

**1229- 153-S01**

**PreCalculus I**

**Fall 2022- CWU Sammamish**

## **Instructor Information**

**Name:** Nelson LaPlante

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**Phone:** (Sammamish) 509-963-3690

**Office Location/Hours:** Sammamish campus or Online through BlackBoard Ultra in Canvas and through Canvas Messaging at essentially all times, even weekends.

**Class Hours:** 9-9:50am OR 12p – 12:50p M-F, Room 206

**Office Hours:** 10a-11a and 1-2p M-F

## **General Education at CWU**

The General Education program prepares you for success at CWU and as a citizen in our dynamic, diverse, and global society. The program fosters integrated learning, enhancing your ability to make connections across courses and disciplines and to apply a breadth of knowledge to real-world problems. It will help you develop skills in critical thinking, clear communication, creative leadership, ethical decision making, and complex problem solving. Combined with your major, the General Education program will cultivate curiosity, empower personal development, strengthen understanding of and respect for diverse perspectives, and build a foundation for lifelong learning.

### **CWU General Education Program Goals**

**Explore:** You will explore a breadth of knowledge, methods of inquiry and reasoning, and fundamental questions. That process will cultivate curiosity, facilitate the understanding of diverse perspectives, empower personal development and growth, and build a foundation for lifelong learning.

**Engage:** As you engage with new knowledge, people, and perspectives, you will assume responsibility for your learning. In the process, you will develop enhanced communication—written and spoken—and critical thinking skills grounded in logic, reason, analysis, and synthesis. Combining these skills will enable you to employ multiple approaches to complex and

real-world problems. As an engaged citizen, you will bring intellectual creativity and curiosity into your personal, civic, and professional life.

**Connect:** You will discover how disciplines, societal challenges, and cultures are interconnected. This process links coursework and community, local and global issues, past and present. Your ability to integrate learning will lead to new ways of thinking, analyzing, and interacting with our dynamic and diverse world.

**Create:** Your knowledge and skills will empower you to ask innovative questions and envision unique projects. This process of creative engagement will enable inquisitiveness and original thinking. It will provide you with agility for success in your career and life.

**Empathize:** Your General Education will facilitate open-mindedness and enable you to better understand and imagine others' experiences. As you become more knowledgeable and curious about the world, you will develop respect for diverse points of view, engage in ethical decision-making, and demand and demonstrate compassionate leadership.

### **CWU Diversity Statement**

CWU expects every member of the university community to contribute to an inclusive and respectful culture for all in its classrooms, work environments, and at campus events.

### **Academic Conduct Code**

All students enrolling in College of Business courses are expected to comport themselves in a professional manner consistent with Washington State law, CWU policy and the College of Business Honor Code. As College of Business students, we pledge to uphold these standards of professionalism and conduct ourselves in accordance with them. We will not lie, cheat, or steal, and will not tolerate those who do. Our behavior defines who we are and what we will become. Academic conduct encompasses integrity as well as professional behavior towards students, staff, and faculty.

All acts of dishonesty in any course work constitute academic misconduct. This includes, but is not limited to, cheating, plagiarism, fabrication of information, misrepresentations, and abetting of any of the above. Should you have any questions about plagiarism or any other forms of academic misconduct, please speak with me before submitting an exam/assignment.

Students violating CWU policy on academic dishonesty (see CWUP 5-90-040(22) and CWUR 2-90-040(22)) will at a minimum be given a score of zero on the relevant assignment/exam and at a maximum failed from the course and referred for further disciplinary action. In addition, CWU disciplinary policy will be followed in the event that academic misconduct occurs. Students should refer to the CWU policy manual (section CWUP 5-90-010(4)) and the CWU Student Conduct Code (II.B) for more information.

