Specific course information

**Catalog description:** This is an advanced programming course in which students work on large-scale individual or team programming projects, and make a formal presentation on their work. The course discusses program development, methodologies and strategies.

**Prerequisites:** CS04315 Programming Languages and CS07340 Design and Analysis of Algorithms

**Type of Course:** ☒ Required □ Elective □ Selected Elective

Specific goals for the course

1. Students have worked in a team to specify, analyze, design, implement, test and document and complex software system.
   - ABET (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
   - ABET (c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
   - ABET (d) An ability to function effectively on teams to accomplish a common goal
   - ABET (i) An ability to use current techniques, skills, and tools necessary for software system development
   - ABET (k) An ability to apply design and development principles in the construction of a complex software system

2. Students have demonstrated and presented a software system to a technical audience.
   - ABET (f) An ability to communicate effectively with a range of audiences

Required list of topics to be covered
1. None

Optional list of topics that could be covered

2. Mobile app development
3. RESTful APIs
4. Web-based applications