Course Log  
Last Updated: 12/17/2013

- Tuesday, 12/17/2013
  Exam 4 - Section 018
  1. none

- Monday, 12/16/2013
  Exam 4 - Section 017
  1. none

- Friday, 12/13/2013
  Review for Exam
  1. Study for Exam 4

- Wednesday, 12/11/2013
  Eulerization & Semi-Eulerization
  1. HW 16 - Graphs 2 - due Thurs 12/12, 6:00 AM
  2. Read pp. 131-132 on “Eulerization and the Chinese Postman Problem”
  3. Begin studying for Exam 4 (if you’re taking it)

- Monday, 12/09/2013
  Eulerian Circuits & Trails
  1. HW 16 - Graphs 2 - due Thurs 12/12, 6:00 AM
  2. Read pp. 127-129 on “Euler Circuits”
  3. Read pp. 131-132 on “Eulerization and the Chinese Postman Problem”

- Friday, 12/06/2013
  Quiz 4 & Modeling
  1. Modeling Homework (found on course website: http://www.ms.uky.edu/~houghw/MA111) - due Mon 12/9
  2. Each student should submit one digital copy of your project to Blackboard - Fri 12/6, 11:59 PM

- Wednesday, 12/04/2013
  Quiz Review: Isomorphism, Planarity & Colorability
  1. Study for Quiz 4 - Fri 12/6
  2. Each group needs to submit one hard copy of their project in class - Fri 12/6
3. Each student needs to submit one digital copy of their project to Blackboard - Fri 12/6, 11:59 PM

• Monday, 12/02/2013
  Colorability
  1. Colorability Homework (found on course website: http://www.ms.uky.edu/ houghw/MA111) - due Wed 12/4
  2. Begin studying for Quiz 4 - Fri 12/6

• Friday, 11/29/2013
  Thanksgiving Break
  1. none

• Wednesday, 11/27/2013
  Thanksgiving Break
  1. none

• Monday, 11/25/2013
  Planarity
  1. none

• Friday, 11/22/2013
  Isomorphism & Planarity
  1. HW 15 - Graphs 1 - due Fri 11/22 - 11:59 PM
  2. read pp. 117-121 on “Graph Theory”

• Wednesday, 11/20/2013
  Intro to Graph Theory
  1. HW 15 - Graphs 1 - due Fri 11/22 - 11:59 PM
  2. read pp. 117-121 on “Graph Theory”

• Monday, 11/18/2013
  Exam 3 - Compensation
  1. none
• Friday, 11/15/2013
Pareto-Optimality & Review
1. HW 14 - Compensation 4 - due Sat 11/16 - 11:59 PM
2. Study for Exam 3 - Mon 11/18

• Wednesday, 11/13/2013
“Good” Compensation Arrangements
1. HW 13 - Compensation 3 - due Thurs 11/14 - 6:00 AM
2. HW 14 - Compensation 4 - due Sat 11/16 - 11:59 PM
3. E-mail group member names to Mr. Hough - due today
4. Begin studying for Exam 3 - Mon 11/18

• Monday, 11/11/2013
Compensation Assumptions & “Good” Compensation Arrangements
1. HW 13 - Compensation 3 - due Thurs 11/14 - 6:00 AM
2. E-mail group member names to Mr. Hough - due Wed 11/13

• Friday, 11/08/2013
Quiz 3 & Solving the Adjusted Winner Method
1. HW 13 - Compensation 3 - due Thurs 11/14 - 6:00 AM
2. E-mail group member names to Mr. Hough - due Wed 11/13

• Wednesday, 11/06/2013
Adjusted Winner Method for $N = 2$
1. HW 12 - Compensation 2 - due Thurs 11/7 - 6:00 AM
2. Decide who you would like to work with on the written project.
3. Study for Quiz 3 - Fri 11/8

• Monday, 11/04/2013
The Equitability Procedure & Intro to Adjusted Winner Method for $N = 2$
1. HW 12 - Compensation 2 - due Thurs 11/7 - 6:00 AM
2. Decide who you would like to work with on the written project.
3. Begin studying for Quiz 3 - Fri 11/8

• Friday, 11/01/2013
Knaster’s Procedure Practice & Intro to the Equitability Procedure
1. HW 12 - Compensation 2 - due Tues 11/5 - 6:00 AM
2. Decide who you would like to work with on the written project.

