

IT110

IT Problem Solving

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Goal of This Course

- The goals of this course are
 - To teach you some basic knowledge and skills, in preparation for your future studies in information technology (IT)
 - To explore and practice a variety of thinking styles and problem-solving strategies applicable to the field
 - Brief coverage of the four tracks in UMB's IT major
- The goal of this lecture is to let you know how this course will be conducted

Format of the Course

- This is an **applied** course
 - A lot of subject matter in here will be purely informational
 - but the goal is to build your ability to *apply* what you
- I will be here to help you with any issues that may arise
- **HINT:** When issues do arise, it is to your great benefit to resolve them sooner, rather than later.
- The bulk of the course will consist of
 - Reports for a series of projects, possibly working in teams
 - Some writing/reflection assignments, with personal research

Format of the Course

- In addition to the aforementioned, there will also be:
 - **Midterm exam**
 - **Final exam**
- The exams' questions will be taken/derived from material covered in...
 - Lectures
 - The Textbook (***Strategies for Creative Problem Solving***)

Projects

- One core component of this course is a series of projects
- You will be given scenarios, or problems
- The scenario will have some issue or issues with it
- You will need to
 - observe the problem as it appears
 - figure out what is the matter
 - and
- Or, you may be asked to implement some kind of improvement to a situation that is already "fine" the way it is -- but could be better.

Project Reports

- One of the most important things you can learn from this course, is the importance of keeping a written record of..
 - Problems that you have encountered
 - Warning signs that there was a problem, in the first place
 - Steps undertaken to diagnose
 - Resources consulted (texts, websites, forums, etc.)
 - Solutions implemented
 - Tests of effectiveness
- These can come in the form of various **logs** and **reports**.
A sys. admin., for example, will usually do this in the form of an **administrator's log**

Project Reports

- When you change a machine or system you administer - or something significant happens on it - make a note of it.
- If you discover some new pattern or piece of knowledge relevant to your research, you will want to remember it.
- If you deal in security, you will want information about new and upcoming trends, threats, and emerging technologies.
- If you forget what you changed and when, you will struggle figuring out what to do next. If you forget some interesting piece of information, you may not be able to find it again.

Project Reports

- This is particularly important when you solve a problem
 - First, if the problem occurs again, the existence of a previously documented solution will save you the trouble of looking it up again
 - Second, the solution could affect other aspects of the system, making a clear record even more important
- For IT110, each report will be due by a particular date and time - to be eligible for credit.
- Even if you work in a team -- as you may for some projects -- each team member must write his or her own lab reports separately
 - Even though you are working together and documenting the same things
 - Even though you may share data such as results/observations and rough notes
 - Duplicated text (other than command line output) between team members' lab reports will be considered **plagiarism**

Project Reports

- These must be kept in your `it110/reports` directory, inside your home directory on the CS department network
- The lab reports must be text files (`report_XX.txt`), where `XX` stands for the project number
 - For a *single-digit* project number
 - `XX` will be the project number preceded by a 0
 - Example: `report_05.txt`
 - (For a *double-digit* project number, `XX` would simply be the project number, such as `report_11.txt`)
 - When you are signed into Linux, the file paths will probably look something like this: `~/it110/reports/report_XX.txt`

Project Reports

- You should make an entry in the log for each day you work on a project's tasks
 - This work will be done in different settings
 - ...both inside and outside of regular class meetings
 - Regardless, that day's work should get an entry
 - While working, you may choose to keep rough notes
 - ...but those are to help you remember what you did and recall observations.
 - **The entries in your lab report should be more refined!**
 - You should complete your entries as soon as possible, after doing the work.

Project Reports

- *In addition to* the daily entries, at the end of each report report, there may be a series of **discussion questions**.
- Read the project report specifications (to be provided) for further details
- There will be a link to the specifications on the class web page, under the **Course Components** section

Individual Assignments

- The assignments are not technically "homework", but you may be able to finish some of them at home
- You will find the list of assignments on the course web page
- You will probably work on the first assignment today (or next class period), after I have finished speaking
- The first assignment is to
 - complete the Unix Apply Process for this course
 - set up a special text file for e-mail
 - send me an introductory e-mail
- I can help you with this, as needed

Do You Have Enough Time to Do the Work for This Course?

- Many of you work, either part time or full time
 - This cuts down on the time you have for class work
 - ***You should not be taking this course if you do not have enough time to do all the work***
- In this course, you will be configuring an Ubuntu server
 - As previously mentioned, technology can be user-hostile
 - Moreover, problem-solving will require considerable attention to many *small details*
 - Project completion will require you to *read and follow given directions* closely.

Do You Have Enough Time to Do the Work for This Course?

