EFB 496/796 – Grow What You Eat Fall 2017

Instructor:

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Office Hours:

9:00 a.m. to 3:00 p.m.
Monday – Friday by appointment

Class Days, Times and Rooms:

Lectures: Tuesday and Thursday afternoons, 12:30 – 1:50
Room 530, Illick Hall (greenhouse workroom)
Labs: Friday mornings, 8:00 – 11:00
Room 530, Illick Hall (greenhouse workroom)

Course Rationale:

Over the past forty years interest in food-related issues has exploded. This interest (some consider it to be an obsession) is often traced to the opening of the iconic Berkley, California restaurant, *Chez Panisse* by Alice Waters in 1971.

Unique at that time was Waters' insistence on seasonal and locally sourced ingredients – especially given the simultaneous increase in highly processed/packaged "convenience" (ready-to-eat/ready-to-heat) food products. These "foods" (including my favorite, Wild Berry Pop-tarts®) now make up more than sixty percent of all calories purchased in grocery stores.

Other significant concerns driving society's interest in food include real and perceived harmful/unsustainable practices associated with traditional production agriculture, the lack of access to fresh, non-processed foods by large segments of our country's disadvantaged and poverty-stricken populations, and the "obesity epidemic."

Responses to these interests/concerns include the proliferation of academic organizations such as Association for the Study of Food and Society; the Agriculture, Food, and Human Values Society; the Canadian Association for Food Studies; the Society for the Anthropology of Food and Nutrition, etc. "Food Studies" majors/minors/programs are also increasingly offered by higher education institutions including, as you know, at both SUNY ESF and Syracuse University.

The ESF and SU programs currently offer mostly food policy-oriented courses. I've learned over the past several years, however, that there's significant interest among our students for learning opportunities focusing on small-scale food production/horticulture in urban settings, both for their own benefit and out of concern for people with limited/no access to fresh, unprocessed food.

And that, I'm assuming, is why you've enrolled in this class?

Over the course of the semester I will introduce you to the science – and art - of growing food for yourself and others. Through a combination of video "lectures" and in-class problem-solving activities and discussions, assigned readings, "hands-on" laboratory exercises, field trips to local farms and crop production plan development, my goal is to help you develop the foundational

knowledge and skills needed to successfully propagate, grow and harvest a core group of herbs, vegetables, grains and fruits under a wide range of environmental conditions.

Learning Outcomes:

Upon completion of this course, it is my hope that you will have developed the knowledge, skills, and confidence to:

- Apply soil health management principles and techniques to the production of their own food.

- Clearly explain the basic physiological/developmental processes common to small-scale/urban herb, fruit and vegetable crops and diagnose symptoms expressed by these crops when the processes malfunction.

- Maximize the influence of desirable environmental conditions and minimize the influence of undesirable environmental conditions on food crops you're growing.

- Develop a plan for managing any pest on any crop using the "tool box" concept associated with Integrated Crop Management (ICM) and Integrated Pest Management (IPM) strategies.

- Show others how to perform basic sexual and asexual propagation techniques required in order to grow common herb, vegetable and/or fruit crops (e.g., seed, stem cuttings, budding/ grafting, layering, division, etc.).

- Explain to others the advantages/disadvantages of alternative production systems (e.g., polyculture, high tunnels, hydroponic, low-input, high density, etc.) for growing vegetables, grains and fruits under a wide range of environmental conditions.

- Locate, analyze and assess classic and recent literature associated directly (and indirectly) with small-scale/urban food production practices, and directly communicate with authors to confirm experimental methods and discuss unpublished observations.

- Analyze conditions associated with a failing crop (e.g., propagule source, environmental conditions, pest/pathogen pressure, etc.), and propose alternative strategies for future efforts.

- Demonstrate proficiency in the problem-solving, technical, and presentation skills required to develop, explain, and implement Integrated Crop Management plans for a range of food crops.

