



Course Syllabus

Course #: MTH 1410 Course Name: Number Bases

Division: Arts & Sciences

Class Days: Online Class Time:
Location: Classroom: Laboratory:
Credit Hours: 1 Contact Hours: 1 Lab Hours: 0 Lecture Hours: 1

Instructor: Michelle Younker Office Location:
Phone: Email Address: myounker@terra.edu
Office Hours: By appointment
Division Office/Location: A202 Division Fax: 419.355.1248
Full-time Contact Person: Nina Schyllander Phone(s): 419.559.2307

Course Description:

This course provides a study of non-decimal numeration systems including binary, octal, and hexadecimal. Other topics include: place value in each system, conversions from one base to another, and addition in each base. Topics will be presented through the use of videotapes and the Internet. Graphing calculator required. THIS COURSE IS OFFERED ONLINE ONLY.

Prerequisite(s): None

Corequisite(s): MTH 0140 or MTH 1310. Note: This course is intended for Computer Science students.

Entry Level Skills and Knowledge:

Basic mathematics and computer skills.

Required Texts, Supplies and Equipment:

Number Bases. By Michelle L. (Macklenar) Younker and Nancy J. Sattler. 1998, 2006. Terra Community College.

Videotapes available in the College Store located on the first floor of Building B. Note: a refundable deposit of \$25 must be paid to receive the videos.

Hand-held Calculator: TI-83+ or TI-84+ required

Grading:

The final course grade will be determined as follows:

Notebook with homework (homework, class participation, etc.)	25%
Quizzes	50%
Comprehensive Final Exam	25%

Grading scale is as follows:

90 – 100	= A
80 – 89	= B
70 – 79	= C
60 – 69	= D
0 – 59	= F

Learning Outcomes:

General Education

Evaluate arguments in a logical fashion.

Technical Education

Course Outcomes:

Upon completion of this course, students should be able to perform these competencies:

1. Determine place values in the decimal, octal, binary, and hexadecimal systems.
2. Convert numbers in the decimal, octal, binary, and hexadecimal systems from standard form to expanded notations and vice-versa.
3. Add numbers in octal notation.
4. Add numbers in binary notation.
5. Add numbers in hexadecimal notation.
6. Convert numbers from one notation to another.
7. Use technology to convert numbers from one notation to another.
8. Use technology to add numbers in various number systems.
9. Use technology to perform Boolean Algebra.

Assessment of Student Learning:

This course may include a project that is one of several that will be used by faculty to assess student academic performance in the program. A panel of faculty will review all (projects or whatever assessment activity you are doing), then assess and summarize the academic performance of students at this point in the program. The results of this assessment will be shared among the department faculty, used to identify needed changes or improvements, and submitted to the Student Academic Assessment Committee as part of the college's overall student academic assessment effort.

Assessment Project and Measurement in course (if any):

Plan of Work:

MTH 1410 Topical Outline:

Week	Course Content	Homework Assignment	
		Assignment	Due Date
1 August 20-26, 2006	Access course website Contact Instructor Begin Session One	Send your email address to myounker@terra.edu	Monday, August 28, 2006
2 August 27- September 2	Work on Session One – Sections 1.1 and 1.2	Work the Homework Problems #1-10 at the end of Sections 1.1 and 1.2	Monday, September 4, 2006
3 September 3- 9	Work Chapter One Quiz Work on Session Two – Sections 2.1 and 2.2	Chapter One Quiz Work the Homework Problems #1-10 at the end of Sections 2.1 and 2.2	Friday, September 8, 2006 Monday, September 11, 2006
4 September 10-16	Work on Session Two – Section 2.3 and Session Three – Section 3.1	Work the Homework Problems #1-10 at the end of Sections 2.3 and 3.1	Monday, September 18, 2006
5 September 17-23	Work Chapter Two Quiz Work on Session Three – Sections 3.2 and 3.3	Chapter Two Quiz Work the Homework Problems #1-10 at the end of Sections 3.2 and 3.3	Friday, September 22, 2006 Monday, September 25, 3006
6 September 24-30	Work Chapter Three Quiz Work on Session Four – Sections 4.1 and 4.2	Chapter Three Quiz Work the Homework Problems #1-10 at the end of Sections 4.1 and 4.2	Friday, September 29, 2006 Monday, October 2, 2006
7 October 1-7	Work on Session Four – Section 4.3 and Session Five – Section 5.1	Work the Homework Problems #1-10 at the end of Sections 4.3 and 5.1	Monday, October 9, 2006
8 October 8-14	Work Chapter Four Quiz Work on Session Five – Sections 5.2 and 5.3	Chapter Four Quiz Work the Homework Problems #1-10 at the end of Sections 5.2 and 5.3	Friday, October 13, 2006 Monday, October 16, 2006
9 October 15- 21	Work Chapter Five Quiz Work on Session Six – Sections 6.1 and 6.2	Chapter Five Quiz Work the Homework Problems #1-10 at the end of Sections 6.1 and 6.2	Friday, October 20, 2006 Monday, October 23, 2006

