Course Outline

Course Number: SOC202H1F  LEC0101 – Summer 2022
Course Title: Introduction to Quantitative Methods in Sociology
Course Instructor Melissa R. Hunte  email: melissar.hunte@mail.utoronto.ca
  •  Teaching Assistant Lei Chai  email: lei.chai@mail.utoronto.ca

Location: FE36
Day/Time: Mondays and Wednesdays 12:00 pm – 3:30 pm. Lectures and labs are integrated and are scheduled twice every week.

Tutorials - TBA

Office Hours: By request. For additional course related support, feel free to email the TA or the Course Instructor.

1. Course Description

We live in a data-driven world, and as social scientists it is imperative to critically understand how data are generated, analyzed, and interpreted because results from statistical analyses can significantly impact individuals and systems, exacerbate social inequalities, reinforce social biases, influence policies, or help improve equity. Therefore, in this course we will think critically and practically about quantitative information, raise awareness of the strengths, limitations, and potential biases that quantitative analyses can generate, expand, and extend students’ statistical knowledge, and provide opportunities for students to apply knowledge to real-world situations or their areas of interest.

2. Prerequisites

The prerequisite to take this course is SOC100H1 and SOC150H1. Students without these requirements will be removed from this course at any time and without notification.

3. Learning Goals & Outcomes

The primary goals of this course are to help you enjoy learning about statistics and extend your knowledge to real-life applications. Once you have successfully completed all the requirements for this course, you should be able to:

i. Apply basic statistical techniques, both descriptive and inferential
ii. Examine research questions using real-world data
iii. Analyze real-world data, interpret results, and write statistical reports.
iv. Use SPSS to run basic statistical analyses
4. Quercus

All announcements, including emergencies or changes to course structure, will be posted on Quercus. Quercus will also be used to access course content, assignments, assessments, and grades. Please ensure your settings on Quercus allow for course announcements to be sent immediately to your email.

5. Textbook


E-text with MindTap $64.95: ISBN # 9781778413155

Print with MindTap $131.95: ISBN # 9781778413117

This textbook is mandatory. Course readings and tests will be based on this text. Obtaining the wrong version of the text may impede your performance in this course. To position yourself for success and to activate prior knowledge, it is recommended that you complete weekly readings before viewing lectures.

The e-text is available through the University of Toronto bookstore and can be purchased directly in Quercus.

MindTap: With the purchase of the text (both hard copy and digital version), you will receive a password for MindTap. Homework and most weekly exercises will be accessed through MindTap. Any additional readings and assignments will be available on Quercus.

To access MindTap, create an online account through the MindTap course website (see information on Quercus). Please use your UTORID as your MindTap username. This will ensure that we can match your MindTap grades with your scores on Quercus. To complete homework assignments, log in using the ID and the password you created during online registration.

6. Software Access

SPSS is the statistical software package you will need to use to complete the research assignments. There are several ways through which you can access SPSS:

A. Purchase: You can purchase an IBM SPSS license for your own computer. A license on your own computer is the most reliable way to access SPSS and it can be purchased through the following:
   a. UofT’s Licensed Software office (https://onesearch.library.utoronto.ca/ic/licensed-software). UofT’s License is available to students for $80.00 but is only valid until July 31, 2022.

B. Lab Computers: SPSS will be available through the lab computers. However, the number of lab computers are limited and are only available during class times.

C. Remote Access: You may access SPSS remotely on your own computer through the University of Toronto Remote Lab (details will follow). This allows users to connect to remote desktops using the U of T VPN. This should be considered the back-up option if all else fails.
IMPORTANT: If you are relying on the lab or remote access, be sure to start your assignments early. Remote resources may be busy and technical issues can arise. Ultimately, you are responsible for completing your assignment on time.

7. Laptop

This course integrates SPSS and statistical knowledge applications at the end of each module. You would be required to access MindTap and SPSS during each class and are strongly encouraged to bring your laptop to each lecture. If you do not own a laptop, you will have the option to use the lab computer, but the lab computers are limited.

8. Course Structure, Assignments, and Evaluation

This is an intensive summer course that runs for approximately 10-12 sessions. Because of the fast-paced nature of summer courses, staying on top of readings and assignments is critical for students’ success. As such, the course is designed to be both student-guided and instructor led. Students would be required to master their learning through pre-class preparations, in-class applications, and post-class homework. The course also integrates a social support component in the assignments to help students support each other in group settings.

