SYLLABUS FOR MATH 1310 (Contemporary Mathematics)

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OFFICE HOURS: MONDAYS 8:00 – 8:30, 1:00 – 1:30
TUESDAYS 8:00 – 8:30, 10:00 – 11:15, 1:00 – 1:30
WEDNESDAYS 8:00 – 8:30, 1:00 – 1:30
THURSDAYS 8:00 – 8:30, 10:00 – 11:15

CATALOG DESCRIPTION: An introduction to contemporary mathematical ideas and problem-solving techniques. Designed for students requiring one college-level mathematics course. This course cannot be applied toward any degree in the Department of Mathematics and Statistics. (MATH 1332)

PREREQUISITE: A grade of C or better in MATH 0300, TSI MATH score 343, TSI MATH complete, or TSI MATH exempt. If you do not meet this prerequisite, you may be dropped from the course without prior notification at your own expense. Please see your instructor immediately if you do not meet this prerequisite, so you can be enrolled in the appropriate MATH course.

AUDIENCE: This is a freshman-level mathematics course, which requires a background consisting of two years of high school mathematics or MATH 0300. The course is primarily intended for majors in liberal arts, social and behavioral sciences.

PURPOSE: This course satisfies the general education core mathematics requirement, elevating the student's mathematical literacy to college-level by introducing contemporary mathematical ideas and problem-solving techniques that demonstrate the broad usefulness and importance of mathematics to modern life.

TEXTBOOK: MATH 1310 College Math by Blitzer, UHD Custom Edition, by Robert Blitzer, Pearson Education Company, Inc. Boston, 2016. ISBN 978-1-323-52358-2 (Book bundled with MyMathLab).

GOALS/OBJECTIVES: At the end of the course, a student should be able to:
1. Apply critical thinking and problem-solving strategies to choose and analyze mathematical models to solve problems from real-world settings.

2. Understand the basic definitions of set theory, apply the language and notation of sets by performing operations to combine sets, and use Venn diagrams to solve survey problems.

3. Use logical reasoning to determine the validity of an argument or statement and apply those techniques to solve problems.

4. Interpret, analyze, and graph various representations of data with linear and nonlinear functions and models.

5. Solve problems in mathematics of finance by calculating simple interest, compound interest, present and future value of an annuity.

6. Develop counting techniques utilizing the fundamental principle of counting, permutations, and combinations, and apply those techniques to solve counting problems.

7. Demonstrate an understanding of the fundamentals of probability, and apply probability/counting techniques to solve problems.

8. Define statistics sampling, frequency distributions, measures of central tendency and dispersion to compare statistical data sets.

Where to Find Course Resources: The first place to seek assistance and resources is from your instructor, both inside and outside of class. Next, students enrolled in MATH 1310 at UHD have access to the Center for Math & Statistics (formerly called the Math Lab) in the Academic Support Center (N925) where they may get additional tutoring with

understanding concepts or improving their skills. The Center is staffed with mathematics faculty and student assistants, and offers tutorial help, calculators, and computer access on a walk-in basis. The Center for Math & Statistics is open for tutoring Monday-Saturday. You are encouraged to visit the Center for Math & Statistics throughout the semester whenever you feel you need extra help - no appointment required. It is also an excellent place to study the textbook and work on homework problems, so that you can receive immediate answers to your questions as necessary.

Department Grading Policy: The final exam for this course is comprehensive, and counts 1/3 of your course average. Your final course average will be used to assign your final course grade according to the standard college formula shown here:

90-100 "A" 80-89 "B" 70-79 "C" 60-69 "D" 0-59 "F"

Method of Evaluation: Three (3) of four major in-class exams at 100 points each will be counted as 39% of your grade. The final exam grade will count 33% (1/3 of your semester of your grade). The final exam contains multiple choice questions to be taken on a scantron provided by the instructor. The remaining 28% of your grade is from in-class activities (group work), your MyMathLab online homework and MyMathLab online quizzes.

