Syllabus for ATMS 261 – Computer Applications in Meteorology – Spring 2009

Date	Topic	Project*
F 16 Jan 2009	Intro/ MS Word & PowerPoint	Group Project #1
F 23 Jan	MS FrontPage	Group Project #2
F 30 Jan	MS Movie Maker	Group Project #3
F 6 Feb	Moving data	Group Project #4
F 13 Feb	Excel	Group Project #5
F 20 Feb	Minitab/Matlab	Group Project #6
F 27 Feb	GIS	Group Project #7
F 6 Mar	DOS command window	Group Project #8
F 20 Mar	Linux command window	Group Project #9 @ RBH238
F 27 Mar	Online weather data resources	Group Project #10 @ RBH141
F 3 Apr	GARP	Group Project #11 @ RBH238
F 10 Apr	VIS5D	Group Project #12 @ RBH238
F 17 Apr	Moving data	Group Project #13 @ RBH238
F 24 Apr	FORTRAN	Group Project #14 @ RBH238
F 1 May	Python	Group Project #15 @ RBH238

*assignment completed before class ends on this date

Description

A course designed to equip the student with tools for effective communication, and data analysis and manipulation with a focus on applications in the atmospheric sciences. These tools will be introduced for computers having Windows XP and Linux operating systems.

Outline

- Introduction
- Applications within the Windows XP Operating System
  - Office Tools
    - MS Word
  - Communication Tools
    - Visualization
      - Powerpoint
      - FrontPage (Web)
      - Others
  - Data Manipulation Tools
    - moving data (push/pull)
      - Online weather data resources
      - FTP
      - telnet
      - ssh/kerberos
    - crunching data (making calculations)
      - Excel
      - Minitab
      - Matlab
      - IDL
    - displaying data
      - GIS
  - The DOS command window
  - Remote Logins
- Applications within the Linux Operating System
  - The Linux command window
  - Office Tools
  - Communication Tools
    - Visualization
      - GARP/GEMPAK
      - McIDAS
      - NCAR-Graphics
      - VIS5D
  - Data Manipulation Tools
    - moving data (push/pull)
      - FTP
      - telnet
      - ssh/kerberos
      - LDM
    - crunching data (making calculations)
      - FORTRAN
      - Python

Grading

Projects	40%
Attendance	50%
Presentation	10%
Total	**100%**

92% < total score ≤ 100%	A
90% < total score ≤ 92%	A-
88% < total score ≤ 90%	B+
82% < total score ≤ 88%	B
80% < total score ≤ 82%	B-
78% < total score ≤ 80%	C+
72% < total score ≤ 78%	C
70% < total score ≤ 72%	C-
68% < total score ≤ 70%	D+
60% < total score ≤ 68%	D
total score ≤ 60%	F

Projects

Projects will be assigned during each class and are intended to aid in improving your understanding of the course material contained in the lectures. Due to the limited number of computers in the RBH141 lab, projects will be worked on in groups that are assigned by the instructor. Each individual within the group will receive an identical grade.

Exams

None

Final Exam

None

Presentation

Each student will be part of a two-person team that will be responsible for leading the class through a project designed to improve familiarity with a computer application listed as part of the course outline. Presentations and projects given during the semester will introduce new material and need to be approved by the instructor. Presentations and projects given during the final exam period will review course material. The presentation should be no longer than 15 minutes and the corresponding project should be capable of being completed before the end of the class period. As part of each presentation team, each team member will be responsible for making a contribution to the 15 minute presentation as well as designing the corresponding project. Written team member evaluations and presentation files are required to be handed in to the instructor as part of the presentation by noon on the Wednesday before the topic is to be introduced in class.

Assignment/Quiz/Exam Policy

Assignments are to be handed in before the end of class on the date they are due. Assignments handed in after the start of lecture are considered late until 4:30 pm on the date they are due and will be have an automatic 10% deduction from their final score. Assignments handed in after 4:30 pm on the date they are due will receive no credit. Accommodations can be made under special conditions.

Instructor

Doug Miller
232-5158
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Textbook

None required

References

Given as necessary

Disabilities

Contact Prof. Miller early in the course if you have a disability that requires special accommodation.

Academic Integrity

Cheating or plagiarism results in a failed assignment, quiz, or exam on the first infraction. A second infraction results in course failure and a report to the UNCA administration. See http://www.unca.edu/catalog/academicregs.html under "Student Responsibilities" for a refresher on the UNCA policy.