

Syllabus

Instructor

Dr. Jim Bowring: <http://www.cs.cofc.edu/~bowring/>

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Office hours: TR:11:00–12:00 AND 3:00–4:30, W:4:30-5:30, by appointment

Class place and time

Classroom: NORT 140

Time: W 5:30-8:30 PM

Catalog description

CSIS 602 – Foundations of Software Engineering – A survey course in software engineering processes and methodologies. This course includes software life cycles, planning and managing projects, capturing and managing requirements, analysis and design, implementation, software testing and quality assurance, and risk analysis in software development. Emphasized are team-based development, quality standards, object-oriented design, and CASE (computer-aided software engineering) tools.

No prerequisites.

Required text

[Software Engineering](#), 8th Edition, by Ian Sommerville, Addison-Wesley, 2007.

Electronic Resources

1. [Textbook Student Resources](#)
2. Software Engineering Body of Knowledge ([SWEBOK](#))
3. [Google Scholar](#)
4. The College of Charleston [Libraries](#) supply free full access to a wide range of electronic resources, including the [ACM Digital library](#) and the [IEEE Computer Society Journals](#).
5. [Center for Student Learning](#)
6. Career Planning Guide provided by the [Career Center](#)

Learning Objectives

The principal objective of this course is to prepare you for your career as a software engineer or software architect by exploring historical and contemporary issues in Software Engineering (SE). These issues include: SE and its relation to computer science and other engineering disciplines, SE licensure and certification, socio-technical systems, safety-critical systems, ethical issues in SE, SE methodologies, development theory, and practice, SE team dynamics, SE project management, SE emerging technologies. Upon completion of this course, you will have a working knowledge of these areas based on extensive readings, research, writing, and speaking assignments. You will also gain critical analysis skills to enable you to analyze and assess SE processes and artifacts and to think holistically about software engineering.

Professional development

I highly recommend that you join either the Association for Computing Machinery ([ACM](#)) or the Institute of Electrical and Electronics Engineers (IEEE) [Computer Society](#). Both offer student memberships. We have a College of Charleston [student chapter of the ACM](#), which you are encouraged to join (free, with free food) and attend. In your professional careers as software engineers, you should maintain one or both of these memberships.

Research projects

You will produce research papers during the semester on topics related to the course. I will prepare specifications at the appropriate time. In general, you will research and present the work of other researchers as published by the ACM or IEEE Computer Society. You should be prepared to present your work to the class on the due date of the paper.

Attendance and class participation

Class participation counts as 10% of your grade.

Homework and assignments

All assignments are due at the beginning of class on their due date. Unless otherwise specified, you will E-mail each assignment as a single PDF. I expect professional-grade documents containing identifying information as well as the work itself.

Instructor availability

I am here to teach, advise, and assist you. I maintain an open-door policy, so feel free to step into my office. (Knock if the door is closed.) I will respond to your emails (see above.)

Disabilities

If you have a documented disability and are approved to receive accommodations through [SNAP Services](#), please contact me during office hours or by appointment.

Student Honor Code

I expect you to abide by the [Honor Code](#) and the [Student Handbook: A Guide to Civil and Honorable Conduct](#). If you have a question about how to interpret the Honor Code, ask before acting! I encourage collaboration, but you must document it. Thus, each student will submit their own homework and, when collaborating, provide a reference to those people and documents consulted.

Grading scale (see page 9 of Graduate Catalog)

Superior (A); Very Good (B+); Good (B); Fair (C+); Acceptable (C); Not Acceptable (F)

Evaluation schedule

10%	Class preparation and participation
40%	Assignments
20%	Midterm exam
30%	Final exam