AGRI 108 Articulation Competencies

Introduction to Horticulture *(3 Credits)*

Introduction to Horticulture studies. Instruction includes: its history and philosophy and core topics in pomology, olericulture, floriculture, viticulture, propagation, growing systems management and strategies. Course will provide students the necessary skills and experiences to explore meaningful career paths in horticulture.

Upon completion of this course, successful students will score 80% or better on the following competencies to receive WVC college credits.

Student Learning Outcomes:

CATEGORIES			
1. **Problem Solving**:	A. Critical Thinking	3. **Social Interaction**:	A. Collaboration
	B. Creative Thinking		B. Ethical Conduct
	C. Quantitative Reasoning		C. Professional Conduct
	D. Qualitative Reasoning		D. Cultural Diversity
2. **Communication**:	A. Oral Expression	4. **Inquiry:**	**A.** Information Literacy
	B. Written Expression		B. Research
	C. Artistic Expression		C. Documentation

Course Competencies Checklist:

- ❑ Describe early plants, adaptions to modern forms, and their economic impacts. (1A,B,C,D. 2A,B 3A,B,C,D. 4A,B,C)
- ❑ Describe historic challenges of horticulture, the advances in the Food Crops Industry. (1A,B,C,D. 2A,B 3A,B,C,D. 4A,B,C)
- ❑ Describe the anatomy of the primary root, stems and leaves. (1A,B,C,D. 2A,B,C 3A,B,C, 4A,B,C)
- ❑ Describe the function and components of the plant cell, plant tissues, and basic chemical composition. (1A,B,C,D. 2A,B 3A,B,C, 4A,B,C)
- ❑ Describe the differences between sexual and asexual plant propagation and differentiate between self and cross-fertilization. (1A,B,C,D. 2A,B 3A,B,C, 4A,B,C)
- ❑ Identify the steps of plant germination, describe the differences between annuals, biennials and perennials, define and discuss dormancy. (1A,B,C,D. 2A,B 3A,B,C, 4A,B,C)
- ❑ Describe plant's dependence on soil, the role of water in plants, describe the essential plant nutrients. (1A,B,C,D. 2A,B 3A,B,C, 4A,B,C)
- ❑ Describe how insects, weeds and diseases reduce or alter yields and species characteristics, the symptoms of an unhealthy stressed plant its care and maintenance. (1A,B,C,D. 2A,B 3A,B,C, 4A,B,C)

- ❑ Discuss the basic principles of heredity and genetics, how and why we improve plants and the environmental, ethical, control, and conflicts brought about by horticulture and biotechnology research. (1A,B,C,D. 2A,B 3A,B,C, 4A,B,C)

- ❑ Survey a variety of agricultural career opportunities and prepare an education plan (portfolio) for entering a rewarding career in horticulture or continuing studies at the next level. (1A,B,C,D. 2A,B,C 3A,B,C,D 4A,B,C)

Program Outcomes:
Students who complete the ATS in Sustainable Agriculture and Resource Systems will be able to:

- Demonstrate skills and knowledge in the fundamentals of:
  - general agriculture production practices
  - tree fruit production practices in North Central Washington
  - general horticulture practices
  - sustainable and organic agriculture production
  - agri-business management
  - natural resources
  - viticulture principles and practices in Washington
- Demonstrate the ability to:
  - think critically (analyze, synthesize, evaluate and apply, problem solve, reason quantitatively and qualitatively) in workplace environments.
  - act responsibly as an individual and as a member of a team or group in a workplace environment.
- Acquire the training and education to seek employment or advance in current employment in agriculture related fields.
- Develop a foundation to continue their studies in agriculture or related fields.

Core Topics:

- The Horticultural Industry, History & Challenges
  - Pomology; Fruit & Nut Production
  - Olericulture & Food Plant Crops
  - Viticulture & Berry Crops Production
  - Floriculture, Greenhouse & Nursery Operations
- Horticulture (Food Crops) Production & Management
  - Growing & Cropping Systems
  - Plant Growth, Reproduction & Physiology
  - Plants Genetics, Biotechnology & World Food Supply
- Plants; Future Foods, Fiber & Fuels
- Careers and Career Pathways in Horticulture