ORU
ORAL ROBERTS UNIVERSITY

Course Syllabus

LIT 111 — Programming

3 Credit hours

I. COURSE DESCRIPTION

An introduction to the art of programming, including such concepts as data representation, algorithm design, structured programming, step-wise refinement, programming style, testing, debugging, and program documentation. An integral part of this course includes experience in the design and implementation of computer programs.

Pre-requisites:
There are no prerequisites for this course. However, it is highly recommended students have basic keyboard skills, Windows operating systems experience, and adequate writing skills. Students should also be able to install and configure software down from the web.

II. ACADEMIC MISSION

Oral Roberts University's academic mission is to transform students by the power of the Holy Spirit into whole, competent servant-leaders through liberal arts and professional education that is fully Christian. Within a Spirit-filled healing community, administration, faculty, and staff love and serve students by helping them grow in knowledge, skills, wisdom, character, and spirit.

Student transformation is measured through the evaluation of student expression of University learning outcomes as demonstrated through accompanying proficiencies and capacities.

Spiritually alive …….. Biblical knowledge; sensitivity to the Holy Spirit; evangelistic capability; ethical behavior

Intellectually alert …….. critical thinking; information literacy; global and historical perspectives; aesthetic appreciation; intellectual creativity

Physically disciplined ……. healthy lifestyle; physically active lifestyle

Socially adept ……. communication skills; interpersonal skills; appreciation of cultural and linguistic differences; responsible citizenship; leadership capacity

Professionally competent ... discipline-specific proficiencies listed under Program Outcomes.

The last page of this syllabus, "COURSE INVENTORY for ORU's Student Learning Outcomes," indicates how this course supports ORU's academic mission and ORU's whole-person approach to learning outcomes through its ePortfolio system.

III. PROGRAM OUTCOMES (PO)

This course supports the program outcomes of the Bachelor of Science degree in Information Technology. An ORU Information Technology graduate must acquire a skill set that enables him or her to successfully perform integrative tasks, including the following Program Outcomes (PO) this course supports, marked below in **bold text** and with an asterisk (*).

1. An ability to apply knowledge of computing and mathematics appropriate to the discipline.
2. ***An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.**
3. An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
4. An ability to function effectively on teams to accomplish a common goal.
5. An understanding of professional, ethical, legal, security and social issues and responsibilities.
6. ***An ability to communicate effectively with a range of audiences.**
7. *** An ability to analyze the local and global impact of computing on individuals, organizations, and society.**
8. Recognition of the need for and an ability to engage in continuing professional development.
9. An ability to use current techniques, skills, and tools necessary for computing practice.
10. ***An ability to use and apply current technical concepts and practices in the core information technologies.**
11. An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems.
12. An ability to effectively integrate IT-based solutions into the user environment
13. An understanding of best practices and standards and their application
14. An ability to assist in the creation of an effective project plan.
15. ***An ability to solve real world problems informed by a Christian worldview.**

IV. COURSE GOALS (CG)

This course provides an overview of the structured methodology needed to produce a computerized solution for many different kinds of problems. This methodology includes the design of input and output data structures along with the development of algorithms to produce accurate and appropriate solutions. The goal is to help students master the syntax and semantics of the JAVA programming language which will allow them to translate the algorithms and data descriptions into correctly working programs.

V. COURSE OBJECTIVES (CO)

Each CO notes the level of **Bloom's Taxonomy (BL)** at which it will be measured as well as the Program Outcome (PO) it supports.

As a result of successfully completing this course, I should be able to:

CO1. Recognize programming concepts that can be applied to programming languages, including a top-down approach to program design and algorithm development [BL2, PO10]

CO2. Display basic knowledge of programming concepts in problem solving, program testing, program documentation and good programming style [BL2, PO2]

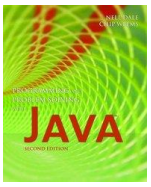
CO3. Discuss real world problems of computer and programming use informed by an ethical and Christian worldview [BL2, PO7]

VI. TEXTBOOK AND OTHER LEARNING RESOURCES

Textbook(s) and materials for the course are listed using standard citation style (APA, MLA, Chicago, Turabian, etc.). Since other styles may be used in disciplines other than the one used in this course or school, the ORU Citing and Documenting Sources pages offer a collection of styles students may choose from. This course asks that students be consistent in whatever style they use throughout the course.

