

MATH 272, TENTATIVE CALENDAR  
SPRING 2020

MONDAY	TUESDAY	WEDNESDAY	FRIDAY
Jan 20th Martin Luther King Day	21st <b>1</b> First day, review. Complex functions.	22nd <b>2</b> Complex functions, phase.	24th <b>3</b> <b>Homework 0 due.</b> Function spaces and Inner products.
27th <b>4</b> Hilbert spaces, symmetries.	28th <b>5</b> Infinite orthonormal bases.	29th <b>6</b> Expansion and projection with bases.	31st <b>7</b> <b>Homework 1 due.</b> Cont.
Feb 3rd <b>8</b> Linear operators and adjoints.	4th <b>9</b> Hermitian and differential operators.	5th <b>10</b> Spectra of differential operators.	7th <b>11</b> <b>Homework 2 due.</b> Fourier series.
10th <b>12</b> Cont.	11th <b>13</b> Fourier transforms.	12th <b>14</b> Special functions (distributions).	14th <b>15</b> Cont.
17th <b>16</b> <b>Homework 3 due.</b> Review.	18th <b>17</b> Review.	19th <b>18</b> <b>Take home Exam 1 due.</b> Review.	21st <b>19</b> <b>Exam 1.</b>
24th <b>20</b> Functions in higher dimensions.	25th <b>21</b> Curves.	26th <b>22</b> Higher dimensional ODEs.	28th <b>23</b> <b>Homework 4 due.</b> Scalar fields.
Mar 2nd <b>24</b> Directional and partial derivatives.	3rd <b>25</b> Integration of scalar fields.	4th <b>26</b> Vector fields.	6th <b>27</b> <b>Homework 5 due.</b> Gradient operator.
9th <b>28</b> Curl and divergence operators.	10th <b>29</b> Integration of vector fields.	11th <b>30</b> Laplace operator.	13th <b>31</b> <b>Homework 6 due.</b> Potential functions.
16th Spring Break	17th Spring Break	18th Spring Break	20th Spring Break

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23rd <b>32</b> Flows of vector fields.	24th <b>33</b> Coordinate systems.	25th <b>34</b> Parameterizations.	27th <b>35</b> Cylindrical coordinates.
30th <b>36</b> Calculus in cylindrical coordinates.	31st <b>37</b> Spherical coordinates.	Apr 1st <b>38</b> Calculus in spherical coordinates.	3rd <b>39</b> General coordinate systems.
6th <b>40</b> <b>Homework 7 due.</b> Review.	7th <b>41</b> Review.	8th <b>42</b> <b>Take home Exam 2 due.</b> Review.	10th <b>43</b> <b>Exam 2.</b>
13th <b>44</b> Partial differential equations, separation of variables.	14th <b>45</b> Laplace and Poisson's equation.	15th <b>46</b> Heat and wave equation.	17th <b>47</b> <b>Homework 8 due.</b> Fourier transforms for time dependent problems.
20th <b>48</b> Quantum harmonic oscillator.	21st <b>49</b> Time dependent Schödinger equation.	22nd <b>50</b> Cont.	24th <b>51</b> <b>Homework 9 due.</b> Maxwell's equations.
27th <b>52</b> Cont.	28th <b>53</b> Cont.	29th <b>54</b> PDEs in other coordinate systems.	May 1st <b>55</b> Cont.
4th <b>56</b> <b>Homework 10 due.</b> Review.	5th <b>57</b> Review.	6th <b>58</b> <b>Take home Exam 3 due.</b> Review.	8th <b>59</b> <b>Exam 3.</b>