

**SOUTHERN ILLINOIS UNIVERSITY CARBONDALE
COLLEGE OF APPLIED SCIENCES AND ARTS**

COURSE SYLLABUS

**AUT 475 Special Project (3 CREDIT HOURS)
Spring 2015
Dynamometer Systems and Testing**

FACULTY:

Instructor: Tim Janello

Email: tjanello@siu.edu

Office: Room 140B, TEC building.

Physical Address: Southern Illinois University - Automotive Tech.
Transportation Education Center
545 N Airport Rd.
Murphysboro, IL 62966

Office hours: 8:30 to 11:30 MT (or by appointment)

Office/Fax Phone: 618-453-9131
Department Phone: 618-453-4024

Mailing Address: Automotive Technology/SIU
Mail Code 6895
Carbondale, IL 62901-6895

Classroom Number: TEC 0133

Class meeting time: 1 -4:50 PM Days: MTRF (Wednesday at instructor discretion)

Class beginning: April 6th, 2015

Class ending date: May 8th, 2015

Holidays: None

OFFICE HOURS:

I encourage you to contact me before /after class or anytime to schedule an office visit to discuss anything. If you need extra contact time, please contact me so I may clear up any questions you may have. My other duties may require me to not always be available, but I will try to make myself available if I know ahead of time.

FACULTY CONTACT:

Students may contact the instructor by phone, fax, or e-mail. If the instructor is not available via phone, please leave a detailed message either in voice mail or with the receptionist. When leaving a message or e-mailing, please remember to provide background and contact information.

AUTOMOTIVE TECHNOLOGY MISSION STATEMENT:

The Department of Automotive Technology provides an educational environment for students to acquire professional, research, and technical skills necessary for success in the automotive industry and other related industries. The faculty conducts applied research in automotive fields and provides service to the community.

MOBILE TECHNOLOGY

Electronic recording devices may be used with permission of instructor but cannot interfere with class. (Laptops, phones, etc.) Turn cell phones off. No disruptive behavior will be tolerated from any device or personal behavior. Remove from class may result.

REQUIRED TOOLS AND EQUIPMENT:

Each student must have available during class the Automotive Department required:

1. Tool set.
2. Wiring and jumper KIT.
(Available at the Department parts store for \$20)
3. Push Pins Only **NO T PINS**

COURSE DESCRIPTION:

This course is an in-depth study of Diesel Fuel Systems, Electronic Engine Management Systems and Diesel Emission Control Systems. Lectures focus on fuel systems analysis, advanced diagnostics, legislative regulations and new technologies related to engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools such as oscilloscopes, scan tools, exhaust gas analyzers, and chassis dynamometer.

PREREQUISITES:

Consent of Department

REQUIRED TEXTBOOK:

- **Reference Material Supplied through D2L and/or handouts.**
- **Each Student MUST have an SIU E-mail account in-order to log-in and obtain reference material, assignments, and TESTS.**

SIU ON-LINE LOGIN INSTRUCTIONS

This course utilizes an instructor developed internet site to enhance instruction. Students will be expected to complete required readings of articles posted to this site and be prepared to discuss them in class. In addition, there is a resource area for students to gather industry related reference information. Instructor presentations and assignments may be posted to this site for student reference.

Login Address: <https://online.siu.edu/>

Once on the site, please be sure to run the browser check and to have your browser allow pop-ups for this site. Instructions for access into the system are posted on this site.

Your Campus Network ID and Password are the same as your ID and password used for access into SalukiNet and other SIUC systems.

REFERENCES:

Instructor provided via electronic format (SIU On-Line) in assignments section and classroom material.

Aaron, J.E. (2006). *The Little, Brown compact handbook*, (6th ed.). New York: Addison-Wesley.

American Psychological Association. (2001). *Publications manual of the American Psychological Association*, (5th ed.). Washington, D.C.: Author.

Both of the above required references are for all the courses. Together, they represent the University's and the College's standards for written academic works. Faculty may add additional references by listing them with the above in alphabetical order (as per APA format).

