



ANTELOPE VALLEY COLLEGE

Academic Affairs
Course Outline of Record

Academic Affairs Only

<input type="checkbox"/>	New Course
<input type="checkbox"/>	Effective Date (for articulation)
<input checked="" type="checkbox"/>	COR Revision 12/10/2009
<input checked="" type="checkbox"/>	Pre Req/Advisories 12/10/2009
<input type="checkbox"/>	Other Changes
<input checked="" type="checkbox"/>	SLOs 11/9/2009

COURSE SUBJECT & NUMBER: CIS 174

COURSE NAME: *Introduction to C#.NET Programming

COURSE UNITS: 3 **COURSE HOURS:** 4 hours weekly

COURSE REQUISITES: *(Follow format of similar courses found in the college catalog.)*

ADVISORY: Completion of CIS 111 and Eligibility for ENGL 099, READ 099 and MATH 102

COURSE DESCRIPTION: *(Write a short paragraph providing an overview of topics covered. Be sure to identify target audience--transfer, major, GE, degree/certificate, etc. If repeatable, state the number of times at end of description as (R#).* Students will learn the fundamentals of Microsoft Windows programming using the C#.NET programming language. The course will include designing, implementing, and testing C#.NET programs, which will provide useful Windows applications to solve representative problems for business, science, mathematics, and engineering. This course is intended for students majoring in business or CIS or those desiring to increase their programming skills. **BEFORE ENROLLING** students should understand object-oriented programming concepts. This course is intended for students majoring in business or CIS or those desiring to increase their programming skills. (CSU, AVC)

COURSE OBJECTIVES: *(Title 5 requires that courses show evidence of critical thinking skills. Use Bloom's taxonomy to formulate concise, performance-based measurable objectives common to all students. Objectives must be closely aligned with course content, assignments, and methods of evaluation)*

Upon completion of course, the successful student will be able to

1. Explain the syntax and semantics of the C#.NET programming language.
2. Describe the Visual Studio.NET programming environment (Integrated Development Environment) and the Microsoft Windows environment.
3. Create effective user interfaces using C#.NET following generally accepted Windows design concepts.
4. Design, implement, test, and execute C#.NET programs in the Microsoft Windows environment.
5. Understand object oriented programming (OOP) concepts.
6. Access database files
7. Create both Windows programs and Web programs.

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COURSE CONTENT: *(Enter course content in terms of specific topics or a specific body of knowledge that each instructor must cover. Put topics in outline form with major and minor headings. Each instructor must cover all material listed below.)*

- I. C#.NET
 - A. Introduction
 - 1. Writing windows applications
 - 2. The Visual Studio Environment
 - B. Windows controls
 - 1. Coding for multiple controls
 - 2. Designing applications for user convenience
 - C. Variables and calculations
 - 1. Variables and exceptions
 - 2. Calculations and accumulation
 - D. Decisions and conditions
 - 1. Decision statements
 - 2. Condition statements
- II. Better coding
 - A. Menus and procedures
 - 1. Menus
 - 2. Common dialog boxes
 - 3. Sub and function procedures
 - B. Multiple forms
 - 1. Multi-form projects
 - 2. About box
 - 3. Splash screen
 - C. Lists, loops, and printing
 - 1. List and combo boxes
 - 2. For loops
 - 3. Printing
 - D. Arrays and structures
 - 1. Single dimension arrays
 - 2. Structures
 - 3. Table lookup with multidimensional arrays
- III. Web
 - A. Laying out web forms
 - B. Validator controls
 - C. Maintaining state
- IV. Advanced topics
 - A. Database files
 - 1. ADO.NET (ActiveX Data Object) with Structured Query Language server
 - 2. Data binding
 - B. Data files
 - 1. Reading and writing data files
 - 2. Using common dialog boxes
 - C. Object oriented programming
 - 1. Classes
 - 2. Inheritance
 - D. Graphics and animation
 - 1. Graphics
 - 2. Random numbers
 - 3. Timer component
 - 4. Scroll bars
 - 5. Playing sounds
 - 6. Drag-n-drop

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METHODS OF INSTRUCTION: *(Methods must be consistent with content and appropriate to objectives; state in terms of what instructor will be doing in order to present course content to students: for example, lecture, demonstration, present audio/visual materials; facilitate group work, etc. Do not list specific instructional equipment.)*

1. Lecture and discussion
2. Demonstration
3. Instructor-supervised individual and group hands-on activities

METHODS OF EVALUATION: *(These must be clearly related to course objectives and reflect course content and assignments in order to comply with Title 5 requirements. Describe what instructor will be looking for when evaluating various assignments and tests in order to determine whether students have met course objectives. Grades must be based on demonstrated proficiency in subject matter and determined, where appropriate, by essays, objective and essay tests, research papers or projects, problem solving exercises, or skills' demonstrations.)*

Students' grades will be determined by their ability to demonstrate understanding and retention of the elements of C#.NET, as evidenced by their completion of:

1. Graded programming assignments evaluating their program (code) and written documentation. (Objectives 3-7)
2. Class participation from discussions and answering other students' questions. (Objectives 1, 2, & 5)
3. Quizzes (Objectives 1-7)
4. Midterm and final exams. (Objectives 1-7)

Students will complete at least two exams consisting of objective questions and short answer questions and/or programming problems to assess students' understanding of the concepts, syntax, and semantics. Practical application of C#.NET will be evaluated based upon the programming assignments. These assignments will include a writing component and will be completed in and outside of the class. The ability to function within the C#.NET programming environment will be demonstrated by students successfully designing, implementing, testing, and executing C#.NET programs. (Objectives 1-7)

Suggested Texts or Other Instructional Materials

(List several when possible; include title, author, publisher, date, and latest edition. If older than five years, provide brief rationale.)

Programming in Visual C# 2008, by Bradley & Millspaugh, McGraw/Hill, 2008