Group Theory - MATH 3175 - 03 - CRN 38818, 9:15 am - 10:20 am, MWR, Forsyth Building 150  $\,$ 

| Day  | Date      | Class | Section   | HW  |
|------|-----------|-------|---|---|
| M    | Jan.6     | 1     | 1.1 Divisors                                    | 6(a,b), 8, 10, 11                             |
| W    | Jan.8     | 2     | 1.2 Primes                                      | 1(a,c), 12, 14, 15                            |
| Th   | Jan.9     | 3     | 1.3 Congruences                                 | 3, 18, 19, 20, 27                             |
|      |           |       | 1.4 Integers modulo n                           | 3(a,b), 9, 15, 25, 29, 31                     |
| M    | Jan.13    | 4     | 2.1 Functions                                   | 2, 5, 9(a-c), 10(a), 11, 12, 15, 16, 18, 20   |
| W    | Jan.15    | 5     | 2.3 Permutations & PracticeQuiz1 & PQ1Sol       | 1(a,e), 4 a, 8, 10, 11, 12, 17                |
| Th   | Jan.16    | 6     | Quiz 1 & 2.3 Permutations                       | 1(a,e), 4 a, 8, 10, 11, 12, 17                |
| M    | Jan.20    | -     | Martin Luther King Day                          |   |
| W    | Jan.22    | 7     | 3.1 Definition of a group                       | 2, 3, 8, 14, 15, 19, 24, 28, 29               |
| Th   | Jan.23    | 8     | 3.2 Subgroups                                   | 1,3,5(a,b),7,11,12,14,15,16,19,21,24,28,29    |
| M    | Jan.27    | 9     | 3.3 Examples                                    | 1, 2, 9, 10, 11, 12                           |
| W    | Jan.29    | 10    | 3.4 Isomorphisms & PracticeQuiz2 & PQ2Sol       | 1, 2, 4, 7, 9, 11, 15, 19, 21, 22, 30, 31, 32 |
| Th   | Jan.30    | 11    | Quiz 2 & 3.4 Isomorphisms                       | 1, 2, 4, 7, 9, 11, 15, 19, 21, 22, 30, 31, 32 |
| M    | Feb.3     | 12    | 3.5 Cyclic Groups                               | 2, 3, 5, 6, 10, 12, 16, 20                    |
| W    | Feb.5     | 13    | 3.5 Cyclic Groups                               | 2, 3, 5, 6, 10, 12, 16, 20                    |
| Th   | Feb.6     | 14    | 3.6 Permutation Groups                          | 1, 6, 7, 8, 9, 16, 17, 19, 20, 23, 28         |
| M    | Feb.10    | 15    | 3.6 Permutation Groups                          | 1, 6, 7, 8, 9, 16, 17, 19, 20, 23, 28         |
| W    | Feb.12    | 16    | 3.7 Homomorphisms & PracticeQuiz3 & PQ3Sol      | 3, 4, 5, 9, 10, 15, 17, 18, 21, 22            |
| Th   | Feb.13    | 17    | Quiz 3 & 3.7 Homomorphisms                      | 3, 4, 5, 9, 10, 15, 17, 18, 21, 22            |
| M    | Feb.17    | -     | President's Day                                 |   |
| W    | Feb.19    | 18    | 3.8 Normal Subgroups, Factor Groups             | 1, 2, 3, 6, 10, 12, 13,19, 20, 21, 22         |
| Th   | Feb.20    | 19    | 3.8 Normal Subgroups, Factor Groups             | 1, 2, 3, 6, 10, 12, 13,19, 20, 21, 22         |
| M    | Feb.24    | 20    | 7.1 Isomorphism Theorems                        | 1, 2, 3, 4, 5, 10, 12, 13, 18, 20             |
| W    | Feb.26    | 21    | 7.1 Automorphisms & PracticeQuiz4 & PQ4Sol      | 1, 2, 3, 4, 5, 10, 12, 13, 18, 20             |
| Th   | Feb.27    | 22    | Quiz 4 & 7.1 Isom. Thms, Autom.                 | 1, 2, 3, 4, 5, 10, 12, 13, 18, 20             |
| M    | Mar.2     | -     |   |   |
| W    | Mar.4     | -     |   |   |
| Th   | Mar.5     | -     |   |   |
| M    | Mar.9     | 23    | 7.2 Conjugacy                                   | 3,4,5,6,7,8,13,14,15,16,17,19,23,24,25        |
| W    | Mar.11    | 24    | 7.2 Conjugacy                                   | 3,4,5,6,7,8,13,14,15,16,17,19,23,24,25        |
| Th   | Mar.12    | 25    | 7.3 Groups Acting on Sets                       | 2, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16          |
| M    | Mar.16    | 26    | 7.4 Sylow theorems                              | 1, 10, 14, 15, 19, 22, 24, 26                 |
| W    | Mar.18    | 27    | 7.4 Sylow theorems & $PracticeQuiz5$ & $PQ5Sol$ | 1, 10, 14, 15, 19, 22, 24, 26                 |
| Th   | Mar.19    | 28    | Quiz 5 & FiniteInternal/ExternalDirectProd.     |   |
| M    | Mar.23    | 29    | 7.5 Finite Abelian Groups,                      | 1, 2, 3(a,b), 6(a,b), 17, 18                  |
| W    | Mar.25    | 30    | 7.5 Finite Abelian Groups,                      | 1, 2, 3(a,b), 6(a,b), 17, 18                  |
| Th   | Mar.26    | 31    | 7.5 Groups Small Order                          | 11, 12  |
| M    | Mar.30    | 32    | 7.7 Simple Groups                               | 1, 2, 3, 5                                    |
| W    | Apr.1     | 33    | $Practice Quiz 6 \ \& \ PQ 6 Solutions$         |   |
| Th   | Apr.2     | 34    | Quiz 6  |   |
| M    | Apr.6     | 35    | Selected Topics                                 |   |
| W    | Apr.8     | 36    | Selected Topics                                 |   |
| Th   | Apr.9     | 37    | Review $F19FinalReview$                         | F18MTH3175GroupTheoryFinal                    |
| M    | Apr.13    | 38    | Review $F18.final-exam-M$                       | $F16MTH3175Group\ Theory\ Final Practice$     |
| W    | Apr.15    | -     | Reading day                                     |   |
| Th-F | Apr.16-24 |       | FINAL EXAMS                                     |   |
|      |           |       |   | <u> </u>                                      |