

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.

Agricultural Mechanics Focus	Secondary: Agricultural Mechanics System				Postsecondary		
Course/Grade	Ninth	Tenth	Eleventh	Twelfth	TCC	Diploma	Bachelor of Science
English	9 th grade Lit/ Composition	10 th grade Lit/ Composition	American Lit/ Composition	World Lit/Composition / British Lit	Entrance or Exit Point		Entrance or Exit Point
Mathematics	Coordinate Algebra / Algebra I	Analytic Geometry / Geometry	Advanced Algebra / Algebra II	Pre-calculus			
Science	Physical Science	Biology	Chemistry	Physics			
Social Studies	Psychology	World History	US History	Government (½ unit) Economics (½ unit)			
Pathway Completer	Basic Agriculture Science (02.47100)	Agricultural Mechanics I (01.42100)	Agricultural Mechanics II (01.42200)	Another Agriculture Course in focus area, Work-Based Learning, Youth Apprenticeship, or Capstone Project			
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	Entrance or Exit Point		Entrance or Exit Point
	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.				

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.usg.edu/ords/f?p=118:1:0:::>

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 Career 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 Systems 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>

Sample High Demand Careers in Georgia

Occupation Specialties	Level of Education Needed	Georgia Average Salary	Annual Average Openings in Georgia	2014 – 2024 Employment Outlook
Agricultural Engineers	Bachelor's Degree	\$74,000	5	High Demand
Welders, Cutters, and Welder Fitters	Postsecondary Certificate	\$36,175	371	High Demand, High Skill
Agricultural Technicians	Bachelor's Degree	\$37,305	43	High Demand, High Skill

GDOL Labor Market Explorer

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 <input type="checkbox"/> Career Awareness <input type="checkbox"/> Career Exploration <input type="checkbox"/> Instructional Related <input type="checkbox"/> Connecting <input type="checkbox"/> Work-Based Learning <ul style="list-style-type: none"> • Employability Skill Dev. • Cooperative Education • Internship • Youth Apprenticeship • Clinicals 	Postsecondary Options: <ul style="list-style-type: none"> • 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 A vital way to get ahead and realize you can pass college courses is by earning postsecondary credits as a high school student. Georgia offers a dual credit program titled Dual Enrollment. You need to talk with your parents, school counselor, or advisor about the proper courses to take each year in high school and dual credit. Students completing the course work in this Plan, will have earned/completed, an Industry Credential, Technical Certificate of Credit (TCC), Associates of Applied Science Degree, and/or Bachelor's Degree.
---	--	---	---

Postsecondary Transition

- Students who will continue their education in a Program of Study at one of the University System of Georgia institutions should prepare to take the ACT or SAT for admissions. Tests for admissions may vary from institution to institution. Contact the selected institution for specific testing information. Additional admissions information can be found at Staying On Course (https://www.usg.edu/assets/student_affairs/documents/Staying_on_Course.pdf)
- Students who will continue their education in a Program of Study at one of the Technical College System of Georgia institutions should prepare to complete a placement exam.
- Students who will continue their education and training in the US Military should take the ASVAB assessment.
- Students should utilize electronic college and career databases to select the most appropriate postsecondary opportunities to match their selected career field, including registered apprenticeships.
- Georgia's dual-credit programs have been combined into one program entitled Dual Enrollment, in which high school students may earn their high school course credits while taking college courses.

Related Pathway Occupations	Other Related Occupations
<ul style="list-style-type: none"> • Agricultural Inspectors • Agricultural Science • Postsecondary Teachers • Agricultural Technicians • Aquaculture Managers • Butchers & Meat Cutters • Buyers & Purchasing Agents • Chemical Technicians • Agricultural Engineers 	<ul style="list-style-type: none"> • Farm & Ranch Managers • Food Cooking Machine Operators • Graders & Sorters • Slaughters & Meat Packers <p style="text-align: right;">*ONET Online</p>

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.