Group Theory Tentative Schedule – Spring 2018

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|  | Overall Plan and Assessments | Monday | Wednesday | Friday |
| Week 1 (8 Jan) | Ch 1 |  | * 1. Permutations   2. Cycles | * 1. Factorization into Disjoint Cycles   2. Even and Odd Permutations |
| Week 2 (15 Jan) | Ch 1  HW Bundle 1 Due Wed | No Class! | * 1. Semigroups   2. Groups | * 1. Homomorphisms   2.1 Subgroups |
| Week 3 (22 Jan) | Ch 2  HW Bundle 2 Due Wed | 2.2 Lagrange’s Thm | 2.3 Cyclic Groups | 2.4 Normal Subgroups  2.5 Quotient Groups |
| Week 4 (29 Jan) | Ch 2  HW Bundle 3 Due Wed | 2.6 Isomorphism Thms | 2.7 Correspondence Thm | 2.8 Direct Products |
| Week 5 (5 Feb) | Catch-up and Review  Test 1 is Friday  HW Bundle 4 Due Wed |  |  | Test 1 |
| Week 6 (12 Feb) | Ch 3  HW Bundle 5 Due Wed | 3.1 Conjugates | 3.2 Symmetric Groups | 3.3 Simplicity of An  3.4 Representation Thms |
| Week 7 (19 Feb) | Ch 3  HW Bundle 6 Due Wed | 3.5 G-sets | 3.5 G-sets | 3.6 Counting Orbits  3.7 Some Geometry |
| Week 8 (26 Feb) | Ch 4  HW Bundle 7 Due Wed | 4.1 p-groups | 4.1 p-groups | 4.2 The Sylow Thms |
| Week 9 (5 March) | Ch 4  HW Bundle 8 Due Wed | 4.2 The Sylow Thms | 4.3 Groups of Small Order | 4.3 Groups of Small Order |
| Week 10 (19 March) | Ch 5  HW Bundle 9 Due Wed | 5.1 Some Galois Theory | 5.1 Some Galois Theory | 5.2 Jordan-Holder |
| Week 11 (26 March) | Catch-up and Review  Test 2 is Friday  HW Bundle 10 Due Wed |  |  | Test 2 |
| Week 12 (2 April) | Ch 5  HW Bundle 11 Due Wed | 5.3 Solvable Groups | 5.4 Thms of P Hall | 5.5 Central Series and Nilpotent Groups |
| Week 13 (9 April) | Ch 6  HW Bundle 12 Due Wed | 6.1 Basis Thm | 6.2 FTFAG (Fundamental Theorem of Finite Abelian Groups) | 6.3 Canonical Forms - Existence |
| Week 14 (16 April) | Ch 10  HW Bundle 13 Due Wed | 10.1 Basics | 10.2 Free Abelian Groups | 10.3 Finitely Generated Abelian Groups |