

OGLALA LAKOTA COLLEGE
COURSE SYLLABUS & ADMINISTRATION
Spring 2014
Rebuilding the Lakota Nation through Education
Wounspe Ihuniyan Hci Lakota Oyate Kin Akta Ic'icakagapi Kte lo

Name of Course:	Brake Systems	Course Number:	Auto 102
Department:	Vocational Education	Credit Hours:	12 cr. hrs
Location:	Auto Shop, Kyle, SD	Time & Day:	Tuesday – Friday, 9 -4
Instructor's Name:	Joe Kirk and/or Stan Janis	Email:	jkirk@olc.edu
Phones:		Mobile:	(308) 360-9163
Office:	(605) 455-1079	Office Hours:	10:30 am – 4 pm

Course Goal: Student will be able to use a drum/disc brake trainer, which will be a two wheel model. This trainer will be part of a brake system program to present the live operation and study hydraulic brake systems. A Delco/Bosh ABS/TCS system trainer will used to present “real world” operation and study of antilock brake/traction control systems. The program will provide courseware for use by the student. The trainers are actual models of new and “recycled” vehicle components. The courseware includes a student manual and worksheets.

Course Objectives:

Student will be able to perform:

- General brake system diagnosis.
- Hydraulic system diagnosis and repair
- Disc and drum brake diagnosis and repair
- Power assist units diagnosis and repair
- Miscellaneous (wheel bearing, parking brake and electrical) diagnosis and repair
- Required NATEF (National Automotive Technicians Education Foundation) tasks to provide a unit of measure and competence of brake system operation and service

Prerequisites:

- 093 English
- 093 Math
- Basic computer skills
- GED or High School Diploma
- Or instructor permission

Required Text and Materials:

- ATech manuals
- Modern Automotive Technology 7th Edition

Homework: Each student should expect to spend two (numpa) to three (yamni) hours out of class on reading and homework assignments each week, for every hour of class time (each credit hour), in order to perform satisfactorily. However, every student differs in their individual skills, educational background, experience, capability and personal goals; so the amount of time you must dedicate to out of class work can vary significantly from this national average.

Reading Load: Reading will include approximately one (wanji) to two (numpa) chapters per week, plus handouts and homework as assigned.

Type & Amount of Writing Load: Moderate writing is required. Homework may consist of mathematical computations in reference to automotive service. In addition, there will be exams, class exercises/quizzes that may include essay-type questions.

Lakota Perspective Provided Through:

Conducting this course based on the values of mutual respect and generosity, seeking to advance each individual's knowledge through their continuing hard work (fortitude) and willingness to learn new information and viewpoints, as well as to demonstrate it, by speaking in front of the group (bravery); all undertaken in an environment of complete truthfulness, trust and integrity. Waunspe wicakiyapi ki iglutanyan ihani unpi kun hena itan waunspe tokeca uha ayin kte. We will do this by embracing the teaching of our ancestors as we learn new ways.

Evaluation and Grading:

You will be assessed on the amount of knowledge you gain about ASDFG, and your ability to apply the concepts to various problems and scenarios (competency); as assessed through homework assignments, in-class exercises, quizzes and examinations. The minimum "core knowledge" you should gain is outlined and bulleted at the beginning of each chapter, under "Chapter Objectives"; you should also understand all the information discussed under "Important Terms" and "Discussion and Review Questions." Your overall grade will be derived from these assessment instruments and weighed as follows:

Homework: will assigned from Automotive brake systems 5th edition class room manual and ATech software.

Chapter Tests, Quizzes and Problems

- Students will be tested using ATech brake system trainers and software plus Automotive brake systems 5th edition shop manual.

A = Superior Quality Work = Demonstrated concept mastery by scoring 90% or better.

B = Good Quality Work = Demonstrated concept mastery by scoring 80-89%.

C = Satisfactory Quality Work = Demonstrated concept mastery by scoring 70-79%.

D = Marginal Quality Work = Demonstrated weak concept mastery by scoring 60-69%

F = Demonstrated concept mastery below the acceptable mark of 59%, which is well below what may be required in the business world.

