**ABET Course Syllabus – CS1010**

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| **Code** | CS1010 | **Credits** | 3 |
| **Title** | Introduction to Higher Education for Computer Science Majors | **Coordinator** | Zilong Ye |

**Course Information**

1. **Catalog Description:** Skills required for the computing profession; critical thinking and lifelong learning; computer ethics; hands-on projects to explore the computing disciplines; academic success strategies; university structure, resources, policies, procedures; community engagement. Graded ABC/NC.
2. **Prerequisites:** N/A.
3. **Contact Hours:** Lecture 2 hours, laboratory 3 hours.
4. **Required/Elective:** This course is required in the BS program.

**Textbook**

No new textbook is required.

**Course Goals**

The Student Learning Outcomes that are addressed by the course are:

* SLO2. Students will be able to demonstrate fluency in at least one programming language and acquaintance with at least three more.
* SLO 7. Student will be able to communicate effectively orally and in writing.
* SLO 8. Students will have the knowledge, skills, and attitudes for lifelong self-development.
* SLO 9. Students will have the ability to analyze the local and global impact of computing on individuals and society.
* SLO 10. Students will have a fundamental understanding of social, professional, ethical, legal, and security issues in computing.

Other outcomes of instruction:

At the end of the course, students are able to

* Students will be able to describe the computing disciplines at a high level.
* Students will be able to characterize the critical thinking skills that are required of a Computer Science major.
* Students will understand the requirements for the Computer Science B.S. degree, and they will be able to define a program for themselves that meets those requirements.
* Students will be familiar with the CSULA resources available to them and will be able to demonstrate their familiarity by using those resources in assigned projects.
* Students will demonstrate skills that sustain lifelong learning, particularly the abilities to think both critically and responsibly and to access, evaluate, and integrate information.
* Students will understand the importance of the decisions they make throughout their lives; the impact and influence of various individual, social, cultural, and environmental factors on those decisions; and the impact of their decisions on their personal well-being and their physical, social and cultural environments.
* Students will develop an awareness of and utilize the resources available at CSULA to support learning, academic planning, and a sense of belonging.

**Topics Covered**

**Lecture components**

* University catalog/Student Handbook
* Computer Science Network Services
* ESSC Services/Campus Resources
* GET, Email, MyCSULA
* University Policies. Procedures and Regulations
* University Information Technology Services
* Computer Science and other computing disciplines
* Computer Science Requirements
* Career Roadmaps; CARR
* Student Learning Outcomes
* Civic Learning and Community Engagement
* Career opportunities, Graduate School, BS-MS vs MS

**Laboratory components**

* Computer organization, hardware and software
* Programming languages
* Data representation
* Binary operations
* Coding basics
  + Variables, if/else, while/for loops
  + Compile, syntax, debug, run
  + Array, list and other basic data structures
* Graphics and draw figures using Turtle
* Introduction to computer networks