

Basic Course Information

Semester	Spring 2018	Instructor Name	Alan "Moose" Butler
Course Title & #	AU T 220 Mechanical Automatic Transmissions	Email	alan.butler@imperial.edu
CRN #	20855	Webpage	n/a
Room	1100-1103 and 1100-1102	Office	1104
Class Dates	February 12 through June 8	Office Hours	6:00 AM to 3:30 PM
Class Days	Monday Wednesday	Phone #s	(619) 200-6034 Cell (760) 355-6507 Office
Class Times	2:00PM-4:05PM (lec) Monday 4:05PM 6:10 PM (lab) Monday 2:00PM-6:10PM, Wednesday	Contact if student will be out or has emergency	Contact me by cell phone, text, or Email
Units	4 Units		

Course Description

This course provides: Review and advanced study of the design construction, mechanical and hydraulic function and repair of the automatic transmission. (CSU)

Student Learning Outcomes

Upon course completion, with a grade of “C” or better, the successful student will have acquired new skills, knowledge, and/or attitudes as demonstrated by being able to:

1. Diagnose fluid loss and condition concerns; check fluid level in transmissions with and without dipsticks; determine necessary action. ILO1, ILO2, ILO3
2. Inspect, repair, and replace external seals gaskets, and bushings. ILO1, ILO2, ILO3
3. Disassemble, clean, and inspect transmission/transaxle. ILO1, ILO2, ILO3
4. Assemble transmission/transaxle. ILO1, ILO2, ILO3

IVC as an institution has adopted five Student Learning Outcomes (SLO’s). They are interconnected with each other. They will be inherent throughout the course:

1. Communication Skills
2. Critical Thinking Skills
3. Personal Responsibility
4. Information Literacy
5. Global Awareness

Student Learning Outcome Objectives:

- To prepare graduates for employment as automotive mechanics, parts and supply house technicians, and service station mechanics and transmission rebuilders. The training program is intended to meet the entry level skill needs in the occupational field of Automotive Technology for mechanics.
- Learn compliance rules concerning safety shop procedures associated with jack stands, air tools, hydraulic jacks, and car lifts.

- Have a thorough understanding of the automatic transmission system and its components.
- Describe the power flows systems of the automatic transmission.
- Describe the proper steps and procedures of disassembly and assembly of the engine sections.
- Communicate and demonstrate global awareness and responsibility.

The class will follow a performance-based curriculum that presents every student with the knowledge tools that will instill the skills to excel in Automotive Automatic Transmission work as well as a responsible member of the community.

Course Objectives

Upon course completion, with a grade of “C” or better, the successful student will have acquired new skills, knowledge, and/or attitudes as demonstrated by being able to:

Measurable Course Objectives - Students Will Be Able To:

1. Demonstrate safe job practices.
 - Describe general safety rules for the auto shop.
 - Engines and transmissions.
 - Hoists, jacks, lifts, and safety standards.
 - Battery charging and electrical equipment.
 - Eye protection, clothing, breathing protection.
 - Fire and electrical emergencies.
 - Location and multi-class fire extinguishers.
 - Location of emergency items.
 - Safety shop color codes.
 - Compressed air, hand tools, air rules, and environmental safety.

2. Demonstrate how to perform transmission maintenance and repairs.
 - Receive a work order from a customer and document the customer’s concerns and complaints.
 - Recommend in writing, after a vehicle inspection, to the customer the necessary repairs to their vehicle.

3. Demonstrate how to use basic hand tools.
 - Pliers, screwdrivers, and hammer.
 - Battery and charging system tools.
 - Under the vehicle tools.
 - Hand tools and air wrenches.

- Electrical circuit tools.
- Common measuring tools.

Methods of evaluation to determine if objectives have been met by student/exam and grading procedures:

- There will be a written mid-term and final exam. The mid-term will have 50 questions. The final exam will have 50 questions.
- There will be written homework tests on the chapters that have been assigned. The homework tests, student's performance on laboratory projects, classroom participation and attendance, and completed worksheets will be added together and a letter graded assigned according to the standard table, which follows.
- All homework quizzes and tests must be completed and delivered to the instructor the week for which they are assigned.

Textbooks & Other Resources

1. Modern Automotive Technology, James E. Duffy 8th Edition (Textbook). ISBN number:
2. Modern Automotive Technology, James E. Duffy 8th Edition (Workbook). ISBN number:

Required Materials:

- Pen and pencils.
- Lined 8"x 11-1/2" standard writing paper.
- Textbooks.
- Proper clothing suitable for shop environment (long pants, leather shoes, safety glasses, gloves, and a means to secure long hair).

Course Requirements and Instructional Methods

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester.

Course Grading Based on Course Objectives

Grading System: Letter-Grade only.

Percent of Overall Grade.

