

Intro

My name is Ian

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We have a moodle page CSC12824 password: Ian Discrete Structures.

Course webpage CSC12824. ianmartiny.us.

this has a schedule & syllabus, link on moodle.

Office Hours TR: 2-3pm in CSEL

Basically, this summer I'm gonna teach you math, all the math you'll use regularly for CS.

Pre-reqs: CSC12200 (data structures) how many are also taking that this summer? prepare for a lot of work!

Also required you know how to program well.

Topics: Logic - how to think logically & manipulate boolean variables

Proofs - How to rigorously prove mathematical/logic claims

Sets, relations, Counting - basic operations on numbers

Recursion/Algorithms, intro to algs.

Combinatorics - how to count things, intro to probability

Trees/graphs - theory on basic CS structures.

Grading: Assignments: 35% - one per week a whole week to do them
A LOT of work

Programs: 25% - 2-3 this summer, projects to apply knowledge
usually only 2 weeks to do them.

Quizzes: 15% - one per week 2 attempts each attempt 12 mins
this is to help you practice for final timed &
graded more harshly than homework.

Final Exam: 25% Last day of class (July 26) full class.

Course work: This is a Summer Course, we have 8 weeks to do ¹⁶ ~~8~~ weeks
worth of material. We will be moving very quickly.

It is your responsibility to make sure you understand material. I am here to
help - any way I can. But ultimately you have to learn it.

Homework & Projects: 1 Homework per week, some easy questions some hard
questions. I highly encourage working together to solve problems, however
every one must turn in their own work.

Homework will be submitted on moodle. You can scan / take a picture of your
hand written work, but if the grader can't read it you'll lose points.

One option is to write your homework in LaTeX - a formatting language.
makes documents look really good. Every assignment turned in in LaTeX
will receive extra credit. You'll need to learn it eventually, may as well
be now for extra credit.

There will be 2-3 projects this summer. You can use any language you want.
If you use a language besides C/C++/Python you'll get extra credit.

NOTE: I will not teach you any languages this is on you. You'll still be held to the same goals, but possibly more lenient, depending on language.

I'm more than willing to help with language issues if you have them.
This is a great opportunity to learn how to teach yourself a language.

Recommended languages: Go, JavaScript, Rust, Java

If you choose others that's fine. If you choose a language I don't know, I can only help so much.

Questions?

Optional Books: Discrete Mathematics & its applications ← lectures based on this
Rosen.

Concrete Mathematics Graham Knuth Patashnik

Homework doesn't necessarily come from either source.