MAT 4134 Advanced Placement Calculus BC 2

Spring 2024 Ms. Jessica Edrington

SCHEDULE:	Period 9-10	12:00-12:50 MWRF	BU 202
Office:	WA147	Phone: 285-7420	E-mail: jaedrington@bsu.edu

Office Hours:

Mondays:	10am – 11:45am; 2pm – 5pm
Wednesdays:	10am – 11:45am; 2pm – 5pm
Thursdays:	9:30am – 11:45am
Fridays:	10am – 11:45am; 1pm – 2pm

and by appointment

I will also be available by email until 10pm most evenings.
Any changes to these hours will be posted outside my office door and/or as a Canvas announcement.

DESCRIPTION: This course meets four days a week and covers the College Entrance Examination Board's BC syllabus in Advanced Placement Calculus. Students are encouraged to register for the AP exam and may find that their college grants them credit for up to two semesters of calculus. Topics covered in the two-semester sequence include limits, derivatives, integrals, series, vectors, and parametric equation, as well as their applications in numerous real-world problems. Treatment of these topics involves both theory and its implementation on graphing calculators, and as part of the study of these topics, we will also consider how different cultures have contributed to and approached many of these topics.

DUAL CREDIT: Ball State University offers 4 college credit hours per semester in MATHS 165 and MATHS 166 to students who pass both semesters with a grade of at least C. Successful completion of the first course is a pre-requisite for enrollment in the second course. Enrollment to the University for credit must be done at the beginning of the semester.

PREREQUISITE: MAT 4133 (AP Calculus BC 1), MAT 4124 (AP Calculus AB 2), or the equivalent.

COURSE CONTENT:

Chapter 6	Differential Equations	6.1, 6.3-6.4
Chapter 7	Applications of Integration	7.4-7.5
Chapter 8	Integration Techniques & Improper Integrals	8.1-8.8
Chapter 9	Infinite Series	9.1-9.10
Chapter 10	Conics, Parametric Equations, & Polar Coordinates	10.1-10.5

TEXT: Larson, and Edwards, *Calculus of a Single Variable*, eleventh edition, 2018, CENGAGE Learning, ISBN 978-1-337-28690-9.

CALCULATOR: The TI-84 Plus calculator will be used extensively in this course. The TI-83 and TI-83 Plus calculators are similar. Use of TI-89, TI-92 and other symbolic algebra calculators will **not** be allowed for exams and quizzes in this course.

METHODS OF STUDENT EVALUATION:

Exams (50%): At the end of each unit, there will be an exam covering that material. Exams are modeled on the AP Exam and that unit's material may also include content from previous units. Dates will be announced at least one week in advance. Exams may have calculator and no-calculator sections.

Quizzes (20%): There will be approximately 7-10 short quizzes, both announced and unannounced.

Homework (10%): For nearly every section, there will be a homework assignment. For each section, students will be expected to either submit a digital scan of this assignment or complete a short homework quiz over that assignment on Canvas. These assignments or quizzes will usually be due

at the beginning of the second class after the homework set is assigned. What may also be included in the homework grade is projects. These may be extended assignments involving challenging applications and problems that will be given either as individual or group projects. Each project should include a detailed report of the methods and solution as well as the answer.

Final Exam (20%): A comprehensive final exam will be given during the designated time period the week designated on the school calendar. As the final exam is cumulative, its score may replace one lower exam score from earlier in the semester.

The following standard overall grading scale will apply:

		92.5% - 100%	A	89.5% - 92.49%	A-
87.5% - 89.49%	B+	82.5% - 87.49%	B	79.5% - 82.49%	B-
77.5% - 79.49%	C+	72.5% - 77.49%	C	69.5% - 72.49%.	C-
		0% - 69.49%	D*		

CLASS ATTENDANCE POLICY: Students are expected to attend every class and be on time. Academy policies on attendance and tardiness will be followed. Sleeping in class constitutes an unexcused absence. Being late more than 10 minutes is recorded as Absent. In the event of unexcused absences, make-up homework, quizzes, or exams will not be allowed. For an excused absence, assignments due that day are expected by class time the next day (not the next class day). Absence from a prior class will not allow the student to defer a scheduled quiz or exam.

"It is the policy of the Indiana Academy that any absence from class is unexcused, except for illness, death in the family, college or school-related activities, and extenuating circumstances. When a student is absent from a class, the instructor reports the student absence to the Faculty Attendance Coordinator in the Office of Academic Affairs. Unless the absence is excused by a school official, it is considered unexcused. The decision as to whether an absence is excused is not determined by the instructor.

*You are expected to attend every class. You are allowed one unexcused absence without penalty. Each additional unexcused absence will be penalized as follows: Unexcused absence (1) = 1-point subtraction from final grade. Unexcused absence (2) = 3-point subtraction from final grade. Unexcused absence (3) = 5-point subtraction from final grade. (For example, if you have an 89 final average with (3) unexcused absences your final grade will be 84). Four (4) or more unexcused absences will lead to academic and residential consequences beyond the scope of this class determined by the Office of Academic Affairs (i.e., residential groundings, parent/principal conference, and/or detention).

**Any minor assignment/test/project/presentation missed due to an unexcused absence will be handled according to the late work policy of this class. You will be given an opportunity to retake any missed assignment/test/project/presentation worth more than 20% of the final grade but will be docked a full letter grade as a result."

ACADEMIC INTEGRITY POLICY: Academic dishonesty in any form is unacceptable and will not be tolerated. Students are responsible for knowing the policies and consequences as stated in the Academy handbook. For this course, cooperative group work on homework assignments is appropriate and encouraged but copying of an assignment from another is not acceptable. Giving information about the content of quizzes or exams to students yet to take the test is a severe violation of academic honesty standards.

Artificial intelligence (AI) provides exciting new tools for academic work. It is appropriate to use AI to explore solutions and to discover methods of approaching problems in homework situations. In such cases, AI should be a learning tool that increases and supports understanding. AI also poses significant dangers for academic integrity. Passing off as your own any research, words, ideas, work, or solutions which you did not create is plagiarism. Whether the source is print, internet content, or generated by AI, copying work from outside resources, and presenting it as your original work is not allowed. Use of AI should be documented.

CELL PHONES: Cell phones and other mobile devices should not be accessed or visible in the classroom unless you are using it as a tool to take notes. Be sure to disable device so that it will not ring, buzz, shake, or otherwise interrupt class. Enjoy the text-free hour.

EATING IN CLASS: Eating, drinking, and chewing gum is not allowed in the classroom.

LAPTOP COMPUTERS: The graphing calculator will be the primary technology in this course, and little use of laptop computers is anticipated except on virtual learning days.

METHODS OF COURSE EVALUATION: Evaluation, including student evaluation of the course, will be conducted according to Academy policy.

If you need course adaptations or accommodations because of a disability, please contact the ***Office of Disability Services***. The ***Office of Disability Services*** coordinates services for students with disabilities; documentation of a disability needs to be on file in that office before any accommodations can be provided. Disability services can be contacted at 765-285-5293 or dsd@bsu.edu.

Ball State University aspires to be a university that attracts and retains a diverse faculty, staff, and student body. We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and worldviews represented at Ball State and among those we serve. We promote a culture of respect and civil discourse as expressed in our Beneficence Pledge and through university resources found at http://cms.bsu.edu/campuslife/multiculturalcenter.