



Course Syllabus

Course #: MTH 0140 Course Name: Basic Algebra

Division: Arts & Sciences

Class Days: Mon/Wed or Tues/Thurs Class Time:
Location: Classroom: Laboratory:
Credit Hours: 4 Contact Hours: 4 Lab Hours: 0 Lecture Hours: 4

Instructor: Office Location:
Phone: Email Address:
Office Hours:
Division Office/Location: Division Fax: 419.355.1248
Full-time Contact Person: Phone(s): 419.559.2307

Course Description:

This course covers topics that include: order of operations, algebraic notation and expressions, scientific and engineering notation, solving linear equations and inequalities, the metric system, verbal problems, graphing linear functions and inequalities, systems of linear equations, exponents, polynomials, and factoring. Graphing calculator required.

Prerequisite(s): Placement Testing

Corequisite(s): None

Entry Level Skills and Knowledge:

Basic mathematics skills.

Required Texts, Supplies and Equipment:

Beginning and Intermediate Algebra, Second Edition by John Tobey, Jeffrey Slater, and Jamie Blair. Published by Prentice Hall.

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

Supplies: Graph paper and ruler

Grading:

The final course grade will be determined as follows:

Table with 2 columns: Assessment Type and Percentage. Rows: Daily Grades (quizzes, homework, class participation, etc.) 25%, Tests 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. Apply order of operations to simplify numeric and algebraic expressions.
2. Simplify and evaluate algebraic expression.
3. Solve first-degree equations and inequalities.
4. Evaluate formulae.
5. Interpret, manipulate, and simplify integer exponents.
6. Express numbers in standard, scientific, and engineering notation and convert from any one of these notations to any other.
7. Round to the correct number of significant digits.
8. Use and convert metric measurements.
9. Solve basic word problems.
10. Solve systems of linear equations with two and three variables.
11. Add, subtract, multiply, and divide polynomials.
12. Factor expressions with greatest common factors, grouping, general trinomials, difference of squares, and perfect square trinomials.

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):

TBA

Plan of Work:

Session	Date	Activities
See topical outline attached at back of this syllabus.		

Course Requirements:

There will be an assignment given each class period. This should be completed by the next class meeting and will be discussed at that time.

Policies

Department Policies: The schedule of tests will be followed as closely as possible. Not all of the course work is in the text. It is important to be in class and to take notes. Students are expected to read the text before class discussion.

Tests must be taken on the scheduled day. Failure to do so will result in a ten percent (10%) penalty. Make-up tests must be taken within one (1) week of the date that the test is given in class.

It is expected that the student will participate by having assignments completed on time, answering questions in class, asking pertinent questions, being on time, 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).

MTH 0140 Topical Outline:

Session	Course Content	Reading Assignment	Activity
1	Course Introduction		
	1.1 Adding Real Numbers	pp. 60 – 70	p. 68 – 1-10 all, 17-69 every other odd (17, 21, 25, etc.)
	1.2 Subtracting Real Numbers	pp. 71 – 75	p. 74 – 3-67 every other odd
	1.3 Multiplying and Dividing Real Numbers	pp. 76 – 85	p. 83 – 3-63 every other odd
2	1.4 Exponents	pp. 86 – 89	p. 89 – 5-51 odd
	1.5 The Order of Operations	pp. 90 – 93	p. 92 – 5-33 odd
	1.6 Using the Distributive Property to Simplify Algebraic Expressions	pp. 95 – 99	p. 98 – 1, 2, 7-39 odd
3	1.7 Combining Like Terms	pp. 100 – 104	p. 103 – 1-43 odd
	1.8 Using Substitution to Evaluate Algebraic Expressions and Formulas	pp. 105 – 112	p. 110 – 1-49 odd
4	1.9 Grouping Symbols	pp. 113 – 116	p. 115 – 3, 4, 5-27 odd
	Significant Figures & Estimation	Supplement	
5	TEST I (Chapter One)		
6	Metric System & Unit Conversions	Supplement	
7	2.1 The Addition Principle of Equality	pp. 126 – 131	p. 130 – 7-51 odd
	2.2 The Multiplication Principle of Equality	pp. 132 – 137	p. 136 – 1-49 odd
8	2.3 Using the Addition and Multiplication Principles Together	pp. 138 – 144	p. 142 – 1-35 odd, 37-65 every other odd
	2.4 Solving Equations with Fractions	pp. 145 – 152	p. 150 – 1-15 odd, 21-47 odd
9	2.5 Translating English Phrases into Algebraic Expressions	pp. 154 – 159	p. 158 – 1-33 odd
	2.6 Using Equations to Solve Word Problems	pp. 160 – 168	p. 166 – 1-33 odd
10	2.7 Solving Word Problems Using Geometric Formulas	pp. 169 – 180	p. 176 – 1-43 odd
11	2.8 Solving Inequalities in One Variable	pp. 181 – 191	p. 188 – 1-43 odd, 47-75 odd