Professional behavior is expected of all students. Students who deploy, threats, harassment, or a pattern of communications with the intention of damaging another student's reputation require

professional interventions beyond what is available from this instructor, and clearly compromise the learning of other students in the class. Similarly, students who behave in a way that interferes with, impedes, or otherwise unreasonably hinders normal teaching, learning, research, administrative, or other functions, procedures, services, programs, or activities involved with the class. This behavior will lead to being excused from the remainder of the course with an “F”. Such behavior is inexcusable.

Students engaging in Prohibited Student Conduct within the course as defined by Washington Administrative Code (See WAC 106-125-020) will face course sanctions, which can include being failed from the course. Further, these students will be reported to the College of Business Dean’s Office and the Office of Student Success. This may result in additional punitive action.

### **CWU Accommodation for Religious Holidays**

University Policy, CWUP 5-90-040(34), provides for reasonable accommodation of student absences for religious holidays in accordance with RCW 28B.137.010. Students seeking reasonable accommodations under this policy must provide written notice to their instructors within the first two weeks of class specifying the dates for which religious accommodations are requested. Contact the Dean of Student Success at (509) 963-1515 for further information.

### **CWU Accommodations for Disabilities**

CWU is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any obstacles to learning, contact Disability Services to discuss a range of available options. Student Disability Services is located in Hogue 126. Call (509) 963-2214 or email [ds@cwu.edu](mailto:ds@cwu.edu) for more information.

### **CWU Statement on Sexual Misconduct**

Central Washington University is committed to providing all community members with a learning and work environment that is free from sexual harassment and assault. Students have options for getting help if they have experienced sexual assault, relationship violence, and sexual harassment, or stalking. Information can be found at <http://www.cwu.edu/wecare> and in CWUP 2-35-050: Sexual Harassment. Faculty are required to report information regarding sexual misconduct or related crimes. Students may speak to someone confidentially by contacting the CWU Wellness Center, 509-963-3213, or the CWU Student Counseling Clinic, 509-963-1391.

### **CWU Support for Student Emotional & Mental Health**

Stress and other life circumstances that may be out of your control can make learning and focusing difficult. If you find stress or other mental health concerns make academics difficult, Central has resources to support you. I encourage you to reach out as soon as you notice you’re struggling.

- Student Counseling Services – crisis appointments available – 509-963-1391 – <http://www.cwu.edu/medical-counseling/counseling-clinic>

- Mental health crisis support outside of normal business hours – 1-800-273-8255; Text HOME to 741741
- Wellness Center – confidential sexual assault and other victim advocacy – 509-963-3213 – <http://www.cwu.edu/wecare/>
- Disability Services – registration for accommodation – 509-963-2214 – <https://www.cwu.edu/disability-services/>

### **THIS SPECIFIC COURSE:**

#### **More Optional Course Materials Link (Professor Tim Brown’s website)**

<https://sites.google.com/site/timbrowncwuwebsite/math-153-pre-calculus-i>

#### **FREE PDF Book**

[PDF BOOK LINK](#)

#### **Optional Materials**

- Calculator- a Graphing Calculator is recommended, especially the TI-83/84 models. If you have another model, that’s fine and none of these are necessary. I use the TI-30 which is a simple statistical calculator and more than adequate
- Paper for taking notes, graph paper is helpful for when we graph • Pencils. I won’t accept exams done with pen (not even those cool erasable pens)!

#### **Required Materials**

- Access to Canvas. I will post assignments, grades, notes, course syllabus, and other important material there.

All Assignments can be found here.

## Course Description

The Goal is to cover a Chapter a week but this is not etched in stone and may be altered slightly

Description: Math 153 is a 5-credit course designed to develop both the concepts and the procedural skills in advanced algebra that will prepare you for the study of Calculus. There will be problem solving, analysis, and communication required in addition to algebraic, graphical, and numerical approaches to the patterns we study.

You need to already have a proficiency in a range of math skills, including linear and quadratic functions, which will be built upon during the course. When you finish, you will have proficiency with functions in general, including operations, compositions, and graphs. You also will have mastery of the specific features and applications of linear, quadratic, exponential, logarithmic, polynomial, and rational functions.

