Alaska Master Gardener Online Course Syllabus

1. Course Information

Title: Alaska Master Gardener Online  
Course Number: ED F595  
Credits: 3  
Prerequisites: None  
Location: Online  
Meeting Time: Self-Paced: Start date: May 28 to End date: August 16

2. Instructor and Teaching Assistant Contact Information

Instructor: Heidi Rader  
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Teaching Assistant: Glenna Gannon  
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Phone: (907) 452-8251 ext. 3281  
Website: http://www.uaf.edu/ces/gardening/mastergardeners/online/

3. Course readings/materials

All required readings/materials are Online. However, the Text can be purchased from Cooperative Extension Service by calling 1-877-520-5211 or emailing ces-pubs@alaska.edu


4. Course description

The Alaska Master Gardener Course Online is an intensive, sustainable gardening class that is specific to Alaska growing conditions. Topics covered are: botany, starting plants, soil, composting, season extension, greenhouses, landscaping, house plants, entomology, pest management, plant disease diagnostics, and sustainable gardening. The class covers growing vegetables, fruits, berries, and flowers.

5. Course Goals

The goal of the Alaska Master Gardener Course is to provide students with the knowledge and skills necessary to grow a successful garden and to assist others with through education in doing the same. The goal for teachers is that they will use these knowledge and skills in a classroom setting, in a school garden, or in an after school gardening project for youth.
6. Student Learning Outcomes
Students will learn what grows well in Alaska. They will learn how to test and improve their soil fertility through organic and conventional methods. They will learn how to extend the season. They will learn to grow vegetables, flowers, fruits, and berries. Students will learn to diagnose pest and diseases in plants. They will also learn about sustainable gardening methods. Students will learn what it means to be an Alaska Master Gardener and how they can fulfill their volunteer service to become a certified Alaska Master Gardener.

7. Instructional Methods
Students access the course using Blackboard Learn: classes.uaf.edu The course consists of Presentations, Readings, Quizzes, Final Exam, and a Discussion Board.

8. Course calendar (tentative): The Alaska Master Gardener Online Course is self-paced. The Course Outline is below:

Lesson 1: Welcome to the Kingdom of Plants

- Welcome to the Plant Kingdom
  1. The definition of “botany”
  2. Human relationships with plants
  3. Plant life cycles and bolting
  4. Overview of plant parts (roots, stems, leaves, modified parts, flowers, seeds)
  5. Physiological processes of plants (photosynthesis, respiration, transpiration)
  6. Factors that affect plant growth (light, temperature, water and humidity, nutrients)
  7. Plants in communities

- Botany Basics & Plant Identification

Lesson 2: Starting Plants in Alaska

- Starting Plants in Alaska
  A. Starting plants from seed
     1. Direct Seeding
     2. Starting Seeds indoors and transplanting
     3. Seed Starting Schedule
     4. Seed Planting depths for Alaska
     5. Seed Spacing
     6. Transplanting
     7. Saving Seeds
  B. Starting plants from plants

- Seed Starting

- Plant Propagation
Lesson 3: All About Dirt

- The Structure and Functions of Soil
  1. Soil composition
  2. Soil functions within an ecosystem
  3. Stages of soil formation
  4. Factors of soil formation
  5. Soil Life
  6. Organic Matter
  7. Soil Water
  8. Compaction
  9. NRCS Yukon Flats Region soil survey

- Soils and Fertilizers
- Composting
- The Alaskan Organic Garden
  1. 13 Essential Plant Nutrients
  2. How to improve Soil Fertility
  3. How to choose Your Fertilizers
  4. The Nitrogen Cycle
  5. Compost
  6. Organic Matter
  7. Lasagna Gardening

Lesson 4: Growing Vegetables in Alaska

- Growing Vegetables in Alaska
  1. Reasons to grow your own veggies
  2. Planning your garden
  3. Building a Raised Bed
  4. Garden Tools
  5. Tilling the soil
  6. Watering
  7. Fertilization
  8. Asparagus
  9. Harvest
  10. Food Preservation

