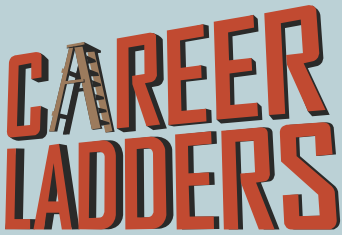


CO-OP/INTERNSHIP STUDENT

Co-op and internship students gain valuable work experience, along with work related classes, while exploring a career in advanced manufacturing.



JOB TITLES COMMON TO THIS CAREER OCCUPATION INCLUDE:

Assembler Trainee	Milling Machine Trainee	Outside Dimension/Inside Dimension Grinder Trainee
Computer Numeric Control Lathe Trainee	Painter Trainee	Material Controller Trainee
Engine Lathe Trainee	Quality Inspector Trainee	Receiving Clerk Trainee
Welding Trainee	Shipping Clerk Trainee	Press Operator Trainee

SAGINAW VALLEY

Each ladder depicts a series of work experiences that leads to more challenging and higher paying opportunities. While every level of the ladder can provide a satisfying job, some employees will choose to gain even more skills and responsibilities that will advance them in their careers. To do so, they will need more education, training, and work experiences. Some jobs will require a certificate, a license, or an advanced degree.

CLIMBING THE CAREER LADDER

ADVANCED LEVEL

Bachelor's degree or proven technical skills that can be demonstrated through industry experience

Manufacturing Engineer
\$19.50-\$26.75/hour

Supervisor
\$19.00-\$27.00/hour

MID LEVEL

Associate's degree or equivalent training and experience

Assembly Specialist
\$12.50-\$22.10/hour

Machining Specialist
\$16.00-\$23.50/hour

Fabricating Specialist
\$14.50-\$19.75/hour

ENTRY LEVEL

High school diploma and completion of the Engineering/Manufacturing and Industrial Technology Career Pathway requirements and/or appropriate career and technical education classes

Co-op/Internship Student
\$6.00-\$8.00/hour

Machinist Trainee
\$8.10-\$12.00/hour

Welding Trainee
\$8.10-\$12.00/hour

Wages will vary within this occupation based on the ability of the student to perform the job without the aid of direct supervision. The ability to do more than one job will also increase the wage and provide the student with a broader range of work experience.

JOB DESCRIPTION

Each occupation is described in terms of specific tasks and typical job duties.

A CO-OP/INTERNSHIP STUDENT MUST BE ABLE TO:

- Enroll in courses that relate to the work experience
- Learn to read and understand blueprints or other needed job information
- Understand and learn the use of measuring tools and equipment
- Gain a good knowledge of mathematics and be able to learn to do calculations as needed for the job
- Learn to produce high-quality work
- Communicate with coworkers and supervisors to receive information and instructions
- Be reliable and punctual in job and school attendance

WAGES

Wage information was obtained from the Michigan Department of Labor and Economic Growth and from local employers to give a general idea of the wages and salaries for this occupation.

WAGE RANGE

\$6.00-\$8.00/hour

WORKING CONDITIONS

Co-ops and internship students work at businesses that are approved by the student's school. There is a formal written agreement between the employer and the school's co-op coordinator or intern supervisor. Periodically the co-op coordinator or intern supervisor visits the worksite to make sure that the student's experience is meeting the expectations agreed upon by the employer and the school personnel.

EDUCATION AND TRAINING

Courses, programs, and certificates that are needed for employment are offered by local education and training providers.



HIGH SCHOOL

- Completion of high school's Engineering/Manufacturing and Industrial Technology Career Pathway and/or appropriate career and technical education classes
- Algebra
- Geometry
- Trigonometry
- Physics
- Career studies, such as electricity, engineering/computer-aided drafting, pre-engineering, machine tool technology, and welding

COMMUNITY COLLEGE

- Delta College offers co-op and internships aligned with coursework

UNIVERSITY

- Davenport University offers co-op and internships aligned with coursework
- Saginaw Valley State University offers co-op and internships aligned with coursework

LOCAL EDUCATION AND TRAINING PROVIDERS

- Local school districts
- Bay-Arenac ISD Career Center
- Saginaw Career Complex
- Saginaw/Midland/Bay Michigan Works!
- Delta College
- Davenport University
- Saginaw Valley State University

JOB OUTLOOK

The rate of growth within this occupation is projected by data from local employers and the Michigan Department of Labor and Economic Growth.

CO-OP/INTERNSHIP STUDENT

Many employers and educators recommend that students participate in co-op and internship opportunities during their high school and college years. Studies show that students who gain work experience that is aligned to their coursework are better prepared for employment. They also have a better understanding of the job responsibilities and opportunities in the career fields of their choice.

