# PROGRAM OF STUDY:

Agriculture Mechanics Systems







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:		
COURSE/ GRADE	NINTH	TENTH	ELEVENTH	TWELFTH
ENGLISH	9 <sup>th</sup> grade Lit/ Composition	10 <sup>th</sup> 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	Basic Agricultural Science	Agricultural Mechanics Technology I	Agricultural Mechanics Technology II	Another course in focus area Work-Based Learning, or You Apprenticeship
Industry Recognized Credential (Pathway Completer)		Visit the End of Pathway Assessment Page (see note		ee note below)
-	Health & Personal Fitness (can be taken in grades 9-12)	Forest Science	Agribusiness Management and Leadership	General Horticulture and Plant Science
Required/ Selective Electives	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.	

## **Postsecondary Transition**

- · University System of Georgia Institutions: Admissions Testing
  - ACT or SAT
  - · For More Information:
  - · Contact the institution of your choice
- 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

# 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: <a href="http://bit.ly/AgricultureEOPA">http://bit.ly/AgricultureEOPA</a>

# Agriculture Mechanics Systems Pathway Description

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. 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.

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.

Sample In Demand Careers in Georgia						
Occupation Specialties	Level of Education Needed	Georgia Average Salary	Annual Average Openings in Georgia	2018 – 2028 Employment Outlook		
Agricultural Inspectors	High School Degree	\$38,010	130	In Demand		
Welders, Cutters, and Welder Fitters	Postsecondary Certificate	\$38,740	1,670	In Demand, High Skill		
Buyers and Purchasing Agents	Bachelor's Degree	\$63,550	1,120	In Demand, High Skill		
Agricultural Technicians	Bachelor's Degree	\$49,100	170	In Demand		

## **Related Pathway Occupations**

## **Other Related Occupations**

- Agricultural ScienceSecondary Teachers
- Chemical Technicians
- Buyers & Purchasing Agents
- Graders & Sorters Farm & Ranch Managers
- Slaughters & Meat Packers



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Agriculture Mechanics Systems







**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.

## **POSTSECONDARY:**

### TCC

# AS51 Agricultural Systems and Mechanics TCC

AGSC 2350 Heating and Ventilation of Agricultural Structures AGSC 2330 Agricultural Structures Design and Construction AGSC 2380 Agricultural Mechanics HORT 1310 Irrigation and Water Management

## DIPLOMA OR AAS

## **AS63 Agricultural Science Degree**

AS51 TCC plus

19 Credits of General Education Core

AGRB 1120 Leadership in Agribusiness

AGRB 1150 Agricultural Finance and Credit

AGRB 2200 Principles of Agronomy AGRB 2800 Agricultural internship

AGSC 1001 Introduction to Agriculture

AGSC 1210 Introduction to Livestock Evaluation

AGSC 1220 Livestock Evaluation and

Composition

AGSC 1230 Livestock Evaluation and Selection

AGSC 1240 Advanced Livestock Evaluation and

Selection

HORT 1010 Woody Plant Identification I HORT 1100 Introduction to Sustainable

Agriculture

Entrance/Exit Point

HORT 1250 Plant Production and Propagation HRTM 1220 Supervision and Leadership in the Hospitality Industry

COMP 1000 Introduction to Computer Literacy

### **BACHELOR OF SCIENCE**

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:

Entrance/Exit Point

Go to GAfutures at <a href="https://www.gafutures.org">www.gafutures.org</a> 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

Entrance/Exit Point

## Career-Related Education Activities

- Career Awareness
- 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