- **Wednesday, 10/30/2013**
  First-Come, First-Served; Fair Shares & Knaster’s Procedure
  1. HW 11 - Compensation 1 - due Fri 11/1 - 11:59 PM
  2. read pp. 93-95 on “Fair Division”
  3. read pp. 103-106 on “Sealed Bids Method”

- **Monday, 10/28/2013**
  Introduction to Compensation
  1. none

- **Friday, 10/25/2013**
  Exam 2 - Cryptography
  1. none

- **Wednesday, 10/23/2013**
  The RSA Cipher; Exam Review
  1. Homework 10 - Cryptography 6 - due Thurs 10/24 - 6:00 AM
  2. Begin studying for Exam 2 - Friday, 10/25

- **Monday, 10/21/2013**
  Review of DHM Public Key Exchange; The RSA Cipher
  1. Homework 9 - Cryptography 5 - due Tues 10/22 - 6:00 AM
  2. Homework 10 - Cryptography 6 - due Thurs 10/24 - 6:00 AM
  3. Begin studying for Exam 2 - Friday, 10/25

- **Friday, 10/18/2013**
  Review of the Affine Cipher; Diffie-Hellman-Merkle Public Key Exchange; Large Number Modular Simplification
  1. Homework 9 - Cryptography 5 - due Tues 10/22 - 6:00 AM
  2. Begin studying for Exam 2 - Friday, 10/25

- **Wednesday, 10/16/2013**
  Review of the Times Cipher & Multiplicative Inverses; Affine Cipher; Intro to Diffie-Hellman-Merkle Public Key Exchange
1. read pp. 395-396 on Public Key Cryptography
2. Homework 8 - Cryptography 4 - due Thurs 10/17 - 6:00 AM

- **Monday, 10/14/2013**
  Decrypting the Times Cipher; Multiplicative Inverses
  1. read pp. 395-396 on Public Key Cryptography
  2. Homework 8 - Cryptography 4 - due Thurs 10/17 - 6:00 AM

- **Friday, 10/11/2013**
  Times/Decimation Cipher - Encryption; Zero-Divisors, GCD, and Units
  1. Homework 7 - Cryptography 3 - due Fri 10/11 - 11:59 PM

- **Wednesday, 10/09/2013**
  Fish Cipher and the Beale Cipher Legend
  1. Homework 7 - Cryptography 3 - due Fri 10/11 - 11:59 PM
  2. Decrypt the message “SEVXKSA” using a Fish Cipher with keywords MONEY and CASH to figure out what surprise you all are getting on Friday.

- **Monday, 10/07/2013**
  Vigenère and Fish Ciphers
  1. Study for Quiz 2 - Wed 10/9
  2. Homework 7 - Cryptography 3 - due Fri 10/11 - 11:59 PM

- **Friday, 10/04/2013**
  Vigenère Cipher
  1. HW 6 - Cryptography 2 - due Monday 6 AM

- **Wednesday, 10/02/2013**
  Shift Cipher; Additive Inverses
  1. HW 5 - Cryptography 1 - due Thursday 6 AM
  2. HW 6 - Cryptography 2 - due Monday 6 AM

- **Monday, 9/30/2013**
  Review of Caesar Cipher; Modular Arithmetic
  1. read pp. 396-397 on Modular Arithmetic (Cryptography Section)
  2. HW 5 - Cryptography 1 - due Thursday 6 AM
• Friday, 9/27/2013
  Introduction to Cryptography; Caesar Cipher
  1. read pp. 387-391 on Substitution Ciphers (Cryptography Section)
  2. check for availability of HW 5 - Cryptography 1

• Wednesday, 9/25/2013
  Exam 1 - Voting Theory
  1. none

• Monday, 9/23/2013
  Review of Voting Methods and Fairness Criteria
  1. complete Homework 4 - due Tues 9/24, 6 AM
  2. study for Exam 1 - Wed 9/25, in class

