CoSM Class Syllabus/Policy
Precalculus B, Spring, 2024
MATH 2212.004

Professor: Jonathan Mitchell Ph.D.
Email: mitchelljonat@sfasu.edu

Email Guidelines:
- Use your @jacks email.
- Use a suitable subject line
- Include the course and SECTION in which you are registered.
- Allow me 24 hours to reply (though often I’m much faster than that)

YouTube Channel: youtube.com/MathDoctorMitchell

Faculty website: https://faculty.sfasu.edu/mitchelljonat

Phone: Office: 936-468-1606
Office: Math 352
Office Hours: by appointment or ...

Department: Mathematics and Statistics
Class meeting times and places: MWF 10:00 – 10:50AM, Bush Math Room 214

Course Description: This is the 2nd of two prep courses for the calculus sequence. We study properties and graphs of trigonometric functions, their inverses, trig identities, conic sections, and polar coordinates.

Required Text and Materials:
- Book: The required textbook is Precalculus: A Prelude to Calculus, 3rd edition, by Axler Wiley. ISBN 9781119321514
- Scientific Calculator: students may use a non-programmable, non-graphing calculator. TI-30 XS MultiView is recommended; the TI 36X-Pro is prohibited on quizzes or exams.

Course Requirements
- When you arrive to class, put your cell phone and other devices on silent (or turn off) and away from you unless told otherwise. Before any quiz or exam put away all smart watches and turn your hat backwards. Remove your headphones.
- Homework — Exercises from the textbook will be assigned for each major topic in the course. Students are expected to start each HW assignment THE SAME DAY we cover that material.
- Quizzes — You will have periodic quizzes. Some of these will be announced; some will not. No make-up quizzes will be offered. Your lowest quiz grade will be dropped at the end of the semester.
- Three in-class exams — If a student must miss an exam due to an excused absence, special arrangements should be made at least one week in advance. Student ID with photo may be required for exams.
- A cumulative final exam — The final exam is (schedule here)
  MATH 2212.004: Monday, May 6, 10:30 AM – 12:30 PM
- Preparing for class — Students should be prepared to invest at least 1-2 hours per day outside of class reading the text, practicing examples, and working homework exercises. Check your @jacks email daily, as your instructor may send reminders, assignments, or announcements. On the day before class, students are expected to look at the schedule (online), see the topic to be covered during class, read the corresponding section in the textbook, print the available notes, and bring them to class the following day.

Grading Policy: Your grade will be computed by a weighted average with the following items and percentages.
- HW & Quizzes: 15%
- Exam 1: 16%
- Exam 2: 20%
- Exam 3: 24%
- Final Exam: 25%

Attendance Policy:
Students are expected to actively participate in class. Here are some ways that can be done. (1) Each student should show up to class on time and engage in the discussion by asking questions, having the slides, writing notes, and working relevant exercises without being a distraction to others. (2) Each the student will need to demonstrate active participation other ways, including but not limited to emailing the instructor questions, submitting documents clearly, punctually, and professionally, and maintaining a positive and respectful attitude.

Updated: August 2023
Tentative Content Schedule: See D2L Brightspace

Tips for Success:
1. Print the slides. Attend every class. Take notes. Ask questions.
2. Be prompt and professional. Remove your headphones. Put your phone away without being asked.
3. Check your SFA email at least once per day. I will do the same.
4. Do all assigned HW exercises in an organized notebook independently and promptly. Cancel Chegg (slater, wolfram alpha, symbolab) subscription, self-evaluate, use a timer, etc.
5. Get in a study group with your peers. Explain concepts to each other.

Course Contact and Study Hours

The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

Please keep in mind that, under federal financial aid eligibility requirements, SFA policy 5.4 defines the credit hour as “(1) Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester hour of credit, or the equivalent amount of work over a different amount of time, or (2) at least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practicum, studio work, and other academic work leading to the award of credit hours.” So, for instance, a 3 credit hour face-to-face course in the fall term should approximate 3 hours of classroom time/direct instruction and at least 6 hours of out-of-class work per week. Online or hybrid courses should employ various strategies for creating student-professor contact and are held to the same standard for contact hours and out-of-class work as face-to-face classes.

