CSCE 101 – Summer 2016
Introduction to Computer Concepts

Instructor: Mohammad Ali Javidian

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Credit: 3 hours

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Class Time: M-F   11:40 AM - 1:40 PM

Classroom: Sumwalt 305 / Sumwalt 361

Office Hours:
MTWRF: 11 am - 11:30 am, and by appointment

Textbook: Nell Dale and John Lewis, Computer Science Illuminated, 6th Edition, ISBN 1284055914.

Specific Course Information

Bulletin Description: History, application, and social impact of computers; problem-solving, algorithm development, applications software, and programming in a procedural language. Open to all majors.

Prerequisites: Two years of college preparatory mathematics or equivalent

Learning Outcomes: Specific outcomes of instruction are that students will be able to:

- Demonstrate the ability to find a solution and write an algorithm when given an English description of a task to be accomplished (that is, a problem statement);
- Demonstrate the ability to write, execute, test, and debug computer programs in a high-level language;
- Demonstrate the mastery and use of the concepts and proper terminology related to computer science.

Topics Covered and Approximate Weight (4 weeks, 10 hours/week, 40 hours total)

1. History of computers (1 hour)
2. Programming languages/ Introduction to programming (2 hours)
3. Problem solving/Algorithms/Pseudo-code (3 hours)
4. Variables/data types (2 hours)
5. Logical flow (4 hours)
6. Debugging/Testing (2 hours)
7. Conditional logic (if/else, not, and/or) (3 hours)
8. Loops (2 hours)
9. Arrays (2 hours)
10. Number systems/binary/octal/hexadecimal/decimal/conversion/binary arithmetic/data representation (3 hours)
11. Computers in society/ethics/privacy/benefits/problems (2 hours)

12. Security/Networks/Database/Artificial intelligence (3 hours)
13. The web and the internet/History/Browsers/Search engines/Programming for the web (3 hours)
14. Hardware/Software/Applications (2 hours)
15. Reviews and Examinations (6 hours)

Assessment and Grading

Test 1	20%
Test 2	20%
Final Exam	20%
Lab	30%
Quizzes/Homework	10%

The grade is calculated as follows:

90%	A		70%	C
87%	B+		67%	D+
80%	B		60%	D
77 %	C+		<60%	F

You must pass the lab portion of the course in order to pass the class (average must be >= 60).

Class Structure

We are adjusting this summer course to follow a structure similar to that of a full semester course. In other words, we are offering fourteen 50-minute sessions which focus on completing lab assignments, leaving the remaining 24 hours and 45 minutes of the course to be devoted to lecture and the study of the theories of computing.

Course Schedule and Lectures

	Monday	Tuesday	Wednesday	Thursday	Friday
Date Topic		**July 5** Introduction, Syllabus, History (Ch. 1)	**July 6** Binary (Ch. 2)	**July 7** Data Representation (Ch. 3)	**July 8** Gates and Circuits(Ch. 4)
Assigned		Lab 1, HW 1	Lab 2		Lab 3, HW 2
Due				Lab 1, HW 1	Lab 2
Date Topic	**July 9** Computing Components (Ch. 5), Test 1 Review	**July 12** ***Test 1***	**July 13** Ch. 5, continue	**July 14** Programming (Ch. 6)	**July 15** Ch. 6, continue
Assigned	Lab 4	Lab 5	Lab 6		Lab 7, HW 3
Due	Lab 3, HW 2		Lab 4	Lab 5	Lab 6
Date Topic	**July 18** *Algorithms (Ch. 7)*	**July 19** Ch. 7, continue Test 2 Review	**July 20** ***Test 2***	**July 21** Data Types (Ch. 8)	**July 22** Network (Ch. 15)
Assigned	Lab 8	Lab 9	Lab 10		Lab 11, HW 4
Due	Lab 7, HW 3		Lab 8	Lab 9	Lab 10
Date Topic	**July 23** Web (Ch. 16)	**July 26** Computer Security(Ch.17)	**July 27** Operating Systems (Ch. 10)	**July 28** Final Exam Review	
Assigned	Lab 12	Lab 13, HW 5	Lab 14		
Due	Lab 11, HW 4		Lab 12	Lab 13, and 14	

*This schedule is subject to change (particularly the order of topics). Please refer back to website for updates.