

Virginia Polytechnic Institute and State University  
College of Agriculture & Life Sciences  
Department of Agricultural, Leadership, & Community Education

**Bachelor of Science  
Agricultural Sciences (AGSC) Major  
Teaching and Learning (TL) Option**

**For student date of entry under UG Catalog 2022-2023**

**Part I. University Pathways General Education Requirements - 44 credit hours**

- Concept 1: Discourse – 9 credit hours required  
 1F – ENGL 1105 First-Year Writing 3 \_\_\_\_\_  
 1F – ENGL 1106 First-Year Writing 3 \_\_\_\_\_  
 1A – \*\*ALCE 2414 Identity and Inclusion in Agriculture 3 \_\_\_\_\_
- Concept 2: Critical Thinking in the Humanities – 6 credit hours required  
 \_\_\_\_\_ 3 \_\_\_\_\_  
 \_\_\_\_\_ 3 \_\_\_\_\_
- Concept 3: Reasoning in the Social Sciences – 6 credit hours required  
 AAEC 1005 Economics of Food & Fiber Systems 3 \_\_\_\_\_  
 AAEC 1006 Economics of Food & Fiber Systems 3 \_\_\_\_\_
- Concept 4: Reasoning in the Natural Sciences – 8 credit hours required  
 BIOL 1105 Principles of Biology, BIOL 1115 Principles of Biology Laboratory 3 \_\_\_\_\_, 1 \_\_\_\_\_  
 BIOL 1106 Principles of Biology, BIOL 1116 Principles of Biology Laboratory 3 \_\_\_\_\_, 1 \_\_\_\_\_  
OR  
 CHEM 1015 Chemistry in Context, CHEM 1025 Chemistry in Context Lab  
 CHEM 1016 Chemistry in Context, CHEM 1026 Chemistry in Context Lab  
OR  
 GEOS 1004 Introduction to Earth Science, GEOS 1104 Introduction to Earth Science Lab  
 GEOS 1024 Earth Resources, Soc, & Env, GEOS 1124 Earth Res, Soc, & Env Lab
- Concept 5: Quantitative and computational thinking – 9 credit hours required  
 5F – MATH 1014 Precalculus with Transcendental Functions 3 \_\_\_\_\_  
 5F – \*STAT 2004 Introductory Statistics 3 \_\_\_\_\_  
 5A – \_\_\_\_\_ 3 \_\_\_\_\_
- Concept 6: Critique and Practice in Design and the Arts - 6 credit hours required  
 6D – \_\_\_\_\_ 3 \_\_\_\_\_  
 6A – \_\_\_\_\_ 3 \_\_\_\_\_
- Concept 7: Critical Analysis of Identity and Equity in the United States  
 \*\*ALCE 2414 Identity and Inclusion in Agriculture 3 \_\_\_\_\_

**Part II. Degree Core Requirements – 19 credit hours**

- ALS 1234 CALS First Year Seminar 1 \_\_\_\_\_  
 \*ALCE 3004 Educational Programs in Agriculture & Life Sciences 3 \_\_\_\_\_  
 \*LDRS 1414 Citizen Leadership 3 \_\_\_\_\_  
 \*ALCE 3624 Communicating Agriculture in Writing 3 \_\_\_\_\_  
 \*ALCE 3634 Communicating Agriculture in Speaking 3 \_\_\_\_\_  
 \*\*ALCE 4034 Methods of Planning Educational Programs for Agriculture 3 \_\_\_\_\_  
 \*ALCE 4044 Agricultural Sciences Seminar 3 \_\_\_\_\_

**Part III. Option in Teaching and Learning Requirements – 36 credit hours**

- A. Disciplinary Core Courses – 27 credit hours  
 \*ALCE 2964 Field Study 3 \_\_\_\_\_  
 \*ALCE 4024 Managing Agricultural Supervised Occupational Experience Programs 2 \_\_\_\_\_  
 \*\*ALCE 4244 Teaching and Training Methods in Agricultural and Life Sciences 3 \_\_\_\_\_

**AGRICULTURAL SCIENCES – TEACHING & LEARNING OPTION GRADUATION CHECKSHEET (continued)**

*ALCE 4754 Internship in Education	3	_____
*ALCE 4064 Ag Mechanical Lab Management	3	_____
**ALCE 4234 Curriculum for Career and Occupational Education	3	_____
*ALCE 4884 Youth Program Management	3	_____
BSE 2094 Introduction to Metal Fabrication	1	_____
*BSE 2484 Engine and Power Train Technology	3	_____
EDCI 3144 Educating Exceptional Learners across the Lifespan	3	_____

**B. Restricted Electives – 9 credit hours<sup>1</sup>**


**Part IV. Area of Specialization – 18 credit hours<sup>2</sup>**


**Part V. Free Electives – 3 credit hours (or balance to 120 credit hours)<sup>3</sup>**


**GRADUATION REQUIREMENTS:**

\*Some courses listed on this checksheet may have prerequisites; please consult the University Course Catalog or check with your advisor.

