

*Past Outlines  
for  
Analysis of  
Algorithms*

by

*Peter M. Maurer*

COT 4400  
EMA 100

Analysis of Algorithms  
Course Outline

Summer 1995  
11:00AM-1:00PM TR

Peter M. Maurer

ENB 314

974-4758

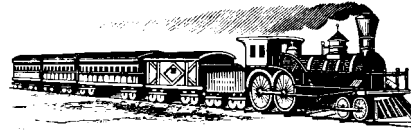
Hours 11:00 12:00 MT

EMAIL: local: maurer remote: maurer@turandot.csee.usf.edu

I normally maintain an open door policy with respect to office visits. You are welcome to come by at any time. The door will be closed -- knock and it will be opened.

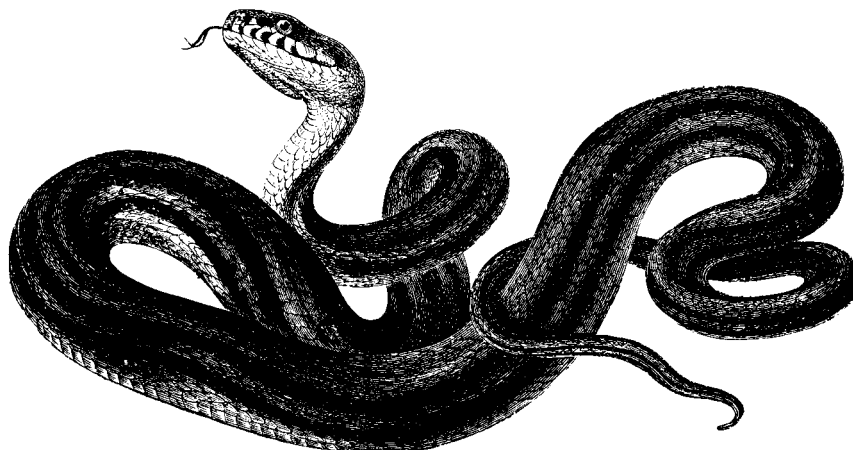
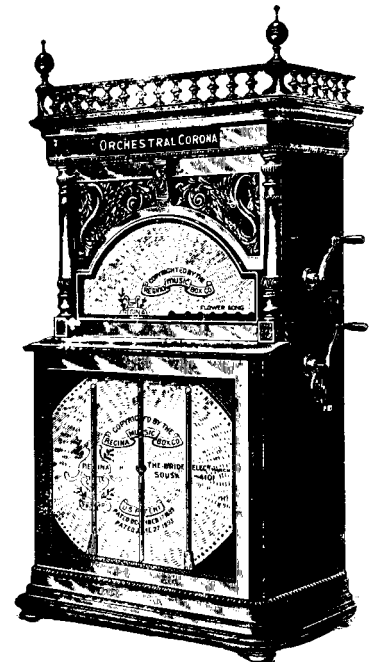
TA: None

Text: Robert Sedgewick, *Algorithms in C*



There will be 2 exams. The first exam will count 1/3 of your grade. The second exam will be comprehensive and will count 2/3 of your grade. Homework will be assigned every day. It will not be graded, but I will call randomly on students to present their solutions. If you haven't done the homework you will have to construct a solution in "real time," and I won't let you weasel out by saying you don't know how to do it. *No* programming exercises will be assigned.

|     |        |   |           |
|-----|--------|---|-----------|
| 1.  | May 16 | Introduction                              |           |
| 2.  | May 18 | Analysis and Implementation of Algorithms | Ch 6, 7   |
| 3.  | May 23 | Sorting                                   | Ch. 8-13  |
| 4.  | May 25 | Sorting                                   | "         |
| 5.  | May 30 | Sorting                                   | "         |
| 6.  | Jun 30 | Sorting                                   | "         |
| 7.  | Jun 1  | Sorting                                   | "         |
| 8.  | Jun 6  | Searching                                 | Ch. 14-18 |
| 9.  | Jun 8  | Searching                                 | "         |
| 10. | Jun 13 | EXAM                                      | "         |
| 11. | Jun 15 | Searching                                 | "         |
| 12. | Jun 20 | Searching                                 | "         |
| 13. | Jun 22 | Graph Algorithms                          | Ch. 29-34 |
| 14. | Jun 27 | Graph Algorithms                          | "         |
| 15. | Jun 29 | Graph Algorithms                          | "         |
| 16. | Jul 6  | Graph Algorithms                          | "         |
| 17. | Jul 11 | NP-Completeness                           | Ch 45     |
| 18. | Jul 13 | File Compression                          | Ch 22     |
| 19. | Jul 18 | Cryptology                                | Ch 23     |
| 20. | Jul 20 | FINAL EXAM                                |           |



