## EE 5240 - Computer Modeling of Power Systems

Spring Semester 2017

- **TEXT:** <u>Computational Methods for Electric Power Systems</u>, M. Crowe, 3<sup>rd</sup> Ed. © 2015.
- **REFERENCES**:Computer Analysis Methods for Power Systems, G.T. Heydt, © 1996.<br/>Computer Aided Power System Analysis, G.L. Kusic, © 1986.<br/>Calculations and Programs for Power System Networks, Y. Wallach, © 1986.<br/>Computer Analysis of Power Systems, J. Arillaga & C.P. Arnold, © 1990.<br/>Computer Modelling of Electrical Power Systems, J. Arillaga, C.P. Arnold, B.J. Harker.<br/>Computer Methods in Power System Analysis, Stagg & El-Abiad, © 1968.<br/>Power System Analysis and Design, J.D. Glover & M. Sarma, 2nd Ed., © 1994.<br/>Computer Methods for Circuit Analysis/Design, J. Vlach & K. Singhal, 2nd Ed, © 1994.<br/>IEEE Recommended Practice for Power System Analysis, IEEE Std 399-1990.<br/>Technical papers handed out in class. Notes posted on class web page.

**READING** The reading assignments as posted on the course web page are to be read *before* coming to **ASSIGNMENTS**: the related lecture period. Study the related sections following each lecture.

- **HOMEWORK**: Homework problems and computer programming exercises will be assigned and collected. Students are encouraged to share concepts and ideas, but may not copy each other's homework or programs. Mini-Lectures on course topics and research papers are also assigned. Lectures will be evaluated by students and the instructor.
- **EXAMS:** Two take-home tests will be given. The university's policy on cheating ("Academic Integrity at MTU," <u>http://www.admin.mtu.edu/usenate/policies/p109-1.htm</u>) will be strictly enforced. A Final Project is done in lieu of a Final Exam. <u>Project presentations are giving in the timeslot reserved for Final Exam</u>, so be sure that you plan on being on campus to present it at that time.
- **ABSENCES**: Students are expected to be present for all tests.
- **HELP FROM INSTRUCTOR:** Questions are encouraged in class, as time permits. Your instructor is available for help during designated office hours in his office in EERC 614. Individual or group help sessions can be prearranged. Please make an effort at solving the problem before asking for help, and be prepared and organized when presenting your problem. This allows your instructor to help as many students as possible during the available office hours.
- **GRADING**: Final averages will be based on the following approximate distribution:

Homework & Programming:	40%
Practical Exercises:	20%
Take-Home Tests (0)	0% (20% each exam)
Participation:	10%
Journal Paper Review:	5% (related to term project)
Term Project:	25%

Worst case cutoffs are: A = 90; AB = 85; B = 80; BC = 75; C = 70; F below 70. Students who complete the work at a high standard and on time are generally assured of an A or B grade. Unsatisfactory or incomplete or late work can result in a C or lower grade. Grades to date will be posted on the course web page, usually updated following each test. Please verify that your grades have been correctly entered.

- **PARTICIPATION:** This is comprised of class attendance, proactivity in doing homework and submitting on time, contribution to the class discussion and e-mail discussions, etc.
- **INTELLECTUAL PROPERTY:** All course materials are available for use only by students registered in this course. All course materials unless otherwise identified are the intellectual property of the instructor(s). Sharing with others not in this class, uploading (giving away that which is not yours) to sites such as classhero.com, etc. may be punishable according to Academic Integrity policies.

Dr. Mork