

**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:** Engine Performance

**Course Number:** Auto 201

**Department:** Applied Science Department

**Credit Hours:** 12

**Location:** Automotive Education Building, Kyle SD

**Time & Day:** Tues.-Fri. 9:00 - 4:00

**Instructor's Name:** Joseph Kirk

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**Office Hours:** 8:30 – 4:00

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**Course Description (Waunspe Oyakapi):**

**Prerequisites:** Auto 101 Electrical/Electronics

- Occupational Math or a 100 level math course
- Computer Basics or a 100 level computer course
- Ethics in the Workplace

GED or High school Diploma

- **Required Text and Materials:** .ATech curriculum with NATEF (National Automotive Technicians Education Foundation) task coverage
- Computer Base Instruction
- Automotive Trainers using Newer Model “Recycled” Vehicles providing more hands on training
- Actual Shop Time using the latest Tools and Equipment (Snap on), Training Boards with actual automotive present day parts circuits.

**Course Goal:** Students will learn how to use training boards to perform troubleshooting, engine control fundamentals, engine control diagnostic fundamentals, engine control system troubleshooting, and injector/ fuel pump systems. Mastery in each area

**Learning Objectives (Wounspe Taku Unspepi Kte Kin He Le E):** Student will be able to perform:

- Fuel system pressure test
- Fuel injector function test
- Basic ignition spark test
- Engine compression test
- PCM (Power train control Module) pinpoint test, use a scanner to retrieve codes and diagnostic code problems causing check engine light activation.
- Explain engine operation and test procedures

**Assessment:** NATEF Priority Items Task List, Skills Assessment rubric and Grades

Demonstrates ability to diagnose and repair (cause, concern and correction) engine performance and drivability problems. Has a sound understanding of automotive operating systems and theory of operation for:

- Ignition systems
- Fuel systems
- Emission systems
- Exhaust systems
- Computer controlled systems

Engine Performance	Mastered	Satisfactory	Can Perform with Supervision	Basic Understanding	Unsatisfactory	Score
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**Homework:** Each student should expect to spend two (nunpa) 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. Therefore, if a course is three (yamni) credit hours you should spend approximately six (sakpe) hours outside of the course room on required readings and homework. 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 (nunpa) chapters per week, plus handouts and homework as assigned.

**Type & Amount of Writing Load:** Writing will include note taking as well as written homework each week.

**Lakota Perspective Provided Through:** This course stresses **Wolakotakiciapi** of “learning Lakota ways of life in the community”. This course is based on the values of mutual respect and generosity (woohola na wochantognakapi), seeking to advance each individual’s knowledge through their continuing hard work (fortitude- wowalitake) and willingness to learn new information and viewpoints, as well as to demonstrate it, by speaking in front of the group (bravery-woohitike); all undertaken in an environment of complete truthfulness, trust, integrity and humility. We will do this by embracing the teaching of our ancestors as we learn new ways. (Waunspe wicakiyapi ki iglutanyan ihani unpi kun hena itan waunspe tokeca uha ayin kte.)

