Math 127 - Calculus III Spring 2022 Schedule

Week 1:

| Lecture # | Day | Date | Section(s) | |
|-----------|-----------|------|--|--|
| | Monday | 1/17 | Dr. Martin Luther King Holiday | |
| Lecture 1 | Wednesday | 1/19 | Introduction and Vector Review | |
| Lecture 2 | Friday | 1/21 | Vector Review and Start of 12.6 | |
| Lab # | Day | Date | Section(s) | |
| | | 1/17 | Week 1 - Lab 1: Worksheet 1 | |
| | Tuesday | 1/18 | Vector Review | |
| Lab 2 | Wednesday | 1/19 | Week 1 - Lab 2: Worksheet 1 | |
| | or | or | | |
| | Thursday | 1/20 | Vector Review | |
| Due Dates | Day | Date | Assignments | |
| | Friday | 1/21 | Diagnostic Quiz 1- Vector Review Canvas (Extra Credit) | |
| | Friday | 1/21 | Achieve Homework 0: Vector Review | |
| | Friday | 1/21 | Worksheets 1 (Attend Labs & Upload to Canvas) | |

Week 2:

| Lecture # | Day | Date | Section(s) | |
|-----------|-----------|---------------|---|--|
| Lecture 3 | Monday | 1/24 | 12.6: A Survey of Quadric Surfaces | |
| Lecture 4 | Wednesday | 1/26 | 14.1: Functions of Two or More Variables | |
| Lecture 5 | Friday | 1/28 | 11.3: Polar Coordinates | |
| | | | 12.7: Cylindrical and Spherical Coordinates | |
| Lab # | Day | Date | Section(s) | |
| Lab 3.0 | Monday | 1/24 | Week 2 - Lab 1: Worksheet 2 | |
| | or | or | | |
| | Tuesday | 1/25 | Vector Review | |
| Lab 4 | Wednesday | 1/26 | Week 2 - Lab 2: Worksheet 2 | |
| | or | \mathbf{or} | In-class Quiz 1: Review of Equations of Lines and | |
| | Thursday | 1/27 | Planes, and Integration Techniques | |
| Due Dates | Day | Date | Assignments | |
| | Friday | 1/28 | Achieve Homework 1: Section 12.6 | |
| | Friday | 1/28 | Worksheet 2 (Attend Labs & Upload to Canvas) | |

Week 3:

| Lecture # | Day | Date | Section(s) | |
|-----------|-----------|------|--|--|
| Lecture 6 | Monday | 1/31 | CatchUp | |
| | | | 14.2: Limits and Continuity in Several Variables | |
| Lecture 7 | Wednesday | 2/2 | SNOW DAY | |
| Lecture 8 | Friday | 2/4 | 14.2: Limits and Continuity in Several Variables and | |
| | | | 14.3: Partial Derivatives | |
| Lab # | Day | Date | Section(s) | |
| Lab 5 | Monday | 2/31 | Week 3 - Lab 1: Worksheet 3 | |
| | | | | |
| | Tuesday | 1/32 | Sections 12.6 and start of 14.1 | |
| Lab 6 | Wednesday | 2/2 | Week 3 - Lab 2: Worksheet 4 | |
| | or | or | | |
| | Thursday | 2/3 | Sections 12.7 and 14.2 | |
| Due Dates | Day | Date | Assignments | |
| | Friday | 2/4 | Achieve Homework 2: Sections 12.7 and 14.1 | |
| | Tuesday | 2/8 | Worksheet 3 and 4 (Attend Labs & Upload to Canvas) | |