Note: Additional outcomes for graduate students enrolled in EFB 796 include:

- Instruct commercial growers on one or more specific aspects of growing one or more food crops - e.g., crop rotation strategies to reduce leaf diseases in tomato crops.

- Create, deliver and evaluate a one period "lecture" to advanced undergraduates in a "flipped" class format.

- Develop, deliver and evaluate a team-based, problem-solving exercise to advanced undergraduates that will reinforce and build upon "lecture" content developed above.

- Create, deliver and evaluate a laboratory exercise to advanced undergraduates that will reinforce and build upon the “lecture” and problem-solving exercise efforts above.

Required Textbook:

A copy of the textbook and the three "Cornell Recommends" are on reserve at the Moon Library reference desk. Assigned readings from the textbook and "Cornell Recommends" will be a source of questions found on quizzes, exams, etc.

“Vegetable Production and Practices”
Gregory E. Welbaum
Eighth Edition
Paperback ISBN-13: 9781845938024
Hardback ISBN-13: 9781780645346
CAB International, 2015

"2017 Cornell Integrated Crop and Pest Management Guidelines for Commercial Vegetable Production"

"2017 Cornell Integrated Crop and Pest Management Guidelines for Berry Crops"

"2017 Cornell Integrated Crop and Pest Management Guidelines for Tree Fruit Production"

Information for purchasing any/all of the "Cornell Recommends" can be found here.

Required Web Resources:

The online resources below are free and can be downloaded. Assigned readings from these resources will be a source of questions found on quizzes, exams, etc.

Also be aware that specific webpages will often be included as "assigned readings." As with content from the required web resources listed below, content from assigned webpages will be fair game as sources for questions on quizzes, exams, etc.

"Comprehensive Assessment of Soil Health - The Cornell Framework Manual"
Moebius-Clune, B.N., D.J. Moebius-Clune, B.K. Gugino, O.J. Idowu, R.R. Schindelbeck, A.J. Ristow, H.M. van Es, J.E. Thies, H. A. Shayler, M. B. McBride, D.W. Wolfe, and G.S. Abawi.
Third Edition
ISBN 0-967-6507-6-3 (print)
Cornell University, Geneva, New York 2016

"Cornell Guide to Growing Fruit at Home"
Eames-Sheavly, M., M. Pritts, C. Cramer, L. Bushway, I. Merwin, and R. Reisinger.
ISBN 1-57753-302-x (print)
Cornell University, Geneva, New York

"Fruit Production for the Home Gardener"
Crassweller, R.M., K. Demchak, S. Gripp, J. Halbrendt, R. Johnson, G. Krawczyk, J. Rytter, E. Sanchez, G. San Julian, M. Saunders, and J. Travis.
Pennsylvania State University, University Park, PA. 2006

Additional References:

Copies are on reserve at the Moon Library reference desk.

Agroecology - The Ecology of Sustainable Food Systems
Stephen R. Gliessman
Third Edition
ISBN-13: 9781439895634
CRC Press, 2015

Field and Laboratory Investigations in Agroecology
Stephen R. Gliessman
Third Edition
ISBN-13: 9781439895726
CRC Press, 2015

Supplies Needed:

10X hand lens, small (*sharp*) pocket knife, hand pruners (desirable)

E-mail:

Typically, I will post any updates, changes, additional resources, etc., to the "Notices" section of the course website. Therefore, I *strongly* recommend that you get in the habit of checking that page on a regular basis.

However, there's always a chance that there may be times when I can't access the website server.

When/if that occurs I will deliver updates to your 'syr.edu' address. If you do not check your 'syr.edu' on a regular basis, go to the SUmail redirect page to redirect your email to your preferred email address.

Attendance:

There is no attendance requirement/expectation for this course. However, as I mentioned on the course website home page, my hope really is that you're going to find this class to be one of the most interesting and useful you'll take during your time here at SUNY ESF. And, therefore you'll look forward to coming to every session.

Grading:

I'm not going to ask for a show of hands here, but . . . . , I'll bet at least a couple of your classmates jumped straight to this section? I believe we've all been programmed throughout our school years to focus on the importance of good grades - which I strongly believe is not the same as good/deep learning.

