

MAT090 Foundations of College Mathematics

(3 credit hours)

Syllabus

Description

An algebraic foundation course covering algebraic expressions, solving linear equations, graphing in the Cartesian plane, and solving algebraic applications. This course does not count for credit toward graduation. Students must pass with a C or better and will be allowed to attempt to pass this class two times. Individuals who have earned credit in College Mathematics or higher level mathematics may not earn credit in MAT090.

Course Learning Outcomes (CLOs)

By the end of this course, the student will be able to do the following:

1. Add, subtract, multiply and divide integers.
2. Add subtract, multiply and divide rational numbers.
3. Simplify a mathematical expression applying the Order of Operations.
4. Convert verbal expressions to variable expressions.
5. Solve linear equations.
6. Graph linear equations using the Cartesian plane.
7. Solve and graph inequalities.
8. Perform basic math operations without the use of a calculator.

Course Topics Fractions

Decimals

Percent

Rounding and estimation

Operations on real numbers

Exponents

Simplifying and evaluating algebraic expressions and formulas

Solving equations

Solving inequalities

Using equalities to solve word problems

Using inequalities to solve word problems

Rational expressions and equations

Linear equations

Graphing equalities

Graphing inequalities

Course Prerequisites/Corequisites

None

Required Textbook(s) and Resources

The course technology fee includes student access to Aplia and an ebook version of your textbook. The fee will be charged to your account during the add/drop period.

An optional, highly discounted loose-leaf hard copy of the textbook is available for purchase in the Tiffin University bookstore. This is a special arrangement with TU and the discounted loose-leaf paper copy may not be available at the same rate from outside vendors.

Optional printed textbook (ebook included in course): Tobey, J., & Slater, J. (2017). *Beginning algebra w/ MySkillsLab access – Custom* (9th ed.). Pearson.

Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. Where applicable, Tiffin University has obtained permission to use copyrighted material.

Minimum Student Technology Requirements

In order to have a quality learning experience in your online courses, the University requires that your primary computer (the computer used to access course materials and on which you will be required to install course-specific software) meets or exceeds certain specifications. Click on the following link to view the specifications:

- [PC Recommendations](#)

Time Management

Time management is an important part of academic success. Please refer to the approximate (average) times noted below for readings and assignments to help plan your time accordingly.

Course Content

Please refer to individual activities for assessment guidelines.

| WEEK 1 | | | |
|--|---|------------|---------------------|
| Course Topics | Fractions Decimals Percent Rounding and estimation | | |
| Read/Review | | | Approx. Time |
| Textbook, Lectures, and Other Resources | Textbook: Chapter 0 MyMathLab Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. | | 5.50 hrs. |
| Activity Type | Course Learning Outcomes | Due | Approx. Time |

| | | | |
|--|--------------|--------|------------------|
| Quiz | CLO(s): 1 | Sunday | 2.00 hrs. |
| Problem of the Week | CLO(s): 1, 2 | Sunday | 1.50 hrs. |
| Approximate Weekly Time on Task (includes resources and activities) | | | 9.00 hrs. |

| WEEK 2 | | | |
|--|---|------------|---------------------|
| Course Topics | Operations on real numbers Exponents | | |
| Read/Review | | | Approx. Time |
| Textbook, Lectures, and Other Resources | Textbook: Chapter 1 MyMathLab Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. | | 5.50 hrs. |
| Activity Type | Course Learning Outcomes | Due | Approx. Time |
| Quiz | CLO(s): 1, 2, 3 | Sunday | 2.00 hrs. |
| Problem of the Week | CLO(s): 1, 3 | Sunday | 1.50 hrs. |
| Approximate Weekly Time on Task (includes resources and activities) | | | 9.00 hrs. |

| WEEK 3 | | | |
|--|---|------------|---------------------|
| Course Topics | Simplifying and evaluating algebraic expressions and formulas | | |
| Read/Review | | | Approx. Time |
| Textbook, Lectures, and Other Resources | Textbook: Chapter 1 MyMathLab Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. | | 5.50 hrs. |
| Activity Type | Course Learning Outcomes | Due | Approx. Time |
| Test | CLO(s): 1, 3 | Sunday | 2.50 hrs. |
| Problem of the Week | CLO(s): 1, 2, 3 | Sunday | 1.50 hrs. |
| Approximate Weekly Time on Task (includes resources and activities) | | | 9.50 hrs. |

