Computer Science 170
Fall Semester, 1992

Dr. Ed Bailey
Seney 112 A - 4 -8398

Texts: C by Dissection, Kelly & Pohl, A Practical Guide to the UNIX System, (2nd) Sobell.

Course Content : History of Computing, Logic, Algorithmic problem Solving, Electric Circuits. Introduction to C language, Introduction to UNIX operating system, recursion and data structures. This includes chapters 1 - 14 in the C text and chapters 1-6, 9 & 10 in the UNIX text.

Grading: There will be three tests at 150 points each for 450 points, six programs for a total of 350 points and a comprehensive final exam at 200 points.

In General,

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| A : | 900 to 1000 points |
| B : | 800 to 899 points |
| C : | 700 to 799 points |
| D : | 600 to 699 points |
| F : | below 599 points |

Honor Code : The Honor Code of Oxford College applies to all work submitted for credit in this course, and all such work will be pledged to be yours and only yours. Please read carefully your copy of the Honor Code. Programs need to include comment lines stating that the Honor Code has been satisfied.

Assignments :

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| Tuesday, August 25 | History of Computing<br>Getting Started with the UNIX OS | <br>Chap. 1-2 (UNIX) |
| Thursday, August 27 | Review of sets,<br>Intro to UNIX Utilities, File Structure and vi<br>Writing An ANSI C program | <br>Chap. 3, 4 & 6 (UNIX)<br>Chap 1 ( C) |
| Tuesday, Sept. 1 | Review of function and Finite Series<br>Lexical Elements, Operations and the C System | <br>Chap 2 (C) |
| Thursday, Sept. 3 | Introduction to logic<br>Flow Of Control ( Part 1 ) | <br>Chap 3 (1 - 12) (C) |
| Tuesday, Sept. 8 | Equivalences and Quantifiers<br>Flow of Control ( Part 2) | <br>Chap 3 ( 13 - 23 ) (C) |
| Thursday, Sept 10 | methods of reasoning and proof<br>Functions in C, Top-Down Design | <br>Chap 4 (C) |
| Sunday , Sept 13 | **Program One ( Chapters 1 - 2) : 11 : 00 p.m.** | |
| Tuesday, Sept 15 | Review for Test One | Chap ( 1 - 4 ) |
| Thursday, Sept 17 | **Test One (Logic and the Basics of the C Language)** | |

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| Tuesday, Sept 22 | Algorithms and Problems<br>Character Processing | Chap 5 (C) |
| Thursday, Sept 24 | More Algorithmic Problems<br>Fundamental Data Types | Chap 6 (1-7) (C) |
| Sunday, Sept 27 | **Program Two Chapters 3 - 4) : 11:00 p.m.** | |
| Tuesday, Sept 29 | MAPS Methodology<br>Mathematical Functions | Chap 6 ( 8 - 14) (C) |
| Thursday, Oct. 1 | Software Development<br>Enumeration Types | Chap 7 (1 - 3,8 - 11 ) (C) |
| Tuesday, Oct. 6 | Case Studies using MAPS<br>Functions and Pointers | Chap 8 ( 1 - 5 ) (C) |
| Thursday, Oct. 8 | Defining Abstractions<br>Storage Classes | Chap 8 (6 - 14) (C) |
| Sunday, Oct. 11 | **Program Three Chapter 5 : 11:00 p.m.** | |
| Tuesday, Oct. 13 | Review for Test Two | Chapters 5 - 8 |
| Thursday, Oct. 15 | **Test Two - Development of Algorithms - Functions in C** | |
| Tuesday, Oct. 20 | Correctness and Robustness of Algorithms<br>One-Dimensional Arrays and Pointers | Chap 9 ( 1 - 6) |
| Thursday, Oct. 22 | Solving Text Processing problems with MAPS<br>Multi-Dimensional Arrays | Chap 9 ( 7 - 12) |
| Tuesday, Oct. 27 | Solving Graphics problems with MAPS<br>Strings and Pointers | Chap 10 ( 1 - 5) |
| Thursday, Oct. 29 | Ensuring Robustness and Correctness<br>Standard Library for Strings | Chap 10 ( 6 - 11) |
| Sunday, Nov. 1 | **Program four Chapter 8 : 11:00 p.m.** | |
| Tuesday, Nov. 3 | Overview of Computer Organization<br>The Preprocessor | Chap 11( 1 - 13) (C) |
| Thursday, Nov. 5 | Representation of information in a computer<br>Software Methodology and recursion | Chap 11( 14 - 16)<br>Chap 12 (C) |
| Tuesday, Nov. 10 | Memory and The Arithmetic-Logic Unit<br>Divide and Conquer methodology | Chap 12 - 4 |
| Thursday, Nov. 12 | The Control Unit<br>Data Structures | Chap 13 ( 1 - 8) (C) |

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| Sunday, Nov. 15 | **Program Five - Chapter 10 - 11:00** | |
| Tuesday, Nov. 17 | Intellectual Property<br>Linked Lists | Chap 13 ( 9 - 15) (C) |
| Thursday, Nov. 19 | Liability for Software Errors<br>Review for Test Three | Chapter (9 - 13 ) |
| Tuesday, Nov. 23 | **Test Three - Software Structures in C** | |
| Tuesday, Dec. 1 | Computing as a Discipline<br>Input/Output and Files | Chap 14 (C) |
| Thursday, Dec. 3 | Review for Final Exam | |
| Friday, Dec. 4 | **Program Six - Chapter 13 : 4:00 p.m.** | |
| Wednesday, Dec. 9 | **Final Exam - 9:00 - P. 120** | |