



North Central State College

MASTER SYLLABUS

2025-2026

- A. Academic Division: Liberal Arts
- B. Discipline: Mathematics
- C. Course Number and Title: MATH1151 Calculus II
- D. Assistant Dean: Laura Irmer, MFA, MA
- E. Credit Hours: 5
- F. Prerequisites: MATH1150 (Minimum grade of C- required)
- G. Last Course/Curriculum Revision Date: Fall 2023 Origin date: 06/08/2011
- H. Textbook(s) Title:  
*Calculus II w/Desmos (OHM Bundle) Access Code*
  - Author: Lumen Learning
  - Copyright Year: 2024
  - Edition:
  - ISBN #9781640873629
- I. Workbook(s) and/or Lab Manual:  
TI-84 Calculator recommended ISBN #8780000100116 \*Check with instructor on calculator options
- J. Course Description: This course is a continuation of MATH1150 Calculus I. Topics include integration and applications, calculus of exponential and logarithmic functions, hyperbolic functions, methods of integration, integration by parts, indeterminate forms and L'Hôpital's Rule, moments and centers of mass, fluid pressure and force, integration techniques, series including Taylor and Maclaurin, calculus of conics, calculus of parametric equations, and polar forms of conic sections including Kepler's Laws. This course meets the requirements for OTM Calculus II TMM006. If combined with MATH1150, it meets the requirements for OTM Calculus I & II sequence TMM017.

K. College-Wide Learning Outcomes:

College-Wide Learning Outcome	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
1. Employ a variety of integration techniques to evaluate special types of integrals and apply to physical, biological or economic situations.	Homework, Tests, Final Exam Throughout the term.
2. Approximate a definite integral by the Trapezoidal Rule.	Homework, Tests, Final Exam Early in the term.
3. Evaluate limits that result in indeterminate forms, including the application of L'Hôpital's Rule.	Homework, Tests, Final Exam Middle of the term.
4. Evaluate improper integrals.	Homework, Tests, Final Exam Late in the term.
5. Find, graph, and apply the equations of conics.	Homework, Tests, Final Exam Late in the term.
6. Determine the existence of, estimate numerically and graphically, and find algebraically the limits of sequences and determine whether a series converges.	Homework, Tests, Final Exam Late in the term.
7. Find the nth Taylor polynomial at a specified center for a function and estimate the error term.	Homework, Tests, Final Exam Late in the term.
8. Analyze curves given parametrically and in polar form and find the areas of regions defined by such curves.	Homework, Tests, Final Exam Late in the term.
9. Solve separable differential equations and understand the relationship between slope fields and solution curves.	Homework, Tests, Final Exam Middle of the term.

M. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93-100	A	4.00	Superior
90-92	A-	3.67	Superior
87-89	B+	3.33	Above Average
83-86	B	3.00	Above Average
80-82	B-	2.67	Above Average
77-79	C+	2.33	Average
73-76	C	2.00	Average
70-72	C-	1.67	Below Average
67-69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
00-59	F	0.00	Failure

N. College Procedures/Policies:

North Central State College believes that every student is a valued and equal member of the community.\* Every student brings different experiences to the College, and all are important in enriching academic life and developing greater understanding and appreciation of one another. Therefore, NC State College creates an inclusive culture in which students feel comfortable sharing their experiences. Discrimination and prejudice have no place on the campus, and the College takes any complaint in this regard seriously. Students encountering aspects of the instruction that result in barriers to their sense of being included and respected should contact the instructor, assistant dean, or dean without fear of reprisal.

\* *Inclusive of race, color, religion, gender, gender identity or expression, national origin (ancestry), military status (past, present or future), disability, age (40 years or older), status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child, status as a foster parent, genetic information, or sexual orientation*

**Important information regarding College Procedures and Policies can be found on the syllabus supplement located at**

<https://ncstatecollege.edu/documents/President/PoliciesProcedures/PolicyManual/Final%20PDFs/14-081b.pdf>



**North Central State College**  
**SYLLABUS ADDENDUM**

<b>Academic Division:</b> <u>Liberal Arts</u>	<b>Discipline:</b> <u>Mathematics</u>
<b>Course Coordinator:</b> <u>Sara K. Rollo</u>	
<b>Course Number:</b> <u>MATH 1151 - 921</u>	<b>Course Title:</b> <u>Calculus II</u>
<b>Semester / Session:</b> <u>Spring 2026 - Session B</u>	<b>Start / End Date:</b> <u>3/16/2026 - 5/8/2026</u>

**Instructor Information**

<b>Name:</b> <u>Makayla M. Meckes</u>	<b>Credentials:</b> <u>M.A. in Mathematics</u>
<b>Phone Number:</b> <u>(419) 755-4800 ext. 1024</u>	<b>E-Mail Address:</b> <u><a href="mailto:mmeckes@ncstatecollege.edu">mmeckes@ncstatecollege.edu</a> (Canvas message preferred)</u>
<b>Office Location (Zoom):</b> <u>nsc.zoom.us/my/nsc.mmeckes</u>	<b>Office Hours:</b> <u>Available via Zoom by appointment</u>