Assignments and Evaluation Summary

<table>
<thead>
<tr>
<th>No.</th>
<th>Assignments</th>
<th>% Grade each</th>
<th>Total % Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x</td>
<td>Syllabus Quiz</td>
<td>.5%</td>
<td>.5%</td>
</tr>
<tr>
<td>1x</td>
<td>Mid-point survey</td>
<td>.5%</td>
<td>.5%</td>
</tr>
<tr>
<td>10x</td>
<td>Participation</td>
<td>.5%</td>
<td>5.0%</td>
</tr>
<tr>
<td>10x</td>
<td>Homework</td>
<td>1.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>5x</td>
<td>Group Work</td>
<td>1%</td>
<td>5.0%</td>
</tr>
<tr>
<td>2x</td>
<td>Outline of Research Assignment</td>
<td>1.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>1x</td>
<td>Research Assignment 1</td>
<td>20.0%</td>
<td>20.0%</td>
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<tr>
<td>1x</td>
<td>Research Assignment 2</td>
<td>25.0%</td>
<td>25.0%</td>
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<tr>
<td>1x</td>
<td>Assessment 1</td>
<td>15.0%</td>
<td>15.0%</td>
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<tr>
<td>1x</td>
<td>Assessment 2</td>
<td>17.0%</td>
<td>17.0%</td>
</tr>
</tbody>
</table>

Total 100.0%

Syllabus Quiz (.5%)

Students’ understanding of course requirements can significantly influence their academic success. As such, students are required to demonstrate their understanding of the content in the syllabus by completing a Syllabus Quiz.

Mid-point Survey (.5%)

A mid-point survey will be used to get feedback on students’ experiences with the course, and to identify areas that may require adjustment.
Class Assignments (20%)

Class sessions are designed to help students activate knowledge through pre-class readings and applications. Students will be graded in three ways at the end of each class session.

i. **Participation (5%)**. After each session students are required to upload the SPSS output of the work they did during class. *This is a safe space for students to practice and make and correct mistakes. Errors and incorrect answers will not be penalized.*

ii. **Homework (10%)**. After each session students are required to apply the knowledge learned by completing homework assignments. *This is also a safe space for students to practice and make and correct mistakes. Your homework grade will be based on the average score of the three attempts (if you are satisfied with the score of your first attempt, you can proceed to the next problem set). All homework assignments are due by 11:59 pm the day after class.*

iii. **Group work (5%)**. Students will be randomly placed in groups and will be required to encourage and help keep each other on track. Students may choose to work collaboratively on homework and participation assignments, but each student must submit their work individually. Each member of the group will be required to complete a short **Social Support Survey** at the end of each week to demonstrate how they supported their peers. An individual mark (.5%) and a group mark (.5%) will be given based on the individual's and group's collective response to the survey. See the illustration below.

Research Assignments (45% + 2%)

Students’ ability to analyze and interpret data and present findings in a coherent statistical report will be assessed by two research assignments – one midterm and the other end-of-term. **Research Assignments are formal assessments and cannot be done in groups.** Although students may brainstorm statistical procedures collaboratively, research questions and the final statistical report must be unique to each individual. Students will also be required to submit drafts of their research assignments, each worth 1%.

Assessments (32%)