**Instructor:** Peter M. Maurer

**Office:** ENB 314

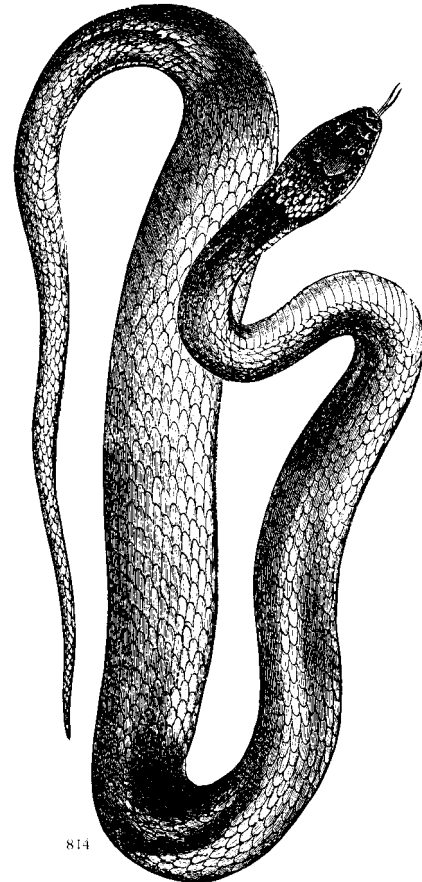
**Office Hours:** MTW 11:00-12:00 AM

**Phone:** 974-4758

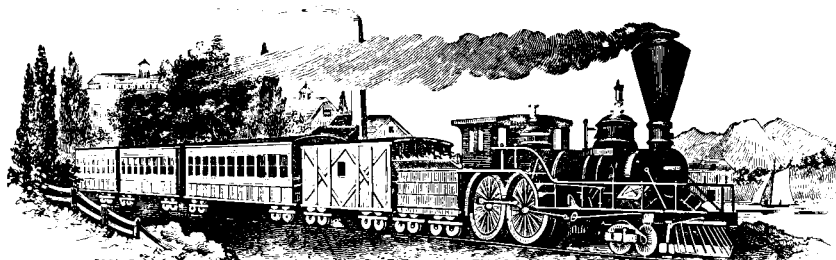
**Text:** Sara Baase, *Computer Algorithms, Introduction to Design and Analysis*

**Class Meetings & Tentative Schedule:**

| Date        | Topic                      |
|-------------|----------------------------|
| 1. Aug. 29  | Introduction               |
| 1. Aug. 31  | Mathematical Preliminaries |
| 2. Sept. 5  | Mathematical Preliminaries |
| 3. Sept. 7  | Mathematical Preliminaries |
| 4. Sept. 12 | Recurrence Relations       |
| 5. Sept. 14 | Recurrence Relations       |
| 6. Sept. 19 | Sorting                    |
| 7. Sept. 21 | Sorting                    |
| 8. Sept. 26 | Sorting                    |
| 9. Sept. 28 | Sorting                    |
| 10. Oct. 3  | <b>EXAM #1</b>             |
| 11. Oct. 5  | Graph Algorithms           |
| 12. Oct. 10 | Graph Algorithms           |
| 13. Oct. 12 | Graph Algorithms           |
| 14. Oct. 11 | Graph Algorithms           |
| 15. Oct. 17 | Searching                  |
| 16. Oct. 19 | Searching                  |
| 17. Oct. 24 | String Matching            |
| 18. Oct. 31 | String Matching            |
| 19. Nov. 2  | String Matching            |
| 20. Nov. 7  | <b>EXAM #2</b>             |
| 21. Nov. 9  | Polynomials and Matrices   |
| 22. Nov. 14 | Polynomials and Matrices   |
| 23. Nov. 16 | Polynomials and Matrices   |
| 24. Nov. 21 | Polynomials and Matrices   |
| 25. Nov. 28 | Dynamic Programming        |
| 26. Nov. 30 | Dynamic Programming        |
| 27. Dec. 5  | Dynamic Programming        |
| 28. Dec. 7  | NP-Completeness            |
| 29. Dec. 12 | <b>EXAM #3</b>             |



There will be three equally weighted exams, given on the dates indicated. These three exams will constitute 85% of your final grade. In addition, there will be one programming project, which is due on Dec 7th at 5pm. The programming project will count 15% of your final grade. I have an open-door policy with respect to office hours. You may come to my office at any time. I habitually keep my office door closed and locked. Don't be afraid to knock.