I = Incomplete Work = A student may receive an incomplete grade only if it has been discussed with the instructor and the instructor deems this as justifiable. If this decision is reached, then the student must fill out an application form, which you may ask for, from the counselor or director at the college center. (See Student Handbook)

W = Withdrawal = A student may withdraw from a course by filling out a Drop Card to be recorded by the Registrar. The student must sign this form if you drop yourself. A Drop Card may/can be filled out and signed by a counselor/instructor for lack of attendance.

Homework has a designated due date. Late homework will lose points when accepted after its due date. If you will be absent make arrangements to get the homework assignment prior to your absence so that it may be turned in on time. In the situation of an emergency you will have two days after the due date to get the assignment turned over to the instructor. **THERE WILL BE NO EXCEPTIONS TO THIS RULE.**

Course Requirements, Expectations of Students:

Student initiated withdrawals are per OLC policy. [Remember, because OLC offers classes in three-hour blocks once per week, (for everyone's travel convenience), if you are absent from one OLC class session, it's like missing three classes at another college.] (See student handbook) If you must be absent, due to emergency, you are responsible to notify the instructor and/or the College Center Administrative Offices in advance (if possible). If you must leave during a class session, please do so quietly and unobtrusively. You remain responsible for all material presented in any class, or portion of class you miss.

1. Unannounced quizzes and graded in-class exercises will be given; content can include any course material assigned, up to and including the current session.
2. Your homework assignments must be turned in on the dates due to get full credit.
3. You are expected to participate in class discussion; this provides evidence of your interest in, and preparation for the class. It also helps gauge the effectiveness of the instruction and everyone's level of comprehension of the material presented. Most importantly, fellow class members benefit from your opinions and insights; in addition, the questions you ask may be about the same topic with which other students are having difficulty, so by helping yourself you also help them.

Attendance

1. Students are required to attend classes regularly. Instructors will submit attendance on-line, weekly, throughout the semester.
2. If a student wishes to be excused from a class, it is the student's responsibility to clear the absence with the instructor. At that time the student must arrange for a make-up assignment. However, an excused absence is the same as an absence until the student has completed work equivalent to being in class. Once the make up assignment is completed, the instructor will then change the absent to present.
3. A student may be dropped from a course after three consecutive absences and will be dropped by the Registrar after five total absences.
4. **There are NO reinstatements and No exceptions for students who are dropped for five absences.**

Tardiness

1. In formulating this policy it is understood that unique problems exist for both students and faculty due to the decentralized nature of OLC. Since classes meet only once per week, it is important that they be held – even if they begin late.
2. Generally speaking, if an instructor is going to be late getting to a college center for a class, the center staff should always be notified.
3. A student shall be considered tardy for class, if he/she arrives late for class, but during the first hour of the class. A student arriving later than this may be marked absent. This policy will not interfere with the instructor's prerogative to grade for class participation.
4. If an instructor is late for a class, students must wait for one-half hour. After this time, the class will be considered cancelled for that week and must be made up.
5. In the event that no students appear for class at the scheduled starting time, the instructor should wait at least one-half hour before deciding to cancel the class.
6. All missed classes must be made up.

Suggestions to the Student:

Please read the specific chapter(s) of text and other supplemental materials assigned, and complete all homework before each class. If you have trouble with any assignment, or have questions on concepts or terminology, be sure to make a note of them during the week as you study. With these notes, you will be able to recall any specific problem area, so we can discuss and clarify it during class; or, if desired, privately during my Office Hours. If you have a disability that interferes with your ability to learn please contact the OLC Coordinator of Support services at 455-6040.

If you begin to have problems with course work, do not allow them to accumulate. See a College Center Counselor, contact Student Services for the help of a Tutor and/or see me right away (during class breaks or Office Hours.) Feel free to call me at my office or home. Resolve issues before they become serious or your progress in class begins to fall behind the other students. Delays and procrastination in addressing problems can only make them worse and your full recovery from them more difficult. Tutors may be available, who can coach you and provide much more personalized help learning the subject matter; but to be effective, you must get help early – don't wait until the last few weeks of the semester.

