



**University of Manitoba Faculty of Agricultural and Food Science**

**Department of Animal Science**

## **Avian Production Systems**

**ANSC 4550**

**Fall 2021**



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## Course Details

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Course Title & Number: **Avian Production Systems ANSC 4550**

Number of Credit Hours: **3**

Lecture: **1:00 – 2:15 pm Tuesday and Thursday;**

Laboratory: **2:30 – 5:30 pm Thursday**

Location for classes/labs/tutorials: **Class: delivered remotely using UMLearn/Microsoft Teams platform**

**Tutorial/laboratory: delivered remotely using UMLearn/ Microsoft Teams platform**

Pre-Requisites: **ANSC 2500 Animal Production**

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## Instructor Contact Information

Instructor(s) Name: **Dr. Anna Rogiewicz**

**Preferred Form of Address:** Dr. Rogiewicz, Dr. Anna would also be acceptable

**Office Location:** 228 Animal Science Building

**Office Hours or Availability:** Generally available within working hours. The best way to meet would be to e-mail to schedule a Microsoft Teams meeting. Instructor will start hosting the Microsoft Teams around 15 minutes before the start and will be available for students.

**Phone No.** **Office:** 204 474 9527

**Email:**

All email communication is preferable mean of the contact. It must conform to the Communicating with Students university policy. Please familiarize yourself with the policy. Use the subject line to state the reason for your e-mail and add the course number. This will help to determine which e-mails may need a quick response. Do not expect detailed or lengthy e-mail responses. If your e-mail question(s) require such a response, I may ask you to come and see me in person instead. Please avoid salutations such as 'Hey You' or 'Hi There'. Dear Dr. Rogiewicz will be fine. Email response may take up to 36 hours. E-mails will not be checked evenings or weekends. If you send an email on Friday afternoon or over the weekend you will most likely get a response no earlier than the following Monday.

**Contact:**

Students are not able to meet with instructor, however are encouraged to approach the instructor immediately before or after the lecture. Instructor will start hosting the Microsoft Teams around **15 minutes before the start and will be available for students.**

Use email for communication. Students can phone the office, but instructor might not work full time from the office.

**Course Description**

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The poultry industry; marketing system, breeding, hatchery practices, management and feeding of large-scale turkey and chicken enterprises. Describes the various avian systems in terms of size, complexity, and relationship to the economy and gives an understanding of the management and marketing practices in the usual poultry systems.

**General Course Objective**

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This course is intended to give a broad perspective in commercial poultry and egg industry in Canada.

**Course Objectives**

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1. To describe the diversity and organization of poultry production.
2. To learn about the origin of poultry species and history of poultry production.
3. To explain the basic management practices employed in various avian production systems.
4. To evaluate methods and management strategies for optimizing production efficiency.
5. To discuss the organized production of poultry and eggs and how it is influenced by the Canadian supply management.

6. To analyse practical problems encountered in avian production systems.
7. To integrate information from previous courses (anatomy, physiology, reproduction, growth, environment, etc.) with management practices in poultry production.
8. To discuss the aspects of poultry welfare, acceptable husbandry practices and environmental issues.
9. To define the practical components of biosecurity within the different poultry systems.
10. To identify principles of precision farming and modern technologies used in poultry industry.
11. To introduce the career opportunities in poultry industry.

### **Intended Learning Outcomes**

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#### **Learning outcomes:**

##### **Knowledge:**

1. Student describes basic types of utility and breeds of poultry, knows the poultry anatomy and physiology, explains the principles of breeding and husbandry.
2. Explain how the management practices and modern technologies employed in poultry production systems impact the poultry and egg production and poultry welfare.
3. Explain the importance and differences of biosecurity standards within different poultry systems.
4. Recognize the principle and structure of the supply management in poultry and egg production.
5. Describe the main principles of poultry nutrition and health.
6. Explain the basics of animal production profitability.
7. Recognize the implication of the modern technology that supports the poultry industry.
8. Explain the egg hatching process and technology employed in commercial hatcheries.
9. Describe and differentiate the table egg and hatching egg production.

##### **Skills:**

1. Use terminology concerning poultry production in understandable and appropriate way.
2. Recognize the necessity of developing professional skills to increase the quality of veterinary care, applying of the appropriate management practices accordingly to regulations (housing conditions, nutrition, animal welfare).
3. Recognize the requisite of constant learning for professional development.
4. Utilize collected information related to health, productivity, animal welfare, quality of eggs and poultry products, and food safety.

