me so that we can iron out the details.