If you must miss a class, turn in your homework to the Applied Science Department Administrative Assistant before the class session you will miss. Upon return to class find out from me, or other students, exactly what was covered in the session missed, and arrange to make-up any assigned work (outside normal class time). Usually classes will only be canceled due to extremely bad weather; check with the Applied Science Department or College Center Office an hour or two before the scheduled start time, if there is a question.

You will be treated with respect, as an adult and the individual you are, at all times; however, this also means that you have the ultimate responsibility for the quality of your education and for the degree of your own success. I will make every effort to present course material in an interesting and relevant manner. I request your assistance, and feedback, if you observe things in my presentation style or the class' format, which I can change, that will make learning the subject matter easier for a majority of class members.

Policies on Academic Honesty:

This course is designed to provide you with the greatest opportunities to learn. Part of this learning process includes the review comments, articles, and the integration of the work of others with your thoughts and ideas. In this process, there is no room for plagiarism, which robs you of meaningful learning and is unfair to the original author.

Plagiarism is an ethical violation that is not tolerated at Oglala Lakota College. OLC faculty and staff are fully aware of the many online resources that are now available, and we encourage you to focus on learning rather than the inappropriate use (copying) of another person's work without proper citation. You are responsible for understanding plagiarism. Please refer to the OLC Catalogue.

AOD Policy:

It is the policy of Oglala Lakota College to be an Alcohol and Other Drugs-free environment; which applies to all faculty, staff and students. As a community dedicated to improving the skills and abilities of all Lakota and related peoples, we believe that an individual's impairment from use of alcohol, or other drugs, defeats their ability to learn and also may threaten the achievement and safety of others; thus has no place on the campus, and will not be tolerated. However, if you have an alcohol or drug problem, help is available to you free of charge through OLC's Student Assistance Program (SAP). For confidential help contact the SAP Coordinator, call 605-455-6034.

Disclaimer:

Information contained in this syllabus was, to the best knowledge of the instructor, considered correct and complete when distributed for use at the beginning of the semester. However, this syllabus should not be considered a contract between Oglala Lakota College and any student. The instructor reserves the right to make changes in course content or instructional techniques without notice or obligation. Students will be informed of any such changes. Additional student rights and responsibilities are outlined in the Student Handbook.

Week 1:

Introduction, go over syllabus, explain grading system and policies

Week 2:

Fundamental principles of brake systems

Week 3:

Brake system diagnosis, trouble shooting various brake system problems

Lab: (students will do hands on testing of brake system component inspections)

Week 4:

Brake diagnosis procedures

Lab: (students will do hands on testing of brake systems)

Week 5:

Hydraulic system components, handling of brake fluid

Lab: (students will perform hands on hydraulic system component disassembly and reassembly)

Week 6:

Bleeding brake systems

Lab: (students will perform brake bleeding techniques)

Week 7:

Servicing the master cylinder, servicing hydraulic brake plumbing, brake switches and valves

Lab: (students will service master cylinders, wheel cylinders and repair brake lines)

Midterm review

Mid term exam

Week 8:

Drum brake operating principles, diagnosis and inspection, drum brake service and machining

Lab: (students will machine and measure brake drums)

Week 9:

Disc brake systems and operating principles, inspect and diagnose disc brake systems, service disc brake systems and rotors

Week 10:

Power assisted brake systems, operating principles, diagnosing and service of power assist units

Lab: (students will test power assist units)

Week 11:

Diagnose and adjust wheel bearings

Parking brake adjustment and repair

Lab: (students will service wheel bearings and practice adjustment procedures)

Week 12:

Brake electrical system service and adjustment

Lab (students will test brake electrical circuits)

Week 13:

Antilock brake systems, traction control systems diagnosis and service

Lab: (students will test antilock and traction control systems)

Week 14:

Overview brake systems

Lab (students will review hands on training and complete NATEF task list)

Week 15:

Review (class room)

Lab: (students will review hands on and complete NATEF task list)

Final exam