Course Syllabus
AUT 355-101 Spring 2016
Lighting, Convenience, and Safety Systems

Instructor: Ben Komnick  Phone: office 618-453-9130 (cell 618-528-4784)  Email: bkomnick@siu.edu
Office hours: 1:30-3:00 PM  MTRF, room 140A (call first)
Class meeting time: MTRF 8:00 - 11:50 AM
Classroom: 174  Component Lab: 155  Service Lab: 157
Class dates: Jan 19 - Apr 1 (final exam on Apr 1)
Course drop date (with full refund): Jan 31 Su
Course withdrawal date (with W grade): Feb 1 - Mar 20

Other dates:
St. Louis Auto Show  Jan 28 - 31 Th-Su
Chicago Auto Show  Feb 13 - 21 Sa-Su
ICAIA instructor conference  Mar 10,11 Th,F
Spring break  March 12 - 20 Sa-Su
Commencement  May 14 Sa

Course Description:
Course covers theory of operation and diagnosis of standard body electrical systems. Topics include power windows, power door locks, power seats, lighting, instrumentation, cruise control, and supplemental restraints. Emphasis is placed on analysis of electrical diagrams and development of diagnostic techniques. Laboratory provides the opportunity to practice troubleshooting skills.

Course Objectives:
This course will provide the student an opportunity to:
1. understand the operation of lighting, convenience, and safety systems.
2. analyze and understand system wiring diagrams.
3. develop effective electrical diagnostic skills.

Topical Outline:

I. Accessory Motor Principles  Approx. Percentage
   A. Motor designs  5%
   B. Motor controls
   C. Testing techniques

II. Power Accessories  25%
   A. Power windows
   B. Power door locks, keyless entry
   C. Power seats, memory seats
   D. Power sliding doors

III. Lighting  15%
   A. Headlights and running lights
   B. Turn signals, hazard, and brake lights
   C. Automatic headlights
   D. Daytime running lights
   E. Interior lighting

IV. Instrument Panels and Gauges  20%
   A. Gauge design
   B. Gauge sending units
   C. Warning indicators
   D. Speedometer and tachometer

V. Rear Window Defoggers  5%
   A. Conventional grids
   B. Divided grids with integrated radio antenna

VI. Cruise Control  5%
   A. Vacuum actuated systems
   B. Stepper motor systems
VII. Windshield Wipers
   A. Motor speed controls
   B. Automatic wipers

VII. Passive Restraint Systems
   A. Frontal and side air bags, seat belt tensioners
   B. Impact sensors, occupant classification sensors
   C. Service precautions, system disarming
   D. Air bag deployment for disposal

**Textbook:** No textbook required. Instructor prepared materials will be used.

**Tools required**
Program required tool set (tool boxes must be labeled with student’s name)
Electrical jumper kit (available from department parts store)
T-pins, ball-head pins

**Grading**
The total points a student acquires at the end of the class will determine the final class grade. Points accumulated by the student will be the product of their quizzes, tests, exams, student reports, homework, and competency-based laboratory projects. Student accumulated points are divided by the total number of class points to present a percentage score. Deductions for missed class time are then taken.

Students will be notified beforehand of the scheduling of tests and exams. Tests or exams will be administrated following unit completion or as needed according to class progress. Any missed test or exam must be made up within one week outside of class time. Quizzes are given at the instructor’s discretion and cannot be made up. Participation in class discussions as well as cooperation and productivity in laboratory will affect borderline grade situations.

**Scholastic standards**
A: 93-100%   B:85-92%   C:77-84%   D:70-76% F:< 70%

**Attendance is required**
Each absence may result in a 2.5% reduction in the student’s grade.
Being late for class three times will equal one absence.
Written explanation for absences may be required.
Students are required to make up course work and lab activities missed during an absence.
Students are responsible for obtaining any course materials and information missed during an absence.

**Safety**
Safety glasses are required in the laboratory. Students will be expected to observe all program and shop regulations/policies and participate in maintaining a clean and safe work environment.

**Emergency Procedures**
Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on the BERT’s website at www.bert.siu.edu, Department of Public Safety’s website www.dps.siu.edu (disaster drop down) and in the Emergency Response Guidelines pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. **It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.** The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

**Other**
Students should inform instructor of any special needs due to medical conditions, learning disabilities, etc.
Work on any personal vehicles at the TEC during or outside of class must first be approved by an instructor.
Cell phone use is not allowed during lecture. If you are expecting an important call or message, please inform the instructor in advance.