



Syllabus

Course Name and Number: BIOE 7240 – Sustainability in the Textile Industry

Winter 2023

TABLE OF CONTENTS

COURSE DETAILS.....	2
INSTRUCTOR CONTACT INFORMATION.....	2
COURSE DESCRIPTION AND GENERAL COURSE DESCRIPTION	2
COURSE GOALS	ERROR! BOOKMARK NOT DEFINED.
COURSE LEARNING OBJECTIVES.....	ERROR! BOOKMARK NOT DEFINED.
TEXTBOOK, READINGS, AND COURSE MATERIALS	ERROR! BOOKMARK NOT DEFINED.
USING COPYRIGHTED MATERIAL	ERROR! BOOKMARK NOT DEFINED.
COURSE TECHNOLOGY.....	ERROR! BOOKMARK NOT DEFINED.
EXPECTATIONS: I EXPECT YOU TO	ERROR! BOOKMARK NOT DEFINED.
EXPECTATIONS: YOU CAN EXPECT ME TO	ERROR! BOOKMARK NOT DEFINED.
CLASS SCHEDULE AND COURSE EVALUATION	8-9
GRADING	9
VOLUNTARY WITHDRAWAL.....	9
ASSIGNMENT DESCRIPTIONS	ERROR! BOOKMARK NOT DEFINED.
REFERENCING STYLE	ERROR! BOOKMARK NOT DEFINED.
ASSIGNMENT FEEDBACK.....	14
ASSIGNMENT EXTENSION AND LATE SUBMISSION POLICY	14
UNIVERSITY SUPPORT OFFICES & POLICIES	14-18

COURSE DETAILS

Course Title & Number: **BIOE 7240: Sustainability in the Textile Industry**

Number of Credit Hours: 3 credit hours

Class Times & Days of Week: 2:30 p.m. – 5:30 p.m.; Thursdays

Location for classes/labs/tutorials: TBA

Pre-Requisites: Consent of the instructor

Instructor Contact Information

Instructor(s) Name & Preferred Form of Address: Dr. Mashiur Rahman, I would prefer to be addressed as Dr. Rahman.

Office Location: 583 Duff Roblin

Office Hours or Availability: Make an appointment by phone at 204 474 8509 or email at Mashiur.rahman@umanitoba.ca. I will get back to you within 48 hours.

Office Phone No. 204 474 8509

Email: Mashiur.rahman@umanitoba.ca. I will return a phone call or email within 48 hrs.

[Note: All email communication must conform to the [Communicating with Students](#) university policy. The University of Manitoba will only use your UM email account for official communications, including messages from your instructors, department or faculty, academic advisors, and other administrative offices. The policy can be found at <https://umanitoba.ca/registrar/student-email-policy>]

Contact: You may contact me by phone at 204 474 8509, text (431 373 0549), by email, or in person. Emails sent after business hours will not likely be answered until the next day.

Course Description

U of M Course Calendar Description

This course examines the life cycle of textile materials focusing on the extraction stage (fibre), manufacturing stages (yarn, composites, medical implants), distribution and use,

and end of the cycle – disposable stage. The course will then examine key themes in the textile sustainability, such as environmental impacts on the textile processing parameters, water and energy footprints, ecological footprints, life cycle assessment and end of life (EOL) management of textile products. The course will conclude with an investigation of the alternative choices to the existing ones in terms of fibres and textile products.

Upon completion of this course, students will be able to:

- Learn the ways of measuring the environmental impacts of textile processing.
- Calculate water, energy, and greenhouse gas emissions from textile processing.
- Evaluate the life cycle assessment (LCA) for the environmental impacts of a textile product.
- Calculate the carbon footprint using the (LCA).
- Make an informed decision at the consumer and professional levels.

General Course Description

Today's university students are demanding not only for sustainable practices in their campuses, but also for the knowledge and skills needed to address issues of sustainability in their academic, personal, professional, and public lives. Textiles have long been an integral part of our daily lives with diverse products ranging from fashion, apparel, healthcare items, industrial fabrics, and car upholstery. Today's textiles industry is valued at US\$1.7 trillion dollars, employing more than 300 million people globally.