Letter Grades.

Points Scores = Letter Grade

90 - 100 = A - Superior

80 - 89 = B - Better Than Average

70 - 79 = C - Average

60 - 69 = D - Below Average

Below 60 = F - Failing

Extra-Credit Work

By arrangement

Outside Projects

By arrangement

Work Handed in Late

Accepted with valid reason.

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add

a class. It is the student’s responsibility to drop or officially withdraw from the class. See General Catalog for details.

- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as ‘excused’ absences.
- Four (4) tardies equal one (1) absence. Five (5) absences will require the student to be dropped and/or given an incomplete or an “F” for the course. A doctor’s release may be considered an excused absence depending on the total number of classes missed. Please review 2017 Class Schedule Booklet statement on Class Attendance.
- Tardiness, leaving early – report to your instructor.
- Call-in because of absence – call your instructor or leave a message at the phone numbers listed at the top of this syllabus.

• **Class Participation Rubric**

BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	Points Possible
Student misses class or leaves class early or shows up to class late. (0 Points)	Student comes to class late or leaves class early, but asks permission or provides an excuse (5-7 Points)	Student is always on time. Student only leaves class with permission after completing assignments. (8-10 Points)	All students start with 10 possible points each day. The points are documented in the grade center at the beginning of class.
Student does not participate in assigned tasks. (0 Points)	Student Participates in assigned tasks but does not take an active role or leadership role. The student tends to watch others work. (5-7 Points)	Student takes a leadership role in all assigned tasks. Student is willing to help others. (8-10 Points)	Points are finalized at the end of class. At the end of class points either will remain at 10 or be lowered.
Student Violates Safety Rules. (0 Points)	Student Does not violate safety rules but needs to be asked what he or she is doing? Student does not clean work area or needs to be told to clean up. (5-7 Points)	Student is safe and encourages others to be safe. Student cleans the shop area and encourages others to clean up. (8-10 Points)	

Classroom Etiquette and Classroom/Laboratory Safety

- Electronic Devices: Cell-phone and electronic devices – set on silent mode and answer during break.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to

meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.

- Visitors and children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.
- Class breaks: 10 minutes for each hour of class.
- Participation in class: To the best of your ability.
- Safety rules: As instructed in the first two meetings and then as directed by staff during the classes.

Safety Rules and Regulations (Code of Safe Practices):

- (1) Safety glasses must be worn in designated shop areas at all times.
- (2) No work shall be done in the shop or computer lab except during designated class time.
- (3) Face masks, face shields, and/or goggles may need to be worn when operating power tools, equipment or machinery, which exposes the student to particulate matter.
- (4) Wear proper the clothing, this is a working shop atmosphere.
 - (a) Do not wear loose fitting clothing, or unsecured long hair, or articles that may be caught in moving machinery, equipment, or power tools.
 - (b) Substantial and appropriate all leather shoes shall be worn in the lab area. No open toed footwear. It is recommended that boot-type footwear be worn in the shop area.
- (5) Wear long pants. Wear gloves when necessary.
- (6) All power equipment shall be shut off when not in use.
- (7) Do not leave machinery unattended when on.

- (8) Do not use tools, equipment, or machinery you have not been instructed on how to use them.
- (9) Use the proper tool for the job at hand.
- (10) When operating the equipment with another student, make sure it is understood which student is the operator.
- (11) Observe rules concerning operator's safety zones.
- (12) Do not hold a conversation with someone operating power tools, equipment or machinery. The distraction may cause an accident.
- (13) Never operate power tools, equipment or machinery without the proper safety guards in place.
- (14) When using air, be sure that no one will be the target of the air blast.
- (15) Unsafe work practices or safety hazards are to be reported to your instructor.
- (16) Any accident or injury, regardless of how minor, must be reported to your instructor immediately.
- (17) No horseplay, running, scuffling, etc. on the college facilities.
- (18) No music allowed in the auto shop.
- (19) No parking in front of the gate.
- (20) No work should be done without instructor's permission. No parking inside the shop during lecture time.
- (21) Each student will be responsible for keeping the work area clean.
- (22) Students cannot leave early without instructor's permission.
- (23) No helpers or visitors during lab activities.
- (24) Clean-up – clean your area of work and as directed by your instructor.

Each student is required to comply with the schedule established by the automotive program at Imperial Valley College. Students are required to attend class each day class is in session. If for any reason a student is absent he or she is responsible for making up any missed literature or lab assignments. It is recommended that the students call or leave a message to inform the instructor if he or she is ill and/or bring a doctor's note upon returning to class.

- You must bring your textbook to every class meeting.
- You must bring notebook and pencils to be prepared for taking class notes on class lectures, homework, videos, and class lab activities.
- You must be on time for each class.
- You must participate during lecture and lab assignments.
- You must hand your assignments in on time and take your exams on time.

