Announcements from lecture

Wednesday Dec 7

- Today is the last day of class.
- Final Exam is Wednesday Dec 14 from 8:00 to 11:00 AM (morning).
- Bring the following to the final exam:
  - Pencil and eraser (part of the exam is multiple choice, and the Scantron form must be filled in pencil).
  - University ID (I-card)
  - Know your NetID (needed for Scantron form) - your email address has the form NetID@illinois.edu.
- Registration for the conflict exam closes at 5pm today. (If you are registered then you have already received an email from the Head TA.)
- Please check our records of your scores.
  - If you find an error, please email your professor by 5 pm on Friday, December 9.
- Solutions to yesterday's worksheet are posted.
- Planetary orbits - how polar curves describe elliptical, parabolic and hyperbolic orbits
- Carols

Monday Dec 5

- Webassign homework 21 (due 11am Wednesday 7 Dec).
- Final Exam Information is available. Use it to make your STUDY PLAN.
- Tutoring room 252 Mechanical Eng Building Monday-Wednesday 3-6pm this week, and then Extra Tutoring sessions (held in 345 Altgeld Hall) on Thursday 12/8, Friday 12/9, Monday 12/12, Tuesday 12/13 (for times see the Final Exam Information).
- Review/Q&A session: Saturday 10 Dec, 10:30am-12:00pm in 314 Altgeld Hall.
- Online polar coordinate plotter. This is a helpful tool for visualization--drag the slider at the bottom to see the curve being drawn.

Friday Dec 2

- Webassign homework 20 (due 11am Monday 5 Dec).
- Final Exam Information is now available.
- Online polar coordinate plotter. This is a helpful tool for visualization--drag the slider at the bottom to see the curve being drawn.

Wednesday Nov 30

- Homework HW17 (due in discussion tomorrow).
- Cycloid video related to worksheet 4.
- Worksheet 4.
- Short videos demonstrating that the cycloid is the solution to the brachistochrone and tautochrone problems.

Monday Nov 28

- Homework HW16 (due in discussion tomorrow).
- Homework HW17 (due in discussion Thursday 1 Dec).
- Professor Tyson will substitute for Professor Laugesen, on Wednesday.
- Cycloid video related to worksheet 4.
- Worksheet 4.

Friday Nov 18

- Webassign homework 19 (due 6pm Monday 21 Nov).
- Homework HW16 (due in discussion Tuesday 29 Nov).
- Final exam conflicts? The final exam will be 8-11 am, Wednesday 14 Dec. If you have a conflict, please click on the link and follow the procedure there.
- Professor Laugesen's office hours today are shortened to 3:00-3:50pm.
- Binomial series notes for today's lecture.
- Have a good Thanksgiving break!

Wednesday Nov 16

- Webassign homework 19 (due 6pm Monday 21 Nov).
- Homework HW15 (due in discussion tomorrow).
- Final exam conflicts? The final exam will be 8-11 am, Wednesday 14 Dec. If you have a conflict, please click on the link and follow the procedure there.
- Professor Tyson’s office hour today runs from 3:00-4:30pm.
- Binomial series notes for today's lecture.

Monday Nov 14
• Homework HW14 (due in discussion tomorrow).
• Homework HW15 (due in discussion Thursday 17 Nov).
• Midterm regrading requests must go to your professor (Tyson or Laugesen). Deadline: 4pm today.
• Final exam conflicts? The final exam will be 8-11 am, Wednesday 14 Dec. If you have a conflict, please click on the link and follow the procedure there.

Friday Nov 11

• Homework HW14 (due in discussion Tuesday 15 Nov).
• Midterm regrading requests must go to your professor (Tyson or Laugesen). Please follow the procedure explained here. Deadline: 4pm Monday 14 Nov.
• Final exam conflicts? The final exam will be 8-11 am, Wednesday 14 Dec. If you have a conflict, please click on the link and follow the procedure there.
• Strategies for testing convergence and divergence of infinite series

Wednesday Nov 9

• Midterm 3 scores and solutions are posted at the Exams page. You will get your exam back tomorrow in Discussion.
• Midterm regrading requests must go to your professor (Tyson or Laugesen). Please follow the procedure explained here.
• Learn from the midterm solutions - work through each solution to see what you can learn.
• Professor Tyson's office hour today finishes at 2:50pm.
• Here is a nautical telescope. It collapses in on itself, just like a "telescoping series".
• Webassign homework 16 (due 11:11am 11/11/11, 11 problems from Chapter 11).

