Syllabus-Spring 2021

Title of Course-Section:	**MATH 1230-501 (Trigonometry)**
Name of Department:	Mathematic, Engineering, & Computer Science
Instructor:	Andisheh Dadashi, Assistant Prof. of Mathematics
E-Mail:	andisheh@unm.edu
Class Meeting Days/Times:	No scheduled lecture
Credit Hours :	3 credit hours
Class Location:	Online (Slack)
Office Location:	Online (Slack)
Office Hours:	Mondays and Wednesdays: 9 am to 12 pm (Online) or by appointment

Note: The instructor reserves the right to change the syllabus at any point of time during the semester.

Get to know your instructor:

Andisheh Dadashi earned her bachelor's degrees in Mathematics and Statistics from a ranked university in her native Iran. After finishing her undergraduate degrees, she studied abroad in India where she earned her first Master's degree in Statistics. She later moved to the USA to pursue a Ph.D. in Statistics at the University of New Mexico (UNM) and in 2016, she was offered a faculty position as a visiting Lecturer II at UNM-Gallup after receiving her second Master's degree in Statistics. Andisheh is a strong advocate of higher education and is following her mother's footsteps who was also a University professor in Iran. Because STEM education is becoming increasingly interdisciplinary, Andisheh sought to complement her background in mathematics and statistics with computer science and is eager to integrate data science into her curriculum. Andisheh is currently working on a Ph.D. in computer science and her research includes astrobiology and biomedical informatics while concurrently teaching mathematics, statistics, and computer programming at UNM-Valencia.
To know **Andisheh** watch this video Click on this link

** Email **

In subject of your email to me, please mention your course name, number, and section number. For example, the subject of your email to me should be: **MATH 1230-501**
You must only contact me with your **UNM e-mail**. Check your **UNM email frequently**. You are responsible for missing any announcement I sent via email or Slack. Failure to identify your message with the class number, and not using your UNM email will result in no response at all.

Table of content

Syllabus quiz

Please, read this Syllabus thoroughly and take the Syllabus quiz before the due date.

Questions will be based on the information in this syllabus.

You have until the end of the first week of classes to finish the quiz. After the due date, quiz will disappear. Syllabus quiz is timed and you have only one trial. Grade of the Syllabus quiz will be part of your overall grade.

What is Trigonometry

Definition of the trigonometric functions, radiant and degree measure, graphs, basic trigonometric identities, inverse trigonometric functions, complex numbers, polar coordinates and graphs, vectors in 2 dimensions. May be taken concurrently with 1240.

In this course, we are going to study the trigonometric functions. Trigonometric functions are functions related to angles. They show in many areas including engineering, physics and, of course, mathematics.

General Education Core Curriculum Essential Skills

In addition to the course learning objectives listed above, because this class meets a UNM General Education Core Curriculum requirement, activities in each unit (i.e.: discussions, assignments, and assessments) are developed so that you can demonstrate development of these essential skills:

Critical Thinking

o Problem Setting: Delineate a problem or question to be considered critically.

o Evidence Acquisition: Identify and gather the information/data necessary to coherently address the problem or question.

o Evidence Evaluation: Evaluate the information given by sources for credibility (e.g. bias, reliability, validity) and probably truth.

o Reasoning/Conclusion: Develop conclusions and outcomes that reflect an informed, well-reasoned argument.

Communication

o Genre and Disciplinary Conventions: Use formal and informal rules/registers appropriate for the particular audience, community, purpose, context, and kind of text and/or media at hand; use them to guide formatting, organization, and stylistic choices are present.

o Strategies for Understanding and Evaluating Messages: Apply strategies such as reading/analyzing for main points or themes; recognizing the variety of rhetorical situations and accompanying strategies that may contextualize messages; locating supportive documentation for arguments to understand and evaluate messages in terms of the rhetorical situation.

o Evaluation and Production of Arguments: Recognize and evaluate the authority of sources in their own arguments and those of others; distinguish among supported claims, unsupported claims, facts, inferences, and opinions.

Quantitative Reasoning

o Communication and/or Representation of Quantitative Information: Express quantitative information symbolically, graphically, and in written or oral language

o Analysis of Quantitative Arguments: Interpret, analyze and critique information or a line of reasoning presented by others

o Application of Quantitative Models: Apply appropriate quantitative models to real-world or other contextual problems

Pre-requisites/Co-requisites: 1220 or ACT Math ≥ 25 or SAT Math Section ≥ 590 or ACCU-PLACER Next-Generation Advanced Algebra and Functions $= 249 - 283$.

