

OLERICULTURE
Horticulture 320 – (UI PISc 451)
SYLLABUS

Fall 2014

Course Description: (3 credits) Science, business, and art of vegetable crop production: culture, fertility, growth, physiology, handling, marketing; garden, commercial, greenhouse, tropical, specialty vegetables. Recommended preparation: BIOLOGY 106, BIOLOGY 107, BIOLOGY 120, or HORT 202. Cooperative: Open to UI degree-seeking students.

Class Time:

Mon. & Wed. 3:30pm – 4:45pm

Meeting Location:

To be determined

Lab:

None

Instructor:

Jeremy S. Cowan, PhD

jeremy.cowan@wsu.edu

509-477-2145

Office Hours:

By appointment. Call, email or talk after class.

Student Learning Goals & Outcomes

WSU Learning Goal	Outcome: By the end of the semester, you will be able to:	Topic or activity to advance LG	How Evaluated
1 Critical & creative thinking	Determine vegetable crops can and/or should be grown in Washington and how they are produced in our climate	Lectures/readings on environmental factors and crops	Class exams; term paper; group activity
2 Quantitative reasoning	Develop enterprise budget and explain production planning for a vegetable crop	Lectures/readings on production systems and crops	Class exams; term paper
3 Scientific literacy	Describe the taxonomic, botanical, growth, and nutritional characteristics of vegetable crops	Lectures/readings on nutrition, botany, and production	Class exams; term paper
4 Information literacy	Find and evaluate the usefulness of different resources on vegetable crops	Term paper and presentation research	Term paper; presentation
5 Communication skills	Meaningfully contribute to group discussion; and, prepare and present scientific and crop production information	Class and group activities	Group activity; presentation
6 Diversity	Recognize and compare the values of working effectively alone and in groups	Class and group activities	In-class participation; group activity
7 Depth of learning	Demonstrate thorough understanding of vegetable crops, their importance economically, nutritionally, and their varied uses	Lectures/readings on vegetable crops, group activities, term paper research	Class exams, discussion, term paper, group activity

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FALL 2014 COURSE CALENDAR

Date	Lect. #	Topic of Discussion	Reading Assignment
Aug. 25	1	Course introduction	WV ch. 1
27	2	Vegetable nutrition	WV ch. 4
Sept. 1	--	Labor Day – NO CLASS	
8	3	Origin, domestication, general classification	WV ch. 2, PVC ch. 2
10	4	Botanical classification, growth & development	WV ch 3, PVC ch. 3
15	5	Environmental factors, propagation	WV ch. 6, PVC ch. 5
17	6	Soils, irrigation, pest management	PVC chs. 6 - 9
22	7	Harvest, handling, packing (Fellman)	PVC ch. 10, UCal 7254
24	8	Worldwide vegetable production systems	Heb. Univ. 8.01
29	**	MIDTERM EXAM #1	
Oct. 1	9	Organic production – certification & methods (Miles)	MSU Biernbaum, UCal 7247
6	10	Organic production – materials, pest control (Miles) Term paper topics due	UCal 7248, 7249, 7250, 7251, 7252, ATTRA IP188
8	11	Root and tuber crops – potatoes (Knowles)	WV ch. 9
13	12	Alliums – onions, garlic, shallots, leeks, other Discussion groups finalized	WV chs 17
15	13	Sweet corn	WV chs. 15
20	14	Hops & mint Term paper outlines due	WV ch. 28
22	15	Asparagus & cassava (Fellman)	WV chs. 11 & 25: pp. 645-56
27	16	Legumes – beans, peas, lentils	WV ch. 22
29	17	Root and tuber crops – carrots, table beets, other	WV chs. 20 & 21
Nov. 3	**	MIDTERM EXAM #2	
5	18	Solanaceous fruits – tomatoes, peppers, eggplant	WV ch. 23
10	**	Group Project Reports (written/oral) due	
12	19	Cucurbits – melons, cucumbers, squash, other	WV ch. 24
17	20	Cole crops – cabbage, broccoli, other	WV ch. 19
19	21	Salad crops – lettuce, celery, spinach Term papers due	WV ch. 18
24, 26	--	Thanksgiving Break – NO CLASS	
Dec. 1	22	Other interesting crops (Miles)	ATTRA CT 161, TBD
3	**	Term paper presentations	
8	**	Term paper presentations	
10	**	Term paper presentations	
18	**	3:10 - 5:10pm – FINAL EXAM – Location TBD	

Textbooks

Required

Title: World Vegetables: Principles, Production, and Nutritive Value 2nd Ed. (WV)
Authors: Vincent E. Rubatzky and Mas Yamaguchi
Copyright: 1997
Publisher: Chapman and Hall (International Thomsen Publishing)
ISBN: 0-412-11221-3

Optional

Title: Producing Vegetable Crops 5th Ed. (PVC – required readings will be provided)
Authors: John M. Swiader and George W. Ware
Copyright: 1997
Publisher: Chapman and Hall (International Thomsen Publishing)
ISBN: 0-412-11221-3

Exams

There will be two midterm exams, each 75 minutes, and one final exam, 120 minutes. Expect each exam to be comprehensive and primarily made up of short answer and essay questions. There may be multiple guess or true false questions at my option.

