Dual-Credit College Algebra

MATH 1313

Texas Woman’s University

Denton, TX

***Semester:*  Spring *Year:*  2018**

***Course Prefix:* MATH *Course Number:* 1313**

***Course Title:* Elementary Analysis II**

***Course Description*:**

Topics in this class include trigonometric functions, analytical trigonometry, and vectors. This course meets the core requirements for graduation at Texas Woman’s University. Lecture will usually take place three days a week, most likely Monday, Wednesday, and Friday.

***This course fulfills:* Core Curriculum Requirements**

***General Information:***

***Instructor:*** Megayla O’Rear

***Location:*** Paradise High School

Room 209

Blackboard: <http://online.twu.edu>

Email: [morear@pisd.net](mailto:morear@pisd.net)

Website: [www.pisd.net](http://www.pisd.net) (see High School, Faculty, my webpage)

***Tutorials:*** Students are strongly encouraged to utilize the tutorials available here at Paradise High School.

Monday – Friday: 7:35 – 7:55am, 3:45 – 4:30 pm

Tuesday, Thursday 1:00 – 1:50

***Course Content:***

***Course Goals and Outcomes:***

The objective of this course is to introduce students to trigonometry and vectors and their applications in life.

***Measureable Student Learning Outcomes:***

1. Demonstrate knowledge and appropriate use of trigonometric functions, their applications, and models;
2. Use, verify, and solve trigonometric identities, and their applications;
3. Demonstrate understanding and the ability to apply the laws of sines and cosines;
4. Use properties of vectors to solve real life problems; and
5. Communicate knowledge using standard mathematical language and interpret it in non-technical language.

Each of the above learning outcomes must be performed at an appropriate level as stated in each

course assignment, grading scale, or rubric.

***Exemplary Educational Objectives:***

1. To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations. (Chapters 5, 6, 7)  
   *Assessment:*  Grades on scheduled exams and departmental final exam.
2. To represent and evaluate mathematical information verbally, numerically, graphically, and symbolically. (Chapters 5, 6, 7)  
   *Assessment:* Grades on scheduled exams and departmental final exam.
3. To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments. (Chapters 5, 6, 7)  
   *Assessment:* Grades on scheduled exams and departmental final exam.
4. To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results. (Chapters 5, 6, 7)  
   *Assessment:* Grades on scheduled exams and departmental final exam.
5. To interpret mathematical models such as formulas, graphs, tables, and schematics, and draw inferences from them. (Chapters 5, 6, 7)  
   *Assessment:* Grades on scheduled exams and departmental final exam.
6. To recognize the limitations of mathematical and statistical models. (Chapters 5, 6, 7)  
   *Assessment:* Grades on scheduled exams and departmental final exam.
7. To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understand its connections to other disciplines. (Chapters 5, 6, 7)  
   *Assessment:* Grades on scheduled exams and departmental final exam.

Each of the above student learning outcomes must be performed at an appropriate level as stated in each course assignment requirements, grading scale, or rubric.

***Course Materials and Supplies:***

***Textbook:*** Larson *Algebra and Trigonometry: Real Mathematics, Real People, Sixth Edition.* We will cover Chapters 5 – 7.

***Supplies:*** You must have a graphing calculator for this class. Your book is based on the TI 84 series, but you may use any graphing calculator (TI-83/84/Nspire CX). If you wish, Paradise High School will issue a TI 84 Plus calculator to you in accordance with local policies regarding such issuance.

***Prerequisite Courses or Conditions:***

Math 1303 or equivalent or permission of the instructor. You must be able to solve linear and quadratic equations as well as simplify algebraic expressions to do well in this class.

***Activities, Assignments, and Grading Policies:***

***Grade distribution:***

* 4 Chapter Exams 65%
* 10 quizzes or homework assignments @  
  1.5% each 15%
* Comprehensive departmental final exam 20%

***Overall final grade:***

* A: 100 – 90%
* B: 89 – 80%
* C: 79 – 70%
* D: 69 – 60%
* F: Less than 60%

No extra credit is available. Incomplete grades are only given for extreme circumstances for students who have completed the majority of the course work. Expect to invest approximately 2 hours of study time out of class for every class hour.

***Drop:*** The last day to drop without academic penalty is **Friday, February 23rd**. After the last day to drop without academic penalty, a student who drops will receive a W or WF at the discretion of the instructor. The last day to drop is **Friday, April 6th.**

***Major Course Assignments and Examinations:***

***Exams*:** Four exams are scheduled during the semester, as well as a cumulative departmental final exam. No make-up exams are available. If you must miss an exam and have an excused absence, you may contact me to make arrangements to take the exam. If you do not have an excused absence, the grade on the final exam will be used as the score for the missed exam.