- Finally, you need to understand how individual project tasks relate to the *grand scheme* of things
- In addition, doing well in this class will require a higher quality of submitted work.
 - You must both *understand* the material well and *express* yourself well
 - Do you have the time and energy to bring your work to a level sufficient to achieve your desired grade?
- If you sign up for more work than you can achieve in the time you have, you are cheating yourself
 - Many people in this country rush to get a degree, but haven't done enough work to digest the material
 - Those people invariably set themselves up for failure

Attendance

- At each class I'll take attendance
- I do this to:
 - Learn your names
 - Have a record
- Your attendance will not affect your grade directly
- However, if you find yourself struggling with the material and have not been coming to class, I'll be less sympathetic!

Course Documents

- Everything I create for this class is made available online
 - All of it can be accessed from the Class Page:
<http://www.cs.umb.edu/~ckelly/teaching/it110>
 - You should bookmark this page because the page will function as our syllabus, instead of a paper syllabus
 - It is a lot of material, but you should at least get to know the layout
 - That way, you will know where to look for information you need
 - This is much quicker than sending an e-mail and awaiting my response

Course Documents

- The "***Course Policies***" section will give you a good idea of my rules and expectations. That section also contains some supplementary information you should check out.
- The schedule will feature links to class notes, along with reading assignments - including your chapter summaries
- The "***Projects***" section will feature descriptions of each project as they come up
- Similarly, links to assignments may be found in the "***Assignments***" section

Taking Notes

- Although I make my notes available in PDF form, I want to encourage you to take notes in class
 - Studies have shown that students learn more when they take notes, even if they never look at their notes again
 - Other studies have shown that the more activities and senses are engaged when you learn something, the greater your likelihood of remembering
 - Writing notes engages another part of your brain, which increases recollection
- All of you should take notes

Taking Notes

- Probably the best practice would be for you to print the notes before coming to class.
- That way, you can write your own notes in the margins, along with any questions you may have.
- **Note:** Sometimes PDF content may differ from slides as presented in class!

Cheating

- All students are expected to follow the University's Code of Student Conduct
- You will find this at http://www.umb.edu/life_on_campus/policies/community/code
- The Computer Science Department has the following policy on cheating
 - You will be given a score of **zero** if you cheat on any assignment, quiz or test
 - If you cheat a second time you will receive an **F** in the course
 - If you cheat a third time you can be **expelled** from the University

Cheating

- I put a great deal of work into my courses, and I ask you to respect that work by not cheating.
- **Important:** *It is the **student's** responsibility to know what constitutes academic dishonesty - at this university and in this class. Lack of knowledge that something constitutes an academic honesty violation **will not** be accepted as a valid excuse.*

Grading Policy

- All homework and exams are subject to the honor code
- Plagiarism is not allowed in any form
- Grades will be computed as follows
 - **Lab Reports:** 40%
 - **Assignments:** 25%
 - **Midterm:** 15%
 - **Final:** 20%

Grading Policy

- Final number grades will be translated to letter grades as follows:

- **A** 93.3 and above
- **A-** 90 to 93.2
- **B+** 86.7 to 89.9
- **B** 83.3 to 86.6
- **B-** 80 to 83.3
- **C+** 76.7 to 79.9
- **C** 73.3 to 76.6
- **C-** 70 to 73.3
- **D+** 66.7 to 69.9
- **D** 63.3 to 66.6
- **D-** 60 to 63.3
- **F** Below 60

Accommodations for Disabilities

- The school is legally obligated to try to accommodate students with disabilities
- If you have a disability you can get help from Ross Center for Disability Services
 - **Location:** Upper Level of the Campus Center, Room 211
 - **Phone:** 617-287-7430
 - **Web Site:** <https://www.umb.edu/academics/vpass/disability/>
- After you have discussed the matter with them, see me
- They will usually draft a letter explaining any accommodations you should receive.

Accommodations for Disabilities

- You should get this letter to me ASAP!
- If you require extra time for an exam, then it is your responsibility to arrange for this at least a week in advance!
- Also, you may wish to check out the page containing my own notes:

[http://www.cs.umb.edu/~ckelly/teaching/common/
data/disability.html](http://www.cs.umb.edu/~ckelly/teaching/common/data/disability.html)

Communications

- All communication outside of class will be conducted through *email*
- For regular contact, we will use your @umb.edu email.
 - Even if you e-mail me from another account, I will still e-mail you via UMB
 - The *first* assignment will include setting up email
 - I will use that account when sending you a personal email concerning the class or any class-wide announcements outside of class.
 - If I have sent you an email about something concerning the class, I'll assume that you have been given adequate notice

Communications

- If you have a question, email me at cg.kelly2013@gmail.com
- Please be sure to:
 1. Use a descriptive, meaningful subject line
 2. Begin the subject with **IT110:**
- Failing to include #2 is effectively the same as not having sent the e-mail at all!
- Don't hesitate to contact me if you are stuck and/or need help with something.
- Others might be having the same issue!

Office Hours

- My office is **S-3-130**
- My official office hours will be posted on the course web page
- You do not have to make a special appointment to see me during office hours - just drop in!
- If you need my help and cannot make it to office hours, contact me and we'll work something out