CSCE 222: Discrete Structures for Computing
Section 505
Fall 2015

Philip Ritchey

Last Modified August 28, 2015

1 Class Time and Location

Lecture: MWF 11:30am – 12:20pm in ETB 2005
Recitation / Review / Supplemental Instruction: see course website.

2 Course Description and Prerequisites

CSCE 222. Discrete Structures for Computing. (3-0). Credit 3.
This course provides the mathematical foundations from discrete mathematics for analyzing computer algorithms, for both correctness and performance; introduction to models of computation, including finite state machines and Turing machines.
Prerequisite: MATH 151. Cross-listed with ECEN 222.

3 Learning Outcomes

At the end of the course, students will understand the basic principles of logic, proofs and sets. They will be able to apply results from discrete mathematics to the analysis of algorithms. They will be able to produce proofs by induction and apply counting techniques. They will have a basic understanding of models of computation.

4 Instructor Information

Instructor

Philip Ritchey    [1]
Office: 326 HRBB
Phone: 979-862-6476
Email: pcr@tamu.edu
Twitter: @_pcr
Office hours: MR 2pm – 4pm, and by appointment.

[1] I am willing to provide a safe haven, a listening ear, and support for lesbian, gay, bisexual, and transgender people or anyone dealing with sexual orientation issues. I am a QPR gatekeeper for suicide prevention. I support violence prevention efforts across campus.

Teaching Assistant

Jan Dufek
Office: TBD
Phone: TBD
Email: dufek@tamu.edu
Office hours: TBD, and by appointment.

Graders

See course website.

Peer Teachers

Peer-Teachers are available to help you with this class. For more details, see `engineering.tamu.edu/cse/academics/peer-teachers/current-peer-teachers` and the course website.

5 Textbook

Kenneth Rosen, Discrete Mathematics and Its Applications, 7th ed., McGraw-Hill, 2012.

6 Course Website

`faculty.cse.tamu.edu/ritchey/courses/csce222/fall15`

7 Grading

Weight	Component	Date
20%	Homework	Every Wednesday
10%	Quizzes	Every Friday
20%	Exam 1	30 September
20%	Exam 2	28 October
20%	Exam 3	2 December
20%	Final Exam	16 December, 10:30am - 12:30pm

Final letter grades will be assigned according to the following cutoffs:

90+:	A
80:	B
70:	C
60:	D
less than 60:	F

N.B. It is not an accident that the rubric adds to 110%. The final letter grade cutoffs are not percentages, but rather raw scores out of the total 110 points possible in the course.

8 Schedule of Topics

Week	Topic	Reading
8/31	The Foundations: Logic and Proofs	Chapter 1
9/7	Basic Structures: Sets, Functions, Sequences, Sums, and Matrices	Chapter 2
9/14	Algorithms	Chapter 3
9/21	Induction and Recursion	Chapter 5
9/28	Exam 1 on 9/30	Chapters 1–3, 5
10/5	Counting	Chapter 6
10/12	Advanced Counting Techniques	Chapter 8
10/19	Relations	Chapter 9
10/26	Exam 2 on 10/28	Chapters 5, 6, 8, 9
11/2	Graphs	Chapters 10
11/9	Trees	Chapters 11
11/16	Modeling Computation	Chapter 13
11/23	Modeling Computation	Chapter 13
11/30	Exam 3 on 12/2	Chapters 9–11, 13
12/7	Final Review	Comprehensive
12/16	Final Exam 10:30am - 12:30pm	Comprehensive

9 Policies

9.1 Attendance

It is strongly recommended that you attend every class, arrive on time, and stay the whole time. You are responsible for learning the material covered in class regardless of your attendance.

9.2 Late and Missed Work

Late homework is not accepted without a University excused absence.
Missed exams cannot be made up without a University excused absence.
Make up for quizzes missed due to University excused absences will occur at the end of the semester with a single comprehensive quiz that will count for the excused portion of the missed quiz grades. See rule 07 of the student rules: `student-rules.tamu.edu/rule07`.