Monday Nov 7

• Midterm 3 Information - tonight 7:15pm. Do you know which room your exam is in...?
• Tutoring room today 3-6pm in 252 Mechanical Engineering Building (MEB).
• Discussion section and Tutoring room are canceled tomorrow.

Friday Nov 4

• Midterm 3 Information - Monday 7 November, 7:15pm, worth 20%. Make study notes and do lots of problems.
• The midterm material includes work (Section 6.4).
• Practice problems on hydrostatic force and centroids are available in Webassign (no credit).
• Midterm conflicts? Follow the conflict instructions.
• Extra tutoring/office hours 447 Altgeld Hall, 2-4pm today

Wednesday Nov 2

• Webassign homework 17 (due 11am tomorrow).
• Midterm 3 Information - Monday 7 November, 7:15pm, worth 20%. Make study notes and do lots of problems.
• The midterm material includes work (Section 6.4).
• Practice problems on hydrostatic force and centroids are available in Webassign (no credit).
• Midterm conflicts? Follow the conflict instructions.
• Improper integral facts and graphs (to be used in today's lecture on the Integral Test).

Monday Oct 31

• Homework HW13 (due in discussion tomorrow).
• Webassign homework 17 (due 11am Thursday 3 Nov).
• Limit laws for sequences
• Midterm 3 Information - Monday 7 November. Prepare your study notes this week.

Friday Oct 28

• Webassign homework 16 (due 11am Monday 31 Oct).
• Homework HW13 (due in discussion on Tuesday 1 Nov).
• Panoramic view of Lake Mead and the Hoover Dam
• Limit laws for sequences

Wednesday Oct 26

• Homework HW12 (due in discussion on Thursday 27 Oct).
• Webassign homework 15 (due 11am Friday 28 Oct).
• Professor Tyson's office hours are Wednesdays 2-4 pm from now on.
• Professor Laugesen will be away on Friday; the lecture will be taught by Professor Tyson.
• The great molasses flood
Monday Oct 24

- **Homework HW11** (due in discussion on Tuesday 25 Oct).
- **Homework HW12** (due in discussion on Thursday 27 Oct).
- Starting this week, Professor Tyson's office hours are **Wednesdays 2-4 pm**.

Friday Oct 21

- Professor Tyson's office hours today: **3-4 pm**.
- **Webassign homework 14** (due 11am Monday 24 Oct).
- **Homework HW11** (due in discussion on Tuesday 25 Oct).
- **Review of the Gamma function problem on yesterday's worksheet**.

Wednesday Oct 19

- **Homework HW10** (due in discussion tomorrow). Get help at the Tutoring Room.
- Professor Tyson's office hours this week: **Wednesday 2-3 pm** and **Friday 3-4 pm**.
- For enjoyment, read this account of Dyson spheres on Wikipedia - see the paragraph on "Dyson shells" (relevant to yesterday's worksheet).
- **Improper integral facts and graphs** to memorize (for today's lecture, Sec. 7.8).

Monday Oct 17

- **Homework HW9** (due in discussion on Tuesday 18 Oct).
- **Webassign homework 13** (due 11am Wednesday 19 Oct). Always read the instructions before starting WebAssign homework.
- **Homework HW10** (due in discussion on Thursday 20 Oct).
- Professor Tyson's office hours this week: **Wednesday 2-3 pm** and **Friday 3-4 pm**.
- **Starting next week, Professor Tyson's office hours will be Wednesdays 2-4 pm**.
- Summary of partial fractions technique for integration.

Friday Oct 14

- Picture of a diffraction pattern as calculated in yesterday's worksheet.
- **Webassign homework 12** (due 11am Monday 17 Oct).
- **Homework HW9** (due in discussion on Tuesday 18 Oct).

Wednesday Oct 12

- **Homework HW8** (due in discussion tomorrow).
- Midterm regrading requests must go to your professor (Tyson or Laugesen). Please follow the procedure explained here.
- Learn from the midterm solutions - work through each solution to see what you can learn.
- If you scored <= 50 on Midterm 2 then you should drop the course immediately. See information here.

Monday Oct 10

- Midterm 2 scores and solutions are posted at the Exams page.
- Professor Tyson is attending a conference this week (ciac!). Professor Dankowicz will teach the BL1 lectures while he is away.
- **Webassign homework 11** (due 11am Wednesday 12 Oct).
- **Homework HW8** (due in discussion on Thursday 13 Oct).

