Syllabus **Spring 2019**

Math 118—Precalculus Algebra

Topics of study include concepts, graphs, and properties of functions, inverse and algebraic functions, techniques of graphing, conic sections, linear and non-linear systems, arithmetic and geometric series, mathematical induction, and the binomial theorem. **4 credits**

Instructor: Gretchen Renfert	**Office Hours**	**Course Meeting Times**		
Office: B152 Science Bldg	Monday **1 – 1:50 PM**	Time	Days	Room
Phone: 715-346–2919	*or*	**9-9:50 AM**	MTWR	**Sci A210**
* **email:** grenfert@uwsp.edu	Wednesday **10 – 10:50 AM**			
Class website: D2L (NOT "Canvas")	*or*			
* *preferred method of contact*	*by appointment (See page 3)*			

Text (rental): *Precalculus: Mathematics for Calculus*, 7th edition
by Stewart, Redlin & Watson (Published by Cengage) **ISBN**: 978-1-305-07175-9
Topics include most of those in Chapters 1–4, and parts of Chapters 10-12.

Calculators: You will need a scientific calculator during portions, but not all, of the semester. Graphing calculators may be used at times, but you will not always be allowed to use a calculator on all parts of quizzes and tests—do not become too dependent on using either type of calculator.

* Computers, cell phones, SMART watches, iPads or other tablets, and calculators with a "QWERTY" keyboard are not allowed during exams or quizzes.

Prerequisites: Math 100 or Math 107 or a suitable placement test.
This course prepares you for: Math 120 if you did not place into Math 120
GEP: QL (See below)

Quantitative Literacy Learning Outcomes: Students will develop the following communication skills, and problem-solving approaches to applied problems in fields such as business, economics, life sciences and social sciences:

1) Select, analyze, and interpret appropriate numerical data used in everyday life in numerical and graphical format
2) Identify and apply appropriate strategies of quantitative problem solving in theoretical and practical applications.
3) Construct a conclusion using quantitative justification.

Evaluation: Course grade information will be available in **D2L** and will be determined by the following:

		Tentative Dates:
15 %	**Quizzes** (6 Quizzes, drop the **1** lowest)	
20 %	**Exam I**	(in-class on **Thursday, Feb 21**)
20 %	**Exam II**	(in-class on **Tuesday, March 12**)
20%	**Exam III**	(in-class on **Thursday, April 25**)
25%	**Comprehensive Final Exam**	**8 AM – 10 AM** **Monday, May 14**
100%		

Course Grades (%) at or above	93	90	87	83	80	77	73	70	67	60
will receive at least a grade of	A	A -	B +	B	B -	C +	C	C -	D +	D

(*Note*: There is no such grade as a D- at this university)

* I reserve the right to exercise discretion in raising a student's grade if the final weighted average does not appear to reflect the quality of a student's work (for example, because of one low exam score early in the course). I will not use discretionary judgments to lower a student's final grade.

Homework: Almost every day a list of homework problems will be given in class. Each of these will be a *minimal* list of problems which you need to understand in order to do well in this course. Doing the homework is extremely important, so make sure you stay on top of it and ask questions on whatever you don't understand. The homework will not be graded, but it is highly recommended that you practice doing problems on your own. (It is obvious on Quizzes and Exams whether students have been doing homework.)

Attendance is expected at every class meeting. Everyone becomes ill sometimes. If you become ill, I expect you to make a reasonable effort to come to class. If the illness or other emergency require absence from class, I expect you to make every attempt to keep up with what is being taught by checking **D2L**, following in your book and making every attempt to do the homework.

* Quizzes and exams MAY **NOT** BE MADE UP unless arranged with me ahead of time, and then only for sufficient reason.

If a dire emergency occurs, contact me as soon as possible to see if an exception is in order.

Incompletes: A grade of incomplete may be given when circumstances arise beyond the student's control and the student is unable to complete the course ***IF*** the student was passing when the circumstances arose.

Disability Accommodations: Reasonable accommodations are available for students who have a documented disability. Please notify the instructor during the first week of class of any accommodations needed for the course. For information on accommodations available to students with disabilities, call 715-346-3365, visit the Disability and Assistive Technology Center in room 609 of the Learning Resources Center, or visit their website: http://www.uwsp.edu/disability/Pages/default.aspx .

***Desire to Learn (D2L)** https://uwsp.courses.wisconsin.edu/d2l/home.

To access D2L, use your regular campus logon ID and password, and then click on our course:
MATH 118 Precalculus Algebra

Homework assignments, handouts, class work, grade information, and other class announcements can be found on the web in Desire to Learn (D2L).

All students are expected to know the UWSP Community **Rights & Responsibilities** and the **Student Academic Standards and Disciplinary Procedures** found on the Dean of Students webpage at http://www.uwsp.edu/dos/Documents/CommunityRights.pdf.

Food/Beverage: I would prefer that you not eat in class. I find food to be a distraction.

Cell Phones: I understand that occasionally you may want to take a picture of what is on the board. Other than that, cell phones should be silenced and put away once class begins.

For Academic Support:

1) Ask questions as they arise.

2) See me before or after class, during my office hours, or check to see if I am available at other times.

☺ 3) Tutoring services are available for this course!! Your Student Instructor is: Shaun

Tutoring

The Department of Mathematical Sciences and the Tutoring-Learning Center (TLC) offer free drop-in and group tutoring to support you in your math classes. In addition, the TLC offers the option for individual math tutoring sessions. The tutors are UWSP students who have done well in their classes and who are here to share their successful study habits and math content knowledge to help others succeed. Discussing mathematical concepts and practicing problems together clarifies and solidifies knowledge, and the tutors are eager to study with you.

