Project Based Research - Mechatronics 8O415DC
SDS PEIMS Code: 12701500 (PROBS1)
Grade Placement: 12, Credit: 1
Prerequisites: None
Project-Based Research is a course for students to research a real-world problem. Students are matched with a mentor from the business or professional community to develop an original project on a topic related to career interests. Students use scientific methods of investigation to conduct in-depth research, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings.

Scientific Research and Design 8O340
TSDS PEIMS Code:13037200 (SCRID)
Grade Placement: 11–12, Credit: 1
Prerequisite: Biology, Chemistry, or (IPC), and Physics
Description: Scientific Research and Design is a broad- based course designed to allow districts and schools considerable flexibility to develop local curriculum to supplement any program of study or coherent sequence. The course has the components of any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and presentation of the conclusions. These components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high-wage jobs and/or continue their education. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement. Students may take this course with different course content for a maximum of three credits. Note: This course satisfies a science credit requirement for students on the Foundation High School Program.

Solid State Electronics DC 8O405
TSDS PEIMS Code : 13036900
Grade Placement: 11–12, Credit: 1
Prerequisite: AC/DC Electronics
Description: [SGHS] In Solid State Electronics, students will demonstrate knowledge and applications of advanced circuits, electrical measurement, and electrical implementation used in the electronics and computer industries. Students will transfer advanced academic skills to apply engineering principles and technical skills to troubleshoot, repair, and modify electronic components, equipment, and power electronic systems in a project based environment. Additionally, students will explore career opportunities, employer expectations, and educational needs in the electronics industry. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
DC Note: This course will provide credit for the high school requirement as well as dual credit through Dallas College (equivalent of CETT1421). Students must meet the content area dual credit enrollment criteria. Dual Credit courses address learning objectives at greater depth along with higher expectations for student performance.