

CURRICULUM GUIDE FOR GARDENING STUDY SCHOOLS REVISED 6/28/2015
 Applicable to GSS Series beginning August, 2015 and after

COURSE I (10 hours)

BASIC BOTANY-- TEST: Open Book USE TEXT BOOK "BOTANY FOR GARDENERS 2.5 hours

- A. Plant anatomy (roots, stems, leaves, flowers)
- B. Plant requirements (light, temperature, water, humidity)
- C. Life cycle of plants (annuals, biennials, perennials)
- D. Reproduction (sexual, asexual - pollination and fertilization)
- E. Study of plant structure (specific plant group studied - use of hand lens or other visual aids)

SOILS TEST 2.0 hours

- A. Characteristics and structure of soil
- B. Soil testing (Extension Service/state)
- C. Function of soil
- D. Importance of roots
- E. Maintenance
- F. Fertilization (compost, fertilizers)

TECHNIQUES FOR GROWING OUTDOOR FLOWERS TEST 1.5 hours

- A. Environmental factors and choice of plant material
 - a. Weather, climate
 - b. Soil temperature
 - c. Cultivar selection -- Locally based important
- B. Organic gardening
- C. Crop rotation and landscape suitability
- D. Pruning and training of plants
- E. Problems and problem solving

PLANT PROPAGATION

- A. Seed selection lecture: 1.5 hours
 - a. Organic, non-GMO, non-organic
 - b. Seed storage and germination
 - c. Seedling success and transplanting
- B. Vegetative propagation
 - a. Bulbs, roots, corms, tubers, rhizomes
 - b. Layering
 - c. Stem and leaf cuttings
 - d. Grafting
 - e. Tissue Culture

C. Propagation workshop (hands on project) workshop 1.5 hours

SUPPLEMENTAL SUBJECT see Updated List on NGC GSS website 1.0 hour
 Study of specific plant group/regional -should: relate to course locally

WRITTEN EXAMS

See page 11 for more on exam requirements 3 hours allowed

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COURSE II **Total hours: 10 hours**

PLANT DISEASES AND GARDEN PESTS TEST: OPEN BOOK 2.5 hours
Site/Visit - farm, CSA, garden center, nursery, botanic garden, university extension

- A. Overview of good growing techniques
(Controls - organic and inorganic)
- B. Regional insect and disease problems
 - a. Seasonal
 - b. New insect/disease problems (add prohibited and invasive species in area)
- C. Beneficial insects - predators
- D. Problem solving/prevention
 - a. Sanitation
 - b. Interplanting
 - c. Mulching
- E. Examples of plant problems - disease and insects

Note: Students bring in examples

IRRIGATION AND WATER 1.5 hours

- A. Planting efficiently
- B. Water use and water saving factors
 - a. How much water is necessary?
 - b. Water problems - regional
 - 1. Water bans
 - 2. Water quality

LAWN ALTERNATIVES AND GROWING GRASS 1.5 hours

- A. Site preparation and selection of grass/plants
- B. Maintenance of site
- C. Problem solving

GROWING FRUIT TEST 1.5 hours

- A. Choice of varieties
- B. When and how to plant
- C. Training and pruning
- D. Environmental factors
- E. Problem solving and solutions

GROWING VEGETABLES TEST 2.0 hours

- A. Choice of varieties (organic, non-GMO, non-organic)
- B. When and how to plant
- C. Crop rotation and inter-planting
- D. Pest control
- E. Problems and solutions

SUPPLEMENTAL SUBJECT 1.0 hour

Suggested topics - Alternative plant groups instead of grass, regional fruit trees or shrubs,
vegetable - seed companies.

WRITTEN EXAMS

See page 11 for more on exam requirements

3 hours allowed

COURSE III

Total hours: 10 hours

SUGGESTED Site visit - Botanic Garden, Horticulture Center/Test Gardens, Commercial Seed Company, Hybridizer site, Garden Center, Nursery.