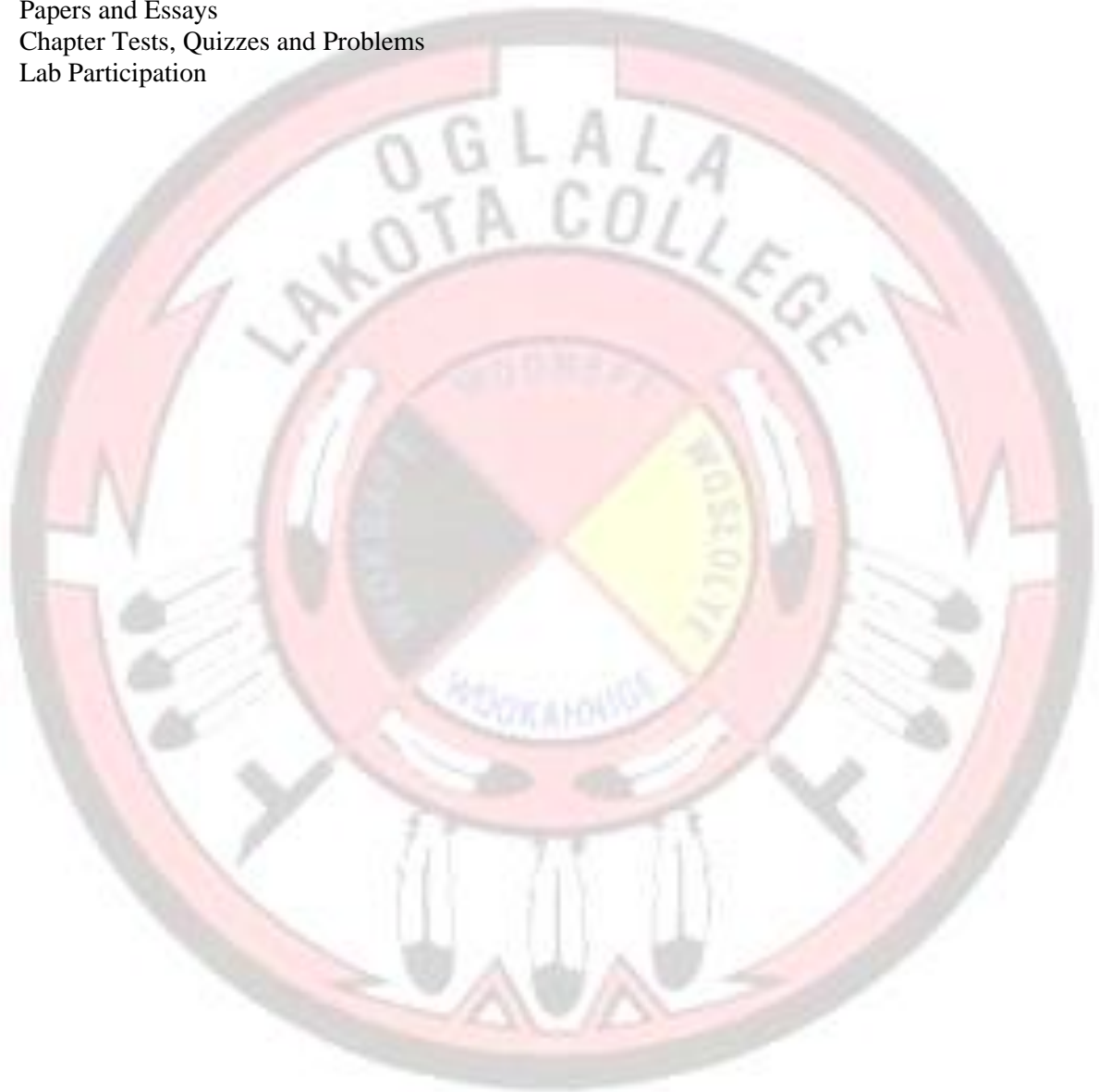
**Evaluation and Grading:** You will be assessed on the amount of knowledge you gain about ASDFG, and your ability to apply the concepts to various problems and scenarios (competency); as assessed through homework assignments, in-class exercises, quizzes and examinations. The minimum “core knowledge” 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:

Papers and Essays

Chapter Tests, Quizzes and Problems

Lab Participation



**Engine Performance Auto 201 Grade and Lab Task List**

P-1	Auto Lab	39
P-2	Auto Lab	16
P-3	Auto Lab	11
Auto Lab	Total Pts. 66 X 10 Pts = 660 Pts	

<b>NATEF Priority Item Totals</b>				
NATEF Priority Item	NATEF Required Priority Item Percentage	Total Priority Items in Engine Repair NATEF Task List	Number of Priority Items Covered in Curriculum	Percentage of Priority Items Covered
P-1	95%	39	39	100%
P-2	80%	16	16	100%
P-3	50%	11	11	100%

<u>Chapter Tests</u>	20 X 20 Pts	400
<u>Attendance</u>	2 Pts per Day x 60 days	120
Points Per Day		
<u>Professionalism</u>	2 Pts per Day X 60 days	120
Proper attire, Hygiene and Professional Language (No Cursing)		
<u>Shop Cleanliness and Safety</u>		75
Clean up work area, Proper tool usage and storage		
<u>Home Work</u>		300
<u>Midterm Test</u>		200
<u>Final Test</u>		200
<b>Semester Total possible :</b>		<b>2075</b>

2075 - 1850	A
1849 - 1624	B
1623 - 1399	C
1398 - 1173	D
1172 - below	F

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.