Local schools report that the number of co-op and internship placements is increasing. More students realize the benefits of aligning their education and work experience as it increases the relevancy of what they are learning. Also, as a co-op or intern they are able to support the cost of their college education while gaining valuable work experience.

ADVANCEMENT

Co-op and internship students are offered the opportunity to gain valuable work experience before deciding on a career in advanced manufacturing. If qualified, students may decide to become trainees in their chosen profession and continue their education on a part-time basis. Co-ops and interns should be enrolled in courses that relate to their work experience.

WHAT THE EMPLOYER SAID



WHAT DO YOU LOOK FOR IN A POTENTIAL EMPLOYEE FOR THIS POSITION?

“Students who would like to participate in the Saginaw Metal Casting Operations’ Manufacturing, Engineering, Construction, and Automation (MECA) program must achieve above-average grades, have taken higher-level math classes, have near-perfect attendance, and be enrolled in the pre-engineering course at the Saginaw Career Complex.”

Bennie Brown, personnel director
General Motors Corporation
GM Powertrain Division – Saginaw Metal Casting Operations

STAR PROFILE

This interview is intended to show you what is needed to be a star employee.



**EMPLOYEE:
JACOB BROWNLIE**

**OCCUPATION:
MANUFACTURING,
ENGINEERING,
CONSTRUCTION, AND
AUTOMATION (MECA)
PROGRAM STUDENT**

**COMPANY:
GENERAL MOTORS
CORPORATION
GM POWERTRAIN
DIVISION – SAGINAW
METAL CASTING
OPERATIONS**

TELL US HOW YOU ATTAINED YOUR CURRENT POSITION.

Students that participate in classes at the Saginaw Career Complex have the opportunity to intern at local businesses. As part of the pre-engineering program, I applied to General Motors to be a Manufacturing, Engineering, Construction, and Automation (MECA) program student. I was fortunate to be selected.

DESCRIBE YOUR TYPICAL DAY.

I am a senior at St. Charles High School. I take English, social studies, and calculus classes in the morning. Then I go the Saginaw Career Complex where I am enrolled in the pre-engineering program. On Mondays through Thursdays, I spend 3½ hours at the Saginaw Metal Casting Operations plant to learn the skills needed to work in engineering and manufacturing. I work with computers and robotics while also learning how to work on a team and focus on continual improvement processes.

WHAT QUALITIES MAKE SOMEONE A “STAR” IN THIS OCCUPATION?

A star must have good grades and near-perfect attendance, as well as the desire to learn.

WHAT TRAINING AND EDUCATION DID YOU NEED TO ENTER THIS POSITION?

I have taken several math and science classes at my high school, and I am enrolled in the pre-engineering program at the Saginaw Career Complex.

WHAT DO YOU LIKE MOST/LEAST ABOUT YOUR JOB?

The thing that I like most about being a MECA student is that this program gets you ready for a career, and you can learn and get paid at the same time. The thing I like least about going to school and participating in the MECA program is that my days are pretty long.

WHAT ADVICE CAN YOU GIVE SOMEONE SEEKING A JOB IN YOUR FIELD?

Take whatever opportunities you have to learn about the different career occupations. Also take as many math and science courses as possible so that you can be well prepared for a variety of jobs. The MECA program pushes teens to achieve. In a competitive job market, GM Powertrain Division – Saginaw Metal Casting Operations (GM-SMCO) and the Saginaw Career Complex are giving us the edge to succeed.

ARE THERE ANY LICENSES OR CERTIFICATIONS NEEDED FOR YOUR POSITION?

There are no licenses or certifications needed to be a MECA student.

ACKNOWLEDGMENTS

The Career Ladders project began as a Saginaw County Vision 2020 initiative. To date, more than 300 individuals have been involved in the project. It is impossible to list them all, but the Comprehensive Education and Workforce Development Committee appreciates each one and the incredible participation by our major employers and educational institutions, as well as the support from the Arnold and Gertrude Boutell Memorial Fund, The Dow Chemical Company, The Dow Corning Foundation, the Fordney Club, the Hospital Council of East Central Michigan, the Michigan Department of Labor and Economic Growth, the National Tooling and Machining Association – Saginaw Valley Chapter, the Saginaw Community Foundation, the Saginaw County Business and Education Partnership, the Saginaw County Chamber of Commerce Foundation, Saginaw County’s local school districts, Saginaw County’s Promise, the Saginaw County Vision 2020, the Saginaw Future Inc., the Saginaw/Midland/Bay Michigan Works!, the Saginaw Township Business Association, the Saginaw Valley Manufacturers’ Association, and the Saginaw Valley Tech Prep Partnership. We also want to thank NOVA for their guidance.

EQUAL OPPORTUNITY EMPLOYER/PROGRAM. AUXILIARY AIDS AND SERVICES ARE AVAILABLE UPON REQUEST TO INDIVIDUALS WITH DISABILITIES.