



Course & Instructor Information

STA201H1 – Why Numbers Matter
LEC0101 – Mondays 2pm-3pm & Wednesdays 1pm-3pm in EM 001

Dr. Bethany White
Associate Professor, Teaching Stream
Department of Statistical Science

Instructor Contact Information & Office Hours

All course content or course administration questions must be posted to the appropriate Portal Discussion Board (Course Content Questions or Course Administration Questions) or brought to office hours. These types of inquiries will not be addressed over email. Any messages of a more personal nature (e.g., providing medical documentation for a missed assignment or midterm) should be emailed to the instructor directly at bethany.white@utoronto.ca (be sure to include the course number – STA201 and your UTORid in your email) or brought to Dr. White in her office hours. You can expect a response within 48 hours (Monday-Friday) to a Discussion Board posting or to an email to your instructor.

Dr. White's STA201 Office Hours: Mondays 3:30-5pm in SS 6024A (unless otherwise indicated on Portal)

Calendar Description

This course teaches non-science students the importance of quantitative reasoning to many different areas. It explores a variety of applications to such diverse subjects as economics, gambling, politics, poetry, graphics, music, medicine, demographics, sports, secret codes, and more, using only basic high school level mathematics combined with logical thinking.

Exclusion: This course is not open to first-year students, nor to students enrolled in any science Major or Specialist program

Distribution Requirement Status: Science

Breadth Requirement: The Physical and Mathematical Universes (5)

Course Learning Outcomes

Upon successful completion of this course, you will be able to:

- see the relevance of mathematical and statistical ideas to everyday life,
- interpret quantitative information presented in a variety of forms,
- evaluate the validity of quantitative claims, and
- use quantitative reasoning and logic to make informed decisions.

Textbook

Crader, Evans, Johnson, and Noell (2015) *Quantitative Literacy: Thinking Between the Lines*, 2nd Edition, WH Freeman and Company + accompanying *Launchpad* subscription (includes electronic version of textbook along with excellent practice questions and multimedia resources)

There are several purchasing options available from the Bookstore, depending on your format preferences:

- A. Subscription to LaunchPad (includes electronic version of textbook) - ISBN# 1319000398
- B. Subscription to LaunchPad (includes electronic version of textbook) + 6 month subscription to REEF (online iClickers) - ISBN# 1319129250
- C. Loose-leaf print copy of the textbook + Subscription to LaunchPad (includes electronic version of textbook) + 6 month subscription to REEF (online iClickers) - ISBN# 1319129269
- D. Hard-cover copy of the textbook + Subscription to LaunchPad (includes electronic version of textbook) + 6 month subscription to REEF (online iClickers) - ISBN# 1319129285

If you do not wish to participate with iClickers (there is flexibility in the course grading scheme for this – see below) or already have an iClicker or a REEF subscription for another course, option A is the recommended format. Some of the textbook options (options B-D above) are bundled with a REEF subscription so you can participate on your own device in class. If you wish to purchase an iClicker device, they are also available at the Bookstore (bundled with a 6 month subscription of REEF) - ISBN# 978-1-498-60164-1.

Launchpad Access

After you purchase an access code, to register for the Launchpad course go to:

<http://www.macmillanhighered.com/launchpad/quantlit2e/4877439>

Bookmark this page. To navigate and start using LaunchPad please consult the [Get Started guide](http://cmg.screenstepslive.com/s/MacmillanMedia_StudentHelp/m/LaunchPadSM) (http://cmg.screenstepslive.com/s/MacmillanMedia_StudentHelp/m/LaunchPadSM) and/or [view this video](https://youtu.be/2crYAsqb7P0) (<https://youtu.be/2crYAsqb7P0>).