• Course Goal 1: Communication Addresses UNM Core Area 2/HED Area II: Mathematics (Algebra Competencies)

– SLO 1: Use correct mathematical notation and terminology. – SLO 2: Read and interpret graphs.

• Course Goal 2: Trigonometry of Real Numbers Addresses UNM Core Area 2/HED Area II: Mathematics (Algebra Competencies)

– SLO 1: Students will be able to use the unit circle to define the six trigonometric functions. – SLO 2: Students will be able to graph the sine, cosine, and tangent functions.

– SLO 3: Students will be able to fit a sine or cosine function to a given graph.

• Course Goal 3: Trigonometry of Angles Addresses UNM Core Area 2/HED Area II: Mathematics (Algebra Competencies)

– SLO1:Students will be able to work with radians and to solve circular motion problems.

– SLO 2: Students will be able to solve right triangles. They will be able to draw a sketch in an applied problem when necessary.

– SLO 3: Students will be able to solve non-right triangles using the law of sines and the law of cosines.

• Course goal 4: Analytic Trigonometry Addresses UNM Core Area 2/HED Area II: Mathematics (Algebra Competencies)

– SLO 1: Students will be able to prove trigonometric identities.

– SLO 2: Students will be able to apply addition and subtraction, double-angle and half angle formulas.

– SLO 3: Students will be able to graph the inverse sine, cosine, and tangent functions.

– SLO 4: Students will be able to solve problems that require the inverse trigonometric functions.

– SLO 5: Students will be able to solve trigonometric equations. These may require the formulas outlined in SLO 2. SLO 6: Students will be able to work with the trigonometric form of complex numbers. This includes DeMoivre's formula.

– SLO 7: Students will be able to work with the Euler form of complex numbers.

– SLO 8: Students will be able to add and subtract vectors in two dimensions. They will be able to use the dot product to project one vector onto another and to determine the angle between two vectors. They will be able to solve a variety of word problems using vectors.

• Course goal 5: Analytic Geometry Addresses UNM Core Area 2/HED Area II: Mathematics (Algebra Competencies)

– SLO 1: Students will be able to work with polar coordinates; this includes graphing in polar coordinates and transforming an equation with polar coordinates into one with rectangular coordinates, and vice versa.

– SLO 2: Students will be able to graph parametric equations in two dimensions that involve trigonometric functions.

Sign up for Slack

All the course communication will be placed in Slack.

Click on this link and watch the video tutorial I created for you.

Slack is where work flows. It's where the people you need, the information you share, and the tools you use come together to get things done. Slack can replace email, text messaging, and instant messaging for your team, and keep all those communication styles together in one app. With both desktop and mobile versions, Slack can help your team collaborate and coordinate their work no matter where they are — in the field office, at home, or out knocking doors.

Join our MATH1230 Slack group by following the invitation link on UNM Learn's course information page.

To sign up only use your **UNM-Email**.

As soon as you click on the link you will be directed to Slack website and you should enter your UNM-email.

On Slack the display name must be your first name – Last name. Also, please write down and send me your UNM-ID Number in a personal message (Click on my name and you can send me a personal message).

Please, have the app on your phone too so you can receive the notifications on your phone when I post. I may post some extra credit questions on Slack for a short time so if you don't want to miss it please have the notification on.

Instructor's Availability on Slack or Via email

- The best way of contacting me will be on Slack workplace.
- In all cases please, give me 24 hours to 48 hours to reach back to you. (This is how professional setting works)
- I will be available on Slack or via email during the day until 4 pm as long as I am not in the classroom teaching.
- I will not be able to respond to any email or any messages on Slack on Saturday and Sunday.
- Even though sometimes it seems I am online on Slack but I may be working on other tasks so please be patient and give me 24 hours to 48 hours to reach back to you.

Messaging & Channels on Slack

When you sign up for Slack, you should be able to find at least one Channel on the left side of your workplace. By clicking the " + " sign you should be able to add the rest of channels to your work place.

• These are 8 Public Channels that all the students have access to, so you can share ideas with your classmate, ask for help, or ask for questions

• Please, be very careful not sharing your written work/project or reports on any Public Channels. Remember your classmates are able to see or download what you are sharing on public channels.

• Please, share your written work/project/project and reports with me through a personal message by clicking on my name on the left side of the workplace.

Public Channels: Announcements, Exam-Review, General, PowerPoint-slides, Syllabus-Schedule, tutoring, video-links, zoom-link.

Slack instruction for our course
Download Slack for Mac
Download Slack for windows
Download Slack for ios
Download Slack for android

Evaluation/Grading Methods

Your final grade in this class is based on the following components:

Online Assignments (Homework, Quiz, Focus on modeling, & Chapter review)	40 %
Syllabus quiz, Watching videos, & PreLect assignments	10 %
Exam 1 & Exam 2	30 %
Final Exam	20 %

Overall Grade and Letter Grade

Passing grade in this course is 70% or better.

