



Please Note: This *Course Outline* is an important step in updating the format of our distance courses. If for any reason the *Course Outline* does not match the print *Course Guide* or online course information, the *Course Outline* shall be taken as correct.

COURSE SYLLABUS

COURSE TITLE:	Medicinal and Aromatic Plants		
COURSE CODE:	HORT 29.3	TERM:	Winter 2014
COURSE CREDITS:	3	DELIVERY:	PHC
COURSE SECTION:	2013-14 W02/W06		

Course Description

Medicinal and Aromatic Plants is a course of study designed to assist students of the Prairie Horticulture Certificate develop and enhance their knowledge at both a backyard and commercial level.

Course Objectives

This Course provides introductory information in the production, processing, and marketing of medicinal and aromatic plants on the prairies. It also provides foundational information in the development of an herb enterprise.

Upon completion of this Course you should know be able to:

- identify medicinal and aromatic plants that are suitable for commercial and non-commercial cultivation on the prairies
- outline steps in planning and developing a field production operation for selected medicinal and aromatic plants
- determine the basic herb processing alternatives and uses of herbal products
- investigate marketing strategies for medicinal and aromatic crops and determine buyers' requirements.

Course Overview

This Course consists of the following nine modules:

Module 1: Introduction to Medicinal and Aromatic Plants

Module 2: Plant Physiological Processes and Environmental Factors

Module 3: General Crop Production and Management

Module 4: Crop Production of Selected Medicinal Plants

Module 5: Crop Production of Selected Aromatic Plants

Module 6: Wildcrafting Practices

Module 7: Processing and Packaging Alternatives

Module 8: Industry Regulations and Quality Control

Module 9: Marketing Medicinal and Aromatic Plants

Appendices: Internet Resources; Testing Laboratories; Organic Standards and Certification; Seed and Plant Sources; Wildcrafting Resources; Regulations and Standards; Processors, Manufacturers, and Analytical Services; Growers and Industry Associations.

Your Instructor

Vanessa Ross Young

Contact Information

You will communicate with your instructor through the Blackboard Learning System, Messages (Course Mail) on all matters. You can expect a reply, from the messages (course mail) tool, within 48 hours. Instructors will not be using your personal email for communication. If you do need to speak with the instructor directly, a contact number is listed below

Phone: 306-966-5097

Available weekdays between 9:30 and 4:00 PM CST

Your instructor will be contacting you via messages (course mail) early in the term. Please reply to their initial contact. They may follow up with a phone call

Profile

Vanessa Ross Young started teaching on Campus in the Biology Undergrad labs in 2002 and has been with the University ever since. In addition to her work with PHC, she also coordinates the U of S Master Gardener Program where she instructs workshops in Botanical Latin, Botany, Soil Science and Communications. Between scheduling courses and workshops, hiring instructors, developing curriculum and teaching for the U of S Master Gardener Program, Vanessa also does freelance photography and raises three very busy little boys.

Required Resources

Readings/Textbooks

Marketing on the Edge: A Marketing Guide for Progressive Farmers

Available from Farm Management Canada website

<http://www.fmc-gac.com/publications/marketing-edge-marketing-guide-progressive-farmers>

Referred to in reading list below as MOE

Miller, R. A. (1985). *The potential of herbs as a cash crop*. Kansas City, Missouri: Acres, USA. ISBN: 0-9-11-311-55-6

Textbooks are available from the University of Saskatchewan Bookstore:
www.usask.ca/consumer_services/bookstore/textbooks

Other Reference Materials

Saskatchewan Herb and Spice Association (2001').
The Herb and Spice Production Manual. Sinaluta, SK

This manual is available as a text (print) and a CD-ROM from the Saskatchewan Herb and Spice Association at <http://www.saskherbspice.org/publications.html>. We recommend the text version.

Supplementary Resources

The following video is not required for this Course. However, you might be interested in purchasing it:

Healthful Herbs in the Home Garden. Video #99. University of Guelph

This video was developed as part of the Study Program University at the University of Guelph. It is designed for home gardeners and hobbyists interested in healthful herb care and production of healthful products. Cost: \$39.95 (includes taxes, shipping and handling). Contact Independent Study, University of Gulf, Gulf, ON NAG 2W1

Course Schedule

Week	Module	Readings (from your textbook unless otherwise stated)	Evaluation Due Date
1	Module 1: Introduction to Medicinal and Aromatic Plants And Module 2: Plant Physiological Processes and Environmental Factors	MOE: Consumer Trends Miller: Chapter 1: The survival of the small farm through alternative agriculture, pp. 1–12.	
2	Module 3: General Crop Production and Management	MOE: Site Location for on farm retail MOE: Facilities Miller: Chapter 2: Some fundamental soil considerations, pp. 13–34.	

