# Principles of Technology 2 (II835) Curriculum Guide 9-12 Grades

**Prerequisite Course(s)**: Principles of Technology 1
**High School Credit** = ½ credit per semester (Postsecondary credit = 0)
**This course will be offered**: X every year OR ___ every other year
**Pathway (Optional)**: Technology Education
**Career Cluster Area**: Applied Academics
**Source of Occupational Skills Standards**: NCAA Academic Requirement Committee
**Eligibility for Nationally Recognized Skill Certificate(s)/State License:** X No OR ___ Yes, and identify Certificate:
**Tech Prep**: X No OR ___ Yes - If Yes, list postsecondary institution and number of postsecondary credits
**Is this course brokered through another institution or agency:** X No OR ___ Yes, and list institution/agency:

**Course Master Number**: II835
**Course Description**: This course is designed to present students with unifying concepts within modern mechanical, thermal, electrical, and fluid systems technologies.

**Content Headings/Topics:**

1. Force Transfers
2. Resistance
3. Energy
4. Power

# Principles of Technology 2 (II835) Curriculum Guide 9-12 Grades

| State Standard | Objective | Sequence and Duration | Sample Teaching Strategy/ Possible Integration | Resources and Text | Dist/ State Assessment | Formative Assessment |
|---|---|---|---|---|---|---|
| NCCAA2-6B1, 2 | 1. Describe linear and angular momentum (in general terms). | | R4.2 | | | Lab Assignments |
| NCCAA2-C1, 2 | 2. State the law of conservation of momentum as it affects linear or angular motion. | | R4.2 | | | Pre / Post Test |
| NCCAA2-6D1-2 | 3. List examples of how momentum affects mechanical and fluid systems. | | | | | Assignment |
| NCCAA16B1,2, 5 | 4. Describe wave motion in general. | | R4.2 | | | Pre / Post Test |
| NCCAA2-6 | 5. Describe how waves transmit (move) energy. | | R4.2 | | | Pre / Post Test |
| NCCAA2-6D1,2, 5, 6 | 6. Identify workplace applications where waves and vibrations are found. | | | | | Pre / Post Test |
| NCCAA2-6D1 | 7. Describe the purpose of an energy converter. | | R4.2 | | | Pre / Post Test |
| NCCAA2-6 | 8. Identify converters that change mechanical energy to fluid or electrical energy. | | | | | Pre / Post Test Lab Assignments |
| NCCAA2-6 | 9. Identify converters that change fluid, electrical, and thermal energy to mechanical energy. | | | | | Pre / Post Test Lab Assignments |
| NCCAA2-6 | 10. Describe what is meant by the efficiency of an energy converter. | | R4.2 | | | Presentation |
| NCCAA2-6 | 11. Distinguish between an energy converter and a transducer. | | R4.2 | | | Assignment |
| NCCAD1,2, 5-7 | 12. Research educational requirements for related jobs. **(B4)** | | W4.2 | | | Presentation |
| NCCAD1, 2, 5-7 | 13. Discuss work skills required for related jobs. **(B5)** | | | | | Class Participation |
| NCCAD1, 2, 5-7 | 14. List jobs/careers available in the field. **(B2)** | | W4.2 | | | Class Participation |