But the industry's significant use of finite resources and toxic chemicals, as well as issues such as effluent treatments, are under increasing scrutiny. Meanwhile, billions of textiles products go to waste: unsold in warehouses or stores, left unused in wardrobes, or discarded while still in good condition. In Canada, an average person throws out 81 pounds of textiles annually, while North Americans send 10 million tonnes of clothing to the landfill every year. Therefore, there is an urgent need for understanding the textile sustainability.

Course Goals

General Learning Outcomes:

Students who are prepared to address the challenges of creating a sustainable world should have knowledge of current issues in sustainability and the social, ecological, and economic dimensions of these complex problems. With the knowledge gained through coursework from varied textiles and clothing areas, students develop the skills to engage in rigorous and complex discussions around creating sustainable solutions. Coursework and experiences in sustainability are meant to widen social, historical, and cultural perspectives and strengthen students' ability to negotiate multiple values that routinely come into play when planning for sustainability at the local, regional, or global scales.

Students connect conceptual learning to challenges and opportunities in the world outside of the university classroom by critically analyzing their own experiences to make sustainability meaningful and guide their personal actions when it comes to textiles and clothing.

Specific Learning Outcomes (SLOs):

- **1 - The textile supply chain and its environmental impact**

This topic reviews the entire supply chain for textiles and clothing sector in terms of various processes from fibres to finished products and their environmental impacts. It also investigates the environmental impacts of different stages in the life cycle of textile products from the cradle to the grave.

- **2- Ways of measuring the environmental impact of textile processing**

This topic provides a comprehensive discussion of different methods involved in measuring the environmental impacts of textile products and processes. Further, it discusses the environmental legislations, standards, and schemes applicable to clothing and textile sectors.

- **3 - Greenhouse gas emissions and carbon footprint calculation**

This topic deals with the concept and principles of carbon footprint measuring methods and challenges for the textiles and clothing products.

- **4 - Water and energy footprints calculation of textile products**

The textile and clothing supply chain consumes both water and energy in huge amounts, so it is imperative to measure the energy and water footprints of any textile product's entire life cycle stages to work on reducing them. This topic deals with the concepts and measurement techniques of water and energy footprints and their applications to the textile and clothing supply chain. It also discusses the main challenges in measuring water and energy footprints of textile products.

- **5 - Calculating the ecological footprints of textile products**

Economic growth and over-consumption of natural resources mean they are being depleted in an unsustainable way. It is therefore critical to have some form of measurements, so the concept of the ecological footprint will be used to quantify how sustainable a product or process is. In this topic, the principles, and measurements of ecological footprints of the textile products will be discussed.

- **6 - Life cycle assessment (LCA) of textile products**

This topic discusses the basic principles of LCA, measurement methods, models for LCA, and standards governing the LCA study.

- **7 - LCA and product carbon footprint (PCF) modelling of textile products**

In this topic, the modelling aspects of life cycle and PCF assessment of textile and clothing products will be discussed. Issues such as the methodological complexities of modelling, available databases, filling of data gaps, and problems specific to modelling textile products will be highlighted.

- 8 - End-of-life management of textile products

Traditionally, disposal of textile products meant sending them to landfill. However, due to scarcity of land, concerns with health and pollution, and the need to conserve resources, new ways (for example, recycling, reuse, incineration) are being investigated for disposal. This topic deals with the end-of-life management of textile and clothing products and discusses approaches to the problem.

Course Learning Objectives

The course learning objectives for each of the SLOs with the cognitive complexity are given below.

SLO1 - The textile supply chain and its environmental impact (Cognitive complexity level: 2)

At the end of this topic students will be able to:

- Understand the textiles supply chain and its environmental implications.
- Break down the life cycle of individual textile product from each manufacturing step.
- Describe each life cycle phase of textile products, their operations, processes, and environmental impacts.

SLO2 - Ways of measuring the environmental impacts of textile processing (Cognitive complexity level: 2)

At the conclusion of this topic students will learn:

- The concept of LCA as well as its most popular variants, namely cradle to gate and cradle to grave assessments.
- The differences among LCA and environmental indicators, such as carbon and ecological footprints.
- The important aspects of environmental laws and regulations applicable to the textile and clothing sectors.
- The keys standards and schemes, namely GOTS, Bluesign, Okeo-tex and eco-labels.

