

Math 125 Section 1414 TTH 1:00 – 3:30 p.m. MS 113

Education opens the mind and expands it. – By Not Me

Prerequisite: Math 114 or 115 and *a strong desire to succeed* – if you have the latter you probably don't need the former! But you are expected to have already learned how to do the following:

- 1) Evaluate, simplify and perform the fundamental operations on algebraic expressions
- 2) Factor polynomial expressions
- 3) Solve linear, quadratic, polynomial, rational, and index 2 radical equations
- 4) Solve a system of 2 linear equations in 2 variables
- 5) Set up and solve various types of word problems

Course Objectives: By the end of the semester, you should be able to

- 1) Apply Math 115 concepts and techniques to more complicated problems
- 2) Solve a system of 3 linear equations in 3 variables using various methods
- 3) Solve polynomial, rational, radical, and absolute value equations and inequalities
- 4) Express solution sets graphically and using interval notation
- 5) Identify, analyze, and graph equations of lines, circles, parabolas, ellipses, hyperbolas, exponentials, and logarithms
- 6) Identify relations and functions, find the domain and range, sketch graphs, and find inverses
- 7) Solve exponential and logarithmic equations and applications

Student Learning Outcome:

Students will be able to *think analytically* and *read critically* to solve intermediate algebra level mathematical problems.

General Requirements: A smile, a positive attitude, patience, perseverance, pencils, paper, an open mind, undivided attention, time, and trust. (sp⁵out²) + 2 books! Whining or complaining wastes energy – use that energy to do your math! **TURN OFF YOUR PHONES DURING CLASS! Math requires concentration - please minimize unnecessary talking!**

Structure of the Class:

The class will be divided into **2 - 3 sessions** (see timeline). There will be breaks in between sessions. Give the class your undivided attention during the sessions. You can do whatever you want during the breaks. You will have a greater chance of success if you do so. ***Please do not talk to me during the breaks!*** I need to rest my throat and recharge.

Textbook: Sutcliffe, The Little Book of Intermediate Algebra



Workbook: Sutcliffe, The Big Book of Intermediate Algebra Exercises

Every student should come to class with his/her own copy; **photocopies are not allowed**. Purchase these books ASAP! Do NOT wait for financial aid!! **Make sure the books have a picture of Taal Volcano (Philippines)!**

Instructor: Teresa V. Sutcliffe

Email: sutclitv@lavc.edu (I check my email at least twice a day.)

Phone: (818) 947-2851 (I usually forget to check my messages! Email is better.)

Office: MS 104B

Drop-in Hours: TTH 10:45 a.m. – 1:00 p.m., 9:20 – 9:55 p.m.

My Website: www.lavcmath.com/sutcliffe

This is where you will find the syllabus, timeline, homework, etc.

Online Resources: www.lavcmath.com/resources/math125 (Here, you will find my lecture videos, notes, etc.) You can also find other lecture videos on YouTube. **Watching videos is not enough - the only way to learn math is to WRESTLE with math problems!!**

Math Lab: The drop-in tutoring lab is located in **LARC 226**. Hours are as follows:

MTWTh 10:00 a.m. – 6:30 p.m.

FS 10:00 a.m. – 3:00 p.m.

In addition, **you can make an appointment for one-on-one tutoring sessions!**

Make sure you show the tutor your notes/Little Book/Big Book so the tutor will know how to help you. Ask the tutor to let you do your own writing of the solution. The tutor should just guide you and not do the problem(s) for you. **The only way you to learn math is to do it yourself.** Show this note to the tutor if he/she insists on doing the problem(s).

Homework: Your homework is to copy worked out examples and other important notes from the Little Book. (See Little Book homework packet.) You turn in these notes the meeting after we discuss the topics (see Timeline for due dates.) **You will earn 1 point for each section you turn in.** Late homework will NOT be accepted. If you cannot come to class, you can drop off your homework in MS 104. It is YOUR responsibility to keep track of the sections that you have turned in.

