



chapters that we will cover in our text. (Some topics include 2 chapters). You should begin the course in Topic 1 and complete it before moving onto the next topic. The topics have been organized in sequential order, so that you build skills and enhance knowledges as you move from one topic to the next. While you have some leeway as to when you complete the topics, a suggested timeline for completing the course has been provided in the schedule later in this course outline. This suggested schedule takes into account the timing of activities and exams.

6. After almost every class we will hold an online activity. But- almost no pressure!!! You can earn up to 5 marks for doing the activities – as long as you get a minimal score of just 50% on each activity- and you have three chances for each activity to get that score. The activities are there to ensure that you understand the material before moving to a new topic. There will be 12 activities and we will only take your best 10 into account. You will need to use an online system called MindTap to have access to the activities. Our book publisher provides access to MindTap once you make the book purchase – described later in this course outline and on Moodle. You can do each activity up to three times until you obtain at least 50% on the activity. Do that for your best 10 activities and you get 5% (0.5% per activity). The activities are at the end of each chapter in MindTap (they are called “Problem Set”) and it is indicated beside them that they count for grades. The deadline for completing the activities will be indicated in MindTap.
7. There will be 4 tests worth 20%, 25%, 25%, 25% percentage of the final course grade. They will be non-cumulative. The schedule presented later in this course outline lists the timing and content of the tests.

Technical requirements for taking the course:

1. Students will need equipment to gain access to Moodle.
2. Students will also need access to Zoom for video conferencing during tutorial sessions.
3. In addition to stable, higher-speed Internet connection, students will need a computer with webcam and microphone, and/or a smart device with these features.

A way to determine Internet connection and speed: there are online tests, such as Speedtest, that can be run.

Useful links describing computing information, resources and help for students:

[Student Guide to Moodle](#)

[Zoom@YorkU Best Practices](#)

[Zoom@YorkU User Reference Guide](#)

[Computing for Students Website](#)

[Student Guide to eLearning at York University](#)

**Course Description**  
**Program Learning Outcomes**

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

1. Compute descriptive statistics and inferential statistics.
2. Interpret and report the results of descriptive statistics and inferential statistics.
3. Distinguish between the role of descriptive statistics and inferential statistics.

**Topics Covered**

- Defining Key Statistical Terms
- Frequency Distributions
- Central Tendency
- Variability
- z-Scores/Normal Distribution
- Probability
- Sampling Distribution
- Confidence Intervals
- Power
- Effect Size
- Hypothesis Testing
- Correlation
- $\chi^2$  Goodness of Fit
- $\chi^2$  Test of Independence
- One-sample t test
- Introduce independent and dependent designs

\*Effect size is included as part of all inferential statistics covered in this course.

## SCHEDULE AND CONTENT

May 11	Introduction to course Broad overview - Descriptive Statistics- mode, median, mean
May 13	Broad overview continued - range, variance, standard deviation, (measurement, Summation notation)
May 18	NO CLASS- Victoria Day
May 20	<b>(Section numbers refer to text - 10<sup>th</sup> edition of book)</b>
	1.1 Populations and samples
	1.3 Variable and measurement
	1.4 Statistical notation
	2.1 -2.3 Frequency distributions- tables, graphs, shape
	2.4 Percentiles, percentile ranks
	3.1 – 3.6 Central tendency
	4.1 Range
	4.2 – 4.6 Standard deviation, variance
<b>May 25</b>	<b>TEST 1 (Worth 20% - covering May 11 – May 20 topics).</b>
	5.1- 5.6 z-Scores
	6.1- 6.3 Probability
May 27	7.1 – 7.4 The distribution of sample means
<b>June 1</b>	<b>TEST 2 (Worth 25% - covering May 25 to May 27 topics).</b>
June 3	8.1 – 8.6 Hypothesis testing
June 8	9.1 – 9.4 t-statistic
	10.1 – 10.5 Hypothesis tests with two independent samples
<b>June 10</b>	<b>TEST 3 (Worth 25% -covering June 3 to June 8 topics).</b>
	11.1 – 11.5 Hypothesis tests with related samples Estimation
June 15	15.1 – 15.4 Correlation
June 17	17.1 – 17.4 Chi-Square statistic
June 22	Review on Zoom (optional)
<b>June 24</b>	<b>TEST 4 (Worth 25% - covering June 10 to June 17 topics).</b>

## **COURSE MATERIALS REQUIRED (Book, MindTap online resource)**

### **Three Course Text Options (PICK ONLY 1 OPTION).**

**Option #1** – bundle of: loose-leaf version of the Gravetter 10<sup>th</sup> ed Stats text + CUSTOM CHAPTER + MindTap Printed Access Card (12 month access)

Package ISBN: 0176882480

Price: \$125.95

**Option #2** – bundle of: Statistics for the Behavioral Sciences 10<sup>th</sup> edition text + CUSTOM CHAPTER + MINDTAP Printed Access Card (12 month access)

Package ISBN: 0176853022

Price: \$180.95

**Option #3** – paperless option - MindTap printed access card (includes e-book) for Gravetter Stats for The Behavioral Sciences, 10th Ed (12 month access). Please ask at the bookstore for this option.

