AUT–450-101 Hybrid Electric Vehicle Technology

SPRING 2016
MTWRF 1:00–4:50pm (Monday, April 4th – Friday, May 6th), TEC-132

DESCRIPTION: This course introduces and investigates hybrid electric and electric vehicle technologies through lecture and laboratory demonstrations. Emphasis will be placed on developing an understanding of the functions of hybrid/electric components and subsystems, the diagnosis and maintenance of electrical subsystems, and high-voltage/high current safety practices.

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office phone: 618/453-9140
office hours: MWF 11am-1pm

REQUIRED MATERIALS:
- SIU email account
- Desire2Learn access ([https://online.siu.edu](https://online.siu.edu))

ATTENDANCE: Attendance is mandatory and will be checked daily. Three tardies and early dismissals, without prior permission, will count as one absence in each instance. Penalties on your grade will occur with more than three absences.

POLICIES: See ‘Student Guidelines, Expectations and Department Standards’
- Silence your phones during class
- Phone use is prohibited during exams
- Late work is not accepted
- No make-up exams

GRADING:
- Attendance = 5%
- Quizzes + Tests = 75%
  - Comprehensive Final on Friday, May 6th @ 1-2:50pm
- Lab Exercises = 20%

GRADING SCALE:
- A. 93-100%
- B. 85-92%
- C. 77-84%
- D. 70-76%
- F. <70%

COURSE OUTLINE:
*Chapters from the Textbook:*
1. Carbon-Based Fuels and the Environment
2. Introduction to Hybrid Vehicles
3. Hybrid Engine Systems
8. Hybrid Auxiliary and High-Voltage Batteries
9. Electric Motors, Generators, and Controls
10. Regenerative Braking Systems
11. Hybrid Vehicle Transmissions and Transaxles
12. Hybrid Vehicle Heating and Air Conditioning
13. Honda Hybrid Vehicles
14. Toyota/Lexus Hybrid Vehicles
15. Ford/Mercury Hybrid Vehicles
16. General Motors Hybrid Vehicles
17. Electric and Plug-In Hybrid Electric Vehicles
19. Hybrid Safety and Service Procedures
20. First Responder Procedures
SAFETY AWARENESS FACTS AND EDUCATION
Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: http://safe.siu.edu

SALUKI CARES
The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: (618) 453-5714, or siucares@siu.edu, http://salukicares.siu.edu/index.html

EMERGENCY PROCEDURES
Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu, Department of Safety’s website at www.dps.siu.edu (disaster drop down) and the Emergency Response Guideline pamphlet. 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.

INCLUSIVE EXCELLENCE
SIU contains people from all walks of life, from many different cultures and sub-cultures, and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education as well an essential preparation for any career. For more information please visit: http://www.inclusiveness.excellence.siu.edu/

LEARNING AND SUPPORT SERVICES
Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:
Tutoring: http://tutoring.siu.edu/
Math Labs http://math.siu.edu/courses/course-help.php

WRITING CENTER
The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit http://write.siu.edu/

AFFIRMATIVE ACTION & EQUAL OPPORTUNITY
Our office's main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: http://diversity.siu.edu/

Additional Resources Available:
SALUKINET: https://salukinet.siu.edu/cp/home/displaylogin

ADVISEMENT: http://advisement.siu.edu/

PROVOST & VICE CHANCELLOR: http://pvcaa.siu.edu/

SIU ONLINE: http://online.siu.edu/