# **Natural Resource Management**

##### Course Syllabus, Fall 2018

###### I. Course Description

A course that provides an opportunity for students to increase awareness of the close ties among living organisms as well as natural and environmental concerns with the interrelationships of living organisms and the world around us. Students are exposed to careers related to natural resources systems. Students also look closely at Nebraska's natural resources and management techniques. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

###### II. Instructor Information

Mr. Philip Simpson

Phone: (308) 346-4150 at school, (308) 346-4225 at home

E-mail address: philip.simpson@burwellpublicschools.com

Best times to contact: 7:30-8:15 a.m. & 3:45-4:30 p.m.

###### III. Instructional Materials

**Texts:**

“Various Resources”

**Required Materials:** Each student needs to have a calculator, a one subject notebook, and a 3-ring folder for handouts.

###### IV. Course Outline

1. **Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.**
   1. AFNR.HS.3.1.c Identify proper use of tools utilized in measuring soil health.
   2. AFNR.HS.3.1.d Apply cartographic skills to natural resources.
   3. AFNR.HS.3.1.f Identify and classify common species of wildlife and fauna found in Nebraska.
   4. AFNR.HS.3.1.g Identify and classify common grasses, forbs, shrubs and trees found in Nebraska ecosystems
2. **Analyze the interrelationships between natural resources and humans.**
   1. AFNR.HS.3.2.a Summarize the impacts that modern agriculture has had on our natural resources.
   2. AFNR.HS.3.2.b Examine and summarize how social views and movements (carbon footprints, recycling, etc. have affected the need for environmental regulations.
   3. AFNR.HS.3.2.c Describe current programs in place to help with the conservation and sustainability of natural resources and explain their importance.
   4. AFNR.HS.3.2.d Recognize the role of local, state, and national agencies/organizations in the management of our local resources.
   5. AFNR.HS.3.2.e Associate farming methods with different environmental conditions.
   6. AFNR.HS.3.2.g Explain how technology has affected the use of our natural resources.
   7. AFNR.HS.3.2.h Examine natural resources and environmental careers.
   8. AFNR.HS.3.2.i Communicate thoughts and feelings with others regarding environmental and natural resources using verbal and nonverbal communication.
3. **Develop plans to ensure sustainable production and processing of natural resources.**
   1. AFNR.HS.3.3.a Identify the components that comprise ecosystems.
   2. AFNR.HS.3.3.b Explain the stages of water movement through the hydrologic cycle and how the parts of the system are managed.
   3. AFNR.HS.3.3.c Summarize the roles of watersheds.
   4. AFNR.HS.3.3.d Distinguish between chemical and physical properties of drinking water.
   5. AFNR.HS.3.3.e Examine the major causes of water pollution.
   6. AFNR.HS.3.3.f Outline the methods used to determine water quality.
   7. AFNR.HS.3.3.g Discover the economic value of the forestry industry.
   8. AFNR.HS.3.3.h Describe the soil formation process.
   9. AFNR.HS.3.3.i Explain the processes in the nitrogen cycle.
   10. AFNR.HS.3.3.j Discuss the role of food chains in maintaining balanced ecosystems.
   11. AFNR.HS.3.3.k Demonstrate how to determine soil types and how it affects land use.

1. **Demonstrate responsible management procedures and techniques to protect, maintain, enhance, and improve natural resources**
   1. AFNR.HS.3.4.a Compare and contrast alternative energy sources.
   2. AFNR.HS.3.4.b Identify the efforts being made to keep non-native species out of a local area.
   3. AFNR.HS.3.4.c Identify non-native and invasive species to Nebraska.
   4. AFNR.HS.3.4.d Calculate the financial cost of non-native species.
2. **Understand management techniques for Nebraska’s natural resources**
   1. AFNR.HS.3.5.a Develop an understanding of the impact and importance of Natural Resources to the people of Nebraska.
   2. AFNR.HS.3.5.b Distinguish between the different ecosystems found in Nebraska.

***V. Grading***

Student’s grades will be determined as follows:

100% --- Daily assignments, record books, projects, tests, quizzes, & presentation

***VI. Homework***

For each assignment I will announce if it is due at the beginning or end of the next class. (if you are in doubt, assume that it is at the *beginning* of class.) If you do not have your homework in on time, you automatically lose 25% of the points and have until the beginning of the next class meeting to turn it in. If it is not turned in at that time, you lose all credit for that assignment.

Some assignments are important enough to your success in this class that I believe you

must complete them and I will make arrangements with you to insure that you do.

If you miss class, we will follow the procedure in the student handbook. If it is lab

activity, you will be required to make up a related assignment since the lab or field trip

may not be reproducible.

***VII. Classroom Procedures***

Student expectations will be outlined in an expectation contract given to the students the

first week of school.

***VIII. Course Content***

FFA is a key component of Agricultural Education and students enrolled in agricultural education courses will spend a great deal of class time preparing for various FFA events. Examples - - Range Judging – Study Plants, Livestock Judging – Judge classes and give oral reasons, LSE’s – preparing and presenting public speeches/demonstrations, SAE’s - Students will work on record keeping and preparing applications