MY OBJECTIVE FOR YOU:

Ask questions. Discuss findings. Have fun. = Building knowledge as class progresses.

COURSE OUTLINE:

To explore Dynamometer operations, theory, testing procedures, data analysis, and test control.

CONFIDENTIAL AND SENSITIVE MATERIAL/INFORMATION

It is understood that students in this class may be provided confidential/sensitive and/or copyrighted material and/or information. Any such material/information is intended to be used solely for the individual student's educational purposes in the course. Do not share any information acquired in the course of this class with anyone.

ATTENDANCE:

The faculty of Southern Illinois University Carbondale affirms the importance of prompt and regular attendance on the part of all undergraduate students. Quality instruction clearly depends upon active student participation in the classroom or its equivalent learning environment. This concept is further expounded upon in the *Southern Illinois Carbondale Catalog*.

The attendance policy is applied to being in class seated with proper equipment to record lecture notes by class start time. Prepared for class means to have completed all assignments by designated time and have all tools required to perform lab assignments.

Automotive Department's policy is:

Each ABSENCE will result in the student's final overall grade percentage be: **Reduced by 2.5%.**

- An absence is defined as not being present for a portion of a lecture and/or lab.
- Also leaving early may be considered an absence.
(consult instructor before leaving)

AND/OR

- **THREE (3) tardy incidences equal ONE (1) Absence**
- A TARDY is defined by the student not present when attendance is taken.

PROMPT ATTENDANCE IS REQUIRED!

- Attendance may be taken promptly at the "Beginning and End" of each four (4) hour session.

MY GUIDING PRINCIPLE:

This is your major; this is an Elective class; you are spending a large amount of money to be here; so why not be here?

Acquire as much knowledge as you can and then demand more!

I am going to push you to achieve more; you should push me to deliver more.

WITHDRAWAL POLICY:

Students who officially register for a session may not withdraw merely by discontinuing attendance. Students who wish to withdraw from all courses must notify their local program advisor, in writing, that they wish to withdraw from the University. The process of withdrawal starts with the student. Students who stop attending and do not officially withdraw will be assigned a grade of "WF" (failure) and will be liable for the cost of the course or courses not attended.

PLAGIARISM: May result in expulsion from the University.

SIUC Student Conduct Code on Academic Dishonesty

As defined by the SIUC [Student Conduct Code](#), acts of academic dishonesty include, but are not limited to:

1. **Plagiarizing** or representing the work of another as one's own work;
2. Preparing work for another that is to be used as that person's own work;
3. Cheating by any method or means;
4. Knowingly or willfully falsifying or manufacturing scientific or educational data and representing the same to be the result of scientific or scholarly experiment or research;
5. Knowingly furnishing false information to a university official relative to academic matters;
6. Soliciting, aiding, abetting, concealing, or attempting acts of academic dishonesty.

STUDENT ASSIGNMENTS AND EXAMINATIONS:

- The instructor will announce when exams are available according to class preparedness.
- The exams may be administered through the use of SIU ON-LINE.
- Exams, Quizzes, and Assignments turned in after the due date and/or time may not be accepted.
- Quizzes are unannounced and totally at the discretion of the instructor. The student is required to study all presented material to date and is subject to being called upon at any time to demonstrate their knowledge for grading purposes.
- Assignment of a Lab Practical is at the discretion of the instructor.
- Students' grades are figured according to total achieved points divided by total points available excluding the Final exam.
- Late assignments are at the discretion of the instructor. The student is encouraged to discuss with the instructor reasons for being late to class as well as turning in late assignments.
- No points may be awarded for late tests, exams, and/or homework.
- The final exam or project due times may not be extended. If its late there may not be any points awarded unless prior approval is obtained from the instructor.

FINAL Project:

A portfolio of your assigned project is due by email on Dec 5, 2014.

Project is worth 200pts.