SLO3 - Greenhouse gas emissions and product carbon footprint (PCF) calculation (Cognitive complexity level: 2)

At the conclusion of this topic, students will learn to:

- Measure the PCF at organizational and individual textile product levels which would help an organization to reduce carbon emissions and costs by improving operational efficiency, and thus contribute towards achieving a sustainable society.
- Identify problematic areas which are responsible for higher greenhouse gas emissions and work to reduce them.
- Discover the challenges that exist in assessing the PCF of textiles and clothing products. These challenges are: suitable methodology/standards for PCF measurement, selection of appropriate emission factors, selection of one or more textile products from those available on the shelf, mapping of boundaries and inclusions/exclusions of different areas of consideration, especially for a longer supply chain such as textiles and so forth.

SLO 4 - Water and energy footprints calculation of textile products (Cognitive complexity level: 2)

When the students have learned the content of SLO4, then they should be able to:

- Understand the water and energy demand in every stage or process in the supply chain of textiles and every phase in the life cycle of textile products.
- Choose the appropriate methods for assessing water and energy footprints of a particular product, and process. Assessment of the water and energy footprints aid students' understanding of the fresh water and energy by the specific production processes of a textile product and how they contribute to issues of water/energy scarcity and pollution.
- Pinpoint the difficulties to water and energy footprints measurement which are modelling and simulation across the supply chain on textiles and clothing sectors. Some of the difficulties are: (a) selection of a proper methodology for the measurement, (b) boundary selection, (c) selecting the cut-off rules, (d) identifying suitable products for the measurement from the long list available and so forth;

SLO 5 - Calculating the ecological footprints (EFs) of textile products (Cognitive complexity level: 2)

- If the students have learned the concept of EFs, then they should be able to calculate and compare the environmental sustainability of a wide array of textiles and clothing products by completing an assignment using the appropriate EF indicators.
- The secondary outcome will be appreciating the challenges in modelling and databases when calculating EFs as the studies on the specific EF of textile products are scarce.

SLOs – 6 & 7 - Life cycle assessment (LCA) of textile products, & LCA and product carbon footprint (PCF) modelling of textile products (Cognitive complexity level: 2)

At the conclusion of these two SLOs, students will be able to:

- Understand the complete process of life cycle assessment (LCA) includes goal and scope definition, inventory analysis, impact assessment, and interpretation.
- Calculate the impact of LCA by using one of the widely known tools, for instance Simapro, Gabi, Eco-it and so forth.
- Evaluate life cycle impact assessment (LCIA) for environmental impact adopting the most common methods, such as Eco-indicator'99, CML 2001, Ecological Scarcity Method and so forth.

SLO – 8: End-of-life (EOF) management of textile products (Cognitive complexity level: 2)

At the conclusion of this topic, students will be able to:

- Develop a hierarchy model for the EOF management of textile and clothing products based on the available options, such as reuse (primary/secondary purposes), recycle (open- and closed-types), landfilling and incineration.
- Calculate recyclability potential index (RPI) using environmental gain index (EGI) and economic gain index (EcGI).

- Appreciate the limitations of EOF management of textiles and clothing products with respect to the recycling and biodegradation.

Note: Cognitive level complexity: 1= demonstrate broad knowledge, 2= demonstrate comprehension, 3 = analyze, interpret and apply knowledge

Textbook, Readings, and Course Materials

Textbook:

- Muthu, Subramanian Senthilkannan. *Assessing the Environmental Impact of Textiles and the Clothing Supply Chain*. Woodhead Publishing, 2014. <https://doi.org/10.1533/9781782421122>. [Online version available through university library]

Reading materials:

- Hatch, K., *Textile science*. St. Paul-Minneapolis, MN: West Publishing Co. 2006.
- Blackburn, R. S., and R. S. (Richard S. .. Blackburn). *Sustainable Textiles: Life Cycle and Environmental Impact*. Woodhead, 2009.
- Tobler-Rohr, Marion I. *Handbook of Sustainable Textile Production*. Woodhead Pub., 2011.
- Blackburn, R. S., and R. S. (Richard S. .. Blackburn). *Biodegradable and Sustainable Fibres*. Woodhead, 2005.

Note: The reading materials will be available to students through library reserves.

Note: The textbook and the recommended materials are cited in MLA style.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and university guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. I will not upload copyrighted works to a learning management system (such as 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.

Canada's Copyright Act:

All students are required to respect copyright as per Canada's *Copyright Act*. Staff and students play a key role in the University's copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world. The Copyright Office provides copyright resources and support for all members of the University of Manitoba community. Visit <http://umanitoba.ca/copyright> for more information.