***Homework/Quizzes:*** There will be 12 assignment sets turned in during the semester that are worth 1.5% each. The lowest 2 will be dropped at the end of the semester. As described previously, these assignment sets will account for 15% of the semester grade distribution for Texas Woman’s University as well as Paradise High School. Randomly chosen problems from each assignment set will be graded. Credit for any graded problem will only be awarded if sufficient work for the problem is shown. Unless a problem is of such a nature that it can be answered without work being shown or reason being given for an answer, work and/or justification will be expected in order for credit to be awarded. Yes/no or true/false questions must be justified.

***Parent Involvement:*** Due to confidentiality laws, the instructor will not be able to communicate with the student’s parent(s) regarding individual grades or the student’s overall average without the consent of the student. If a parent wishes to schedule a conference to discuss either of these two issues, the student must be present at that conference.

***TWU Attendance* *Policy:***

Consistent and attentive attendance is vital to academic success, and is expected of all students. Grades are determined by academic performance, and instructors may give students written notice that attendance related to specific classroom activities is required and will constitute a specific percentage of students’ grades.

Instructors are strongly encouraged to keep a record of student attendance. They should note absences due to documented student illness, serious illness or death in the student’s immediate family, pregnancy or related conditions, official school activity, state-recognized religious holiday, active military service that is of a reasonably brief duration, or other verified absences deemed appropriate by the instructor. Students must consult with instructors regarding the completion of make-up work.

Absences do not exempt students from academic requirements. Excessive absences, even if documented, may result in a student failing the course. An incomplete may be granted if the student has a passing grade, but only if the instructor determines that it is feasible for the student to successfully complete remaining assignments after the semester. Pursuant to university policy, such determinations are within the discretion of the instructor.

For this particular course, attendance is required and will be taken daily. For those students who have early dismissal, attendance is only required on those days during which class is being held or during which other class business, such as a unit test, is being administered. Absences will be reported at the end of the semester. Responsibility for work missed because of illness or school business is placed upon the student. Good attendance and class participation will be considered when looking at borderline grades.

***Disability Support Policy Statement:***

If you anticipate the need for reasonable accommodations to meet the requirements of this course, you must register with the office of Disability Support Services (CFO 106, 940-898-3835, [dss@twu.edu](mailto:dss@twu.edu)) in order to obtain the required official notification of your accommodation needs. Please meet with me to discuss approved accommodations and how my course requirements and activities may impact your ability to fully participate.

***Academic Integrity:***

Honesty in completing assignments is essential to the mission of the University and to the development of the personal integrity of students. In submitting graded assignments or tests, students affirm that they have neither given nor received unauthorized assistance, and that they have abided by all other provisions of the Code of Conduct in the TWU Student Handbook. ***Cheating, plagiarism, fabrication or other kinds of academic dishonesty will not be tolerated and will result in appropriate sanctions that may include failing an assignment, failing the class, or being suspended or expelled***. Suspected cases in this course may be reported to Student Life. The specific disciplinary process for academic dishonesty is found in the TWU Student Handbook. The TWU library link, “Avoiding Plagiarism,” will aid students in completing their assignments with integrity.

***Cell Phones:*** Cell phones are allowed in the classroom. They must be **either** turned off **o**r turned to a silent mode **and** then put away. Cell phones are not to be answered or **utilized for any other purpose** (i.e. texting, web browsing, use of any social media, e-mail, apps/games, photos, etc.) in class. Students who ignore this policy may be asked to leave class and/or be subject to local disciplinary measures. Do not expect to be able to leave to answer your cell phone. When there are extenuating circumstances that require that a student be available by phone, the student should speak to the instructor prior to class, so that together they can arrive at an agreement concerning the device. The instructor will take up cell phones on days for which assessments are scheduled.