Students’ knowledge of statistical concepts will be evaluated by a midterm and end-of-term assessment.
<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Topics, Readings</th>
<th>Assignments</th>
<th>% Grade</th>
<th>Due Date</th>
<th>Time</th>
</tr>
</thead>
</table>
| 0     | 9-May-22 | Pre-Class Prep  
Read Syllabus  
Read: Chapter 1  
Complete: Review Problems: Chapter 1 | Review Course Outline  
Syllabus Quiz  
Lecture Participation 1  
SPSS Output: Intro | .5%    | 10-May    | 11:59 PM |
| 1     | 11-May-22 | Prior Knowledge Activation  
Read: Chapters 2 & 3  
Complete: Review Problems: Chapter 2  
Complete: Review Problems: Chapter 3 | Homework 1  
Aplia Homework: Chapter 1 | 1.0%   | 10-May    | 11:59 PM |
| 2     | 13-May-22 | Lecture  
Chapter 2: Basic Descriptive Statistics  
Chapter 3: Measures of Central Tendency and Dispersion  
SPSS lab | Participation 2  
SPSS Output: Chapter 2  
SPSS Output: Chapter 3 | .5%    | 13-May    | 11:59 PM |
|       | 16-May-22 | Prior Knowledge Activation  
Read: Chapters 4 & 5  
Complete: Review Problems: Chapter 4  
Complete: Review Problems: Chapter 5 | Homework 2  
Aplia Homework: Chapters 2&3  
Group Work 1  
Co-regulation/Social Support | 1.0%   | 12-May    | 11:59 PM |
|       |        | Assignment Due | Outline of Research Assignment 1 | 1.0%    | 13-May    | 11:59 PM |
| 3     | 20-May-22 | Lecture  
Chapter 4: z Scores & The Normal Curve  
Chapter 5: Intro to Inferential Statistics: Sampling and the Sampling Distribution  
SPSS Lab | Participation 3  
SPSS Output: Chapter 4  
SPSS Output: Chapter 5 | .5%    | 20-May    | 11:59 PM |
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<th>Date</th>
<th>Activity</th>
<th>Description</th>
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<tr>
<td>18-May-22</td>
<td>Prior Knowledge Activation</td>
<td>Read: Chapters 6</td>
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<tr>
<td></td>
<td></td>
<td>Complete: Review Problems: Chapter 6</td>
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<td></td>
<td>Homework 3</td>
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<td>17-May 11:59 PM</td>
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<tr>
<td>4</td>
<td>Lecture</td>
<td>Chapter 6: Estimation Procedures for Sample Means and Proportions</td>
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<td>SPSS Lab</td>
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<td></td>
<td>Participation 4</td>
<td>.5%</td>
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<td>20-May 11:59 PM</td>
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<tr>
<td>22-May-22</td>
<td>Prior Knowledge Activation</td>
<td>Read: Chapter 7</td>
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<td></td>
<td></td>
<td>Complete: Review Problems: Chapter 7</td>
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<tr>
<td></td>
<td>Homework 4</td>
<td>1.0%</td>
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<td>19-May 11:59 PM</td>
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<td>Group Work 2</td>
<td>Co-regulation/Social Support</td>
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<td>22-May-22</td>
<td>Assignment Due</td>
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<tr>
<td>23-May-22</td>
<td>Victoria Day</td>
<td>Holiday. No Class.</td>
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<td>22-May-22</td>
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<td>Content Evaluation 1</td>
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<td>24-May 12am</td>
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<td>25-May-22</td>
<td>Prior Knowledge Activation</td>
<td>Read: Chapter 8:1-8.6</td>
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<td>Complete: Review Problems: Chapter 8</td>
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<td>Homework 5</td>
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<td>26-May 11:59 PM</td>
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<td></td>
<td>Group Work 3</td>
<td>1%</td>
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<td>27-May 11:59 PM</td>
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<tr>
<td>Date</td>
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<td>Participation</td>
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<tr>
<td>30-May-22</td>
<td>Lecture</td>
<td>Participation 6</td>
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<td>Chapter 8: 8.1-8.6</td>
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<td>SPSS Lab</td>
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<td>Prior Knowledge Activation</td>
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<tr>
<td></td>
<td>Read: Chapters 10</td>
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<td>Complete: Review Problems: Chapter 10</td>
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<tr>
<td>1-Jun-22</td>
<td>Lecture</td>
<td>Participation 7</td>
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<td></td>
<td>Chapter 10: Hypothesis Testing with</td>
<td></td>
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<tr>
<td></td>
<td>Means and Proportions: The One-Sample Case</td>
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<td></td>
<td>SPSS Lab</td>
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<tr>
<td></td>
<td>Prior Knowledge Activation</td>
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<tr>
<td></td>
<td>Read: Chapter 11</td>
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<tr>
<td></td>
<td>Complete: Review Problems: Chapter 11</td>
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<tr>
<td></td>
<td>Homework 7</td>
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<td></td>
<td>Aplia Homework: Chapter 10</td>
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<td></td>
<td>Group Work 4</td>
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<tr>
<td></td>
<td>Co-regulation/Social Support</td>
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<td>5-Jun-22</td>
<td>Assignment Due</td>
<td>Outline of Research Assignment 2</td>
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<tr>
<td>6-Jun-22</td>
<td>Lecture</td>
<td>Participation 8</td>
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<tr>
<td></td>
<td>Chapter 11: Hypothesis Testing with</td>
<td></td>
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<tr>
<td></td>
<td>Means and Proportions: The Two-Sample Case</td>
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<tr>
<td></td>
<td>SPSS Lab</td>
<td></td>
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<tr>
<td></td>
<td>Prior Knowledge Activation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Read: Chapters 12 &amp; 13</td>
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<tr>
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<td>Complete: Review Problems: Chapter 12</td>
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<td></td>
<td>Homework 8</td>
<td></td>
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<tr>
<td></td>
<td>Aplia Homework: Chapter 11</td>
<td></td>
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</tbody>
</table>
### Lecture
- **Chapter 12: Hypothesis Testing with More Than Two Means: One-Way Analysis of Variance**
- **Chapter 13: Hypothesis Testing and Measures of Association for Variables Measured at the Interval-Ratio Level**
- **SPSS Lab**

