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| Career Technical Education (CTE) Program of Study for Entry into Community College |
|  | **Name:**       | **ID:**       | **Gr:**    | **Department:** Engineering and Technology |
| **Industry Sector:** Engineering and Design | **Career Pathway:** Engineering Design, Engineering Technology, Architectural, Computer Hardware, Electrical and Network Engineering | **Student Organization or Club:**Engineering and ACME Club |
| **Recommended High School Course Schedule** |
| ***Level*** | ***Grade*** | ***English*** | ***Social Studies*** | ***Math*** | ***Science*** | ***Other Required Courses, Electives, CTE*** | ***Other Required Courses, Electives, CTE*** | ***Work-Based******Learning Activities*** |
| Secondary | 9 | English 1 | Geography & Health & Wellness  | Algebra 1 | Biology | Physical Ed 1  | \*\*Introduction to Engineering Plus \*\*Computer Applications | * Engineering Club
 |
| 10 | English 2 | World History | Geometry | Environmental Science | Physical Ed 2  | \*\*Principles of Engineering | * Engineering Club
* ROP Industry Day
 |
| 11 | English 3 | US History | Algebra 2/ Trigonometry | Chemistry | \*\*Computer Graphics I | Select One: Digital Electronics or Computer Integrated Manufacturing | * Engineering Club
* ROP Portfolio Day
 |
| 12 | English 4 | Government & Economics | College Prep Math, Pre-Calculus, or CTE Elective | **CTE Electives: Select:** \*\*Engineering Design Development **and 2 Periods from:** \*\*Welding Technology I, \*\*\*Internships in Agriculture (2 periods), \*\*\*Beginning Drafting, \*\*Architectural Design \*\*Small Engines & Power Equipment, \*\*Computer Programming  | * Engineering Club
* ROP Community

Classroom/Portfolio Day* Senior Exit Interviews
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| Postsecondary | **Articulated Courses: Student earns Merced College units of credit for the identified college course when student passes the ACE (Articulated Credit by Exam)** |
| MUHSD/ROP | MERCED COLLEGE | UNITS |
| Computer Applications I | AOM 50B: Document Formatting and Keyboarding | 3 |
| Welding Technology I | WELD 06: Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding | 3 |
| Internships In Agriculture (2 periods) | Co-op 41A: Cooperative Education | 3 |
| Beginning Drafting | DRFT 04A: Fundamentals of Computer-Aided Drafting | 3 |
| Architectural Design or Advanced Architectural Design | DRFT 42A: Architectural Design – AutoCAD and DRFT 42B: Architectural Drafting – 3D  | 3-6 |
| Principles of Engineering | ENGR 30: Introduction to Engineering | 2 |
| Introduction to Engineering | DRFT 04C: Introduction to Parametric Modeling | 3 |
| Computer Graphics I  | ART 40A: Introduction to Digital Media | 3 |
| Small Engines & Power Equipment  | MA 15: Small Engine Repair/Maintenance | 3 |
| Computer Programming I | CPSC 05A: Visual Basic Programming | 3 |
|  ***\*ROP Certificate Earned at Completion of Course \*\*Merced College credit earned through articulation \*\*\*ROP & Articulation*** |
| Merced Community College Coursework Related to the Pathway | Sample Occupations Related to the Pathway |
| Degrees & Certificates | Sample Courses  | AA or AS Degree or Certificate | BS or BA Degree |
| **Degrees:** A.S. or A.S. Engineering, A.S. Engineering Tech, A.A. CAD Draftsman Architectural or Mechanical, A.A. Computer & Networking Tech, A.A. Electronics Tech, A.A. Industrial Electronics Tech, A.A. Instrumentation & Process Control Tech **Certificates:** Several in Engineering, Drafting, Electronics |  ENGR 05: Engineering GraphicsENGR 10: Engineering MaterialsENGR 18: Electrical Circuits AnalysisENGR 25: Descriptive GeometryELCT 32: Semiconductors & Integrated CircuitsDRFT 10: Rendering and Animation |  Drafter/Designer Engineering TechnicianCAD/CAM SpecialistJourneyman EngineerSurveyorIndustrial Designer Estimator |  ArchitectCivil EngineerMechanical EngineerArchitectrual EngineerStructural EngineerComputer EngineerElectrical Engineer |

POS Engineering & Design Community College – 10/16/14