Extra Credit for the Course: All MyMathLab homework and quizzes are always due the morning of the test day covering that material, and are closed after the due date. You will receive 10 points of extra credit (5 points for the MyMathLab homework and 5 points for the MyMathLab quizzes) added to the test if all MyMathLab homework and quizzes have a grade of 90 or better. You can also receive up to 5 points more extra credit for test corrections if turned in on time and are done on a separate sheet of paper (You must write the questions and show all work to receive extra credit).

In-Class Activities (Group Work): Over the course of the semester, there will be several in-class assignments which can be done in groups. On that day when an assignment is given, the assignment will count as the role sheet. Be sure to turn in your assignment even if it is incomplete to be counted as present! These assignments cannot be made up, so if you are absent, you will get a grade of 0 for the daily assignment.

Withdrawing from the Course or Receiving an Incomplete: Please be aware of the last day to withdraw with a course grade of "W." This date is published in the semester class schedule. If you do not complete the course requirements and do not officially withdraw, you will receive a course grade of "F." This is university policy over which your instructor has no control. You cannot receive the grade "I" (Incomplete) unless you have a documented personal emergency that prevents you from completing the last fraction of the course, such as the last test and/or the final exam. You must have a passing average based on the work you have already completed to receive an "I".

Attendance Policy: An attendance policy is enforced for this class! Your failure to attend class, or make contact with faculty to adequately explain your absence by the 10th class day of the semester will result in being administratively dropped from this course. Being dropped from this course may affect your enrollment status and/or your financial aid eligibility. If a student misses the equivalent of more than 6 hours of class, the instructor will notify the MS department office that the student is in violation of the attendance policy. The student's advisor will also be notified.

Calculator Policy: Each student is expected to purchase or otherwise have access to a scientific calculator throughout the semester and will be allowed to use a scientific calculator on the final exam. A scientific calculator is one that includes the !, nPr, and nCr function keys.

Excess Course Attempts: In accordance with state law, effective Fall 2004 the University of Houston Downtown is charging an additional fee per semester credit hour for any course that is repeated for the third time, beginning with the Fall 2002 semester. If a course has been previously attempted twice, the third enrollment will result in the additional charge. An attempt is defined as an enrollment that results in any letter grade (including "F" and "W").

GENERAL UNIVERSITY POLICIES: All students are subject to UHD's Academic Honesty Policy and to all other university-wide policies and procedures as they are set forth in the UHD University Catalog and Student Handbook.

STATEMENT ON REASONABLE ACCOMMODATIONS: UHD complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for students with a disability. In accordance with Section 504 and ADA guidelines, UHD strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. If you believe that you have a documented disability requiring academic adjustments/auxiliary aids, please contact the Office of Disability Services, One Main St., GSB314, Houston, TX 77002. (Office) 713-221-5078 (Website) www.uhd.edu/disability/ (Email) disabilityservicess@uhd.edu

Using MyMathLab (See separate MML Instruction Sheet in this Syllabus): To supplement what is done in class, your instructor will **REQUIRE** an online resource called MyMathLab. To use MyMathLab, you must purchase a Student Access Code from the UHD Bookstore (bundled with custom textbook or sold separately) or purchase it online at www.mymathlab.com. If you purchased a MyMathLab code for MATH 1310 last semester (i.e. you are repeating the class), you DO NOT need to purchase a new code this semester. Your account will still be active, but you will need to enroll in a new section. You can use MyMathLab on any computer that has Internet access. If you do not have a computer at home with Internet access, you can log into MyMathLab from a UHD computer, print out the MyMathLab assignment, work through the exercises on paper, and then enter the answers in MyMathLab when you are next on campus. To register with MyMathLab, you will also need a valid email address – use one that you regularly check. You must register with MyMathLab at www.mymathlab.com. You may be asked for the following information: (1) The course ID number listed on the separate MyMathLab Information Sheet in this syllabus. (2) The zip code for UHD (77002). You will then create a Login Name and Password which you will use to log in whenever you use MyMathLab at www.mymathlab.com. Be sure to record your exact login name and password for future logins. Note: The computers in the Center for Math & Statistics (formerly called the Math Lab) in N925, the Academic Computing Labs (S800, C300, B200), the PLTL (Peer Led Team Learning) Lab (S738), and the SI Lab (S405) can be used to access MyMathLab.

