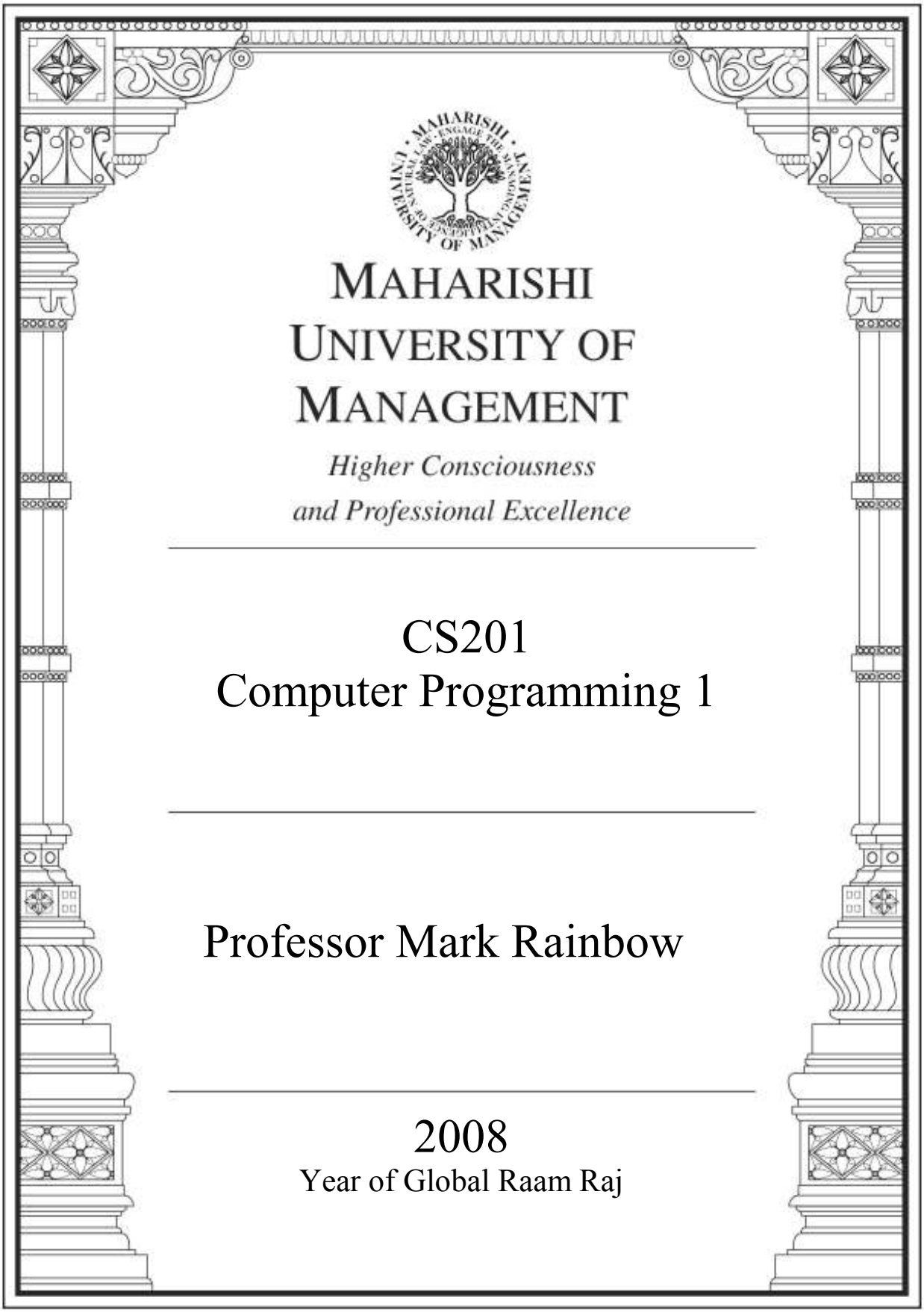

MAHARISHI UNIVERSITY OF MANAGEMENT

Higher Consciousness and Professional Excellence

CS201
Computer Programming 1

Professor Mark Rainbow

2008

Year of Global Raam Raj

Maharishi University of Management is an Equal Opportunity Institution.