Homework Assignment

Week	Course Content	Assignment	Due Date
10	Work Chapter Six Quiz	Chapter Six Quiz	Friday, October 27, 2006
October 22-28	Work on Session Seven – Sections 7.1 and 7.2	Work the Homework Problems #1-10 at the end of Sections 7.1 and 7.2	Monday, October 23, 2006
11	Work Chapter Seven Quiz	Chapter Seven Quiz	Friday, November 3, 2006
October 29-November 4	Work on Session Eight – Sections 8.1 and 8.2	Work the Homework Problems #1-10 at the end of Sections 8.1 and 8.2	Monday, November 6, 2006
12	Work on Session Eight – Section 8.3 and Session Nine – Section 9.1	Work the Homework Problems #1-10 at the end of Sections 8.3 and 9.1	Monday, November 13, 2006
November 5-11			
13	Work Chapter Eight Quiz	Chapter Eight Quiz	Friday, November 17, 2006
November 12-18	Work on Session Nine – Sections 9.2 and 9.3	Work the Homework Problems #1-10 at the end of Sections 9.2 and 9.3	Monday, November 20, 2006
14	Work on Session Nine – Sections 9.4 and 9.5	Work the Homework Problems #1-10 at the end of Sections 9.4 and 9.5	Monday, November 27, 2006
November 19-25			
15	Work Chapter Nine Quiz	Chapter Nine Quiz	Friday, December 1, 2006
November 26-December 2	Review for Comprehensive Final Exam		
16	Comprehensive Final Exam	Exam	Sunday, December 10, 2006
December 3-10			

Course Requirements:

There will be an assignment given at the end of each section. The ten (10) homework problems at the end of each section must be worked. This should be completed before moving onto the next section. These assignments must be turned in to the instructor to be graded. There will also be nine (9) quizzes that should also be completed at the end of each section and turned in to the instructor.

Policies

Department Policies:

The final exam must be taken by **December 8, 2006**. All work for the course must be turned in to the instructor by **December 8, 2006**.

Homework assignments and quizzes must be received by 5:00 PM on the due date listed in the syllabus. Failure to do so will result in a ten percent (10%) penalty. The final exam must be taken on or before the date listed in the syllabus to avoid a ten percent (10%) late penalty.

It is expected that the student will participate by having assignments completed on time, answering questions, asking pertinent questions, accessing the website in a timely fashion, and having a cooperative attitude.

Final Exam Policy: The final exam is comprehensive. All students, regardless of grade average, must take the comprehensive final exam for this course.

Course Withdrawing: If for any reason you need to withdraw from this course, be certain that you do so according to College procedure. It is your responsibility to know and follow this procedure. If you simply stop coming to class, without officially withdrawing from the course, your grade is an automatic "F." Please follow official College procedure for withdrawing from this or any course.

College Academic Policies are located in the College Catalog. A copy of the current catalog may be picked up in any of the division offices or admissions. The list of college policies is also available online at <https://www.terra.edu/register/Collegecat/policies.asp>.

Support Services: The College offers a number of support services to assist in your success in this course and all courses. Among these services are the Writing & Math Center in B105, the Office of Learning Support Services, which coordinates the campus disability services and tutoring programs, the computer labs, and the computers in the atriums.

Any student who feels he/she may need an accommodation based on the documentation of a disability should contact the Office of Learning Support Services privately to discuss his/her specific issues. Please contact the OLSS at (419) 334-8400 X 208 or visit 100 Roy Klay Hall (Building A) to coordinate reasonable accommodations.

If you have a documented disability and are receiving academic accommodations through the Office of Learning Support Services, please schedule a meeting with your instructor in a timely manner so that we may discuss how these services will be arranged.

Tutoring services are available to students beginning the second week of every quarter. Students requesting tutoring services should obtain a tutor request form from the OLSS in 100 Roy Klay Hall (Building A) or online at the Terra website. Please note that instructor verification and acceptance of the Student Learner Agreement is necessary for all tutoring requests. All requests should be submitted to 100 Roy Klay Hall (Building A).