Week 4:

| Lecture # | Day | Date | Section | | |
|------------|-----------|------|---|--|--|
| Lecture 9 | Monday | 2/7 | 14.3: Partial Derivatives and 14.4: Differentiability | | |
| | | | and Tangent Lines | | |
| Lecture 10 | Wednesday | 2/9 | 14.4: Differentiability and Tangent Lines | | |
| Lecture 11 | Friday | 2/11 | 14.5: The Gradient and Directional Derivatives | | |
| Lab # | Day | Date | Section(s) | | |
| Lab 7 | Monday | 2/7 | Week 3 - Lab 2: Worksheet 4 | | |
| | or | or | | | |
| | Tuesday | 2/8 | Sections 12.7 | | |
| Lab 8 | Wednesday | 2/9 | Week 4 - Lab 1 or 2: Worksheet 5 | | |
| | or | or | | | |
| | Thursday | 2/10 | Sections 14.2 | | |
| Due Dates | Day | Date | Assignments | | |
| | Tuesday | 2/8 | Worksheet 3 and 4 (Attend Labs & Upload to Canvas) | | |
| | Friday | 2/11 | Diagnostic Quiz 2 - On Canvas (Extra Credit) | | |
| | | | Sections 12.6, 12.7, 14.1, 14.2, 14.3 | | |
| | Friday | 2/11 | Achieve Homework 3: Sections 14.2 and 14.3 | | |
| | Friday | 2/11 | Worksheets 5 (Attend Labs & Upload to Canvas) | | |

Week 5:

| Lecture # | Day | Date | Section(s) | |
|------------|-----------|------|--|--|
| Lecture 12 | Monday | 2/14 | 14.5: The Gradient and Directional Derivatives and | |
| | | | 14.6: The Chain Rule | |
| Lecture 13 | Wednesday | 2/16 | 14.6: The Chain Rule | |
| Lecture 14 | Friday | 2/18 | 14.7: Optimization in Several Variables | |
| Lab # | Day | Date | Section(s) | |
| Lab 9 | Monday | 2/14 | Week 5 - Lab 1: Worksheet 6: Sections 14.3 - 14.5 | |
| | or | or | In-class Quiz 2: | |
| | Tuesday | 2/15 | Sections 14.2 and 14.3 | |
| Lab 10 | Wednesday | 2/16 | Week 5 - Lab 2: Worksheet 6 | |
| | or | or | | |
| | Thursday | 2/17 | Sections 14.3, 14.4 and 14.5 | |
| Due Dates | Day | Date | Assignments | |
| | Friday | 2/18 | Diagnostic Quiz 3 - Canvas (Extra Credit) | |
| | | | 14.5, 14.6 and 14.7 | |
| | | | On Canvas (Extra Credit) | |
| | Friday | 2/18 | Achieve Homework 4: Sections 14.4 and 14.5 | |
| | Friday | 2/18 | Worksheets 6 (Attend Labs & Upload to Canvas) | |

Week 6:

| Lecture # | Day | Date | Section | |
|------------|-----------|------|---|--|
| Lecture 15 | Monday | 2/21 | 14.7: Optimization in Several Variables | |
| Lecture 16 | Wednesday | 2/23 | 14.8: Lagrange Multipliers | |
| Lecture 17 | Friday | 2/25 | 15.1: Integration in Two Variables | |
| Lab # | Day | Date | Section(s) | |
| Lab 11 | Wednesday | 2/23 | Mon.:Week 6 - Lab 1: Worksheet: 7:Section 14.6 | |
| | or | or | | |
| | Tuesday | 2/22 | Tues: Week 5 -Lab 2 Worksheet 6 and Week 6 - Lab | |
| | | | 1: Worksheet: 7 | |
| Lab 12 | Monday | 2/21 | Wed: Week 6 - Lab 2: Worksheet 8: Section 14.7 | |
| | or | or | | |
| | Thursday | 2/24 | Thur: Week 6 - Lab 1: Worksheet 7 and Lab 2: 8 | |
| Due Dates | Day | Date | Assignments | |
| | Tuesday | 2/22 | Worksheet 6 and Achieve 4(Attend Labs & Upload to Canvas) | |
| | Friday | 2/25 | Achieve Homework 5: Section 14.6 | |
| | Friday | 2/25 | Worksheet 7 and 8 (Attend Labs & Upload to Canvas) | |

