

Math 1332- Mathematics for Liberal Arts

Course Syllabus

Fall 2010

Instructor: Jack Hatton

Email: jack.hatton@hccs.edu

Phone: 713.718.2434

Office: Northline Campus

Office Hours: By Appointment

Catalog Description: MATH 1332: Mathematics for Liberal Arts is a course designed for liberal arts, non-mathematics, non-science, and non-business majors. The course provides students with an appreciation of the history, art, and beauty of mathematics in the world around us. Topics include an examination of sets with applications, probability and statistics, financial management, mathematical modeling, and fundamentals of geometry and its applications. 3 credit (3 lecture).

Prerequisites A grade of C or better in Math 0312 or the equivalent.

Textbook: *Thinking Mathematically*, Robert Blitzer, Fourth Edition, Prentice Hall, 2008.

Course Intent: The intent of this course is to provide the student certain manipulative skills with limits insofar as they apply to concrete but elementary problems in the social and natural sciences. Mathematical rigor will be kept to a minimum.

Audience: This course is for students who need to fulfill the mathematics core requirement for a degree in liberal arts.

Americans with Disabilities Act (ADA): The Houston Community College System is committed to providing the least restrictive learning environment for all students. HCCS promotes equity in academic access through the implementation of reasonable accommodations as required by the Vocational Rehabilitation Act of 1973, Title V, Section 504 and the Americans with Disabilities Act of 1990 (ADA) which will enable students with disabilities to participate in and benefit from all postsecondary educational activities. Students needing accommodations due to a documented disability should contact the ADA counselor for their college at the beginning of the semester. The faculty is authorized to provide only the accommodations requested by the Disability Support Services Office.

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc) who needs to arrange reasonable accommodations must contact the appropriate HCC Disability Support Service (DSS) Counselor at the beginning of each semester. **Instructors are authorized to provide only the HCC DSSO approved accommodations but must do so in a timely manner.**

Students who are requesting special testing accommodations must first contact the appropriate (most convenient) DSS office for assistance each semester:

DISABILITY SUPPORT SERVICES OFFICES:

System: 713.718.5165

Central: 713.718.6164 – *also for Deaf and Hard of Hearing Services and Students Outside of the HCC District service areas.*

Northwest: 713.718.5422

Northeast: 713.718.8420

Southeast: 713.718.7218

Southwest: 713.718.7909

After student accommodation letters have been approved by the DSS office and submitted to DE Counseling for processing, students will receive an email confirmation informing them of the Instructional Support Specialist (ISS) assigned to their professor.

New DE Student User ID

Your Blackboard login user ID will be your HCC User ID (sometimes referred to as the “W” number). All HCC students have a unique User ID. If you do not know your User ID you can look it up by visiting the HCC home page:

- From www.hccs.edu, under the column “CONNECT”, click on the “Student System Sign In” link
- Then click on “Retrieve User ID” and follow the instructions.

Or use the direct link to access the Student Sign In page:

<https://hccsaweb.hccs.edu:8080/psp/csprd/?cmd=login&languageCd=ENG>

The default student password is “distance.” Students will then be prompted to change their password after their first login. Please visit the Distance Education (DE) Technical Support website if you need additional assistance with your login.

Class Attendance:

As stated in the HCC Catalog, all students are expected to attend classes regularly. Students in DE courses must log in to their Blackboard class or they will be counted as absent. Just like an on-campus class, your regular participation is required.

Although it is the responsibility of the student to drop a course for non-attendance, the instructor also has the authority to block a student from accessing Blackboard, and/or to drop a student for excessive absences or failure to participate regularly. DE students who do not log in to their Blackboard class before the Official Day of Record will be AUTOMATICALLY dropped for non-attendance. Completing the DE online orientation does not count as attendance.

Notice For Students Outside Of HCC SERVICE AREA: Proctoring

Students who live or work outside the HCC service area and cannot take paper exams at one of our HCC testing locations MUST make arrangements for a proctor. For more information and to complete the required Proctor Approval Form, please visit de.hccs.edu.

HCC Course Withdrawal Policy (updated 7/26/2010)

Beginning Fall 2007, the State of Texas imposes penalties on students who drop courses excessively. Students are limited to no more than SIX total course withdrawals throughout their educational career at a Texas public college or university.

To help you avoid having to drop/withdraw from any class, contact your DE professor regarding your academic performance. You may also want to contact your DE counselor to learn about helpful HCC resources (e.g. online tutoring, child care, financial aid, job placement, etc.).

How To Drop A Class:

- **If a student decides to drop or withdraw from a class upon careful review of other options, the student can drop online prior to the deadline through their HCC Student Center.**
- **HCC and/or instructors may drop students for excessive absences without notification** (see Class Attendance below).
- **Students should check HCC's Academic Calendar by Term for drop/withdrawal dates and deadlines.** Classes of other duration (mini-term, flex-entry, 8-weeks, etc.) may have different final withdrawal deadlines. Please contact the HCC Registrar's Office at 713.718.8500 to determine mini-term class withdrawal deadlines.