© 2008 Maharishi University of Management

®Transcendental Meditation, TM, TM-Sidhi, Science of Creative Intelligence, Maharishi Transcendental Meditation, Maharishi TM-Sidhi, Maharishi Science of Creative Intelligence, Maharishi Vedic Science, Vedic Science, Maharishi Vedic Science and Technology, Consciousness-Based, Maharishi International University, and Maharishi University of Management are registered or common law trademarks licensed to Maharishi Vedic Education Development Corporation and used under sublicense or with permission.

CS201 Computer Programming 1

Expressing the Language of Natural Law.

GOAL

This first course in programming explores the principles of computer languages and their expression in software programs. We will emphasize practice in writing programs using two different programming languages, Alice and Java. Skills gained in writing programs will be supported by learning the concepts of computer science, but structured in a practical, and enjoyable way.

OBJECTIVES

By the end of the course you will have learned the Java computer language well enough to write a short computer program in Java to display a photo, edit the photo using a few tools, and save the results. You will know the fundamentals of object-oriented programming, and the main concepts of current programming practices, including data types, functions and methods, variable scope, the importance of data structures, the use of algorithms, user-interface design, and verification methods.

EVALUATION CRITERIA

The course grade will be based on two examinations, several quizzes, lab assignments, class participation, and the Professional Etiquette evaluation with the following weights:

Homework, Labs & Quizzes	25%
Midterm Exam	35%
Final Exam	40%

Attendance at all class sessions including labs is required. Unexcused absences or tardiness will reduce a student's final grade. (See policy below.)

GRADING SCALE

Points	*Grade*
90 – 100	A
87 – 90	A-
84 – 87	B+
76 – 84	B
73 – 76	B-
70 – 73	C+
62 – 70	C
0 – 62	NC

COURSE TEXTBOOK

The following textbook is required for this course. Reading assignments will be made from this text. *Programming with Alice and Java* by John Lewis and Peter DePasquale, published in 2008 by Addison Wesley, ISBN 032151209X.

OTHER REFERENCES

See **course web site** (http://www.cs.mum.edu/courses/cs201/) for more references and support material.

LESSON SCHEDULE AND READING ASSIGNMENTS
(All reading assignments from *Programming with Alice and Java* by Lewis & DePasquale.)

Lesson 1: Course Overview	
Lesson 2: The Alice programming environment	Read chapter 1
Lesson 3: Methods and Data	Read chapter 2
Lesson 4: Control Statements	Read chapter 3
Lesson 5: Events in Alice	Read chapter 4
Lesson 6: Managing Many Objects	Read chapter 5
Lesson 7: Java Objects and Classes	Read chapter 6
Lesson 8: Event Processing in Java	Read chapter 7
Lesson 9: Lists and Arrays	Read chapter 8
Lesson 10: Inheritance and Polymorphism	Read chapter 9
Lesson 11: Exceptions and File Streams	Read chapter 10
Lesson 12: Software Design Process	Read chapter 11
Lesson 13: Recursion	Read chapter 12

Homework assignments will be made each day and posted on the class web site.

Daily Schedule

The daily schedule of all courses is designed to give students mastery of specific fields of knowledge and to cultivate higher states of consciousness for success and fulfillment in life. Do your best to get to bed by 9:30 p.m. so you are rested and fresh in the morning. Don't stay up late to do homework.

MORNING

	Group practice of the Transcendental Meditation and TM-Sidhi programs
10:00 – 11:50	Class lecture, discussion, activities, labs
11:50 – 12:00	Group meditation
12:15 – 1:15	Lunch

AFTERNOON

1:00 – 3:00	Continuation of morning class, projects, labs
3:30 – 4:15	Exercise/fitness activities
	Group practice of the Transcendental Meditation and TM-Sidhi programs

EVENING

	Dinner
7:30 – 9:15	Homework
9:30	Rest

CLASS ATTENDANCE

Attendance at all classes is required, because all elements of class — lectures, questions and answers, discussions, group work, student presentations — contribute to the learning process. Absences are usually excused only if you are sick in bed or have family emergency.