Term Paper & Presentation

Each student will select a unique, minor vegetable crop (including herbs and spices) that can be grown in Washington state and prepare a written report [6 – 10 pages, 12pt. font, double-spaced, with references (not included in the page count)] and presentation (5 – 8 minute slide or video presentation). An outline for your report will be due two weeks after report topics are finalized. Your report and presentation should cover the taxonomy, use and/or economic importance, propagation, disease and production issues, post-harvest handling, and marketing of the crop. You will also prepare an enterprise budget (not included in the page count) for the crop to be produced in a region of Washington of your choosing. Extra credit may be available if your report or presentation goes the extra mile and includes something of peculiar interest. Presentations will be delivered to the class during the final 3 class sessions of the semester. Your World Vegetables textbook is the best source of ideas for a minor vegetable crop to use as a topic for your paper. Peruse the table of contents beginning on page viii to see a listing of rare and interesting crops. Have fun with it.

Group Activity

Students will be divided into groups (4-5 people per group) and participate in a discussion activity. Each group will select a single crop and discuss the pros and cons (advantages/disadvantages, etc.) of producing that crop using each of the three major production systems (modern intensive, market garden/organic, and subsistence). Each group will choose a leader and all members of each group will be required to participate in at least four discussion sessions of one hour or more each. The group will submit a written report (3 pages), and all members of each group will participate in a verbal or video presentation to the class (up to 10 minutes long). Group participation will be graded by individual group members, and points for the group activity will be adjusted accordingly.

Extra Credit

Extra credit may be earned by submitting a 1 – 2 page (12pt. font, single-spaced) report on a news article about vegetables. The article must have been published in a mainstream news source, not in a specialty publication. The article may be on any aspect of vegetables from growing to end-uses. You may submit up to three (3) reports for up to five (5) extra credit points each. Each report will be graded on novelty (1 pts.; more credit for articles with unusual stories), spelling and grammar (1 pt.), presentation (1 pt.; did you accurately portray the story?), and analysis (2 pts.; did you demonstrate that you understood the story and made some connection with the topics or discussion in this class?).

Grading

Task	Value
Midterm Exam #1	33
Midterm Exam #2	33
Final Exam	34
Term Paper Outline	5
Term Paper Final Report	35
Presentation	35
Group Activity	25
TOTAL	200

Grade	Points	Grade	Points
A	≥ 187	C	138 – 146
A-	180 – 186	C-	130 – 137
B+	172 – 179	D+	120 – 129
B	163 – 171	D	110 – 119
B-	155 – 162	D-	100 – 109
C+	147 – 154	F	< 100

Expectations

You are expected to be a **positive, contributing member** of the class. Come to class prepared. Assist other students when you can. Do not disrupt or prevent learning by others. Students who do not meet these expectations may be expelled from a class or from the entire course.

Attendance

If you miss class, you are still responsible for the material covered. Either get notes from a classmate or do not miss class.

Electronic Devices

I recognize that we live in the 21st Century and that everything is digital today. Thus, I welcome you to take notes or look for resources on your laptop or tablet, but ask that you do everything in your power to prevent your device from disrupting class. This includes the drama involved in turning it on, finding an outlet, plugging it in, turning it on, and the annoying start up sounds, as well as the beeps, buzzes, and funny quips indicating that you have mail, a new comment or post, or an IM waiting for your attention. And please, keep your cell phones silenced and put away. Class is only an hour and a quarter and most things can wait.

Students with Disabilities

Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations **MUST** be approved through the Access Center.

Academic Integrity

WSU expects all students to behave in a manner consistent with its high standards of scholarship and conduct. Students are expected to uphold these standards both on and off campus and acknowledge the university's authority to take disciplinary action. The purpose of these standards and processes is to educate students and protect the welfare of the community. The standards of Conduct for Students can be found at <http://conduct.wsu.edu>. University instructors have the authority to intervene in all situations where students are suspected of academic dishonesty. In such instances, responsible instructors retain the authority to assign grades to students considering, from an academic standpoint, the nature of the student action. More information regarding responding to academic integrity violations can be found at <http://academicintegrity.wsu.edu/>. Feel free to contact the Office of Student Standards and Accountability (509-335-4532) if you would like more specific information about the process. Writing Programs (509-335-7959) can assist with proactive assignment design that minimizes intentional or unintentional academic dishonesty.

Safety

Washington State University is committed to maintaining a safe environment for its faculty, staff, and students. Safety is the responsibility of every member of the campus community and individuals should know the appropriate actions to take when an emergency arises. In support of our commitment to the safety of the campus community the University has developed a Campus Safety Plan, <http://safetyplan.wsu.edu>. It is highly recommended that you visit this web site as well as the University emergency management web site at <http://oem.wsu.edu/> to become familiar with the information provided.