## Math 140 Sequence of Topics

From Calculus, 3rd Edition, by Briggs and Cochran

|  | Topic | Assignment |
| :---: | :---: | :---: |
| 2.2 | Intuitive Limit Definitions | $3,5,13,15,17,19,21,23,25,51$ |
| 2.3 | Limit Computations | ```9-19 odd, 23, 25, 27, 31-67 odd, 73, 80, 85, 87, 89, 97``` |
| 2.4 | Infinite Limits | 7, 9, 13, 21, 25, 29, 33, 37-43 odd |
| 2.5 | Limits at Infinity | 5, 7, 9, 15-31 odd, 35-49 odd, 51ab, 53ab, 55ab, $63,65,67,69$ |
| 2.6 | Continuity | $\begin{aligned} & 5,7,17-29 \text { odd, } 33,35,37,41,43,45,49,51,55 \text {, } \\ & 57,63,82,83 \end{aligned}$ |
| 2.7 | Precise Definitions of Limits | 19, 21, 27, 33, 39, 45, 65, $67+$ Exercises in $\S 2.2$ of the Notes |
| 3.1 | Introducing the Derivative | 9, 17, 21-45 odd, 51 |
| 3.2 | The Derivative of a Function | 11, 13, 21-39 odd, 43, 59, 71 |
| 3.3 | Rules of Differentiation | $7,15,19-39$ odd, 45-53 odd, 59-67 odd, 73 |
| 3.4 | The Product and Quotient Rules | 9, 11, 17-53 odd, 67 |
| 3.5 | Derivatives of Trigonometric Functions | 5, 7, 11-51 odd, 61, 67, 73a, 75a, 77, 85 |
| 3.6 | Derivatives as Rates of Change | 21, 23, 25, 27, 37 |
| 3.7 | The Chain Rule | 15, 19, 25-53 odd, 57, 61, 65, 69, 75, 79 |
| 3.8 | Implicit Differentiation | 5-37 odd, 43, 45, 47, 49, 51, 59, 65 |
| 3.9 | Related Rates | 5-27 odd, 31, 35, 37, 41, 43, 49 |
| 4.1 | Extrema of Functions | 13, 17, 21, 25-61 odd, 65 |
| 4.2 | Mean Value Theorem | 11, 13, 21, 31, $52+$ Assignment in $\S 4.2$ of Notes |
| 4.3 | Strict Monotonicity and Concavity | 13, 19-47 odd, 57-67 odd, 73, 83, 98, 105 |
| 4.4 | Graphing Functions | 17, 19, 23, 27, 29, 31, 35, 37, 43, 45 |
| 4.5 | Optimization Problems | 9, 13-33 odd, 37, 39, 42, 53, 54 |
| 4.6 | Linear Approximation | 7, 19, 21, 23, 25ab, 29ab, 35ab, 37-45 odd, 55 |
| 4.7 | L'Hôpital's Rule | 11, 15, 19, 23, 27, 31, 35, 39-59 odd, 60, 68 |
| 4.9 | Antiderivatives | $13-29$ odd, $33,37,39-47$ odd, $51,53,57,59,63$, 67, 75, 83, 85 |
| 5.1 | Areas Under Curves | 15, 23, 25, 29, 47, 49 |
| 5.2 | The Definite Integral | 10, 15, 25, 27, 33-43 odd, 49-65 odd, 75-83 odd |
| 5.3 | The Fundamental Theorem of Calculus | 6, 13, 17, 25-81 odd, 91, 106, 107, 111 |
| 5.5 | The Substitution Rule | 7, 9, 13, 17-69 odd, 75-83 odd, 87, 93, 105, 113 |
| 6.2 | Regions Between Curves | 9-29 odd, 37-51 odd, 55-63 odd, 69 |
| 6.3 | Volumes by Slicing | 3, 7, 11-39 odd, 45, 49, 53 |
| 6.4 | Volumes by Shells | 9-23 odd, 29, 49, 53, 57 |
| 6.5 | Lengths of Curves | 5, 9-19 odd, 38 |

