

CSC 1521: Contemporary Mathematics with Computing Syllabus - Winter 2012

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Website: Blackboard (and <http://myhome.spu.edu/mht/csc1521>)
Office hours: Mondays and Wednesdays 12:30 – 1:30pm or by appointment

Meeting Times: MWF 9:30 – 10:50am in OMH 244
Final Exam: Thursday March 15, 8:00 – 10:00am

Prerequisites

MAT 1101 (intermediate Algebra) or its equivalent (usually taken in high school). In particular, students must have satisfied the Mathematics competency requirement. You must take the Math Proficiency Test and remove any deficiencies indicated by it before taking this course.

Course Description and Learning Objectives

This Contemporary Mathematics with Computing course is designed to be an exploration of various mathematical methods and models that have applications to our economic, political, and personal lives. In addition to a selection of topics from areas such as management science, statistics, money management, social choice, and information science, the course introduces the mathematics behind the computer, computerized data representation, storage and manipulation, and use of the computer as a quantitative problem-solving tool in diverse areas of modern life.

The course is designed as an answer to the question “What would you teach students if they only took one math and computing course during their entire college career?” This course is not intended to prepare you for further college-level studies in mathematics or computing, but instead fulfills the Exploratory Curriculum Mathematics requirement.

Required Text and MathPortal On-line Access

For All Practical Purposes – with On-line Access, 8th Edition (this text is referred to as FAPP8e)
COMAP, 2009, W. H. Freeman. ISBN: 978-1-4292-3882-3.

MathPortal is an online computerized learning space that integrates an interactive eBook, animations, tutorials, and a number of other study aids. Each student is **required** to obtain individual access to the on-line MathPortal website for this course. The bookstore textbook package includes a unique MathPortal Access Card that can be used to register on-line, or students can purchase MathPortal Access directly on the website.

Please follow these instructions to register and gain access to the on-line MathPortal:

- 1.) Point your browser to <http://courses.bfwpub.com/fapp8e> (If you are a Mac user, you will need to use Firefox).
- 2.) Click on the link “REGISTER AN ACTIVATION CODE.”
(or “PURCHASE ACCESS” to purchase an Activation Code directly with a credit card).
- 3.) You will be prompted to follow the on-screen instructions to find your course. You will start by selecting the school’s state/province, the school name, and then your course & instructor section:
e.g., WA Washington Seattle Pacific University Contemporary Math with Computing – Tindall, Mike.
- 4.) You will enter the activation code (found in your Access Card). You will also be asked to enter your email address, choose a password and you will be ready to go!

If you have any trouble during the registration process, contact your instructor. You can also contact the publisher directly by calling 1-800-936-6899 or emailing to techsupport@bfwpub.com.

Course Requirements:

1. *Participation:* Class time will include class discussions, lecture, small-group problem solving and discussions, and video presentations. Your participation is essential. Attendance in class is expected and will be recorded. A participation grade will be assigned. I expect that you will come to class prepared, having read any assigned reading, and contribute to group discussion. Your willingness and effort to help others understand the material while working in small groups is especially important.
2. *Homework:* Homework will be assigned regularly with due dates each week. In order for you to benefit the most from homework it must be done promptly. To that end, **late homework will not be accepted**; it must be in my hands (or submitted) by the beginning of the class at which it is due. The lowest homework grade will be dropped when final grades are computed.
3. *Quizzes and Exams:* There may be quizzes in addition to homework assignments for some chapters. There will be three exams. These will cover the concepts contained in the textbook or MathPortal as well as class discussion points that may not appear in the text. All exams must be taken at the scheduled time unless there is a legitimate reason for not doing so. (Over sleeping or family vacations are not acceptable reasons.) If an emergency prevents you from being present, contact me on or before the day of the exam.

Exam dates will be announced a week in advance. Class will meet during the scheduled final exam time (8:00 – 10:00am Thursday, March 15) for the last of the three exams.

Grades

A weighted average will be used to determine your course grade. The distribution of weights is:

Participation	10%
Homework	45%
Quizzes and Exams	45%

An average of 94 or above will result in a grade no lower than A, 90-93 no lower than A-, 87-89 no lower than B+, 83-86 no lower than B, 80-82 no lower than B-, 77-79 no lower than C+, 73-76 no lower than C, 70-72 no lower than C-, 67-69 no lower than D+, 60-66 no lower than D.

Subjective criteria may be used in border-line cases. *A grade of I (incomplete) is only given for non-academic reasons such as a severe illness that prevents you from completing the course. You must have a passing grade on the material that you have completed in order to receive an incomplete.*

Computers and Software

Calculator use is allowed and expected. Additionally, this class uses computers with an online web-browser (Firefox or Internet Explorer) and Microsoft Excel. Excel is a component of Microsoft Office 2010 for Windows-PCs, or Office 2008/2011 for Macs. All public machines on campus have this software, but you probably want to have it installed on your own PC as well. A CD of Microsoft Office 2010 (or Office for the Mac) is available for inexpensive purchase from CIS in Lower Marston. You may also download Office 2010 from the SPU Download Center at <http://www.spu.edu/download>. For more information, see <http://www.spu.edu/cishelpdesk/software/info/>.

