

***CSE 1001 Fundamentals of Software Development 1 (4 credits)***

**Primary instructor:** Philip Bernhard

**Supporting faculty:** Ryan Stansifer

**Textbooks and references:**

R. Sedgewick and K. Wayne, Introduction to Programming in Java. Addison Wesley, 2007. ISBN 978-0-321-498805-2. (T)

**Course information:**

**2014–2015 Catalog description:** CSE 1001 Fundamentals of Software Development 1 (4 credits). Introduces software development as it applies to small programs. Students learn to program in a higher-level language and to read, understand, write and evolve typical small higher-level programs. (Requirement: Passing score on calculus placement test or prerequisite course.) (CL) Prerequisites: MTH 1000.

**Prerequisites by topic:** Mathematics through precalculus, basic English writing skills

**Place in program:** Required, grade of C or better. Prerequisite for: CSE 1002

**Course outcomes & related student outcomes:** The student will be able to

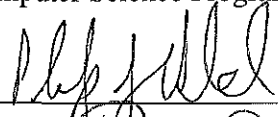
1. Use fundamental types (constants and variables): integer, float, character, string, Boolean, array, etc., in computer programs. (4a: Skillful software construction)
2. Use basic control structures: if-then, for, while, switch, etc., in computer programs. (4a: Skillful software construction)
3. Identify syntactically correct code. (2: Scientific, computing, and engineering problem solving)
4. Interpret the semantics of code. (2: Scientific, computing, and engineering problem solving)
5. Use test and debug information to correct programs. (3: Skillful use of tools)
6. Effectively document software. (7: Communicate effectively)
7. Use computer programming skills to solve problems. (2: Scientific, computing, and engineering problem solving)

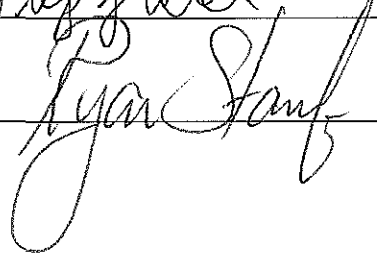
**Topics covered:**

1. Data types (10 hours)
2. Console I/O (2 hours)
3. Flow control (10 hours)
4. Classes, objects and methods (5 hours)
5. Arrays (8 hours)

- 6. Streams and File I/O (1 hour)
- 7. Recursion (3 hours)
- 8. Computer hardware and software components (1 hour)

**Approved by:** Phil Bernhard, Associate Professor & Ryan Stansifer, Associate Professor and Director of Computer Science Programs

Signature:  Date: 2/18/15

Signature:  Date: 18 Feb 2015