### **College Policy on Grading and Change of Grades:**

[http://www.olc.edu/~wwhitedress/student-services/Docs/OLC\\_Handbook.pdf](http://www.olc.edu/~wwhitedress/student-services/Docs/OLC_Handbook.pdf) see page 9 and 10

**Course Requirements, Expectations or Students:** 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).

- Unannounced quizzes and graded in-class exercises will be given; content can include any course material assigned, up to and including the current session.
- Your homework assignments must be turned in on the dates due to get full credit.
- 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.
- If the Instructor is not present at the beginning of the class, and the College Center Staff has not heard from the Instructor, you should wait at least 30 minutes past the normal start-time and then if the Instructor has still not arrived, you may leave.

### **Attendance and Tardiness**

[http://www.olc.edu/~wwhitedress/student-services/Docs/OLC\\_Handbook.pdf](http://www.olc.edu/~wwhitedress/student-services/Docs/OLC_Handbook.pdf) see page 8

### **Policies on Academic Honesty**

[http://www.olc.edu/~wwhitedress/student-services/Docs/OLC\\_Handbook.pdf](http://www.olc.edu/~wwhitedress/student-services/Docs/OLC_Handbook.pdf) see page 43

### **Standards of Conduct Policy**

[http://www.olc.edu/~wwhitedress/student-services/Docs/OLC\\_Handbook.pdf](http://www.olc.edu/~wwhitedress/student-services/Docs/OLC_Handbook.pdf) see page 38

### **ADA Policy**

[http://www.olc.edu/~wwhitedress/student-services/Docs/OLC\\_Handbook.pdf](http://www.olc.edu/~wwhitedress/student-services/Docs/OLC_Handbook.pdf) see page 37

### **Electronic Information Resources Acceptable Use Guidelines**

[http://www.olc.edu/~wwhitedress/student-services/Docs/OLC\\_Handbook.pdf](http://www.olc.edu/~wwhitedress/student-services/Docs/OLC_Handbook.pdf) see page 41

### **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 cell number. 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.

### TOPICAL CONTENT

Week 1	Introduction to basic engine performance using scanners, volt/ohm meters to use in troubleshooting modules and there use in a vehicle, performed in class room, lab and shop.	
Week 2	Use of compression tester to check valve train components for any problems with valves, valves springs. Cam lifters push rods and pistons.	
Week 3	Check Ignition system for faults how to find faults in a COP (coil on plug ) ignition system, how to change spark plugs ,check spark plug wear and condition .perform in class and lab.	
Week 4	Introduction to fuel systems and fuel specifications - class room and lab.	
Week 5	Perform preliminary engine diagnosis- class and lab.	
Week 6	Perform engine diagnosis test - class room and lab.	
Week 7	Perform computerized engine control diagnosis and repair – lab -midterm	
Week 8	Overview fuel supply systems – class room.	
Week 9	Test and service fuel supply systems - lab	
Week 10	Overview electronic fuel injection systems - classroom.	
Week 11	Diagnosis and service electronic fuel systems - lab.	
Week 12	Engine performance: fuel and exhaust systems - Class and lab.	
Week 13	Overview turbochargers and super chargers - class room.	
Week 14	Exhaust systems diagnosis and exhaust systems lab and class room.	

Week15	Engine related services class in lab. - Final	
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**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. [http://www.olc.edu/~wwhitedress/studentservices/Docs/OLC\\_Handbook.pdf](http://www.olc.edu/~wwhitedress/studentservices/Docs/OLC_Handbook.pdf)

