ELEG 5523 – Electric Power Quality
Summer 2014

TIME: MSE Program

VENUE:


INSTRUCTOR: Dr. J. C. BALDA (3171 or 3218 Bell Engineering Center, Tel: (479) 575-3009, Fax: (479) 575-7967, e-mail: jbalda@uark.edu)

OFFICE HOURS: MWF = 8:00-10:00am. Otherwise, make an appointment.

1.0 COURSE OUTLINE

1. Introduction to Electric Power Quality
2. Power Electronics Background
3. Wiring and Grounding
4. Voltage Sags and Interruptions
5. Harmonics
6. Distributed Generation and Power Electronic Systems
7. Power Quality Benchmarking
8. Instrumentation and PQ Analyzers
9. Transients

2.0 GRADING POLICY

Tests 70%
Homework Problems 30%

The first test covers items 1 to 3, the second test covers items 4 to 5, and third test covers items 6 to 9.

Grading system: A ≥ 90, 90 > B ≥ 80; 80 > C ≥ 70; 70 > D ≥ 50

Cutting a test will result in a zero grade; i.e., THERE IS NO MAKE UP TEST UNDER ANY CIRCUMSTANCE. A formula sheet with only numbered equations from the textbook is allowed in each test. Drawings, equivalent circuits, solved problems ARE NOT ALLOWED on the formula sheet; failure to satisfy this will be considered academic dishonesty. As written in the UA Academic Integrity website, “As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail. Each University of Arkansas student is required to be familiar with and abide by the University’s ‘Academic Integrity Policy’ which may be found at “provost.uark.edu/457.php”. A short video is at http://www.youtube.com/watch?v=SQW_IoOhjvo&feature=youtu.be

Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.” Please, refer to www.ieee.org/about/whatis/code.html for the IEEE Code of Ethics.

3.0 ATTENDANCE POLICY

Attendance is voluntary; each student is responsible for the information presented during each class meeting.

4.0 GENERAL

Students are advised to make use of the Dr. Balda’s office hours in order to reinforce any concept that may not be clear independently of their grades.

Any of the above rules may be changed at any time if the circumstances warrant doing so.
5.0 EMERGENCY PROCEDURES

Many types of emergencies can occur on campus; instructions for specific emergencies such as severe weather, active shooter, or fire can be found at emergency.uark.edu.

Severe Weather (Tornado Warning):
- Follow the directions of the instructor or emergency personnel
- Seek shelter in the basement or interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building
- Stay in the center of the room, away from exterior walls, windows, and doors

Violence / Active Shooter (CADD):
- CALL- 9-1-1
- AVOID- If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- DENY- Barricade the door with desk, chairs, bookcases or any items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it’s safe.
- DEFEND- Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.