Course Title: **Calculus with Analytic Geometry II**

Course Prefix: **MATH** **Course No.:** **2024** **CRN: XXXXX** **Section No.: P0X**

Department of **Mathematics** **College of** **Arts and Sciences**

Instructor Name: Dr. Dimitar Michev
Office Location: 301F-WRBanks
Office Phone: (936)-261-1982
Fax: (936)-261-2088
Email Address: dimichev@pvamu.edu
Snail Mail (U.S. Postal Service) Address: Prairie View A&M University
P.O. Box 519
Mail Stop **2225**
Prairie View, TX 77446

Office Hours:
Virtual Office Hours:
Course Location: **BNKS 209**
Class Meeting Days & Times:
Course Abbreviation and Number: Math 2024-P01

Catalog Description: Credit 4 semester hours. Applications of integrals, integration techniques, inverse functions, indeterminate forms, improper integrals, parametric equations, polar coordinates, infinite series, power series, Taylor series.

Prerequisites: Math 1124 or equivalent
Co-requisites:
Required Text: Calculus, 6th edition, by James Stewart, Brooks Cole Publishing Company ISBN-13: 978-0-495-01160-6; ISBN-10: 0-495-01160-6
Recommended Text:

Access to Learning Resources:
PVAMU Library:
phone: (936) 261-1500;
web: http://www.tamu.edu/pvamu/library/
University Bookstore:
phone: (936) 261-1990;
web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d

Course Goals or Overview:

The goal of this course is to provide a solid foundation of different integration techniques, and infinite series and to show how the basic concepts of calculus can be applied to solving a variety of scientific and applied problems

At the end of this course, the student will be able to

		Alignment with Core Curriculum
1	Express and deliver mastery in the differential and integral techniques to deal with functions of a single variable; Convert a variety of techniques to integrate more complex integrals	CS and EQ
2	apply integral calculus to solving a variety of scientific and applied problems	CS and EQ
3	understand and evaluate the concept and applications of inverse functions	CT
4	understand and explain parametric equations of curves and equations of curves in polar coordinates; Explore and find derivatives of and tangents to parametric and polar curves	CS and EQ
5	analyze sequences and series; find the interval of convergence of a power series; find Taylor or Maclaurin series for a function and solve related applied problems; use power series to find derivatives and integrals and to solve other applied problems	CT and EQ
6	apply calculus to solve selected problems that arise in mathematics, science, engineering, computer science, business, and economics	CT, CS and EQ

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course. *Note: See Program Outcomes in True Outcomes*

Exams – written tests designed to measure knowledge of presented course material
Exercises – written assignments designed to supplement and reinforce course material
Projects – web development assignments designed to measure ability to apply presented course material
Class Participation – daily attendance and participation in class discussions

Grading Matrix

Homework/Presentation/Projects	15%
Quizzes	20%
Tests and Midterm exam	40%
Final exam	25%

Additional points (%) will be given for extraordinary projects and presentations, , solution of assigned nontrivial problems, hard work in class, attendance of all classes, etc.

Grade Determination:

Percentage	Grade	Description
90% - 100%	A	Excellent
80% - 89.9%	B	Good
70% - 79.9%	C	Fair
60% - 69.9%	D	Poor
0% - 59.9%	F	Failure

Course Procedures

Submission of Assignments:

Formatting Documents:
Microsoft Word is the standard word processing tool used at PVAMU. If you're using other word processors, be sure to use the "save as" tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.
Exam Policy
Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook

Professional Organizations and Journals

Calculus of Variations and Partial Differential Equations

References

Math 2024 Calculus with Analytic Geometry II

Week	
1	Introduction **Chapter 6** Applications of integration 6.1 Areas between curves Student presentations express and deliver review of Calculus I Skills and apply integration.
2	6.2-6.3 Volumes 6.4, 6.5 Work; Average value of a function Student Presentations apply knowledge of volume and function.
3	**Chapter 7** Inverse functions 7.1 Inverse functions Student presentations show relationship of inverse function calculations.
4	7.2 –7.5 Exponential and logarithmic functions 7.6 Inverse trigonometric functions Student project groups organize logarithmic function to solve.
5	7.7 Hyperbolic functions 7.8 Indeterminate forms. L'Hospital's rule Presentations by students explain L'Hospital rule.
6	**Chapter 8** Techniques of integration 8.1 Integration by parts 8.2 Trigonometric integrals
7	8.3 Trigonometric substitutions 8.4 Integration of rational functions
8	**Review** Student presentation writes and explain midterm review questions. **Mid-Term Exam**
9	8.5-8.6 Strategy for integration 8.7 Approximate integration
10	8.8 Improper integrals **Chapter 9** Further applications of integration Student project groups explore and organize applications of integration.
11	9.1-9.2 Arc length, area of surface of revolution Student Presentations interpret area of surface of revolution.
12	**Chapter 11** Parametric equations and polar coordinates 11.1-11.2 Curves defined by parametric equations Students apply parametric equations by presentation.
13	11.3-11.4 Polar coordinates **Chapter 12** Infinite Sequences and Series 12.1, 12.2 Sequences and series Sequences and series calculated and expressed by student presentations.
14	12.3-12.7 Strategy for testing series 12-8-12.11 Power series their types and applications Student presentation evaluates testing series.
15	**Review** Student presentations write and explain final review questions. The Last day of classes
16	**Final exam**