Academic Honesty

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to 'cite a source' correctly, you must ask for help.

- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

Additional Help

- Canvas: Check for special announcements and additional instructional materials and videos.
- You may consult your college map for the Math Lab, Reading & Writing Lab, and Study Skills Center (library).
- Library Services: As you know there is more to our library than just books. You have access to tutors in the Study Skills Center, study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. Please contact the DSP&S office if you feel you need to be evaluated for educational accommodations.

Physical Conditions: Notify the instructor if you have any physical conditions which could possibly affect your safety or health in the performance of the course class/laboratory assignments.

Adjustments to your assignments, if necessary, will be made.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see: The IVC Student Health Center.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities, please refer to the IVC General Catalog.

Harassment Statement:

All forms of harassment are contrary to basic standards of conduct between individuals and are prohibited by state and federal law, as well as the District's policy, and will not be tolerated. The District is committed to providing an academic and work environment that respects the dignity of individuals and groups. The District shall be free of sexual harassment and all forms of its sexual intimidation and exploitation. If someone says or does anything to you or someone else that makes you feel uncomfortable or that you feel is inappropriate contact your instructor immediately.

Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. Students can access tutorials online.

Anticipated Class Schedule / Calendar and Important IVC Dates

Spring 2018 Important Dates:

- Late registration February 12 -24.
- Deadline to drop full-term classes without owing fees. February 24.
- Ticketing for parking violation starts February 26.
- Deadline to make up for incomplete grade March 23.
- Financial aid return to title IV drop deadline April 26.
- Deadline to drop full-term classes May 12.
- Holidays/Spring Recess April 1 - 7.
- Last week of classes including final examinations June 5 - 9.

Class Dates and Outlines – Instruction Methodology:

Note: Lecture times and dates on chapters may be subject to change.

Week 1: Class Orientation. Safety Orientation. Shop safety, battery safety, proper clothing, proper use of shop equipment, personal protective equipment, accident prevention, and hazardous materials. No homework this week is due but textbooks need to be purchased. Students will be instructed on safety procedures to be followed in the shop. There will be shop safety training and written test. Several subject related practical application material worksheets, handed out during the laboratory class, will be completed and handed in to the instructor at the end of the class sessions.

Week 2: Chapter 1: The Automobile. Hand in to the instructor at the beginning of the lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.

Week 3: Chapter 3: Basic Hand Tools. Hand in to the instructor at the beginning of the lecture class the answers to the ASE questions in the textbook at the end of the chapters. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.

Week 4: Chapter 4: Power Tools and Equipment. Hand in to the instructor at the beginning of the lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.

- Week 5: Chapter 6: Automotive Measurement and Math. Hand in to the instructor at the beginning of the lecture class the answers to the ASE questions in the textbook at the end of the chapters. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.
- Week 6: Chapter 66: Automatic Transmissions Fundamentals. Hand in to the instructor at the beginning of the lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook will be completed in class and evaluated at the end of the Saturday session.
- Week 7: Chapter 67: Automatic Transmission Service. Hand in to the instructor at the beginning of the lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook will be completed in class and evaluated at the end of the Saturday session.
- Week 8: Chapter 68: Transaxle and Front Drive Diagnosis and Repair. Hand in to the instructor at the beginning of the lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook will be completed in class and evaluated at the end of the Saturday session. Review material in classroom for the mid-term test.
- Week 9: Chapter 69: Case Diagnosis Service and Repair. Mid-Term Test during lecture class. Hand in to the instructor at the beginning of lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.
- Week 10: April 1 and 27– No Classes – Spring Break.
- Week 11: Chapter 72: Transaxle and Front Drive Axle Technology. Hand in to the instructor at the beginning of lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.
- Week 12: Chapter 73: Transaxle and Front Drive Axle Diagnosis and Repair. Hand in to the instructor at the beginning of lecture class the answers to the ASE questions in the textbook at the end of the chapter. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.
- Week 13: Chapter 74: Tire, Wheel, and Wheel Bearing Fundamentals. Hand in to the instructor at the beginning of lecture class the answers to the ASE questions in the

textbook at the end of the chapter. Workbook Pages will be completed in class and evaluated at the end of the Saturday session.

Week 14: Review in Lecture Class What We Have Learned. Work in the Lab.

Week 15: Chapter 10: Career Success. Hand in to the instructor at the beginning of lecture class the answers to the ASE questions in the textbook at the end of the chapter. Work in the lab.

Week 16: Review in Lecture Class All Chapters in preparation for final test. Work in Lab. Last week to complete and hand in any missing class or lab assignments.

Week 17: Review in Lecture Class All Chapters in preparation for final test. Take Final Test the last hour of the class.