



Course Prefix/Number/Title: **HORT 121 Introduction to Aquaponics**

Number of credits: 2

Course Description: Course provides an overview of aquaponics and its history, five different plant growth subsystems, fish and plant species, fish and plant health, and environment control methods. It will be a “modular course”. Modular is defined as a course that is shorter than a full semester term and can start and end on any week during a term. Course meets the credit hour requirement.

Pre-/Co-requisites: None

Course Objectives:

- Demonstrate a basic understanding of aquaponics.
- Identify and explain the difference between the five aquaponics systems.
- Explain the key factors of water quality for sustaining a favorable soilless and aquatic environment.
- Display proficiency in basic daily operations pertaining to the fish and plant health.
- Demonstrate awareness of recent trends and techniques used in aquaponics to make operations more productive and efficient.

Instructor: Keith Knudson

Office: 105 Simrall Blvd.; Bottineau, North Dakota 58318

Office Hours: TBD

Phone: 701-228-5489

Email: keith.knudson@dakotacollege.edu

Textbook(s): Textbook is not required. But recommended resource is [Aquaponics Food Production](#) ISBN 978-0-9779696-1-6, 218 pages, 37 color photos and diagrams, 14 grayscale photos and diagrams, soft cover, released July, 2008.

SKU Number: AFPB

Course Requirements: This is a pass/fail course.

Course Requirements: Grading will be based on the following to obtain points. There will be two checklists each worth 10 points; four quizzes\* each worth 40 points; 3 forums each worth 40 points; and a final exam worth 100 points. Total possible points for the course are 400.

Pass = 280 points or more

Fail = 279 points or less

\*Quizzes will be manually reviewed and graded during the following week. While you may receive an automated grade, that grade will not be final until the instructor has reviewed the quiz and made adjustments to the score. During the review, the instructor will adjust scores to allow for minor misspellings. Any essay questions will have to be manually scored as well.

Tentative Course Outline:

- Introduction – Aquaculture, Hydroponics and Aquaponics
- History of Aquaponics
- The Process
- System Components
- System Designs
- Fish Selection and Plant Selection
- System Start Up, Operation and Maintenance
- Plant Health and Care
- Lighting
- Fish Health and Feeding

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):

Attain level of technical skills and practices used in Horticulture Industry in preparation for workplace readiness.

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. Be respectful of other students, instructors, 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:** According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

**Disabilities and Special Needs:**

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

**Title IX:**

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.