**Instructor:** Peter M. Maurer

**Office:** ENB 314

**Office Hours:** MTW 2:00 - 3:00 PM

**Phone:** 974-4758

**Text:** Sara Baase, *Computer Algorithms, Introduction to Design and Analysis*

**Class Meetings & Tentative Schedule:**

| Date        | Topic                                    |
|-------------|--|
| 1. Aug. 26  | Introduction                             |
| 2. Aug. 28  | Mathematical Preliminaries               |
| 1. Sept. 4  | Mathematical Preliminaries               |
| 2. Sept. 9  | Mathematical Preliminaries               |
| 3. Sept. 11 | Recurrence Relations                     |
| 4. Sept. 16 | Recurrence Relations                     |
| 5. Sept. 18 | Sorting                                  |
| 6. Sept. 23 | Sorting                                  |
| 7. Sept. 25 | Sorting                                  |
| 8. Sept. 30 | Sorting                                  |
| 9. Oct. 2   | <b>EXAM #1</b>                           |
| 10. Oct. 7  | Graph Algorithms                         |
| 11. Oct. 9  | Graph Algorithms                         |
| 12. Oct. 14 | Graph Algorithms                         |
| 13. Oct. 16 | Graph Algorithms                         |
| 14. Oct. 21 | Searching                                |
| 15. Oct. 23 | Searching                                |
| 16. Oct. 28 | String Matching                          |
| 17. Oct. 30 | String Matching                          |
| 18. Nov. 4  | String Matching                          |
| 19. Nov. 6  | <b>EXAM #2</b>                           |
| 20. Nov. 13 | Polynomials and Matrices                 |
| 21. Nov. 18 | Polynomials and Matrices                 |
| 22. Nov. 20 | Polynomials and Matrices                 |
| 23. Nov. 25 | Polynomials and Matrices                 |
| 24. Nov. 27 | Dynamic Programming                      |
| 25. Dec. 2  | Dynamic Programming                      |
| 26. Dec. 4  | Dynamic Programming                      |
| 27. Dec. 9  | NP-Completeness                          |
| Final Exam  | FRIDAY December 13th,<br>10:30AM-12:30PM |



**A Healthy Young 19-Year Old Man,  
After Taking *Analysis of Algorithms*.**

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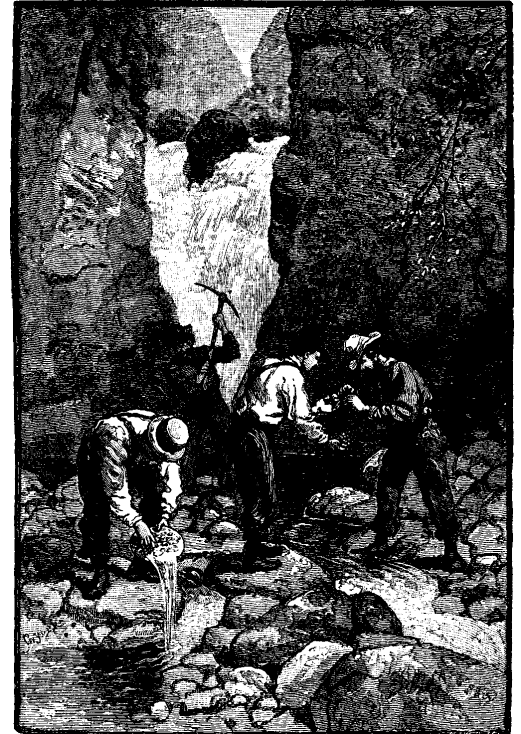
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| 26. Nov. 25  | Dynamic Programming                        |
| 27. Nov. 27  | Dynamic Programming                        |
| 28. Dec. 2   | Dynamic Programming                        |
| 29. Dec. 4   | NP-Completeness                            |
| Final Exam   | THURSDAY December 11th,<br>10:30AM-12:30PM |



**To get to the Gold, you've got to break a lot of rocks.**

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