##### **Social competences:**

1. Demonstrates responsibility for decisions made in relation to animal welfare, sustainability of poultry production, food safety and wellbeing of personnel involved in poultry industry.
2. Understands frequent practical problems encountered in avian production systems.
3. Evolve the habit for continuing improvement of knowledge and skills development.
4. Recognize the broad employment opportunities within poultry industry.

### **Using Copyrighted Material**

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Please respect copyright. Copyrighted content is used in this course. I have ensured that I will the acknowledged content I use appropriately and that it is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by me, are available for your

private study and research, and you must not distribute them in any format without permission. Do not upload copyrighted works to a learning management system (e.g., UM Learn), or any website, unless an exception to the *Copyright Act* applies or written permission has been confirmed. For more information, see the University's Copyright Office website at <http://umanitoba.ca/copyright/> or contact [um\\_copyright@umanitoba.ca](mailto:um_copyright@umanitoba.ca).

## **Recording Class Lectures**

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The Course Instructor holds copyright over the course materials, presentations and lectures, which form part of this course. No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission. Course are for the participant's private study and research.

## **Textbook, Readings, Materials**

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Required textbook – None. I will recommend and provide the reading materials when applicable. Supplementary readings – If you are having trouble with some material and would like some extra reading please contact me and I can recommend a book and /or web-site to assist you.

## **Course Technology**

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It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical, and legal manner. Class will be delivered on-line using Microsoft Teams platform and UMLearn. I will make an effort to build a learning community and will try to address individual needs to make the on-line learning satisfactory and meaningful. Class notes and links to videos will be posted on UMLearn. You should be aware that the notes posted are not complete and will require you to attend class to fill in key details. Lab assignments, midterm tests and final exam will be delivered online.

## **Class Communication**

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The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students, please visit: [http://umanitoba.ca/admin/governance/media/Electronic Communication with Students Policy - 2014 06 05.pdf](http://umanitoba.ca/admin/governance/media/Electronic_Communication_with_Students_Policy_-_2014_06_05.pdf). Please note that all communication between myself and you as a student must comply with the electronic communication with student policy ([http://umanitoba.ca/admin/governance/governing\\_documents/community/electronic communication with students policy.html](http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html)). You are required to obtain and use your u of m email account for all communication between yourself and the university.

## **Expectations: I Expect You To**

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1. Attend class and be on time as much as you can.
2. Follow the university student academic and conduct guidelines.
3. Participate in teaching and learning process. I always assume that each student has some knowledge or experience in the subject that could be shared or discussed during the lecture or lab. Students are expected to be engaged and to give their best effort in class discussions but perfection is not expected.
4. Complement the notes that I provide with your own notes that you take during lectures. The notes that I provide are incomplete and you will be expected to attend lectures in order to complete your notes. You will also be evaluated based on your comprehension of material supplied in Power-point notes, handouts and any relevant discussions during class.
5. Complete all assignments on time.
6. I expect the courtesy and best manners during the presentations delivered by guest speakers. Please remember that every individual guest speaker is doing a big favor to students and teachers providing the unique opportunity to learn by sharing his/her experience and enhancing the entire educational process.
7. Produce university-level quality writing: legible and proofread. I encourage you to type and submit hard copies of assignments. If there are a significant number of errors or if it is difficult to read, the assignment will be returned to you prior to grading for changes.
8. Be courteous and civil to me and to your fellow students.
9. Be patient with the potential unforeseen circumstances related to the remote teaching/learning.

See [Respectful Work and Learning Environment Policy](#).

## **Expectations: You Can Expect Me To**

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1. Be respectful of your opinions, questions and response to questions.
2. Make every reasonable effort to answer your questions.
3. Mark your tests in a fair, equitable and prompt fashion.
4. I will use the PowerPoint lectures in class in a large part of the teaching practice in class.
5. I will make an effort to provide you valuable material as a substitute to the tours, which cannot be offered this time due to the Covid-19 related restrictions.

See [Respectful Work and Learning Environment Policy](#).