**I. Topical Timeline (Subject to Change):**

MATH 1151	Due Wednesday by 11:59pm	Due Saturday by 11:59pm
<b>Week 1</b>	Topic 1 Homework Introduction Post	Test 1 Topic 1 Key Concept Post
(3/16 - 3/21)	Outcomes/objectives: Differentiate and integrate natural logarithmic, exponential, inverse trigonometric, and hyperbolic functions, and their inverses	
<b>Week 2</b>	Topic 2 Homework	Test 2 Topic 2 Key Concept Post
(3/22 - 3/28)	Outcomes/objectives: Interpret and use slope fields in mathematical situations, solve differential equations involving growth and decay, solve by using separation of variables and solve first-order linear and non-linear differential equations	
<b>Week 3</b>	Topic 3 Homework	Topic 4 Homework Topics 3 & 4 Key Concept Post
(3/29 - 4/4)	Outcomes/objectives: Find the area of a region between two curves, find the volume using both the disc and shell methods Find arc length and surface of revolutions of a function, solve problems involving work, fluid pressure and fluid force and find centers of mass	
<b>Week 4</b>	Test 3	Topic 5 Homework Topic 5 Key Concept Post
(4/5 - 4/11)	Outcomes/objectives: Learn and use integration by parts, integrate trigonometric functions, and integrate using trigonometric substitution	
<b>Week 5</b>	Topic 6 Homework	Test 4 Topic 6 Key Concept Post
(4/12 - 4/18)	Outcomes/objectives: Integrate using partial fraction decomposition, find integrals by numerical integration, use L'Hopital's Rule for indeterminate forms, and integrate improper integrals	
<b>Week 6</b>	Topic 7 Homework	Topic 8 Homework Topic 7 & 8 Key Concept Post

Course Number: MATH 1151-921  
Semester / Session: Spring 2026 - Session B

Course Title: Calculus II  
Start / End Date: 3/16/2026 - 5/8/2026

(4/19 - 4/25)	Outcomes/objectives: Learn sequences, determine the convergence of a series, and use the integral test and p-series to determine convergence Compare series to find convergence, determine convergence for alternating series and by the ratio and root tests	
Week 7	Topic 9 Homework	Test 5 Topic 9 Key Concept Post
(4/26 - 5/2)	Outcomes/objectives: Use Taylor polynomials to approximate an elementary function, represent functions by power series, and find the convergence of Taylor and Maclaurin series	
Week 8	Topic 10 Homework Topic 10 Key Concept Post	Final Exam **DUE FRIDAY (5/8) by 11:59pm**
(5/3 - 5/8)	Outcomes/objectives: Graph conics, plane curves that are expressed as parametric equations, review polar coordinates and polar functions and their equations, find the area and arc length of problems in polar form and find polar forms of conic sections	

## II. Course Assignments:

1. Discussion Board Posts
2. Homework
3. Tests
4. Final Exam

## III. Grading and Testing Guidelines:

Activity	Qty	Total Points	Percentage
Homework	10	239	20%
Discussion Board Posts	11	33	5%
Tests	5	86	50%
Final Exam	1	25	25%
Total	26	380	100%

## IV. Examination Policy:

Assignments must be completed by the indicated due date. Due dates can be found in the syllabus, Canvas, and Lumen. Failure to complete an assignment by the indicated due date will result in a grade of zero for that assignment.

Homework, tests, and the final exam will be completed via Lumen. Follow the instructions in Canvas to set up your Lumen account. Discussion board posts will be completed via Canvas.

There is a time and attempt limit on tests and the final exam. Pay close attention to the limits prior to beginning tests and the final exam to ensure completion within the allowed time and attempts.

## V. Class Attendance and Homework Make-Up Policy:

Assignments for the week open on Sunday at 12:00am and are due on Wednesday at 11:59pm and Saturday at 11:59pm, with the exception of the first and last week. The first week's assignments will open on the first day of the course (Monday, March 16<sup>th</sup>), and the final exam will be due the last day of the course (Friday, May 8<sup>th</sup>). Please note that per college policy, no work can be accepted after the last day of the course, so all assignments must be submitted prior to May 8<sup>th</sup> at 11:59pm. Any assignments submitted after that time will not be graded.

Extension requests should be submitted as soon as the need arises and prior to the assignment due date. Requests received after an assignment's due date may not be granted. All extension requests should be sent via Canvas message and include the assignment name

**Course Number:** MATH 1151-921  
**Semester / Session:** Spring 2026 - Session B

**Course Title:** Calculus II  
**Start / End Date:** 3/16/2026 - 5/8/2026

and requested extended due date. Extensions are not guaranteed, but extensions submitted prior to the assignment due date and with a reasonable requested extended due date are more likely to be granted. Extensions will not be granted if the answer key for the assignment has been viewed.

## **VI. Classroom Expectations:**

Respectful interaction among NCSC students, faculty, and staff is always expected.

Course communications should be sent via Canvas. You can expect a response within 24-48 hours.

Grades will generally be posted within 2 business days of the assignment due date. Grades will be transferred from Lumen into Canvas. Please check Canvas for the most accurate and up-to-date grade.

If assistance is needed, Zoom meetings may be scheduled at a time convenient for both the student and instructor. Please reach out to the instructor via Canvas message to schedule.

AI should not be used as a substitute for student work on any graded assignment.

Any student who requires reasonable accommodations related to a disability should inform the course instructor and the Coordinator of Specialized Services (Room 138 in Kee Hall; phone 419-755-4727).

Students who encounter difficulty in any of their courses are encouraged to visit the Tutoring Resource Center (Room 119 in Fallerius Technical Education Center) for tutoring assistance, and the Student Success Center (Room 136 in Kee Hall) for academic assistance, advising services, referrals for personal counseling and Learning Disability (LD) Testing.