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

Academic Integrity (4.1)

The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

Withheld Grades Semester Grades Policy (5.5)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the coursework because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course to compute the grade point average. For additional information, go to

Updated: August 2023
Students with Disabilities

Please copy and paste the following statement and place it in your course syllabus.

To obtain disability-related accommodations, alternate formats, and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Student Wellness and Well-Being

SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:

The Dean of Students Office (Rusk Building, 3rd floor lobby)

www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202

www.sfasu.edu/humanservices/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”

Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

• Health Services
• Counseling Services
• Student Outreach and Support
• Food Pantry
• Wellness Coaching
• Alcohol and Other Drug Education

www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

Crisis Resources:

• Burke 24-hour crisis line: 1.800.392.8343
• National Suicide Crisis Prevention: 9-8-8
• Suicide Prevention Lifeline: 1.800.273.TALK (8255)
• johCrisis Text Line: Text HELLO to 741-741

See https://math.sfasu.edu/docs/syllabi/MATH2212Syllabus.pdf for elements common to all sections.
Math 2212/2012 – Precalculus B
Course Syllabus

Course description: Preparatory of the calculus sequence: Triangular and circular trigonometric function derivation; special triangles; graphs, domains/ranges, asymptotes, and transformation of circular functions and their inverses; fundamental trigonometric identities; conic sections; polar and rectangular coordinate systems.

Credit hours: 2

The following is an excerpt from SFA Policy 5.4:

The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;

2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

Course Prerequisites and Corequisites: Credit for Math 2211 or permission of the department chair

Course outline:

• Trigonometry
  - Triangular/circular functions
    ▪ Definitions in both contexts
    ▪ Special triangles and values of the trigonometric functions at the standard multiples
    ▪ Graphs, domains/ranges, asymptotes, and transformations of the circular functions
  - Trigonometric Identities
    ▪ Basic: reciprocal, quotient and Pythagorean identities
    ▪ Others: sum/difference identities, double- and half-angle identities
  - Inverse trigonometric functions
    ▪ Domains/ranges, reference angles
  - Graphs
  - Solving trigonometric equations
  - Law of Sines and Cosines

• Vectors & Analytic Geometry
  - Polar Coordinates
  - Vectors

Approximate time spent

65%

35%
Complex numbers and the complex plane
- Cartesian coordinate system/distance formula
- Conic sections: parabola, ellipse, hyperbola
- Transformations (including rotations)
- Polar coordinates

**Student Learning Outcomes (SLO):** At the end of MTH 2212, a student who has studied and learned the material should be able to:

1. Define triangular/circular trigonometric functions.
2. Determine the domains/ranges/grap hes of circular trigonometric functions and their transformations.
3. Identify special triangles and values of the trigonometric functions at the standard multiples.
4. Extend the definition of the trigonometric functions and the Pythagorean Theorem to obtain the reciprocal, quotient, and Pythagorean identities.
5. Understand the sum and difference formulas and use them to generate the double- and half-angle formulas.
6. Restrict the domain of the trigonometric functions so that the inverse trigonometric functions may be defined.
7. Solve trigonometric equations.
8. Use Law of Sines/Cosines to solve triangles.
9. Recognize that the distance formula is an application of the Pythagorean Theorem.
10. Define and analyze the conics: circles, ellipses, parabolas, and hyperbolas.
11. Convert the polar equation of a conic to a rectangular equation and vise versa.

There are no specific program learning outcomes for this major addressed in this course. It is specifically intended as preparation for the calculus sequence.

This course meets educator preparation standards for one or more certification programs; a complete listing of all the educator preparation standards this course meets can be found at: https://sfasu.edu/docs/jacksteach/jacksteach-standards-alignment-chart.xlsx.

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Location: corner of E. College and Raguet St.

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- Counseling Services
- Student Outreach and Support
- Food Pantry
- Wellness Coaching
- Alcohol and Other Drug Education

www.sfasu.edu/thehub
936.468.4008
Crisis Resources:
- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
- Crisis Text Line: Text HELLO to 741-741

Acceptable Student Behavior
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy 10.4). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom.

Date of document: 08/23/2023