

DL 5/3/11

County College of Morris
COURSE SYLLABUS

Course: CMP209 Pascal Programming
Semester: Spring, 1994
Instructor: Mrs. Pauline E. Pike
Office: HT208
Telephone: 201 - 328-5774
Office Hours: Tuesday, Wednesday
11:00 a.m.-12:30 p.m.

Course Materials:

- . Textbook: TURBO PASCAL (4th Edition)
by Elliot B. Koffman
- . 1 3 1/2 inch Double Sided Double Density Disk

Grade Determination:

- | | | |
|----------------------------|------|--------------------------|
| . 2 Tests worth a total of | 40% | (100 points each test) |
| . 1 Final Exam | 30% | (150 points final exam) |
| . 5 Programming projects | 30% | (30 points each project) |
| | ==== | |
| | 100% | |

Grading Scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=0-59%

Tests:

There will be no make-ups on tests, although in special circumstances you may arrange to take a test prior to the test date. If you miss a test, the final will count as itself and also in place of that missed test.

Projects:

There will be a due date given for each project. You may hand in projects after the due date, but the grade will be lowered 10% for each week the project is late.

Course Objectives:

1. Students will develop and enhance their problem-solving skills.
"A computer programmer is first and foremost a solver of problems."
2. Students will develop algorithms and data structures to solve problems.
3. Students will be able to code PASCAL programs that are very readable, well-structured, and that work!

12	Chapter 10.1-10.8 Arrays, strings, arrays of characters, processing strings and arrays	p. 521 - 1-9
13	Chapter 11 records, hierarchical records Chapter 12 Multidimensional arrays, array of records	p. 561 - 1-5 p. 618 - 1,3,5-9
14	Chapter 10.9 searching, sorting Chapter 13 recursion	p. 522 - 10 p. 663 - 1,3,4
15	Chapter 15.1-15.4 text files, binary files Chapter 16 pointers and linked lists	p. 747 - 1-2
16	Final Exam	

Note: Please see me if you have a learning disability or physical handicap, so that we can work out any accommodations that may be necessary.

Professor Wirth's Reason for Inventing PASCAL:

"The desire for a new language for the purpose of teaching programming is due to my dissatisfaction with presently used languages whose features and constructs too often cannot be explained logically and convincingly and defy systematic reasoning.It is my conviction that the language in which a student is taught to express his ideas profoundly influences his habits of thought and invention."

County College of Morris
COURSE INFORMATION OUTLINE

Course: PASCAL

Cat. No.: CMP 229

Class Hours: 2

Lab Hours: 2

Credit Hours: 3

Department Chairperson Approval: *[Signature]*

Approval Date: 10/5/87

Division Chairperson Approval: *[Signature]*

Approval Date: 11/11/87

1. Prerequisite (Last course(s)):
CMP 202 or CMP 225

2. Co-requisite:

3. Textbooks:
TURBO PASCAL, Gonzalez and Chiriboga, 1987 Ed., Franklin, Beedle,
and Assocs.

4. Supplementary Books:
Turbo Pascal Manual, Borland.

5. Supplementary Materials:
Diskette

6. Statement of Course Objectives:
1. To learn Pascal syntax.
2. To learn the Turbo editor.
3. To learn structured programming techniques.
4. To relate syntax and structure to efficient Pascal programs.

7. Statement of Relation to Curriculum(s):
Required course in scientific option (3500) and an elective in
business option (3501).

8. Catalog Course Description:
Rules and syntax of Pascal language programming. Topics include
problem-solving techniques and top-down design using procedure,
data types, sequential control structure, selection control
structure, repetition structure, nested logic, procedure with
parameters, text and binary files, and array and record
processing. The student is required to complete a series of
laboratory and project assignments illustrating the above topics.

