CSC317 Introduction to Programming three

COURSE CODE: CSC317

COURSE TITLE: Introduction to Programming III

COURSE SESSIONS: This course is delivered on-line on BlackBoard. In addition, There will be one tutorial session of 50 minutes each week. use of web and email based instruction. A 50 minute tutorial will also be made available.

CREDITS: 3

COURSE DESCRIPTION:
Project oriented instruction in program development, using a professional development environment. Extensive programming practice is provided in both individual and team contexts for development of applications and systems. Design issues addressed include object oriented programming systems, approaches to inter-operability and portability, design of module interfaces and definition of system test beds.

PRE-REQUISITES: CSC242

TEXT: Beginning Java Objects: from concepts to Code, Jacquie Barker by Apress, 2003

COURSE OVERVIEW:

The software industry's main goal is to design reusable, portable and inter-operable software. Object-Oriented Design and Programming (OOD&P) is a powerful paradigm that allow users to build reusable software. This course focuses on object-oriented programming systems in Java, with approaches to reusability, portability, and interoperability of software development. A professional development environment such as the Java Software Development platform will be employed. In order to succeed, OOD&P concepts will be introduced with a special focus in the development of reusable applications and systems.

COURSE OBJECTIVES:

The objectives of this course are to:

- Learn the basic characteristics of portable programming languages such as Java
- Understand object-oriented design and programming concepts
- Comprehend Java Data and Control Structures
- Be able to design and implement object-oriented programs on medium-scale projects.
- Promote positive attitudes, social values and working abilities required in order to succeed in the industry.

CONTENT (TOPIC) OUTLINE:

- Introduction to object-oriented concepts
- Introduction to Basic programming constructs and data types
- Introduction to classes, instances, methods and messages and inheritance
- Introduction to wrapper classes, overriding; overloading, dynamic binding and polymorphism, abstract class multiple inheritance
- Introduction to UML
- Basic GUI, Abstract Window Toolkit, Swing
- Advanced Topics:
  Graphics (2D and 3D)
  Java Database Connectivity
  Networking
  Remote method Invocation
  Java Bean
  Servlets

TEACHING AND LEARNING METHODS:
All concepts presented will be illustrated with examples. Additional reading material will be provided to complement examples. Assignments are provided to insure that individual concepts are well-understood. These concepts will be explored and discuss on Blackboard and during the tutorial session. A capstone project will permit the integration of most of the object-oriented design and programming concepts seen in this course.

STUDENT RESPONSIBILITIES:

Avoid isolation, participate and be proactive.
It is extremely important that you do not feel isolated. You should participate in all activities such as online discussion, quizzes, project developments, and assignments. It is recommended to share ideas, questions, comments, and suggestions. Whenever you have a question, consult your classmates and your instructor. Be open to collaborating with and gaining insights from your classmates. If you are able to explain something about the course to your peers you will at the same time reinforce your knowledge about the topic and develop communication skills. If you are having technical difficulties (**software, hardware or connectivity problems**), problems understanding something about the course or other kinds of problems, you **must** let your instructor know the same day. If you fail to do so, the problem may become insolvable later on.

Meet the recommended deadlines.
If you meet the deadlines the instructor will send you feedback on time and you will be able to apply what you have learned for the next lesson. Otherwise, you will be behind and it will be extremely difficult and even impossible to catch up. If you have any problems meeting a deadline you must report it the **same day**.

Apply what you learn.
Apply everything you learn immediately in your daily activities (work, projects, assignments). It will be easier for you to understand and internalize what you learn if you put it to work.

Be self-motivated, prepared and work hard.
In order to succeed in an on-line learning environment, you must know how to take advantage of the on-line learning environment. In understanding the benefits of online learning, you will reinforce your self-motivation skills. You should equally be aware of an on-line course's inconveniences so you can be prepared to deal with them. You will be required to work a minimum of twelve hours per week and should be able to check and respond to your e-mail 5-6 days a week.

Be polite and respectful.
You communicate with human beings via technology. At times you will feel exhausted and/or frustrated but it is still necessary to be polite and respectful in order to create a positive and productive working environment.

COURSE POLICY

Students are encouraged to work and learn in group. However, all work must be performed and submitted individually. If you reuse or adapt code from any sources (internet, textbook, tutorials, other), you must explicitly credit and reference this source.

Violations will be considered as an "academic disconduct" and will be penalized according to the "Code of Student Conduct" section of the student handbook.

METHOD OF EVALUATION:

Overall evaluation will be based on a set of activities. The weight of each activity is reported in the following table:

Grading Policy

Activity	Weight (% of Grade)
Participation	**10**
On-line Quizzes (averaged)	**10**
Assignments (averaged)	**10**
Project	**30**
Mid-term	**25**
Final test	**15**
Total	**100**

TEXTBOOK:

Beginning Java Objects: from concepts to Code
Jacquie Barker by Apress, 2003
http://www.amazon.com/exec/obidos/ASIN/1590591461

Reference books
Java How to Program, 5/e,
Harvey Deitel & Paul Deitel, 2003, Prentice Hall.

Recommended Reading:
Java an Object-Oriented Language,
Michael Smith, Mc Graw Hill, 1999.

Java Programming, An IS Perspective,
Jan L.Harrington, John Wiley & Sons, 1998.

Tutorial at Sun Micro Systems,
http://java.sun.com/docs/books/tutorial/getStarted/index.html

REFERENCES

Web Sites:
Java main site (downloads and tutorials): http://java.sun.com/

Course web site:
http://faculty.uvi.edu/users/mboumed/courses/csc317/

Selected Links