- Define and recognize functions given numerical, graphical, or algebraic relationships
- Solve systems of linear equations using matrices
- Work with function and interval notation
- Apply the function concepts of function arithmetic, composition, and inverses
- Translate among numeric, symbolic, graphical, and verbal representations of functions
- Work with functions including: linear, quadratic, exponential, logarithmic and piece-wise
- Analyze the effects of transformations on both the algebraic and graphical representations of functions
- Locate and determine graphical features of functions including range, domain and x and y intercepts

## Expectations/Policies

- All work turned in to me is preferably to be done in pencil again.
- Attendance: I do not take attendance on a regular basis (except for the first 3 days of the quarter).

As a policy I won't accept late assignments but if you have something message or ask me about it and I am flexible with reason.

- Grading:

I post grades on Canvas, Please let me know if you have any questions or concerns about what you believe to be a wrong grade or anything else!

## **KEY CANVAS COMPONENTS:**

- **Course Information:** includes Course Syllabus and Course Policies
- **Announcements:** I post announcements occasionally. Be sure to get notifications on your phone via the Free Canvas App.
- **Weekly Lessons:** includes weekly assigned chapters, Exams (See Below), Homework (See Below), Discussion Board (See Below), Lecture Notes that contains chapter overviews, instructional objectives.
- **Modules:** Modules will appear according to the sectional topics and will consist of PDF worksheets to practice with, video and voice recorded lectures, and review exam material. BE Sure to Check the Module Tab weekly. Follow along with the Modules and Syllabus and you will know what to study for the week.

**Homework** I will not **assign** HW per se BUT I do expect you to be working daily or nearly so on chapter problems and have basic evidence of something done in the way of math work on paper. Keep your work and have it checked off at the time of each Unit Exam. It will count towards your grade for the course. HW for the unit is generally due the day of the exam but this is flexible. This simply means that you should be doing the practice problems as necessary for your understanding at the end of each section. For credit on this assignment show me at least 2 pages of this work done or upload a photo of 2+ pages to the proper HW assignment.

**Quizzes** Expect at least 1 quiz for each unit, given as a take home and due the following day. These are OPEN Notes and book.

**Other “Take Home” Assignments:** A special assignment is expected but Note that if none is assigned that this will automatically become a free, automatic 5% added to your grade. Once, and if, assigned you will have several days to complete and turn in. Questions will be graded as right or wrong. You CAN Do These only as a Group or a group chat and I encourage if possible and comfortable to get together with other students.

**Unit Exams:** You will have 3 unit exams (100 points each). Partial credit will be considered on all exams. No retake exams will be given though if you are unhappy with your performance there is a way to get points back. If you are unable to attend class on an exam day, you must arrange with me PRIOR to the exam date. No exams will be dropped.

**Final Exam:** There will be a Final Exam consisting of one question from each section and an additional 2-4 from the last unit.

Per CWU, **Cheating** is prohibited and may result in a Failure for that assignment. You may receive a zero on this exam (with no chance of makeup) if you copy, explicitly assist, check, etc. on a test. Tests are *no-other-people* assignments. You must do them alone.

**Letter Grades** (based on the weighted final percentage)

### **Grading Scale Letter Grade**

93-100%	<b>A</b>
90-92%	<b>A-</b>
87-89%	<b>B+</b>
83-86%	<b>B</b>
80-82 %	<b>B-</b>
77-79%	<b>C+</b>
73-76%	<b>C</b>
70-72%	<b>C-</b>
67-69%	<b>D+</b>
63-66%	<b>D</b>
60-62%	<b>D-</b>
59% or less	<b>F</b>

### **ASSIGNMENT GRADING WEIGHTS**

UNIT EXAMS (3)	20% Each	60%
FINAL EXAM		10%
QUIZZES		15%
HOMEWORK (3)		10%
SPECIAL ASSIGNMENT (This is a potential assignment)		5%