		<p>Miller: Chapter 3: Some basic farm practices, pp. 35–58.</p> <p>Miller: Chapter 4: Basic farm machinery, pp. 59–74.</p> <p>Miller: Chapter 5: The farm plan, with specific examples, pp. 75–96.</p>	
	Assignment 1	Basic Input Cost Analysis – 10%	Jan 28, 2014
3 and 4	<p>Module 4: Crop Production of Selected Medicinal Plants</p> <p>And</p> <p>Module 5: Crop Production of Selected Aromatic Plants</p>	<p>Miller: Table 6: Soil, light and propagation methods, pp. 50–54; and</p> <p>Miller: Table 18: Dehydration and storage requirements for most herbs and spices, pp. 110–113.</p>	
5	Module 6: Wildcrafting Practices	Miller: Chapter 11: Foraging as a source for supplemental rural incomes, pp. 199–216.	
	Assignment 2	Compare three plants, current research, value – 20%	Feb. 11, 2014
6	Module 7: Processing and Packaging Alternatives	<p>MOE: Value Added Processing</p> <p>Miller: Chapter 6: Techniques for Bulk Dehydration and Storage, pp. 97–117.</p> <p>Miller: Chapter 7: The Art of Processing, pp. 119–135.</p> <p>Miller: Chapter 10: The Cottage Industry, with Specific Examples, pp. 181–197.</p>	
7	Module 8: Industry Regulations and Quality Control	<p>MOE: Regulations</p> <p>Readings to be found online:</p> <p>Health Canada: Natural Health Products http://www.hc-sc.gc.ca/hpb/onhp/welcome_e.html</p> <p>Small, E. and Catling, P.M. 1999. Canadian Medicinal Crops, pp. 177–181. See</p>	

		http://www.monographs.nrc.ca/cgi-bin/cisti/journals/rp/rp2_book_e?melist2_301e WHO Guidelines for the Assessment of Herbal Medicines. WHO Technical Report Series, No. 863, WHO Geneva, 1996. See http://www.who.int/medicines/library/trm/medicinalplants/assherbal.shtml	
8	Module 9: Marketing Medicinal and Aromatic Plants	MOE: Types of Direct Marketing MOE: Components of Direct Marketing MOE: Marketing Plan MOE: Merchandising MOE: Advertising and Promotion Miller: Chapter 8: Direct (retail) marketing, pp. 137–154. Miller: Chapter 9: Bulk marketing, pp. 155–180. Miller: Chapter 10: The cottage industry, with specific examples, pp. 181–198.	
	Assignment 3	In depth investigation of one plant in areas covered by module 7-9, make a plan – 40%	March 11, 2014
	FINAL EXAM	Final exam is worth 30%	March 29, 2014

Please note that the above schedule is just a rough estimate of how you should balance your time. Feel free to work as fast or slow as you want as long as the assignments are completed and emailed on time.

Note: If for any reason the Course Outline Reading List does not match the Module Reading List, the Course Outline shall be taken as correct.

Grading Scheme

Assignment One	10%
Assignment Two	20%
Assignment Three	30%
Final Examination	40%

Total	100%
-------	------

Information on literal descriptors for grading at the University of Saskatchewan can be found at: <http://www.usask.ca/calendar/> then follow the links to see Exams & Grades/Grading system.

Please note: There are different literal descriptors for undergraduate and graduate students.

More information on University policy related to grading and examinations can be found at: <http://policies.usask.ca/policies/academic-affairs/academic-courses.php>

The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors, and the institution. A copy of the Learning Charter can be found at: <http://policies.usask.ca/documents/LearningCharter.pdf>

Evaluation Components

The purpose of this class is to walk you through all the considerations necessary to successfully manage a medicinal or aromatic crop of your own. As such, the primary assignment for this class is to build the framework of a usable plan for you to grow your selected crop. Each assignment in this class will work towards the final goal of preparing an integrated plan. The integrated plan is the major assignment of this class and is worth 40% of your final grade.