9.3 Typesetting

All homework must be typeset in LaTeX, **with each problem worked out on its own page**. You will submit both the LaTeX source (a plaintext document written in the LaTeX markup language) and typeset PDF file. Resources for LaTeX can be found on the course website and on the Internet.

9.4 Version Control

You are strongly encouraged to use a version control system to track changes and back up your work. Texas A&M has an institutional GitHub account (`github.tamu.edu`) that you can use. Aside from Git, other free options for version control include SVN, CVS, Mercurial, Perforce.

9.5 Collaboration

You are explicitly permitted and encouraged to work together on homeworks. If you do that, you may even turn in a single homework with each of your names on it. If you work together on part of the homework but not all, then include a statement on the first page identifying the collaborators (by full name) for each problem. To do this, you must actually collaborate on each problem. You are not permitted to split the work and pool your solutions. If you would like help connecting with other students, the TA and I can help. Groups can be of size up to 3, no larger. Try to not work with the same people on every homework.

9.6 Regrading

We work very hard to ensure that all work is graded correctly and completely. If you believe that your work has been graded incorrectly or incompletely, you must **meet with the TA to check your solution within one week of the date the work is returned**. Only if the TA determines that your solution is correct and complete will your work be regraded.

9.7 Return of Graded Work

We will make an effort to return your graded work to you within one week of the date of submission. You may pick up your graded work from the instructor during office hours.

9.8 Solutions

Homework solutions will typically be posted on eCampus the day after the assignment is due.
Quiz solutions will be worked out in class immediately after the quiz.
Exam solutions will be worked out in class on the Friday after an exam.

9.9 Extra Credit

There are 10 points of extra credit built into the grading rubric. This is the only extra credit that is available in the course. Do not waste your time asking for more or different extra credit.

9.10 Curving

This class is superlatively unlikely to be curved.

9.11 Piazza

All questions and comments about the course should be posted on Piazza (`piazza.com`). Piazza is designed and managed so that you can get help quickly and efficiently from classmates, the PTs, the graders, the TA, and myself. If you email a question or comment about the course to me, the TA, orthe graders, you will very likely be redirected to Piazza. You may post questions or comments to the instructors on Piazza privately, however this privilege will be revoked if it is misused.

9.12 Email Formatting

When you send email to myself or any of the TAs or graders, the subject must be prefixed with [CSCE 222] and you must sign your name to the email. Putting [CSCE 222] in the subject will let us know the course about which you are emailing. Signing your name will let us know who you are. If you do not sign your name, we will assign you one at random in our reply.

9.13 Discussion of Grades

Federal law prohibits the instructor, TA, and graders from discussing grades over email or phone. If you have a question about your grade, you must discuss it with us in-person, such as during office hours.

9.14 Americans with Disabilities Act (ADA) Policy Statement

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, the 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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit `disability.tamu.edu`.

9.15 Harassment and Discrimination

Texas A&M is committed to the fundamental principles of academic freedom, equality of opportunity and human dignity. To fulfill its multiple missions as an institution of higher learning, Texas A&M encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual within our state, nation and world. All decisions and actions involving students and employees should be based on applicable law and individual merit.

Texas A&M University prohibits harassment and discrimination against any member of the University community on the basis of race, religion, color, sex, age, national origin or ancestry, genetic information, marital status, parental status, sexual orientation, gender identity and expression, disability, or status as a veteran.

Students who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the Office of the Dean of Student Life at 845-3113.

9.16 Academic Integrity Statement and Policy – Aggie Code of Honor

An Aggie does not lie, cheat, nor steal, nor tolerate those who do.

For all academic work in this and every course, it is expected of you that you shall neither give nor recieve any unauthorized aid.

All violations of the Aggie code of Honor will be reported to the Aggie Honor System Office.

For more information, see `aggiehonor.tamu.edu/RulesAndProcedures/`.