Classwork: I will use examples from the big book to explain the topics. Copy the work to the problems that I will explain in your big book. Write “small” so you can see the entire “picture” of the problem and its solution. Then do the exercises that I will assign for the session. *Do not worry if you are behind – keep moving with the class!* **You will earn 2 points per section for your work in the big book.**

Exams: There will be **6 one-hour exams** (see timeline) and **a cumulative 2-hour final exam**.

Good news: *You may refer to your little book and/or big book during exams!* However, no other notes will be allowed during exams. *The books must be bound and not have any loose pages.* This will hopefully remove a lot of your test anxiety. You still need to study and practice a lot for the exams – trust me! Otherwise, the books won't really help you if you don't know what to do. Remember that the exams are timed and you have to finish during the time allotted for the exam. I strongly encourage those of you who plan to transfer to a 4-year institution to try taking the exams without referring to your books.

Makeup Exams: There will be no makeup exams. I will drop your lowest exam score and double your highest score.

Final Exam: The final exam is on Tuesday, May 31st, 12:30 – 2:30. Everyone is required to take the final exam. A grade of 'F' will be assigned if you do not take the final exam (even if you already have a passing grade).

General Exam-Taking Policies:

- Put your picture ID card on your desk.
- Do **NOT** un-staple or tear off any page from the exam.
- Scratch papers are **NOT** allowed.
- Any form of **TALKING** will be considered as **CHEATING** and you will get a 0 for the exam.
- Do **NOT** ask me any question during an exam.
- All electronic devices must be **turned off** and **put away**.
- All bags/purses/backpacks must be on the floor.
- Desks must be clear except for the test, photo ID, pencils, erasers, calculator, and books – no other notes are allowed!
- You may use a regular or scientific calculator, **NOT a phone or graphing calculator**.
- **Bring your own supplies!** You need to have your own pencils, calculator, etc.
- You **MAY LISTEN TO MUSIC** but you cannot use your phone. You need to **use good earbuds/headphones** so your music does not leak!
- You are allowed to leave the room for a **2-minute restroom break**. You need to **empty out your pockets** before you go. If you are gone for more than 2 minutes, it is possible that I will ask you to take off your shoes/boots.

Answers to Syllabus Questions The deadline for turning in this packet is on Tuesday, February 23rd. ***Each question is worth ½ a point.*** Late packets will NOT be accepted.

Grade Components: Your grade for the class will be based on how many **total points** you will earn **out of 1000 points**. The points can be earned as follows:

Syllabus Questions	20 points
Little Book Notes*	75 points
Big Book Exercises*	150 points
Exams (6 @ 100 points each)	600 points
Final Exam	200 points

Grading Scale:

Total Points	Grade
>= 900	A
800 – 899	B
700 – 799	C
600 – 699	D
<600	F

Extra Credit Opportunity: You can earn **30 extra credit points** by participating in the Service Learning Program. You need to render **15 hours of volunteer work**. See Mr. Rick Brossman in the Counseling Department (818) 947-2642 for a list of approved Service Learning activities. I recommend that you start this as soon as possible if you want to do this.

Cheating: You will get a **0** on the exam if I catch you cheating. Cheating includes talking, using notes or an electronic device, leaving the room (See general exam-taking guidelines.) You may also be subject to **disciplinary action**.

Attendance, Exclusion and Withdrawal: I will check attendance each meeting and I can exclude you from the class after **2 unexplained absences**. It remains **your responsibility to drop the class** after the second week. Failure to do so could result in a grade of “F” for the class. **The last day to drop is May 8th**. Please do not expect me to give you a special class if you are absent. **You are responsible for all lessons, classwork, and exams missed**. You may want to watch my lecture videos (see online resources) or any other online resource in case you are absent from class.

Students with Disabilities: If you are a student with a disability requiring classroom accommodations, and have not contacted SSD, do so in a timely manner. Call SSD at (818) 947-2681 or TTD (818) 947-2680 to meet with a counselor. If SSD has already sent me the memo confirming your required accommodations for this class, please meet with me to discuss arrangements.