### Prior Knowledge Activation
- **Read:** Chapter 14
- **Complete:** Review Problems: Chapter 14

### Participation 9
- **9-Jun 11:59 PM**
- **.5%**

### Homework 9
- **9-Jun 11:59 PM**
- **1.0%**
- **Aplia Homework: Chapters 12 & 13**

### Group Work 5
- **10-Jun 11:59 PM**
- **1%**
- **Co-regulation/Social Support**

### Lecture
- **Chapter 14: Partial Correlation and Multiple Regression and Correlation**
- **SPSS Lab**

### Participation 10
- **10-Jun 11:59 PM**
- **.5%**

### Homework 10
- **14-Jun 11:59 PM**
- **1.0%**
- **Aplia Homework: Chapter 14**

### Optional Lecture
- **Review/Overflow**

### Assignment Due
- **Research Assignment 2**
- **25.0%**
- **19-Jun 11:59 PM**

### Assessment Due
- **Content Evaluation 2**
- **17.0%**
- **20-Jun 12 am - 12am**

### Total %
- **100.0%**

### 9. Expectations

Students are expected to complete all course requirements by the designated dates to earn a course grade. This includes:

- Attending all lectures and labs
- Completing all readings, assignments, and assessments.
- Communicating their needs to the course instructor or TAs especially if there is a situation that impedes their completion of an assignment or test. This should be done prior to due dates.
- Submitting accessibility needs as soon as possible.
- Adhering to the University of Toronto Rules and Regulations and Guidelines on Academic Integrity.
- Communicating respectfully with peers, TAs, and Course Instructor, and adhering to Community Guidelines.
- Engaging to learn.

Extensions

Please note that extensions are provided under exceptional circumstances. Arrangements for an extension must be made with the Course Instructor prior to assignment due date. If prior arrangements were not made, a penalty for late submission will apply. The late submission penalty is 5% per day (including weekends) starting from the day after the due date.

Students who are late in submitting an assignment for medical reasons, need to email the instructor (not the TA), and also declare their absence on the system (ACORN). Students who are late in submitting an assignment for other reasons, such as family or other personal reasons, should request their College Registrar to email the instructor.

(NOTE: Because of Covid-19, students do NOT need to submit the usual documentation, i.e., medical notes or the Verification of Illness forms).

10. Grading Criteria

Assignments are graded in accordance with the evaluation criteria set out by the University of Toronto (please refer to http://calendar.artsci.utoronto.ca/Rules_&_Regulations.html). Evaluation rubrics will be posted on Quercus. The University Assessment and Grading Practices Policy is available at: https://governingcouncil.utoronto.ca/secretariat/policies/grading-practices-policy-university-assessment-and-january-26-2012

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Letter Grade</th>
<th>Grade Point Value</th>
<th>Grade Definition</th>
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<tbody>
<tr>
<td>90-100</td>
<td>A+</td>
<td>4.0</td>
<td>Excellent</td>
</tr>
<tr>
<td>85-89</td>
<td>A</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>80-84</td>
<td>A-</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>77-79</td>
<td>B+</td>
<td>3.3</td>
<td>Good</td>
</tr>
<tr>
<td>73-76</td>
<td>B</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>70-72</td>
<td>B-</td>
<td>2.7</td>
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</table>