Assignment 1: Inventory of Capital Costs

Value: 10% of final grade

Due Date: January 28, 2014

Purpose: Student will make an inventory of their current assets and needs for field and/or greenhouse production.

Description: Consider the crop production options discussed in your modules and decide if a field or greenhouse production (or a combination thereof) is best for your situation. List all of the capital costs necessary to grow a general medicinal or organic crop in your area – make sure to include buildings, equipment and land that would be required. As you have yet to decide a crop, you do not need to consider costs specific to an individual plant (such as seed costs) in this example. You may scale this assignment to whatever amount of product is reasonable to your desired production needs. Your assignment should be one to two pages long and should include the following information:

1. Write a brief description of the scale of your proposed production – is it a backyard scale or a field scale? Ask yourself, “How much product do I want to produce?” Why have you chosen to grow this amount of product?
2. Create a chart detailing the capital costs (including buildings, equipment, machinery, and land) necessary to meet this scale of production. If you do not currently own or have access to the necessary resources, list an estimated cost next to this item.

Assignment 2: Comparing Plants

Value: 20% of final grade

Due Date: February 11, 2014

Purpose: The opportunity to think about and integrate what you are learning and apply your learning to practice. Students will research three different plants and evaluate this information to decide which crop will work best for their situation.

Description: Select **three** medicinal, aromatic, or wildcrafted crops that you may be interested in growing. These crops may be chosen from your textbook or selected from other medicinal, aromatic, or wildcrafted plants outside of the course materials. For each plant make a chart of the following information:

1. Describe your reasons for choosing this plant to investigate.
2. In point form, list a quick overview of the general growing requirements, insect, pest and disease issues of this crop.
3. Decide if the growing requirements dictate the need to grow it in a field, greenhouse or combination of both.
4. What scale is reasonable to successfully grow this crop? Refer to Assignment one for a discussion on scale.
5. List a minimum of three different ways to sell the plant once it is harvested. You do not need to be specific here, this is a quick survey to help guide your decision making process.
6. Based on the information gathered in Assignment one, list any specialized capital costs that are required in your situation to successfully grow this crop from seeding through to market. You do not have to list anything that is already listed in Assignment one. Do not overlook that some crops have special harvesting needs.
7. Look up the current price to purchase seed for your plant. You may wish to consult the appendices for references.
8. Explain how much labour would be necessary to successfully grow each crop at your desired scale from seed to harvest to market. That is, can one person successfully grow it on his or her own or will there be peak times when additional labour is necessary? If so, estimate the need. For example, perhaps during harvest, 2 additional people would be necessary.

Based on the information gathered above, decide which crop of the three would be best for you to grow. Defend your answer in one paragraph.

Assignment 3: Final Project

Value: 30% of final grade

Due Date: March 11, 2014

Purpose: The opportunity to think about and integrate what you are learning and apply your learning to practice. Each student will create a basic, individualized growing and marketing plan for one medicinal, aromatic or wildcrafted plant.

Description: Choose **one** of the crops that you researched in assignment 2 that could provide you with a viable operation. For example, growing peppermint for aromatherapy, or borage for oil. Students will expand on the information provided in Assignment 2 to create a more detailed plan for successfully moving their chosen product from seed through to market.

1. Develop a plan for growing this crop beginning with crop establishment and ending with shipping your product to a buyer.

2. Detail every step along the way specific to your operation. For example, describe how you would grow the crop in your operation. Outline the field size, soil type and texture, any pre-seeding activities.
3. Describe planting or seeding methods along with all fertilization and pest control considerations. Detail when and how the crop will be harvested, as well as all post harvest handling.
4. Describe your processing and storage facilities.
5. List any and all post harvest processing steps.
6. Outline how you will sell your product and whether you will perform any value and added processing. If so, describe these processes.
7. Consult current research to inform and defend your harvesting and marketing decisions.
8. Discuss the regulations you have to comply with in order to bring your product to market?
9. Detail your marketing strategy. For example, direct sales, internet marketing, buyer, a third party such as a restaurant.

Final Exam

Value: 40% of final grade

Final Exam Date: MARCH 29, 2014

Description: The final exam will be **closed book** and will include material from all parts of the course. It will be two hours long. The exam will be composed of multiple choice, fill-in-the-blanks, matching and short answer questions requiring three or four sentences to answer fully as well as essay style questions. In answering these questions you should include as many specific details as you can to demonstrate a clear understanding of the material presented in the course guide.

