

## COURSE DESCRIPTION

Dept., Number	CSci 103	Course Title	Survey of Computing: Programming in Alice
Semester hours	3	Course Coordinator	Pamela B. Lawhead, Associate Professor

### Current Catalog Description

Introduction to computers and computing for students with no prior computer experience

Experimental version description: This is an introductory programming course that teaches fundamental computer science concepts. It uses the tool [Alice](#) to create 3-D virtual worlds. The course includes discussion of programming constructs such as looping, selection, and data structures, along with how to control objects (raise hands, flap wings, move, turn, spin, walk, etc.). CSci 103 is normally a course for non-majors. We are experimenting with this content as a prototype for a “computer science 0” course.

### Textbook

Wanda Dann, Stephen Cooper, and Randy Pausch. *Learning to Program with ALICE*, Prentice Hall, 2006. ISBN (0-13-142420-3).

### References

The website for this course is in Blackboard. The online materials include the syllabus, a reading list, handouts, and other related material.

### Course Outcomes

The general outcome for this course is that the students become familiar with the basic concepts of programming and use of computers. Upon successful completion of the course, the students have familiarity with:

1. algorithmic thinking and expression: the ability to read and write in a formal language;
2. abstraction: the ability to generalize and to decompose problems logically;
3. appreciation of elegance: an understanding that although there are many ways to solve a problem, some are inherently better than others.

### Relationship between Course Outcomes and Program Outcomes

The course outcomes are primarily related to program outcome (a), an ability to apply knowledge of computing and mathematics appropriate to the discipline.

Prerequisites by Topic

This course has no prerequisites.

Major Topics Covered in the Course

- Animation programs:
- Classes, objects, and methods
- Inheritance
- Control flow
- Boolean questions
- Methods, functions, and parameters
- Events, world events
- Program design
- Program testing
- Introductory game design

Assessment Plan for the Course

The course outcomes are assessed by the students:

1. Active participation and attendance at all class meetings
2. Completion of all homework assignments
3. Presentation and submission of projects
4. Demonstration of learning on tests and final exam.

How Data in the Course are Used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

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Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Algorithms	1		Software design	1	
Data structures	1		Concepts of programming languages		