- Excellent: Strong evidence of original thinking; good organization; capacity to analyze and synthesize; superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base.
- Good: Evidence of grasp of subject matter, some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with literature.
<table>
<thead>
<tr>
<th>Percentage</th>
<th>Letter Grade</th>
<th>Grade Point Value</th>
<th>Grade Definition</th>
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</thead>
<tbody>
<tr>
<td>67-69</td>
<td>C+</td>
<td>2.3</td>
<td>Adequate</td>
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<tr>
<td></td>
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<td></td>
<td>Student who is profiting from the university experience; understanding of the subject matter and ability to develop solutions to simple problems in the material.</td>
</tr>
<tr>
<td>63-66</td>
<td>C</td>
<td>2.0</td>
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</tr>
<tr>
<td>60-62</td>
<td>C-</td>
<td>1.7</td>
<td></td>
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<tr>
<td>57-59</td>
<td>D+</td>
<td>1.3</td>
<td>Marginal</td>
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<tr>
<td></td>
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<td></td>
<td>Some evidence of familiarity with the subject matter and some evidence that critical and analytic skills have been developed.</td>
</tr>
<tr>
<td>53-56</td>
<td>D</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>50-52</td>
<td>D-</td>
<td>0.7</td>
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<tr>
<td>0-49</td>
<td>F</td>
<td>0.0</td>
<td>Inadequate</td>
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<tr>
<td></td>
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<td></td>
<td>Little evidence of even superficial understanding of subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.</td>
</tr>
</tbody>
</table>

### 11. Academic Integrity

**Cheating Behaviours** - Students are prohibited from sharing or discussing test questions or answers with each other.

**Plagiarism** - Using another writer’s words or ideas without the proper acknowledgement. The University of Toronto’s Code of Behaviour on Academic Matters states that it is an offence for a student knowingly “to represent as one’s own, any idea or expression of an idea or work of another in academic examination or term test or in connection with any other form of academic work, i.e. to commit plagiarism”. Please refer to the following resources for further information on academic integrity and how to avoid plagiarism:

- [Academic Integrity at U of T](#).
- [Student Academic Integrity (Arts & Science)](#).
- [Code of Behaviour on Academic Matters](#).
- [How Not to Plagiarize](#).
- [Advice on Academic Writing](#).

### 12. Academic Support

**Academic and/or Technical Service Support**

The following are some important links to help you with academic and/or technical service and support:

- Full library service through [University of Toronto Libraries](#).
- Resources on conducting online research through [University Libraries Research](#).
- Quercus Information in the [Canvas Student Guide](#).
- Resources on academic support from the [Academic Success Centre](#).
• General student services and resources at **Student Life**.

**Writing Support**

Writing is an important academic skill and can be challenging for many students, regardless of language background. Writing improves with practice and effort. If you have a concern about your writing skills, please speak with the course instructor or TA. The University of Toronto has several resources available to support you, some of them include:

• **Writing Centres in Arts and Science, St. George Campus**.
• **FREE Quality English Language Instruction**
• **Strategies for Online Learning & Accessibility**

**13. Accessibility Support**

Students with diverse learning needs are welcome in this course. If you have a disability or health consideration that may require accommodations, please feel free to email the Course Instructor and the Accessibility Services Office as soon as possible. The Accessibility Services staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

The University of Toronto recommends that students register at Accessibility Services well in advance of classes to allow for timely arrangements. Please contact them at accessibility.services@utoronto.ca.

Further information and support can be found here:

• **Accessibility Services**

**14. Religious Observances**

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of cultural and religious traditions. I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. If you anticipate being absent from class or missing a major course activity (such as a test or in-class assignment) due to a religious observance, please let me know as early in the course as possible so that we can work together to make alternate arrangements.

**15. Student Feedback**

Course evaluations are especially important to inform curriculum development and ensure the quality of education at this Faculty. As such, you will be asked to evaluate this course twice: mid-way through and at the end of the course. Thank you for taking the time to provide honest and objective feedback.
16. Course Materials, including lecture notes

Course materials are provided for the exclusive use of enrolled students. Please do not share them with others, post on public domains, sell or give the materials to a person or company for goodwill or monetary gain.