FACULTY OF SCIENCE

STAT2010U: Statistics & Probability for Physical Science

Course outline for Fall, 2024

1. Course Details & Important Dates*

Course Type	CRN	Day	Time	Location
*HYW In person & online	40410	Wednesday Friday	12:40-2 pm Virtual (online)	UA1350 online video

Classes Start	Classes End	Final Exam Period
Sept 3, 2024	Dec 2, 2024	Dec 4 – 14, 2024

See below "Outline of Topics in this Course" for a detailed week by week breakdown of both online and in class lectures.

NOTE: Additional important information will be posted in "Announcements" throughout the semester - make sure you stay up to date on this. We recommend that you turn on the setting that a copy of announcements be sent to your university e-mail account immediately.

* Visit https://ontariotechu.ca/current-students/academics/important-dates-and-deadlines.php for other dates

Important Note – Final Exams

The final exam for this course will require you to be ON CAMPUS during the regular final exam period.

2. Instructor Contact Information

Instructor Name	Office	Phone	Email
Paula Di Cato (section 001)	UA3018	Ext. 2825	Please use Canvas E-mail
Office Hours (student drop in hours): **Please refer to the "Office Hours" link on the Homepage of our Canvas site for the complete list of all STAT2010 office hours.**			
Grader/Teaching Assistant Name	Office	Phone	Email
Basak Cakmak	TBD	N/A	Please use Canvas E-mail
Office Hours: Please see office hours link in Canvas on the main page.			

3. Course Description

This course introduces the concepts and techniques of statistics and probability to collect, present, analyze and interpret data, and make decisions in the presence of variability. Students study a selection of topics relevant to biological science, selected from: basic concepts of probability theory: events, sample spaces, probability; basic concepts of discrete mathematics: set theory, propositional logic, combinatorics; probability: marginal probability, conditional probability, independence, discrete and continuous random variables; probability distributions: binomial, exponential, uniform, normal, etc.; mean and variance; the central limit theorem; statistical inference: estimation, significance tests, confidence intervals; One way ANOVA; introduction to experimental design. Introduction to correlation and regression.

4. Learning Outcomes

On the successful completion of the course, students will be able to:
Describe, interpret and analyze data. Calculate summary statistics such as central tendencies, dispersion, quartiles and percentiles. Graphically display data using histograms, stem-and-leaf plots and boxplots. Describe shape and skewness of data. Compute the probability of an event, marginal, joint and conditional probabilities. Describe the concept of random variables, and setting up a discrete mass function. Identify a variety of probability distributions, both discrete and continuous and the ability to calculate various probabilities, and distribution summary statistics. Computing confidence intervals for both large and small sample sizes based on a single mean. Distinguish between independent, paired or pooled data and calculating confidence intervals based on the difference between two means. Write a testable hypothesis and explain the difference between the null and alternative hypothesis. Define statistical significance and explain the meaning of a p-value. Carry out a hypothesis test for univariate (large and small sample size), bivariate data (independent, paired or pooled) and multivariate data. Describe the purpose and calculate Pearson Correlation Coefficient as well as the least squares line and goodness of fit. Applying all learning outcomes stated above in SAS (statistical analysis system).

5. Course Design

Each week you will have 1 in-class lecture and 1 online video lecture made available to you through canvas. Your 1st lecture is an in-person lecture on Wednesday Sept 4. Your online lecture is a video lecture pre-recorded in Camtasia and will be posted Friday of each week. The online lectures posted each Friday will be accessible throughout the duration of the course. Your first online video lecture is on Friday Sept 6. A total of 6 online timed quizzes (in Mobius) will be completed throughout the duration of the course, consisting of 10 multiple choice/true false/fill in the blank questions (see below “Assignment and Tests” to view a detailed breakdown of quiz dates). 10 assignments will be completed based on the material taught throughout the course. Pop quizzes in lecture will allow for practice and feedback. SAS software will be used near the end of the semester in lectures, quizzes and assignments. One midterm and 1 final exam.

6. Outline of Topics in the Course

Week 1 (Sept 3-6) *Chapter 1: Data and Distributions*

In-class lecture 1, Wednesday Sept 4:
- Data, Populations and Samples (Section 1.1);
- Histograms and Stem and Leaf Plots (Section 1.2).

Video lecture 2 posted Friday Sept 6:
- Histograms and Stem and Leaf Plots – Cont'd (Section 1.2);
- Continuous Distributions (Section 1.3).