1. **Appearance**
2. **Organization**
3. **Factual Information**
4. **Logical Sequences**
5. **Test Outcomes**

Course Requirements and Procedures:

1. *Department of Automotive Technology rules and regulations are active and must be followed!*
2. ***This includes Safety Glasses! They must be properly worn at all times when in the Lab area.***

3. **Any violation of this personal safety rule may cause the individual to be removed from class.**
4. Reading and written assignments (*assigned at instructor's discretion*)
5. You must have an SIU e-mail address to log onto SIU On-Line for assignments and reference.
6. Student's responsibility to read chapters related to class discussion.
7. Impromptu quizzes based on presentations and related text book material.
 - a. (Quizzes can only be made up if prior arrangements are made.)
8. Scheduled Exams:
 - b. Will be announced prior.
 - c. (The student is responsible to take missed exams within FIVE (5) days of initial exam date.)
9. Any student(s) who fail to follow the lab and worksheet procedures may be removed from class. Each STEP of the worksheets must be followed and the instructor must sign before the student may proceed to the next step. NO EXCEPTIONS!!!!
10. EACH STUDENT IS RESPONSIBLE FOR THEIR OWN LAB SHEETS AND ULTIMATELY THEIR GRADE.
11. Proper clothing is required.
12. Shop, tools, equipment, vehicles are to be used, **with care**, and returned to proper storage.
13. Each student must sign out and in vehicles and equipment. Vehicles must have least a 1/4th tank of gas and in proper running order with no codes present or MIL illuminated at the conclusion of each class.

GRADING:

The SIUC Automotive Technology Department maintains the following scholastic standards for grading:

A	93-100%	Excellent
B	85-92%	Good
C	77-84%	Satisfactory
D	70-76%	Poor
F	<69%	Failure

Incomplete Grades and Withdrawal Policies:

Incomplete (INC): An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. Students are required to apply, in writing, to the faculty member for an INC. Applications for an incomplete grade are available from the SIUC office. If the application is approved by the faculty member and should the student fail to complete the course within the time period designated by the faculty member, not to exceed one year, or graduation, whichever occurs first, the Incomplete will be converted to a grade of **F** and the grade will be computed in the student's grade point average.

WF: Failure. A grade of WF will be awarded to students who do not officially withdraw from class, cease attending the class, and fail to complete requirements for the course. When awarding a WF, the faculty member will note the date/time of the student's last date of attendance/participation.

Course Drops: Students officially drop courses through the program change process. This process is done with the Program Advisor. Unless a student has processed an authorized drop from the course by the published Add/Drop Date, the student will not be allowed to drop the course. It is the student's responsibility to ensure that the drop process is officially completed. It is probable that a student who does not drop by the Add/Drop Date, but stops attending/participating during the second half of the course, will be awarded a grade of WF.

**Southern Illinois University Carbondale
College of Applied Sciences and Arts
Automotive Technology
Student Policies**

These Policies Have Been Established For Your Safety And Welfare, Please Do Not Abuse Them!

