**Math 7 Mathematics of Gambling Course Information Fall 2017**

**Time and Meeting Place:** MWF 10:00-10:50, Fl 106
**Instructor:** Professor Jim Hoste, B205, x73258, jhoste@pitzer.edu
**Office Hours:**MW 11-12, F 1-2, and by appointment
**Text:** Class Notes available on Sakai and *Beat The Dealer*, E.O. Thorpe.
**Prerequisites:** High School algebra

1. **Course Overview:** This course is an introduction to elementary probability theory. We will explore this topic by analyzing various gambling games. Topics will include: rolling dice and flipping coins, odds versus chance, roulette and expected value, dealing with infinity, craps, random walks, permutations and combinations, poker hands, keno, bingo, Pascal's triangle, the normal distribution, and Blackjack.

2. **Learning Outcomes:** After taking this course, the successful student should be able to:

   - determine the chance of random events involving coins, dice, and cards
   - compute the expected value of a gambling game
   - be able to compare various bets using expected value
   - understand combinations and permutations and be able to count outcomes of various events
   - be able to evaluate risk and make informed choices in every-day life

3. **Course Work:** There will be regular homework assignments due once a week. Most, if not all, homework will be done on-line using WeBWorK. Homework and due dates will be posted on the class website. LATE HOMEWORK WILL NOT BE ACCEPTED (except in the case of illness, personal emergencies, etc.). There will be a 15–20 minute quiz every week, at *one of* our class meetings. THERE WILL BE NO MAKE-UP QUIZZES. (The lowest three quizzes will be dropped.) A final exam will be given at the regularly scheduled time. (Consult the schedule of final exams for the exact time.)

4. **WeBWorK** To connect to WeBWorK, go to `http://pzwork.pitzer.edu/webwork2`. This should take you to the CAS login page. To log on,

   (a) Choose the name of your college from "select your college."

   (b) Enter your username followed by a period followed by your institution's three-letter code (cgu, cmc, cuc, hmc, jsd, kgi, pom, ptz, scr). For example, Professor Hoste's username is `jhoste.ptz`

   (c) Enter your password. (This should be the same as your password to get into Sakai.)

   You should now be taken to the WeBWorK page. You should now see a list of courses in which you are enrolled that are using WeBWorK. (Probably only this class, Math007PZ.) Select Math007PZ. There should now be a "Main Menu" on the left where you can select "Homework Sets." Finally, this should take you the first homework set called "Orientation." Select that. This is an introductory tutorial that will teach you how to use WeBWorK.

   If you have problems, email Professor Hoste.

5. **Grading:**

| coursework | weight |
|---|---|
| Homework | 20% |
| Quizzes (may drop lowest three) | 50% |
| Final Exam | 30% |

| grading scale | |
|---|---|
| 90–100% | at *least* an A |
| 80–90% | at *least* a B |
| 65–80% | at *least* a C |
| 50–65% | at *least* a D |
| 0–50% | F |

6. **Calculators:** Calculators will be useful for the homework, quizzes, and final exam. Students should have a calculator and know how to use it.

7. **Special Accomodations** At Pitzer we strive to provide an accessible learning experience for all students. If you anticipate or experience physical or academic barriers based on a documented access/disability need, you are welcome to contact Pitzer Academic Support Services at `academicsupport@pitzer.edu` to explore reasonable accommodation.