

Course: **Analysis of Algorithms**

Professor: Lyudmyla Barannyk

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Office Hours: MF 1:30 - 2:30 pm, Tu 4-5 pm and/or by appointment

Suggested books: *Introduction to Algorithms*
by T.H. Cormen, C.E. Leiserson, R.L. Rivest,
C. Stein, The MIT Press

Introduction to the Design and Analysis of Algorithms by A. Levitin, Addison Wesley

Time: MWF 12:30 pm - 1:20 pm

Location: TLC 149

There is a class email list: math395-sp12@uidaho.edu. You can make an alias for it. You can use the email list to ask me questions that might be of interest to others in the class. You can also email me at barannyk@uidaho.edu with other questions.

Course web site: <http://www.webpages.uidaho.edu/~barannyk/Teaching/Math395.html>

Content: We cover standard measures of efficiency for algorithms (mostly worst-case and average-case analysis), methods of evaluating an algorithm's performance (asymptotic analysis, big-O, and big-Theta notation), and standard examples and tools in the design of good algorithms (brute force, recursive, divide-and-conquer, decrease-and-conquer, transform-and-conquer, dynamic, greedy, and branch-and-bound techniques). We'll also see lower bound arguments (proofs that a problem cannot have an algorithm more efficient than a given lower bound), reductions of one problem to another, and a brief introduction to complexity theory and NP-completeness.

Unclaimed Assignment Policy: Assignments not retrieved on the day of return can be picked up during office hours.

Exams: Exam 1, Wednesday, February 15
Exam 2, Wednesday, March 28
Final Exam, Monday, May 7, 12:30 - 2:30 pm

Calculator Policy: Calculators are not to be used on exams.

Quizzes: No Quizzes!

Homework: Homework will be assigned on Wednesday and due the following Wednesday at the beginning of class. Late homework will not be in general excepted. Homework will either be collected weekly or biweekly depending on the rate we cover the material. A random selection of problems will be graded.

Course Grade:

Midterm Exam:	30%
Final Exam:	40%
Homework:	30%