In order to pass this course your grade on the final exam must be 70% or better.

Overall Grades: pluses and minuses may or may not be added to letter grades at the instructor's discretion. Grades of A+ are not rare and will only be awarded for exceptional work.

Grade	From	To	Grade	From	To	Grade	From	To
A+	98	100	B+	88	89.99	C+	78	79.99
A	93	97.99	B	83	87.99	C	70	77.99
A-	90	92.99	B-	80	82.99	D	60	69.99

Where do you find your grade?

In WebAssign: On the left side of the main page you will see an option named "Grade Book". Your Up to dated grade can be find in your grade book

Course Outline - eBook - Package (WebAssign)

Book and Package: Pre-calculus Mathematics for Calculus, 7th Edition, Stewart, Redlin, Watson purchase from the bookstore or an ebook version through WebAssign is available.

WebAssign is the online learning system which accompanies the textbook and includes an e-book. WebAssign is required for MATH1230. If you don't use WebAssign, your WebAssign Assignments, participation and online exam scores will be 0s.

Required: Appropriate WebAssign access code (do not purchase a generic code, in this case the code is book specific).

On WebAssign: To enroll in MATH 1230 - Trigonometry, spring 2021 section 501 use

Class Key: unm 4016 1875

Other Requirements:

• Reliable access to a computer or tablet, and Internet. A computer (laptop or desktop) is recommended. Preferred browsers are Chrome, Firefox, or Safari. Preferred operating systems are Windows or Apple.

• Administrative rights to download free software or plug-ins or add-ons on the computer you plan to use for this course. The first time you login to the WebAssign homepage run the Installation Wizard to make sure you have all the appropriate software installed. Also, make sure you are allowing popups.

• WebAssign account. If you have used any of the Cengage products before, you can use the same account you created the first time you used it. Otherwise, you can create an account when you register in WebAssign for this class. Register by going to https://www.webassign.net.

• Adobe Reader (a free download), preferably version 11.0 or better.

Temporary Access for the WebAssign

If you are not able to purchase WebAssign access code right away, you can have temporary access to our online WebAssign course using the temporary access while you're following the instruction above. The temporary access starts on the first day of class and expires after 15 days. When you purchase the access code you can continue your access to the WebAssign. In this case, you must continue using the same email address (UNM-Email) that you were using to get the temporary access otherwise you will lose your work on WebAssign.

Inclusive Access (IA)

Where to purchase Access Code for the WebAssign?

You can purchase the WebAssign Package at UNM Valencia Bookstore or Online.

If your course comes with Inclusive Access (IA) you will receive an email that contains instructions for inclusive access to the book via the RedShelf on UNM Learn. Please, read the instructions carefully and follow what is required to have access to the book at a discounted price.

Step by Step registration:
You can find step by step instruction by clicking on the following link: Click Here

On WebAssign: To enroll in MATH 1230 - Trigonometry, spring 2021 section 501 use
Class Key: unm 4016 1875
For the instruction on how to sign up for the WebAssign please go to this page:
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Where is your e-book?
Pre-calculus Mathematics for Calculus, 7th Edition, Stewart, Redlin, Watson purchase from the bookstore or an ebook version through WebAssign is available.
WebAssign is the online learning system which accompanies the textbook and includes an e-book. When you log in to your course in WebAssign, your e-book is located on the left side of the main page under MyLab Math. Under MyLab Math you can find an option named "etext". This will take you to the online book.

WebAssign Support

• Need Help? The WebAssign technical support team can be reached by phone or by webform via the Student Support Community. Here are their hours and contact information:
"Student support"
Phone: 1.800.354.9706
The following link includes more detailed instructions on how to register for your course: "Frequently Asked Questions"

You will have online assignments which is part of your overall grade. Online assignment is a combination of Homework, Quiz, Focus on modeling, & Chapter review for each topics.

Warning: WebAssign will not work with Ipad, Phone or these sorts of devices. Also on some laptops it may ask for some setting. Also, make sure you are allowing popups. Please, follow the instructions showing in error message or if you cannot figure it out contact tech support Mentioned here **"WebAssign Support"**.

Where do you find your online assignment? You can find your online assignments on WebAssign. On the main page, click on the assignment or click on the class schedule.

Your daily homework and quiz are your most important effort in this course. It is imperative that you do all of the assigned problems, especially the hard ones, because this is how you actually learn the material.