This course classroom (OMH 244) uses Windows-compatible personal computers with Microsoft Office 2010, which will be used for in-class activities. However, the classroom is NOT available as an open lab. PCs are available for your out-of-class use at the Computer Lab on the second floor of Otto Miller Hall (OMH 253) or at the PC lab in the University Library.

Storage: USB Flash Drive

You should invest in a portable storage device so that you can back up your personal files. The best option is a USB flash drive. USB drives are available for sale in the lower level of the library. Any reasonable size will do; 2GB is more than adequate for our use in this class.

ALWAYS BRING YOUR TEXTBOOK AND STORAGE TO CLASS. In-class labs / practice assignments will not always be announced ahead of time. Come prepared!

Policy Notes

1) **Academic Integrity:** The current edition of the SPU *Undergraduate Catalog* describes the University's commitment to academic integrity, which is breached by academic dishonesty of various kinds. Among these is turning in another's work as your own and committing plagiarism, which is the copying of portions of another's words from a published or electronic source without acknowledgement of that source. The penalty for a breach of academic integrity is a failing grade for the work in question on the first offense and a failing grade for the course as a whole with repeated offenses.

2) **Classroom Environment:** Mutual respect and consideration for others make for an effective classroom environment. By following a few sensible guidelines, we can make the classroom a more comfortable place for all.

- **Please turn off your cell phones** at the beginning of class, or set them to silent mode, so you don't disturb our time together.
- **Do NOT use your computer during the class period for anything that is not class-related;** that is rude and disrespectful.
- **Eating and drinking in class in a lab classroom such as OMH 244** is prohibited to protect the equipment. The only exception is for water bottles, which are to be kept tightly closed when not being used.
- Always **take care of bathroom visits and other personal needs before class** begins.
- **If you know ahead of time that you need to leave class early,** please let the instructor know and sit near the door so as to cause minimal distraction.
- **Please come to class on time** (better yet, be early!). This shows respect not only for the instructor but for your classmates as well.

3) **Inclement Weather:** Inclement weather or an emergency may on occasion affect SPU's schedule. In some cases, classes and campus offices may shut-down entirely; in others there may be a late start or an early closure of the campus. Two campus contacts will always carry the most up-to-date information on the campus schedule: the **Emergency Closure Hotline (206-281-2800)** and the SPU Home Page. Since weather in the Seattle area can change rapidly, check these sites often for updates. If SPU is open but you are unable to travel to campus due to inclement weather, please let your instructor know as soon as possible. Finally, be sure to check your email for any messages from your instructor regarding class activities.

4) **Emergency procedure:** Note the emergency procedures posted in the classroom or laboratory, and note the emergency exits. In case of an emergency (fire, earthquake, hazardous material spillage, bomb threat, etc.), the class will evacuate the building and gather in the Alumni parking lot to the south of OMH. Please stay together as you exit, and be sure to check in with your instructor once you reach the gathering place.

5) **Disability statement:** In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, students with specific disabilities that qualify for academic accommodations should contact Disabled Student Services (DSS) in the Center for Learning. DSS in turn will send a Disability Verification Letter to the course instructor indicating what accommodations have been approved.

6) **Course Evaluation:** You are expected to participate in an **online evaluation** of this course and its instructor in a thoughtful and constructive manner. The evaluation data is used to make improvements in the course, and your feedback is considered when selecting textbooks, designing teaching methods and preparing assignments. Courses are evaluated using the Banner Course Evaluation System. All answers are completely confidential - your name is not stored with your answers in any way. In addition, I will not see any results of the evaluation until after final grades are submitted to the University.

Suggestions for success:

1. Plan on reading and studying some outside of class each day for this course.
2. Work in small groups outside of class to do homework, compare notes, and clarify ideas discussed in class. Use the group as a sounding board as you attempt to explain concepts and procedures.
3. Read the appropriate section in the text prior to the class period in which it is discussed, and if time permits, try to work a problem from that section.
4. Complete your homework the day it is assigned. Do not wait until the day it is due.
5. Reflect on what you learned from the homework.
Determine which ideas were used to solve the problems.
Look for differences and similarities between the problems.
Identify which concepts and procedures you understand and which ones remain unclear.
6. Use some of your homework problems to help you review.
7. Relax. It's probably not as difficult as you think.

*"Seattle Pacific University seeks to be a premier Christian university fully committed to engaging the culture and changing the world by graduating people of competence and character, becoming people of wisdom, and modeling grace-filled community."
– Seattle Pacific University Mission*

*"Programs in the Computing Sciences provide knowledge and problem-solving skills in the theoretical and applied aspects of computing-related disciplines. Informed by a Christian worldview, our students learn to utilize computing technologies in a socially responsible manner and apply their expertise wherever they serve in the world."
– Computing Sciences Mission*

"The Department of Mathematics seeks to provide excellent instruction to enable our students to be competent in the mathematics required for their chosen fields, and to share our expertise with the community through service and leadership. Hence, common goals for students in mathematics courses include 1) becoming competent in the topics covered in the course, 2) demonstrating skills and attitudes which contribute to professional, ethical behavior, 3) the ability to communicate mathematically, in both written and verbal form, and 4) learning to appreciate the beauty and utility of mathematics.