Week 2 (Sept 9-13) *Chapter 1: Data and Distributions*

In-class lecture 3, Wednesday Sept 11:
- Discrete Distributions – Cont'd (Section 1.3).

Video lecture 4 posted Friday Sept 13:
- Standard Normal and Nonstandard Normal Distribution (Section 1.4).

Week 3 (Sept 16-20) *Chapter 1: Data and Distributions & Chapter 2: Measures of Center*

In-class lecture 5, Wednesday Sept 18:
- Binomial Distribution (Section 1.6);
- Measures of Center for Data and Distributions (Section 2.1).

Video lecture 6 posted Friday Sept 20:
- The Mean and Median of Continuous Distributions (Section 2.1);
- Measures of Variability (Section 2.2).

Week 4 (Sept 23-27) *Chapter 2: Measures of Center & Chapter 3: Bivariate and Multivariate Data and Distributions*

In-class lecture 7, Wednesday Sept 25:
- Quartiles and the Interquartile Range, Boxplots and outliers (Section 2.3).

Video lecture 8 posted Friday Sept 27:
- Bivariate Data (Section 3.1);
- Correlation, Pearson's Sample Correlation Coefficient and Causation (Section 3.2);
- Fitting a line to Bivariate Data (Section 3.3).

6. Outline of Topics in the Course cont…

Week 5 (Sept 30 - Oct 4) *Chapter 3: Bivariate and Multivariate Data and Distributions & Chapter 5: Probability and Sampling Distributions*

In-class lecture 9, Wednesday Oct 2:
- The Least Squares Regression Line and Assessing the Fit of the Least Squares Line (Section 3.3);
- Plotting the Residuals (Section 3.3).

Video lecture 10 posted Friday Oct 4:
- Probability, sampling space and events (Section 5.1);
- Operations on Events and Associated Rules of Probability (Section 5.2).

***Week 6* (Oct 7-11)** *Chapter 5: Probability and Sampling Distributions*

In-class lecture 11, Wednesday Oct 9:
- Conditional Probability and Independence (Section 5.3);
- Random Variables and Probability Distributions (Section 5.4).

Video lecture 12 posted Friday Oct 11:
- Mean and Variance of a Random Variable (Section 5.4);
- Sampling Distributions (Section 5.5);
- The Mean, Variance and Standard Deviation of the Sample Mean (Section 5.6).

Reading Week (Oct 14-18) *Co-curricular period*

No lecture during Co-curricular period (No lectures Oct 14-18)

Week 7 (Oct 21-25) *Chapter 5: Probability and Sampling Distributions & Chapter 7: Estimation and Statistical Intervals*

In-class lecture 13, Wednesday Oct 23:
- The Central Limit Theorem, empirical rule and continuity correction (Section 5.6).

Video lecture 14 posted Friday Oct 25:
- Large-Sample Confidence Intervals for a Population Mean (Section 7.2);
- 95% Confidence Interval, Other Confidence Levels and a General Formula and Sample Size Formula (Section 7.2).

Week 8 (Oct 28 - Nov 1) *Chapter 7: Estimation and Statistical Intervals*

MIDTERM IN-CLASS ON WEDNESDAY, OCT 30

Video lecture 15 posted Friday Nov 1:
- Large-Sample One sided Confidence Intervals (Section 7.2);
- Large-Sample Confidence Intervals for a Population Proportion and Sample Size Formula (Section 7.3);
- The t-Distribution and Small-Sample t Confidence Interval (Section 7.4).

6. Outline of Topics in the Course cont…

Week 9 (Nov 4-8) *Chapter 7: Estimation and Statistical Intervals & Chapter 8: Testing Statistical Hypotheses*

In-class lecture 16, Wednesday Nov 6:
- The t-Distribution and Small-Sample t Confidence Interval – Cont'd (Section 7.4);
- Hypothesis Testing, Type I and Type II Error and p-values (Section 8.1).

Online lecture 17 posted Friday Nov 8:
- Hypothesis Testing, Type I and Type II Error and p-values – Cont'd (Section 8.1);
- Tests Concerning a Single Mean (Section 8.2).

Week 10 (Nov 11-15) *Chapter 8: Testing Statistical Hypotheses*

In-class lecture 18, Wednesday Nov 13:
- Tests Concerning a Single Mean – Cont'd (Section 8.2);
- Tests Concerning a Difference Between Two Means: Paired Data (Section 8.2).