In MyMathLab you can: • Complete and submit homework assignments online (these are due on the test day); • Check out your MyMathLab homework grades and other course grades in the Gradebook (I will keep your grades current on MML); • View a complete online version of the textbook and look at multimedia sources such as online video clips that accompany the textbook, and much more. Be sure to register with MyMathLab during the first week of the semester, so you can begin to use it right away. A free 14-day temporary access is also available during the first two weeks of class.

Tips for Becoming a Successful College Student:

1. Come to class.

2. Read your book.

3. Do your homework and quizzes in MyMathLab.

4. Listen and ask questions.

5. Contribute to classroom discussions.

6. Use any tutoring resources that are available.

7.Interact with your teachers, either face to face or using the phone or email.

8. Form study groups with your classmates.

9. Meet with your advisor.

10. Get involved in campus activities.

11. Share new ideas with your friends, family, and fellow UHD students!

VISIT THE UHD ALGEBRA STUDENT WEB PAGE FOR MORE INFORMATION (including the Math 1310 Final Exam Review): http://cms.uhd.edu/qep/algebra

Math 1310 Fall 2018 Calendar

Date	Section Covered
Aug 20	1.1
22	1.2
27	1.3
29	2.1
Sept 3	**Holiday**
5	2.2
10	2.2
12	2.3
17	2.5
19	**Test 1**
24	3.1
26	3.2
Oct 1	3.3
3	3.4
8	**Test 2**
10	7.1
15	7.2
17	7.6
22	8.3
24	8.4
*29	**Test 3**
31	8.5
Nov 5	11.1
7	11.2
12	11.3
14	11.4
19	**Test 4**
21	**Holiday**
26	12.1, 12.2
28	12.2, 12.3
Dec 3-4	**Reading Days & Final Exam Review** (12/3 9:00-12:00) & **E-Final Exam**
5	**In-class Final Exam** (10:00-12:30)

* **Last Day To Drop A Course With A Grade Of "W"**

MyMathLab Computerized Homework System Instructions – REQUIRED!!!

To register for Math 1310 CRN11573 Fall 2018:

1. Go to www.pearson.com/mylab .

2. Under Register, select Student .

3. Confirm you have the information needed, then select OK! Register now.

4. Enter your instructor's course ID: blumberg37574 , and Continue .

5. Enter your existing Pearson account username and password to Sign In.

You have an account if you have ever used a MyLab or Mastering product.

» If you don't have an account, select Create and complete the required fields.

6. Select an access option.

» Enter the access code that came with your textbook or that you purchased separately from the bookstore.

» Also available for your course, you can:

- Buy access using a credit card or PayPal.
- Get temporary access.

7. From the You're Done! page, select Go To My Courses .

8. On the My Courses page, select the course name Math 1310 CRN11573 Fall 2018 to start your work. Go to Assignments.

You will need to complete 1.1 on the first day.

To sign in later:

1. Go to www.pearson.com/mylab .

2. Select Sign In .

3. Enter your Pearson account username and password, and Sign In .

4. Select the course name Math 1310 CRN11573 Fall 2018 to start your work.

To upgrade temporary access to full access:

1. Go to www.pearson.com/mylab .

2. Select Sign In .

3. Enter your Pearson account username and password, and Sign In.

4. Select Upgrade access for Math 1310 CRN11573 Fall 2018.

5. Enter an access code bought at the bookstore or buy access with a credit card or PayPal.

NEED TECHNICAL SUPPORT? Call (toll-free) 844-292-7015

Testing Numbers To See If They Are Evenly Divisible By…

0	Undefined! No number can ever be divided by zero!!
1	All numbers are divisible by 1!
2	Even numbers – numbers ending in 0, 2, 4, 6 or 8
3	Add up the digits! If the sum of the digits is divisible by 3, then the number is too.
4	If when you divided the original number by 2 the quotient (result) was even or if the last 2 digits are divisible by 4.
5	If the number ends in 0 or 5
6	If the number is divisible by both 2 and 3
7	No divisibility test for 7!
8	If when the original number was divided by 4 the quotient (result) was even or if the last 3 digits are divisible by 8.
9	Add up the digits! If the sum of the digits is divisible by 9, then the number is too.
10	The number ends in 0.
11	Double digits for all numbers less than 100.

MATH 1310 – FORMULAS & TABLES

Set Theory

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

Logic

p	~p
T	F
F	T

p	q	p∧q
T	T	T
T	F	F
F	T	F
F	F	F

p	q	p∨q
T	T	T
T	F	T
F	T	T
F	F	F

p	q	p→q
T	T	T
T	F	F
F	T	T
F	F	T

Functions

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$y = mx + b$$

$$Ax + By = C$$

$$f(x) = mx + b$$

$$f(x) = ax^2 + bx + c$$

$$x = \frac{-b}{2a}$$

$$f(x) = b^x$$

$$f(x) = log_b x$$

Personal Finance

$$I = Prt$$

$$A = P(1 + rt)$$

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

$$A = Pe^{rt}$$

$$P = \frac{A}{\left(1 + \frac{r}{n}\right)^{nt}}$$

$$Y = \left(1 + \frac{r}{n}\right)^{n} - 1$$

$$A = \frac{P\left[\left(1 + \frac{r}{n}\right)^{nt} - 1\right]}{\left(\frac{r}{n}\right)}$$

$$P = \frac{A\left(\frac{r}{n}\right)}{\left[\left(1 + \frac{r}{n}\right)^{nt} - 1\right]}$$

Counting & Probability

$$n! = n(n-1)(n-2)\cdots(3)(2)(1)$$

$${}_nP_r = \frac{n!}{(n-r)!} \text{ or } \frac{n!}{p!\,q!\,r!\ldots}$$

$${}_nC_r = \frac{n!}{(n-r)!\,r!}$$

$$P(E) = \frac{n(E)}{n(S)}$$

Statistics

$$\bar{x} = \frac{\sum x}{n} \text{ or } \frac{\sum xf}{n}$$

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{n-1}}$$

"Math Classroom Etiquette Rules"

1. Go to the restroom before class.

2. Unless you become suddenly ill or you notify me before class, remain in class until dismissed by me.

3. Cell phones should be turned off and put away. No electronic earpieces that are not medically necessary are allowed.

4. Check the calculator policy to see what kind can be used in class!

5. No web surfing. Do not work on the online homework during class unless you are directed by your instructor or you are in Math 1201 or CSP 110M.

6. No sleeping - if you get drowsy, ask if you may use the restroom to splash water on your face.

7. If you are taking a test, do not get up for any reason unless you have completed your test! If you get up I will assume you have finished your test and I will take it up!

8. If you are late on test day, you will not be able to take the test after the first person has completed an exam.

The 10 Rules of Conquering Math 1310

Working hard is a good way to begin !!! Doing well on tests, like dark chocolate and finding a $100 bill, is a proven pathway to total bliss. But if math really "isn't your thing" or you're returning to school after a long hiatus, then consider the following:

1. There are two kinds of people that pass Math 1310: Those that work really really hard and those that don't tell the truth!

2. Don't come to math class thinking it's one of those "warm and fuzzy feel good about yourself " places, unless of course, you are making an "A". I'm not Dr. Phil. If a class wanted to make you feel instantly better about yourself, it would be in a bar or a therapy session. Come to class anyway, and don't be absent unless you are throwing up, bleeding profusely or just found out you're related to Bill Gates.