Required Materials

Textbook:



Dale, N., & Weems, C. (2008). *Programming and problem solving with Java* (2nd ed). Sudbury, Mass: Jones and Bartlett Publishers. [Print ISBN: 9780763734022]

Note: eText version of Dale & Weems's textbook is available from Vitalsource: https://www.vitalsource.com/referral?term=9781449639808 [eText ISBN: 9781449639808]

Other required materials:

Downloadable Software

a. Eclipse Integrated Development Environment (IDE): https://www.eclipse.org/ide/ Click the download button and, on the next page, click to download "ORACLE's Enterprise Pack for Eclipse." Then download both the Mars and Neon options for your operating system.
b. Java SE Development Kit (JDK) Cobundles: http://www.oracle.com/technetwork/java/javase/downloads/index.html

Optional Materials

Textbooks: None

Other: None

VII. POLICIES AND PROCEDURES

A. University Policies and Procedures

1. **Participation:** Participation in each online class through discussion forums, assignments, and all other course activities is mandatory at Oral Roberts University. This counts as your attendance in the course. Excessive absences can reduce a student's grade or deny credit for the course.
2. **Plagiarism:** The ORU Catalog explicitly addresses the issue of plagiarism. Make sure you know ORU's policy on plagiarism and what is considered plagiarism: https://goo.gl/iG7F4D
3. **Privacy:** By law, students are entitled to privacy regarding their records. The Family Educational Rights and Privacy Act of 1974 (FERPA), as amended and available in the ORU Employee Handbook, sets forth requirements designed to protect the privacy of student education records. The law governs access to records maintained by educational institutions and the release of information from those records.
4. **Whole Person Assessment Requirements:**
   a. Specify which, if any, Whole Person Assessment requirements there are for this course.

      None for this course.

B. School and/or Department Policies and Procedures

1. Class Assignments

a. Students need to have the appropriate textbooks, course materials, and other supplies as designated by the professor.
b. Professors may refuse to accept an assignment if it has inappropriate content, does not meet the assignment's criteria (e.g., not typed, incorrectly documented), is incomplete, is suspected of plagiarism, or is turned in too late.

2. Late Work

a. The student is responsible for obtaining class assignments and materials, and all work is expected to be completed as scheduled. Late work may not be accepted by the professor, or it may result in a lower grade. Computer or Internet malfunctions do not constitute an excuse for late work; students should have their work prepared in time to ensure that they can get it completed, edited, and proofread prior to the instructor's due date. These responsibilities assist the student in professional development.
b. Generally, assignments missed from a serious sickness or family crises can be made up and the instructor should be notified as soon as possible to reach an agreement on due dates and possible penalties. Each instructor has his or her own late-work policy. Instructors use their own judgment in accepting late work.

3. Incompletes

As stated in the University catalog, incompletes are granted only for "good cause," such as extended hospitalization, long-term illness, or a death in the family. Students must petition for an incomplete using the form available in the English and Modern Languages Department. Very few incompletes are granted.

C. Online Programs Policies and Procedures

1. **Learning Community:** Online learning community is established through active participation in the threaded weekly discussions. The mutual exchange of ideas, information, and experiences is an essential part of the learning process, and students are encouraged to use the discussion forum as virtual classroom platform.
2. **ADA and Students with Disabilities:**
   - Click here (http://www.brightspace.com/about/accessibility/) to view Desire2Learn's "Accessibility Resources for Students with Disabilities."
   - Students requiring Disability Services from ORU, please click here: https://goo.gl/QGoK4x
   - Desire2Learn (D2L) Accessibility Guidelines and Checklist: https://goo.gl/Ck4RwY
   - D2L Accessibility Policy: https://www.d2l.com/accessibility/
3. **Useful Links for Online Students:**
   - Student Learning Glossary
   - Library: http://library.oru.edu.
   - D2L Helpdesk: d2lhelp@oru.edu
   - I.T. Student Helpdesk: studenthelpdesk@oru.edu
   - Netiquette and Online Discussions: https://goo.gl/f744AY
   - Contact the University: please fill out this online form. Please first contact your instructor for assistance with any matter specific to the course.

D. Course Policies and Procedures

Evaluation Procedures: The final grade will be based on forum discussions, chapter quizzes, and projects. The weight of each item is included in the Course Calendar.

