Syllabus for
CSC 454-01—Special Topics in Computer Science: GUI and RAD Programming
3 Credit Hours
Spring 2011

I.   COURSE DESCRIPTION

Selected topics covered in the core curriculum considered in response to student interest and
need. (May be repeated if subject matter is different.)
Prerequisites: Permission of department chair.

This course covers the principles and techniques involved in creating GUI (Graphical User
Interface) programs using RAD (Rapid Application Development) tools. Topics include the
concepts of event driven programming, principles of human interface design, and the utilization
of tools available in the Microsoft Visual Studio software environment.

II.   COURSE GOALS

This course is designed to give the student the conceptual framework and the practical experience
necessary to build software that implements a Windows-based interface.

III. STUDENT LEARNING OUTCOMES FOR THIS COURSE

A.   Terminal Objectives
      As a result of successfully completing this course, the student will be able to utilize the
      Visual Studio development environment to develop programs that utilize a Windows
      interface to interact with the user.

B.   Unit I Objectives
      As a result of successfully completing this unit, the student will be able to do the
      following:
      1.   Explain the concepts involved in building GUI programs.
      2.   Use the Visual Studio development environment to write a sample GUI program
            that demonstrates how to utilize the basic user controls that are available.

C.   Unit II Objectives
      As a result of successfully completing this unit, the student will be able to do the
      following:
      1.   Write a record declaration appropriate for storing information in a file.
      2.   Write a GUI program that works with data in a file of records.
      3.   Explain the XML protocol.
      4.   Create a text file that stores data in the XML format.
      5.   Write a GUI program that works with data stored in XML format.
      6.   Write a sample program that demonstrates the use of the database user controls
            that are available in Visual Studio.
      7.   Write a GUI program that works with data stored in a database.

D.   Unit III Objectives
As a result of successfully completing this unit, the student will be able to do the following:
1.   Write a GUI program that demonstrates how to use some feature of Visual Studio not previously studied in the course (e.g. create graphics images, utilize the reporting controls, etc.).
2.   Design and implement a significant project that demonstrates mastery of the essential features of the Visual Studio environment and tools.

IV.   TEXTBOOKS AND OTHER LEARNING RESOURCES

None

V.   POLICIES AND PROCEDURES

A.   University Policies and Procedures
1.   Attendance at each class or laboratory is mandatory at Oral Roberts University. Excessive absences can reduce a student's grade or deny credit for the course.
2.   Students taking a late exam because of an unauthorized absence are charged a late exam fee.
3.   Students and faculty at Oral Roberts University must adhere to all laws addressing the ethical use of others' materials, whether it is in the form of print, electronic, video, multimedia, or computer software. Plagiarism and other forms of cheating involve both lying and stealing and are violations of ORU's Honor Code: "I will not cheat or plagiarize; I will do my own academic work and will not inappropriately collaborate with other students on assignments." Plagiarism is usually defined as copying someone else's ideas, words, or sentence structure and submitting them as one's own. Other forms of academic dishonesty include (but are not limited to) the following:
a.   Submitting another's work as one's own or colluding with someone else and submitting that work as though it were his or hers;
b.   Failing to meet group assignment or project requirements while claiming to have done so;
c.   Failing to cite sources used in a paper;
d.   Creating results for experiments, observations, interviews, or projects that were not done;
e.   Receiving or giving unauthorized help on assignments.
By submitting an assignment in any form, the student gives permission for the assignment to be checked for plagiarism, either by submitting the work for electronic verification or by other means. Penalties for any of the above infractions may result in disciplinary action including failing the assignment or failing the course or expulsion from the University, as determined by department and University guidelines.
4.   Final exams cannot be given before their scheduled times. Students need to check the final exam schedule before planning return flights or other events at the end of the semester.
5.   Students are to be in compliance with university, school, and departmental policies regarding Whole Person Assessment (WPA) requirements. Students

should consult the WPA handbooks for requirements regarding general education and the students' majors.

    a.   The penalty for not submitting electronically or for incorrectly submitting a Whole Person Assessment artifact is a zero for that assignment.

    b.   By submitting an assignment, the student gives permission for the assignment to be assessed electronically.

B.   Department Policies and Procedures

    1.   Each student who uses the computer is given access to the appropriate computer resources. These limited resources and privileges are given to allow students to perform course assignments.   Abuse of these privileges will result in their curtailment. Students should note that the contents of computer directories are subject to review by instructors and the computer Administrative staff.

    2.   A fee of $15.00 will be assessed for all late exams. This policy applies to all exams taken without notifying the professor prior to the regularly scheduled exam time, and to all exams taken late without an administrative excuse.

    3.   Any student whose unexcused absences total 33% or more of the total number of class sessions will receive an F for the course grade.

C.   Course Policies and Procedures

    1.   Whole Person Assessment Requirements

    This course does not require a Whole Person Assessment artifact.

    2.   Evaluation Procedures

    The final grade is based approximately 20% on homework, 60% on programs, and 20% on the final exam.

    3.   Assignments

    Homework assignments and programming problems are given regularly in class. Details of specific requirements are given at that time.

    4.   Attendance

    A total of 20 bonus points is awarded for enrolling in the class. Each unexcused absence will subtract 10 bonus points from your final grade in the course (based on a scale of 1000 possible points).

VI.   COURSE CALENDAR

Unit	Lesson	Topic
I	1	Introduction
	2-7	Visual Studio overview
II	8-11	File data management
	12-15	XML data management
	16-19	Database data management
III	20-23	Explore Visual Studio features
	24-29	Final project
	30	**Final Exam**

Course Inventory for ORU's Student Learning Outcomes

CSC 454-01—Special Topics in Computer Science: GUI and RAD Programming
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This course contributes to the ORU student learning outcomes as indicated below:
Significant Contribution – Addresses the outcome directly and includes targeted assessment.
Moderate Contribution – Addresses the outcome directly or indirectly and includes some assessment.
Minimal Contribution – Addresses the outcome indirectly and includes little or no assessment.
No Contribution – Does not address the outcome.

The Student Learning Glossary at http://ir.oru.edu/doc/glossary.pdf defines each outcome and each of the proficiencies/capacities.

OUTCOMES & Proficiencies/Capacities		Significant Contribution	Moderate Contribution	Minimal Contribution	No Contribution
1	**Outcome #1 – Spiritually Alive** Proficiencies/Capacities				
1A	Biblical knowledge				X
1B	Sensitivity to the Holy Spirit				X
1C	Evangelistic capability				X
1D	Ethical behavior			X	
2	**Outcome #2 – Intellectually Alert** Proficiencies/Capacities				
2A	Critical thinking		X		
2B	Information literacy			X	
2C	Global & historical perspectives				X
2D	Aesthetic appreciation		X		
2E	Intellectual creativity		X		
3	**Outcome #3 – Physically Disciplined** Proficiencies/Capacities				
3A	Healthy lifestyle				X
3B	Physically disciplined lifestyle				X
4	**Outcome #4 – Socially Adept** Proficiencies/Capacities				
4A	Communication skills		X		
4B	Interpersonal skills			X	
4C	Appreciation of cultural & linguistic differences				X
4D	Responsible citizenship				X
4E	Leadership capacity			X	

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