SYLLABUS

Horticulture 120: Survey of Horticulture
Plants are an irreplaceable component of life on earth. Horticulture, the art and science of the cultivation of plants, investigates the basic development of plants and the interaction of plants and society. This Survey of Horticulture course will provide an opportunity to learn basic plant science knowledge, to acquire lab skills relevant to the propagation of plants, to examine and understand the influence of plants on society, and to critically evaluate plant-related science issues in the media and everyday life. Throughout the course, students will be able to learn about and apply the scientific method thus allowing students to critically evaluate data and experimental design. This critical evaluation may then help students to make educated decisions about science-related issues.

Course Learning Objectives:
To learn the basic principles of plant science and acquire Horticultural skills
To acquire skills to critically evaluate literature as it pertains to science
To become informed citizens regarding global plant science issues
To facilitate community engagement and service to others
To examine and understand the influence of plants on society

Instructor:
Dr. Sara Patterson
spatters@wisc.edu
Office: Room 486 in Plant Sciences   262-1543
Office Hours: Monday 2:30-3:30 PM; Tuesdays 2-3 PM
Teaching schedule:
        MW 1:20-2:00; M 4-5:30; T 3:30-4:30; Th and F (Hort 120 labs all day)

Teaching Assistants:
Jean Reisterer-Loper
riestererlop@wisc.edu
Office: RM 494 Plant Sciences 262-8332
Office Hours: Monday 10-12 and by appointment RM 494 Plant Sciences
Labs: Thursday 301 and 302

Marc Amante
amante@wisc.edu
Office: RM 494 Plant Sciences 262-8332
Office Hours: MW 2:30-3:30 and by appointment PM RM 494 Plant Sciences
Labs: Friday 303 and 304

Service Learning Fellow
Lydia Odegard
lodegard@wisc.edu
Office: RM 494 Plant Sciences 262-8332
Office Hours: M2:30-3:00 bi-weekly and by appointment
RESPECT
All are welcome here regardless of your age, race, gender, background, political affiliation, or sexual orientation. This course is based on respect and any disrespect will not be tolerated. We are all, including myself and the TAs, both learners and teachers in this class. Your ideas will be received with the utmost respect even when in conflict with other’s opinions. We want to you feel comfortable in sharing your thoughts, comments, and questions even if they turn out to be misconceptions. If you ever feel you are not being respected by anyone that is a part of this class, please contact me, Marc or Jean via phone, email, letter, or in person.

REQUIRED TEXT:
none

LABS
Labs are required and it is recommended that one wear proper clothes and shoes for walking and gardening. On days that we go to Eagle Heights, bringing bags for produce will allow students to take home fresh veggies and flowers.

ADDITIONAL RESOURCES:
Learn@UW

Other books of special interest or for fun:


<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture #</th>
<th>Lecture Topic</th>
<th>Date, Lab</th>
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<tbody>
<tr>
<td>September 2</td>
<td>1 Wed</td>
<td>Discussion of syllabus and class expectations: Introduction to Horticulture and SERVICE LEARNING Plant Structure: General</td>
<td>SEPT 3-4 LAB 1 SERVICE LEARNING, Field Trip to Eagle Heights/planting arugula…</td>
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<tr>
<td>September 7</td>
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<td>LABOR DAY</td>
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<tr>
<td>September 9</td>
<td>2 Wed</td>
<td>Plant structure, seed germination, flowers and fruits</td>
<td>SEPT 10/11 LAB 2 Structure of Plants and basic Propagation in DC Smith Hort Greenhouse; Field Trip Allen Centennial Gardens (Flowering and Pollination)</td>
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<tr>
<td>September 13</td>
<td></td>
<td>SUNDAY 3:30-6:00 GRAPES and BEVERAGES (optional)</td>
<td>Food Science Labs</td>
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<tr>
<td>September 14</td>
<td>3 Mon</td>
<td>Plant cells and organs</td>
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<tr>
<td>September 16</td>
<td>4 Wed</td>
<td>Plant Classification: Apiaceae, Lamiaceae, Brassicaceae, Asteraceae</td>
<td>SEPT 17/18 LAB 3 Field Trip: Eagle Heights (Family ID)</td>
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<tr>
<td>September 21</td>
<td>5 Mon</td>
<td>Plant Classification: Poaceae, Fabaceae, Solanaceae</td>
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<tr>
<td>September 23</td>
<td>6 Wed</td>
<td>Plant Growth: Soil and Nutrition</td>
<td>SEPT 24/25 LAB 4 Field Trip: Eagle Heights: Soil structure and (Fabaceae and Solanaceae)</td>
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<tr>
<td>September 28</td>
<td>7 Mon</td>
<td>The Plant’s Environment: Light and Water</td>
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<tr>
<td>September 30</td>
<td>8 Wed</td>
<td>Plant Responses to the Environment: Photosynthesis, Respiration and Transpiration</td>
<td>OCT 1/2 LAB 5 Propagation II: Leaf cuttings, tubers and stems DC Smith Hort Greenhouse</td>
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<tr>
<td>October 5</td>
<td>9 Mon</td>
<td>EXAM 1</td>
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<tr>
<td>October 7</td>
<td></td>
<td>Responses Applied: Propagation, Pruning and Grafting</td>
<td>OCT 8/9 LAB 6 Eagle Heights – pick/harvest arugula and radishes/ seed collection, removal tubers, cleaning garden</td>
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<tr>
<td>October 12</td>
<td>10 Mon</td>
<td>Genetics</td>
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<tr>
<td>October 14</td>
<td>11 Wed</td>
<td>Responses to the Environment: Hormones and Tropisms</td>
<td>OCT 15/16 LAB 7 Olbrich Gardens</td>
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<tr>
<td>October 19</td>
<td>12 Mon</td>
<td>Greenhouse: Controlled Environments –guest lecture</td>
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<tr>
<td>October 21</td>
<td>13 Wed</td>
<td>Pests, Diseases, Weeds</td>
<td>OCT 22/23 LAB 8 Propagation III (transplanting, Bonsai,) @ DC Smith Hort</td>
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<tr>
<td>October 26</td>
<td>14 Mon</td>
<td>Pests, Diseases, Weeds</td>
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<td>Date</td>
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<td>Event</td>
<td>Notes</td>
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<tr>
<td>October 28</td>
<td>15 Wed</td>
<td>Woody Ornamentals – guest lecture</td>
<td>OCT 29/30 LAB 9 Campus Tree Walk / CUCURBITS</td>
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<tr>
<td>November 2</td>
<td>16 Mon</td>
<td>Post Harvest: Physiology</td>
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<td>November 4</td>
<td>17 Wed</td>
<td>Post Harvest: Physiology: Marketing and Economics</td>
<td>NOV 5/6 LAB 10 Propagation IV: Air layering, Pruning, Grafting @ DC Smith Hort &amp; Botany Greenhouse (Plant Diversity)</td>
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<tr>
<td>November 9</td>
<td>18 Mon</td>
<td>House Plants and Ornamentals</td>
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<tr>
<td>November 11</td>
<td>19 Wed</td>
<td>EXAM II</td>
<td>NOV 12/13 LAB 11 Propagation V - DC Smith – house plants</td>
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<tr>
<td>November 16</td>
<td>20 Mon</td>
<td>Herbs &amp; Spices and Medicinals</td>
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<td>November 18</td>
<td>21 Wed</td>
<td>Herbs &amp; Spices and Medicinals</td>
<td>11/21-22 LAB 12 Herbs &amp; Spices</td>
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<tr>
<td>November 23</td>
<td>22 Mon</td>
<td>PLANT BREEDING</td>
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<tr>
<td>November 25</td>
<td>23 Wed</td>
<td>PLANT BREEDING</td>
<td>NOV 26-29 Thanksgiving Holiday NO LAB</td>
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<tr>
<td>November 30</td>
<td>24 Mon</td>
<td>Turf- guest lecture</td>
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<tr>
<td>December 2</td>
<td>25 Wed</td>
<td>Plant Biotechnology</td>
<td>DEC3/4 LAB 13 DC Smith Hort Greenhouse &amp; Presentations</td>
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<tr>
<td>December 6</td>
<td>SUNDAY</td>
<td>SPICES around the world (optional)</td>
<td>FOOD SCIENCE</td>
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<td>December 7</td>
<td>26 Mon</td>
<td>Sustainable Practices</td>
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<tr>
<td>December 9</td>
<td>27 Wed</td>
<td>Sustainable Practices</td>
<td>DEC 10/11 LAB 14 DC Smith Hort Greenhouse &amp; Presentations</td>
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<tr>
<td>December 14</td>
<td>28 Mon</td>
<td>Semester Review</td>
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<tr>
<td>December 22</td>
<td>Wed</td>
<td>FINAL EXAM (7:45AM)</td>
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IMPORTANT DATES TO REMEMBER:
September 16   Service Agreement due
October 5   Exam I
November 11   Exam II
November 16   Service learning Completed
November 12/13   Presentation Topic Due
November 23   Service Paper Due
December 3/4   Presentations
December 10/11   Presentations
December 22   Final Exam 7:45AM (room to be posted)

• ASSIGNMENTS AND POINTS
  •Exam I       150 pts
  •Exam II      150 pts
  •Final Exam      250 pts
  •Total       550 pts

