MA 15300 College Algebra Course Syllabus

Course Title: College Algebra

Course Number: MA 15300

Instructor Name:

Instructor Email:

Office Hours: M-F 1:17 - 2:04

Office Location: Rm 162

Course Description:

Review of algebraic operations, factoring, exponents, radicals and rational exponents, and fractional expressions. Linear and quadratic equations and modeling, problem solving, and inequalities. Graphs of functions and transformations, including polynomial, rational, exponential, and logarithmic functions with applications.

Course Prerequisites:

MA 11100 or MA 11300 with a grade of B- or higher or placement by departmental exam or permission of the instructor.

Course Access:

Canvas will be used. Therefore, students are EXPECTED to check it regularly. On Canvas, students will find Lesson Plans**,** ELearning Directions**,** Assignments (some)

MathLab (mymathlabforschool.com) will be used extensively. Students should expect and plan to become proficient with its operation. On MathLab, students will find Assignments (most)**,** Quizzes/Test & Personalized Reviews

Course Goals:

- Highlight the link of mathematics to the real world.
- Develop a wide base of mathematical knowledge, including
  - basic skills and concepts,
  - a functional view of mathematics, including graphical, algebraic, numerical, and contextual viewpoints
  - properties and applications of some of the basic families of functions
  - geometric visualization,
  - problem solving, predicting, critical thinking, and generalizing
- Incorporate the use of general academic skills such as

- communicating mathematics concepts,
- understanding and using technology, and
- working collaboratively.

Indiana College Core Area 3 Quantitative Reasoning Competencies

3.1. Interpret information that has been presented in mathematical form*.
3.2. Represent information/data in mathematical form* as appropriate
*mathematical form = functions, equations, graphs, diagrams, tables, words, and geometric figures.
3.3. Demonstrate skill in carrying out mathematical (e.g. algebraic, geometric, logical, statistical) procedures flexibly, accurately, and efficiently to solve problems.
3.4. Analyze mathematical arguments, determining whether stated conclusions can be inferred.
3.5. Communicate which assumptions have been made in the solution process.
3.6. Analyze mathematical results in order to determine the reasonableness of the solution.
3.7. Cite the limitations of the process where applicable. Communication
3.8. Clearly explain the representation, solution, and interpretation of the math problem.

Student Learning Objectives:

1. To correctly perform algebraic operations, to solve algebraic equations of degree two, to perform operations with exponents and radicals.
2. To sketch graphs of certain polynomial, exponential and logarithmic functions.
3. To solve systems of equations and inequalities.

In addition to the above, see also the Indiana Academic Mathematics Standards for Precalculus Algebra listed here.

Learning Resources & Texts

Text: PreCalculus, 6th Edition (Demana)
Special Materials: TI-83 Plus Graphing Calculator (provided) & iPad (provided)

Assignments

- EACS grading scale will be used. Semester Grades: 85% coursework, 15% final
- Coursework Grades will be divided 80% Summative Assessments (quizzes, tests, etc.) and 20% will be Formative Assessments (homework, class assignments, etc.
- Grading will be done daily with grades recorded at least weekly. 10% may be deducted for late work unless prior arrangements have been made.
- Student attentiveness and participation is expected

Grading Scale:

Grading scale will be as follows (EACS approved), 90-100 A / 80-89 B / 70-79 C / 60-69 D / 59 & below F.

Course Evaluation:

Collegiate Connection students, students will be provided on Canvas. All data collected is anonymous and will be shared with instructors and their departments at the end of the school year.

Academic Misconduct / Plagiarism / AI:

Academic Misconduct, including plagiarism (using other people's ideas/words and not giving them credit thus implying the work is your own original work) or using your own work from a previous course without the express permission of the instructor, is taken very seriously at any learning institution. It is taken very seriously in this class. Please be aware of what behaviors constitute academic misconduct (See Bulletin, Code of Students Rights, Responsibilities and Conduct Part II. A.) If caught cheating or plagiarizing, a student may receive no credit on the assignment and may result in an F for the course. Any instances of academic dishonesty will be reported to the Office of Student Conduct and Care and your Department Chair and may result in expulsion from the University. Additional potential consequences can be found under: potential consequences (See Bulletin, Code of Students Rights, Responsibilities and Conduct, Part III. A.: i.e., failure of the assignment, failure of the course and/or dismissal from the university) of such behavior.

Electronic sources such as AI are allowed on assignments but should not be used to just find answers but rather to supplement student learning. Use of any unapproved electronic sources on assessments will result in a zero on that assessment.

Student Support Services

Purdue University Fort Wayne is committed to your academic and personal success. Visit the Student Support Services page for a list of student support services, including academic services, technology services, health and wellness, and support from administrative offices. For help with technology, including Brightspace, visit the IT Services Student Technology Support page.

If you observe and/or are made aware of student behavior that leaves you feeling concerned, worried, and/or alarmed, trust your instincts and say something. The CARE Team can assist with the student of concern, whether that's you or someone you are referring. Report the concern through the online CARE referral form. Please note that this form is not for emergencies. If you know of a student who is injured, is injuring themselves or others, or is threatening injuries to themselves or others, please call 911 immediately.

Your emotional wellness and mental health are important. If you have a mental health disorder, are struggling with your mental health, your stress overwhelms your ability to cope with it, or you find yourself needing emotional support, please talk to someone. If you or someone you know is in a mental health crisis situation, call 911 or go to the local emergency room. Otherwise, please reach out to our Center for Student Counseling (CSC). All currently enrolled PFW and IUFW students have access to free counseling at the center. To make an appointment to talk with a counselor call 260-481-6200 or email csc@pfw.edu.

Course Schedule

Chapter P ~ Prerequisites
Chapter 1 ~ Functions and Graphs
Chapter 2 ~ Polynomial, Power, and Rational Functions
Chapter 3 ~ Exponential, Logistic, and Logarithmic Functions