

Dakota College at Bottineau Course Syllabus

Course Prefix/Number/Title: **HORT 125 Aquaponics Practicum I**

Number of credits: 1 To 4 Credits

Course Description: Course provides students with hands-on experiences in a greenhouse environment. Students will apply concepts discussed in Production Aquaponics course. Students will work directly with fish stocking, sampling plans for fish weights and fish feed calculations, seed propagation and transplanting seedlings, plant identification, pest identification and scouting procedures and harvesting of produce, and safe working practices.

Pre-/Co-requisites: None

Course Objectives:

- Demonstrate the ability to monitor fish size and feeding requirements.
- Maintain schedules for water quality and greenhouse environment
- Develop live fish handling procedures.
- Understand the importance of proper bio-filter cleaning procedures.
- Sample and identify pests and diseases of fish and plants in aquaponics.
- Maintain equipment, operations and awareness in such a manner to provide safe working conditions.

Instructor: Keith Knudson

Office: Molberg Center, Rm 26; 105 Simrall Blvd, Bottineau, North Dakota 58318

Office Hours: 1 PM to 3:30 PM – MWF or by appointment

Phone: 701-228-5489

Email: keith.knudson@dakotacollege.edu

Lecture/Lab Schedule: TBD – Aquaponics Greenhouse

Textbook(s): None

Course Requirements: Grading is based on student's ability to demonstrate practices relating to the course objectives.

The final grade is based on the following criteria:

- A = 89.5% to 100% of the total points
- B = 79.5% to < 89.5% of the total points
- C = 68.5% to < 79.5% of the total points
- D = 59.6% to < 69.5% of the total points
- F = < 59.5% of the total points

Tentative Course Outline: The practicum demonstrates the below activities and skills.

- Monitor the following per an established schedule
 - Water
 - Pumps, pipe, tanks and valves
 - Aeration
 - Filtration – Mechanical and bio-filtration
 - Greenhouse environment
 - Supplemental lighting
- Increase feed consumption to fish and determine BSA to determine system accommodation to increased feed amounts
- Record daily schedule data
- Record fish weights and plant nutritional needs
- Participate in scheduling of plantings, harvest and customer quantity requirements
- Scheduling and planting calendar
- Field Trips

General Education Goals/Objectives: Students should follow the Aquaponics Program curriculum.

Relationship to Campus Theme: This course is part of our Aquaponics Production and Management program and it addresses the campus theme of Nature, Technology and Beyond by learning about our natural resources and how best to utilize each resource. The latest technology is discussed and demonstrated.

Classroom Policies:

1. Cell phones, iPods and related technologies use are prohibited in the classroom unless otherwise instructed.
2. Food and beverages are permitted in accordance with IVN classroom policy.
3. Be respectful of other students, instructor and guests.

Student Email Policy:

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity: All students are expected to excel to the best of their ability. Students must adhere to the highest standards of academic integrity. Dishonesty in the classroom or laboratory and with assignments, quizzes and exams is a serious offense and is subject to disciplinary action by the instructor and college administration. For more information, refer to the student handbook.

Disabilities and Special Needs: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact your instructor and the Learning Center (701-228-5479) as early as possible during the beginning of the semester