Week **7**:

| Lecture # | Day | Date | Section(s) |
|---------------|-----------|-----------|--|
| Lecture 18 | Monday | 2/28 | Midterm 1 Review |
| Midterm 1 | Tuesday | March 1st | Sections: 12.6, 12.7, 14.1-14.7 |
| | | | 5:50-7:50 PM Room: Budig 130 |
| Lecture 19 | Wednesday | 3/2 | Catch Up |
| | | | 15.2: Double Integrals over General Regions |
| Lecture 20 | Friday | 3/4 | 15.2: Double Integrals over General Regions |
| Lab # | Day | Date | Section(s) |
| Lab 13 | Monday | 3/28 | Practice Exam |
| | or | or | |
| | Tuesday | 3/1 | |
| Lab 14 | Wednesday | 3/2 | Week 7 - Lab 2: Worksheet 9 |
| | or | or | |
| | Thursday | 3/3 | Section 14.8 |
| Due Dates | Day | Date | Assignments |
| | Friday | 3/4 | Achieve Homework 6: Sections 14.7 and 14.8 |
| | Friday | 3/4 | Worksheet 9 (Attend Labs & Upload to Canvas) |
| Optional | Day | Date | Time and Place |
| Review | Saturday | 2/26 | 1 PM - 3 PM, Wescoe 3140 |
| Practice Exam | Sunday | 2/27 | LEEP 2, 7-9 pm |

Week 8:

| Lecture # | Day | Date | Section | | | |
|------------|-----------|------|--|--|--|--|
| Lecture 21 | Monday | 3/7 | 15.2: Double Integrals and 15.3: Triple Integrals | | | |
| Lecture 22 | Wednesday | 3/9 | 15.3: Triple Integrals | | | |
| Lecture 23 | Friday | 3/11 | 15.3: Triple Integrals | | | |
| Lab # | Day | Date | Section(s) | | | |
| Lab 15 | Monday | 3/7 | Week 8 - Lab 1: Worksheet 10 | | | |
| | or | or | | | | |
| | Tuesday | 3/8 | Section 15.1 | | | |
| Lab 16 | Wednesday | 3/9 | Week 8 -Lab 2: Worksheet 11 | | | |
| | or | or | | | | |
| | Thursday | 3/10 | Section 15.2 | | | |
| Due Dates | Day | Date | Assignments | | | |
| | Tuesday | 3/11 | Last week's extended assignments | | | |
| | Friday | 3/11 | Diagnostic Quiz 4-Canvas (Extra Credit) | | | |
| | | | Section 15.1, 15.2 and 15.3 | | | |
| | Friday | 3/11 | Achieve Homework 7: Sections 15.1 and 15.2 | | | |
| | Friday | 3/11 | Worksheet 10 and 11 (Attend Labs & Upload to Canvas) | | | |

Spring Break: March 14^{th} -March 20^{th}

Week 9:

| Lecture # | Day | Date | Section(s) | |
|------------|-----------|------|--|--|
| Lecture 24 | Monday | 3/21 | 15.6: Change of Variables | |
| Lecture 25 | Wednesday | 3/23 | 15.6: Change of Variables | |
| Lecture 26 | Friday | 3/25 | 15.4: Integration in Polar, Cylindrical, Spherical | |
| Lab # | Day | Date | Section(s) | |
| Lab 17 | Monday | 3/21 | Week 9 - Lab 1: Worksheet 12 | |
| | or | or | | |
| | Tuesday | 3/22 | Section 15.2 | |
| Lab 18 | Wednesday | 3/23 | Week 8 - Lab 2: Worksheet 12 | |
| | or | or | In-class Quiz 3: | |
| | Thursday | 3/24 | Sections 15.2 and 15.3 | |
| Due Dates | Day | Date | Assignments | |
| | Friday | 3/25 | Achieve Homework 8: Section 15.3 | |
| | Friday | 3/25 | Worksheet 12 (Attend Labs & Upload to Canvas) | |