• Friday, 9/20/2013
  Voting Method Practice worksheet
  1. complete Homework 4 - due Tues 9/24, 6 AM
  2. study for Exam 1 - Wed 9/25, in class

• Wednesday, 9/18/2013
  Review of Monotonicity and Majority Criteria; Condorcet and Independence of Irrelevant Alternatives Criteria
  1. complete Homework 4 - due Tues 9/24, 6 AM
  2. begin reviewing for Exam 1 - Wed 9/25, in class
  3. Describe a 4-candidate election scenario that you’d like to see on the exam. Be creative! - due Fri 9/20, in class

• Monday, 9/16/2013
  Fairness Criteria for 2-Candidate Elections; Monotonicity, Majority, and Condorcet Criteria for 3+ Candidate Elections
  1. complete Homework 3 on WeBWorK - due Tue 9/17, 6 AM
  2. read Fairness Criteria for 3+ Candidate Elections
     - pp. 42-44 on Ex. 8 and the Majority Criterion
     - pp. 36-37 on Ex. 2 and the Condorcet Criterion
     - pp. 41-42 on Ex. 6 & 7 and the Monotonicity Criterion
     - pp. 47-48 on Ex. 11 and the Independence of Irrelevant Alternatives (IIA) Criterion
• Friday, 9/13/2013
Review of 2-Candidate Voting Methods; Fairness Criteria for 2-Candidate Elections

1. complete Homework 3 on WeBWorK - due Tue 9/17, 6 AM
2. begin reading Fairness Criteria for 3+ Candidate Elections
   – pp. 42-44 on Ex. 8 and the Majority Criterion
   – pp. 36-37 on Ex. 2 and the Condorcet Criterion
   – pp. 41-42 on Ex. 6 & 7 and the Monotonicity Criterion
   – pp. 47-48 on Ex. 11 and the Independence of Irrelevant Alternatives (IIA) Criterion

• Wednesday, 9/11/2013
Quiz 1; 2-Candidate Voting Methods

1. none

• Monday, 9/9/2013
Review of Plurality, Borda Count, Plurality with Elimination, and Pairwise Comparison Methods; Insincere and Approval Voting

1. study for Quiz 1 - Wed 9/11, in class
   – Plurality Method & Majority Candidates
   – Borda Count Method
   – Plurality with Elimination Method
   – Pairwise Comparison Method & Condorcet Candidates
2. complete Homework 2 in WeBWorK - due Wed 9/11, 6:00 AM

• Friday, 9/6/2013
Review of Plurality with Elimination; Method of Pairwise Comparisons, Condorcet Candidates

1. read p. 38, Example 4; p. 39 on Insincere Voting - due Mon 9/9, in class
2. read pp.49-50 on Approval Voting - due Mon 9/9, in class
3. complete Homework 2 in WeBWorK - due Wed 9/11, 6:00 AM

• Wednesday, 9/4/2013
Review of Plurality & Borda Count Methods; Method of Plurality with Elimination

1. read p. 37 on the Condorcet Criterion and pp. 44-46 on Copeland’s Method (Pairwise Comparisons) - due Fri 9/6, in class
2. complete Homeworks 0 & 1 in WeBWorK - due Fri 9/6, 6:00 AM
3. complete Homework 2 in WeBWorK - due Wed 9/11, 6:00 AM

• Friday, 8/30/2013
Review of Plurality Method; Borda Count Method
1. read pages 39-40 (Instant Run-Off Voting / Plurality with Elimination) - due Wed 9/4
2. complete Homework 0 & 1 in WeBWorK - due Fri 9/6, 6:00 AM
3. read “Professionalism” handout on course webpage

• Wednesday, 8/28/2013

Course Introduction; Ballots, Preference Schedules, and the Plurality Method

1. read syllabus, fill out “Syllabus Agreement Form” - due Fri 8/30
2. read pages 35-36 (Plurality Method) and 42-43 (Borda Count Method) - due Fri 8/30
3. read WeBWorK access information (see course webpage) - due Fri 8/30