Course Technology

As a courtesy to the instructor and your classmates, use of cell phones is not permitted during class time. Please remember to switch off your cell phone to avoid interruptions. Laptops may be used during lectures only for the purpose of taking notes. Lecture (for example, PowerPoint slides) materials will be available through UM Learn.

Expectations: I Expect You To

- participate in the class discussion.
 - attend the class regularly;
 - treat your instructor and peers with respect and you would appreciate the same courtesy in return.
- See [Respectful Work and Learning Environment \(RWLE\) Policy](https://umanitoba.ca/about-um/respectful-work-and-learning-environment-policy) at <https://umanitoba.ca/about-um/respectful-work-and-learning-environment-policy>.

RWLE policy: The University wishes to promote and support a community which embraces diversity and inclusion, provides for equality of opportunity, and recognizes the dignity of all people.

- policies around Class Communication, Academic Integrity, and Recording Class Lectures (Section 2.5 ROASS).

Expectations: You Can Expect Me To

- Return your assignments within two weeks of submission with feedback.
- Use a variety of teaching strategies to facilitate student learning.
- Be in class for 10 minutes prior to and after the class time to discuss any questions or comments you may have.

CLASS SCHEDULE AND COURSE EVALUATION

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 ROASS: Changes to Course Outline and Timing Requirements](https://umanitoba.ca/admin/governance/senate/motions/senate_motions_march_16_2020.html) (https://umanitoba.ca/admin/governance/senate/motions/senate_motions_march_16_2020.html).

The schedule should include dates and times of classes, including missed classes due to holidays or other commitments of the instructor. It also includes dates of assignments/quizzes/exams and alternate forms of assessments, date for voluntary withdrawal, and dates when students can expect to receive their assignment or test grades.

Date	Class Content & Teaching Strategies	Required Readings or any Pre-class Preparation	Evaluation		
			Type of Assessment	Due Date	Value of Final Grade
TBA	Textile and clothing supply chains and environmental impacts – Direct Instruction (lecture, handouts, tutorials and so forth)	TBA	Assignment 1 (SLO-1) - paper	TBA	15%
TBA	Environmental impacts of textiles and clothing Direct Instruction (lecture, handouts, tutorials and so forth)	TBA	Assignment 2 (SLOs 2 & 3) - paper	TBA	15%
TBA	Calculation of environmental impacts of textiles and clothing (Direct Instruction (lecture, handouts, tutorials and so forth)	TBA	Assignment 3 (SLOs 4 & 5) - paper	TBA	15%
TBA	Presentation		SLOs 6-8		10%
TBA	Attendance				5%
TBA	Final exam (cumulative)		Major focus: SLOs 6 - 8		40%
	Total				100%

Grading

The grading scale for this course

Letter Grade	Percentage out of 100	Grade Point Range	Final Grade Point
A+	92-100	4.25-4.5	4.5
A	85-91	3.75-4.24	4.0
B+	78-84	3.25-3.74	3.5
B	72-77	2.75-3.24	3.0
C+	66-71	2.25-2.74	2.5
C	60-65	2.0-2.24	2.0
D	50-59	Less than 2.0	1.0
F	Less than 50		0

Voluntary Withdrawal

The last day to drop the class and receive 100% refund is January 20, 2023 and the last day to withdraw with no refund is March 22, 2023. If a student who did not drop the course by the deadline would be assigned a final grade. The withdrawal courses will be recorded on official

transcript. Please consult the [Registrar's Office](https://umanitoba.ca/registrar) web page at <https://umanitoba.ca/registrar> for more information. Please note that I would be willing to discuss student's progress and strategies for improvement prior to the withdrawal date.

ASSIGNMENT DESCRIPTIONS

Final letter grades will be assigned based on the overall performance of the students in the following assignments, presentation and final examination

Assignment 1 (individual):	15%
Assignment 2 (individual):	15%
Assignment 3: (individual):	15%
Oral Presentation: (individual):	10%
Final Exam:	40%
Attendance:	5%
Total:	100%

Students' who do not complete all the items under 'Evaluation' will automatically receive a final grade of 'F'.

Assignment 1:

The nature of the assignment is an individual project that would focus on the major processing steps in the textile and clothing production. The students will use all materials covered in class including videos and research articles for learning outcome one (SLO 1). All work should be completed independently unless otherwise specified by the course instructor.