Expect 2-3 hours of homework for every hour of class meeting time (on average 6-9 hours per week).You will be using WebAssign for your online assignments. Within WebAssign, you can access electronic version of the textbook, extra practice problems, author video lectures, lecture powerpoints to accompany the video lectures. Homework will be assigned in WebAssign and will be graded automatically. Points and the number of assignments will vary.

For each question you must submit your written work. You can take a picture of your solution and upload it for that assignment. For homework, you have 100 trials and it is not timed.

For quizzes, you have two trials, but the quiz is not timed.

For each homework and quiz to receive full credit and receive participation points you must submit your written work for all the questions in that assignment. You can take a picture of your work and upload it on Webassign.

Due Dates: For assignments, you will have an initial due date. You also can request an extension on the assignment if you are not able to finish your assignment before the initial due date.

By requesting an extension on each assignment you receive 25% deduction on that assignment. You can request one extension on each assignment within the 14 days after the initial due date. You can find the due dates on the main page of WebAssign.

More information will be posted on Slack announcement channel.

There are three On-line exams throughout this course: Exam 1, Exam 2, and Final

All online exams are on WebAssign and as soon as 12:05 am on the due date you can find the exam's window on WebAssign's main page.

For the On-Line exams: You can begin your On-line exams at 12:05 am on the exam day and your due time will be 11:55 pm on the same day. You have only one attempt which means if you start your exam you must finish your exam in one session otherwise you will receive zero. You have 120 minutes to answer all the questions in one session. You will receive the grade when you complete the Exam but you cannot review your result until after the due date.

You can find the due dates here in "Course Schedule"

During the exam you must show all your work on a piece of paper(s) with including all the proper mathematical notation. To receive full credit, you must upload the scan (picture) of the paper on webassign. A correct answer without work will receive 0 points.

If you must miss an exam, you must contact your instructor a couple of days before the day of the exam in order to discuss a make-up test. Make-up tests will be given solely at your instructor's discretion and only in cases of well documented excused absences. If you miss an exam and do not contact your instructor immediately, you may be dropped from the course.

No early exams will be permitted except in documented emergencies. Flight reservations, weddings, vacations, birthdays, non-NCAA sporting events etc. are not considered emergencies. More detail about your Exams and Final will be discussed in the class during the semester.

Calculator

Scientific calculator may be necessary. No calculators will be allowed on any of the exams (including the final).

Teaching Materials

Where can you find the materials for this class?

a. You can find my lectures note/ Pdf in the Notes Channel on Slack.

b. There are some PowerPoint and image and clicker slides on the home page of WebAssign provided by publisher you may find useful. You can find them all in the resource section on the homepage.

c. UNM Mathematics and Statistics department has provided the past exams for you which is similar to the exams we have in this course. Click Here!

d. There are Math videos provided by publisher for each chapter. These videos will help you to enhance your learning.

e. Study Plans are the best resource to practice the chapter content. It shows you the weakness or strength in a certain section of a chapter. It will give you more questions from the section that you need to work on more. Study Plans are accessible on WebAssign's homepage.

f. There are many study plans and videos under "Tools for Success" and "Skills for Success" and "Algebra review" in WebAssign. You should go through all these options to find which one is the most helpful for you.

Support!

If you are struggling in this course, do not be afraid to ask for help!

• Office Hours: See my office hours listed at the beginning of this syllabus."Office Hours" Feel free to come by or log in for online office hours, or make an appointment to get help.

• Form study groups: You may work together with other members of our class on Slack.

• Free Tutoring: The Math Center at Valencia campus has free tutoring and open labs. Call 505-925-8907 for more information. CAPS on main campus also provides tutoring for which I can get documentation."LRC"

• Student Services: There are various services provided in our Student Services Department. Read about "ARC" equal access Services. Also, we have a testing center, advising, and career placement available: Valencia Student Services

Academic Dishonesty

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy: Click Here!

The policy states: Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic Dishonesty is defined as:

"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Cheating students will be prosecuted according to University guidelines. Students should get acquainted with their rights and responsibilities as explained in the Student Code of Conduct Click Here!

StudentBehavior & CollegialBehavior

According to the Code of Conduct as stated in the Policies and Regulations for UNM, student activities that interfere with the rights of others to pursue their education or to conduct their University duties and responsibilities will lead to disciplinary action.

This includes any activities that are disruptive to the class and any acts of academic dishonesty. Students are expected to behave in a courteous and respectful manner toward the instructor and their fellow students. Students may be dropped from a class for inappropriate behavior. For more information: Click Here!