Friday Oct 7

- **No class today** - class cancelled because of yesterday's evening exam.

Wednesday Oct 5

- **Midterm 2 guidance** - Thursday 7:15-8:15pm, worth 20%. Prepare study notes, and do lots of problems.
- Solutions have been posted to many practice problems, including yesterday's worksheet.
- Material: up through Sec. 6.2 (volumes by washers). Volume by shells is not covered on this exam.
- Professor Tyson's office hours today: Wednesday 1:30-3:30pm in 329 Altgeld Hall.
- Professor Laugesen's office hours today: Wednesday 2:30-4:30pm in 376 Altgeld Hall.
- Tutoring room: regular hours 3-6pm today in 252 Mech Eng Bldg, special hours 3-6pm Thursday in 218 Mech Eng Bldg.

Monday Oct 3

- **Webassign homework 10** (due tomorrow 11am).
• Midterm 2 guidance - Thursday, October 6, 7:15-8:15pm, worth 20%. Prepare study notes, and do lots of problems.
• Material: up through Sec. 6.2 (volumes by washers).
• Professor Tyson's office hours this week: Wednesday 1:30-3:30pm in 329 Altgeld Hall.
• Professor Laugesen's office hours this week: Wednesday 2:30-4:30pm in 376 Altgeld Hall.
• Problem 5.3.72 solution.

**Friday Sep 30**

- Webassign homework 10 (due Tuesday 4 Oct, 11am).
- Midterm 2 guidance - check your room, and study over the weekend.
- Thursday, October 6, 7:15-8:15pm, worth 20%. Midterm conflicts? Follow the conflict instructions.
- Material: up through today's lecture, Sec. 6.2.
- Webassign practice problems on integration by substitution (not due, no credit).
- Interactive examples from the TEC area of the publisher's website
  - Volume of revolution
  - Volumes using disks, washers, shells

**Wednesday Sep 28**

- Webassign homework 9 (due Friday 30 Sep, 11am).
- Homework HW7 (due in discussion on Thursday 29 Sep).
- Midterm 2 information: make your study plan today...the exam is on Thursday, October 6, 7:15-8:15pm, worth 20%.
- Midterm conflicts? Follow the conflict instructions.
- Learn from your mistakes! e.g. talk to TAs at Tutoring room about homework problems you got wrong.

**Monday Sep 26**

- Homework HW6 (due in discussion on Tuesday 27 Sep).
- Homework HW7 (due in discussion on Thursday 29 Sep).
- Tutoring Room - 252 Mechanical Engineering Building, 3-6pm on Mon, Tue, Wed every week.

**Friday Sep 23**

- Webassign homework 8 (due Monday 26 Sep, 11am).
- Homework HW6 (due in discussion on Tuesday 27 Sep) - lots of max/min problems, so start early.
- Yesterday's Worksheet 9: for a nice picture of Snell's Law (refraction) see laser beam reflecting off and refracting into a semicircle of plexiglass.
- Summation formulas, and integral properties. For help on "sigma" notation, see Appendix E.
- Wolfram Alpha - great tool for calculations and plotting.

**Wednesday Sep 21**

- Webassign homework 7 (due Friday 23 Sep, 11am).
- Homework HW5 (due in discussion tomorrow).
- Tutoring Room - new location and longer hours: 252 Mechanical Engineering Building, 3-6pm on Mon, Tue, Wed every week.
- Graphs of the Maxwell-Boltzman distribution from Worksheet 8.
- Interactive examples from the TEC area of the publisher's website
  - Estimating the area under y=x^2
  - Estimating the area under various curves
  - Approximating an Integral with Riemann Sums

**Monday Sep 19**

- Midterm 1 make-up quiz: the discussion section tomorrow (Tuesday 20 Sep) will begin with a 5 minute quiz covering limits at infinity (the problems will be similar to Midterm 1 problem 3; make sure you know the series for ln(1+x)). This quiz is worth 3 points to be added on to your Midterm 1 score.
- Webassign homework 6 (due Wednesday 21 Sep, 11am).
- Homework HW5 is due in discussion on Thursday 22 Sep. HW must be stapled.
- Tutoring Room - new location and longer hours. Now in 252 Mechanical Engineering Building, 3-6pm on Mon, Tue, Wed every week.

