

# Syllabus

## SENG 536 Software Metrics

Yrd. Doç. Dr. Mehmet KAYA

### Course Meeting Times

Lectures: 1 session / week, 3 hours / session

### Description

This course is designed to provide students with practical techniques for quantitative measurement of software projects. It will provide a solid foundation especially in measurement methods, define metrics commonly used to manage software projects, illustrate how to effectively communicate your metrics, and provide problems and projects to strengthen your understanding of the methods and techniques. Our intent is to arm you with what you will need to effectively “manage by the numbers” and better ensure the success of your software projects. This is a programming intensive course where, students are expected to participate in lectures, read research articles on selected software metrics and implement some of these metrics as static source code analysis tool. As the programming projects constitute an important part of this class, students should have a strong background in object oriented programming concept and some experience with C++ programming language as prerequisite of the class.

### Exams

There will be a midterm exam midway through the term. Your project scores will determine your Final Exam score. Therefore, there will not be an in-class final exam.

### Projects

Throughout the semester, students will be asked to implement static analysis programs to measure some quality characteristics of a given code base. They will be using a Parser facility we will introduce in class. First three projects will include:

1. Software Size Analysis Program in terms of KLOC
2. Software Size Analysis Program in terms of functionality
3. Software Complexity Analysis Program

Note that these are individual projects. Students are expected to implement what they are asked to on their own without any collaboration. Discussion on projects is welcome as long as it is not directly related to the solution itself.

### Required Texts

Each week’s materials will come from different sources including eBooks, research articles and online resources. These materials will be sent to students before each session.

### Grading

Your overall grade will be determined roughly as follows where each Project will have equal weight:

ACTIVITIES	PERCENTAGES
Midterm	40%
Projects	60%