Welcome

I am delighted to welcome everybody to Math 118, Pre- Calculus Algebra course, a face-to-face course. I am Dr. Robert Kreczner, and I will be your teacher. I am confident you will enjoy learning the course material, and I am also sure you will complete the course successfully.

What is Expected from You

What is Expected from You:

1. Attend all the classes unless you experience medical problems or serious personal issues. In such cases, you will be excused. While in class, you are required to comply with the current UWSP mask policy.

2. Do all the assignments posted in Canvas, read the textbook, do homework assignments, and take practice exams.
3. Be able to convert your handwritten assignments to pdf files, for example, using your phone.
4. Check Canvas at least once a day, Monday through Friday.

Contacts and Information about the Teacher

- Name: Dr. Robert Kreczner
- To contact me please use only this email: rkeczne@uwsp.edu
- Important: When sending me an email, please include Math 118 in its subject line.
- My office is D351, in Science Building

Office Hours

Monday to Friday, 9:00 am to 9:50 am, in my office, D351, Science Building.

Available Help

What	Location	Schedule	Cost
STEM Drop-In Tutoring	CBB 190	No appointment needed – stop by when tutors are available: https://www.uwsp.edu/tlc/Pages/dropInTutoring.aspx.	Free
STEM One-on-One Tutoring	ALB 018	By appointment. Visit ALB 018 (library basement) to make a request or complete online request form here: https://www.uwsp.edu/tlc/Pages/request-math-science-tutoring.aspx	Free

STEM Tutoring – Fall 2021

Textbook

Precalculus: Mathematics for Calculus,
7th Edition by Stewart, Redlin & Watson (Cengage)
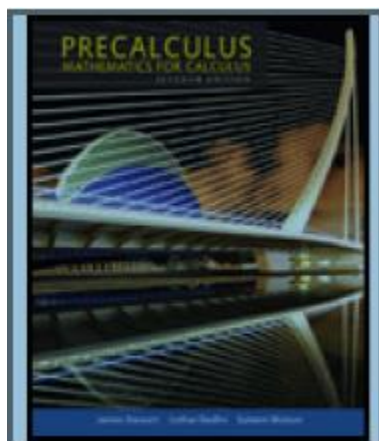
What We will Study

MATH 118. Precalculus Algebra. 4 cr. Topics include concepts, graphs, and properties of functions, inverse and algebraic functions, techniques of graphing, conic sections, linear and nonlinear systems, arithmetic and geometric series, mathematical induction and the binomial theorem. Preparation for Math 225; if you did not place into Math 225 . Prereq: 100 or Math 107 or suitable placement test score.

General Education Designation(s):
GEP: QL; AAS: AAS-QL, NW

Topics

• Solving Equations Algebraically and Graphically
• Solving Rational-Function Inequalities via Sign Charts
• Functions
o Definition and Properties (sums, differences, products, quo tients, roots, compositions, inverses, average rate of change and difference quotients)
o Polynomial and Rational Functions (Factor Theorem, Rational Zeros Theorem, long and synthetic division)
o Graphs of functions (intercepts and zeros, asymptotes, symmetry, transformations)
o Exponential and Logarithmic Functions
• Conic Sections (parabolas, ellipses, hyperbolas)
• Solving Systems of Linear Equations (substitution and elimination by hand; rref)
• Partial Fraction Decompositions
• Sequences (e.g., arithmetic, geometric)
• Sigma Notation and Geometric Series

As a General Education Quantitative Literacy course, the following learning outcomes must be met.
Quantitative Literacy Learning Outcomes
• Select, analyze, and interpret appropriate numerical data used in everyday life in numerical and graphical format.
• Identify and apply appropriate strategies of quantitative problem solving in theoretical and practical applications.
• Construct a conclusion using quantitative justification

The corresponding textbook sections that will be covered. The order of the sections listed below is not necessarily the order in which they may be covered. Suggested

MATH 118 Syllabus.pdf   Download Suggested MATH 118 Syllabus.pdf

1. Graphs
1.1 Real Numbers (Review)
1.2 Exponents and Radicals (Review)
1.3 Algebraic Expressions (Review)
1.4 Rational Expressions (Review)
1.5 Equations (Review)
1.6 Complex Numbers (Optional)
1.7 Modeling with Equations (Optional)
1.8 Inequalities
1.9 The Coordinate Plane; Graphs of Equations; Circles
1.10 Lines
1.11 Solving Equations and Inequalities Graphically
1.12 Modeling Variation (Optional)

2. Functions
2.1 Functions
2.2 Graphs of Functions
2.3 Getting Information from the Graph of a Function
2.4 Average Rate of Change of a Function
2.5 Linear Functions and Models
2.6 Transformations of Functions
2.7 Combining Functions
2.8 One-to-One Functions and Their Inverses

3. Polynomial and Rational Functions
3.1 Quadratic Functions and Models
3.2 Polynomial Functions and Their Graphs
3.3 Dividing Polynomials
3.4 Real Zeros of Polynomials
3.5 Complex Zeros and the Fundamental Theorem of Algebra (Optional)
3.6 Rational Functions
3.7 Polynomial and Rational Inequalities

4. Exponential and Logarithmic Functions
4.1 Exponential Functions
4.2 The Natural Exponential Function
4.3 Logarithmic Functions
4.4 Laws of Logarithms
4.5 Exponential and Logarithmic Equations
4.6 Modeling with Exponential Functions (Optional)
4.7 Logarithmic Scales (Optional)

10. Systems of Equations and Inequalities
10.1 Systems of Linear Equations in Two Variables
10.2 Systems of Linear Equations in Several Variables
10.3 Matrices and Systems of Linear Equations
Remark: Only cover the use of rref (reduced row echelon form) to solve linear systems.
10.4 The Algebra of Matrices (Omit)
10.5 Inverses of Matrices and Matrix Equations (Omit)

Homework Assignments and Exams

- A homework assignment will be given every week. It will be posted every Monday, and it will be due Sunday. The problems will be taken from the covered sections in the textbook.
- Weekly practice exams will be due Wednesday.
- Exams in class: Exam 1, after Week2; Exam 2, after Week5; Exam 3, after Week8; Exam 4, after Week 11; Exam 5, during final exam time.

Grading Policy

- Attendance 5%
- Homework Assignments 20 %
- Practice quizzes 25%
- Exams 50%

Name:	Range:		
A	100%	to	94 %
A-	< 94%	to	90 %
B+	< 90%	to	87 %
B	< 87%	to	84 %
B-	< 84%	to	80 %
C+	< 80%	to	77 %
C	< 77%	to	74 %
C-	< 74%	to	70 %
D+	< 70%	to	67 %
D	< 67%	to	64 %
F	< 64%	to	0 %

Calculators

I recommend that you should have a graphing calculator. TI-83 or TI-84, any version, these are the most frequently used models by students. You can use these calculators during exams.