Included in this opening day handout:

1. General Information (four pages; please digest it before next lecture).
   - Includes Statement on Collaboration, Academic Integrity, etc.

2. Syllabus with lecture subjects and quiz dates.

3. Recitation and tutorial schedule forms for 6.041 and 6.431. Please complete the applicable one now. We know that you may have to make changes later, but **we need the forms at the end of today’s lecture** to have initial recitation assignments available by the morning of Thursday, February 3.
GENERAL INFORMATION

WELCOME to 6.041/6.431! This fundamental subject is concerned with the nature, formulation, and analysis of probabilistic situations. No previous experience with probability is assumed. This course is fun, but also demanding.

6.041 and 6.431: Students intending to take the undergraduate version of the course need to sign up for 6.041, while those intending to take the graduate version should sign up for 6.431, which includes full participation in 6.041, together with some additional homework problems, additional topics, and possibly different quiz and exam questions.

6.041/6.431 has three types of class sessions: lectures, recitations, and tutorials. The lectures and recitations each meet twice a week. In addition, there will be a tutorial once a week, which is not mandatory, but is highly recommended.

LECTURES serve to introduce new concepts. They have an overview character, but also include some derivations and motivating applications. You are expected to attend. Lectures are at 12pm–1pm on Mondays and Wednesdays in Room 34-101. The first lecture is on Wednesday, February 2.

RECITATIONS meet on Tuesdays and Thursdays, and attendance is mandatory. In recitation, your instructor elaborates on the theory, works through new examples with your participation, and answers your questions about them. The first recitations are on Thursday, February 3.

TUTORIALS meet on Thursday afternoons and Fridays. In tutorial, you discuss and solve new examples with a little help from your classmates and your instructor. Tutorials are active sessions to help you develop confidence in thinking about probabilistic situations in real time. Tutorials are not mandatory, but they are highly recommended. Past students have found them to be very helpful. **The TA who leads the tutorial you are assigned to will be your first point of contact for questions on the problem sets.** The first tutorials are on Friday, February 11.

RECITATION ASSIGNMENTS provided by the registrar will not be followed. Instead, recitation and tutorial assignments will be made based on the recitation and tutorial schedule forms you complete and turn in at the end of the first lecture. Since balancing the sizes of the sections is critical to effective teaching, you might not be assigned to your first choice of time; we apologize in advance. To allow maximum flexibility in scheduling, you must explicitly specify an MIT course conflict to eliminate a particular recitation or tutorial time. Recitation assignments will be available by 8am on Thursday, February 3, on the course web page (http://stellar.mit.edu/S/course/6/sp11/6.041/). The first tutorials are the following week, and the posting of the tutorial assignments may be later. If a change in your course schedule necessitates a change of section, explain your situation by email to the Head TA, Shashank Shekhar Dwivedi (head.ta@mit.edu). Recitation and tutorial assignments are paired; thus, a reassignment in one may require a reassignment in the other.

FIRST WEEK. There will be no tutorials during the first week of classes.
ADVANCED STUDENTS. There may be a possibility for 6.041 students to be assigned to 6.431 recitation sections. If you are interested in slightly faster paced or more advanced recitations and tutorials (while remaining responsible only for 6.041 assignments), please indicate so on the signup sheet.

INDIVIDUAL MEETINGS WITH YOUR RECITATION INSTRUCTOR AND TA are encouraged. We all want to help! They will both give you their office hours at the first recitation or tutorial meeting. If you have already made a reasonable effort, your instructor or TA will be glad to help you with homework problems, before or after they are due. However, do not expect either of them to work with you if you have not yet carefully read the relevant material in both the lecture handouts and the text.

ADDITIONAL HELP FROM STAFF MEMBERS. Your tutorial TA and your recitation instructor will both have office hours every week. OFFICE HOURS for faculty and staff for that week will be posted on the web site, and any changes to them will be announced on the website as well. Optional quiz reviews are presented uniformly for the entire class, not for individual sections. Similarly, any supplementary handouts will be identical for all sections.