**Friday Sep 16**

- Midterm 1 feedback and grade ranges are available. Go there and follow the advice about working through the exam solutions!
  - score < 20 - talk to your TA or your professor about how you can do better in this course.
  - score < 15 please go in person to Math Advising in 313 Altgeld Hall between 9-12 or 1-4 weekdays AS SOON AS POSSIBLE to arrange a switch to Math 220/221. The deadline is Tuesday 20 September. Talk to your professor if there are special circumstances.
- Webassign homework 6 (due Wednesday 21 Sep, 11am).
- Midterm 1 make-up: the discussion section on Tuesday 20 Sep will begin with a 5 minute quiz covering limits at infinity (the problems
will be similar to Midterm 1 problem 3). This quiz is worth 3 points to be added on to your Midterm 1 score.

**Monday Sep 12**

- **Midterm 1** is on Wednesday 14 Sep. **Bring your I-card.**
- Do you know where to go for the exam?
- A handout on differentials may be helpful for some students.
- **Tutoring room:** 243 Altgeld Hall, 4-6pm Monday and Tuesday this week (canceled on Wednesday). If the room is full, then ask the TA for directions to the overflow room, which has more TAs.

**Friday Sep 9**

- **Midterm 1** is on Wednesday 14 Sep.
- Find your room and time information, and work on the practice problems.
- **Webassign homework 5** (due Monday 12 Sep, 11am). You can ask questions at the Discussion Forum (under "Communication" in WebAssign).

**Wednesday Sep 7**

- **Homework HW4** is due in lecture on Friday 9 Sep. HW must be stapled - graders will deduct points if not.
- Getting help: ask homework questions at the Discussion Forum (under "Communication" in WebAssign), and at the Tutoring Room, which has an extra session tomorrow (Thursday 8 Sep) 4-6pm.
- Mon-Thu 6-9pm in Altgeld room 343: Math Department tutors (not our TAs) can help with your homework. See the Tutoring Room page.
- **Midterm 1 Information and practice problems - start studying today!**
- List of differentiation rules for lecture today. You are responsible for knowing all of these.

**Friday Sep 2**

- **Homework HW3** is due in recitation section on Tuesday 6 Sep.
- **Webassign homework 4** (due Wednesday 7 Sep 11am).
- Ask homework questions at the class Discussion Forum (under "Communication" in WebAssign). It will be active over the weekend.
- **Cycloid video** related to yesterday's worksheet.
- **Theorems on continuity** for later in this lecture.

**Wednesday Aug 31**

- **Webassign homework 3** (due Friday 11am).
  Have you been dropped from the course in WebAssign? Then log in to **WebAssign** and update your account profile to show your official university email address (that is, in the form **netid@illinois.edu**). You will receive a confirmation email at the new address. You will need to respond as directed in that email. Then send email to **Professor Tyson** or **Professor Laugesen** asking to be reinstated to the course.
- **Homework HW2** is due at the beginning of your recitation section tomorrow.
- The Tutoring Room is open in room 243 Altgeld Hall from 4-6 pm every Monday, Tuesday and Wednesday.
- **Limit laws from Section 2.3.**
- **Examples for today's class.**

**Monday Aug 29**

- **Homework HW1** is due at the beginning of your recitation section tomorrow.
- **Homework HW2** has been assigned. See the Assignments page. It is due at the beginning of your recitation section on Thursday, September 1.
- The Tutoring Room is open from today. Room 243 Altgeld Hall from 4-6 pm every Monday, Tuesday and Wednesday.
- Professor Tyson's office hour from 4-6 pm on Friday, September 2 has been rescheduled to 3-4 pm Tuesday, August 30 and 3-4 pm Thursday, September 1.

**Friday Aug 26**

- Do **Webassign homework 2** (due Monday 11am).
- **Homework 1** has been assigned. See the Assignments page. It is due at the beginning of your recitation section on Tuesday, August 30.
- There is a handout reviewing the first half of today's lecture.
- The Tutoring Room will be open starting Monday, August 29. Rooms to be announced.

**Wednesday Aug 24**

- Material in tomorrow's worksheet is related to today's lecture. You should review the lecture notes before coming to section.
- There is a handout reviewing today's lecture.
- An interesting demonstration of superposition of waves (topic of yesterday's worksheet).

**Monday Aug 22**
Before tomorrow, please:

- bookmark this course website,
- write the exam dates in your schedule,
- purchase the textbook,
- sign up to Webassign,
- do Webassign homework 1 (due Wednesday 11am).

Then go to your small section meeting ("discussion section") tomorrow. It will meet every Tuesday and Thursday.