Religious Holidays: Accommodations will be made for religious holidays if you advise me in writing during the first week.

Financial Aid: Financial aid is available! Call (818) 947-2412. Go to the Financial Aid Office in the Student Services Center, first floor.

For more info, go to <http://www.lavc.edu/financialaid/index.html>.

What you will really get out of this class: The material is immaterial! You will most likely forget most of the math that I will teach you in this class, especially if you are not going to pursue a STEM career, but you will hopefully **acquire lots of life skills and develop character traits** that you will actually need to have a successful and happy life. Here are some (given in random order):

- Managing your time well
- Having self-discipline
- Getting used to working hard, giving your 100% to something, not procrastinating
- Thinking in an organized way
- Thinking logically
- Thinking critically
- Improving your memory
- Developing the ability to learn new things
- Developing the ability to perform multi-step processes
- Learning to persevere and persist
- Conquering unfounded fears
- Developing a positive attitude

There you go! Give it your best shot and you might be surprised at what you can do. I sincerely believe that you will increase your chances of being happy in this life if you cultivate your mind and heart. **YOU CAN DO IT!!**

About Me: I am from the Philippines. I fell in love with Algebra when I was 12. I decided to do math because I did not (still do not) like writing, expressing my opinion, doing lab work, etc. Math seemed neat and straightforward – if you know the rules and practice a lot, you can do it. Math became hard after algebra but I stuck to it because I did not know what else to do with myself. There were lots of times when I felt like I wanted to give up – I do understand how you feel! ☺ It's only recently when I got older and wiser that I started realizing why we need to educate ourselves. It's not easy...I guess it's not supposed to be...that's how character is developed. *No pain, no gain.* My dream is to come up with my own quotable quote! ☺