Since we assume you are all adults, we will expect from you, respectful adult behavior. Engaging in disruptive or unruly behavior could result in your being asked to leave, at which time you will be counted absent and a referral will be sent to the Associate Dean of Student Services. Continuing to behave in this way could result in your being dropped from the course. Disruptive or unruly behavior includes but is not limited to:

- texting or talking on your cell phone or Laptop at any time during class,
- continually talking with your neighbor when we are not working on a group activity,
- working on homework from another class,
- reading material or watching media on a mobile device not related to this course or at a time that is inappropriate,
- refusing to participate in the class activities.

UNM Valencia Title IX Representative

Title IX (9) Statement: In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education (see pg. 15 - http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity (oeo.unm.edu). For more information on the campus policy regarding sexual misconduct, see: Click Here!

Your Responsibility

EXPECTATIONS: Students are expected to conduct themselves in a polite, courteous, professional and collegial manner. Cell phones must be set on silent and be out of sight during class. No food or drink is allowed in the computer labs.

Time for This Course: Plan to spend a minimum of 9 to 12 hours per week for this class. There is no guarantee you will pass if you dedicate this amount of time, you still need to learn the material and use your time wisely, but those who pass generally are the ones who spend the time needed to do the work to learn the material.

You are responsible for all material covered in this Syllabus and in class, in assigned readings, and on homework assignments. Not all material on tests will necessarily be covered in class but will be in the assignments. The use of cell phones, headphones, etc. is not permitted in class or exams.

Disabilities Policy: (ARC)

Contact Equal Access Services at 925-8560 to schedule an appointment.Click Here!

The Center for Academic Learning

The Learning Center is open Monday – Friday with evening hours Monday – Thursday To schedule an appointment or for additional information call (505)-925-8907 Click Here!

UNM Valencia Registrar's Office

Contact Registration Office by calling 925-8580 Click Here!

UNM Deadlines & Academic Calendar

UNM Deadlines: Click Here! .....*And....* **Academic Calendar:**Click Here!

Library

We have a library at UNM-Valencia. You should already know where the library is.

These are the topics that we are going to learn in this semester.

Chapter 1: sections 6
1.6: Complex Numbers &
Chapter 5: sections 1 to 5
5.1: The Unit Circle &
5.2: Trigonometric Functions of Real Numbers &
5.3: Trigonometric Graphs &
5.4: More Trigonometric Graphs &
5.5: Inverse Trigonometric Functions and their Graphs &
Chapter 6: sections 1 to 6
6.1: Angle Measure &
6.2: Trigonometry of Right Triangles &
6.3: Trigonometric Functions of Angles &
6.4: Inverse Trigonometric Functions and Right Triangles &
6.5: The Law of Sines &
6.6: The Law of Cosines &
Chapter 7: sections 1 to 5
7.1: Trigonometric Identities &
7.2: Addition and Subtraction &
7.3: Double and Half-Angle, Product-Sum &
7.4: Basic Trigonometric Equations &
7.5: More Trigonometric Equations &
Chapter 8: sections 1, 3, and 4
8.1: Polar Coordinates &
8.3: Polar form of Complex Numbers; DeMoivre's Theorem &
8.4: Plane Curves and Parametric Equations &
Chapter 9: sections 1 to 3
9.1: Vectors in Two Dimensions &
9.2: The Dot Product &
9.3: 3-Dimensional Coordinates &

Math 1230 Schedule

Topics	Dates

Note: Find online assignments dates on Webassign

5.1: The Unit Circle
5.2: Trigonometric Functions of Real Numbers
5.3: Trigonometric Graphs
5.4: More Trigonometric Graphs
5.5: Inverse Trigonometric Functions and their Graphs

6.1: Angle Measure
6.2: Trigonometry of Right Triangles
6.3: Trigonometric Functions of Angles
6.4: Inverse Trigonometric Functions and Right Triangles
6.5: The Law of Sines
6.6: The Law of Cosines

Monday March 8th Midterm Exam01 $\Longleftarrow$ Exam01

7.1: Trigonometric Identities
7.2: Addition and Subtraction
7.3: Double and Half-Angle, Product-Sum
7.4: Basic Trigonometric Equations
7.5: More Trigonometric Equations

8.1: Polar Coordinates
1.6: Complex Numbers

Monday April 12th Midterm Exam02 $\Longleftarrow$ Exam02

8.3: Polar form of Complex Numbers; DeMoivre's Theorem
8.4: Plane Curves and Parametric Equations

9.1: Vectors in Two Dimensions
9.2: The Dot Product
9.3: 3-Dimensional Coordinates

Wednesday May 12th Final: (Ch7:1-5, Ch8:1,3,4, Ch9:1-3) $\Longleftarrow$ Final Exam