Video lecture 19 posted Friday Nov 15:
- Tests Concerning a Difference Between Two Means: Independent Data (Section 8.2);
- The Pooled Two-Sample t Procedure (Section 8.2).

Week 11 (Nov 18-22) *Chapter 8: Testing Statistical Hypotheses*

In-class lecture 20, Wednesday Nov 20:
- The Pooled Two-Sample t Procedure – Cont'd (Section 8.2);
- Review of all hypothesis procedures;
- Chi-Squared Test for Independence (Section 8.3).

Online lecture 21 posted Friday Nov 22:
- Chi-Squared Test for Independence – Cont'd (Section 8.3);
- Chi-Squared Test for Comparing Several Populations (Section 8.3).

Week 12 (Nov 25-29) *SAS Statistical Program*

In-class lecture 22, Wednesday Nov 27:
- Introductory to SAS;
- Understanding the Basic Concepts of SAS;
- Univariate analysis in SAS (histogram/boxplot/stem and leaf), Correlation and Regression in SAS, Single Mean Hypothesis in SAS.

Online lecture 23 posted Friday Nov 29:
- Understanding How to Read SAS output;
- Ability to interpret SAS output;
- Paired/Independent/Pooled Hypothesis and Confidence intervals in SAS, Chi Square Test in SAS.

7. Required Texts/Readings

REQUIRED:

Applied Statistics FOR ENGINEERS AND SCIENTISTS, Devore – Farnum - Doi, Third Edition, CENGAGE Learning Nelson Education, 2014. ISBN 113311136X.

RECOMMENDED/OPTIONAL:

Student Solutions Manual For Devore – Farnum - Doi 3rd ed. Applied Statistics for Engineers and Scientists. 2014. ISBN 1133492185.

Note: All homework questions and full homework solutions are available in Canvas.

The text book and solution manual are available on reserve at the library.

Additional readings may be assigned or recommended during the course.

8. Evaluation Method

The course mark will be calculated as follows:

In lecture pop quizzes: 5%
Online quizzes: 10%
Assignments: 15%
Midterm: 30% **(Wednesday, October 30 – in class)**
Final Exam: 40%

IMPORTANT: You may be required to use Respondus Lockdown Browser and Monitor for the midterm and Final Exam. This will require a working webcam. You must show your student ID.

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found in Section 5 of the Ontario Tech Academic Calendar.

9. Assignments and Tests

In lecture Pop Quizzes:
These short quizzes will take place using Canvas and must be completed in your in-class lecture section. They will not be announced in advance, and can occur at any point during the in-class lecture but will typically occur at the end of lecture. They will be completed in groups. The lowest *two* in lecture pop quizzes will not count towards your final grade.

Online Quizzes:
Online quizzes will be completed in Mobius and are to be completed individually. There will be 6 online quizzes throughout this course. Your *single* lowest quiz will be dropped. Quizzes will consist of 10 multiple choice/fill in the blank questions and you will have 30 minutes to complete each quiz. Each quiz will be made available for ~3 days, and you have TWO attempts at each quiz (this is to account for possible technical issues or syntax mistakes, so if you experience an issue, please just re-take the quiz – we will not make changes to scores). Your best attempt counts. The quiz schedule is as follows:
Quiz 1 – covers lectures 1, 2, 3 and 4. Must be taken sometime between 5pm Friday September 13 and 5pm Monday September 16.

Quiz 2 – covers lectures 5, 6 and 7. Must be taken sometime between 5pm Friday September 27 and 5pm Monday September 30.

Quiz 3 – covers lectures 8 and 9. Must be taken sometime between 5pm Friday October 4 and 5pm Monday October 7.

*Quiz 4 – covers lectures 10, 11, 12 and 13. Must be taken sometime between 5pm Friday October 25 and 5pm Monday October 28. (3 attempts for this quiz)

Quiz 5 – covers lectures 14, 15, 16, 17, 18 and 19. Must be taken sometime between 5pm Friday November 15 and 5pm Monday November 18.

Quiz 6 – covers lectures 20, 21 and 22. Must be taken sometime between 5pm Friday November 29 and 5pm Monday December 2.