Math 125 Section 1414 Tentative Timeline

Day	Date	Time	BB Sections	Topics	Videos/ Online Resources*	Important Dates/Events/Homework				
1	1 T	9-Feb	1:00 - 1:30	Syllabus Questions	Watch the first 2 videos.	Buy your Big Book ASAP! (Ch 1 and 4 posted online.)				
			1:30 - 2:10	1.1 Removing Nested Symbols of Grouping	IA-1					
			2:20 - 3:00	1.2 Integer Exponents	IA-2					
			3:00 - 3:15	1.4 Adding or Subtracting Polynomials						
			3:15 - 3:30	1.5 Multiplying Polynomials	IA-4					
2	Th	11-Feb	1:00 - 1:10	Q&A		LB 1.1, 1.2, 1.4, 1.5 Due				
			1:10 - 2:00	1.6 Binomial Expansions	IA-5					
			2:10 - 3:00	1.7 Dividing Polynomials	IA-6					
			3:00 - 3:30	4.1 The nth Root of a Real Number	IA-24					
2	3 T	16-Feb	1:00 - 1:40	4.2 Simplifying Radical Expressions	IA-25	LB 1.6, 1.7, 4.1, 1.5 Due				
			1:40 - 2:20	4.3 Adding or Subtracting Radical Expressions	IA-26					
			2:30 - 3:00	4.4 Multiplying Radical Expressions	IA-27					
			3:00 - 3:30	4.5 Dividing Radical Expressions	IA-28 thru IA-30					
			4	Th	18-Feb		1:00 - 1:40	Rationalizing Denominators		LB 4.2, 4.3, 4.4 Due
1:40 - 2:20	4.6 Rational Exponents	IA-31 thru IA-33								
2:30 - 3:00	4.7 Multiplying or Dividing Radicals with Different Indices									
3:00 - 3:30	4.8 Reducing the Index									
3	5 T	23-Feb	1:00 - 2:10	1.8 Chapter 1 Review Section		Answers to Syllabus Questions Due				
			2:20 - 3:30	4.10 Chapter 4 Review Section						
	6	Th	25-Feb	1:00 - 1:10	Q&A		LB 4.5, 4.6, 4.7, 4.8 Due			
				1:10 - 2:10	Ch 1 and 4 EXAM					
				2:20 - 3:00	2.1 Factoring out the GCF and Factoring by Grouping	IA-7 and IA-8				
3:00 - 3:30	2.2 Factoring Quadratic Trinomials	IA-9								
4	7 T	1-Mar	1:00 - 1:20	Review 2.1 and 2.2		LB 2.1, 2.2 Due				
			1:20 - 1:50	2.3 Factoring Special Binomials	IA-11 and IA-12					
			1:50 - 2:20	2.4 Factoring by Substitution	IA-16					
			2:30 - 3:30	2.6 Combined Factoring Techniques	IA-13 thru IA-15					
			8	Th	3-Mar		1:00 - 1:40	3.1 Simplifying Rational Expressions	IA-17	LB 2.3, 2.4, 2.6 Due
1:40 - 2:20	3.2 Multiplying or Dividing Rational Expressions	IA-18 and IA-19								
2:30 - 3:30	3.3 Adding or Subtracting Rational Expressions	IA-20								
5	9 T	8-Mar	1:00 - 1:50	3.4 Performing Combined Operations on Rational Expressions	IA-21 thru IA-23	LB 3.1, 3.2, 3.3 Due				
			1:50 - 2:10	2.7 Chapter 2 Review Section						
			2:20 - 3:30	3.5 Chapter 3 Review Section						
	10	Th	10-Mar	1:00 - 1:10	Q&A		LB 2.7, 3.4, 3.5 Due			
				1:10 - 2:10	Ch 2 and 3 EXAM					
2:20 - 3:30	5.1 Solving Linear Equations	IA-40 - IA-42	Deadline to petition for Pass/No Pass is 3/11							
6	11 T	15-Mar	1:00 - 1:40	5.2 Solving Absolute Value Equations	IA-43	LB 5.1 Due				
			1:40 - 2:20	5.3 Solving Quadratic Equations	IA-44					
			2:30 - 3:30	5.4 Solving Polynomial Equations	IA-45					
			12	Th	17-Mar		1:00 - 1:40	5.5 Solving Rational Equations	IA-46	LB 5.2, 5.3, 5.4 Due
							1:40 - 2:20	5.6 Solving Radical Equations	IA-47	
2:30 - 3:30	5.7 Solving Equations in Quadratic Form	IA-44								
7	13 T	22-Mar	1:00 - 1:30	5.8 Solving Literal Equations	IA-48	LB 5.5, 5.6, 5.7 Due				
			1:30 - 2:10	5.9 Solving Translation Word Problems						
			2:20 - 3:30	5.10 Chapter 5 Review Section						
			14	Th	24-Mar		1:00 - 1:10	Q&A		LB 5.8, 5.9, 5.10 Due
							1:10 - 2:10	Ch 5 EXAM		
2:20 - 3:00	6.1 Set Notation, Graph, and Interval Notation	IA-49								
3:00 - 3:30	6.2 Solving Simple Linear Inequalities	IA-50								
8	15 T	29-Mar	1:00 - 1:40	6.3 Solving Compound Linear Inequalities	IA-51	LB 6.1, 6.2 Due				
			1:40 - 2:20	6.4 Solving Nonlinear Inequalities	IA-52 thru IA-54					
			2:30 - 3:30	6.5 Solving Absolute Value Inequalities	IA-55					
			Th	31-Mar	Cesar Chavez Day			No School!		

