COSCI 407 PROGRAMMING LOGIC

Section: **0189** **Spring 2014**
Instructor: **Mari Rettke**
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Student Learning Outcomes

Students will at the completion of the course be able to:

Demonstrate the ability to solve problems by examining, selecting, using and evaluating various approaches to developing solutions.

Evidence will be the ability to:

Devise a problem solution to be converted to a program using the following techniques: problem analysis, determination of input, output and any required processing, construction of a flow chart, performing a memory trace of the operation of the proposed problem solution, testing and debugging operations, construction of the final algorithm.

The final result will:

- Utilize various control structures
- Demonstrate knowledge and use of algorithms and sub-algorithms
- Relate abstract logic to concrete problem solving

Determination of Grade

1. **Attendance:**

   The class meets from **Monday and Wednesday from 12:15 to 1:40pm.** Attendance will affect your grade in a negative manner only. You may miss two class meetings without penalty. If you miss more than two meetings, 1 point will be subtracted from your final grade for each additional class missed. Three cases of tardiness equal one absence.

2. **Homework: (25%)**

   Homework assignments will be given each week. These assignments will count as 25% of the final grade. Homework must be turned in the following week to be counted. Homework does not need to be completely correct, but it must demonstrate evidence of effort.

3. **Exercises (25%)**
   - Class participation. Students will perform a structured walk through of their proposed problem solutions.
   - Three in-class written quizzes on the material covered

4. **Midterm: (25%)**

The midterm will consist of 33 questions. Twenty six of these questions will be from two of the quizzes previously given in class – one or two point(s) value will be assigned to these questions. Seven of the questions will be code examples. These will be worth three points each. The total point value of the mid-term is 50 points.

5. **Final Exam (25%)**

The final exam will be a proposed problem. The student will turn in typed results of the problem solution according to the above student learning objective.

6. **Grading scale:** A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = below 60

MATERIALS:

Text - the Logic and Design of Computer Programs; Jim Messinger; (Scott Jones Publisher); 2010 ; ISBN: 1-576-76130-4

Pencil, paper

Office Hours: Tue 9:30 -10:30 Thursday 12:30 – 1:30 and Tues/Thur evening 4:00 to 5:45 and Wednesday 4: - 6:00 or by appointment (call 818-470-8419 or 818-364-7742 or by email)

WEEKLY SCHEDULE

- **Introduction to algorithms**
- **Structured programming – Intro to hardware and software**
- **Data types, operators, library functions, modules**
- **Assignment statements, I/O, sequential algorithms**
- **Decision/Selection structures**
- **Repetition – pre-test loops, post-test loops**
- **Repetition – counting loops**
- **Repetition – pattern recognition**
- **Mid-term**
- **Files, sub-algorithms**
- **Arrays of one dimension, lists**
- **Sorting and Searching**
- **Arrays of more than one dimension**
- **Records and random access files**
- **Final exam**

Final Exam – June 9 room 2007 12:30 – 2:30