Manufacturing Engineer

Derwin R. Crosby

CLYDE C. MILLER CAREER ACADEMY

2021-2022

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| CLASS INFORMATION | | | |
| Room: 006 & 013 (Basement)  Email: Derwin.crosby@slps.org  Phone: 314.371.0394 X - 61006 | | A Day: Period 1, 2, 3, & 4  B Day: Period 5, 6, 7, & 8  Planning Period: 4th & 8th | |
| Course Description | | Quarter Overview | |
| To help students understand and build a strong foundation in the field of automated manufacturing. Students will be introduced to basic hand tools and power equipment. Students will learn machine shop safety and best practices. Students will be introduced to AutoDesk Inventor (AutoCAD) 3-D modeling. Students will be provided extensive hands-on experience with Computer Numerically Controlled (CNC) lathes and Computer Integrated Manufacturing (CIM). | | * Quarter 1 – **Unit 1**: Principles of Manufacturing, Safety, Measurements, Hand-Power Tools. | |
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| Grading Scale  A – 90 – 100 %  B – 80 – 89 %  C – 70 – 79 %  D- 60 – 69 %  F – Below 60 % | Attendance Policy  Per building Level  Policy on file in Teams | | ***Office Hours***:  Planning Period: 12:30 – 2:07 PM  **Periods 1 & 2**: 7:07 – 10:20 am (A)  **Period 3**: 10:26 – 12:30 pm (A)  **Period 5 & 6**: 7:07 – 10:20 am (B)  **Period 7**: 10:26 – 12:30 pm (B) |
| Learning Targets | | | |
| In this class you will…   * LO 1: Mathematical Calculations – Students will be able to perform mathematical calculations commonly used in manufacturing process, material selection, tolerances and projects. *Project-based activities.* * LO 2: Manufacturing Careers & History – Students will be able to identify careers, trends, past history, and qualifications needed for employment in manufacturing. *Do-Now.* * LO 3: Manufacturing Safety – Students will apply safe practices and adhere to known guidelines for insuring safety while working in the manufacturing lab. *Daily* * LO 4: Production Processes – Students will be able to analyze and appraise the capability of production of parts and determine the performance sequence of maneuvers to enhance production speed and quality of finished products. *Lab-work.* * LO 5: Tooling – Students will demonstrate competency in performing various types of bench work procedures and skills. *Project-based activities.* * LO 6: Advanced Manufacturing – Students will be introduced to 3D Printing and other advance manufacturing concepts. *Project-based activities.* | | | |
| Something else could go here…or not | | | |
| **Classroom & Technical Expectations**  All classes strive to prepare students for adult life by teaching skills and behaviors that will be valued in the workplace. The following expectations are stressed and graded in all Manufacturing Engineering classes. Your instructor will review these, provide instructions and answer any questions.   * *Attendance* – Be here on time each day, prepared to work, and dressed appropriately in school required uniforms. * *Respect* – Use appropriate language, be honest and truthful, and be respectful of peers and adults. * *Safety* – Follow all safety rules and procedures. Keep work area orderly. * *Responsibility* – Complete work on time, follow directions, use resources to answer questions, ask for help when needed, and contribute to class discussion. * *Quality* – Show determination to complete tasks, be consistent in quality, and focus on the task at hand. * *Team* – Work as a productive team member in a variety of roles and communicate in a sensitive way. | | **Classroom Environment: “Machine Shop – LAB”**  Students will be graded on classroom participation for work assignments/clean-up duties in the Manufacturing Lab. There will be a daily roster displayed, with a rotational schedule of the cleaning assignments for each week. Each student will have the opportunity to perform all assigned duties.  ***There will be no exceptions to opt-out of the activity.*** | |