**Important Dates:**

**November 11, Veterans' Day, no classes**

**November 23-27, Thanksgiving Holiday, no classes**

**Final Exam: TBD, See Final Exam Schedule**

**Challenges to Grades:**

There is a soft statute of limitations of one week after assignments are graded for challenges to assignment, quiz, and exam points. This means you have one week to raise any issues with your grade. If you do not check Grades in CANVAS and do not realize until several weeks after an assignment is due that you did not hand it in, or that you sent it to the wrong place, it may be too late to make any grade changes. If you keep up to date by checking your e-mail, ANNOUNCEMENTS, and GRADES, you should have no issues. I will normally grade assignments within one week after they are due.

*AT The End of the quarter I will post a non-graded 'assignment' called "FINAL GPA" which will consist only of the letter grade that will be posted to your transcript. Please be sure to view it, study it for accuracy and make sure that all assignments are graded correctly so that I can make any necessary changes before I submit grades on the Sunday night after the Final Exam is taken.*

**Basic Course Outline – Chapters 2 - 5**

Unit#1- Functions and Graphs

Unit#2 – Polynomials, Rationals, Zeros

Unit#3 – Exponentials, Inverses, Logarithms

*Unit#4 (If Time Permits) – Matrices and applications*

*(Chapter Titles and Sections based off the PDF Link at the top)*

*This Textbook can be found in the Modules section of via the link on the Home Page*



## Course Schedule<sup>[SEP]</sup> Math 153: Precalculus I, Fall, 2022

### Week 1: Unit#1/CH#1 - Functions and Linear Equations (CH#1)

W 9/21/22 Introduction/Orientation 9/2

Th 9/22 Functions

F 9/23 1.2- Graphs

### Week 2: Unit# 1/CH#1 Continued

M 9/26 1.3 Linear Functions

T 1.4 Combinations of funct

W 1.4 Combinations of funct

Th 1.5 Transformation

F 9/30 1.5 Transformation

### Week 3: Unit# 1 Continued EXAM I

M 10/3 1.5 Transformation

T 1.6 Families of Functions

W 1.6 Families of Functions

Th

F 10/7/21. **Exam #1 – Unit #1**

### Week 4: Unit#2/CH#2 – Rationals, Polynomials, Zeros)

M 10/10 2.1 Quadratic Functions

T 2.1

W 2.2 Polynomial Functions

**Th** 2.2

F 2.3 Real Roots and Factors of Polynomial

### Week 5: Unit#2- Continued

M 10/17            2.3  
T                2.3  
W                2.4 Complex Numbers  
Th               2.4  
F                2.5 Complex Roots

**Week 6: Unit#2 Continued            EXAM II**

M 10/24 –    2.5 Complex Roots  
T –            2.6 Rational  
W             2.7 Inequalities  
Th             REVIEW  
F 10/28/20        **Exam#2 – Unit #2**

**Week 7: Unit#3 –Exponents, Inverses, Logs (Ch#3)**

M 10/31            3.1 Exponential Functions  
T                3.1  
**W**                3.2 Inverse Functions  
Th               3.2  
F                3.2

**Week 8: Unit#3 - Inverses, Logs (Contin)**

M 11/7            3.3    Log Functions  
T                3.3  
W 11/11.            Veterans' Day. NO CLASSES  
Th 11/12            3.4 Log IDs  
F                3.4

**Week 9: Unit#3 Continued**

**Exam III**

M 11/16	3.5 Solving Exponents and Logs
T	3.5
W	3.5
Th	3.5
F	Unit#3 Exam – Last Unit Exam

**Week#10: Unit#3 Continued Thanksgiving Weekend**

**Matrices PDF Book Chapter#8)**

M 11/23	Chapter 8- Matrices
T	8
W 11/25	No Classes
Th 11/26	Happy Thanksgiving
F 11/27.	No Classes

M 11/30	Chapter 8- Matrices
T 12/1	Financial Models & Exponential Applications
W	Applications in Economics
Th	Review for Final Exam
F	Q & A

