Course Number and Title .......... CSCI 172 Introduction to Computer Modeling
Term ....................................... Fall 2014
Semester Credits ..................... 3
Prerequisites ........................... M 90 Introductory Algebra, or consent of instructor

Faculty Contact Information

Faculty
Steven (Steve) L. Stiff
Phone: 243-7913
Email: steven.stiff@umontana.edu

Office
GH08-I
MC East Campus

Office Hours
T, W, R: 2:10 AM – 3:00 PM
or by appointment

Class Meeting Times and Final Exam

Section 01 (CRN 75202)
Day, Time, and Location
Lecture TR, 8:10am – 9:30am, AD14

Final Exam
T, 12/09/2014, 10:10am – 12:10pm, AD14

Course Description
Problem solving and data modeling using computer productivity software. Emphasis using spreadsheets and databases for data analysis. Formal presentation of results.

Course Overview
This class focuses on using the computer as a modeling tool for analysis of data sets. The software applications we will be using for data modeling are spreadsheets and databases. We'll utilize the Microsoft spreadsheet Excel and the Microsoft database Access to implement data modeling. These are the most common spreadsheet and desktop database applications in use today. The 2013 version of MS Excel and MS Access are needed to complete activities for this course (available on computers in student classrooms and labs).

The course uses a textbook authored by Poatsy & Grauer and published by Pearson Prentice-Hall. It is bundled with the online simulation software package MyITLab. This application provides electronic exercises using a simulation of the MS Office productivity suite. All students are welcome to utilize the computing labs and classrooms available on campus.

Both an electronic copy and printed copy of the textbook bundle are available for the course. MyITLab is an important component of the printed textbook bundle. There are lots of versions of this particular textbook. Be sure to purchase the version with the MyITLab bundle. The ISBN listed will accurately identify this bundle.

Course Objectives
Upon completion of this course students will:
• Create, manipulate, and format data in a spreadsheet.
• Create and use formulas, including conditional formulas.
• Use a spreadsheet to do basic descriptive statistics.
• Design models for visualizing data including charts.
• Work with large tables.
• Design a spreadsheet to implement a computer model.
• Work with database tables and queries.
• Understand how table relationships are used.
CSCI 172 | INTRODUCTION TO COMPUTER MODELING

COURSE SYLLABUS

Required Materials

- There are two choices for the textbook. PLEASE CHOOSE ONLY ONE.

  - **Paper Hard Copy Textbook Option**
    *Custom Edition Office 2013 with MyITLab and Office 2013 Bundle; Poatsy & Grauer; Pearson Publishing 2013*
    Important Note: This is a custom textbook bundle. It includes the required MyITLab subscription. PLEASE PURCHASE FROM THE UM BOOKSTORE ONLY!

  - **Electronic Textbook Option**
    Register directly through the MyITLab website at [http://www.myitlab.com](http://www.myitlab.com). This requires payment via credit card. No transaction is needed with UM Bookstore.

  - **MyITLab Course ID (This information insures registration in the appropriate MyITLab for section.)**
    - CSCI 172-01C FA14 – Stiff
      Course ID: gallagher73826

- Other Required Materials
  - A computer with the Microsoft Excel/Access 2013. The UM campus computer labs are another option for using MS Access/Excel 2013 for local students.

Evaluation and Grading Criteria

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Grading Scale</th>
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<tbody>
<tr>
<td>Homework</td>
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<tr>
<td>Assessment</td>
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<tr>
<td>Unit Projects</td>
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<tr>
<td>Final Exam</td>
<td>20.0%</td>
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<tr>
<td>Attendance (Bonus)</td>
<td>2.0%</td>
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Grading Scale

- 100% - 90% ................. A
- 90% - 80% .................. B
- 80% - 70% .................. C
- 70% - 60% .................. D

Course Policies

**Online Component**

Various components of the course will be delivered via UMOnline ([http://umonline.umt.edu](http://umonline.umt.edu)) using the Moodle Course Management Software. It is the responsibility of the student to become familiar with and work in Moodle. Moodle training is also available through UMOnline.

