**Math 5A Suggested Syllabus**

(Based on 29 lectures)

**Text:** *Biocalculus, Calculus for Life Sciences*, Stewart and Day, 2nd Edition

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| **Lecture** | **Section** | **Topic** |
| 1 | pp. xli; 1.1 | Introduction |
| 2 | 1.2-1.3 | Functions |
| 3 | 1.4 | Exponentials |
| 4 | 1.5 | Logarithms |
| 5 | 1.6 | Sequences |
| 6 | 2.1 | Limits of sequences |
| 7  | 2.2 | Limits of functions at infinity |
| 8 | 2.3 | Limits of functions – finite |
| 9 | 2.4 | Algebraic methods of limits |
| 10 | 2.5 | Continuity |
| 11 | 3.1 | Derivatives |
| 12 | 3.2 | The derivative as a function |
| 13 | 3.3 | Differentiation formulas |
| 14  | 3.4 | Product and quotient rules |
| 15 | 3.5 | Chain rule |
| 16 |  | Review |
| 17 |  | **Midterm** |
| 18 | 3.6 | Exponential growth and decay |
| 19  | 3.7 | Log and inverse tangent |
| 20 | 3.8 | Linear approximations |
| 21 | 4.1 | Maximum and minimum values |
| 22  | 4.2 | Derivatives and graphs |
| 23 | 4.3 | L'Hopital's rule |
| 24 | 4.4 | Optimization |
| 25 | 4.5 | Recursion |
| 26 | 4.6 | Antiderivatives |
| 27  |  | Catch up and Review |
| 28 |  | Final Exam Review |
| 29 |  | Final Exam Review |