Assignments:
Assignments are to be completed individually. There will be 10 assignments throughout this course. Each assignment clearly states the topics covered. *Your lowest 3 assignments will be dropped.* Assignments will be submitted as a quiz format within Canvas and final answers are graded only. You must submit your final answers via the quiz format within Canvas on time as the Assignment quiz closes precisely at the due date/time. Assignment submission is typically open for 1 full week and you can enter/re-enter the assignment submission as many times as you like during that week.

9. Assignments and Tests cont…

Late assignments are not accepted in this course for any reason whether it be medical, technical or other. This is why I am dropping the lowest 3 assignments. Do not email your Professor asking for an extension or exception as those emails will not receive a response. Here is the assignment schedule:

-Assignment 1 is posted on Friday, Sept 6 and is due on Friday, Sept 13 at 5:00pm in Canvas Assignment 1 and submission

-Assignment 2 is posted on Friday, Sept 13 and is due on Friday, Sept 20 at 5:00pm in Canvas Assignment 2 and submission

-Assignment 3 is posted on Friday, Sept 20 and is due on Friday, Sept 27 at 5:00pm in Canvas Assignment 3 and submission

-Assignment 4 is posted on Friday, Sept 27 and is due on Friday, Oct 4 at 5:00pm in Canvas Assignment 4 and submission

-Assignment 5 is posted on Friday, Oct 4 and is due on Friday, Oct 11 at 5:00pm in Canvas Assignment 5 and submission

-Assignment 6 is posted on Friday, Oct 11 and is due on Friday, Oct 25 at 5:00pm in Canvas Assignment 6 and submission

-Assignment 7 is posted on Friday, Nov 1 and is due on Friday, Nov 8 at 5:00pm in Canvas Assignment 7 and submission

-Assignment 8 is posted on Friday, Nov 8 and is due on Friday, Nov 15 at 5:00pm in Canvas Assignment 8 and submission

-Assignment 9 is posted on Friday, Nov 15 and is due on Friday, Nov 22 at 5:00pm in Canvas Assignment 9 and submission

-Assignment 10 is posted on Friday, Nov 22 and is due on Friday, Nov 29 at 5:00pm in Canvas Assignment 10 and submission

Midterm Tests and Final Exam:
The midterm and final exam may be done online through Respondus Lockdown Browser and Monitor. A webcam and strong internet access is necessary to complete these tests if it is decided that the test in done online through Respondus Lockdown Browser and Monitor, otherwise the tests are done in class on paper. A non-graphing, non-programmable calculator is permitted. The final exam will test all material covered in the course. The midterm test and final exam may consist of a hand written component OR a timed multiple choice component OR a combination of both. You will be provided a formula sheet for both the midterm and the final exam.

9. Assignments and Tests cont…

NOTE: Regarding missed work:

- **If you miss an online quiz, in lecture pop quiz or an assignment, then you receive a 0 on it. We recognize that times may arise when you are forced to miss a quiz/assignment, but it is for this very reason that the single lowest online quiz mark, 2 lowest in lecture pop quizzes and the three lowest assignment marks are dropped. This is extremely generous, so no notes will be accepted for missed quizzes and/or assignments. This policy applies to all students.**

- **If you miss the Statistics Readiness Assessment, then you will get a grade of 0 on it. If you missed the test because you registered in the course Sept 11 or later, you must contact Paula Di Cato by Canvas e-mail within 5 business days of registration.**

Missed Tests (midterm or final exam):
In the case of a missed midterm or final exam, you will need to complete an Academic Consideration form. You can find this at https://forms.ontariotechu.ca/forms/online/view.php?id=1068845
This form applies for missed midterms and exams, even if they are worth less than 25% of the grade. For additional information about the process, please contact Science Advising immediately.

For information about the deadline and associated process, please contact Science Advising immediately (science.advising@ontariotechu.ca). The usual accommodation for a missed midterm test will be to re-weight the grading scheme to allocate the missed test mark to the final exam mark.

If you miss a test without a legitimate reason or do not provide the proper documentation, you will receive a mark of zero. If the test is written, the decision is irreversible. If you are contemplating not writing a test for any reason, please speak to the science academic advisor in advance of the test, as well as informing the instructor.

10. Technology Requirements

Ontario Tech uses *Canvas*™ as its learning management system (LMS). Access to the LMS is limited to students formally registered in courses. That access is for the duration of the semester **and for an additional 120 days once the semester is over**. Students are strongly encouraged to download any/all relevant course material during that access period. Any requests for access post this period must be made in writing to the instructor/faculty member responsible for the course.