If you experience problems registering or logging in, please contact Launchpad Customer Support. You can reach a representative during the hours of operation listed below by one of the following:

- through the [online form](http://www.macmillanlearning.com/Catalog/techsupport) (<http://www.macmillanlearning.com/Catalog/techsupport>)
- by chat (via the online form, for student access and payment inquiries)
- or by phone at 1 (800) 936-6899

Portal (Blackboard) Course Site

It is your responsibility to check the course website on Portal regularly and to monitor your utoronto email inbox for messages about the course. Important announcements, information about how to get set up with iClickers/REEF and LaunchPad, information about assessments, help (via the Discussion Board), your grades, etc. will be available on the Portal site and several course assessments will need to be submitted there through Portal tests. Outline lecture slides will be posted there in .pdf format, 1 slide per page only, by 11:59pm the night before lecture. Alternative file formats will not be available. **Note that complete slides/lecture material used in class will not be posted or distributed in any form under any circumstances.**

The Discussion Board tool is enabled on the Portal website. Post questions and respond to your peers' questions about course content (e.g., lecture, readings, practice questions, etc.) or general course administration there. It will be monitored on a regular basis. If you email your instructor with a course content or general administration question, you will be directed to the Portal Discussion Board. This is an open Discussion Board and an extension of our classroom learning community so please be respectful of one another. Derogatory, discriminatory, or otherwise inappropriate language or topics will be removed and dealt with at the instructor's discretion.

Questions & Additional help

Have a course-related question? Need extra help with the material? Here are some options:

- **Have a question about STA201 course material or general administration of the course?**
 - Review the questions already posted on the Portal discussion boards and if your question hasn't already been addressed, post it there with an informative subject line.
 - Visit the instructor's office hours or TA office hours (to be announced on Portal). Note that the TAs will not be available by email or for extra help outside any office hours they hold.
- **Need to reach the instructor about a private or personal matter (e.g., illness, grades)?** Email the instructor – do not post this on the Portal Discussion Board! E-mail should only be used for emergencies or personal matters and should include the course (STA201) and your UTORid. If you email a question to the instructor about course material or course administration, then you will be asked to post your question on the appropriate Portal discussion board – these types of questions will not be answered via email.

Grading Scheme & Assessment Information

Your course grade will be automatically calculated based on the following grading scheme that gives you the highest grade:

Assessment	Scheme 1	Scheme 2	Scheme 3	Scheme 4
Course Structure Quiz	1%	1%	1%	1%
Class Participation (iClickers)	6%	6%	0%	0%
Assignments (3)	18%	18%	24%	24%
Midterm	30%	20%	30%	20%
Final Exam	45%	55%	45%	55%

No special rounding rules or individual grade adjustments (e.g. to meet GPA cut-offs, minimal requirements for programs, etc.) will be used to calculate course grades. No special reweighting of assessments or extra work will be accepted to account for perceived poor performance, nor to account for any assessment(s) that have been missed without accommodation. There are no exceptions to these policies.

Course Structure Quiz

This Portal multiple choice quiz covers details from this course syllabus, and will be available from the first day of classes (Thursday, January 5) until **10pm, on Wednesday, January 25**. This is a graded quiz (e.g., if there are 6 questions and you answer 3 of them correctly, you will earn 0.5% out of the possible 1% for the quiz). No credit will be given for quizzes that are not submitted by the due date. No accommodation will be made after the deadline for any reason (e.g., technical problems). Attempt the quiz early during the availability period so that any problems that arise can be dealt with before the deadline. If you encounter a technical difficulty, report the problem immediately by emailing your instructor at bethany.white@utoronto.ca

iClickers/REEF

iClickers (or REEF) will be used to promote engagement and provide feedback on your understanding during classes as well as to provide you with credit on your lecture participation. The information below provides further details. Note that iClicker/REEF participation is optional – alternate grading schemes are available for students who do not wish to participate this way (see Grading Schemes 3 and 4 above).

iClicker questions will be asked during lecture. The proportion of questions you answer (starting the week of January 23) will determine the fraction of the available participation grade (6%) that you earn, as shown in the table on the right. There will be around 3 clicker questions per class. However, some classes will have more or fewer questions. Clicker participation only requires that you try; you do not have to get the questions correct to earn this part of your course grade. Notice that you can miss up to 25% of the clicker questions for any reason without affecting your grade. Due to this flexibility, there is no accommodation for missed clicker participation for any reason (e.g., legitimately missed lectures, technical problems, incorrectly registered iClicker/REEF).