Grrrrrrrrr, I ***HATE*** the concept of "grades!" I believe the lazer-like focus on grades takes the focus off the bigger picture of *learning* - which I think is the whole idea of college, right? I would much rather you fail this class (don't freak out, it's not likely) and ***LEARN*** a lot, versus receive an "A" by being good at "playing the game" (i.e, cramming for quizzes, exams, etc.) - but actually learning very little over the course of the semester!

Therefore, I hope that you'll keep the following "Six C's" in mind as you make your way through this course - and the remainder of your undergraduate education and beyond.

Confidence - Over the course of the semester, you're going to be constantly buffeted from all directions - classes, work, relationships, family issues, etc. I encourage you to consider this class as undertaking a large-scale, long-term project. At times you're going to encounter obstacles that require you to dig deep and be resilient. Developing "grit" and "determination" now will give you the confidence you will need to succeed in the future.

Content - Believe it or not, you may likely become "the" SUNY ESF expert on some topic we address in this course. Instead of resisting this curiosity, be passionate about it!

Creativity - Gluing *content* together in ways that have never been imagined - often not intentionally, but sometimes with *confidence*, is the "holy grail" of this trait. Unfortunately, the blinders of getting a good "grade" more often than not squash creativity like a bug! I encourage you to create and share in this class.

Critical Thinking - Our understanding of how the natural world works, as well as our understanding of how little we actually know about how the natural world works means that the knowledge base for growing food sustainably is truly like putting together a giant jigsaw puzzle that's being constantly broken apart every time you look away! Your challenge will be constantly sift through the shifting sands of food production knowledge *(content)* to determine what information you'll use *(confidence)* to solve *(creativity)* your current growing concerns.

Collaboration - The idea of a lone wolf coming up with the "next big thing" (Amazon, Tesla, Facebook, etc.) just doesn't happen. Jeff Bezos, Elon Musk, Mark Zuckerberg, et. al., all collaborated with (many) others as their ideas were taking shape. While it may be easier to "just get it done" when it comes to group projects in this class, practicing your ability to focus the confidence, content expertise, creativity and critical thinking skills of your classmates to solve problems collaboratively will almost always lead to better results.

Communication - Have you ever thought about using your social media accounts to document your educational experiences (confidence, content expertise, creativity, critical thinking, collaborative skills) to show potential employers how you can help them effectively *communicate* their message? Have you ever used presentation software other than PowerPoint? Have you ever turned a PowerPoint presentation into a video that you've then embedded in your website (you do have a personal website, right)? My guess is that your answer is no to all of the above. I want to encourage you to take risks when communicating your learning experiences in this class. Even if it "bombs" spectacularly, as long as you've made an honest effort, you won't be penalized. I'm living proof that companies will hire you if you're a good communicator!

To tie these "Six C's" together, I strongly encourage you to watch New York Times columnist, Thomas Friedman's “Education and Average is Over” presentation.

I'm pretty confident in saying that most employers are never going to ask you what grade you received in this class - or even what your GPA was college. However, you might end up having them sitting up, listening intently and considering hiring you as you explain to them how they can grow picture perfect apples without pesticides on the trees in their backyard by using ziploc bags!

Now, having said all of the above, I do realize that focusing on grades is a hard habit to break, therefore, I want to assure you that if you actively engage in all components of the class it should be

pretty easy to get a pretty good grade. Getting a poor grade on a quiz, exam, lab assignment, etc., will probably reflect a lack of effort, rather than an inability to master and manipulate the knowledge and skills associated with this course.

Quizzes (20 x 10 points): 200 points

Mastering any type of performance involves repetition – whether it's playing a musical instrument, shooting free throws, learning the art and science of plant propagation, etc. The twenty quizzes (10 points each - you can drop the lowest score and double the highest score) you'll take at the beginning of most lecture periods this semester aren't intended to be annoying or punitive.

