

**NRM 212**  
**GREENHOUSE MANAGEMENT**  
**Spring – 2018**

**Schedule**

Monday            2:15 PM - 5:15 PM, AHRB 1W05

**Course Objective:**

To guide students to an understanding of greenhouses and other controlled environment production systems with emphases on use, applications, management and operation.

**Expected Student Outcome:**

Students should understand major design and construction requirements for a greenhouse to function as an efficient growing environment for various crops. Students should also understand environmental control systems and management practices such as media, irrigation, fertilization, crop production systems and pest management. Students should have ability to recognize and appreciate opportunities and challenges for efficient greenhouse use under northern conditions.

**Instructor:**

Dr. Meriam Karlsson, Professor of Horticulture

*Office:* 1W04 Arctic Health Research Bldg., 474-7005, mgkarlsson@alaska.edu

*Office hours:* Tuesday and Thursday 10 am -12 noon or by appointment, 1W04 AHRB

**WEB:**

Blackboard <https://classes.alaska.edu/>

Virtual Grower 3

<http://www.ars.usda.gov/services/software/download.htm?softwareid=309>

**Recommended Text:**

Greenhouse Operation and Management, 7th ed., by Paul V. Nelson, 2012, Prentice Hall, Pearson Higher Education, ISBN 9780132439367  
(list price new \$267.00, rent used \$106.80).

**Supplemental Text:**

Greenhouse Engineering, 3rd revision, by R.A. Aldrich and J.W. Bartok Jr., 1994, NRAES-33, Ithaca, NY.

([http://host31.spidergraphics.com/nra/doc/Fair%20Use%20Web%20PDFs/NRAES-33\\_Web.pdf](http://host31.spidergraphics.com/nra/doc/Fair%20Use%20Web%20PDFs/NRAES-33_Web.pdf))

Greenhouse Technology and Management, 2nd ed., by N. Castilla, 2012, CABI, Boston.

Greenhouses, Advanced Technology for Protected Horticulture, by J.J. Hanan, 1998, CRC Press Boca Raton, Florida.

Greenhouses for Homeowners and Gardeners, by J.W. Bartok, Jr., 2000, NRAES-137, Ithaca,

**Evaluation Policy:**

Grades will be based on exams, one literature review, the greenhouse design project and class participation. The relative importance of each component for the final grade is indicated below:

|                           |                       |
|---------------------------|-----------------------|
| Exam I                    | 200 (20%)             |
| Exam II                   | 200 (20%)             |
| Final Exam                | 300 (30%)             |
| <br>                      |                       |
| Greenhouse Design Project | 200 (20%)             |
| <br>                      |                       |
| Literature Review         | 50 (5%)               |
| Class Participation       | <u>50 (5%)</u>        |
|                           | 1,000 points (= 100%) |

Letter grades will be determined using the following scale:

|   |                |
|---|----------------|
| A | 90.0 to 100 %  |
| B | 80.0 to 89.9 % |
| C | 70.0 to 79.9 % |
| D | 60.0 to 69.9 % |
| F | Below 59.9 %   |

Borderline grades may be curved based on class participation, attendance and student progress during the semester. No make-up exams will be given unless there is a verifiable emergency or arrangements have been made with the instructor prior to the scheduled due date and time.

**Student Code of Conduct:**

The UAF Student Code of Conduct includes the following common guidelines regarding academic integrity:

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**NRM 212-Spring 2018, tentative schedule** ([pages Nelson, 2012. Greenhouse Operation and Management, 7th ed.](#))

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|             |   |                     |
|-------------|---|---------------------|
| January 22  | Course introduction,<br>Greenhouse definitions and industry characteristics       | p. 1-33             |
| January 29  | Greenhouse designs and construction   | p. 35-76            |
| February 5  | Greenhouse heating  | p. 77-123           |
| February 12 | Greenhouse cooling and environmental control systems                              | p. 125-149, 151-159 |
| February 19 | Root subreenhj EMC /P <</MCID 16 >>BDC c1(e)4( c)4(ool)-2t355.7Td (p. )sTj 2.839d |                     |