



Western Technical College

## 30090323 Soils Management

### Course Outcome Summary

#### Course Information

<b>Description</b>	Students in this class learn about the physical, chemical, nutrient and biological characteristics of soil. The way soil is formed and develops will be discussed as well as how wind and water erosion impact soil quality. Students will be able to evaluate the effect of fertilizers, herbicide, pesticides and fungicides on soil as well as assess the role of organic matter and microbes in the soil. Instruction is provided on how to take and understand soil testing procedures and reports. Students will receive instruction to implement fertilizer recommendations using cost versus benefit analysis. Included is instruction on the application of farm manures, chemicals and soil conservation practices. All classes in the Farm Business and Production management program include instruction on financial analysis and management of the farming operation.
<b>Career Cluster</b>	Agriculture, Food and Natural Resources
<b>Instructional Level</b>	Technical Diploma Courses
<b>Total Credits</b>	3
<b>Total Hours</b>	180

#### Textbooks

No textbook required.

#### Experiential Learning

1. Work Based Learning

#### Program Outcomes

1. Utilize agronomic resources for optimal farm production.
2. Evaluate livestock management plans.
3. Plan for operation and maintenance of farm facilities and equipment.
4. Create farm business plans.

5. Apply marketing principles to agricultural enterprises.

### **Course Competencies**

1. **Examine soil physical, chemical, nutrient and biological characteristics.**
2. **Explain the soil formation and development processes.**
3. **Analyze soil texture.**
4. **Interpret soil maps and surveys.**
5. **Assess the role of organic matter and microbes in the soil.**
6. **Develop a Land Use plan.**
7. **Evaluate wind and water erosion.**
8. **Evaluate the effect of fertilizers, herbicide, pesticides and fungicides on soil.**
9. **Plan soil conservation and nutrient management measures.**