**Attendance**

- Regular classroom attendance is expected and attendance is taken.
- Students more than 10 minutes late for class will not be given credit for attendance.

**Assignments and Exams**

- All assigned work is due at the assigned time on the assigned date.
- All exams are to be taken at the assigned time on the assigned date.
- **All late or missed work receives a score of 0.** Late work is accepted only in extraordinary circumstances, and is accepted and graded at the instructor’s discretion.

**Electronic Communication Devices**

- All electronic communication devices must be secured, muted, or tuned off prior to the start of class.
- Any use of an electronic communication device during an exam is considered cheating and will be handled at the instructor’s discretion (refer to Student Conduct).
- Audio and/or video recording of class sessions is not permitted without prior approval of the instructor (refer to Students with Disabilities).
Email

This course uses and therefore requires you to use your student email account for all course email communication.

Student Conduct

- All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or disciplinary sanction by the University.
- Student conduct is governed by the Student Conduct Code. All students need to be familiar with the Student Conduct Code. It is available for review or can be downloaded at http://www.umt.edu/vpsa/policies/student_conduct.php.

Students with Disabilities

- Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely manner. Please be prepared to provide me a copy of your Letter of Verification supplied by your Disability Services for Students (DSS) Coordinator for my records. Refer to http://life.umt.edu/dss or call 406-243-2243 (voice/text) for information regarding your rights.
- When requesting accommodations, please contact me after class or in my office to discuss your needs. This is done in order to maintain your privacy and minimize class disruptions.
- For students requesting examination accommodations, you must supply me the completed Learning Center (LC) scheduling form for my signature at least 3 days prior to the scheduled test date (the LC requires the signed form at least two days prior to testing). LC contact information is available at http://www.mc.umt.edu/academics/learningcenter.

Policies for Dropping and Adding Courses, Changing Sections, Grading, and Credit Status

- The University Policy for dropping courses or requesting grading/credit status changes can be found in the academic catalog or on the web at http://www.umt.edu/registrar/students/dropadd.php. All students should be familiar with this policy.
- If you are having difficulty with the course for any reason and decide not to continue, please complete a drop or withdrawal form. A properly completed and approved drop or withdrawal form will prevent you from receiving a failing grade on your college transcript.
- Please note: if you are receiving financial aid, dropping or withdrawing from a course may affect your financial aid status.

Changes to Syllabus

NOTE: The instructor reserves the right to modify the syllabus and assignments as needed based on faculty, student, and/or environmental circumstances. If changes are made to the syllabus, amended copies will be dated and made available to the class.
CSCI 172 Course Outline (tentative)

Unit 1  Introduction (Introduction & Excel Ch. 1-2)
  1.1 Introduction to Course
  1.2 Introduction to Data Tables (Microsoft Word)
  1.3 Computer Security
  1.4 Introduction to Spreadsheets - Basics
  1.5 Introduction to Spreadsheets – Formulas
  1.6 Functions: Aggregate Functions & Logic Lookup
  1.7 Function: Financial Functions & Range Names

Unit 2  Data Visualization & Managing Large Data Sets (Excel Ch. 3-4)
  2.1 Introduction to Charting
  2.2 Chart Design, Chart Layout, & Sparklines
  2.3 Large Datasets and Data Tables
  2.4 Table Manipulation and Aggregation; and Conditional Formatting

Unit 3  Introduction to Databases, Queries, and the Relational Model (Access Ch. 1-2)
  3.1 Introduction to Databases, Filters, and Sorts
  3.2 Multiple Table Databases & Relationships
  3.3 Queries
  3.4 The Relational Model

Unit 4  Calculations, Forms, and Reports (Access Ch. 3-4)
  4.1 Calculations & Aggregate Functions
  4.2 Expression Building
  4.3 Forms
  4.4 Reports

Unit 5  Analysis Tools (Excel Ch. 5-6)
  5.1 Outlines and Subtotals
  5.2 Pivot Tables and Pivot Charts
  5.3 What-If Analysis
  5.4 Data Analysis from Quantitative Data Sets