1. Each student must wear safety glasses meeting the Z 87 specification - Illinois law requires this.
 - **You will not be allowed to work in the lab without a pair!**
 - You may purchase approved safety glasses from the Automotive Parts Store.
2. Each student must provide his/her own hand tools with owner's name clearly visible on the outside of the tool box. If two students are sharing the same tools, each must have a key. Tool sets can be purchased through the Automotive Parts Store.
3. Each student must provide his/her own shop towels - not towels from the washroom.
4. Clothing should provide maximum safety protection and reflect professionalism. You will not be allowed to wear sandals or work without a shirt.
5. Please park only in designated parking areas along the road on the west end of the Labs. Students are not allowed to park in or around the L-buildings. This includes all areas between the labs (L-1 / L-2), (L-2 / L-3), (L3 / L4) along with the drive through directly west of these buildings. These areas are reserved for Automotive Technology vehicles and customer vehicles.
6. Vehicles & motorcycles are not allowed to be left on the Carterville Campus without prior approval. Specifics regarding the policy and approval can be obtained by contacting the Parts Store Manager. A set of vehicle keys must be available on campus at all times to facilitate movement if necessary. Vehicles parked on the Carterville campus for an extended period of time without proper approval are subject to towing at the owners expense.
7. **No Lab Vehicles may be driven by students.** All test drives **must be** performed with an instructor on board.
8. Each lab class may have one 15-minute break at the instructor's discretion
9. Attendance in class is required!!
 - 1 absence will lower your grade 2.5%
 - 3 tardies count as one absenceAfter 3 absences, you will be required to have a conference with the instructor before returning to class.
10. All vehicles brought in for work must be scheduled through the instructor; no vehicles are to be jacked up outside of buildings or on the parking lot.
11. Each student is expected to keep his/her work area orderly and clean at all times.
12. Tobacco smoking is not allowed in any building. The campus has been declared smoke-free. Smokeless tobacco is not permitted in the buildings.
13. Personal cell phones are not to be used during class time.
14. If you are working on your own vehicle or your parents' vehicle, you can purchase repair parts at discount through various Automotive Parts Stores in Carbondale. Discount slips may be obtained from your instructor, which will identify you as a student in the Automotive Technology program. All purchases will be handled on a cash basis only.
15. Students are not allowed to work in the labs unsupervised.

Automotive Technology Student Laboratory Access Guidelines

1. Automotive Department student workers, undergraduate assistants, and independent study students are allowed to work in the automotive laboratories without direct faculty supervision while working for SIUC and under the direction of an automotive faculty member.
2. Faculty supervisors should make an honest effort to obtain permission of the faculty member in charge of the automotive laboratory before allowing access for any Automotive Department student worker, undergraduate assistant or independent study student.
3. Automotive Department student workers, undergraduate assistants, and independent study students must maintain automotive laboratory security by locking all doors when leaving, not allowing other students access without faculty permission, and not allowing other students to use/remove equipment or service vehicles without faculty permission.
4. All students must be under direct faculty supervision before being allowed any access to the automotive laboratories with the exception of the above mentioned student workers, undergraduate assistants, and independent study students.
5. Student RSO (ATO Club) members must acquire permission and have direct faculty supervision to have access to any automotive laboratory with the exception of the north west corner of the welding lab where the project car is housed.

Safety Instructions:

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 BERT's website at www.bert.siu.edu, Department of Safety's website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline 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.

Academic Dishonesty Policy:

Students may be subject to disciplinary proceedings resulting in an academic penalty or disciplinary penalty for academic dishonesty. Academic dishonesty includes, but is not limited to, cheating on a test, plagiarism, or collusion.

ADA Statement for Students Requiring Special Accommodations:

As per Section 504 of the Vocational Rehabilitation Act of 1973 and the American Disabilities Act (ADA) of 1990, if accommodations are needed, inform your instructor as soon as possible.

Student Guidelines, Expectations and Department Standards

Attendance & Scholastics

- Class attendance is required. One (1) absence can potentially lower your grade 2.5% and three (3) tardies count as one (1) absence. After three (3) absences, you will be required to have a conference with the instructor before returning to class.
- The Automotive Technology program maintains the following scholastic standards for grades:
93-100% = A, 85-92% = B, 77-84% = C, 70-76% = D, Lower than 70% = F

Attire and Conduct

Attire and conduct reflects the expectations of the Department and industry partners. The following guidelines are mandated to provide maximum safety protection and reflect professionalism.