## Class Schedule

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This schedule is **subject to change at the discretion of the instructor** (and/or based on the learning needs of the students but such changes are subject to Section 2.8 of the – [ROASS Procedure](#)). If you miss lecture(s), it is your responsibility to obtain any information announced in class. Guest speaker's lecture material will be examinable. Lectures: Tuesdays and Thursdays 1:00 – 2:15 pm

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Date	Lecture topic
Sep. 9 TR	Course introduction, Biology of the bird, part 1
Sep. 14 T	Biology of the bird, part 2
Sep. 16 TR	Course introduction for Diploma Students, Manitoba poultry industry and terminology
Sep. 21 T	Origin of poultry
Sep. 23 TR	Poultry nutrition
Sep. 28 T	Breeding, genetics and selection
Sep. 30 TR	Animal welfare
Oct. 5 T	Broiler chicken production and meet processing
Oct. 7 TR	Manitoba Chicken Producers - guest speaker <i>Vallene Simoens</i>
Oct. 12 T	Laying hen management - guest speaker <i>Wei Jia</i> Manitoba Egg Farmers
Oct. 14 TR	Egg and pullet production in Manitoba- guest speaker <i>Cory Rybuck</i> Manitoba Egg Farmers
Oct. 19 T	Mid-term
Oct. 21 TR	Broiler breeder management
Oct. 26 T	Hatching egg production: hatchability and hatcheries
Oct. 28 TR	Turkey production and Manitoba Turkey Industry
Nov. 2 T	TBD
Nov. 4 TR	Food safety
Nov. 9 T	Fall term break
Nov. 11 TR	Fall term break Remembrance Day
Nov. 16 T	Health and diseases - guest speaker <i>Lorne Cruise, DVM</i>
Nov. 18 TR	Mid-term
Nov. 23 T	History of poultry production
Nov. 25 TR	Specialty Poultry Production- guest speaker <i>Herman Grauer</i> , Natures Farm
Nov. 30 T	Niche and specialty markets, non-quota flocks



Dec. 2 TR Major assignment presentations  
Dec. 7 T Major assignment presentations  
Dec. 9 TR Final Exam review

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### Laboratory Expectations

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Experiential learning activities are this time in the form of video demonstrations of the various poultry related operations. Visiting tours cannot be offered this time. I expect students to fully participate in laboratory and tutorial activities. I will invite guest speakers who will provide more detailed information and will address questions. Laboratory material will be examinable.

### Lab Schedule

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This schedule is **subject to change at the discretion of the instructor** (and/or based on the learning needs of the students but such changes are subject to Section 2.8 of the – ROASS Procedure). If you miss lab(s), it is your responsibility to obtain any information announced in class.

Lab, Thursdays 2:30- 5:30 pm

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<b>Date</b>	<b>Topic</b>
Sep. 9 TR	Reproduction and Embryology
Sep. 16 TR	Manitoba Poultry industry and terminology
Sep. 23 TR	Poultry nutrition
Sep. 30 TR	Biosecurity
Oct. 7 TR	Broiler chicken production
Oct. 14 TR	Siemens Farms virtual tour
Oct. 21 TR	Burnbrae Farms- egg processing plant tour
Oct. 28 TR	Hatchery virtual tour
Nov. 4 TR	University of Manitoba Poultry Research Station tour
Nov. 11 TR	Fall term break Remembrance Day
Nov. 18 TR	Barn ventilation - presentation
Nov. 25 TR	TBD
Dec. 2 TR	Major assignment presentations

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## Course Evaluation Methods

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### 1. Two mid- term tests

The mid-term tests will be a mix of types of questions including short and long answers. They, as well as the final exam, will be closed book with no notes or other materials to be used during the tests. Total marks for each term test is 50 marks.

### 2. The laboratory assignments (each laboratory)

The laboratory assignments due one week after completion of lab. The format will be dictated by the topics covered.

### 3. Scientific article review

Instructor will distribute scientific articles to students by October 28. One article per student. Assignment: write 2 page (Calibri 12, 1.0 of line spacing) summary of the research and your opinion regarding the material. Deadline: Nov 25, 2021.

### 4. Group presentation

The class assignment will also be based on group presentation (or individual presentation, if preferable) of current topics related to poultry production. The size of the group will be determined later. Students are welcome to present they own choice of topic or one of the suggested below.

1. Antibiotics in poultry industry/consequences of RWA poultry (Raised without antibiotic)
2. Salmonella in laying hens
3. The use of feed enzymes in poultry production
4. Biosecurity in commercial and free-range laying hen production systems
5. Food safety concerns and regulations for meat & egg producers
6. Food: Poultry products in modern cuisine .
7. Poultry industry as a global community.
8. Smart poultry- how the modern technology and equipment support the successful poultry production.
9. Poultry welfare.