14% of grade – Forum Discussions
28% of grade – Chapter Quizzes
58% of grade – Projects

1. **Grading Scale:**
   A=90-100% B=80-89% C=70-79% D=60-69% F=59% and below.
2. **Other Policies and/or Procedures**
   None

VIII. COURSE CALENDAR

The Course Calendar shows the specific learning activities and assessments for this course, along with their respective grade weights. The far right column lists the Course Objectives (CO) that are tied to the corresponding Assessment in column 2. All activities and assessments are fully described online in D2L under their respective Week. When applicable, † Indicates this is a Whole Person Assessment item that is also submitted to the E-Portfolio system.

Week	Assessments	Hours	Weight	CO
1	**Object-Oriented Programming**	--	--	--
	View/Listen/Read	4	--	--
	Forum 1: Copyright Infringement	4	2%	3
	Quiz 1a: Chp 1-Object-Oriented Programming	1	2%	1
	Quiz 1b: Chp 2-Elements of Java	1	2%	1
	Project 1a: Overview of Programming	3.5	4%	2
	Project 1b: Elements of Java	3.5	4%	2
2	**Classes and Methods**	--	--	--
	View/Listen/Read	4	--	--
	Forum 2: Software Certification	3	2%	1
	Quiz 2a: Chp 3-Classes and Methods	1	2%	1
	Quiz 2b: Chp 4-Numeric Types	1	2%	1
	Project 2a: Classes and Methods	3.5	4%	2
	Project 2b: Numeric Types	3.5	4%	2
3	**Branching & Method Algorithm Design**		--	--
	View/Listen/Read	4	--	--
	Forum 3: Computer Dependency	3	2%	3
	Quiz 3a: Chp 5-Algorithm Design	1	2%	1
	Quiz 3b: Chp 6-Loops and Files	1	2%	1
	Project 3a: Branching Methods	3.5	4%	2
	Project 3b: Loops and Files	3.5	4%	2
4	**Control Structures**	--	--	--
	View/Listen/Read	4	--	--
	Forum 4: Opening the Black Box	3	2%	3
	Quiz 4a: Chp 7-Control Structures	1	2%	1
	Quiz 4b: Chp 8-Software Engineering	1	2%	1
	Project 4a: Control Structures	3.5	4%	2
	Project 4b: Object-Oriented Software	3.5	4%	2
5	**Inheritance and Polymorphism**	--	--	--
	View/Listen/Read	4	--	--
	Forum 5: When Efficiency Hits Home	3	2%	1
	Quiz 5a: Chp 9-Arrays	1	2%	1
	Quiz 5b: Chp 10-Inheritance and Polymorphism	1	2%	1
	Project 5a: Arrays	3.5	4%	2
	Project 5b: Inheritance & Polymorphism	3.5	4%	2

Week	Assessments	Hours	Weight	CO
6	**Data Structures & Collections**	--	--	--
	View/Listen/Read	4	--	--
	Forum 6: Software Requirements	3	2%	1
	Quiz 6a: Chp 11-Array-based Lists	1	2%	1
	Quiz 6b: Chp 12-Data Structures	1	2%	1
	Project 6a: Array-based Lists	3.5	4%	2
	Project 6b: Data Structures	3.5	4%	2
7	**Recursion**	--	--	--
	View/Listen/Read	4	--	--
	Forum 7: Programming Ethics	3	2%	3
	Quiz 7a: Chp 13-Recursion	1	2%	1
	Quiz 7b: Chp 14-Applets	1	2%	1
	Project 7a: Recursion	3.5	5%	2
	Project 7b: Applets	3.5	5%	2
Course Total	Total estimated hours based upon 16 hours per week for 7 weeks	113	100%	

VII. COURSE INVENTORY

For ORU's Student Learning Outcomes

LIT 111 Programming
Spring 2017

This course contributes to the ORU Course Objectives 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	Analytical Problem Solving	X			
2C	Global & historical perspectives				X
2D	Aesthetic appreciation			X	
2E	Intellectual creativity		X		
2F	Information literacy		X		
3	**Outcome #3 – Physically Disciplined** Proficiencies/Capacities				
3A	Healthy lifestyle				X
3B	Physically disciplined lifestyle				X
3C	Properly balanced nutrition plan				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

 (Syllabus Revised 1/1/17) Last updated: February 21, 2017

This syllabus is subject to change without notice up until the first day of the semester.