Special Notice: "Students who repeat a course for a third time or more may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. Please ask your instructor/counselor about opportunities for tutoring or other assistance prior to considering course withdrawal or if you are not receiving passing grades."

Student Services

DISTANCE EDUCATION ADVISING AND COUNSELING SERVICES

Much DE student information can be found on the DE Student Services website: de.hccs.edu. Advising or counseling can be accomplished through our online request form [AskDECounseling](#). Counselors and Student Services Associates (SSA) can assist students with admissions, registration, entrance testing requirements, degree planning, transfer issues, and career counseling. In-person, confidential sessions, can also be scheduled to provide brief counseling and community referrals to address personal concerns impacting academic success.

EARLY ALERT

HCC has instituted an Early Alert process by which your professor will “alert” you through Distance Education (DE) counselors of concerns that you might fail a class because of excessive absences and/or poor academic performance.

INTERNATIONAL STUDENTS

International Students are restricted to ONLY ONE online/distance education class per semester. Please contact the International Student Office at 713-718-8520 if you have additional questions about your visa status.

NOTICE FOR STUDENTS OUTSIDE OF HCC SERVICE AREA

Students who live or work outside the HCC service area and cannot take paper exams at one of our HCC testing locations MUST make arrangements for a proctor. Please see the DE Student Services Additional Resources webpage for more information.

Virtual Classroom Conduct:

As with on-campus classes, all students in HCC Distance Education courses are required to follow all HCC Policies & Procedures, the Student Code of Conduct, the Student Handbook, and relevant sections of the Texas Education Code when interacting and communicating in a virtual classroom with faculty and fellow students. Students who violate these policies and guidelines will be subject to disciplinary action that could include denial of access to course-related email, discussion groups, and chat rooms or being removed from the class.

Resource Materials: Any student enrolled in Math 1332 at HCCS has access to the Academic Support Center in all colleges where they may get additional help in understanding the theory or in improving their skills. The Center is staffed with mathematics faculty and student assistants, and offers tutorial help, videotapes and computer - assisted drills. Also available is a Student's Solutions manual that may be obtained from the Bookstore.

The following chapters will be covered in the course. However, the order may not necessarily be in numerical order.

Unit 1: Chapter 2-Set Theory

Unit 2: Chapter 7-Functions

Unit 3: Chapter 8-Consumer Mathematics and Financial Management

Unit 4: Chapter 10-Geometry

Unit 5: Chapter 11-Counting Methods and Probability Theory

Unit 6: Chapter 12-Statistics

Student Learning Outcomes:

1. Analyze information using sets, Venn Diagrams, Counting Methods, probabilities and statistics to make conclusions based on data.
2. Incorporate the mathematics of finance to be consumer-wise.
3. Utilize geometric and trigonometric formulas to solve problems.
4. Apply basic algebraic concepts to linear, quadratic, exponential and logarithmic functions

Course Objectives: Upon completion of this course, a student will be able to:

1. Use Venn diagrams to solve application problems.
2. Identify sets and subsets and perform set operations.
3. Be familiar with the basic concepts of probability.
4. Find the probability of an event.
5. Use tree diagrams to find possible outcomes and use combinations and permutations.
6. Solve application problems involving probability.
7. Be familiar with the fundamentals of statistics.
8. Assess a statistical study.
9. Find the mean, median, and mode of given sets of raw data.
10. Interpret statistical tables and graphs.
11. Identify normal and skewed distribution curves.
12. Determine variance and standard deviation from a given sample.
13. Find the margin of error associated with a given sample.
14. Convert fractions and decimals to percents.
15. Convert percents to decimals and fractions.
16. Find simple and compound interest.
17. Find the future value of a given annuity.
18. Find the monthly payment and the total interest for a given simple interest amortized loan.
19. Identify points, lines, planes; read and measure angles.
20. Identify types of triangles and use the Pythagorean Theorem.
21. Find perimeter and area of polygons and circles.
22. Use right triangle trigonometry.
23. Apply linear and quadratic functions.
24. Apply exponential and logarithmic functions.

Determination of Your Final Grade: There will be 3 or 4 major examinations (at least one of these is an on-site exam) given in this class plus one comprehensive final examination (on-site exam). Your final course grade is awarded based on the following standard HCCS ten point scale.

Final Average	$90 \leq \text{Final Avg.} \leq 100\%$	$80 \leq \text{Final Avg.} < 90\%$	$70 \leq \text{Final Avg.} < 80\%$	$0 \leq \text{Final Avg.} \leq 69\%$
Final Course Grade	A	B	C	D or F

Policy on Late Assignments and Make-Up Exams: All homework assignments will be due on the day of each exam. Also, there will be **NO** makeup exams. If you miss an exam, the final exam will count twice. It will count once for the missed exam and again for the final exam itself. If you know in advance that you will be absent on an exam day, please let me know as soon as possible.

Grading Formula: Grades will be determined by the following formula.

Tests-60%

Homework-15%

Final Exam-25%