COURSE SYLLABUS

<u>CLASS</u>	<u>TOPIC</u>	<u>TEXT PGS/ DUE DATES</u>	<u>CLASS</u>	<u>TOPIC</u>	<u>TEXT PGS/ DUE DATES</u>
1.	<u>Intro to Pascal</u>	<u>Chp. 1</u>	2.	<u>Turbo editor, text files</u>	<u>Chp. 2</u>
3.	<u>Pascal structure, Write</u>	<u>43-61</u>	4.	<u>Writeln Lab</u>	<u>H.O.</u>
5.	<u>Read Readln</u>	<u>62-91</u>	6.	<u>Block Move Lab</u>	<u>H.O.</u>
7.	<u>Arithmetic, Files</u>	<u>93-138</u>	8.	<u>Project I</u>	<u>H.O.</u>
9.	<u>Test #1</u>	<u> </u>	10.	<u>Create, Read Text File</u>	<u>H.O.</u>
11.	<u>Top Down Design</u>	<u>Chp. 5</u>	12.	<u>Parameters</u>	<u>Chp. 5</u>
13.	<u>Boolean Variables</u>	<u>Chp. 6</u>	14.	<u>Project II</u>	<u>H.O.</u>
15.	<u>Repetition</u>	<u>Chp. 7</u>	16.	<u>Case Lab</u>	<u>H.O.</u>
17.	<u>Functions</u>	<u>Chp. 8</u>	18.	<u>Functions</u>	<u>H.O.</u>
19.	<u>Test #2</u>	<u> </u>	20.	<u>Project III</u>	<u>H.O.</u>
21.	<u>Records</u>	<u>Chp. 11</u>	22.	<u>Records (Cont.)</u>	<u>Chp. 11</u>
23.	<u>Binary Files</u>	<u>H.O.</u>	24.	<u>Binary File Lab</u>	<u>H.O.</u>
25.	<u>Dynamic Structures</u>	<u>Chp. 13</u>	26.	<u>Pointer Lab</u>	<u>H.O.</u>
27.	<u>Recursion</u>	<u>276-279</u>	28.	<u>Recursion Lab</u>	<u>310-313</u>
29.	<u>Test #3</u>	<u> </u>	30.	<u>Review</u>	<u> </u>
31.	<u>Final Exam</u>	<u> </u>			

DETERMINATION OF COURSE GRADE

Number of Projects 4 counts as 25 % of Grade
 Number of Tests/Quizzes 3 counts as 75 % of Grade
 Final Exam X or Project counts as " % of Grade
 Attendance**/Class Participation counts as % of Grade

A = 100 - 90
 B = 89 - 80
 C = 79 - 70
 D = 69 - 60
 F = 59 - 0

Course...Pascal Programming..... Cat. No.....CMP 229.....
 Clinical
 Class Hours3.....Laboratory Hrs.1..... Credit Hours.....3.....Course Fee ...\$40.....
 Recitation

Department Chairperson Approval *James Steadman* Approval Date 10/8/97
Division Dean Approval *G. L. Jones* Approval Date 10/7/97

- Understanding Turbo Pascal: Programming and Problem Solving*, Douglas W. Nance
West Publishing Co., ISBN 0-314-02812-9

- None

- One 3 1/2 inch floppy disk

- This course requires specialized equipment with limited life cycle of one to five years. The equipment is expensive, subject to rapid obsolescence, and has high maintenance costs. The excess contact hours result from a catalog-stated requirement that students must spend additional time in a laboratory setting.

- Develop and enhance a student's problem-solving skills
- Develop algorithms
- Use structure charts, flowcharts and pseudo code to outline solutions
- Code Pascal programs that are very readable, well-structured, and that work

- Elective in 3500 Scientific Programming Option
- Elective in 3501 Business Programming Option
- Elective in 3502 Microcomputer Option

9. Catalog Course Description (Please include when course will be offered --Fall, Spr., Sum., etc.)

This course stresses efficient coding and advanced programming techniques for students already familiar with the elementary syntax of Pascal. Topics include problem-solving techniques and top-down design using procedures and functions with parameters, data types, text and binary files, recursion and recursive data structures and array and record processing. The student is required to complete a series of laboratory and project assignments utilizing the above techniques.

Fall, Spring, and Summer, evening

Cat. No. CMP229

10. Course Outline

- Course Introduction
- Introduction to Pascal
- Output Statements
 - Variables and Constants
 - Data Types
 - Formatting Output
- Input Statements
- Arithmetic and Assignment Statements
- Pre-defined Functions
- Outlining Solutions
 - flowcharting
 - pseudo-code
 - structure charts
- Functions and Procedures
- Selection code
 - Boolean type
 - Conditional expressions
 - If then, If then else statements
 - Nested Ifs
 - Case statement
- Iteration code
 - For loops
 - While loops
 - Repeat Until loops
- Text Files
- Enumerated Data Types and Subranges
- Arrays
 - One-dimensional arrays
 - Searching techniques
 - Sorting techniques
 - Arrays of Strings
 - Multidimensional arrays
 - Arrays of records
- Recursion
- Pointer Variables
- Linked Lists

(over)