Course Syllabus
AUT 390 - 301, Spring 2016
Network Systems and Vehicle Electronics

Instructor: Ben Komnick
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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
Class dates: Apr 4 - May 6 (final exam on May 6)
Classroom: 174 Component Lab: 155 Service Lab: 157
Course drop date (with full refund): April 10
Course withdrawal date (with W grade): Apr 11 - Apr 24

Other dates:
Honors Day
Commencement: May 14 Sa

Course Description:
A study of specialized body electrical systems. Topics include data communication networks, theft deterrent systems, automatic temperature controls, and audio systems. Emphasis is placed on current and developing technologies. Laboratory experiences provide the opportunity to use scan tools, oscilloscopes, and on-board self-diagnostic systems. Prerequisite: junior standing or consent of school.

Course objectives:
This course will provide the student an opportunity to:
1. understand the theory of network systems and vehicle electronic systems.
2. analyze operational characteristics of network systems and vehicle electronic systems.
3. practice related diagnostic procedures.

Topical Outline:

I. Theft Deterrent Systems 20%
   A. Pelletized key systems
   B. Key rotation systems
   C. Transponder based systems
   D. Content theft systems

II. Data Communication Networks 50%
   A. Multiplexing theory, message prioritization
   B. Network wiring configurations
   C. Industry standard networks
   D. Signal monitoring, no response diagnosis

III. Audio Systems 15%
   A. Radio receiver theory
   B. Remote components and speakers
   C. Performance/noise diagnosis
   D. Audio controls

IV. Automatic Temperature Controls 15%
   A. Temperature sensing: outside, inside, sunload, occupant
   B. Output controls: blower, mode, temperature
   C. Controllers, self-diagnostics
   D. Multi-zone systems
**Textbook:** No textbook required. Instructor prepared materials will be used.

**Tools required:**
Program required tool set (tool boxes should 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 test and exams. Tests or exams will be administered 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 and 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 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.