## Tentative

## **COURSE SCHEDULE**

| Week |         | Date           | lect   | Topics  | Textbook              |
|------|---------|----------------|--------|---|-----------------------|
| 1    | T<br>Th | 08/23<br>08/25 | 1<br>2 | Introduction, Energy sources, generation, & environment Review of steady-state AC and phasors                                       | notes<br>1.1,2, notes |
| 2    | T<br>Th | 08/30<br>09/01 | 3<br>4 | Review of RMS, Single-phase AC power<br>Single-phase AC power, P, Q, S,  S , pf, pf correction                                      | notes, 1.8            |
| 3    | М       | 09/05          |        | Labor Day   |                       |
|      | T<br>Th | 09/06<br>09/08 | 5<br>6 | <ul><li>3-phase power, Y- and delta-connections</li><li>3-phase power, balanced systems, efficiency, One-line diagrams</li></ul>    | 2.1-2<br>2.4-6        |
| 4    | T<br>Th | 09/13<br>09/15 | 7<br>8 | One-line diagrams, Electromagnetics, Ideal transformers, Ratings<br>Transformation of impedance, Model of the non-ideal transformer | 2.6, 1.4<br>1.4       |
| 5    | T<br>Th | 09/20<br>09/22 | 9      | Transformer voltage regulation, Autotransformers, 3-phase, etc.   | 3.1-4                 |
|      | 111     | 09/22          |        | Exam 1  |                       |
| 6    | T<br>Th | 09/27<br>09/29 |        | Per-unit system Per-unit system   | 3.5-8<br>3.9-12       |
| 7    | T<br>Th | 10/04<br>10/06 |        | Rotational Motion, AC Machinery Fundamentals, Synchronous machines Synchronous machines as generators                               | 1.3, Ch 4<br>5.1-4    |
|      |         | 10/08<br>10/16 |        | Fall Break  |                       |
| 8    | T<br>Th | 10/18<br>10/20 |        | Synchronous machines as motors, pf correction<br>Synchronous generator on line, 3-phase Induction motors                            | 5.4-8<br>5.9-13, Ch 6 |
| 9    | Τ       | 10/25          |        | Exam 2  |                       |
|      | Th      | 10/27          | 16     | 3-phase Induction motors  | Ch 7                  |
| 10   | T<br>Th | 11/01<br>11/03 |        | Single-phase Induction motors, DC motors<br>DC motors   | notes<br>Ch 8         |
| 11   | T<br>Th |                |        | DC motors Transmission lines and models   | Ch 8<br>Ch 9          |
| 12   | T<br>Th | 11/15<br>11/17 | 21     | Transmission line models and calculations  Exam 3   | Ch 9                  |
| 13   | T<br>Th | 11/22<br>11/24 | 22     | Power System Thanksgiving   | Ch 10                 |
| 14   | T<br>Th | 11/29<br>12/01 |        | Power Flow<br>Power Flow  | Ch 10, 11<br>Ch 11    |
| 15   | T<br>Th | 12/06<br>12/08 |        | Symmetrical faults Faults, The 3 "sequences", Unsymmetrical faults  | Ch 12<br>Ch 12, 13    |
| 16   | Th<br>F | 12/15<br>12/16 |        | Zoom Review<br>Final Exam, 1:00 - 3:00 PM   |                       |