Note: Students must apply to write the final examination. Deadline for application is February 3, 2014. The application form can be found in the course menu. You will be given a time and date to write the exam at an examination centre in your province approximately two weeks before the final examination date.

Final examinations will be held at selected centres throughout the prairies. These selected centres are classified as "regular" centres. Regular centres will be established at sites where there is a large concentration of students in the surrounding area. No fee will be charged for writing a final examination at a regular centre.

If you are unable to write the final examination at a regular centre, you may apply for establishment of a "special" centre and will be responsible for making your own arrangements to write the examination under the supervision of an approved invigilator. You will be responsible for any financial reimbursement that might be required.

Further information regarding final examination sites, forms and how to apply for establishment of a special centre is located in the PHC handbook.

Please do not send in your application for final examination to your instructor. It must be returned to the location on the application form.

Additional Information

Module Activities

Activities are designed to help your learning. We encourage you to actively go through the following steps for each module:

Research demonstrates that we remember more if we write things down. Writing out definitions and answers will help prepare you for the exam.

- write out definitions for Key Terms and Concepts and add new ones that you find as you study the materials
- write out answers to the Study Questions
- identify questions and mark any items that you have trouble understanding
- discuss questions and any confusion you have with your tutor
- add your own comments from your observations and experiences about a particular topic

Being an active learner in this way helps make the experience much more satisfying, and enables you to learn much more effectively.

Assignment Submission

To obtain your best mark, you should complete all assignments and attempt all questions in each assignment in the course. If you know only part of the answer, put it down and you may receive partial marks. Remember, instructors find it very easy to mark a question that has not been attempted.

You are expected to submit assignments by the due dates indicated in your Course Syllabus. The instructor has the discretion to penalize late submissions or not. Assignments submitted beyond the final exam date may or may not be accepted by the instructor. If you experience legitimate problems such as accident or family illness, discuss it with your instructor so that some suitable arrangement can be worked out.

Before submitting any assignment, ensure to save a backup copy of it in case the original is lost.

All of the assignments are located under assignments in the course menu .

Please submit all assignments online, using the Assignments tool in Blackboard.

Assignments Tool in Blackboard:

1. From the Course Home Page, on the left menu click Assignments.

2. On the Assignments page, click the Assignment you want to submit and download any attached files.
3. In the Upload Assignment area, key in the Assignment Materials text box or attach your file. Note the file naming rules.
4. Add any Comments for your instructor.
5. Click Submit to submit the assignment.
6. Review Submission History that appears after you Submit. Click OK if you need to go back and revise.

For Further Information about Using the Blackboard Assignments Tool:

1. From inside Blackboard, click on the Help tab to see U of S Course Tools/BBLearn 9.
2. On the tool bar under Course Tools, click the Students' Help tab and then click one of the following options:
 - Videos and then click Working with Assignments (2 min 59 sec video).
 - Course Tools Help Documents and click Working with Assignments (a pdf document)
 - FAQs

Checking Your Assignment Grades

1. From the Course Home Page, on the left menu click My Grades.
2. To see the grade for the specific assignment, click on the assignment grade.

Evaluation and Grading

The following criteria are considered in grading assignments and the final examination:

- demonstrated analytical/critical insight and ability
- evidence of appropriate level of understanding of course content
- breadth/depth of coverage of the question(s)
- assignment organization
- syntax, technical errors, clarity of expression.

Integrity Defined (from the Office of the University Secretary)

“Integrity is expected of all students in their academic work – class participation, examinations, assignments, research, practica – and in their non-academic interactions and activities as well.”
(Office of the University Secretary)

It is your responsibility to be familiar with the University of Saskatchewan [Guidelines for Academic Conduct](http://policies.usask.ca/documents/Guidelines%20for%20Academic%20Conduct%201999.pdf). More information is available at <http://policies.usask.ca/documents/Guidelines%20for%20Academic%20Conduct%201999.pdf>

acknowledgements

Course Author(s)

Jill Turner, BSA, M.Sc PAg, CCDE, University of Saskatchewan
Vanessa Ross Young BSc, CCDE, University of Saskatchewan

CCDE Instructional Design and Course Development

Instructional Designers:

Shelly Balbar
Jordan Epp

Support Staff:

Cindy Klassen
Diana Hebig