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca
Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

11. Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain human anatomy, matters pertaining to race, gender, or sexuality. The Course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content. The warning will be: "The content you are about to view contains sensitive subject matter that may be considered offensive and/or disturbing to some viewers. By viewing and/or interacting with the content you acknowledge and agree that it is your decision to view and interact with the content and to take the risk that you will experience a negative emotional response or reaction to the nature of the content."

12. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

13. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
- Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

14. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. **Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible.** Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

Students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the **downtown Oshawa campus** can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

14. Students with Disabilities cont…

Students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

15. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

16. Online Test and Exam Proctoring (Virtual Proctoring)

To maintain academic integrity in online testing, your instructor may require the use of Respondus LockDown Browser and Respondus Monitor or a similar virtual proctoring platform. In doing so, you will be required to use a computer with a webcam (either built-in or USB plug in). Please advise your instructor as soon as possible if you do not have a computer with a camera. This is a link to a short video that explains the basics of Respondus LockDown Browser: https://web.respondus.com/lockdownbrowser-student-video/

17. Final Examinations

Final examinations are held during the final examination period at the end of the semester and may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

While the University is returning to campus, final exams may require online submission, so you will require internet access along with a webcam.

Students are required to show their Student ID card (campus ID). Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious obligations may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php

18. Freedom of Information and Protection of Information Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Science.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act (“FIPPA”). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

18. Freedom of Information and Protection of Information Act cont…

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Science encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time.

If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information

Throughout this course, personal information may be collected through the use of certain technologies under the authority of the *University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O.* and will be collected, protected, used, disclosed and retained in compliance with Ontario's *Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.*

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Monitor or Proctortrack to maintain academic integrity for examinations;
- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning;

Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

19. Human Rights and Respect

Ontario Tech University is committed to providing a campus environment in which all University Members are treated with dignity and to fostering a climate of understanding and mutual respect. The University will not tolerate, ignore or condone Discrimination or Harassment by or against anyone. Examples of Harassing behavior include, but are not limited to; bullying, taunting or mocking someone's race or creed, ridiculing an individual's disability, or targeting individuals with unwanted sexual or negative stereotypical comments about one's sex, gender, sexual orientation, gender identity and/or gender expression. Pursuant to Ontario Tech's Respectful Campus Policy, students are reminded of their role in ensuring a campus environment that is equitable and inclusive. Requirements to refrain from harassment and discrimination apply broadly to the classroom, including in lectures, labs and practicums, as well as through the use of sanctioned and unsanctioned technological tools that facilitate remote learning, e.g. class and other chat functions, video conferencing, electronic mail and texts, and social media content amongst or about University students, faculty and staff.

20. Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behavior that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

21. Copyright Notice

All teaching materials provided by the instructor throughout the course, including, but not limited to, in whole or in part, recorded lectures, slides, videos, diagrams, case studies, assignments, quizzes, and examinations are subject to the Copyright Act, R.S.C., 1985, c. C-42. Teaching materials are owned by the faculty member, instructor or other third party who creates such works. The copyright owner(s) reserves all intellectual property rights in and to the teaching materials, including the sole right to copy, reproduce, distribute, and modify the teaching materials. Consistent with the university's Intellectual Property Policy, teaching materials are intended only for the educational use of Ontario Tech University students registered in the course that is the subject of this course outline. Any distribution or publishing of this material (e.g. uploading material to a third-party website) is strictly prohibited under the law unless the student has obtained the copyright owner's prior written consent. Any violation of copyright law or the Intellectual Property Policy, if proven, may be subject to sanction as academic misconduct, and/or under the Student Conduct Policy.

22. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

23. Final Exam Views

Once grades are released in mycampus, if you want to view your final exam/find out your exam grade, you need to **complete the Exam View Request Form for STAT2010 that's available here (copy and paste the link) ->** https://shared.uoit.ca/shared/faculty/fsci/forms/Science-Final-Exam-View-May-2014.pdf

Notes regarding exam views:

-the above form is the only way to request an exam view for this course; e-mail me the form within canvas.

-as per the University policy, you have 5 business days from the day that marks are released to submit the exam view request form. **Late requests will not be accepted.** Once the form is submitted, your instructor will then contact you regarding a date/time to view your exam.

-unless there is a clerical mistake, instructors cannot change marks as a result of an exam view

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.