TITLE: Textiles and Clothing Supply Chains and Processing steps

GOAL: Learning Objective 1

Assignment preparation procedure: The students will be choosing one fibre, one yarn, one grey fabric, and one dyed/printed from more than 50 textile samples. Then the students will be prepared a table on the supply chains for fibre/yarn/fabric. This table will also contain water/energy/chemicals (dyes, auxiliaries and so forth) requirement for each step of the supply chain. The sources of the materials would be Chapter 1 of the textbook and the reading materials (Textile Science book by Hatch). The assignment should be written according to the Canadian Biosystems Engineering journal style.

SUBMISSION GUIDELINES: Upload your assignment to UM Learn.

EVALUATION CRITERIA: This assignment will be evaluated for content knowledge as shown in the rubric.

Rubric for Assignment 1:

Criteria	Below average (1)	Average (2)	Very good (3)	Outstanding (4)	Score
Supply chain flow chart and number of processing steps	None of the flow chart is correctly established.	Only two flow charts (for example, fibre & yarn) are correctly established.	Three flow charts (for example, fibre, yarn & grey fabric) are correctly established.	All four flow charts (fibre, yarn, grey fabric & processed fabric) are correctly established.	
Water requirement in the processing steps	Student does not have grasp of information, >25% water information is not provided/wrong	Student demonstrates a slight grasp of information, 50% of water information data is correct.	Student demonstrates considerable knowledge in the subject area, up to 75% of water content data are correct.	Student demonstrates full knowledge of the subject water use information.	
GHG information	Student does not have grasp of information, >25% GHG information is not provided/wrong	Student demonstrates a slight grasp of information, 50% of GHG information data is correct.	Student demonstrates considerable knowledge in the subject area, up to 75% of GHG content data are correct.	Student demonstrates full knowledge of the subject GHG release information.	
Ecological footprints (EFs)	Student does not have grasp of information, >25% EFs information is not provided/wrong	Student demonstrates a slight grasp of information, 50% of EFs information data is correct.	Student demonstrates considerable knowledge in the subject area, up to 75% of EFs content data are correct.	Student demonstrates full knowledge of the subject EFs release information.	

Assignment 2:

The nature of the assignment is an individual project that would focus on the major processing steps in the textile and clothing production. The students will use all materials covered in class including videos and research articles for learning outcome one (SLOs 2-3). All work should be completed independently unless otherwise specified by the course instructor.

TITLE: Environmental impacts of textiles and clothing industries

GOAL: Learning Objectives 2 and 3

Assignment preparation procedure:

SUBMISSION GUIDELINES: Upload your assignment to UM Learn.

EVALUATION CRITERIA: This assignment will be evaluated for content knowledge as shown in the rubric.

Rubric for Assignment 2:

Criteria	Below average (1)	Average (2)	Very good (3)	Outstanding (4)	Score

--	--	--	--	--	--

Assignment 3:

The nature of the assignment is an individual project that would focus on the major processing steps in the textile and clothing production. The students will use all materials covered in class including videos and research articles for learning outcome one (SLOs 4-5). All work should be completed independently unless otherwise specified by the course instructor.

TITLE: Calculation of Environmental impacts of textiles and clothing industries

GOAL: Learning Objectives 4 and 5

Assignment preparation procedure:

SUBMISSION GUIDELINES: Upload your assignment to UM Learn.

EVALUATION CRITERIA: This assignment will be evaluated for content knowledge as shown in the rubric. The content knowledge

Rubric for Assignment 3:

Criteria	Below average (1)	Average (2)	Very good (3)	Outstanding (4)	Score

Assignment 4: Presentation (10%)

Title of the presentation: TBA

Presentation rubric:

Criteria	Descriptors	Beginning [1]	Developing [2]	Proficient [3]	Mastery [4]
Content	Importance of topic, relevance, accuracy of facts, overall treatment of topic	Topic lacks relevance or focus; presentation contains multiple fact errors	Topic would benefit from more focus; presentation contains some fact errors or omissions	Topic is adequately focused and relevant; major facts are accurate and generally complete	Topic is tightly focused and relevant; presentation contains accurate information with no fact errors
Organization/ Clarity	Appropriate introduction, body, and conclusions; logical ordering of ideas; transitions between major points	Ideas are not presented in proper order; transition are lacking between major ideas; several parts of presentation are wordy or unclear	Some ideas not presented in proper order; transitions are needed between some ideas; some parts of presentation may be wordy or unclear	Most ideas are in logical order with adequate transitions between most major ideas; presentation is generally clear and understandable	Ideas are presented in logical order with effective transitions between major ideas; presentation is clear and concise
Completeness	Level of detail, depth, appropriate length, adequate background of information	Presentation does not provide adequate depth; key details are omitted or undeveloped; presentation is too short or too long	Additional depth needed in places; important information omitted or not fully developed; presentation is too short or too long	Presentation provides adequate depth; few needed details are omitted; major ideas adequately developed; presentation is within specified length	Presentation provides good depth and detail; ideas well developed; facts have adequate background; presentation is within specified length
Grammar/Mechanics	Correct grammar and usage that is appropriate for audience(s)	Presentation contains several major grammar/usage errors; sentences are long, incomplete or contain excessive jargon	Presentation may contain some grammar or sentence errors; sentences may contain jargon or are too long or hard to follow	Presentation has no serious grammar errors; sentences are mostly jargon-free, complete and understandable	Presentation contains no grammar errors; sentences are free of jargon, complete and easy to understand
Documentation	Proper support and sourcing for major ideas, inclusion of visual aids that support message	Little or no message support provided for major ideas; visual aids are missing or inadequate; little or no sourcing provided	Some message support provided by facts and visual aids; sourcing may be outdated or thin, visual aids need work	Adequate message support provided for key concepts by facts and visual aids; sourcing is generally adequate and current	Effective message support provided in the form of facts and visual aids; sourcing is current and supports major ideas
Delivery	Adequate volume, appropriate pace, diction, personal appearance, enthusiasm/energy, posture, effective use of visual aids	Low volume or energy; pace too slow or fast; poor diction; distracting gestures or posture; unprofessional appearance; visual aids poorly used	More volume/energy needed at times; pace too slow or fast; some distracting gestures or posture; adequate appearance; visual aids could be improved	Adequate volume and energy; generally good pace and diction; few or no distracting gestures; professional appearance; visual aids used adequately	Good volume and energy; proper pace and diction; avoidance of distracting gestures; professional appearance; visual aids used effectively
Interactions	Adequate eye contact with audience, ability to listen and/or answer questions	Little or no eye contact with audience; poor listening skills; uneasiness or inability to answer audience questions	Additional eye contact needed at times; better listening skills needed; some difficulty answering audience questions	Fairly good eye contact with audience; displays ability to listen; provides adequate answers to audience questions	Good eye contact with audience; excellent listening skills; answers audience questions with authority and accuracy

Referencing Style

Assignments should be written using the Canadian Biosystems Engineering journal (CBEJ) reference style. The CBEJ journal styles will be uploaded in the UMLearn.

Assignment Feedback

The feedback to the students will be provided in summative (i.e., grade) form. The graded assignment with the comments will be uploaded in the UMLearn within two weeks of the assignment submission. The students will receive a sufficient percentage of their final grade prior to the voluntary withdrawal date, which will allow students to make a decision about completing or withdrawing from the course.

Assignment Extension and Late Submission Policy

Each assignment is due by 11:59 pm on the due date or the appropriate late penalty will apply. Assignments submitted after the due date will be docked 25% per school day. Students' who do not complete all the items under 'Assignment Description' will automatically receive a final grade of 'F'. There are no exceptions outside of those permitted according to university guidelines (e.g. illness). If you are unable to complete the assignment due to medical reasons (medical certificate required) or compassionate reasons, please contact the instructor (send an email), preferably before the due date.

UNIVERSITY SUPPORT OFFICES & POLICIES

Writing and Learning Support

The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

You can also meet one-to-one with a 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. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor's feedback.

These 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/>

You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 205 Tier Building.

University of Manitoba Libraries (UML)

As the primary contact for all research needs, your liaison librarian can play a

Faculty of Agricultural & Food Sciences



vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, 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 in-person. A complete list of liaison librarians can be found by subject at <http://bit.ly/WcEbA1> or by name at <https://umanitoba.ca/libraries/librarians-and-archivists>. In addition, general library assistance is provided in person at all nine (9) University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult the following: <http://bit.ly/1sXe6RA> or <https://umanitoba.ca/libraries/locations-and-facilities>. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries' homepage: www.umanitoba.ca/libraries.

