RHODES

CS 350
Theory of Computation

Fall 2004

Instructor: Ivaylo Ilinkin

Office:	Ohlendorf 420	**Class Room:**	Ohlendorf 225
Phone:	843-3791	**Class Hours:**	TR 14:00-15:15
Email:	**ilinkin @ rhodes . edu**	**Office Hours:**	MWF 1:30-3:00pm, TR 9:30-11:00pm, or
			by appointment

(I get a lot of e-mail, so for quick response, please add the following in the subject line of your e-mails: **"cs350: question"**)

Text:

The main textbook for the course is:
> *Introduction to the Theory of Computation*, 2nd ed, Michael Sipser

On-line information:

All the relevant information for the class can be found on the class web page:
> http://www.rhodes.edu/mathcs/faculty/classes/Fall-2004/cs350/

Please, check this page at least twice a day, since this will be the only source of relating last-minute pertinent information.

General course description:

CS 350 is a fundamental course about the essence of computing. We will discuss a series of abstract models of computation and investigate their power and limitations. We will explore the inheret limits of computation by looking at problems that simply cannot be described by a computational process. Finally, we will examine the practical aspects of computing by classifying problems with respect to their difficulty in terms of the required computational resources time and space. A lot of the main ideas in CS 350 have direct practical appliations to areas such as compiler theory, programming languages, string matching, etc. This course builds on abstract and mathematical thinking, and aims to further the appreciation for the theory and practice of computer science.

Workload:

The amount of time spent on this course will vary based on your mathematical background and learning

style. However, it will be important to keep up with readings and allow enough time to absorb the material at greater depth. Also, it will be wise to read each asignment carefully as soon as it is posted. Some of the problems will require a level of creativity and ingenuity that can develop only after several days of struggle and careful analysis.

For richer and better learning experience you are encouraged to form study groups with your colleagues to clarify and solidify your understanding of the concepts presented in class. You are expected, however, to develop your own solutions on assignments and exams. See the policy outlined in the "Assignments" and "Scholastic Conduct" sections of the syllabus, or talk to the instructor, if you are unsure about the expected level of collaboration.

Attendance:

Attendance is expected for each class period. I may frequently cover material that is not in the book, and in general, I will count on your participation to make this class an engaging and effective experience. Please, try to be respectful to your colleagues by avoiding late arrivals to class.

Assignments, exams, and grading:

There will be several homework assignments, two exams during the semester, and a final exam. You are expected to work individually on the assignments and the exams. If group work is allowed on any of the assignments, this will be mentioned explicitly in the guidelines of the particular assignment. See the "Scholastic Conduct" section for further clarification.

The asignments must be typed (unless indicated otherwise). The due dates are strict -- in general, the assignments will be due electronically on Tuesdays by 11:59pm and you may be asked to present your solutions on the following Thursdays. The assignments may have "soft" due dates, i.e. due dates on which some of the problems will be due, but you will not be penalised for wrong or partial solutions. However, you will benefit most, if you treat the "soft" due dates as strict due dates.

The exams will be closed-book and closed-notes, no calculators.

Here are the relevant dates and how much each portion of your work will contribute to your final grade:

Assignments	Sep 14, Sep 28, Oct 21, Nov 2, Nov 16, Dec 2	54%
Exam 1	Thu, Oct 7	13%
Exam 2	Thu, Nov 11	13%
Final	Fri, Dec 10, 8:30am	20%

Late assignments:

Late assignments will not be accepted. Please, visit the class web page for specific information about the homework due dates and submission guidelines.

Grading:

Grading will be based on the scale below. For borderline cases, I may take into account attendance, participation, and an apparent trend of improvement during the semester.

[93%, 100%)	A	[87%, 90%)	B+	[75%, 80%)	C+	[60%, 65%)	D
[90%, 93%)	A-	[83%, 87%)	B	[70%, 75%)	C	[0%, 60%)	F
		[80%, 83%)	B-	[65%, 70%)	C-		

However, you are expected to receive the equivalent of at least a C- on the final exam in order to pass the class. Also, each homework that is not turned in will have the effect of lowering your final grade by one grade bracket.

Incompletes and make-up exams:

Incompletes will be considered when a serious family or personal emergency arises and all but a small portion of the work has been completed. Make-up exams will be given under special circumstances provided that arrangements are made well in advance.

Withdraws:

Please, keep in mind the following dates:

Drop/Add Ends	08/31/2003
Extended Drop Ends	09/15/2003
Pass/Fail Option Ends	09/15/2003
Withdraw Period Ends	10/29/2003

Scholastic conduct:

In general, you are free to discuss the assignments with others, but you are expected to work out your own solution and write your own code. The discussions should be at a sufficiently high-level that may hint at possible directions to explore, yet, still allows you to display the results of your own individual hard work and creativity.

If you need help and are unsure about the level of co-operation you are receiving, please, see the instructor during office hours for clarification and help with the assigned material.

For further general information on the expected scholastic conduct at Rhodes, please, see
http://www.rhodes.edu/CampusCommunity/HonorCode/index.cfm