PROGRAM OF STUDY: Industrial Maintenance

This Program of Study may serve as a graduation guide for the next four plus years, along with other career planning and educational materials. Courses listed in this model may include recommended coursework and should be individualized to students' educational and career goals. Each graduation plan needs to meet minimum high school graduation requirements. Dual Enrollment courses can be high school academic and/or career technical education courses.

	SECONDARY:					POSTSECONDARY:				
COURSE/ GRADE	**NINTH**	**TENTH**	**ELEVENTH**	**TWELFTH**	**Entrance/Exit Point**	**TCC**	**Entrance/Exit Point**	**DIPLOMA OR AAS**	**Entrance/Exit Point**	**BACHELOR OF SCIENCE**
ENGLISH	9th grade Lit/ Composition	10th grade Lit/ Composition	American Lit/ Composition	World Lit/ Composition / British Lit						
MATHEMATICS	Coordinate Algebra / Algebra I	Analytic Geometry / Geometry	Advanced Algebra / Algebra II	Pre-calculus						
SCIENCE	Physical Science	Biology	Chemistry	Physics						
SOCIAL STUDIES	World History	Psychology	US History	Government (½ unit) Economics (½ unit)						
PATHWAY COMPLETER	**Industrial Mechanics**	**Fluid Power and Piping Systems**	**Electrical Motor Controls**	Another course in focus area, Work-Based Learning, or Youth Apprenticeship		**IF11 Industrial Fluid Power Technician Certificate** Find the campus for the TCC options		Completion of IF11 Industrial Fluid Power Technician TCC leads to IST4 Industrial Systems Technology diploma or IS13 Industrial Systems Technology degree. Find the campus for the Diploma, Degree options		The University System of Georgia offers students' higher education options at 30 institutions throughout the state, providing a wide range of academic programming including certificates and associate, baccalaureate, masters, doctoral and professional degrees. https://apps.ds.usg.edu/ords/f?p=118:1:0:
Industry Recognized Credential (Pathway Completer)	Visit the End of Pathway Assessment Page (see note below)									
Required/ Selective Electives	Health & Personal Fitness (can be taken in grades 9-12)	Introduction to Digital Technology	Embedded Computing	AP Chemistry						
	Modern Language/Latin *2 units required for admissions to Georgia University System Colleges/Universities* For a listing of Modern Language/Latin courses offered at your high school, please contact your advisor, counselor, or curriculum handbook.		**Other Electives** For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.							

NOTE: Students have many options to **ENTER** and **EXIT** from their academic studies into the workforce. When a student graduates from high school, they are eligible to choose one of many **ENTRANCE POINT** options: **1.** Enroll in either a 2 or 4 year post-secondary program; **2.** Enroll in an apprenticeship program or the military; or **3.** Enter the workforce using technical skills learned in high school. When a student finishes a 2- or 4-year degree program, they may choose to **EXIT** and **1.** Enroll in an apprenticeship program or the military; **2.** Enroll in a professional university degree program; or **3.** Enter the workforce using technical skills learned.

Industrial Maintenance Career Pathway Completers - Industry Credentialing for High School Students

Upon completion of sequenced courses in the Industrial Maintenance Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. Secondary students completing the Industrial Maintenance pathway will be able to sit for the National Industry Credentialed assessment offered on-line from NCCER and NIMS. Once mastery is reached, students will receive recognition for completion and use this credential in conjunction with their job or continuing training. For specific assessment information, refer to: http://bit.ly/GAManufacturing.

Sample In Demand Careers in Georgia

Occupation Specialties	Level of Education Needed	Georgia Average Salary	Annual Average Openings in Georgia	2014 – 2024 Employment Outlook
Industrial Machinery Mechanics	Postsecondary Certificate	$45,688	424	In Demand, High Skill
Maintenance Workers, Machinery	Diploma, some postsecondary	$41,166	66	In Demand, High Skill
Millwrights	Diploma, some postsecondary	$48,030	65	In Demand, High Skill
Mechanical Engineering Technician	Bachelor's Degree	$57,064	184	In Demand, High Wage

Data link here.

Go to GAfutures at www.gafutures.org for more information about your education and career planning, including valuable financial information (grants and scholarships including HOPE Program, grants and loans, FAFSA, and CSS forms).

Career Enhancement Opportunities

Career-Related Education Activities

- Career Awareness
- Career Exploration
- Instructional Related
- Connecting
  - Work-Based Learning
  - Employability Skill Dev.
  - Cooperative Education
  - Internship
  - Youth Apprenticeship
  - Clinicals

Postsecondary Options:

- 4-Year Universities/ Colleges
- 2-Year Colleges
- Technical Colleges
- State Registered Apprenticeships
- Special Purpose Schools
- On-the-Job Training
- Military

Earning Postsecondary Credits While in High School

- Dual Enrollment Program
  - Earn postsecondary credit while in high school
  - You can complete
    - Industry Credential
    - Technical Certificate of Credit (TCC)
    - Associates of Applied Science Degree
    - Bachelor's Degree
- Who can help?
  - Parents
  - School Counselor
  - Advisor

Postsecondary Transition

- University System of Georgia Institutions: Admissions Testing
  - ACT or SAT
  - For More Information:
    - Contact the institution of your choice OR
- Technical College System of Georgia
  - Placement Exam
- United States Military
  - ASVAB Assessment
- Use BRIDGE Law platform to inform decisions on postsecondary opportunities
- Dual Enrollment
  - Earning high school course credits while taking college courses

Related Pathway Occupations	Other Related Occupations
• Millwright • Machinery Maintenance Workers	• Tool & Die Workers *ONET Online

Industrial Maintenance Pathway Description

Industrial machinery mechanics and maintenance workers maintain and repair factory equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment. Millwrights install, dismantle, repair, reassemble, and move machinery in factories, power plants, and construction sites.

Workers in this occupation must follow safety precautions and use protective equipment, such as hardhats, safety glasses, and hearing protectors. Most work full time. However, they may be on call and work night or weekend shifts. Overtime is common.

Industrial machinery mechanics and maintenance workers and millwrights typically need a high school diploma. However, industrial machinery mechanics need a year or more of training after high school, whereas maintenance workers typically receive on-the-job training that lasts up to a year. Most millwrights go through a 4-year apprenticeship.

Employment of industrial machinery mechanics and maintenance workers and millwrights is projected to grow 17 percent from 2014 to 2024, faster than the average for all occupations. The need to keep increasingly sophisticated machinery functioning and efficient will drive demand for these workers. Job prospects for qualified applicants should be very good.

Compare the job duties, education, job growth, and pay of industrial machinery mechanics and maintenance workers and millwrights with similar occupations.