

MATH 272, TENTATIVE CALENDAR  
SPRING 2020

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

MONDAY	TUESDAY	WEDNESDAY	FRIDAY
16th Spring Break	17th Spring Break	18th Spring Break	20th Spring Break
23rd <b>32</b> Coordinate systems.	24th <b>33</b> Parameterizations.	25th <b>34</b> Cylindrical coordinates.	27th <b>35</b> Spherical coordinates.
30th <b>36</b> <b>Homework 7 due.</b> Review.	31st <b>37</b> Review.	Apr 1st <b>38</b> <b>Take home Exam 2 due.</b> Review.	3rd <b>39</b> <b>Exam 2.</b>
6th <b>40</b> Partial differential equations, separation of variables.	7th <b>41</b> Laplace and Poisson's equation.	8th <b>42</b> Heat equation.	10th <b>43</b> <b>Homework 8 due.</b> Wave equation and Fourier transforms.
13th <b>44</b> Schrödinger equation with a potential.	14th <b>45</b> Time dependent Schrödinger equation.	15th <b>46</b>	17th <b>47</b> <b>Homework 9 due.</b> Maxwell's equations.
20th <b>48</b>	21st <b>49</b> PDEs in other coordinate systems.	22nd <b>50</b> Harmonics.	24th <b>51</b> Fundamental solutions.
27th <b>52</b> <b>Homework 10 due.</b> Review.	28th <b>53</b> Review.	29th <b>54</b> <b>Take home Exam 3 due.</b> Review.	May 1st <b>55</b> <b>Exam 3.</b>
4th <b>56</b> Mini-project: Hydrogen atom.	5th <b>57</b> Mini-project: Hydrogen atom.	6th <b>58</b> Mini-project: Hydrogen atom.	8th <b>59</b> Mini-project: Hydrogen atom.