Resources for the presentation: recent peer reviewed scientific article, government reports and data available on-line, public domain information (internet), Canadian Poultry Magazine (<https://www.canadianpoultrymag.com/>), and other. The oral presentation to be made in class. Give a 15-minute presentation. Provide outlines of the presentation to instructor at least one week prior the date of class. Handout of your PowerPoint will be distributed by instructor to all students. **Material presented is examinable.** Evaluation will be done by the instructor. Evaluation criteria: clarity of presentation, organization and flow of ideas, quality of presentation.

### 5. Written final exam

The final examination will cover **all** classes, all laboratories, all guest speaker presentations and all class presentation. It will consist of long- answer questions, short-answer questions, truth-false test. The final exam will be done on-line using the Word form. Time for the exam completion: 2 hours.

Date	Assessment Tool	Value of Final Grade
October 19	Mid-term 1	20%
November 18	Mid-term 2	20%
Multiple dates	Lab assignments	10%
November 25	Scientific article review	10%
December 3, December 8	Group Presentation	10%
TBD	Final exam	30%

## Grading

I generally will have your test marks back to you within one week of your writing of the test. This means that you should have 40% (midterm tests 1 and 2) of your final grade before the voluntary withdrawal date.

Letter Grade	Percentage out of 100	Final Grade Point
A+	92-100	4.5
A	85-91.9	4.0
B+	78-84.9	3.5
B	70-77.9	3.0
C+	62-69.9	2.5
C	55-61.9	2.0
D	50-54.9	1.0
F	Less than 50	0

## Referencing Style

**If applicable:** Assignments should use the citation format adopted by the Canadian Journal of Animal Science:

### Example of correct citation:

#### Journal:

Waterer, J.G., and Evans, L.E. 1985. Comparison of Canadian and American hard red spring wheat cultivars. *Can. J. Plant Sci.* **65**: 831–840.

#### Book:

Cochran, W.G., and Cox, G.M. 1968. *Experimental design*. 2nd ed. John Wiley and Sons, Inc., New York, NY. 611 pp.

### Internet:

Irvine, B. 1998. Can producers use an in-row liquid suspension to inoculate pulse crops? [Online]. Available: <http://res.agr.ca/brandon/brc/newsnote/news191.htm> [1998 Oct. 01].

More information available on-line:

<http://www.nrcresearchpress.com/uml.idm.oclc.org/page/cjas/authors#28>

Make sure you cite only literature that is highly relevant and avoid multiple citations on the same point. Check each reference with the original article and refer to it in the text by the author and date. List multiple references in the text in chronological order. Use "et al." when there are more than two authors but give all authors in the reference list at the end of your assignment.

### **Assignment Extension, Late Submission Policy, Missing Tests**

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**Late Assignments:** Electronically submitted assignments must be submitted by the end of the day (4:30 pm) on the date that it is due. There will be a 10% deduction for every 24-hour period the assignment is late.

**Missed Assignments:** Unexcused missed assignments will be given a grade of zero. Where assignments are missed and excused through written notification such as a doctor's certificate of illness or other circumstances that are beyond the control of the student, the student may be given the following options: 1) complete the assignment and receive the late assignment penalty as describe above; 2) establish a new due date with the instructor and complete the assignment without penalty when handed in by the new due date; or, 3) the final grade will be determined by increasing the value of the final exam by the amount that would have been allocated to the missed assignment.

**Missed Exams:** Unexcused missed exams will be given a grade of zero. Where exams other than the final exam are missed and excused through written notification such as a doctor's certificate of illness or other circumstances that are beyond the control of the student, the student may be given the following options: 1) re-schedule a date for the exam with the instructor and complete the exam at that time (the instructor has the option to set a different exam); or, 2) the final grade will be determined by increasing the value of the final exam by the amount that would have been allocated to the misse d exam. If the final exam is missed and an appropriate excuse has been provided, another exam date will be set at the discretion of the instructor.

### **Policies Related to Student Discipline**

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#### **Academic Dishonesty: Plagiarism, Cheating and Examination Impersonation**

Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty. Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room. Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term

assignments is also subject to serious academic penalty. *Students should acquaint themselves with the University's policy on plagiarism, cheating, exam impersonation and duplicate submission.*

[http://umanitoba.ca/student/resource/student\\_advocacy/academicintegrity/Academic-Integrity-policies-and-procedures.html](http://umanitoba.ca/student/resource/student_advocacy/academicintegrity/Academic-Integrity-policies-and-procedures.html)).