• SERVICE LEARNING PROJECT
  •Completion of 20 hours of service and paper  150 pts
    (service – 100 points; paper – 50 points)

• LABORATORY
  •Activities (Presentation and Class Participation)  130 pts
  •Quizes (weekly- can drop 2)    100 pts
  •Attendance        70 pts
  •Total for lab  300 pts

TOTAL       1000 pts

EXTRA CREDIT
  Includes ½ page reflection on the lab  25 pts for Food Science lab

GRADE SCALE
A        100-94%
AB       93-88%
B        87-84%
BC       83-78%
C        77-70%
D        69-60%
F        59-0%

*Late assignments will be penalized by 10% for each day it is late. Assignments turned in more than five
days late will not be accepted.

*Any student who has a disability and is in need of classroom accommodations should contact the
McBurney Disability Resource Center (phone-263-2741, tty-263-6393) and the instructor at the beginning
of the semester.

*Absences due to illness will be addressed on an individual basis, but all students who anticipate missing
lab must e-mail or call before class. In this case we will be willing to extend deadlines for assignments but
you will still be responsible for all work. If there are extended absences we may require make-up labs or
discuss the option of an incomplete grade in the course. A single absence from lab with an excuse results in
no point loss: additional labs are 15 points each lab.
PRESENTATIONS:

The last two labs are dedicated to greenhouse work and presentations. These are designed to allow students to briefly explore areas not covered in class and to provide an additional form of learning. It is suggested that students work in groups, but individuals are acceptable (approximately 5 minutes/student is expected). References/sources should be provided.

The presentations are challenging yet rewarding and best presentations receive prizes. All presentations that require a computer will need to be sent to instructor the day before as will need to be uploaded to laptop computer.

Suggestions include but are not limited to:

- Ancient Trees
- Exotic fruits
- Famous gardens in history
- Flax, Hemp and other Plant Fibers
- Fruits and vegetables in film
- Hydroponics
- Math and plants
- Music and plants
- Organic versus Conventional Agriculture
- Plants in Art
- Plant as Beverages through the world
  - Wine
  - Palm wine
  - Banana beer
  - Vinegar
  - Soy milk
  - Beer
- Plants as Dyes
- Plants in History
- Plants in Music
- Plants in Mythology
- Plants in Witchcraft
- Poisonous Plants
- Savage Plants
- Woods for Instruments
- New books on gardening/horticulture
- Michael Pollan and the Omnivore’s Dilemma (as pertains to plants)
- Native/sustainable foraging strategies…or…stalking the wild asparagus and making sure it remains
- Volunteer experience if unique
THE SERVICE EXPERIENCE

This assignment (20 hours service learning) is designed to give each student the opportunity to explore what's happening horticulturally in our community and to participate in some aspect of community service. It will be the responsibility of each student to arrange his/her service experience. The service contract needs to be turned in by Wednesday, September 16th and completed by Wednesday, November 16th. A short 3-5 pg paper summarizing activities will need to be completed by November 23rd. Almost any experience that will provide an opportunity to work with plants or horticultural crops will be suitable but will need to be preapproved if not on the list. (see SERVICE LEARNING at LEARN@UW for additional material on Service Learning or Morgridge Center/Volunteering @ red Gym or http://www.morgridge.wisc.edu/students/landingpages/localvolunteering.html)

General Garden Guidelines
Any garden-based landscape is based primarily on one important design core element – plant materials. That factor is that it is in a constant stage of change (mostly growth if conditions are right). While design and planting involves many elements, one major aspect is that plants continuously grow and spread, filling space. They all do that at different rates and sizes so good landscapers and designers have to know and understand the plant materials they are working with because a landscape is in constant flux as the materials they put in the ground establish and grow. Every plant species, variety or cultivar has its ideal cultural and environmental conditions for maximum growth and happiness. Gardens take significant work and community volunteers are often responsible for much of the maintenance. In your service learning, your contributions will be appreciated immensely.

In many cases you may find yourself frustrated or confused, as often the specific knowledge about a plant or the management of pests may be unknown to you. We encourage you to contact the professor or TAs as well as your agency supervisor.