ISBN: 9781337280754

Price: \$99.95

The bookstore is open ONLINE only and will ship texts to students with NO shipping fee.

Bookstore web site: <https://www.bookstore.yorku.ca/>

If students already have a used text, all they need is Option #3 – the MindTap access card, which they can purchase through the bookstore web site. The bookstore will email them with an access code.

If students just buy access to MindTap, they may be wondering about the custom chapter. This chapter contains statistical tests that are used in the second half of this course (PSYC 2022) so it's not needed right now. Students can buy this chapter at the bookstore for \$9.95.

MindTap gives students access for three course attempts, which means that a student could withdraw from this course and take it again at a later date and still have access to MindTap. The courses don't have to be consecutive – students could take the course now, withdraw, and then take it again in January 2021.

### **Course Enrolment**

Last date to enrol without permission of course instructor – May 25

Last date to enrol with permission of course instructor – June 8

Last date to drop courses without receiving a grade – July 17

Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript –

see note below) July 18 – Aug 12

*\*Note: You may withdraw from a course using the registration and enrolment system after the drop deadline until the last day of class for the term associated with the course. When you withdraw from a course, the course remains on your transcript without a grade and is notated as "W". The withdrawal will not affect your grade point average or count towards the credits required for your degree.*

**The course instructor and TA's do not get involved in enrolment issues - see department administration.**

### **Evaluation**

The best 10 out of 12 activities (0.5% mark for completing 10 out of 12 activities with a minimal 50% score ) TOTAL: 5 marks

Four tests worth 20%, 25%, 25%, 25% percentage of the final course grade. TOTAL: 95% of the final course grade. See above schedule for dates.

### **Missed Classes and other matters**

We do not take attendance. Please contact your TA for on-line appointments in case you are having any difficulties in understanding the material.

### **Grading**

The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Tests will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 90, B+ = 75 to 79, etc.)

**Missed Tests:** Students are expected to write each test on the dates specified.

### **ETHICS AND LEGAL OBLIGATIONS**

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Academic Standards, Curriculum & Pedagogy webpage (see Reports, Initiatives, Documents) -

<http://www.yorku.ca/secretariat/senate/committees/ascp/index-ascp.html>

- Senate Policy on Academic Honesty and the Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

Audio-visual recordings – both on Moodle and Zoom: 1) the recordings should be used for educational purposes only and as a means for enhancing accessibility; 2) students do not have permission to duplicate, copy and/or distribute the recordings outside of the class (these acts can violate not only copyright laws but also FIPPA and intellectual property rights); and 3) all recordings will be destroyed after the end of classes. Please see the Teaching commons going remote website

particularly the section on Copyright and intellectual property at <https://bold.info.yorku.ca/> and <https://copyright.info.yorku.ca/students-reuse-of-teaching-materials-from-york-courses-2/> for some statements to use in your course outline about intellectual property.

#### 1) Information about Academic Resources

Textbooks: See notes in this outline and on Moodle.

Digital content: York University Libraries also has access to online content that can be linked (using permalinks) through Moodle. A Library guide on creating permalinks/stable links to articles/ebooks/electronic resources can be found in various databases/Omni (the new library catalogue) at <https://researchguides.library.yorku.ca/permalinks> -- that can be used in Moodle. When students click on the stable link, they will be asked to authenticate through Passport York and then they have full access to the online resource. Using these permalinks addresses copyright issues.

#### 2) Information about Academic honesty and integrity

Please see the library resources, academic integrity, and copyright section of the Going Remote website at <https://bold.info.yorku.ca/>

In this course, we strive to maintain academic integrity to the highest extent possible. Please familiarize yourself with the meaning of academic integrity by completing SPARK's Academic Integrity module at the beginning of the course. Breaches of academic integrity range from cheating (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.) to aiding and abetting (helping someone else to cheat). All breaches in this course will be reported to the appropriate university authorities, and can be punishable according to the Senate Policy on Academic Honesty."

<https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>

#### Test Banks

The offering for sale of, buying of, and attempting to sell or buy test banks (banks of test questions and/or answers), or any course specific test questions/answers is not permitted in the Faculty of Health. Any student found to be doing this may be considered to have breached the Senate Policy on Academic Honesty. In particular, buying and attempting to sell banks of test questions and/or answers may be considered as "Cheating in an attempt to gain an improper advantage in an academic evaluation" (article 2.1.1 from the Senate Policy) and/or "encouraging, enabling or causing others" (article 2.1.10 from the Senate Policy) to cheat.

#### Academic Accommodation for Students with Disabilities

While all individuals are expected to satisfy the requirements of their program of study and to aspire to do so at a level of excellence, the university recognizes that persons with disabilities may require reasonable accommodation to enable them to do so. The university encourages students with disabilities to register with Student Accessibility Services (SAS) to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors as necessary. Please let me know as early as possible in the term if you anticipate requiring

academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course.

<https://accessibility.students.yorku.ca/>

### Electronic Device Policy

This course will be delivered in an online format and therefore electronic devices (e.g., tablets, laptops) as permitted during class time for course-related purposes. It is expected that you would complete tests/exams in a manner that does not require consulting an unauthorised source during an examination.