**Week 12: FINALS WEEK**

M 12/ 7.	No Classes, Study Day
T -	
W	
TH	
F	END OF FALL QUARTER

**The Following is for the official hardcopy book and can be used to reference chapter documents available in each section but you can ignore it completely if you wish. Be sure to focus on the Topics and not the chapters if using the class PDF book.**

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**Unit 1:** (VIA CWU HARDCOPY BOOK)

[PP A 2.1 function arithmetic.pdf](#)

Quiz 2.1, 2.2 (& circles)

Quiz 2.3 - 2.5

[PP B function library.pdf](#)

[PP C 2.5 transformations.pdf](#)

[PP D; linear equations.pdf](#)

[PP E; 3.2 linear model.pdf](#)

**Unit 2:** (3.3 - 4.6: *polynomials and rationals*)

- : [PP F; factor quadratics.pdf](#)
- : [PP G; 3.3 props of quadratics.pdf](#)
- : [PP H; 3.5 quad inequalities.pdf](#)
- [PP I; 4.1 polynomial features.pdf](#)
- [PP J Polynomial factoring.pdf](#)
- [PP K; irrational zeros.pdf](#)
- : [PP L; 4.6 complex zeros.pdf](#)
- [Perfect Practice M 4.2 rational.pdf](#)

**Unit 3:** (Text Ch 5)

- : [PP N 5,1 composites.pdf](#)
- : [PP O 5.2 inverses.pdf](#)
- : [PP P 5,3a expon intro.pdf](#)
- : [PP Q 5.5 props of logs.pdf](#)
- [PP R 5,7 financial models.pdf](#)
- [PP S 5,8 expon apps.pdf](#)

# Canvas

*This is an IT/online class and as such all instructional material will be made available via the textbook and Canvas and me through videos. There you will find Homework, discussion board topics, readings & videos, homework exercises, and various assignments. It is typical that 10+ hours per week is necessary for your reading and preparation. If you are extremely efficient it may take less, but it may take more. A great deal of the material in the Canvas Modules is Application and as such I believe will be seen as interesting and perhaps even surprising.*

For this course, Canvas serves as the vessel for ALL course related materials. It is your responsibility to become familiar with Canvas and seek support for any technical issues. If you experience any technical difficulties with Canvas and/or any of its components click the Help icon in Canvas to contact the 24/7 support hotline. You will find [additional Canvas support](#) and [technology requirements](#) on the CWU online learning website (<http://www.cwu.edu/online-learning/>). If you experience any technical difficulties with MyCWU network and login, contact CWU Help Desk at [servicedesk@cwu.edu](mailto:servicedesk@cwu.edu) and/or 509-963-2001.

## TECHNOLOGY SUPPORT:

There is a 24/7 Canvas support hotline available to you at 877-399-8897. You will find additional Canvas support and technology requirements on the CWU online learning website (<http://www.cwu.edu/online-learning/>). CWU Service Desk can assist you with MyCWU network and login issues ([servicedesk@cwu.edu](mailto:servicedesk@cwu.edu)): 509-963-2001.

Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser. Canvas supports the last two versions of every browser release. We highly recommend updating to the newest version of whatever browser you are using as well as the most up-to-date Flash plug-in. This Canvas guide explains which version of each browser is currently supported in Canvas (<https://community.canvaslms.com/docs/DOC-10720-67952720329>). There are also tips on how to configure your chosen web browser to work best with Canvas.

Canvas is not officially supported on mobile browsers, but it does offer an app for iOS and Android. However, because it is made to work on a desktop, this is not the best interactive experience. Since Canvas uses small elements of Flash, not all Canvas features may be supported on mobile devices, especially on iOS.

Technology glitches can, and are likely to, occur; do not wait until the last minute when doing assignments. NOTE: When it comes to taking your quizzes on Canvas, it is my policy to allow students only one attempt at each exam. If you get “kicked out” of the system, for whatever reasons, you will not be allowed back into the quiz.