NOTE to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course Canvas site for enrolled students and may be more current than this sample syllabus.

Course Name: The Biology of Horticulture  
Course Number: HORT 301  
Term Offered: Spring and Fall  
Credits: 3  
Instructor name: Dr. Ryan Contreras  
Instructor email: ryan.contreras@oregonstate.edu  
Instructor phone: 541-737-5462  
Link to instructor bio or website: http://horticulture.oregonstate.edu/content/ryan-contreras

Course Description
Gain fundamental knowledge of plant growth and development of horticultural crops and understand how manipulation of growth systems affects growth and development. The course will progress from a micro- to macro-level, the last section covering how environmental factors affect growth and development. PREREQs: General biology or botany sequence.

Communication
Please post all course-related questions in the weekly General Discussion Forum so that the whole class may benefit from our conversation. Please email your instructor directly using the above email address for matters of a personal nature. I will reply to course-related questions and email within 24 hours. I will strive to return your assignments and grades for course activities to you within five days of the due date.

Course Credits
This course combines approximately 90 hours of instruction, online activities, and assignments for 3 credits.

Technical Assistance
If you experience any errors or problems while in your online course, contact 24-7 Canvas Support via chat, phone, or e-mail through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or need assistance logging into a course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email osuhelpdesk@oregonstate.edu or visit the OSU Computer Helpdesk online.

Learning Resources
All resources will be provided through Canvas.

Canvas
This course will be delivered via Canvas where you will interact with your classmates and with your instructor. Within the course Canvas site, you will access the learning materials, such as the syllabus, class discussions, assignments, projects, and quizzes. To preview how an online course works, visit the Ecampus Course Demo. For technical assistance, please visit Ecampus Technical Help.
Measurable Student Learning Outcomes
1. Communicate about plant growth and development using proper terminology accepted in the scientific community
2. Identify physical manifestations of “normal” and “abnormal” plant growth and development
3. Explain the underlying biological reasons for normal and abnormal growth and development
4. Predict how environment affects plant growth and development
5. Combine knowledge of biological phenomena and environmental effects to produce desired effects on plant growth and development

Evaluation of Student Performance
- Discussions 100 points
- Quizzes 100 points
- Midterm Exam I 50 points
- Midterm Exam II 50 points
- Final Exam 100 points
- Total 400 points

Grading Scale
Grade letter and associated Percentage floor
A 90 C+ 77 D 60
B+ 87 C 70 F 0
B 80 D+ 67

Course Content
Each week there will be a reading selection and associated lecture material in the form of a PowerPoint with voice recording. All times noted are Pacific time.

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<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Learning Activities</th>
<th>Due Dates</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to growth and development</td>
<td>One reading Three lectures Video on DD, GDD, Chill units Online discussion Quiz 1</td>
<td>For All Discussion Posts: First post due Wed., second post due by end of week. Quiz &amp; Discussion availability: Sunday Week 1 at 12 am until Sunday Week 2 11:59 pm.</td>
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<td>Life cycles of plants</td>
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<td>Heat and chilling accumulation</td>
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<td>2</td>
<td>Double fertilization</td>
<td>One reading Two lectures Three video links Online discussion Quiz 2</td>
<td>Quiz &amp; Discussion availability: Sunday Week 2 at 12 am until Sunday Week 3 11:59 pm.</td>
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<td>Embryogenesis</td>
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<td></td>
<td>Endosperm development</td>
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<tr>
<td>3</td>
<td>Seed structure and development</td>
<td>One reading Three lectures Two video links Online discussion Quiz 3</td>
<td>Quiz &amp; Discussion availability: Sunday Week 3 at 12 am until Sunday Week 4 11:59 pm.</td>
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<tr>
<td></td>
<td>Seed dormancy</td>
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<td></td>
<td>Seed germination</td>
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Midterm 1 will cover material from weeks 1-3 and be available: Saturday 12 am Week 3 to Sunday, Week 5 at 11:59 pm.
<table>
<thead>
<tr>
<th>Week</th>
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</tr>
</thead>
</table>
| 4    | Meristems and histogenic layers  
Phyllotaxy  
Shoot growth patterns | Two readings  
Three lectures  
Two video links  
Online discussion  
Quiz 4 | Quiz & Discussion availability:  
Sunday Week 4 at 12 am until  
Sunday Week 5 at 11:59 pm. |
| 5    | Phase change  
Bud Dormancy  
Acclimation | Two readings  
Three lectures  
Online discussion  
Quiz 5 | Quiz & Discussion availability:  
Sunday Week 5 at 12 am until  
Sunday Week 6 at 11:59 pm. |
| 6    | Flower process  
Flowering and environment  
Reproductive strategies | One reading  
Three lectures  
One video link  
Online discussion  
Quiz 6 | Quiz & Discussion availability:  
Sunday Week 6 at 12 am until  
Sunday Week 7 at 11:59 pm. |

