

**McWhorter School of Building Science
Spring 2015**

Course Number & Title:

BSCI 7106 - Electrical Systems in Buildings

Instructor:

Mark C. Tatum, PE

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Credit Hours/ Prerequisites, if applicable:

3 credit hour course (lecture)

Texts or Major Resources:

National Electrical Code Handbook, current edition (2014), National Fire Protection Association.

Course Description:

Overview of the electrical systems commonly used in buildings. Basic theory and design concepts are covered along with lighting and electrical distribution equipment.

Course Objectives:

At the completion of this class students will be able to:

- Understand basic electrical principles.
- Describe building electrical systems.
- Interpret electrical drawings.
- Communicate with electrical professionals.
- Apply the National Electrical Code

Course Requirements/Evaluation:

3 written exams

Final exam

Homework assignments

Grading scale (% of final grade):

Written & final examinations 90%

Homework assignments 10%

Grading scale:

90 – 100 A

80 – 89 B

70 – 79 C

60 – 69 D

below 60 F

At the instructor's discretion individual assignments/exams may be curved on a uniform basis by a normal distribution curve.

Course Policy Statements:

The syllabus and policies contained herein may be changed during the semester at the discretion of the instructor. Students will be notified in a timely manner of any changes.

Class Attendance: Attendance is mandatory and necessary to understand the course material. The student is expected to be prepared for each lesson by studying course materials before class and/or completing the homework assigned. There will be one unexcused absence allowed without penalty. Each subsequent unexcused absence will result in a loss of 3% of the total points for the class.

Academic Honesty Policy: All portions of the Auburn University student academic honesty code (Title XII) found in the *Student Policy eHandbook* will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Disability Accommodations: Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with The Program for Students with Disabilities, 1244 Haley Center, 844.2096 (V/TT).

Course Content / Schedule:

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Class	Date		Topic	Assignments
1	1/6	Tue	Class introduction - building codes, history, magnetic fields	
2	1/7	Wed	Basic formulas, RMS, power factor and electrical demand	
3	1/8	Thu	Basic circuits, conductor properties, resistance, voltage drop	
4	1/9	Fri	Transformers, residential circuits	
5	1/14	Wed	Review of basics covered in residence	Homework 1, 2
6	1/21	Wed	Homework 1, 2 review	Exam 1
7	1/28	Wed	Exam 1 review	
	2/4	Wed	No class - Reno competitions	Homework 3
8	2/11	Wed	Video - Homework 3 review	
	2/18	Wed	No Class - Kramer uses both sessions	
9	2/25	Wed	Introduction to 3 phase	Homework 4
10	3/4	Wed	Homework 4 review	
11	3/11	Wed	Commercial circuits	Exam 2
12	3/18	Wed	Exam 2 Review	
	3/25	Wed	No class - Spring break	
13	4/1	Wed	Raceway systems	
14	4/8	Wed	Electrical Safety	
15	4/15	Wed	Lighting	Exam 3
16	4/22	Wed	Exam 3 Review	
17	4/29	Wed	Last Day of Class	Final Exam

The instructor reserves the right to make adjustments to the schedule and assignments during the semester