- Students are to maintain a clean and professional appearance at all times. Lockers and showers are available in restrooms 112 and 172. Lockers are also available in corridors 150 and 170.
- The Automotive Technology Department uniform shirt is required to be worn in all automotive technical classes. Students will be provided a single Department uniform shirt, and it is recommended you purchase additional uniform shirts. The shirts can be purchased at the Automotive Technology Parts Store. Any T-shirt or sweatshirt being worn is to be underneath the Department uniform shirt.
- In automotive non-laboratory classes, students can also wear a clean and professional shirt such as a dress shirt, or a shirt with a collar. T-shirt style shirts are not acceptable.
- Full-length pants are required to be worn while in all automotive classes. Uniform, dress, khaki, or neat blue-jean style pants are acceptable. Shorts, sweat, workout, or pajama styles are not acceptable.
- Hats and ball caps are not allowed to be worn in the building. No oversize and loose fitting clothing is to be worn while in automotive classes. No "Hoodie" style sweat shirts are allowed in the labs. All long hair is to be confined.
- Non-perforated, closed-toe shoes are required in all automotive classes and laboratories.
- Wearing jewelry may pose a safety hazard. We strongly discourage the wearing of any jewelry.
- Safety glasses must be worn in the laboratories while lab activities are in session and/or when you are performing any actions that may cause an eye hazard. Safety glasses may be purchased at the Automotive Technology Parts Store.
- Cell phones are not to be used for calls or texting during class time unless approved by the instructor. Practice professional courtesy.

Laboratory Activities and Items

- Students are not allowed to work in the labs unsupervised. Students are to work directly with their instructor for access to laboratories, tools, equipment, training vehicles, fuel, and supplies. All of these items are State or others property. Students are not to assume they can acquire or use these items without the instructor's approval. Access to and use of these items is a privilege. Improper use will lead to disciplinary action.
- Students are expected to follow all safety guidelines in the use of all tools and equipment. If proper guidelines are not known, students are to contact their supervising instructor before proceeding. Tools and equipment needing repair/service are to be brought to the attention of the supervising instructor.

- Fender covers and other protection and safety items are to be used as needed.
- Each student must provide their own required tools for use in the labs with their name clearly visible on the outside of the toolbox. Tool sets can be purchased through the Automotive Technology Parts Store.
- **All** test drives of “customer vehicles” **must be** performed with an instructor on board. SIU “Training vehicles” are not allowed to be driven.
- All vehicles and/or components brought in for work **must be** scheduled through the instructor; this includes personal vehicles. All vehicles and/or components being worked on in the labs **must have a completed work order on file** in the Automotive Technology Parts Store.
- Parts and supplies for items being worked on in the labs are to be purchased through the Automotive Technology Parts Store unless prior approval from the SIU Parts Store Manager is obtained. Students can purchase repair parts through the Parts Store at a discount.

Workspace Cleaning

- Each student is expected to keep his/her work area and equipment orderly and clean at all times. The labs are provided with various drain pans and cleaning products. All messes caused by or in the students’ work area (i.e. dirt and oil on floor, dirty drain pans, shavings on drill press, and grease prints on equipment) are required to be cleaned up. Not maintaining an orderly and clean work environment may lead to disciplinary action due to the potential hazards caused to others.

Food, Drink, Smoking and Tobacco Products

- No food or drink is allowed to be brought in to the computer lab and automotive service or component laboratories. Eating, drinking, handling contact lenses, chewing gum, or applying makeup/lip balm is not allowed in any of the automotive labs.
- Smoking is not allowed in or within 15 feet of any campus building. There is absolutely no smoking allowed in the lot on the west side of the Transportation Education Center (TEC) building. Smokeless tobacco products are not permitted in the TEC.

Parking

- All students, faculty, and staff are to park in designated areas. Parking on the west side of the TEC is restricted to Automotive Technology fleet and customer vehicles or deliveries. Unauthorized parking will result in towing at the owner’s expense.
- The roadways and parking lots around the TEC are under the authority of the Southern Illinois Airport. All users are to abide by their regulations. Citations can and will be issued.

Outdoor Student Space

- Outdoor gathering space is available at either the northeast, northwest or south entrance of the TEC. There is to be no outdoor gathering on the west side of the TEC. This area is restricted.

Student Concurrence

I have received, read and fully understand the Southern Illinois University, Automotive Technology Department “Student Guidelines, Expectations and Department Standards”. I hereby agree to abide by all items as described. I understand that my failure to comply with these guidelines will lead to disciplinary action.

Print Student Name

SIU Student ID (Dawg Tag)

Student Signature

Date