If you must miss a class, please let me know ahead of time! Give me a call, send me an email, or send a note with a friend. Simply not showing up where one is expected is unprofessional and discourteous and will be considered an unexcused absence. If I don't hear from you, I'll need to try to get in touch with you.

There is no such thing as a "personal day." If you have personal business to take care of, please schedule it for after class or during the days between blocks. At the same time, I recognize that it may be occasionally be necessary for a student to miss a class (or part of a class) for some important reason other than illness or family emergency. I'm open to considering your needs with you. Please speak with me before the absence.

Each lesson of each course is important. Students are expected to be present during each class period. If you miss more than two lessons you may be asked to withdraw from the course.

PUNCTUALITY

Punctuality is expected and required in the professional world. People commonly lose their jobs for being late — especially new college graduates unfamiliar with professional expectations. Colleges and universities have come under criticism for not properly preparing students in these values.

Therefore we place a similarly high value on arriving on time for every class session. If students are late, they disrupt the learning environment and may miss the wholeness of the lesson. Coming late is unprofessional and shows lack of courtesy to the instructor and to fellow students.

Thus the faculty request that students arrive a couple minutes early, so everyone is seated and settled when the class begins. Punctuality also extends to returning from the class break in a timely fashion (after 5 minutes). The instructor should not need to go out and round up students.

If you need to be late to class for some reason beyond your control (a dentist appointment, for example), please arrange that with me ahead of time.

DRESS

The standards of dress are the same as the campus standard. Please maintain an appearance that is neat, respectful, and appropriate to the classroom environment. That means, do no wear T-shirts, shorts, or inappropriately revealing clothing. Hair color should be a natural color, and no pierced body parts, except earlobes. Students from other cultures and traditions may wear traditional dress, as appropriate.

For details on the above, please see the Student Handbook.

ACADEMIC HONESTY

The purpose of our homework and lab assignments is to give each student practical experience in applying the knowledge gained from lectures and readings. This hands-on experience is needed to learn the details of how to apply the knowledge. Therefore, it is against academic policy to copy, or share with others, any homework or lab projects that are assigned as individual work

You may discuss the course material, concepts, or ideas with other students. You may review together the relevant topics from lectures or readings to help understand the principles required to start a programming assignment.

You can prepare for the exam together, discussing and working on various problems and expected questions. In essence, you can collaborate freely in any course-related work that is not required for submission and evaluated by the instructor.

Under no circumstances should you post your lab or homework solutions on a course newsgroup, send via email, or in any other way distribute to others.

Every student is expected to work individually on his or her own lab project, exams, and anything else being evaluated as part of the course grade.

If you are found to have violated this policy for a quiz, homework or lab assignment, then you will receive no credit for the assignment. If the violation occurs for an exam, you will receive no credit for the course, and be subject to disciplinary measures by the Dean of Students, with possible dismissal from the graduate program.

Do your own work, and enjoy the learning process.

CS 201

Computer Programming 1

Schedule

Theme	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Getting Started with Alice	Introduction and Overview	Methods and Data	Control Statements	Thanksgiving break	Thanksgiving break	Thanksgiving break
	Welcome to Alice	Exercises in using Methods	Thanksgiving break			
Gaining Experience with Alice Programming	Exercises in using Control Statements	Managing many Objects	Exercises in Managing many Objects	Events in Alice	Exercises in using Events	Mid-term Exam
Transition to Java Programming	Java Objects and Classes	Event Processing	Lists and Arrays	Inheritance and Polymorphism	Exceptions	Exercises using Exceptions
	Software Design Process	Lab Exercises	Exercises using Recursion	Final Exam		
		Recursion	Review			