University Rules and Procedures

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):
You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. Fabrication: use of invented information or falsified research.

4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Technical Considerations for Online and Web-Assist Courses

Minimum Hardware and Software Requirements:

-Pentium with Windows XP or PowerMac with OS 9
-56K modem or network access
-Internet provider with SLIP or PPP
-8X or greater CD-ROM
-64MB RAM
-Hard drive with 40MB available space
-15" monitor, 800x600, color or 16 bit
-Sound card w/speakers
-Microphone and recording software
-Keyboard & mouse
-Netscape Communicator ver. 4.61 or Microsoft Internet Explorer ver. 5.0 /plug-ins
-Participants should have a basic proficiency of the following computer skills:
- ·Sending and receiving email
- ·A working knowledge of the Internet
- ·Proficiency in Microsoft Word
- ·Proficiency in the Acrobat PDF Reader
- ·Basic knowledge of Windows or Mac O.S.

Netiquette (online etiquette): students are expected to participate in all discussions and virtual classroom chats when directed to do so. Students are to be respectful and courteous to others in the discussions. Foul or abusive language will not be tolerated. When referring to information from books, websites or articles, please use APA standards to reference sources.

Technical Support: Students should call the Prairie View A&M University Helpdesk at 936-261-2525 for technical issues with accessing your online course. The helpdesk is available 24 hours a day/7 days a week. For other technical questions regarding your online course, call the Office of Distance Learning at 936-261-3290 or 936-261-3282

Communication Expectations and Standards:
All emails or discussion postings will receive a response from the instructor within 48 hours.

You can send email anytime that is convenient to you, but I check my email messages continuously during the day throughout the work-week (Monday through Friday). I will respond to email messages during the work-week by the close of business (5:00 pm) on the day following ***my receipt*** of them. Emails that I receive on Friday will be responded to by the close of business on the following Monday.

Submission of Assignments:
Assignments, Papers, Exercises, and Projects will distributed and submitted through your online course. Directions for accessing your online course will be provided. Additional assistance can be obtained from the Office of Distance Learning.

Discussion Requirement:
Because this is an online course, there will be no required face to face meetings on campus. However, we will participate in conversations about the readings, lectures, materials, and other aspects of the course in a true seminar fashion. We will accomplish this by use of the discussion board.

Students are required to log-on to the course website often to participate in discussion. It is strongly advised that you check the discussion area daily to keep abreast of discussions. When a topic is posted, everyone is required to participate. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.

College of Arts and Sciences Student & Staff Aspiration Statement

The faculty and staff of the College of Arts and Sciences at PVAMU are committed to providing the best possible quality education to its students. To that end, we will work hard to prepare the students for success by setting the proper academic environment and background necessary to facilitate learning. In order for us to be successful, there are some basic expectations our students must demonstrate. These expectations are a simple ingredient to foster camaraderie and '*esprit de corps*' in every class and classroom on campus. Additionally, these are lifelong fundamental learning skills to better prepare students for success in America's job market.

CAS student expectations:

- You are expected to come to class prepared and on time.
- Higher education is an investment in your future, to that end; you must endeavor to be properly equipped for class. (i.e. School supplies, text, and other supporting materials).
- Resolution of any classroom issues (i.e. Grades, course materials, etc) should begin with the instructor.
- If you must leave early, notify the instructor before the class begins, sit by the door, and exit quietly
- Be considerate of your fellow classmates; please turn off all phones, pagers and other electronic devices.
- Do not talk to other students during lecture. If you have a question or a comment on the subject being discussed, address it to the instructor directly.
- Walk quietly through the hallways, classes in other rooms may still be in session.
- Please refrain from eating, drinking, sleeping in class, using profanity, and engaging in any form of horseplay in the classroom it is disruptive to your fellow classmates.
- Be respectful, civil, polite and considerate when dealing with your professors as well as your fellow classmates.
- Student attire is based on personal preference and taste. The rule of thumb is simple, if it projects a statement which is offensive to others, then maturity should dictate that it is probably not a good idea to wear to class.
- Enthusiasm is infectious, a smile and positive attitude will go far to motivate and charge your professors and fellow classmates