CSCE 181 Introduction to Computing: Spring 2012

NEWS: *1/16/12, 10:51AM (Mon)*

- [01/16] slide01 uploaded.
- [01/14] Course web page goes online
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- [LINKS] •News archive•Grades•Codes•Lecture notes

Read-Only Bulletin Board.: 1/9/12, 03:18PM (Mon)

Page last modified: 1/14/12, 08:53PM Saturday.

General Information   Resources   Weekly Schedule   Credits   Lecture Notes   Example Code   Read-Only Board

I. General Information

Instructor:

Dr. Yoonsuck Choe
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Phone: 979-845-5466
Office hours: MF 2pm-3pm.

TA:

Stephen Probus
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Office hours: TR 3:45pm-4:40pm. W 11:00am-11:45am.

Catalog Description:

Introduce entering students to the broad field of computing; presentations from industry and academia about how computer science concepts are used in research and end products; includes a major writing component.

Prerequisite/Restrictions:

N/A

Lectures:

Time: Tuesday and/or Thursday, 2:20pm to 3:35pm

Room: HRBB 124

The class will meet about 15 times, most likely once per week but some weeks can have no meeting while some others can have two. Specific schedule can change so please closely monitor the announcements on the course web page. It is your responsibility to keep track of the schedule.

Lectures will be given either by the instructor or a guest lecturer from CSE or from external organizations.

Goals:

The goals of this course are:

- to introduce entering students to the broad field of computing.
- to help students develop technical writing skills.

Objectives:

The expected accomplishments of the students are as follows:

1. Become familiar with a broad range of topics in computer science.
2. Become skilled in forming independent thoughts about research topics in computer science.
3. Become skilled in organizing thoughts in a coherent manner and expressing them in written form.

Outcomes:

The students who take this course should be able to demonstrate the following upon the completion of this course.

1. Knowledge of contemporary issues in computer science.
2. Knowledge of how computer science can impact society.
3. Ability to form independent, constructive criticism.
4. Ability to argue in a coherent manner.
5. Ability to write in an organized manner.

Textbook:

We will be using the following textbook (required):

- Writing for Computer Science, 2nd Edition, by Justin Zobel, Springer, 2004.

Recommended texts include:

- *Great Ideas in Computer Science,* Alan W. Bierman, MIT Press, 1990. Not so new but still has good general material.
- *Computer Science, An Overview,* J. Glenn Brookshear, Addison Wesley, multiple editions.

- *An Invitation to Computer Science*, G. Michael Schneider and Judith L. Gersting, Brooks/Cole, multiple editions.
- *A Balanced Introduction to Computer Science*, David Reed, Prentice Hall, multiple editions.

Topics to be covered:

The topics to be covered in lecture periods are as follows (tentative: some topics may not be covered due to the time constraint and availability of guest lecturers):

- computer systems: computer architecture, networking, distributed computing, parallel computing, computer security
- theoretical foundations: algorithms, theory of computation, randomized algorithms
- software: programming languages, compilers
- intelligent systems: artificial intelligence, machine learning, pattern recognition, robotics, information retrieval
- multidisciplinary topics: computational biology, computational neuroscience, complex systems
- human-centered computing: human-computer interaction, sketch recognition, computer graphics

See the Weekly Schedule section for more details.

Grading:

Grading will be based on the following:

- Attendance: Attendance is required for all scheduled lectures. More than two unexcusable absences will result in an automatic 'fail'.
- Class participation:
  - Sleeping, reading news paper, doing other work, using laptop/cell phone during the class, eating, and other disruptive behavior will result in one penalty point per offense. Accumulating three penalty points will lead to an automatic 'fail'.
  - Students are *required* to ask at least three *meaningful* questions during the guest lectures (or research presentations) during the semester. Students may either raise their hands and ask the question (state your name clearly to get credit) or submit a short written note with their question(s) (sentence or two) during the presetation to fulfill this requirement. Several questions submitted during one lecture will only count as one. Obvious questions will not count toward this requirement (e.g., "So, you did this and that?", "What was that again?", etc.).
  - Students are required to read chapters from the textbook (see the weekly schedule for chapter assignment). Students are expected to read the chapters *before* coming to class on the day indicated in the weekly schedule. Three very short quizzes will be given (one question per chapter). Students are expected to pass at least two quizzes to successfully complete this requirement.
- Short reports: six short reports. A one-page report from select lectures will be required. Students need to score 7 or higher (out of 10) on all six reports to pass.
- Term paper: one final report. A major write up, 5 to 6 pages in length, will be assigned. This will be a survey paper on a topic of your choice, and you need to score 70 or above

(out of 100) to pass.

You must pass **all** components of this course in order to earn a passing grade.

Academic Integrity:

AGGIE HONOR CODE: An Aggie does not lie, cheat, or steal or tolerate those who do.

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

For additional information please visit: http://www.tamu.edu/aggiehonor/

For this class, certain aspects of the honor code need to be clarified.

1. All writing should be in your own words.
2. Properly cite when you take ideas or verbatim quotes from other sources.

Failure to do so will result in an automatic 'F'.

Course Policy:

- Late Assignments: Late submissions will not be accepted, unless there is a legitimate reason (health, etc.).
- Communication: A class web page (listed at the top of this syllabus) will be maintained throughout the semester. Students are responsible for checking both the web page and email regularly for class updates.

Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall or call 845-1637.

II. Resources

1. TBA

III. Weekly Schedule and Class Notes

- **Lecture notes**: all notes will be uploaded in this directory.
- It is **your responsibility** to download, print, and bring the notes to the class. Notes will be available 24 hours before each class.
- See the **TAMU Calendar** for breaks, etc.
- More detail will be available as we go along.

Week	Date	Topic	Reading	Assignments	Notices and Dues	Notes
1	1/17	Introduction (Choe)	Zobel chapters 1 (introduction) and 13 (ethics): read it this week			slide01.pdf
1	1/19	---				
2	1/24	History of computer science (Choe)	Zobel chapter 2 (good style): read before coming to class (same applies to the rest of the chapters)			
2	1/26	---				
3	1/31	Technical writing (Choe)	Zobel chapter 4 (punctuation)			
3	2/2	---				
4	2/7	---(This week's lecture is on Thursday!)---				
4	2/9	Research talk (Dr. Evdokia Nikolova): Algorithmic game theory	Zobel chapter 3 (style specifics), first half			
5	2/14	Finding and citing sources (Choe)	Zobel chapter 3 (Style specifics), second half			
5	2/16	---				
6	2/21	Guest lecture: Brian Orrell, CTO, Pariveda Solutions	Zobel chapter 8 (editing)			
6	2/23	---				
7	2/28	Research talk (Dr. Dylan Shell): Flocks and robots	Zobel chapter 9 (writing up)			
7	3/1	---				
		Research talk (Manoj				

8	3/6	Prasad): Sketch recognition	Zobel chapter 10 (doing research)
8	3/8	---	
9	3/13	**Spring break**	
9	3/15	**Spring break**	
10	3/20	Research talk (Choe):Intelligent systems (Neuroevolution)	
10	3/22	---	
11	3/27	Research talk (TBA)	
11	3/29	---	
12	4/3	Research talk (Dr. Jaakko Järvi)	software
12	4/5	---	
13	4/10	Research talk (TBA)	
13	4/12	---	
14	4/17	---(This week's lecture is on Thursday!)---	
14	4/19	Research talk (Dr. Bjarne Stroustrup)	programming languages
15	4/24	Research talk (Dr. E. J. Kim)	computer architecture
15	4/26	---	
16	5/1	Last class	

IV. Credits

Course design adapted from Profs. Jinxiang Chai, John Keyser, Jennifer Welch, and Valerie Taylor.

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