Suggestions include but are not limited to:
* Allen Centennial Garden, Ed Lyon, 262-1542, eslyon@wisc.edu
* Botany Gardens and Greenhouse, Mohammed Fayyaz, mmfayyaz@facstaff.wisc.edu
* Campus Natural Areas, Bryn Scriver bscriven@fpm.wisc.edu
* Cider Farm, Mineral Pt, Deirdre Birmingham deirdreb@mindspring.com 608-967-2362 cell 608-219-4279
* City of Fitchburg, Director of Parks, Recreation and Urban Forestry 608 270-4288 or 4289
* City of Madison Parks department, 266-5949
* City of Madison Schools (many options)
* Community Action Coalition for South Central Wisconsin, Inc. Micah Kloppenburg (608) 246-4730 ext. 236 micahk@caacsw.org
* Community Gardens, Joe Mathers, joem@caacsw.org, 608-246-4730 ext. 212
* Community Groundworks – Goodman Youth Farm Jennica Skoug jennica@communitygroundworks.org
* Community Supported Agriculture (CSA) info@macsac.org, or phone (608) 226-0300
* Community Gardens, Joe Mathers, joem@caescw.org, 608-246-4730 ext. 212
* DC Smith Greenhouse Johanna Oosterwyk, jmooster@wisc.edu
* Eagle Heights Garden, Edward Woolsey, e.a.woolsey@mailbag.com
* FH King, fhking.students@gmail.com, www.fhkingstudentfarm.com/
* Independent Living, Dan, Volunteer Services Manager 608.268.9641 or coordinator@independentlivinginc.org
* Longenecker Horticultural Gardens UW Arboretum; Contact: David Stevens – Curator 608-890-4825 dstevens@wisc.edu http://uwarboretum.org/
* Madison Area Community Supported Agriculture (CSA) Coalition http://www.csacoalition.org/get-involved/
* Madison Children’s Museum, Julie Butler, 608.354.0142
* Madison Food Pantry http://foodpantrygardens.org
* Madison Senior Center John Weichelt-Volunteer Coordinator 608-267-2344
* Oakwood Village www.oakwoodvillage.net Savannah Bailey, savannah.bailey@oakwoodvillage.net
* Period Garden Park http://www.periodgardenpark.org/ Contact Joe Bonardi joebonardi@yahoo.com
* Reap Food Group: http://www.reapfoodgroup.org/ - Emily Latham - emilyl@reapfoodgroup.org; phone: (608) 310-7838
* Sustain Dane GROW- Rachel Martin rachel@sustaindane.org
* Troy Gardens (Community Groundworks), Patricia Lindquist, patricia@troygardens.org
* UW Organic Agricultural Research Stations (West Madison)
* UW O.J. Noer Agricultural Research Station, Tom Schaub, tgschwab@wisc.edu
* UW Arboretum, Native Plant Gardens: Susan Carpenter, 262-2445 or scarpen1@wisc.edu
* UW Arboretum, Restoration Project- http://arboretum.wisc.edu/get-involved/volunteer/work-parties/
* Walnut St Greenhouse Lynn Hummel, elhummel@wisc.edu
* Waterloo Restoration Project Marc Amante- amante@wisc.edu
* West Madison Agricultural Research Station
* Wisconsin Grape Growers –
* Wisconsin State Parks 266-2181
  
  jared.urban@wisconsin.gov
(608) 228-4349
Service-Learning Commitment Form for Horticulture 120

Name of Student: ____________________________________________________________

Name of Community Agency/Program: _________________________________________

Name of Agency Supervisor: _________________________________________________

Agency Supervisor phone number: ____________________________________________

Agency Supervisor email address: ____________________________________________

Address where service is being performed:

____________________________________

____________________________________

Brief description of work to be carried out by student:

____________________________________

____________________________________
To be provided to agency:

The agency agrees to:
- Provide a minimum of 20 hours of supervised volunteer experience to the student.
- Orient the student to the overall operation of the agency and its mission and to provide specific training or orientation to the student where appropriate.
- Designate a staff person to serve as the primary supervisor for the student.
- Notify the instructor or service-learning fellow of any problem with a student or of any relevant changes in the program or agreed upon activities.
- Provide brief feedback on the quality of the student’s work in the middle and at the end of the semester.

The student agrees to:
- Serve a minimum of 20 hours over the course of the semester.
- Establish a mutually agreed-upon schedule with the agency or project group to fulfill this commitment.
- Notify the agency supervisor when circumstances alter the agreed-upon schedule.
- Maintain strict confidentiality regarding all client information where applicable.
- Discuss any concerns about this placement with the agency supervisor, instructor, and/or service-learning fellow if they arise.

The instructor and TA agree to:
- Consult with agencies in identifying appropriate service-learning activities for the student, when necessary.
- Explain the objective of the service-learning experience to the student.
- Provide on-going follow-up support to students and/or agency supervisors around the service work, when necessary.
- Check in with both the student and the agency supervisor over the course of the semester to assess the student’s progress.

Agreed-upon schedule for service commitment:

___________________________  ___________________________
Signature of Student                  Date

___________________________  ___________________________
Signature of Agency Supervisor       Date

Note: work must be completed by November 16th
If any questions- please email Sara Patterson spatters@wisc.edu
or Lydia Odegard lodegard@wisc.edu