



Grande Prairie Regional College
Department: Academic Upgrading

COURSE OUTLINE—Fall 2008

Science 100 5(5-0-0) Science and Society

Instructor's name: William Shaw Phone number: 539-2713

Instructor's office: C207 Email: bshaw@gprc.ab.ca

Office Hours: 2:30 pm – 3:30pm Mon/Wed, or by appointment

Meeting Hours: Monday – Friday 9:00 am – 9:50 am Room: A209

Calendar Description:

SC 0100 Science and Society 5 (5-0-0) HS Time: 75 Hours

Description: This course is meant to increase the pre-high school student's understanding of connections between science, technology and society. You will be introduced to basic ideas about science, technology, biology, chemistry, physics, ecology, scientific method, along with related social issues.

Corequisites: EN 0090 and MA 0090 or consent of instructor.

Resource requirements:

No recommended textbook. Unit Tests will be based on class notes and activities.

Attendance:

Regular attendance is expected of all students. Success in education has been shown to be directly linked to attendance. Attendance will be taken during class. Any student **missing more than 15 classes may be debarred from writing the final exam**. Lateness is highly disruptive to a class. Please be considerate.

Assignments, Unit Tests:

All assignments and unit tests **MUST** be completed on time. A missed unit test will result in a score of zero unless **PRIOR arrangements** have been made with the Instructor for valid reasons to write the unit test at some other time. All assignments **MUST** be handed by the deadline.

Course Delivery and Evaluation:

This course is a lecture course which requires student participation. The course content is divided into 4 units. The course is evaluated as follows:

| | |
|------------------------|-----|
| Unit 1 - Earth Science | 25% |
| Unit 2 - Physics | 25% |
| Unit 3 - Chemistry | 25% |
| Unit 4 - Biology | 25% |

Final grades are given as follows:

| Alpha Grade | 4-Point Equivalent | Percentage Guidelines | <i>Designation</i> |
|--------------------|---------------------------|------------------------------|---------------------------|
| A+ | 4.0 | 90 - 100 | Excellent |
| A | 4.0 | 85 - 89 | |
| A- | 3.7 | 80 - 84 | First Class Standing |
| B+ | 3.3 | 76 - 79 | |
| B | 3.0 | 73 - 75 | Good |
| B- | 2.7 | 70 - 72 | |
| C+ | 2.3 | 67 - 69 | Satisfactory |
| C | 2.0 | 64 - 66 | |
| C- | 1.7 | 60 - 63 | |
| D+ | 1.3 | 55 - 59 | Minimal Pass |
| D | 1.0 | 50 - 54 | |
| F | 0.0 | 0 - 49 | <i>Fail</i> |

| Unit / Appx Classes | Major Topics Covered |
|-------------------------------------|---|
| Unit 1: Earth Science 13 days | <ul style="list-style-type: none"> • Scientific Method • Models of the Universe • Geology • Plate Tectonics, Earthquakes and Volcanoes • Rocks, Minerals and Fossils • Water and The Water Cycle • Electromagnetic Spectrum |
| Unit 2: Physics 19 days | <ul style="list-style-type: none"> • Energy Forms • Law of Conservation of Energy • Thermal Energy • Electrical Energy • Distance, Displacement, Speed, Velocity, Acceleration, • Scalar, Vectors |
| Unit 3: Chemistry 15 days | <ul style="list-style-type: none"> • Classification of Matter • Mixtures and Solutions • Elements and The Periodic Table • Atomic Structure • Compounds and Reactions |
| Unit 4: Biology 18 days | <ul style="list-style-type: none"> • Plants and Plant Structures • Ecology • Food Chains and Webs • Human Impact on Ecosystems • Sexual and Asexual Reproduction • DNA, Human Genome Project • Mitosis, Meiosis • Biotechnology and Society |