**Math 1313**

**(This syllabus is subject to change)**

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| --- | --- | --- | --- |
| **DATE** | | **SECTION**  **(# Problems)** | **ASSIGNMENT** |
| Jan | 17 | 5.1 (22) | 14,18,23,26,32,33,36,38,40,42,44,47,52,56,64,66,69,  70,72,74,78,82 |
|  | 19 | 5.1 (11) | 84,86,87,88,94,98,100,105,106,121,122 |
|  | 22 | 5.2 (12) | 8,10,16,18,22,25,30,32,34,35,54,56 |
|  | 24 | ***HS #1*** | ***5.1*** |
|  | 24 | 5.2 (12) | 60,64,68,72,74,76,80,82,83,86,87,89 |
|  | 26 | Calculator Activity Sheet (33) | All listed problems |
|  | 29 | 5.3 (16) | 14,16,20,28,30,32,34,38,40,44,46,52,56,58,64,69 |
|  | 31 | ***HS #2*** | ***5.2, Calculator Activity Sheet*** |
|  | 31 | 5.3 (12) | 72,74,84,86,89,92,96,100,108,110,136,137 |
| Feb | 2 | REVIEW | Lessons 5.1-5.3 |
|  | 5 | REVIEW | Lessons 5.1-5.3 (go over questions) |
|  | 5 | ***HS #3*** | ***5.3*** |
|  | 7 | ***TEST*** | ***5.1-5.3*** |
|  | 9 | 5.4 (6) | Graphing Trigonometric Functions: 1-6 (sin) |
|  | 12 | 5.4 (6) | Graphing Trigonometric Functions: 7-12 (cos) |
|  | 14 | 5.5 (6) | Graphing Trigonometric Functions: 13-18 (tan) |
|  | 16 | ***HS #4*** | ***Graphing: 1-12*** |
|  | 16 | 5.5 (6) | Graphing Trigonometric Functions: 19-24 (cot) |
|  | 20 | 5.5 (8) | Graphing Trigonometric Functions: 25-32 (csc/sec) |
|  | 21 | 5.6 (16) | 6-12e,24-28e,46,54-60e,66-72e |
|  | 27 | ***HS #5*** | ***Graphing: 13-32*** |
|  | 27 | 5.7 (17) | 6-20e,23,26,28,32,33,39,41,42,45 |
|  | 28 | REVIEW | 5.4-5.7 |
| Mar | 2 | REVIEW (questions) | 5.4-5.7 |
|  | 2 | ***HS #6*** | ***5.6, 5.7*** |
|  | 6 | ***TEST*** | ***5.4-5.7*** |
|  | 7 | 6.1 (20) | 10,13,18,21-30 all,33-36all,38,40,44 |
|  | 9 | 6.1 (16) | 46,48,52,54,56,59-61all,68,70,76,78,111-114 all |
|  | 19 | 6.2 (15) | 12-20e,32,36,38,39-51o |
|  | 21 | 6.2 (7) | 34,53,54,56,57,61,63 |
|  | 21 | ***HS #7*** | ***6.1*** |
|  | 26 | 6.3 (10) | 9,32-36e,40,41,44,45,50,66 |
|  | 28 | 6.4 (14) | 10,12,18,22,24,28,32,46,50,61-69o |
| Apr | 2 | 6.5 (12) | 10(a,c,e,g),13,18,22,24,78,84,86,100,101,105 |
|  | 3 | ***HS #8*** | ***6.2, 6.3*** |
|  | 3 | REVIEW | Chapter 6 |
|  | 4 | REVIEW (questions) | Chapter 6 |
|  | 4 | ***HS #9*** | ***6.4, 6.5*** |
|  | 6 | ***TEST*** | ***Chapter 6*** |
|  | 9 | 7.1 (9) | 16,22,24,29,30,32,36,40,42 |
|  | 11 | 7.2 (10) | 14,20,22,28,44,47,48,49,50,56 |
|  | 18 | 7.3 (19) | 14,18,24,25,28,32,36,40,44,45,52,54,62,64,69,74,76,  80,86 |
|  | 20 | 7.4 (16) | 8,11,14,16,18,20,24,28,32,34,40,42,46,48,50,58 |
|  | 20 | ***HS #10*** | ***7.1, 7.2*** |
|  | 23 | 7.5 (9) | 8,10,14,18,20,24,38,42,46 |
|  | 23 | ***HS #11*** | ***7.3*** |
|  | 25 | 7.5 (7) | 48,50,58,66,70,74,76 |
|  | 27 | REVIEW | Chapter 7 |
|  | 30 | ***HS #12/***REVIEW (questions) | ***7.4, 7.5*** |
| May | 1 | ***TEST*** | ***Chapter 7*** |
|  | 2 | SEMESTER REVIEW | Chapters 5-7 |
|  | 3 | SEMESTER REVIEW | Chapters 5-7 |
|  | 4 | SEMESTER REVIEW | Chapters 5-7 |
|  | 5 | ***SEMESTER FINAL*** | ***Chapters 5-7*** |

\*\* The date for the semester final is set for **Saturday, May 5th.** Transportation will be provided for that time. If you are unable to take the final on that date, you may **tentatively** take the final on **Tuesday, May 9th**, but you will be responsible for your own transportation for this particular date. You are required to take the final on one of these two dates.