SPECIAL PERSONAL SITUATIONS. Unforeseen events happen to many of us during the semester. If any are likely to affect your performance, please enlist the help of Student Support Services (http://web.mit.edu/uaap/s3/) and keep your TA, recitation instructor and/or the Head TA and the lecturer aware of your situation.

ADMINISTRATIVE MATTERS. Recitation and tutorial assignments will be handled by the Head TA, Shashank Dwivedi (head.ta@mit.edu). Copies of all material distributed can be found on the course’s web site and outside the TA office in 24-312. Graded problem sets will be returned to you in your assigned tutorial. All unclaimed problem sets will be placed outside 24-312 on the metal shelves.

PREREQUISITES. The prerequisite for 6.041/6.431 is 18.02, or a year of college level calculus for those with undergraduate degrees from other universities. Students who have not completed the prerequisite with a grade of A, B, C, or P may not enroll.

TEXT. The text for this course is Introduction to Probability (second edition) by Bertsekas and Tsitsiklis. It is available at the MIT Coop and many other book stores. Solutions to end-of-chapter problems are available at http://athenasc.com/prob-solved_2ndedition.pdf. A few of these problems will be covered in recitation and tutorial. The remaining ones can be used for self-study. (For best results, always try to solve a problem on your own before reading the solution.)

Additionally, the following books may be useful as references. They cover many of the topics in this course, although in a different style. You may wish to consult them to get a different perspective on particular topics:
2. S. Ross, A First Course in Probability

PROBLEM SET questions are posted on the course website according to the schedule in the course syllabus. PSets are due at the beginning of lecture on their due dates, typically
Wednesday. Baskets will be placed outside the lecture hall (34-101) ten minutes before lecture begins (approximately 11:55am) and will remain available until at least 12:15pm. Be sure to arrive on time the day PSets are due! **Place your solutions in the basket corresponding to your tutorial TA.** Solutions will be available on the course website shortly after lecture. There will be 11 problem sets assigned this term, with the final PSet not collected or graded. Your worst PSet score (out of the 10 collected) will not be taken into account, which essentially allows you to miss one PSet without penalty.

Since we post PSet solutions immediately after the PSets are due, **we do NOT accept any late PSets.** Students who submit a note from Student Support Services will be excused from the appropriate PSet. Please see the Head TA if you have further questions regarding this policy.

We grade homework, but often only a small, randomly chosen subset of the problems. We post detailed solutions on the course website. Your TA is available to discuss your work with you, both before and after it is due. You may encounter difficulty figuring out where your own solution of a homework problem went astray. There are many ways to approach most probability problems. Just agreeing with our problem solutions may not explain why your approach didn’t work. Please let your instructor or TA help you whenever such issues occur. If the intent of a question on a problem set is unclear, please email your assigned tutorial TA for clarification.

**QUIZZES AND EXAMS.** There will be two quizzes and a final exam this term. Quiz 1 will be on Monday, March 7 and, Quiz 2 will be on Monday, April 11, both during the regular lecture time (Room 34-101). A comprehensive final exam will be given during finals week at the time and place announced by the Schedules Office.

**CONFLICT EXAMS:** Since both the quizzes are given during lecture time, we won’t schedule any conflict exams. Conflicts for the final are resolved by the Schedules Office.


**STUDY HABITS.** In order to get the most out of the course, it is important to not fall behind. It is also important to read the text carefully before attempting to solve the problem sets. A very good practice is to review the transparencies handed out at lecture before attending the next lecture or recitation; this way, recitations and tutorials will be much more informative and meaningful.

Make it a point to go to staff office hours if you have any questions or just want to chat about the course; we count on seeing you during the term! Also, it is a good idea to retain a copy of your completed homework before you turn it in. This lets you compare it with our solutions right away, rather than waiting a week until the graded homework is returned to you.

**GRADES** will be determined by your work in all aspects of this subject. Final grades are assigned in a meeting of the entire staff. **Your TA is not allowed to discuss likely final grades with you.**
The weighting that will be used to combine various elements of your performance is:

- First Quiz: 25%
- Second Quiz: 25%
- Final: 35%
- Homework: 10% (based on your best 9 out of 10 problem sets)
- Attendance & Participation: 5% (Your recitation instructor’s and tutorial TA’s combined assessment, based primarily on their contact with you during recitations and tutorials.)