% Questions answered	Class Participation Mark (/6%)
0%	0%
$0 < \% \text{ answered} < 15$	1%
$15 \leq \% \text{ answered} < 30$	2%
$30 \leq \% \text{ answered} < 45$	3%
$45 \leq \% \text{ answered} < 60$	4%
$60 \leq \% \text{ answered} < 75$	5%
$75 \leq \% \text{ answered} \leq 100$	6%

It is your responsibility to register your iClicker device (see <http://teaching.utoronto.ca/ed-tech/teaching-technology/iclickers/registering-your-iclicker/>) or set up your REEF account correctly (information is posted on Portal) to ensure that your clicker participation is recorded properly. Use of an iClicker device or REEF account associated with a UTORid other than your own or granting permission for someone else to submit answers on your behalf in your absence are academic offences and will be dealt with as such.

Assignments

There will be three (3) equally-weighted assignments to be completed **independently** (no collaboration permitted) and submitted through Portal (as a Blackboard 'Test') by their respective deadlines (**Assignment #1 due 10pm, February 1, Assignment #2 due 10pm, March 8, and Assignment #3 due 10pm, March 29**).

Assignment questions will be posted on Portal no later than one week before the due dates. Assignments must be completed and submitted through the appropriate Portal test by the deadlines to avoid late penalties. Late assignments will be accepted through the appropriate Portal test with a penalty of **20% per calendar date** (e.g., if the submission deadline is 10pm on Feb 1, and you submit at any time between 12:00am and 11:59pm on Feb 2, your maximum possible score will be 80% - e.g., if you earn 76%, then your grade will be 56%, etc.).

Refer to the "Missed Assignments and Midterm" section below for information on how to request accommodation for a missed assignment and what accommodation may be possible.

Midterm

There will be a **75-minute** midterm on **Wednesday, February 15, 2017 from 1:30-2:45pm**. The location and information on coverage will be posted on Portal in advance. You must bring your student identification to the midterm.

Refer to the "Missed Assignments and Midterm" section below for information on how to request accommodation for a missed midterm and what accommodation may be possible.

Final exam

There will be a **2-hour multiple-choice exam** scheduled but the Faculty of Arts and Science during the April exam period. You must bring your student identification to the final exam. Information on coverage, along with some sample questions will be posted on Portal in advance.

Final exam conflicts (see <http://www.artsci.utoronto.ca/current/exams/conflicts>) and petitions for a deferred exam must be brought to the Faculty of Arts and Science, not your instructor. *Information on how to request a deferred exam due to illness or another valid reason is available at:*
<http://www.artsci.utoronto.ca/current/petitions/common#deferred>

Calculators

You will need a non-programmable calculator. Any basic calculator will be sufficient (no special functions are necessary). Calculators on phones or other devices equipped to communicate with the outside world (for example, through the internet or cellular or satellite phone networks) will not be permitted during the midterm and final exam.

Marking concerns with Assignments or the Midterm

Any requests to have an assignment or midterm question regraded must be made in writing directly to your instructor at bethany.white@utoronto.ca (unless directed otherwise on Portal) **within one week** of the date the marks were posted on Portal. To be considered, your message must clearly identify the question you have concerns about, contain a detailed justification for your concern and make specific references to your answer and to the relevant course material. Keep in mind that it is possible for your assignment grade to go down if the regraded mark is lower than your original assignment grade.

Accommodations for Missed Assignments or Midterm

- If an assignment or the midterm is missed for a valid medical reason, you must email your instructor immediately, then submit the University of Toronto Verification of Student Illness or Injury form (<http://www.illnessverification.utoronto.ca>) to your instructor within **one week** of the assignment deadline or midterm. The form will only be accepted as valid if the form is filled out according to the instructions on the form. **The form must indicate that the degree of incapacitation on academic functioning is moderate, serious, or severe in order to be considered a valid medical reason for missing the midterm (and for assignments, it must cover at least the 2 days – the due date + at least 1 adjacent day – in order to be deemed valid). If the form indicates that the degree of incapacitation on academic functioning is negligible or mild or does not cover the midterm date or assignment due date (+ 1 adjacent day for assignments) then this will NOT be considered a valid medical reason.**
- Other reasons for missing a midterm or assignment will require prior approval by your instructor. If approval is not received in advance for non-medical reasons then you will receive a grade of 0% for the missed midterm or assignment.
- Note: If you submit an assignment or write the midterm, it will be assumed that you deemed yourself fit enough to do so and your grade will stand as calculated. No accommodation will be made based on claims of medical, physical, or emotional distress after the fact.
- **Accommodation for missed assignments** - There are no make-ups for assignments. If accommodation is granted by the instructor for a missed assignment, the weighting for that assignment will be shifted to your final exam; otherwise 0% will be recorded for your missed assignment.

