

MATH 272 CALENDAR
SPRING 2022

Color coding:

- Reading assignments to be done before class on the scheduled day.
- Exams set to take place on those days.
- Assignments due on these days.
- No class on this day.

MONDAY	TUESDAY	WEDNESDAY	FRIDAY
<div>Jan 17th</div> <ul style="list-style-type: none"> • Martin Luther King Day. 	<div>18th 1</div> <ul style="list-style-type: none"> • First day: syllabus and review. • Functions in higher dimensions. • §10.1 	<div>19th 2</div> <ul style="list-style-type: none"> • Curves. • Velocity (tangent) and acceleration (normal) vectors. • §10.2 	<div>21st 3</div> <ul style="list-style-type: none"> • Scalar fields. • Partial derivatives. • Directional derivatives. • §10.3
<div>24th 4</div> <ul style="list-style-type: none"> • Vector fields. • §10.4 	<div>25th 5</div> <ul style="list-style-type: none"> • Gradient. • Level curves. • §11.1 	<div>26th 6</div> <ul style="list-style-type: none"> • Jacobian. • Divergence and curl of vector fields. • §11.2 	<div>28th 7</div> <ul style="list-style-type: none"> • Laplacian and harmonic functions. • Homework 1. • §11.3
<div>31st 8</div> <ul style="list-style-type: none"> • Composite functions. • §11.4 	<div>Feb 1st 9</div> <ul style="list-style-type: none"> • Integration over curves. • §11.5 	<div>2nd 10</div> <ul style="list-style-type: none"> • Potential functions. • Conservative fields. • §11.6 	<div>4th 11</div> <ul style="list-style-type: none"> • Homework 1 Presentations.
<div>7th 12</div> <ul style="list-style-type: none"> • Surfaces. • Implicit and explicit parameterizations. • § 	<div>8th 13</div> <ul style="list-style-type: none"> • Double and triple integrals. • §11.7 	<div>9th 14</div> <ul style="list-style-type: none"> • Surfaces. • Implicit parameterizations. • Tangent planes and normals. • §12.1 	<div>11th 15</div> <ul style="list-style-type: none"> • Explicit parameterization of surfaces. • Normals. • §12.2 • Homework 2.

MONDAY	TUESDAY	WEDNESDAY	FRIDAY
14th 16 <ul style="list-style-type: none"> • Integration over surfaces. • Flux. • §12.3, §12.4 	15th 17 <ul style="list-style-type: none"> • Continue. 	16th 18 <ul style="list-style-type: none"> • Open day. 	18th 19 <ul style="list-style-type: none"> • Homework 2 Presentations.
21st 20 <ul style="list-style-type: none"> • Coordinate systems. • Cylindrical coordinates. • §13.1 	22nd 21 <ul style="list-style-type: none"> • Continue. 	23rd 22 <ul style="list-style-type: none"> • Spherical coordinates. • §13.2 	25th 23 <ul style="list-style-type: none"> • Continue. • Homework 3.
28th 24 <ul style="list-style-type: none"> • Open day. 	Mar 1st 25 <ul style="list-style-type: none"> • Homework 3 Presentations. 	2nd 26 <ul style="list-style-type: none"> • Exam 1. 	4th 27 <ul style="list-style-type: none"> • Exam 1.
7th 28 <ul style="list-style-type: none"> • Higher dimensional ODEs. 	8th 29 <ul style="list-style-type: none"> • Continuum limit and partial differential equations. 	9th 30 <ul style="list-style-type: none"> • Continue. 	11th 31 <ul style="list-style-type: none"> • Understanding the <ul style="list-style-type: none"> – Laplace – Poisson – heat – wave equations. • Homework 4.
14th <ul style="list-style-type: none"> • Spring Break. 	15th <ul style="list-style-type: none"> • Spring Break. 	16th <ul style="list-style-type: none"> • Spring Break. 	18th <ul style="list-style-type: none"> • Spring Break.
21st 32 <ul style="list-style-type: none"> • d'Alembert's solution to the wave equation. 	22nd 33 <ul style="list-style-type: none"> • Separation of variables. 	23rd 34 <ul style="list-style-type: none"> • Time dependent Schödinger equation. 	25th 35 <ul style="list-style-type: none"> • Homework 4 Presentations.
28th 36 <ul style="list-style-type: none"> • Superposition states. 	29th 37 <ul style="list-style-type: none"> • Continue. 	30th 38 <ul style="list-style-type: none"> • Maxwell's equations. 	Apr 1st 39 <ul style="list-style-type: none"> • Homework 5.

MONDAY	TUESDAY	WEDNESDAY	FRIDAY
4th 40 • PDEs in other coordinate systems.	5th 41 • Homework 5 Presentations.	6th 42 • Exam 2.	8th 43 • Exam 2.
11th 44 • Complex functions and phase.	12th 45 • Function spaces and inner products.	13th 46 • Linear operators and adjoints.	15th 47 • Differential operators and domains. • Homework 6.
18th 48 • Spectra of differential and Hermitian operators.	19th 49 • Orthonormal bases and projection.	20th 50 • Continue.	22nd 51 • Homework 6 Presentations.
25th 52 • Fourier series.	26th 53 • Fourier transform on \mathbb{R} .	27th 54 • Dirac delta and fundamental solutions.	29th 55 • Continue. • Homework 7.
May 2nd 56 • Project and review.	3rd 57 • Homework 7 Presentations.	4th 58 • Exam 3.	6th 59 • Exam 3.