- Vegetable Gardening
Lesson 5: Growing Fruits & Berries in Alaska

- Growing Fruits & Berries in Alaska
  1. What’s a fruit?
  2. Reasons to grow fruits in Alaska
  3. Considerations for fruit growers
  4. About hardiness zones
  5. Apples and their relatives
  6. Siberian kiwi
  7. Strawberry
  8. Raspberry
  9. Native berries

- Berry Crops & Home Orchards

Lesson 6: Season Extension & Greenhouses in Alaska

- Season Extension & Greenhouses in Alaska
  1. Crops that benefit from Season Extension
  2. Types of Season Extenders
  3. Greenhouses
    1. Types of Structures
    2. Choosing a Site
    3. Utilities
    4. Set-up or Layout
    5. Greenhouse Soil
  4. Management
  5. Economics

- Greenhouses & Season Extenders
Lesson 7: Landscapes in Alaska

- Landscaping with Annuals and Perennials
  1. Functions of a Landscape
  2. Microclimates
  3. Herbaceous and Woody Perennials, Bulbs and Annuals
  4. Watering, Seed Starting, Transplanting and Autumn Cleanup
  5. Plant Selection
  6. Focal Points, Massing and Formal and Informal Design
  7. Plant Selection by Biology, Color, Texture and Foliage
  8. Designing and Caring for Container Gardens
  9. Landscape Change

- Edible Flowers for the Home Landscape
- Sustainable Landscape Design
- Annual & Perennial Flowers
- Woody Landscape Plants
- Lawns

Lesson 8: House Plants

- House Plants Care & Propagation
  1. Plant needs
  2. Pruning and Propagation
  3. Potting and Repotting
  4. Troubleshooting and Common Pests

- House Plants

Lesson 9: Entomology

- Beneficial Insects
- Basic Entomology

Lesson 10: Pest Management

- Weed Management
- Vertebrate Pest Management
- Integrated Pest Management
Lesson 11: What’s Wrong with My Plant?

- Plant Nutrition

1. Nutrient composition of plants
2. Soil type and pH
3. Common signs of a nutrient deficiency
4. Nitrogen, phosphorous and potassium deficiencies
5. Magnesium, calcium (blossom end rot) and sulfur deficiencies
6. Iron, boron and other micronutrient deficiencies
7. The “limiting nutrient” concept
8. Nutrient deficiencies and pest/disease interactions
9. Over-fertilization

- Plant Disease Diagnosis & Management
- Plant Disease
- Diagnosing Plant Problems

Lesson 12: Gardening Wherever You are in Alaska

- Recommended Variety Lists all Around Alaska

1. Gardening Help Sheet for Nome & Surrounding Areas
2. Nome Varieties
3. Recommended Variety List for South Central Alaska
4. Recommended Variety List for South Eastern Alaska
5. Gardening in South Eastern Alaska
6. Recommended Varieties for Interior Alaska

- Variety Trials Conducted at the Agriculture & Forestry Experiment Station in Fairbanks, Alaska

9. Course policies: All quizzes and Assignments are due by August 12. To become a certified Alaska Master Gardener, 40 hours of volunteer service must be completed during the year after the course is completed. Information on volunteer requirements can be found here: http://www.uaf.edu/ces/gardening/mastergardeners/online/volunteer/

10. Evaluation:
Quizzes: 50% of Grade
Final Exam: 30% of Grade
Book Report and Lesson Plans: 20% of Grade
Must receive a 60% or better to receive a passing grade.
Grades are based on absolute scores, not on a curve.
11. Support Services
Computing Support: http://www.uaf.edu/uaf/computing/ is the most important UAF support service for this class. You will be especially interested in links that relate to Blackboard. The Helpdesk can help with userids and passwords to access the course. Their email is helpdesk@alaska.edu. In addition, students can contact their local Cooperative Extension Service Agent for Gardening, Food Preservation, 4H/Youth Development, and Natural Resource information and workshops in their community.

12. Disabilities Services
Reasonable accommodation to students with disabilities will be made in accordance with the Americans with Disabilities Act (ADA), to insure that UAF students have equal access to the campus and course materials. I will work with the Office of Disabilities Services (*208 WHIT, 474-5655) to provide reasonable accommodation to students with disabilities.