



DEPARTMENT OF MOTORCYCLE AND RECREATIONAL POWERSPORTS

COURSE OUTLINE – WINTER, SEMESTER 2

SM 200 ATV Theory

INSTRUCTOR:	Les Ashton	PHONE:	780.835.6687
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OFFICE:	FM6 111	E-MAIL:	LAshton@GPRC.ab.ca
	FM6 111		TRyerson@GPRC.ab.ca
	FM6 111		MGamble@GPRC.ab.ca
OFFICE HOURS:	Monday through Friday. 9:00 a.m. – 5:00 p.m.		

PREREQUISITE(S)/COREQUISITE: None.

REQUIRED TEXT/RESOURCE MATERIALS:

Textbooks:

Motorcycle Fundamentals	Goodheart-Willcox ISBN -13: 978-1-56637-479-8
Motorcycle Electrical Systems	Tracy Martin
Bombardier Recreational Product's Guide to Service Fundamentals and Principles <i>Note: Used in SM 150, 200, 250</i>	Bombardier

Optional Textbooks:

All Terrain Vehicle (ATV) Maintenance Manual – 2 nd Edition	Intertec
Four Stroke Performance Tuning	A. Graham Bell

Other Required Supplies:

- 3-ring binder
- loose leaf paper
- good eraser
- pencils
- calculator (basic)
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CALENDAR DESCRIPTION: This course covers the ATV from top to bottom. Topics will include; engine inspection and overhaul, ATV carburetion, EFI systems, manual and automatic clutches, transmissions, drive systems, ATV steering and suspension types, ATV braking systems, and ATV electrical circuits function and diagnostic procedures.

Delivery Option – Fairview Campus Only

CREDIT/CONTACT HOURS: 4.5 credits; 10 hours per week; 8 weeks; 80 hours.

DELIVERY MODE(S): Instructor led classroom theory.

OBJECTIVES: The Outdoor Power Equipment Technician program has been developed to provide students with entry level skills in the ATV equipment technologies.

TRANSFERABILITY: None.

GRADING CRITERIA: Students must complete all required courses with a grade point of 2.0 or higher; a percentage of 63% or higher; a “C” letter grade or higher, and no failing grades. A student must pass each course individually in order to receive a Certificate of Achievement in Pre-Employment Outdoor Power Equipment Technician. Absence for tests will result in a score of zero.

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	4-point Equivalent	Percentage Guidelines	Designation
A+	4.0	90 – 100	EXCELLENT
A	4.0	85 – 89	
A-	3.7	80 – 84	
B+	3.3	77 – 79	FIRST CLASS STANDING
B	3.0	73 – 76	
B-	2.7	70 – 72	
C+	2.3	67 – 69	SATISFACTORY
C	2.0	63 – 66	
F	0.0	60 – 62	
F	0.0	55 – 59	FAIL
F	0.0	50 – 54	
F	0.0	0 – 49	
WF	0.0	0	
			FAIL, withdrawal after deadline

EVALUATIONS:

Areas of Evaluation	Percentage of Total Course Mark
Final Exam	40%
Unit Tests	60%

STUDENT RESPONSIBILITIES:

Please refer to the Student Rights and Responsibilities policy in the Grande Prairie Regional College Calendar or at

www.gprc.ab.ca/downloads/documents/StudentRightsandResponsibilities.pdf.

ATTENDANCE REQUIREMENTS:

In addition, attendance will be graded as follows:

- Unavoidable absences should be relayed to the instructor prior to or immediately after the day in concern. If the instructors know the situation, it is easier to be compassionate to individual needs. If you are unable to contact the instructor, a message left at the Mech. 6 Tool Room will alert us to unexpected absences (780.835.6744).
- Note: Attendance is monitored for both shop and theory.
- Student attendance is recorded by the hour.
- If a student is late by 15 minutes = one hour missed.
- Students who are chronically late must meet with the Instructor or the Chair of the program.
- Chronic lateness will not be permitted.
- If six hours are missed the student must meet with the Instructor. A written and signed record of the meeting will be completed. A copy will be given to the student and the instructor will place a copy on the student's file.
- If 12 hours are missed the student must meet with the Chair of the program. A written and signed record of the meeting will be completed. A copy will be given to the student, the instructor and the Chair.
- If 18 hours are missed the student must meet with the Chair of the program again. Disciplinary action will be taken. Such disciplinary action may include, but is not limited to, a penalty assessed to the student's marks, placed on probation, or termination from the program.
- Absence for tests will result in a score of zero.

STATEMENT ON PLAGIARISM AND CHEATING:

Please refer to

www.gprc.ab.ca/downloads/documents/Student%20Misconduct%20Plagiarism%20and%20Cheating.pdf regarding plagiarism, cheating and the resultant penalties. These are serious issues and will be dealt with severely.

COURSE SCHEDULE/TENTATIVE TIMELINE:

- Week 1 ATV safety, PDI, set-up. ATV wheels and tires design, trailer tires, tire repair and products, introduction to parts and accessory catalogues and parts acquisition systems, model identification.
- Week 2 Brake inspection and service on mechanical and hydraulic types. Hydraulic principles, safety, interlocks, chassis, steering inspection and adjustment. Trailer electric brakes installation and service.
- Week 3 4 stroke tune up, carburetion, EFI operation and trouble shoot, top end overhaul, aftermarket performance accessories, chassis dynamometer use.
- Week 4 Bottom end overhaul, transmissions theory of operation and gear ratios calculation. Clutches, PVT, kick starters, and oil cooling systems.
- Week 5 Basic electrical review, ignition systems, CDI, TCI. Spark plug construction and operating characteristics, lighting and accessories circuits.
- Week 6 Suspensions and shaft drive including springs, shocks, swing arms, universal and CV joints. Differentials theory.
- Week 7 Electric starter circuits including interlocks and relays. Battery testing and servicing. Charging systems components and theory.
- Week 8 Chain drive roller chain identification and servicing. Review.