Week 10:

| Lecture # | Day | Date | Section | | | |
|------------|-----------|------|--|--|--|--|
| Lecture 27 | Monday | 3/28 | 15.5: Applications of Multiple Integrals | | | |
| Lecture 28 | Wednesday | 3/30 | 13.1: Vector-Valued Functions and 13.2: Calculus of | | | |
| Lecture 20 | Wednesday | 0,00 | Vector-Valued Functions Vector-Valued Functions | | | |
| Lecture 29 | Friday | 4/1 | 13.2: Calculus of Vector-Valued Functions | | | |
| | | , | | | | |
| Lab # | Day | Date | Section(s) | | | |
| Lab 19 | Monday | 3/28 | Week 10 - Lab 1: Worksheet 13 | | | |
| | or | or | | | | |
| | Tuesday | 3/29 | Section 15.6 | | | |
| Lab 20 | Wednesday | 3/30 | Week 10 - Lab 2: Worksheet 14 | | | |
| | or | or | | | | |
| | Thursday | 3/31 | Section 15.4 | | | |
| Due Dates | Day | Date | Assignments | | | |
| | Friday | 4/1 | Diagnostic Quiz 5 Canvas (Extra Credit) | | | |
| | | | Sections 15.6, 15.4, 15.5 | | | |
| | Friday | 4/1 | Achieve Homework 9: Sections 15.6 | | | |
| | Friday | 4/1 | Worksheet 13 and 14 (Attend Labs & Upload to Canvas) | | | |

Week 11:

| Lecture # | Day | Date | Section | |
|------------|-----------|------|--|--|
| Lecture 30 | Monday | 4/4 | 13.3: Arc Length and Speed | |
| Lecture 31 | Wednesday | 4/6 | 16.1: Vector Fields | |
| Lecture 32 | Friday | 4/8 | 16.1: Vector Fields and 16.2: Line Integrals (If possible) | |
| Lab # | Day | Date | Section(s) | |
| Lab 21 | Wednesday | 4/6 | Week 11 - Lab 1: Worksheet 15 | |
| | or | or | | |
| | Tuesday | 4/5 | Sections 13.1-13.2 | |
| Lab 22 | Monday | 4/4 | Week 11 - Lab 2: Worksheet 16 | |
| | or | or | | |
| | Thursday | 4/7 | Sections 13.3 and 16.1 | |
| Due Dates | Day | Date | Assignments | |
| | Friday | 4/8 | Achieve Homework 10: Sections 15.4 and 15.5 | |
| | Friday | 4/8 | Worksheet 15 and 16 (Attend Labs & Upload to Canvas) | |

Week 12:

| Lecture # | Day | Date | Section(s) |
|---------------|-----------|-----------------|--|
| Lecture 33 | Monday | 4/11 | Midterm 2 Review |
| Midterm 2 | Tuesday | April 12^{th} | Sections: 14.7, 14.8, 15.1-15.6, 13.1-13.3, 16.1 |
| | | | (Emphasis is on the material after Midterm 1.) |
| | | | 5:50-7:50 PM Room: Budig 130 |
| Lecture 34 | Wednesday | 4/13 | 16.2: Line Integrals |
| Lecture 35 | Friday | 4/15 | 16.2: Line Integrals & 16.3: Conservative Vec- |
| | | | tor Fields |
| Lab # | Day | Date | Section(s) |
| Lab 23 | Monday | 4/11 | Practice Exam |
| | or | or | |
| | Tuesday | 4/12 | |
| Lab 24 | Wednesday | 4/13 | Week 12 - Lab 2: Worksheet 17 |
| | or | or | |
| | Thursday | 4/14 | Section 16.1 |
| Due Dates | Day | Date | Assignments |
| | Friday | 4/15 | Achieve Homework 11: Section 13.1-13.3 |
| | Friday | 4/15 | Worksheet 17 (Attend Labs & Upload to Canvas) |
| Optional | Day | Date | Time and Place |
| Review | Saturday | 4/9 | 1 PM - 3:00 PM, Room: Wescoe 3140 |
| Practice Exam | Sunday | 4/10 | LEEP 2, Room 2415 at 7:00PM |