- **Accommodation for a missed midterm** – If accommodation is granted by the instructor for a missed midterm, you will have the option to either **1.** Write an online make-up exam worth 10% on **Monday, February 27** (the Monday following Reading Week) so your final exam will be worth 65% OR **2.** Shift the entire weighting of your missed midterm onto your final exam so it will be worth 75%. If accommodation is not requested and granted from the instructor for your missed midterm, 0% will be recorded for your missed midterm and your final exam will remain 55% as indicated in the grading scheme.

Academic integrity

You are responsible for knowing the content of the University of Toronto's Code of Behaviour on Academic Matters at <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>.

Academic offenses will be taken very seriously and dealt with accordingly. For all of the assessments in this course, submitting another student's answer(s) as your own, or providing your own answer(s) to another student for him/her to submit as his/her own is considered as an academic offense and will be reported as such. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact your instructor.

Intellectual Property Statement

Course material (i.e. lecture slides, assignment and midterm questions/solutions and other supplementary course material posted on Portal) is the intellectual property of your instructor and is made available to you for your personal use in this course. Sharing, posting, selling or using this material outside of your personal use in this course is not permitted under any circumstances and is considered an infringement of intellectual property rights.

No videotaping of lectures will be permitted under any circumstances. If you would like to make an audio recording of the lectures in this course, you **MUST** ask permission from your instructor in advance. According to intellectual property laws, not asking permission constitutes stealing.

Accessibility Needs

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodation, please feel free to contact Accessibility Services at (416) 978 8060; <http://accessibility.utoronto.ca>

How to Succeed in this Course

- Read this course syllabus in its entirety and understand the course policies;
- Attend and participate in class regularly and take notes (obtain notes from a classmate for any missed classes);
- Complete textbook readings on schedule;
- Complete assignments carefully and as early as possible;
- Practice, practice, practice! Work through at least some of the suggested textbook/LaunchPad exercises each week to make sure you understand the basic concepts. You need to study and do practice problems frequently (not just in the week before the midterm/exam) to keep up in the course.
- Take advantage of the help available & ask questions (lectures, office hours, Portal Discussion Board).

Course Schedule

This is our tentative schedule for course topics. Some adjustments may be made as the course progresses, depending on the rate at which individual topics are covered. There will be regular assignments available in LaunchPad and recommended textbook problems posted on Portal.

Week	Textbook	IMPORTANT REMINDERS
Week 1 – Jan 9-13	Ch 1 – Critical Thinking	
Week 2 – Jan 16-20	Ch 1 – Critical Thinking (continued)	
Week 3 – Jan 23-27	Ch 2 – Analysis of Growth	iClicker participation starts counting this week Course Structure Quiz due 10pm, Wed, Jan 25
Week 4 – Jan 30-Feb 3	Ch 3 – Linear and Exponential Change: Comparing Growth Rates	Assignment 1 due 10pm, Wed, Feb 1
Week 5 – Feb 6-10	Ch 4 – Personal Finance	
Week 6 – Feb 13-17		<i>No class or instructor office hours on Monday, Feb 13</i> MIDTERM: 1:30pm-2:45pm, Wed, Feb 15 (Locations TBA on Portal)
Week 7 – Feb 20-24		Reading week
Week 8 – Feb 27-Mar 3	Ch 5 – Introduction to Probability	
Week 9 – Mar 6-10	Ch 6 – Statistics	Assignment 2 due 10pm, Wed, Mar 8
Week 10 – Mar 13-17	Ch 6 – Statistics (continued)	
Week 11 – Mar 20-24	Ch 7 – Graph Theory	
Week 12 – Mar 27-31	Ch 9 – Geometry	Assignment 3 due 10pm, Wed, Mar 29
Week 13 – Apr 3-5 <i>(partial week)</i>	Wrap-up	Apr 6-7 – U of T study days
Exam Period		Apr 10-28 - Exam period Apr 14-Good Friday (U of T closed)