FACTORS THAT INFLUENCE PLANT GROWTH	TEST; Open book	2.0 hours
A. Environmental factors		
a. Local, regional conditions		
b. Light, water, and temperature		
c. Weather - Seasonal, drought, flood		
d. Pollution problems		
B. Nutrients - organic, inorganic		
C. Plant/cultivar choices		
NEW PLANT DEVELOPMENT AND EVALUATION		1.5 hours
A. Hybridization		
B. Cultivar selection Include Native Plants and Nativars		
a. Commercial operation - seed company		
b. Plant specialist - (i.e., plant society hybridizers)		
C. Environmental suitability		
D. Test gardens		
CONTAINER GARDENING - OUTDOOR	TEST	2.0 hours
A. Plants suitable for containers		
B. General culture		
a. Environmental, temperature, light, humidity		
b. Annuals, perennials, vines, etc.		
C. Types of containers		
a. Size, weight, and adaptability		
b. Single container, combination plantings, dish gardens, planters, and troughs		
HOUSEPLANT BASICS	TEST	1.5 hours
A. Growing conditions indoors		
B. Plant choices		
C. Training and pruning		
D. Types of indoor containers		
(Single container, combination plantings, dish gardens, terrariums)		
TEACHING TOUR OF A BOTANICAL GARDEN		2.0 hours
A. Indoor and outdoor plants		
B. Annuals, perennials, trees, shrubs, container plants, wildflowers, etc.		
SUPPLEMENTAL SUBJECT		1.0 hour
Suggested topics - Related plant group, hybridizing, weeds		
WRITTEN EXAMS		
See page 11 for more on exam requirements		3 hours allowed

COURSE IV

Total hours: 10 hours

Suggested Location - University or extension service, botanic garden

PLANT CLASSIFICATION AND NOMENCLATURE 1.0 hour

- A. Overview of all studied plants
- B. Binomial nomenclature - naming system Note: Keep it simple
- C. Important flowering/foilage plant groups

OUTDOOR IDENTIFICATION OF PLANTS TEST 3.0 hours

- A. Plant families
 - a. Characteristics
 - b. Local/regional choices
- B. Key/glossary and identification of plants (hand lens required)

SPECIALIZED STYLES OF GARDENING TEST 2.0 hours

- A. Sun/Shade gardening
- B. Greenhouse
- C. Organic
- D. Rock gardens/alpine gardens
- E. Hot beds and cold frames
- F. Hydroponics and aquaponics

TECHNIQUES FOR GROWING WOODY ORNAMENTALS TEST 1.5 hours

- A. Plant selection and environmental factors
- B. When and how to plant
- C. Training and pruning
- D. Specific problems and solutions

PRUNING TECHNIQUES 1.5 hours

- A. Overview of proper equipment/tools/training
- B. Trees and shrubs
- C. Perennials and annuals
- D. Any other - specific plant group
- E. Demonstration
 - a. Inside and outside
 - b. Participation by students

SUPPLEMENTAL SUBJECT 1.0 hour

Suggestion: Specific plant group

WRITTEN EXAMS

See page 11 for more on exam requirements 3 hours allowed

LIST OF SUGGESTED SUPPLEMENTAL SUBJECTS

The State GSS Chairman may suggest other subjects for approval by the Accrediting Chairman. Local interests will be considered.

Any plant-related subject approved by the NGC Accrediting Chairman.

A revised list is being developed. Until then, see the List of Supplemental Subjects included in the old curriculum (available on the NGC website) for ideas, and consider the following:

Gardening for Wildlife/Habitat – resources include National Pollinator Garden Network and The Million Pollinator Garden Challenge, and National Wildlife Federation (see NGC website: The Million Pollinator Garden Challenge)

Heirlooms (vegetables, flowers)

Invasive Plants

Reconciliation Ecology (see article in the Fall 2015 issue of *The National Gardener*)

Vermiculture/Vermicomposting