If you have questions about the schedule or would like to make an appointment:

1. **Visit:** the TLC in room the basement of the Library, **ALB 018**
2. **email:** tlctutor@uwsp.edu
3. **Call:** (715) 346-3568

Name	Schedule	Location	Cost
Drop-In Tutoring Center	https://www.uwsp.edu/tlc/Pages/dropInTutoring.aspx	**DUC 205**	**FREE**
Group Tutoring	https://www.uwsp.edu/tlc/Pages/schedules.aspx	See TLC Website	**FREE**
One-on-One Tutoring	https://www.uwsp.edu/tlc/Pages/CA-tutoring.aspx	Visit ALB 018 to make a request.	**$9/session** * fee waived for students listed as low-income
The Math Room	https://www.uwsp.edu/mathsci/Pages/tutoring.aspx	**SCI A113A**	**FREE**

Renfert's Schedule:

	Monday	Tuesday	Wednesday	Thursday	* Friday
8:00 - 8:50	Math 105.1 Sci A208	Math 105.1 Sci A208	Office Hour	Math 105.1 Sci A208	
9:00 - 9:50	**Math 118.2 Sci A210**	**Math 118.2 Sci A210**	**Math 118.2 Sci A210**	**Math 118.2 Sci A210**	
10:00 - 10:50	*	*	Office Hour	*	
11:00 - 11:50	*Lunch*				
12:00 - 12:50	*	*	*	*	
1:00 - 1:50	Office Hour	Math 119.2 Sci A201	*	Math 119.2 Sci A201	
2:00 - 2:50	Math 105.4 Sci A202	Math 105.4 Sci A202	Office Hour	Math 105.4 Sci A202	
3:00 - 3:50	*	*	*	*	
4:00 - 4:50	* *Available by appointment*				

** Tentative Math 118 Schedule**

Week	Dates	Sections	Topic
1	Jan 22 - 24		Introduction
		1.1 - 1.7	Chapter 1 Review
		1.8	Inequalities
2	Jan 28 - 31	1.9	The Coordiante Plane; Graphs of Equations; Circles
		1.10	Lines
		1.11	Solving Equations & Inequalities Graphically
		1.8 - 1.11	Chapter 1 Review: 1-8 through 1.11
3	Feb 4 - 7	2.1 & **Quiz 1**	Functions; **Quiz 1**
		2.2	Graphs of Functions
		2.3	Getting Information from the Graph of a Function
		2.4	Average Rate of Change of a Function
4	Feb 11 - 14	2.5 & 2.6	Linear Functions & Models; Transformations of Functions
		2.6	Transformation of Functions (continued)
		2.7	Combining Functions
		Exploration	Fitting Lines to Data (p. 139)
5	Feb 18 - 21	2.8 & **Quiz 2**	One-to-One Functions & Their Inverses; **Quiz 2**
		2.8	One-to-One Functions & Their Inverses (continued)
		Review	Review Chapter 1-2
		Exam 1	**Thursday, February 21st**
6	Feb 25 - 28	**Exploration**	Modeling with Functions (p. 237)
		3.1	Quadratic Functions & Models
		3.1 & 3.2	Polynomial Functions & Their Graphs
		3.2 & 3.3	Dividing Polynomials
7	Mar 4 - 7	3.4 & **Quiz 3**	Real Zeros of Polynomials; **Quiz 3**
		3.6	Rational Functions
		3.6 & 3.7	Polynomial & Rational Inequalities
		3.7	(continued)
8	Mar 11 - 14	Review	Review Chapter 3
		Exam 2	**Tuesday, March 12th**
		Exploration	Fitting Polynomial Curves to Data (p. 325)
		4.1 & 4.2	Exponential Functions; The Natural Exponential Function
Mar 16 - 24			***SPRING BREAK***
9	Mar 25 - 28	4.3	Logarithmic Functions
		4.4	Laws of Logarithms
		4.5	Exponential & Logarithmic Equations
		Exploration	Fitting Exponential & Power Curves to Data (p. 392)
10	Apr 1 - 4	4.5 & **Quiz 4**	(continued); **Quiz 4**
		10.1	Systems of Linear Equations in Two Variables
		10.1 & 10.2	Systems of Linear Equations in Severable Variables
		10.2	(continued)
11	Apr 8 - 11	10.3	Matrices & Systems of Linear Equations **(Graphing Calculator)**
		10.3 & **Quiz 5**	(continued); **Quiz 5**
		Exploration	Linear Programming (p. 775)
		10.7	Partial Fractions
12	Apr 15 - 18	11.1	Parabolas
		11.2	Ellipses
		11.3	Hyperbolas
		Exploration	Conics in Architecture (p. 836)
13	Apr 22 - 25	11.4	Shifted Conics
		Review	Review Chapter 4
		Review	Review Chapters 10 & 11
		Exam 3	**Thursday, April 25th**
14	Apr 29 - May 2	12.1	Sequences & Sigma Notation
		12.2	Arithmetic Sequences
		12.3	Geometric Sequences
		Exploration	12.6: Binomial Theorem (if time allows)
15	May 6 - 9	**Quiz 6**	**Quiz 6**
		Review	Chapters 1 & 2
		Review	Chapters 3 & 4
		Review	Chapters 10 & 11
	Monday, May 14th	**Final Exam**	**Time: 8:00 - 10:00 AM** **Room: Science A210 (Our regular classroom)**