Week 13: (Last day to withdraw: Monday April 18^{th})

| Lecture # | Day | Date | Section(s) | |
|------------|-----------|------|--|--|
| Lecture 36 | Monday | 4/18 | 16.3: Conservative Vector Fields and 17.1: Green's | |
| | | | Theorem | |
| Lecture 37 | Wednesday | 4/20 | 17.1: Green's Theorem | |
| Lecture 38 | Friday | 4/22 | 16.4: Parametrized Surfaces and Surface Integrals | |
| Lab # | Day | Date | Section(s) | |
| Lab 25 | Monday | 4/18 | Week 13 - Lab 1: Worksheet 18 | |
| | or | or | | |
| | Tuesday | 4/19 | Section 16.2 | |
| Lab 26 | Wednesday | 4/20 | Week 13 - Lab 2: Worksheet 19 | |
| | or | or | | |
| | Thursday | 4/21 | Section 16.3 | |
| Due Dates | Day | Date | Assignments | |
| | Friday | 4/22 | Achieve 12: Sections 16.1 and 16.2 | |
| | Friday | 4/22 | Worksheet 18 and 19 | |

Week 14:

| Lecture # | Day | Date | Section(s) | | |
|------------|-----------|------|--|--|--|
| Lecture 38 | Monday | 4/25 | 16.4:Parameterized Surfaces and Surface Integrals | | |
| | | | 16.5: Surface Integrals of Vector Fields | | |
| Lecture 39 | Wednesday | 4/27 | 16.5: Surface Integrals of Vector Fields | | |
| Lecture 40 | Friday | 4/29 | 16.5: Surface Integrals of Vector Fields 17.2: Stokes' | | |
| | | | Theorem | | |
| Lab # | Day | Date | Section(s) | | |
| Lab 26 | Monday | 4/25 | Week 15 - Lab 1: Worksheet 20 | | |
| | or | or | | | |
| | Tuesday | 4/26 | Section 17.1 | | |
| Lab 27 | Wednesday | 4/27 | Week 15 - Lab 2: Worksheet 20 | | |
| | or | or | In-class Quiz 4: | | |
| | Thursday | 4/28 | Sections 16.1, 16.2, 16.3,17.1 Study Worksheet 18, 19, | | |
| | | | 20 and Achieve 12, 13, 14 | | |
| Due Dates | Day | Date | Assignments | | |
| | Friday | 4/29 | Achieve 13: Sections 16.2, 16.3 and 17.1 | | |
| | Friday | 4/29 | Worksheet 20 (Attend Labs & Upload to Canvas) | | |
| | Friday | 4/29 | Diagnostic Quiz 5, - On Canvas (Extra Credit) | | |
| | | | Sections 13.1-13.3, 16.1, 16.2, 16.3 and 17.1 | | |

Week 15:

| Lecture # | Day | Date | Section | |
|-------------------------------------|--|------|--|--|
| Lecture 41 | Monday | 5/2 | 17.2: Stokes' Theorem and 17.3: Divergence | |
| | | | Theorem | |
| Lecture 42 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | Chapters 16 and 17 Review | |
| Stop Day Friday 5/6 | | 5/6 | Stop day Review | |
| Lab # Day Date | | Date | Section(s) | |
| Lab 28 | Monday | 5/2 | Week 16 - Lab 1: Worksheet 21 | |
| | or | or | | |
| | Tuesday | 5/3 | Sections 16.4 and 16.5 | |
| Lab 29 Wedneso | | 5/4 | Week 16 - Lab 2: Worksheet 22 | |
| | or | or | | |
| | Thursday | 5/5 | Sections 17.2 and 17.3 | |
| Due Dates Day Da | | Date | Assignments | |
| | Thursday | 5/5 | Diagnostic Quiz 6 Canvas (Extra Credit) | |
| | | | Sections 16.4, 16.5, 17.2, 17.3 | |
| | Thursday | 5/5 | Achieve 14: Sections 16.5, 17.2 and 17.3 | |
| | Thursday | 5/5 | Worksheet 21 and 22 (Attend Labs & Upload to Canvas) | |
| Optional Day Date | | Date | Time and Place | |
| Stop Day Review Friday 5/ Help room | | 5/6 | 1-3 PM Budig 130 | |
| | | | Closes on Friday 5/6, but We reopen on Monday | |
| | | | 12/13 10AM- a little past 3PM | |

Final Exams Week:

| Ī | Final Exam | Tuesday, May 10^{th} | 4:30 - 7 PM | Location depends on your lab instructor |
|---|------------|------------------------|-------------|---|
| | | | | (TBA) |