Math 125 Section 1414 Tentative Timeline

Day	Date	Time	BB Sections	Topics	Videos/ Online Resources*	Important Dates/Events/Homework
T	5-Apr					
Th	7-Apr					Spring Break!! :)
9 16 T	12-Apr	1:00 - 1:20	8.1	Solving Two by Two Linear Systems		LB 6.3, 6.4, 6.5 Due
		1:20 - 2:10	8.2	Solving Three by Three Linear Systems	IA-78 and IA-79	
		2:20 - 3:30	8.3	Solving Linear Systems Using Matrix Methods	IA-80	
17 Th	14-Apr	1:00 - 1:40	8.5	Solving Nonlinear Systems of Equations in Two Variables	IA-82 thru IA-84	LB 8.1, 8.2, 8.3 Due
		1:40 - 2:20	8.7	Chapter 8 Review Section		
		2:30 - 3:30	6.7	Chapter 6 Review Section		
10 18 T	19-Apr	1:00 - 1:10		Q&A		LB 6.7, 8.7 Due
		1:10 - 2:10		Ch 6 and 8 EXAM		EXAM 4
		2:20 - 3:00	7.1	The Rectangular Coordinate System	IA-59 and IA-60 EA-60 thru EA-66**	
		3:00 - 3:30	7.2	Lines	IA-56, IA-57	
19 Th	21-Apr	1:00 - 1:40	7.3	Writing Equations of Lines	IA-58 EA-67 thru EA-69**	LB 7.1, 7.2 Due
		1:40 - 2:20	7.4	Parabolas: Equations Given in Standard Form	IA-63	
		2:30 - 3:00	7.5	Parabolas: Equations Given in General Form	IA-64 thru IA-66	
		3:00 - 3:30	7.7	Circles	IA-61 and IA-62	
11 20 T	26-Apr	1:00 - 1:40	7.8	Ellipses and Hyperbolas	IA-67 thru IA-70	LB 7.3, 7.4, 7.7 Due
		1:50 - 2:40	10.1	Relations and Functions: Definitions	IA-90 thru IA-93	
		2:40 - 3:30	10.2	The Domain and the Range	IA-90 thru IA-93	
21 Th	28-Apr	1:00 - 1:30	10.3	Graphs of Basic Functions	IA-94	LB 7.8, 10.1, 10.2 Due
		1:30 - 2:10	10.4	Graphing Transformations	IA-95 thru IA-99	
		2:20 - 2:50	10.5	The Zeros of a Function		
		2:50 - 3:30	10.6	Operations on Functions	IA-100	
12 22 T	3-May	1:00 - 1:50	10.7	The Inverse of a Function	IA-102 thru IA-105	LB 10.3, 10.4, 10.5, 10.6 Due
		2:00 - 3:30	7.10	Chapter 7 Review Section		
			10.9	Chapter 10 Review Section		
23 Th	5-May	1:00 - 1:10		Q&A		LB 10.7, 10.9, 7.10 Due
		1:10 - 2:10		Ch 7 and 10 EXAM		EXAM 5
		2:20 - 2:50	11.1	The Exponential Function	IA-106 thru IA-109	
		2:50 - 3:30	11.2	The Logarithmic Function	IA-110 thru IA-111	Last Day to Drop with a 'W' is 5/8
13 24 T	10-May	1:00 - 2:10	11.3	Properties of Logarithms	IA-112 thru IA-114	LB 11.1, 11.2 Due
		2:20 - 3:30	11.4	Solving Exponential and Logarithmic Equations	IA-115	
25 Th	12-May	1:00 - 2:10	11.5	Applications		LB 11.3, 11.4 Due
		2:20 - 2:50	12.1	Sequences		
		2:50 - 3:30	12.2	Series and Summation Notation		
14 26 T	17-May	1:00 - 2:10	12.3	Arithmetic Sequences and Series		LB 11.5, 12.1, 12.2 Due
		2:20 - 3:30	12.4	Geometric Sequences and Series		
27 Th	19-May	1:00 - 2:10	11.6	Chapter 11 Review Section		LB 12.3, 12.4 Due
		2:20 - 3:30	12.5	Chapter 12 Review Section		
15 28 T	24-May	1:00 - 1:10		Q&A		LB 11.6, 12.5 Due
		1:10 - 2:10		Ch 11 and 12 EXAM		EXAM 6
		2:20 - 3:30		Final Exam Review		
29 Th	26-May	1:00 - 3:30		Final Exam Review		
16 30 T	31-May	12:30 - 2:30		FINAL EXAM		
			75	LB/BB Sections		LB Points = 75; BB Points = 75*2 = 150

*www.lavcmath.com/resources/math125

**www.lavcmath.com/resources/math115