**Midterm 2 will cover material from weeks 4-6 and be available:**  
**Saturday 12 am Week 6 until Sunday 11:59 pm Week 8**

| 7    | Fruit growth and seeds  
Managing fruit load  
Fruit maturity | One reading  
Three lectures  
Online discussion  
Quiz 7 | Quiz & Discussion availability:  
Sunday Week 7 at 12 am until  
Sunday Week 8 at 11:59 pm. |
| 8    | Hardiness zones and freezing  
Cold damage symptoms and types  
Physiology of freezing | One reading  
Three lectures  
Online discussion  
Quiz 8 | Quiz & Discussion availability:  
Sunday Week 8 at 12 am until  
Sunday Week 9 at 11:59 pm. |
| 9    | Drought and flood stress  
Heat and salt stress | One reading  
Two lectures  
Online discussion  
Quiz 9 | Quiz & Discussion availability:  
Sunday Week 9 at 12 am until  
Sunday Finals Week at 11:59 pm. |
| 10   | Light and photomorphogenesis | Two readings  
One lecture  
Online discussion  
Quiz 10 | Quiz & Discussion availability:  
Sunday Week 10 at 12 am until  
Sunday Finals Week at 11:59 pm. |
| **Finals** | **Final Exam:**  
Opens Friday of Week 10 @ 12 am  
Closes Wednesday of Finals Week @ 11:59 pm (Pacific) | | |
Course Policies

Discussion Participation
Students are expected to participate in all graded discussions. While there is great flexibility in online courses, this is not a self-paced course. You will need to participate in our discussions on at least two different days each week, with your first post due no later than Wednesday evening, and your second and third posts due by the end of each week.

Proctored Exams
This course requires that you take exams under the supervision of an approved proctor. Proctoring guidelines and registration for proctored exams are available online through the Ecampus testing and proctoring website. It is important to submit your proctoring request as early as possible to avoid delays.

Makeup Exams
Makeup exams will be given only for missed exams excused in advance by the instructor. Excused absences will not be given for airline reservations, routine illness (colds, flu, stomach aches), or other common ailments. Excused absences will generally not be given after the absence has occurred, except under very unusual circumstances.

Exam Time Limits
Exams in this class are timed; if you exceed the time limit on an exam, you will be assessed a penalty of 10% for every five minute interval beyond the time limit.

Incompletes
Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has turned in 80% of the points possible (in other words, usually everything but the final paper). If you are having any difficulty that might prevent you completing the coursework, please don’t wait until the end of the term; let me know right away.

Guidelines for a Productive and Effective Online Classroom
Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university’s regulations regarding civility.

Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.
Statement Regarding Students with Disabilities
Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Accessibility of Course Materials
All materials used in this course are accessible except some narrated lectures. If you require accommodations please contact Disability Access Services (DAS).

Additionally, Canvas, the learning management system through which this course is offered, provides a vendor statement certifying how the platform is accessible to students with disabilities.

Expectations for Student Conduct in this Online Classroom
Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility. Student conduct is governed by the university's policies, as explained in the Student Conduct Code.

Academic Integrity
Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit Student Conduct and Community Standards, or contact the office of Student Conduct and Mediation at 541-737-3656.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:
a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.
b) It includes:
   i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
   ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
   iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
   iv) TAMPERING - altering or interfering with evaluation instruments or documents.
   v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.
c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University’s Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Tutoring
NetTutor is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing lab where tutors critique and return essays within 24 to 48 hours. Access NetTutor from within your Canvas class by clicking on the NetTutor button in your course menu.

OSU Student Evaluation of Teaching
Course evaluation results are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. You will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.