**Warren County School District**

**PLANNED INSTRUCTION**

**COURSE DESCRIPTION**

**Course Title:** Design and Modeling (PLTW STEM COURSE)

**Course Number:** 00755

**Course Prerequisites:** None

**Course Description:**

Design and Modeling provides students opportunities to apply the design process to creatively solve problems. Students are introduced to the unit problem in the first activity and are asked to make connections to the problem throughout the lessons in the unit. Students learn and utilize methods for communicating design ideas through sketches, solid materials, and mathematical models. Students will understand how models can be simulated to represent an authentic situation and generate data for further analysis and observations. Students work in teams to identify design requirements, research the topic, and engage stakeholders. Teams design a toy or game for a child with cerebral palsy, fabricate and test it, and make necessary modifications to optimize the design solution.

**Suggested Grade Level:**  6 – 8

|  |  |  |  |
| --- | --- | --- | --- |
| **Length of Course:** | One Semester | Two Semesters | Other (9 week course) |

**Units of Credit:** .25 Middle Level Credit(Insert ***None*** if appropriate)

**PDE *Certification and Staffing Policies and Guidelines* (CSPG) Required Teacher Certifications**:

CSPG 33, CSPG 50, CSPG 53, CSPG 65

**Certification verified by WCSD Human Resources Department**:  Yes  No

**TEXTBOOK AND SUPPLEMENTAL MATERIALS**

**Continue using Board approved textbook?** Yes  No (*If yes, then complete the information below.*)

**Board Approved Textbooks, Software, Supplemental Materials:**

**Title:** Project Lead the Way Durable and Consumable Resources

**Publisher:**

**ISBN #:**

**Copyright Date:**

**Date of WCSD Board Approval:**

**BOARD APPROVAL:**

**Date Written:** 8/28/2018

**Date Approved:** October 8, 2018; *March 11, 2019 Revised Credit*

**Implementation Date:** 2018-2019

**SPECIAL EDUCATION AND GIFTED REQUIREMENTS**

The teacher shall make appropriate modification to instruction and assessment based on a student’s Individual Education Plan (IEP) or Gifted Individual Education Plan (GIEP).

**COURSE OVERVIEW**

(*List the content to be taught*)

**For standards, essential questions, content, and skills see Curriculum Map –** See attached course outline and academic standards taught within this course.

**ASSESSMENT**

**Portfolio Assessment:**  Yes  No

**District-Wide Common Final Examination Required:**  Yes  No

**Course Challenge Assessment** (Describe)**:** None

**WRITING TEAM:** Warren County School District

**WCSD STUDENT DATA SYSTEM INFORMATION**

1. Is there a required final examination?  Yes  No

***\*Warren County School District Policy 9741 and9744 state, “All classes in grades 9-12 shall have a final exam.”***

1. Does this course issue a mark/grade for the report card?  Yes  No
2. Does this course issue a Pass/Fail mark?  Yes  No
3. Is the course mark/grade part of the GPA calculation?  Yes  No
4. Is the course eligible for Honor Roll calculation?  Yes  No
5. What is the academic weight of the course?

|  |  |  |
| --- | --- | --- |
| No weight/Non credit | Standard weight | Enhanced weight |