Rather, the intent is for the quizzes to encourage you to regularly review and reflect upon the material presented throughout the semester, continuously gluing and layering information together in different ways to help you develop a deeper understanding of the foundational knowledge and skills needed to successfully grow a wide range of food crops.

The quizzes will be cumulative (i.e., questions on the quizzes may be from any lecture, lab, field trip, supplemental reading, etc.) and are typically short answer (three to six or seven sentences) essays.

Assignments (2 x 50 points): 100 points

You will submit two, fifty point individual/small group assignments during the semester. They will be evaluated on their thoroughness, keenness of observation, accuracy and clarity. Instead of viewing them as "busy work" (like I did as an undergraduate), I encourage you to consider them as opportunities to practice communicating effectively via written documents, oral presentations and/or the creation of digital media content. Done well, these efforts can certainly be valid components of an "e-Portfolio."

"Grow What You Eat" Manuscript and Workshop Project: 200 points

This two-part assignment will provide you with an opportunity to dig deeply (sorry, couldn't resist) into a food crop production topic - e.g., growing tomatoes, potatoes, sweet corn, or apples for hard cider, weed management in the garden, etc. This may very well turn you into ***the*** SUNY ESF expert on the topic.

The first part of this project will be to write an article for submission to "Fine Gardening" magazine. This is not a hypothetical assignment - by the end of the semester ***you will*** submit a manuscript to this national gardening magazine!

The second part of this project will be to prepare and deliver a roughly ten minute presentation on your topic of choice as part of a "Grow What You Eat" Campus Community Workshop that the class will host from 8:00 a.m. to 11:00 a.m. in Illick 12 on Friday, December 8th during the last meeting of the class. In addition, you will convert your presentation into a video that will be archived on this website as a reference for future students in this class - as well as campus community members.

A tentative rubric for assessing your effort on this assignment can be found here.

For inspiration, you can watch the videos created by students in my 2017 spring semester "Plant Propagation" class as part of a full day workshop they delivered for Cornell Cooperative Extension "Master Gardener" trainees as part of their final project.

Exams: 300 points

There will be three, one hour exams (100 points each) over the course of the semester. While each exam will focus primarily on material covered since the preceding exam, they will be cumulative. Like the quizzes, the questions will generally be short answer/essay. However, any given exam could theoretically consist entirely of true/false questions, short answer questions, or even a single, multiple part question to be answered in essay form.

If you come to class (and participate in discussions), actively participate in the labs, watch the assigned videos, do the readings and study (this is college, after all), the exams will be a challenge. Their intent is two-fold; to encourage the repetition required to make the knowledge and skills associated with growing your own food second-nature to you, and to develop your critical thinking and communication skills - not to stress you out!

Final Exam: 200 points

The final exam will be cumulative, covering not only the material and discussions presented during the lecture portion of the course, but also lab assignments, field trips, and the “Fine Gardening” manuscripts and workshop presentations prepared by your classmates. The questions on the final exam will be similar in form to those found in the one hour exams.

Grading Scale:

A+	970 – 1000 points	C	730 – 769 points
A	930 – 969 points	C-	700 – 729 points
A-	900 – 929 points	D+	650 – 699 points
B+	870 – 899 points	D	570 – 649 points
B	830 – 869 points	D-	500 – 569 points
B-	800 – 829 points	F	<500 points

Academic Integrity:

I will do my best to deliver a course that is worth your time and effort. If I do not clearly present materials in lecture or during labs, please do not hesitate to ask for clarification. If I can be helpful in directing you toward additional information on a topic of interest to you, please ask during class, send me an email, call, and/or stop by my office.

In exchange, I expect you to be an engaged and respectful participant in the course. As with most things in life, the more effort you put into this course, the more you’ll get out of it.

Also, it should go without saying that I expect you to present your own work. Incidents of cheating, plagiarism and other forms of academic dishonesty will result in the failure of specific assignments and/or the entire course. Please consult the SUNY ESF *Academic Integrity Handbook* for additional information on academic integrity.

Notes: