

# Schedule

A week-by-week breakdown of the material.

## Week 1 (01/08-01/12)

**Day 1** Sequences (11.1). Limit of sequence. Limit Laws<sup>1</sup>

**Day 2** Review of Calc 1, Calc2<sup>2</sup>

**Day 3** Review of Calc 1, Calc2

## Week 2 (01/15-01/19)

**Day 1** Infinite Series (11.2)<sup>3</sup>

HW Due: 11.1 16, 26, 48, 70

**Day 2** Positive Terms series (11.3)<sup>4</sup>

**Day 3** Absolute vs Conditional Convergence (11.4)<sup>5</sup>

## Week 3 (01/22-01/26)

**Day 1** Ratio and Root tests (11.5)<sup>6</sup>

**Day 2** Series tests review.

**Day 3** Power Series (11.6)<sup>7</sup>

## Week 4 (01/29-02/02)

**Day 1** Taylor Series (11.7)<sup>8</sup>

**Day 2** Taylor Series (11.7) cont<sup>9</sup>

**Day 3** Review

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<sup>1</sup>[notes/sequences.html](#)

<sup>2</sup>[notes/calc\\_review.html](#)

<sup>3</sup>[notes/series\\_intro.html](#)

<sup>4</sup>[notes/series\\_positive.html](#)

<sup>5</sup>[notes/series\\_conditional.html](#)

<sup>6</sup>[notes/series\\_root.html](#)

<sup>7</sup>[notes/series\\_power.html](#)

<sup>8</sup>[notes/series\\_taylor.html](#)

<sup>9</sup>[notes/series\\_taylor.html](#)

## Week 5 (02/05-02/09)

**Day 1 Midterm 1** (chapter 11, study guide<sup>10</sup>)

**Day 2** Vectors in the Plane (13.1)<sup>11</sup>

**Day 3** Vectors in the Space (13.2). Equations for lines in space.<sup>12</sup>

## Week 6 (02/12-02/16)

**Day 1** Dot product and angles (13.3).<sup>13</sup>

**Day 2** Dot product and angles (cont, 13.3). Projections.<sup>14</sup>

**Day 3** Cross product (13.4).<sup>15</sup>

## Week 7 (02/19-02/23)

**Day 1** Equations for planes (13.5).<sup>16</sup>

**Day 2** Vector-valued functions (14.1).<sup>17</sup>

**Day 3** Calculus of vector-valued functions (14.2).<sup>18</sup>

## Week 8 (02/26-03/02)

BREAK

## Week 9 (03/05-03/09)

**Day 1** Arc Length (14.3).<sup>19</sup>

**Day 2** Curvature (14.4). Normal vectors.<sup>20</sup>

**Day 3** Review

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<sup>10</sup>[notes/midterm1\\_study\\_guide.html](#)

<sup>11</sup>[notes/vectors.html](#)

<sup>12</sup>[notes/vectors\\_space.html](#)

<sup>13</sup>[notes/dot\\_product.html](#)

<sup>14</sup>[notes/dot\\_product.html](#)

<sup>15</sup>[notes/cross\\_product.html](#)

<sup>16</sup>[notes/plane\\_equations.html](#)

<sup>17</sup>[notes/vector\\_valued\\_functions.html](#)

<sup>18</sup>[notes/vector\\_valued\\_calculus.html](#)

<sup>19</sup>[notes/arc\\_length\\_curvature.html](#)

<sup>20</sup>[notes/arc\\_length\\_curvature.html](#)

## Week 10 (03/12-03/16)

**Day 1 Midterm 2** (chapters 13, 14, study guide<sup>21</sup>)

**Day 2** Functions of multiple variables (15.1). Level curves.<sup>22</sup>

**Day 3** Limits and Continuity in several variables (15.2).<sup>23</sup>

## Week 11 (03/19-03/23)

**Day 1** Partial Derivatives (15.3).<sup>24</sup>

**Day 2** Differentiability (15.4). Linear Approximation.<sup>25</sup>

**Day 3** Gradient. Directional derivatives (15.5)<sup>26</sup>

## Week 12 (03/26-03/30)

**Day 1** Chain rule (15.6).<sup>27</sup>

**Day 2** Optimization (15.7).<sup>28</sup>

**Day 3** Lagrange Multipliers (15.8).<sup>29</sup>

## Week 13 (04/02-04/06)

**Day 1** Integration in two variables (16.1).<sup>30</sup>

**Day 2** Integration over more general regions (16.2).<sup>31</sup>

**Day 3** Integrals in Polar Coordinates (16.4).<sup>32</sup>

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<sup>21</sup>[notes/midterm2\\_study\\_guide.html](#)

<sup>22</sup>[notes/multiple\\_variables.html](#)

<sup>23</sup>[notes/limits\\_continuity.html](#)

<sup>24</sup>[notes/partial\\_derivatives.html](#)

<sup>25</sup>[notes/differentiability.html](#)

<sup>26</sup>[notes/gradient.html](#)

<sup>27</sup>[notes/chain\\_rule.html](#)

<sup>28</sup>[notes/optimization.html](#)

<sup>29</sup>[notes/lagrange\\_mults.html](#)

<sup>30</sup>[notes/multiple\\_integrals.html](#)

<sup>31</sup>[notes/integrals\\_general.html](#)

<sup>32</sup>[notes/integrals\\_polar.html](#)

## **Week 14 (04/09-04/13)**

**Day 1** Change of variables (16.6).<sup>33</sup>

**Day 2** Review

**Day 3** Catchup

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<sup>33</sup>[notes/integrals\\_change\\_variables.html](https://www.math.utoronto.ca/~joe/notes/integrals_change_variables.html)