<sup>1</sup>AGSC advisor must approve content area elective courses and the student must file a *content area electives form* with the Department of Agricultural, Leadership, and Community Education undergraduate office. Students must choose courses from the following areas: Agricultural and Life Science (ALS), Agricultural and Applied Economics (AAEC), Animal and Poultry Science (APSC), Biochemistry (BCHM), Biological Systems Engineering (BSE), Crops, Soils, and Environmental Science (CSES), Dairy Science (DASC), Environmental Science (ENSC), Entomology (ENT), Fisheries and Wildlife (FIW), Food Science and Technology (FST), Forestry (FREC), Human Nutrition Food and Exercise (HFNE), Horticulture (HORT), Leadership and Social Change (LDRS), Plant Pathology and Weed Science (PPWS). Students seeking teacher licensure need to have three credit-hours in the following content areas: 1) Agricultural Economics and Management (AAEC), 2) Animal Science (APSC, DASC), 3) Agricultural Mechanics (ALCE, BSE), 4) Forestry/Wildlife Management (FIW/FREC), 5) Horticulture (HORT), and 6) Plant Sciences (CSES).

<sup>2</sup>AGSC advisor must approve area of specialization courses and the student must file an *area of specialization form* with the Department of Agricultural, Leadership, and Community Education undergraduate office. Students may either choose an approved minor to fulfill this requirement, or complete at least 15 hours at the 3000 level or higher. Approved minors include: Academic Programs (CAFS, IAG, or IHW), Agricultural and Applied Economics (AAEC: ABMN, AEMN, ENMN, or ITMN), Agricultural, Leadership, and Community Education (ALCE: ILMN), Animal and Poultry Science (APSC: APSC or EPEQ), Dairy Science (DASC), Entomology (ENT), Food Science and Technology (FST), Forest Resources and Environmental Conservation (FREC: FORS, UACF, or WSM), Plant and Environmental Sciences (SPES: CSES, ENSC, HORT, TRFM, VITI, or WESC), or Sustainable Biomaterials (SBIO). If a minor is not selected, students must choose courses from the following areas for their area of specialization: Agricultural and Life Science (ALS), Agricultural and Applied Economics (AAEC), Animal and Poultry Science (APSC), Biochemistry (BCHM), Biological Systems Engineering (BSE), Crops, Soils, and Environmental Science (CSES), Dairy Science (DASC), Education, Curriculum and Instruction (EDCI), Education Psychology (EDEP), Environmental Science (ENSC), Entomology (ENT), Fisheries and Wildlife (FIW), Food Science and Technology (FST), Forestry (FOR), Human Nutrition Food and Exercise (HFNE), Horticulture (HORT), Leadership and Social Change (LDRS), Plant Pathology and Weed Science (PPWS), School of Plant and Environmental Sciences (SPES).

<sup>3</sup>Students seeking teacher licensure must dual enroll in the Secondary Education, Agriculture (AGED) program in the School of Education at Virginia Tech.

\* **IN-MAJOR GPA:** Indicates in-major courses for purposes of calculating in-major GPA.

**PREREQUISITES:** Some courses required for this major have prerequisites. Please refer to the Undergraduate Course Catalog or consult your advisor for information about prerequisites.

**FOREIGN LANGUAGE:** Requires 2 years of high school study in the same language (equivalent to 1105).

Has foreign language requirement been completed? (Yes/No) \_\_\_\_\_

Courses taken at Virginia Tech to complete the foreign language requirement will not count toward graduation.

**SATISFACTORY PROGRESS:** By the end of the academic year in which the student has attempted 72 hours (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" will consist of 1) GPA of at least 2.0; 2) at least 24 credits that apply to the University Core, and 3) 9 credit credits of departmental requirements.

**MINIMUM OVERALL GPA REQUIRED FOR GRADUATION: 2.00**

**MINIMUM IN-MAJOR GPA REQUIRED FOR GRADUATION: 2.00**