Department: Science Course Title: Environmental Science Course #: 541

DESCRIPTION OF COURSE:

Grade 11, 12; 1 Credit; Prerequisite: Course 511

Students learn about ecosystem structure and function in terms of material and energy utilization and distribution. Students will learn about the natural mechanisms that ecosystems use to enable homeostasis, and they will investigate what happens when those mechanisms fail. Other topics will include animal and human population biology, problems and solutions associated with human population growth, inorganic and organic waste management, and pollution control. This course is not a litany of environmental woes! Rather the course focuses on understanding natural mechanisms, considering human impact on natural mechanisms, and seeking solutions to the problems caused by human impact on natural mechanisms. Achievement will be demonstrated through a wide variety of quizzes, tests, reports, and performance evaluations.

REQUIRED TOPICS OF STUDY	SUGGESTED INTRUCTIONAL TIME	STANDARDS/ ASSESSMENT ANCHORS
The Aim of Environmental Science	1 Week	4.3.12.C / 4.8.10.A
Ecosystems… Description, Function, Homeostasis, and Change	3 Weeks	4.6.10.A / 4.6.10.B / 4.6.12.A / 4.7.12.A
Population Dynamics	2 Weeks	4.6.10.A / 4.7.12.C / 4.8.10.D / 4.3.12.A / 4.6.12.C
Food Production and Distribution	3 Weeks	4.2.10.A / 4.4.10.A / 4.4.10.C / 4.4.10.D / 4.4.12.D / 4.5.10.B / 4.4.12.A
Critical Factors of the Soil System	1 Week	4.3.10.B / 4.4.10.B / 4.6.10.A / 4.6.12.A
Principles of Sustainability in Agriculture and Resource Use	4 Weeks	4.2.12.A / 4.4.10.B / 4.4.12.C / 4.2.10.A / 4.2.10.B / 4.2.10.C / 4.2.12.A / 4.2.12.B / 4.2.12.C
The Economics of Environmentalism	1 Week	4.2.12.B / 4.1.12.E / 4.4.12.C

INSTRUCTIONAL RESOURCES:

Internet resources are used extensively in Environmental Science. Most resources are presented through interactive lessons and web quests incorporated into a Moodle Learning Management System software installation.

Textbook: Environmental Science 8th Edition, Prentice Hall, Bernard J. Nebel / Richard T. Wright, 2002, ISBN: 0-13-032538-4