Session	Course Content	Reading Assignment	Activity
12	TEST II (Chapter Two)		
13	3.1 The Rectangular Coordinate System	pp. 204 – 215	p. 211 – 1-7 odd, 11-31 odd
	3.2 Graphing Linear Equations	pp. 216 – 225	p. 222 – 1-11 odd, 12-28 all
14	3.3 The Slope of a Line	pp. 226 – 236	p. 234 – 1-49 odd
	3.4 Writing the Equation of a Line	pp. 239 – 242	p. 241 – 1-27 odd, 29-36 all
15	3.4 Writing the Equation of a Line (continued)	pp. 239 – 242	p. 241 – 1-27 odd, 29-36 all
	3.5 Graphing Linear Inequalities	pp. 243 – 247	p. 245 – 1-21 odd
16	3.5 Graphing Linear Inequalities (continued)	pp. 243 – 247	p. 245 – 1-21 odd
	3.6 Functions	pp. 248 – 258	p. 255 – 1-43 odd
17	3.6 Functions (continued)	pp. 248 – 258	p. 255 – 1-43 odd
	4.1 Systems of Linear Equations in Two Variables - Graphing	pp. 272 – 285	p. 282 – 5-14 all
18	TEST III (Chapter Three)		
19	4.1 Systems of Linear Equations in Two Variables - Substitution and Elimination (continued)	pp. 272 – 285	p. 282 – 15-49 odd
20	4.2 Systems of Linear Equations in Three Variables	pp. 286 – 292	p. 290 – 1-29 every other odd
	4.3 Applications of Systems of Linear Equations	pp. 294 – 304	p. 300 – 1-31 odd
21	4.3 Applications of Systems of Linear Equations (continued)	pp. 294 – 304	p. 300 – 1-31 odd
	5.1 The Rules of Exponents	pp. 324 - 332	p. 331- 1-65 every other odd, 69-95 odd
22	5.2 Negative Exponents and Scientific Notation	pp. 333 – 339	p. 338 – 1-53 odd, 55, 57, 61
	Engineering Notation	Supplement	
23	5.3 Fundamental Polynomial Operations	pp. 340 – 345	p. 344 – 5-31 odd
	5.4 Multiplying Polynomials	pp. 347 – 352	p. 351 – 1-59 odd

Session	Course Content	Reading Assignment	Activity
24	5.5 Multiplication: Special Cases	pp. 353 – 359	p. 357 – 5-47 odd
	5.6 Dividing Polynomials	pp. 360 – 366	p. 364 – 1-23 odd
25	TEST IV (Chapters Four and Five)		
26	6.1 Removing a Common Factor	pp. 376 – 378	p. 379 – 1, 2, 5-41 odd
	6.2 Factoring by Grouping	pp. 381 – 385	p. 384 – 1-25 odd
27	6.3 Factoring Trinomials of the Form $x^2 + bx + c$	pp. 386 – 392	p. 391 – 3-53 odd
	6.4 Factoring Trinomials of the Form $ax^2 + bx + c$	pp. 393 – 398	p. 397 – 1-55 odd
28	6.5 Special Cases of Factoring	pp. 400 – 405	p. 400 – 1-47 odd, 53-75 odd
	6.6 A Brief Review of Factoring	pp. 406 – 409	p. 408 – 1-43 odd
29	Course Review		
30	COMPREHENSIVE FINAL EXAM		