**Policy on Respectful Work and Learning Environment**

[http://umanitoba.ca/admin/governance/governing\\_documents/community/566.html](http://umanitoba.ca/admin/governance/governing_documents/community/566.html)

**Inappropriate and Disruptive Student Behaviour**

[http://umanitoba.ca/admin/governance/governing\\_documents/students/279.html](http://umanitoba.ca/admin/governance/governing_documents/students/279.html)

**Accessibility Policy for Student with Disabilities**

[http://umanitoba.ca/admin/governance/governing\\_documents/students/281.html](http://umanitoba.ca/admin/governance/governing_documents/students/281.html)

**Withdrawal from class**

[http://umanitoba.ca/student/records/leave\\_return/695.html](http://umanitoba.ca/student/records/leave_return/695.html)

**LEARNER SUPPORT**

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University support offices and policies

**Writing and Learning Support**

The Academic Learning Centre (ALC) offers writing and learning supports to help you throughout your academic program. These supports are offered online during the Covid-19 pandemic.

Make an appointment with an ALC writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. The ALC also has an English as an Additional Language (EAL) specialist available to work with students on improving their English-language academic writing skills.

Consult an ALC learning specialist or attend an academic skills workshop to improve your time management, learning strategies and test-taking strategies. Get support in select courses by making an appointment with an ALC content tutor. The ALC also offers peer-facilitated study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In SI study groups, students ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

In addition to one-to-one and group sessions, you can also find writing and study tip sheets and videos on the ALC website.

Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at: <http://umanitoba.ca/student/academiclearning/>

Contact the Academic Learning Centre by calling 204-480-1481 or emailing [academic\\_learning@umanitoba.ca](mailto:academic_learning@umanitoba.ca). Bannatyne students can contact the Bannatyne Student Services office at 204-272-3190.

### **University of Manitoba Libraries (UML)**

Research begins at [UM Libraries](#). [Learn at the Libraries](#) is a great place to start, with information for students on academic writing, how to search the library, evaluating resources, and writing citations. As the primary contact for all research needs, your [liaison librarian](#) can play a vital role when completing academic papers and assignments. Liaisons can answer questions about locating appropriate resources or managing citations, and will address any other concerns you may have regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you online. When working remotely, students can also receive help online through [Ask Us!](#) chat. For further detail about the libraries' services and collections, [visit the Libraries' web site](#). Regularly check our [COVID-19 Update](#) page for available library services and access to resources for Fall 2020

### **Mental health support:**

**For 24/7 mental health support, contact the Mobile Crisis Service at 204-940-1781.**

#### **Student Counselling Centre**

Contact SCC if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. SCC offers crisis services as well as individual, couple, and group counselling. *Student Counselling Centre:* <http://umanitoba.ca/student/counselling/index.html>

474 UMSU University Centre or S211 Medical Services Building  
(204) 474-8592

#### **Student Support Case Management**

Contact the Student Support Case Management team if you are concerned about yourself or another student and don't know where to turn. SSCM helps connect students with on and off campus resources, provides safety planning, and offers other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team.

<http://umanitoba.ca/student/case-manager/index.html>

520 UMSU University Centre  
(204) 474-7423 (Student Support Intake Assistant)

#### **University Health Service**

Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical services to students, including psychiatric consultation. Note that due to fire displacement, UHS is unable to provide in-person medical care on the Fort Garry Campus until October, 2020.

University Health Service <http://umanitoba.ca/student/health/>

(204) 474-8411 (Business hours or after hours/urgent calls)

### **Health and Wellness**

Contact our Health and Wellness Educator if you are seeking information on health topics, including physical and mental health concerns, alcohol and substance use harms, or sexual violence. You can also access peer support from a *Healthy U* peer health educator.

*Health and Wellness Educator*

<https://umanitoba.ca/student/health-wellness/welcome-about.html>

[britt.harvey@umanitoba.ca](mailto:britt.harvey@umanitoba.ca)

469 UMSU University Centre

(204) 295-9032

### **Sexual Violence Resource Centre**

Contact SVRC if you have experienced sexual violence or are seeking information about how to help somebody else. SVRC provides inclusive, survivor-centred, trauma-informed services, such as consultation, referrals, safety planning, and a range of on-site supports, including counselling by Clinic.

*Sexual Violence Resource Centre*

<https://umanitoba.ca/student-supports/sexual-violence-support-and-education>

[svrc@umanitoba.ca](mailto:svrc@umanitoba.ca)

537 UMSU University Centre

(204) 474-6562 (Sexual Violence Intake and Triage Specialist)