

# PSYCHOLOGY C58F

## *Experimental Psychology Microcomputer Laboratory*

Fall 1996

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Office Hours: Monday 10:15 to 12:00  
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Textbook: *Learn Basic Now* by Micheael Halvorson and David Rygmyr

### **Course Outline**

This course has several purposes. First, it will introduce you to the microcomputer as a research tool. You will learn the fundamentals of the operation of the machine itself (the hardware), you will learn a computer language via which the machine can be made to perform specific tasks related to data collection, and you will be introduced to the basics of a common statistical software package used for analyzing data. Much of the time will be spent learning QuickBasic 4.5 (a common computer language). This is in large part a practical "hands on" course. You will be expected to do much of the work at the computer, learning by doing.

Although many of the examples and assignments in the course will be drawn from cognitive psychology, I will try to demonstrate the breadth of the microcomputer's impact throughout research in psychology. There are three realms where this influence is felt:

- 1) preparation of the experiment or survey,
- 2) conducting the experiment or survey and collecting data,
- 3) carrying out the data analysis, and

### **Grading**

Your final grade will be based on five assignments (worth 5% each), a mid-term exam (worth 25%), a final project (worth 30%), and a final exam (worth 20%). The assignments will usually be made on a thursdays and will be due in class the following thursday. These assignments will begin either the second or third week of classes. Experience tells us that it is best if you do these yourself, not as groups. These are considered individual assignments and should be treated as such. There will be a mid-term exam on October 22nd. For your final project, you will write a program to implement an experiment of interest to you, the topic is to be discussed with me prior to beginning. For this project you will collect data and write a brief research report (in APA style). During the final week you will demonstrate and explain your program to the class. Your written report is due at that time. The final exam will be scheduled by the registrar. The mid-term and final exams will involve debugging and writing QuickBasic code, as well as short-answer questions.

## Tentative Syllabus

<u>Week</u>	<u>Topic</u>	<u>Reading</u>
1	The history of computers and their use in psychology	
2	Learning about the Hardware Introduction to BASIC	Chapters 1 & 2
3	PRINT & INPUT, String and Numeric variables, BASIC math operations	Chapters 3 & 4
4	Introduction to Flowcharting, Decision Making, IF & SELECT CASE	Chapter 5
5	Loops, FOR ... NEXT, WHILE, DO ... LOOP	Chapter 6
6	Random Numbers, Timing, Subroutines	Chapter 6 & 7
7	Arrays, READ ... DATA	Chapter 8
8	Strings and String Functions	Chapter 9
9	Data Files	Chapter 10
10	Introduction to Graphics	Chapter 11
11	Introduction to a Statistical Software Package	
12	Using the Statistical Software Package for your Final Project	
13	Final Project Demonstrations	