COLLEGE OF THE DESERT

Course Code CIS-086

Course Outline of Record

1. Course Code: CIS-086
2. a. Long Course Title: Visual Basic Programming
   b. Short Course Title: VISUAL BASIC PROGRMG
3. a. Catalog Course Description:
   This is an introductory course in computer programming concepts. Students design, write and debug programs using the principles of structured programming. Topics covered include: programming language structure and syntax; algorithm development, logic and design considerations and program development tools; error handling and debugging; functions, subprograms and parameter passing; conditional and relational operators; selection and looping structures; array processing; sequential and random file access; and an introduction to object oriented programming.
   b. Class Schedule Course Description:
   Visual Basic Programming
   c. Semester Cycle (*if applicable*): *N/A*
   d. Name of Approved Program(s):
   - ADMINISTRATIVE OFFICE ASSISTANT
   - ADMINISTRATIVE OFFICE PROFESSIONAL
   - COMPUTER INFORMATION SYSTEMS
   - COMPUTER INFORMATION SYSTEMS
4. Total Units: 3.00 Total Semester Hrs: 90.00
   Lecture Units: 2 Semester Lecture Hrs: 36.00
   Lab Units: 1 Semester Lab Hrs: 54.00
   Class Size Maximum: 32 Allow Audit: No
   Repeatability No Repeats Allowed
   Justification 0
5. Prerequisite or Corequisite Courses or Advisories:
   Course with requisite(s) and/or advisory is required to complete Content Review Matrix (CCForm1-A)
   Prerequisite: CIS 010
6. Textbooks, Required Reading or Software: *(List in APA or MLA format.)*
   a. Bradley, Julia Case and Millspaugh, Anita C. (2010). *Programming in Visual Basic.Net* (Update/e). OR McGraw-Hill Irwin.
   College Level: Yes
   Flesch-Kincaid reading level: 11.4
7. Entrance Skills: *Before entering the course students must be able:*
   a. Identify the fundamental computer concepts and terminology used for input, processing, output, and storage.
   - CIS 010 - Using computers effectively requires that students can express their instructions in a form that the computer program can understand and execute.
   - CIS 010 - Students must understand what they want to accomplish, what logical steps are required to accomplish the objective, and how to submit instructions to the computer to achieve the required objective.
   - CIS 010 - Compare and contrast computer literacy and information systems.
   - CIS 010 - Explain basic computer concepts, terms and definitions.
   - CIS 010 - Compare and contrast the basic categories of system software and application software.
   - CIS 010 - Discuss the pros and cons of machine language, assembler language and high-level programming languages.
   - CIS 010 - Explain and discuss the system development life-cycle and the software development process.

   b. Identify the key features of software such as operating systems, word processors, spreadsheets, databases, communications, and graphics.

- CIS 010 - Compare and contrast computer literacy and information systems.
- CIS 010 - Explain basic computer concepts, terms and definitions.
- CIS 010 - Compare and contrast the basic categories of system software and application software.
- CIS 010 - Explain the basic concepts and understand the uses of various categories of productivity software, including word processing, electronic spreadsheets and database management.
- CIS 010 - Discuss the pros and cons of machine language, assembler language and high-level programming languages.
- CIS 010 - Explain and discuss the system development life-cycle and the software development process.

c.
Apply the principles of and solve problems with computer applications.

- CIS 010 - Using computers effectively requires that students can express their instructions in a form that the computer program can understand and execute.
- CIS 010 - Students must understand what they want to accomplish, what logical steps are required to accomplish the objective, and how to submit instructions to the computer to achieve the required objective.
- CIS 010 - Describe and use Windows options and features.
- CIS 010 - Demonstrate skills in disk and file management.

d. Understand the principles of computer security, ethics, and privacy.

- CIS 010 - Discuss the significant legal, moral and ethical, and security issues associated with increased computerization.

8. Course Content and Scope:

Lecture:

1. Programming language structure, syntax and commands
2. Conditional and relational operators
3. Procedures, functions and parameter passing
4. Structured programming methodology
    1. Sequence, selection and iteration
    2. Modularization and stepwise refinement
5. Error handling and debugging
6. Arrays processing
7. Sequential and random-access file access
8. Objects and properties of objects

Lab: *(if the "Lab Hours" is greater than zero this is required)*

1. Comprehensive programming assignments demonstrating mastery of all the concepts listed above.

9. Course Student Learning Outcomes:
    1. Demonstrate the ability to design a programming solution in Visual Basic that will meet a business requirement.