| WEEK 4 | | | |
|--|---|------------|---------------------|
| Course Topics | Solving equations Solving inequalities | | |
| Read/Review | | | Approx. Time |
| Textbook, Lectures, and Other Resources | Textbook: Chapter 2 MyMathLab Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. | | 5.50 hrs. |
| Activity Type | Course Learning Outcomes | Due | Approx. Time |
| Quiz | CLO(s): 1, 2, 3, 5 | Sunday | 2.00 hrs. |
| Problem of the Week | CLO(s): 1, 2, 3, 5 | Sunday | 1.50 hrs. |
| Approximate Weekly Time on Task (includes resources and activities) | | | 9.00 hrs. |

| WEEK 5 | | | |
|--|---|------------|---------------------|
| Course Topics | Using equalities to solve word problems Using inequalities to solve word problems | | |
| Read/Review | | | Approx. Time |
| Textbook, Lectures, and Other Resources | Textbook: Chapter 3 MyMathLab Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. | | 5.50 hrs. |
| Activity Type | Course Learning Outcomes | Due | Approx. Time |
| Test | CLO(s): 1, 2, 3, 4, 5 | Sunday | 2.50 hrs. |
| Problem of the Week | CLO(s): 1, 2, 3, 4, 5 | Sunday | 1.50 hrs. |
| Approximate Weekly Time on Task (includes resources and activities) | | | 9.50 hrs. |

| WEEK 6 | | | |
|--|--|------------|---------------------|
| Course Topics | Rational expressions and equations Linear equations | | |
| Read/Review | | | Approx. Time |
| Textbook, Lectures, and Other Resources | Textbook: Chapter 6, 7 MyMathLab Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. | | 5.50 hrs. |
| Activity Type | Course Learning Outcomes | Due | Approx. Time |
| Quiz | CLO(s): 1, 2, 3, 5 | Sunday | 2.00 hrs. |
| Problem of the Week | CLO(s): 1, 2, 3, 5 | Sunday | 1.50 hrs. |
| Approximate Weekly Time on Task (includes resources and activities) | | | 9.00 hrs. |

| WEEK 7 | | | |
|--|---|------------|---------------------|
| Course Topics | Graphing equalities Graphing inequalities | | |
| Read/Review | | | Approx. Time |
| Textbook, Lectures, and Other Resources | Textbook: Chapter 7 MyMathLab Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. | | 5.50 hrs. |
| Activity Type | Course Learning Outcomes | Due | Approx. Time |
| Test | CLO(s): 1, 2, 3, 4, 5, 6, 7, 8 | Sunday | 4.00 hrs. |
| Approximate Weekly Time on Task (includes resources and activities) | | | 9.50 hrs. |

| | |
|---|-------------------|
| Approximate Time on Task for Entire Course | 64.50 hrs. |
|---|-------------------|

Grading Structure

| Activity | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Total |
|---------------------|-----------|-----------|------------|-----------|------------|-----------|------------|------------|
| Online Home Work | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 210 |
| Quizzes | 40 | 40 | | 40 | | 40 | | 160 |
| Tests | | | 100 | | 100 | | 100 | 300 |
| Problem of the week | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 105 |
| Total | 85 | 85 | 145 | 85 | 145 | 85 | 145 | 775 |

| Activity Categories | Percentage of Total Points |
|---------------------|----------------------------|
| Online Homework | 27% |
| Quizzes | 21% |
| Tests | 39% |
| Problem of the Week | 13% |
| Total | 100% |

| Grading Scale | |
|---------------|------------|
| Grade | Percentage |
| A | 90-100% |
| B | 80-89% |
| C | 70-79% |
| D | 60-69% |
| F | <60% |

Please see the Academic Bulletin for grade appeal information.

FERPA

The Family Educational Rights and Privacy Act (FERPA) protects student information. Other than directory information, such as name, address, phone number, etc., students must give consent for individuals to gain access to a student's educational record, including grades, transcripts, and behavior reports (unless the student is under the age of 18). Students also have the right to review their educational records. For a more detailed explanation, please see the Student Handbook.

Office for Student Accessibility Services

Please refer to your Moodle Home page for Office for Student Accessibility Services contact information to coordinate reasonable accommodations for students with documented disabilities.

Veterans

Please refer to your Moodle Home page for services for veterans, service members, and their families.

Moodle and Non-Moodle Technical Support

Blackboard Student Services will provide 24x7 Moodle helpdesk support for all Tiffin

University students and faculty. Locate contact information for Blackboard Student Services (Moodle-related issues) and for Tiffin University ITS helpdesk (non-Moodle related issues) on your Moodle Home page.

This syllabus is subject to change at the discretion of the University.