



Software Development Certificate

Department of Mathematics, Computer Science, and Statistics Ellis College of Arts and Sciences

Required Number of Hours: 14

Description of certificate: (Include an introductory paragraph and certificate plan of study.) Students completing the requirements for this certificate will have an advanced understanding of software development. Not only will they have the knowledge to produce industry quality software, they will also have the foundational knowledge required to make that software as resource and time efficient as possible.

Student Learning Outcomes: Upon successful completion of the certificate, the student will have acquired an understanding of the following concepts and a proficiency in their implementation.

- Software Development Lifecycle
- Modeling
- Modern IDE Software Development
- Object Orientation
- Sorting/Searching
- Interfaces
- Abstract datatypes
- Lists
- Trees
- Stacks/Queues
- Sets/Maps
- Graphs
- SQL
- Database Design

Required Courses:

- CSC 1104 – Foundations of Computer Science I
- CSC 1114 – Foundations of Computer Science II
- CSC 2203 – Data Structures
- CSC 3133 – Introduction to Database Theory

Contact information:

Jim Harper, Director of Computer Science

870.230.5039

E-Mail: harperj@hsu.edu