

DIXIE STATE COLLEGE
Automotive Basic Maintenance AUTO 1500
Spring 2009

PRE-REQUISITES: None

CREDIT HOURS: Two Credits

INSTRUCTOR: Bill Schouten Office: TE 109 Phone: 652-7859

CLASS SCHEDULE: Two and one half hours per week

TEXT: The Car Care Book, 3rd edition by Ron Haefner.
(students may "borrow" a text, deposit required and return it at end of the semester)

COURSE DESCRIPTION:

This course is designed for the student who has limited automotive technical knowledge and wants to learn more. The student will develop skills in vehicle maintenance, care in appearance, selecting a competent mechanic, auto insurance, buying a new or used car and driving tips. Guest speakers will join us on occasion. Your vehicle owner's manual will be used extensively in this class. Some elementary lab / shop work is required.

REQUIRED MATERIALS:

Vehicle Owners Manual for your car.

SAFETY REQUIREMENTS:

Students must complete safety training before live work. All lab demonstrations comply with OSHA and EPA safety standards. Students are required to read and obey safety rules posted in the shop.

ATTENDANCE & GRADING:

This is a performance based class. Student must be in attendance to perform, and grades are in direct relation to standards of performance. Grades will be based on the following:

Grading:	Attendance	280 points
	Mid Term	400 points
	<u>Final</u>	<u>400 points</u>
	Total	1080 points

AUTO 1500 Basic Auto Maintenance. Spring - 09
Time lines, due dates, subject matter etc.

<u>Week of:</u>	<u>Chapters</u>	<u>Lab sheets, tests etc.</u>
Jan 5	Orientation	Intro, assign books, etc.
Jan 12	1, 2	
Jan 19	Holiday	
Jan 26	3, engine	
Feb 2	4, fuel systems	
Feb 9	5, electrical systems	Perform lab sheets in shop.
Feb 16	Holiday	
Feb 23	6, lube & cooling	Take home practice mid term.
Mar 2	Mid-term.	Ch. 1, 2, 3, 4, 5, 6
Mar 9	7, drive train	
Mar 16	Spring break all week.	
Mar 23	8, tires & brakes	Perform lab sheets in shop.
Mar 30	We will do lab sheet for tires and change a spare tire.	
April 6	9, susp. & steering	
April 13	10, heating & A.C.	Lab sheets in shop
April 20	11, maint. programs.	Take-home practice final exam.
April 27	Review for final exam on chapters 7, 8, 9, 10, 11, 12	
May 27	Final exam week.	Final on chapters 7, 8, 9, 10, 11, 12

AUTO 1500 Text Book: “THE CAR CARE BOOK” by Ron Haefner
3rd edition. Thompson – Delmar Learning

Read the following chapters and answer the review questions at the end of each chapter.

1. What makes the wheels go?
This chapter deals with a brief overview of all the automobile systems, how they fit together etc. A brief discussion of horsepower and torque are included.
2. Tooling up.
This chapter deals with some basic information about safety, vehicle inspection, basic tools and supplies etc. It also goes into basic under car and under hood inspection and light maintenance.
3. The engine.
An overview of the engine is covered here. The 4 stroke cycle engine is discussed in some detail to assure understanding. Routine maintenance and common engine problems are covered.
4. Fuel system.
Basic overview covered followed by more detail on the basic fuel system parts like the filters, delivery, emissions, maintenance and problems. A small section is devoted to the diesel engine fuel system operation.
5. Electrical system.
Brief overview followed by more details on the battery and safety, starting, charging, ignition, lights and accessories etc. We also discuss basic electrical problems.
6. Lubrication and cooling.
Overview followed by more detail on safety. We discuss lube and cooling functions and discuss oil qualities and characteristics. We cover the need for antifreeze and discuss temperature / pressure relationships as altitude and pressure caps pertain to the system.
7. Drive train.
Manual trans / axle and clutch. Automatic trans / axle and torque converter.
Two wheel drive, four wheel drive, all wheel drive, front drive, rear drive etc.
8. Tires and brakes
Discuss tires, construction, and sizing. Emphasize the necessity of proper inflation and the hazards of running tires at incorrect pressures. We discuss drum and disc brakes, their differences, advantages etc.
9. Suspension and steering.
We talk about the various systems, alignment angles, power steering etc.
10. HVAC.
Cover heating system fundamentals. Discuss A.C. fundamentals and talk about maintenance.
11. Maintenance programs.
Discuss the importance of implementing and follow-through of a good maintenance program.

(contd.)

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
12. A look at repairs.
Determine if you should attempt the repair yourself or take it to a car care professional.
13. Fix the car or dump it.
Determine if the car has reached it's "point of no return" and it's time to sell it.
14. Buying tips for parts, service and insurance.
15. Buying a new car.
16. Leasing a car as opposed to buying. Pros, cons.

DIXIE STATE COLLEGE

2008-2009 ACADEMIC CALENDAR

S	Start of Class	CD	Career Day	<i>Note: Faculty & Staff Workshops take place August 17th thru August 22, 2008.</i>
L	Last Day of Class	R	Reading Day	
H	Holiday	F	Final Exams	
SB	Semester Break*	SB	Spring Break	
B	Block Classes Begin	G	Graduation	

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August	24	25	S	27	28	29	30	January	4	S	6	7	8	9	10
September	31		2	3	4	5	6		11	12	13	14	15	16	17
	7	8	9	10	11	12	13		18	H	20	21	22	23	24
	14	15	16	17	18	19	20		25	26	27	28	29	30	31
	21	22	23	24	25	26	27	February	1	2	3	4	5	6	7
October	28	29	30	1	2	3	4		8	9	10	11	12	13	14
	5	B	7	8	9	10	11		15	H	B	18	19	20	21
	12	13	14	15			18		22	23	24	25	26	27	28
	19	20	21	22	23	24	25	March	1	2	3	4	5	6	7
	26	27	28	29	30	31	1		8	9	10	11	12	13	14
November	2	3	4	5	6	7	8		15	SB	SB	SB	SB	SB	21
	9	10	11	12	13	14	15		22	23	24	25	26	27	28
	16	17		19	20	21	22	April	29	30	31	1	2	3	4
	23	24	25				29		5	6	7	8	9	10	11
December	30	1	2	3	4	5	6		12	13	14	15	16	17	18
	7	8	9	10	11	L	13		19	20	21	22	L	F	25
	14	F	F	F	F	F	20	May	26	F	F	F	F	G	2

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