

ASM 225 Computer Applications in Agricultural Systems Management

Course Description:

ASM 225. Computer Applications in ASM. 3 cr. Application and use of software for problem solving, reporting, and graphical communication. Prereq: CSCI 114 or 116; MATH 105, 107, or 146.

Meeting Times: 12:30 to 1:45 p.m. on Tuesdays and Thursdays. See the attached sheet for a tentative schedule.

Location: West Dining Center Computer Cluster (Room 3).

Instructor: Dr. Dean D. Steele 701-231-7268
Dean.Steele@ndsu.edu 113 ABEN Building
<http://www.ageng.ndsu.nodak.edu/personnel/steele.htm>

Office Hours: Tuesdays and Thursdays, 2:30 – 3:30 p.m.; and by appointment. Variations in this schedule will be announced in class, via Blackboard, and/or via e-mail. You may also check with a staff member in ABEN 100 for variations in this schedule.

Texts/Software: Steele, D.D. 2009. *Computer Applications in Agricultural Systems Management*. Fargo: N. Dak. St. Univ.

(This text is required and consists of course notes, software instructions, problem sets, etc. related to engineering problem solving with Microsoft Excel. We will use this text for approximately the first half of the semester and you should bring it to class. The text is sold at roughly its cost for printing and Bookstore markup and the instructor receives no profit on its sale.)

Hamad, M.M. 2010. *AutoCAD 2010 Essentials*. Sudbury, Massachusetts: Jones and Bartlett Publishers. ISBN# 978-0-7637-7629-9.

(This text is required and consists of introductory-level instruction in the use of Autodesk AutoCAD® software. The text will be used for the second half of the semester and will not be used until approximately early to mid October.)

Autodesk. 2009. *Student Engineering & Design Community*. Available at

<http://students8.autodesk.com/?lbon=1>. Accessed 18 Aug 2009.

[Please note that student editions of Autodesk software are optional for this course. The NDSU computer clusters have copies of AutoCAD 2010 software available for your use. In personal correspondence with the instructor (6 Aug 2009), Kelly Thompson of Jones and Bartlett Publishers stated, "...your students would be eligible to participate in the Autodesk [online student community](#), and would have access to the student versions of the AutoCAD materials for the duration of your class. They must register using their school appointed email address (must include an 'edu') in order to be eligible."]

Materials: Students will need an e-mail account, access to the Internet, a calculator with its manual, and a folder or notebook for notes and handouts. Students will also need portable media storage devices (USB flash drives or equivalent) to keep duplicate copies of their files.

Goals: After completing this course, students should be able to: 1) use computer software for problem solving, reporting, and graphical communication tasks; and 2) continue to learn how to use spreadsheets, AutoCAD, and word processors to solve a variety of new problems in their studies and work, especially in areas not covered in this course.

Prerequisites: CSCI 114 or 116; MATH 105, 107, or 146.

Topics:

1. Technical correspondence, tabular and graphical presentation of data, and reporting.
2. Problem solving with a spreadsheet, including use of formulas, sequential calculations, back solving, dimensions and units, graphing, two-way tables, descriptive statistics, linear regression, database functions, optimization, and other topics as time permits.
3. Computer-aided design using AutoCAD.

See also the tentative schedule.

Computer Usage:

Students will use computers for most or all of the homework assignments. At least one test will be conducted on the computer to test students' software proficiency. Computer usage will not be allowed for some or all of the remaining tests and/or quizzes. The reason for this approach is to test your understanding of concepts and your ability to perform calculations related to the subject matter.

Laboratory Projects:

All of the class periods will be in a computer cluster for hands-on instruction, exercises, assignments, and/or projects.

Last update: 9/28/2009.