3. There's no "about" or "approximately" in the class start time. Show up to class on time! There's no need to stop for coffee or a doughnut on the way to class (unless of course you bring me a Starbucks made **my way**). It'll only make you leave to "answer the call of nature" (See rule #5). You should have no trouble staying awake in your exciting stimulating morning math class, therefore, eliminating the need for coffee. (Anyone who guesses my Starbucks order gets extra credit.)

4. There will be several opportunities for extra credit (bringing me coffee isn't really one of them). It has been my experience that EVERYONE can benefit from extra credit (both at the mall and in my course). Extra credit is like a sale - take advantage of it while it's here - because when it's gone, it's gone. Don't miss out!

5. There isn't an app on your phone which lets you know the best time to leave class while I'm teaching; in fact, there is never a good time while I'm teaching! I know more than you about math - that's why I'm the teacher and you're the student. I'm paid to be here and you pay to be here. Get the picture? Read my lips. You are expected to take care of business or "answer the call of nature" before class begins or wait until the end of class.

6. Your cell phone can do lots of things, but fortunately so far it hasn't replaced me. There is no need to have your phone out on your desk (or sitting in your lap). Who can resist checking out why your phone is vibrating? I can't and neither can you. Turn your phone OFF - you can still get your emails, texts, and missed calls after I'm done for today. Then we can have "show and tell", and report our most interesting tweet. If you missed the call from your relatives saying you won the lottery, they are sure to call back. Even relatives you didn't know you had will call you! Keep your phone turned off (you can always blame it on those lousy school rules - wink, wink)!

7. So you want to be the Texans quarterback or teach your French Poodle to do the Wobble. Then you're in the wrong class. Set realistic goals for yourself! Maybe you want to make a 100 on the next test - possible. But be warned: Making a 100 on a math test takes hard work - finishing the online homework EVERY day, taking the quizzes as many times as it takes to make a good grade, and doing lots of studying. It's not impossible!! But being the Texan quarterback? Get real!

8. Watch out for those time robbers called "friends". They want your time and attention but don't teach you anything that makes you smarter, especially math. You're not in Kansas or high school anymore! Just say "no"!! Time management is self taught, so start your course today. Make time in your daily schedule to do each homework (and redo the missed questions) and take the section quizzes. This means saying "No" to parties, shopping, road trips and other important events that may come up that prevent you from putting schoolwork first. If you think high school parties were fun, college parties are a lot better!! Remember, just say "No"!!

9. My personal very scientific survey reveals that no one in UHD's history has ever made an "A" in Math 1310 without doing the online homework. No one!! You may know more about quantum physics or underwater basket weaving than I, but Math is my field. You'll have to trust me on this.

10. You're not here as community service or to avoid the military draft. You are here to better your chances to succeed in life. If you don't think math will help you get there, then think again! President Obama doesn't count on his fingers - he took my math class at UHD. (This is a little known fact, but Barack and I are BFFs.) College is life changing. You have the chance to make a difference in your life - don't blow it!!

Commit these rules to memory. There will be a test - not mine. Your grade will be determined when you finish college and become the next billionaire. Don't forget the little people who helped you along the way!

NEED TO IMPROVE YOUR MATHEMATICS?
WANT FREE TUTORING?

Come visit the Math Lab in N-925 and get help in the following Math classes:

Beginning Algebra (MATH 0300)
Intermediate Algebra (MATH 1300)
College Algebra (MATH 1301)
Plane Trigonometry (MATH 1302)
Pre Calculus (MATH 1404)
Finite Math (MATH 1305)
Fundamentals of Calculus (MATH 1306)
College Mathematics for Liberal Arts (MATH 1310)

Instructor and peer tutoring.
Videos are available for viewing and to check out.
Calculators & textbooks available for in-lab use.
Computers available for online homework.

HOURS OF OPERATION

Mon – Thurs 8 am – 8 pm
FRI 8am - 2 pm & Sat 11-5

Sponsored by Computer and Mathematical Sciences Dept.
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