PROGRAM OF STUDY: Agricultural Mechanics System

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.

<table>
<thead>
<tr>
<th>COURSE/ GRADE</th>
<th>NINTH</th>
<th>TENTH</th>
<th>ELEVENTH</th>
<th>TWELFTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>9th grade Lit/ Composition</td>
<td>10th grade Lit/ Composition</td>
<td>American Lit/ Composition</td>
<td>World Lit/ Composition / British Lit</td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td>Coordinate Algebra / Algebra I</td>
<td>Analytic Geometry / Geometry</td>
<td>Advanced Algebra / Algebra II</td>
<td>Pre-calculus</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>Physical Science</td>
<td>Biology</td>
<td>Chemistry</td>
<td>Physics</td>
</tr>
<tr>
<td>SOCIAL STUDIES</td>
<td>World History</td>
<td>Psychology</td>
<td>US History</td>
<td>Government (½ unit) Economics (¼ unit)</td>
</tr>
<tr>
<td>PATHWAY COMPLETER</td>
<td>Basic Agricultural Science</td>
<td>Agricultural Mechanics I</td>
<td>Agricultural Mechanics II</td>
<td>Another course in focus area, Work-Based Learning, or Youth Apprenticeship</td>
</tr>
</tbody>
</table>

**SECONDARY:**

**POSTSECONDARY:**

<table>
<thead>
<tr>
<th>TCC</th>
<th>DIPLOMA OR AAS</th>
<th>BACHELOR OF SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Find the campus for the TCC options</td>
<td>Find the campus for the Diploma, Degree options</td>
</tr>
</tbody>
</table>

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)
- Forest Science
- Agribusiness Management and Leadership
- General Horticulture & Plant Science
- 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.
- Modern Language/Latin
  For a listing of other elective courses offered at your high school, please check with your advisor, counselor, or curriculum handbook.
- Other Electives

**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.

**Agricultural Mechanics System Career Pathway Completers - Industry Credentialing for High School Students**

Upon completion of sequenced courses in the Agricultural Mechanics System Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. Secondary students completing the Agricultural Mechanics System pathway will be able to sit for the National Industry Credentialed assessment offered on-line from NOCTI and Precision. 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/AgricultureEOPA
Agricultural Mechanics Focus Area

Pathway Description

Because workers in the Agricultural Mechanics pathway are responsible for the efficient operation of farm machinery, opportunities in the farm equipment industry will grow as farms merge and grow larger. Agricultural and farm equipment mechanics are responsible for the maintenance, repair, and installation of machines that increase the efficiency of farming activities, such as planting, harvesting, and irrigating crops. Agricultural mechanics also service and repair smaller lawn and garden equipment operated by suburban homeowners.

Important skills for this pathway include the ability to maintain and repair farm machines, such as large tractors or combines. Dairy equipment repairers maintain, and repair milking machines and other equipment used by dairy farmers. Modern farm equipment utilizes computers, electronics, and hydraulics, which means that workers need to continually update their skills. In fact, what was once a general repairer’s job has become a more specialized technical field in the farm industry. As a result, many farmers rely on farm equipment dealers to maintain and repair their machinery because the equipment is more complex than in the past. Another occupation in this pathway is agricultural engineer—someone who designs equipment and technology to meet farmer needs.

Some agricultural mechanics receive formal training in professional/technical schools and two-year colleges, where they learn the basics of diesel engines, transmissions, and hydraulics. Other mechanics learn their skills on the job, receiving training from more experienced mechanics and from training sessions conducted by heavy equipment manufacturers. Competition for workers is keen because of the scarcity of qualified people to fill agricultural mechanic positions.

Sample In Demand Careers in Georgia

<table>
<thead>
<tr>
<th>Occupation Specialties</th>
<th>Level of Education Needed</th>
<th>Georgia Average Salary</th>
<th>Annual Average Openings in Georgia</th>
<th>2014 – 2024 Employment Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Engineers</td>
<td>Bachelor’s Degree</td>
<td>$74,000</td>
<td>5</td>
<td>In Demand, High Wage</td>
</tr>
<tr>
<td>Welders, Cutters, and Welder Fitters</td>
<td>Postsecondary Certificate</td>
<td>$36,175</td>
<td>371</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Agricultural Technicians</td>
<td>Bachelor’s Degree</td>
<td>$37,305</td>
<td>43</td>
<td>In Demand, High Skill</td>
</tr>
<tr>
<td>Agricultural Inspectors</td>
<td>High School Degree</td>
<td>$39,051</td>
<td>124</td>
<td>In Demand</td>
</tr>
</tbody>
</table>

Go to GAfutures at [www.gafutures.org](http://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
- Agricultural Inspectors
- Postsecondary Teachers
- Aquaculture Managers
- Chemical Technicians

Other Related Occupations
- Agricultural Science
- Agricultural Technicians
- Buyers & Purchasing Agents
- Farm & Ranch Managers
- Food Cooking Machine Operators
- Graders & Sorters
- Slaughters & Meat Packers

*ONET Online