

Northwest Arkansas Community College
Business and Computer Information Systems Division

Discipline Code

PROG

Course Number

1103

Course Title

GUI Programming

Catalog Description

(S) This course provides an introduction to GUI programming using an appropriate language. Students will gain knowledge and skill in object-oriented programming and the design of graphical user interfaces, as well as using persistent data (such as File IO). Topics include common GUI widgets, event handling, and Object-oriented design. (Outside lab time will be required.)

Prerequisite: PROG 1003

Prerequisites

PROG 1003

Credit Hours

3 Credit Hours

Contact hours

45 Lecture/Lab Contact Hours

Load hours

3 Load Hours

Semesters Offered

Spring

ACTS Equivalent

None

Grade Mode

A-F

Learning Outcomes

The student will:

- Apply object-oriented programming design concepts
- Demonstrate competence of object-oriented programming concepts by analyzing and designing solutions to various selected problems
- Implement those designs as GUI applications that incorporate general widgets (e.g. menus, common controls, dialog boxes, forms)
- Test and evaluate the resulting GUI application
- Apply computational and algebraic skills to problems using proper structure and analysis
- Use a File or Database to persist data in an application.
- Apply and implement events with common GUI widgets.

General Education Outcomes Supported

- Students develop higher order thinking skills.
- Students can use computers proficiently.
- Students demonstrate information literacy.

Standard Practices

Topics list

- Concepts of GUI design
- GUI Widgets, including buttons, textboxes, list boxes, checkboxes, radio buttons, dropdown lists, and forms.
- Object-Oriented Programming in a GUI environment
- Common dialog boxes (Open, Save, and informational Dialog boxes)
- Creating single and multiple form applications
- Accessing and using a database to persist data
- Using data structure to solve a given problem
- Menus
- File I/O

Learning activities

- Assignments and Projects
- This course requires some in class, hands-on work and also additional hands-on work in a virtual or on-campus computer lab.

Assessments

Homework, Quizzes, Exams, and Projects

Grading guidelines

- A = 90-100%
- B = 80-89%

- C = 70-79%
- D = 60-69%
- F = 0-59%

Last Revision Date: Spring 2022