

**Course Prefix/Number/Title:** ENVT 270 - WATER RESOURCE MANAGEMENT (2020)

**Number of Credits:** 4 credits

**Course Description:**

This course is designed to assist students in integrating the interdisciplinary aspects of biological, chemical and physical sciences into a holistic approach to managing water resources. Focus is on regulations, education, and best management practices to protect and conserve water resources for future generations.

**Pre-/Co-requisites:** None

**Course Objectives:**

- 1) Understand the physical, chemical and biological properties of water
- 2) List properties and features of water resources
- 3) Measure the integrity of surface and ground water
- 4) Analyze data to make informed decisions on watershed management

**Instructor:** Larry Brooks

**Office:** Nelson Science Center 102

**Office Hours:** By appointment

**Phone:** (701) 228-5457

**Email:** [larry.brooks@dakotacollege.edu](mailto:larry.brooks@dakotacollege.edu)

**Lecture Schedule:** 2:00 – 2:50 PM MWF in NSC 103

**Lab Schedule:** By arrangement

**Textbooks:** None

**Course requirements:**

Grading is based on a standard college curve, where students earn a grade based upon the percent of total possible points they obtain. The lecture component of this course consists of approximately 600 points (12 drop quizzes worth 5 points each, 4 lecture exams worth 100 points each, and one water resource management paper/presentation worth 150 points). Lecture points are added to laboratory point (approximately 200 points) to obtain the total points possible for the course (approximately 800). Drop quizzes may not be made up, but students will be able to drop their two lowest scores of the twelve drop quizzes given during the semester. There is a one week grace period to makeup any missed exam or work. Any missed exam/work not made

up within the allotted time will be given a zero. Makeup exams may be of an essay nature and are usually considered more difficult. Letter grades are assigned based on the following criteria:

- A = 90-100% of the total points
- B = 80-89% of the total points
- C = 70-79% of the total points
- D = 60-69% of the total points
- F = <60% of the total points

**Course Outline (Tentative):**

<u>DATE</u>	<u>TOPIC</u>
8-26	Introduction and Chemistry Review
8-28	Chemistry Review
8-31	Chemistry Review
9-2	Properties of Water
9-4	Water Math
9-7	No Class – Labor Day
9-9	The Hydrologic Cycle and Physical Properties of Water
9-11	Biology of Water
<b>9-14</b>	Biology of Water
9-16	Exam review
<b>9-18</b>	EXAM I
9-21	Rivers and Stream
9-23	Rivers and Streams
9-25	Rivers and Stream
<b>9-28</b>	Lakes and Reservoirs
9-30	Lakes and Reservoirs
10-2	Lakes and Reservoirs
10-5	Wetlands
10-7	Wetlands
10-9	Ground Water
10-12	Ground Water
10-14	Exam Review
10-16	EXAM II
10-19	Surface Water Management
10-21	Surface Water Management
10-23	Surface Water Management
<b>10-26</b>	Surface Water Management
10-28	Legal Aspects of Water (Water Law)
10-30	Legal Aspects of Water (Water Law)

11-2	Economic Aspects of Water
11-4	Social Aspects of Water
11-6	Miscellaneous Aspects of Water
11-9	Exam Review
11-11	No Class – Veterans Day
11-13	EXAM III
11-23	Water Management Plans
<b>11-25</b>	<b>NO CLASS - THANKSGIVING HOLIDAY</b>
<b>11-27</b>	<b>NO CLASS - THANKSGIVING HOLIDAY</b>
11-30	Global Water Issues
12-2	Global Water Issues
12-4	North Dakota and Canadian Water Issues
12-7	North Dakota and Canadian Water Issues
12-9	Water Management Plans - Student Presentations
12-11	Review for Final Exam
12/14-18	FINAL EXAM (Date and time TBD)

**CTE Competency/Department Learning Outcomes:**

- 1) Employ industry-specific skills in preparation for workplace readiness

**Relationship to Campus Focus:**

This course aligns with the campus theme of *Nature, Technology and Beyond* by fostering a deep sense of respect and an ethic of concern for our natural resources. Student will learn about best management practices to protect and conserve watersheds and water resources.

**Classroom Policies**

- 1) Cell phone and related technology are prohibited in the classroom at all times. It is recommended that you do not bring your cell phone into the classroom or, at the very least, turn it off.
- 2) Food and beverages are permitted in accordance with IVN classroom policy.
- 3) Be respectful of other students, technicians, 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.