**6.041/6.431 Statement on Collaboration, Academic Integrity, etc.**

We encourage working together whenever possible — working out problems in tutorials, discussing and interpreting reading assignments and homework. Talking about the course material is a great way to learn.

Regarding homework, the following is a fruitful (and acceptable) form of collaboration: discuss with your classmates possible approaches to solving the problems and then have each one fill in the details and write her/his solution independently. An unacceptable form of dealing with homework is to copy a solution that someone else has written.

We discourage, but do not forbid, use of materials from prior terms that students may have access to. Furthermore, at the time that you are actually writing up your solutions, these materials must have been set aside; copy-editing from a bible is not acceptable.

At the top of each homework you turn in, we expect you to briefly list all sources of information you used, other than the text, books on reserve for this course, or discussions with 6.041/6.431 staff. A brief note such as “Did homework with John Thompson and Jane Appleby in study group” or “Looked at old bible for Problem 4” would be sufficient. With such a disclosure, there is no penalty or other downside to the use of sources or collaboration. On the other hand, using such sources without reference is plagiarism and is not acceptable.

After a quiz has been returned, we give students a limited amount of time to resubmit their quizzes for regrades if they feel that there is a problem with the grading on their exam. Your new grade can turn out to be higher, lower, or the same as before. (We reserve the right to regrade the entire exam.) If you submit an exam to be regraded, **do not write anything at all on the exam booklet.** Please write a note on a separate sheet of paper. We will reconsider the grade based on the explanation in your note, but TAs are not allowed to discuss the grading with you personally. Any attempt to modify an exam booklet is a serious breach of academic integrity. We photocopy a substantial fraction of the exams before they are returned and the probability of catching a change is high.

In general, we expect students to adhere to basic, common sense concepts of academic honesty. Presenting another’s work as if it were your own or cheating in exams will not be tolerated. The appropriate authorities at MIT will be notified in cases of academic misconduct.
6.041 RECITATION AND TUTORIAL SCHEDULE FORM
Please fill out and hand in this form at the end of the first lecture.

PLEASE PRINT NEATLY (especially your email address)

Probability you will actually take 6.041 for credit:

FIRST NAME:

LAST NAME:

YEAR: ___________________________ COURSE: ___________________________

EMAIL:

Recitation sections for 6.041 meet twice a week. In the space below, indicate your top 3 choices in decreasing order of preference (i.e. 1 indicates your first choice). Also indicate times in which you have a direct conflict, by writing the MIT course number with which you have the conflict.

Tuesdays and Thursdays 10:00–11:00 ___________________________

Tuesdays and Thursdays 11:00–12:00 ___________________________

Tuesdays and Thursdays 1:00–2:00 ___________________________

Tuesdays and Thursdays 2:00–3:00 ___________________________

Tutorials meet once a week on Thursdays, Fridays, and possibly Mondays. In the schedule below, please indicate times in which you have a direct conflict. Write the MIT course number with which you have the conflict. Times with an X are not available.

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Interested in attending 6.431 recitations/tutorials? (Consider this if you are interested in a slightly more advanced version, while being responsible only for 6.041 assignments.)

If “yes”, put a check here: ☐
6.431 RECITATION AND TUTORIAL SCHEDULE FORM
Please fill out and hand in this form at the end of the first lecture.

PLEASE PRINT NEATLY (especially your email address)

Probability you will actually take 6.431 for credit: ________________________________

FIRST NAME: __________________________________________________________________

LAST NAME: __________________________________________________________________

YEAR: ___________________________ COURSE: ________________________________

EMAIL: ______________________________________________________________________

Recitation sections for 6.431 meet twice a week. In the space below, please indicate times
in which you have a direct conflict. Write the MIT course number with which you have the
conflict. Only the times below may be offered for 6.431 Students this term.

Tuesdays and Thursdays 11:00–12:00 ________________________________

Tuesdays and Thursdays 12:00–1:00 ________________________________

Tutorials meet once a week on Thursdays or Fridays. In the schedule below, please indicate
times in which you have a direct conflict. Write the MIT course number with which you
have the conflict. Times with an X are not available.

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