

# Schedule

A week-by-week breakdown of the material.

## Week 1 (01/09-01/13)

**Day 1** Review of Precalculus<sup>1</sup>

**Day 2** Review of Precalculus (cont)<sup>2</sup>

**Day 3** Review of Precalculus (inequalities)<sup>3</sup>

The concept of limit<sup>4</sup>

## Week 2 (01/16-01/20)

**Day 1** The concept of limit<sup>5</sup>

Limit laws<sup>6</sup>

**Day 2** Continuity<sup>7</sup>

**Day 3** Evaluating Limits<sup>8</sup>

## Week 3 (01/23-01/27)

**Day 1** Trigonometric Limits<sup>9</sup>

**Day 2** Limits at Infinity<sup>10</sup>

**Day 3** Intermediate Value Theorem<sup>11</sup>

Homework Due: 2.5 16, 30, 2.6 10, 24, 40

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<sup>1</sup>[notes/algebra\\_review.html](#)

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

<sup>3</sup>[notes/algebra\\_review.html](#)

<sup>4</sup>[notes/limit\\_concept.html](#)

<sup>5</sup>[notes/limit\\_concept.html](#)

<sup>6</sup>[notes/limit\\_laws.html](#)

<sup>7</sup>[notes/continuity.html](#)

<sup>8</sup>[notes/limit\\_evaluation.html](#)

<sup>9</sup>[notes/limit\\_trig.html](#)

<sup>10</sup>[notes/limit\\_infinity.html](#)

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

## Week 4 (01/30-02/03)

**Day 1** Introduction to derivatives<sup>12</sup>

**Day 2** Derivative as a function<sup>13</sup>

Homework 4 Due: 2.7 8, 20, 2.8 2, 6

**Day 3** Derivative rules<sup>14</sup>

Homework 5 Due: 3.1 4, 26, 34, 38

## Week 5 (02/06-02/10)

**Day 1** **MIDTERM 1** (study guide<sup>15</sup>)

**Day 2** Sick day

**Day 3** Derivative rules<sup>16</sup>

Higher derivatives<sup>17</sup>

## Week 6 (02/13-02/17)

**Day 1** Derivatives for trigonometric functions<sup>18</sup>

Homework 6 Due: 3.2 16, 20, 26, 36, 66

**Day 2** Chain rule<sup>19</sup>

Implicit differentiation<sup>20</sup>

**Day 3** Related rates<sup>21</sup>

Homework 7 Due: 3.3 4, 18, 32, 3.5 12, 14

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<sup>12</sup>[notes/derivatives\\_intro.html](#)

<sup>13</sup>[notes/derivatives\\_function.html](#)

<sup>14</sup>[notes/derivatives\\_rules.html](#)

<sup>15</sup>[notes/midterm1\\_study\\_guide.html](#)

<sup>16</sup>[notes/derivatives\\_rules.html](#)

<sup>17</sup>[notes/derivatives\\_higher.html](#)

<sup>18</sup>[notes/derivatives\\_trig.html](#)

<sup>19</sup>[notes/chain\\_rule.html](#)

<sup>20</sup>[notes/implicit\\_differentiation.html](#)

<sup>21</sup>[notes/related\\_rates.html](#)

## Week 7 (02/20-02/24)

**Day 1** Linear Approximation and applications<sup>22</sup>

Extreme values<sup>23</sup>

Homework 8 Due: 3.6 18, 28, 42, 3.7 12, 70

**Day 2** Extreme values<sup>24</sup>

Homework 9 Due: 3.8 6, 10, 38, 3.9 14, 16

**Day 3** Mean value theorem, monotonicity<sup>25</sup>

## Week 8 (02/27-03/03)

**Day 1** BREAK

**Day 2** BREAK

**Day 3** BREAK

## Week 9 (03/06-03/10)

**Day 1** Mean value theorem, monotonicity (cont)<sup>26</sup>

Homework 10 Due: 4.1 14, 46, 52, 4.2 18, 30

**Day 2** (At conference)

**Day 3** (At conference)

## Week 10 (03/13-03/17)

**Day 1** Graph sketching<sup>27</sup>

Homework 11 Due: 4.3 20, 26, 38, 46 Day 2

Graph sketching<sup>28</sup>

**Day 3** Applied optimization<sup>29</sup>

Homework 12 Due: 4.4 6, 24, 4.5 16, 32

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<sup>22</sup>[notes/linear\\_approx.html](#)

<sup>23</sup>[notes/extreme\\_values.html](#)

<sup>24</sup>[notes/extreme\\_values.html](#)

<sup>25</sup>[notes/mean\\_value\\_theorem.html](#)

<sup>26</sup>[notes/mean\\_value\\_theorem.html](#)

<sup>27</sup>[notes/graph\\_sketching.html](#)

<sup>28</sup>[notes/graph\\_sketching.html](#)

<sup>29</sup>[notes/applied\\_optimization.html](#)

## Week 11 (03/20-03/24)

**Day 1 MIDTERM** (study guide<sup>30</sup>)

**Day 2** Applied optimization (cont)<sup>31</sup>

**Day 3** Newton's method<sup>32</sup>

## Week 12 (03/27-03/31)

**Day 1** Antiderivatives<sup>33</sup>

Homework 13 Due: 4.6 2, 4, 8, 20, 52

**Day 2** Introduction to computing areas<sup>34</sup>

**Day 3** The definite integral<sup>35</sup>

Homework 14 Due: 4.7 2, 16 4.8 14, 22, 50

## Week 13 (04/03-04/07)

**Day 1** The definite integral (cont)<sup>36</sup>

**Day 2** Fundamental Theorem of Calculus<sup>37</sup>

**Day 3** Fundamental Theorem of Calculus, part 2<sup>38</sup>

Homework 15 Due: 5.2 4, 14, 18, 40

## Week 14 (04/10-04/14)

**Day 1** The substitution method

Homework 16 Due: 5.3 10, 20, 38, 46

**Day 2** Area between curves

Homework 17 Due: 5.4 24, 28, 34, 36

**Day 3** TBD

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<sup>30</sup>[notes/midterm2\\_study\\_guide.html](#)

<sup>31</sup>[notes/applied\\_optimization.html](#)

<sup>32</sup>[notes/newton.html](#)

<sup>33</sup>[notes/antiderivatives.html](#)

<sup>34</sup>[notes/computing\\_areas.html](#)

<sup>35</sup>[notes/definite\\_integral.html](#)

<sup>36</sup>[notes/definite\\_integral.html](#)

<sup>37</sup>[notes/fundamental\\_theorem\\_calculus.html](#)

<sup>38</sup>[notes/fundamental\\_theorem\\_calculus.html](#)