10. Course Objectives: *Upon completion of this course, students will be able to:*
    a. Define and use proper high-level programming language structure and syntax.
    b. Demonstrate the ability to utilize the programming concepts of functions, subprograms and parameter passing; conditional and relational operators; selection and looping structures sequential file access; objects and properties of objects; and error handling and debugging.
    c. Develop algorithms using structured programming techniques, including modularization, stepwise-refinement, sequence, selection and iteration.
    d. Design, write and debug high-level language programs in a PC compiler environment.

11. Methods of Instruction: *(Integration: Elements should validate parallel course outline elements)*
    a. Demonstration, Repetition/Practice
    b. Discussion
    c. Distance Education
    d. Lecture

e. Observation
f. Participation
g. Technology-based instruction

12. Assignments: *(List samples of specific activities/assignments students are expected to complete both in and outside of class.)*
In Class Hours: 90.00
Outside Class Hours: 99.00
a. In-class Assignments
1. Program exercises demonstrating each new concept
2. Comprehensive programming exercises demonstrating multiple concepts
3. Textbook readings in preparation for quizzes and in class hands on demonstrations
4. Final Project demonstrating critical thinking in design and mastery of all semester concepts
b. Out-of-class Assignments
1. Program exercises demonstrating each new concept
2. Comprehensive programming exercises demonstrating multiple concepts
3. Textbook readings in preparation for quizzes and in class hands on demonstrations
4. Final Project demonstrating critical thinking in design and mastery of all semester concepts

13. Methods of Evaluating Student Progress: *The student will demonstrate proficiency by:*
- Written homework
- Laboratory projects
- Computational/problem solving evaluations
- True/false/multiple choice examinations
- Mid-term and final evaluations
- Student preparation

14. Methods of Evaluating: Additional Assesment Information:
Non-computational problem solving Skill demonstration through completion of computer programming exercises

15. Need/Purpose/Rationale -- *All courses must meet one or more CCC missions.*
PO - Career and Technical Education
Fulfill the requirements for an entry- level position in their field.
Apply critical thinking skills to execute daily duties in their area of employment.
Apply critical thinking skills to research, evaluate, analyze, and synthesize information.
IO - Critical Thinking and Communication
Apply principles of logic to problem solve and reason with a fair and open mind.
Conduct research, gather and evaluate appropriate information, organize evidence into oral and written presentation, using proper MLA, APA, and other discipline-specific formats to cite sources.

16. Comparable Transfer Course

University System	Campus	Course Number	Course Title	Catalog Year

17. Special Materials and/or Equipment Required of Students:

18. Materials Fees: ☐ Required Material?

Material or Item	Cost Per Unit	Total Cost

19. Provide Reasons for the Substantial Modifications or New Course:

    Two year periodic review

20. a. Cross-Listed Course *(Enter Course Code)*: *N/A*
    b. Replacement Course *(Enter original Course Code)*: CS-086

21. Grading Method *(choose one)*: Letter Grade Only

22. MIS Course Data Elements
    a. Course Control Number [CB00]: CCC000513202
    b. T.O.P. Code [CB03]: 70200.00 - Computer Information Syst
    c. Credit Status [CB04]: D - Credit - Degree Applicable
    d. Course Transfer Status [CB05]: A = Transfer to UC, CSU
    e. Basic Skills Status [CB08]: 2N = Not basic skills course
    f. Vocational Status [CB09]: Clearly Occupational
    g. Course Classification [CB11]: Y - Credit Course
    h. Special Class Status [CB13]: N - Not Special
    i. Course CAN Code [CB14]: *N/A*
    j. Course Prior to College Level [CB21]: Y = Not Applicable
    k. Course Noncredit Category [CB22]: Y - Not Applicable
    l. Funding Agency Category [CB23]: Y = Not Applicable
    m. Program Status [CB24]: 1 = Program Applicable

    Name of Approved Program *(if program-applicable)*: ADMINISTRATIVE OFFICE ASSISTANT,ADMINISTRATIVE OFFICE PROFESSIONAL,COMPUTER INFORMATION SYSTEMS,COMPUTER INFORMATION SYSTEMS
    Attach listings of Degree and/or Certificate Programs showing this course as a required or a restricted elective.)

23. Enrollment - Estimate Enrollment
    First Year: 0
    Third Year: 0

24. Resources - Faculty - Discipline and Other Qualifications:
    a. Sufficient Faculty Resources: No
    b. If No, list number of FTE needed to offer this course: *N/A*

25. Additional Equipment and/or Supplies Needed and Source of Funding.

    N/A

26. Additional Construction or Modification of Existing Classroom Space Needed. *(Explain:)*

    N/A

27. FOR NEW OR SUBSTANTIALLY MODIFIED COURSES
    Library and/or Learning Resources Present in the Collection are Sufficient to Meet the Need of the Students Enrolled in the Course: Yes

28. Originator Zerryl L. Becker Origination Date 10/03/14