

IONA COLLEGE
Department of Computer Science

CS 140 EA
Dr. Huang

Spring 2003

CS 140 – Computer Applications

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Office Hours: Monday, Wednesday and Thursday 8:00am to 12:00am
Monday 2:00pm to 6:00pm
And by Appointment

Course Description

This course will introduce the student to the computer from Micro to Mainframe. Introductory concepts of Computer Organization and Data Organization will be presented. Ethical and social issues relating to computing will be discussed. Students will learn to use a variety of software packages; among those presented will be word processing, financial modeling and data base management. Projects that require the use of application software will be assigned.

Course Objectives

- To provide an understanding of the components of a computer system and their functions
- To provide an understanding of software development and the problem solving process
- To provide an understanding of the social and ethical issues engendered by computers
- To provide a basic knowledge of computer terminology and the technology of the computer age
- To develop in the student an awareness of the future use of the computer in the student's career
- To form the foundation that can lead to more advanced courses in computer science

Required Texts

The required books and materials are on sale at the Iona College Bookstore.

Dale, Nell & John Lewis. (2002). Computer Science Illuminated. Sudbury, MA: Jones and Bartlett Publishers.

Office XP with Visual Basic 6.0 Level 1 Custom Edition (2002). Course Technology [to be assembled and bound by publisher according to our specifications]

Required Materials

You should have five 3.5" high-density (HD) diskettes. You can purchase diskettes at the Iona College Bookstore, Staples, Comp-USA, Computer City or other computer stores in packages of five and ten diskettes. You can expect to pay between \$4-\$5 for a box of ten HD diskettes.

Required Software

Microsoft Office XP (Containing Excel, Access, and PowerPoint), Visual Basic 6.0

Grading Criteria

Participation, Homework	10%
Quizzes	20%
Projects (Computer assignments, papers, class presentations, et al)	40%
Final Exam	30%

Policy on Plagiarism and Academic Dishonesty

Cheating on an examination other than the Final Examination will result in the loss of credit for that examination. Cheating on the Final Examination will result in failure of the course. Plagiarism of a homework assignment, lab assignment or computer project or the permission of such plagiarism will result in the loss of credit for that assignment.

Policy on Attendance

As outlined in the College Bulletin, unless the reasons for the absence or the quality of the student's work justifies an exemption from the rule, a student who has been absent from 20% or more of the scheduled class sessions will be dismissed from the class and assigned the failing grade of "FA".

Course Outline

W k	Lecture Topic	Lecture Ref	Lab
1	1.0 Course Introduction 2.0 The Big Picture 2.1. Computing Systems	Ch 1	Iona College Computing Signing on Windows 98
2	2.2 The History of Computing 2.3 Computing as a Tool and Discipline 2.4 Ethical Issues	Ch 1	PowerPoint Tutorial 1: Creating a Presentation <i>and/or</i> PowerPoint Tutorial 2: Modifying Text and Graphics
2	3.0 Binary Values and Number Systems 3.1 Number Categories 3.1 Natural Numbers 3.3 Ethical Issues 4.0 Introduction to Spreadsheets	Ch 2, Ch 12: pp. 375- 383	Excel Tutorial 1: Managing Financial Data Excel Tutorial 2: Formulas and Functions
4	5.0 Data Representation 5.1 Data and Computers 5.2 Representing Text (ASCII, Unicode) 5.3 Ethical Issues 6.0 Gates and Circuits [Optional] 6.1 Computers and Electricity 6.2 Gates 6.3 Ethical Issues	Ch 3, Ch 4: pp. 88- 95	Excel Tutorial 3: Formatting
5	7.0 Computing Components 7.1 Individual Computer Components 7.2 Stored Program Concepts	Ch 5	Excel Tutorial 4: Charts and Graphs
6	7.3 Ethical Issues 8.0 Introduction to Database Management Systems	Ch 5 Ch 12: pp. 383- 391	Access Tutorial 1: Introduction Access Tutorial 2: Creating and Maintaining a Database
7	9.0 Problem Solving and Algorithm Design 9.1 Problem Solving 9.2 Top-Down Design [Example: Optional] 9.3 Object-Oriented Design [Example: Optional] 9.4 Ethical Issues	Ch 6: pp. 142- 155, 162-169	Access Tutorial 3: Querying a Database
8	10.0 Low-Level Programming Languages 10.1 Computer Operations 10.2 Levels of Abstraction	Ch 7 pp. 188- 190, 198-200,	Access Tutorial 4: Creating Forms and Reports

	10.3 Machine Language 10.4 A Program Example 10.5 Assembly Language 10.6 Ethical Issues	207-210	
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Wk	Lecture Topic	Lecture Ref	Lab
9	11.0 High-Level Programming 11.1 Translation Process 11.2 Programming Language Paradigms 11.3 Functionality of Imperative Languages 11.4 Introduction to Visual Basic	Ch 8, VB Overview in Lab book	Visual Basic Tutorial 1: Creating a Project Working with Controls Writing Code
10	12.0 Visual Basic 12.1 Interface Design 12.2 Assignment statements 12.3 Arithmetic operators 12.4 Variables and Constants 12.5 If ...Then ...Else statement	VB Lab book	Visual Basic Tutorial 2: Designing Applications Building User Interface Coding, Testing, Debugging
11	13.0 Operating Systems 13.1 Roles of an Operating System 13.2 Memory Management [Optional] 13.3 Process Management [Optional] 13.4 CPU Scheduling [Optional] 13.5 Ethical Issues	Ch 10	Visual Basic Tutorial 3: Creating Variables and Constants Modifying an Application
12	14.0 Networks 14.1 Networking	Ch 15	Visual Basic Tutorial 4: If. . .Then. . .Else
13	14.2 Open Systems and Protocols 14.3 Network Addresses	Ch 15	HTML(Notes) Basic tags
14	15.0 The World Wide Web 15.1 Spinning the Web 15.2 HTML	Ch 16	HTML (Notes) Creating a web page
15	15.3 Interactive Web Pages 15.4 XML	Ch 16	