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 University Centre or S207 Medical Services

Tel: (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.

Student Support Intake Assistant <http://umanitoba.ca/student/case-management/index.html>

520 University Centre

(204) 474-7423

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.

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

104 University Centre, Fort Garry Campus

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

Health and Wellness

Contact our Health and Wellness Educator if you are interested in [peer support from Healthy U](#) or information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault.

Health and Wellness Educator <https://umanitoba.ca/student/health-wellness/welcome-about.html>

britt.harvey@umanitoba.ca

Live Well @ UofM

For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site:

<http://umanitoba.ca/student/livewell/index.html>

Your rights and responsibilities

As a student of the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The [Academic Calendar](http://umanitoba.ca/student/records/academiccalendar.html) <http://umanitoba.ca/student/records/academiccalendar.html> is one important source of information. View the sections *University Policies and Procedures* and *General Academic Regulations*.

While all of the information contained in these two sections is important, the following information is highlighted.

- If you have questions about your grades, talk to your instructor. There is a process for term work and final **grade appeals**. Note that you have the right to access your final examination scripts. See the Registrar's Office website for more information including appeal deadline dates and the appeal form <http://umanitoba.ca/registrar/>
- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the **Academic Integrity** regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support <http://umanitoba.ca/academicintegrity/> View the **Student Academic Misconduct** procedure for more information.
- The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected conduct yourself in an appropriate respectful manner. Policies governing behavior include the:

Respectful Work and Learning Environment

http://umanitoba.ca/admin/governance/governing_documents/community/230.html

Student Discipline

http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html and,

Violent or Threatening Behaviour

http://umanitoba.ca/admin/governance/governing_documents/community/669.html

- If you experience **Sexual Assault** or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The **Sexual Assault** policy may be found at:
http://umanitoba.ca/admin/governance/governing_documents/community/230.html
More information and resources can be found by reviewing the Sexual Assault site
<http://umanitoba.ca/student/sexual-assault/>
- For information about rights and responsibilities regarding **Intellectual Property** view the policy [https://umanitoba.ca/governance/sites/governance/files/2021-06/Intellectual_Property_Policy - 2013_10_01 RF.pdf](https://umanitoba.ca/governance/sites/governance/files/2021-06/Intellectual_Property_Policy_-_2013_10_01_RF.pdf)

For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective faculty/college/school web site
<http://umanitoba.ca/faculties/>

Contact an **Academic Advisor** within our faculty/college or school for questions about your academic program and regulations <http://umanitoba.ca/academic-advisors/>

Biosystems Engineering Academic Advisor:

- **Undergraduate student:** Nammy Nadarajah, Narmatha.Nadarajah@umanitoba.ca;
- **Graduate student:** Heather Innis, heather.innis@umanitoba.ca

Student Advocacy

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns.

<http://umanitoba.ca/student/advocacy/>

520 University Centre

Tel: 204 474 7423

student_advocacy@umanitoba.ca

Student Accessibility Services:

The University of Manitoba is committed to providing an accessible academic community. Students Accessibility Services (SAS) offers academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.

Student Accessibility Services

520 University Centre

Phone: (204) 474-7423

Email: Student_accessibility@umanitoba.ca

University Policies:

Class Communication:

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/governing_documents/community/electronic_communication_with_students_policy.html.

Please note that all communication between you (as a student) and your instructor (myself) must comply with the electronic communication with student policy. You are required to obtain and use your U of M email account for all communication between yourself and the university.

Academic Integrity:

Each student in this course is expected to abide by the University of Manitoba Academic Integrity principles. Always remember to reference the work of others that you have used. Also be advised that you are required to complete your assignments independently unless otherwise specified. If you are encouraged to work in a team, ensure that your project complies with the academic integrity regulations. You must do your own work during exams. Inappropriate collaborative behavior and violation of other academic Integrity principles will lead to the serious disciplinary action. 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. Electronic detection tools may be used to screen assignments in cases of suspected plagiarism. Visit the Academic Calendar, Student Advocacy, and Academic Integrity web pages for more information and support.

Recording Class Lectures:

No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission from me. Course materials (both paper and digital) are for the instructor's private study and research.