Course Information

Course Description

The Quantitative Literacy I course is a course designed to introduce students to basic and some intermediate concepts of number sense and quantitative analysis. The course is designed to help students conceptualize abstract quantitative concepts as they relate to real-world problems and everyday life. The course provides extensive examples and practice to help students explain and apply the concepts. The course covers basic number sense, algebraic concepts, Geometry and visual modeling, and probability.

Course Outcomes

- The student will be able to perform basic mental calculations including estimation, multiplication, division, adding, subtracting, rounding, and factors.
- The student will be able to analyze, calculate, and convert basic fraction equations including proper, mixed, improper, equivalent, common and uncommon denominators.
- The student will be able to identify, analyze and evaluate problems with decimals, ratios, and proportions, and rational proportions.
- The student will analyze and evaluate algebraic equations. Including basic equations, inequalities.
- The student will analyze and evaluate functions, systems of equations, exponential and logarithmic graphics.
- The student will identify and analyze elements of a coordinate plane as it relates to linear equations and functions.
- The student will analyze and evaluate basic geometric shapes and equations.
- The student will analyze data, identify the correct graphic representation, and evaluate graphs to solve problems.
- The student will analyze data and calculate descriptive statistics.
- The student will analyze and evaluate data to determine basic statistics such as measures of spread, normal distribution, z-scores, confidence intervals, correlation, and regression.
- The student will analyze and calculate basic probability such as permutations, combinations, events, and simple probability.
- The student will analyze and calculate probability such as two events, AND probability, OR
probability, and conditional probability.

Course Materials

All required reading and other materials necessary to complete required exercises are provided within the course platform. Links to additional, optional resources on external websites are also provided for each lesson in a Lesson Toolbox.

Course Length

This is a self-paced course allowing students to learn according to their personal schedules. It contains 10 modules, each with multiple lessons that support varied approaches to engaging with the topic, including readings, video, and a knowledge-check quiz. To earn credit for the course, students must complete 59 low-stakes lesson knowledge-check quizzes, 10 module practice assignments (formative), 10 module evidence assignments (word problems - formative), 10 formative module quizzes, and 2 exams (proctored summative assessments).

We recommend that you work through the course at a comfortable pace that allows you to make regular, incremental (daily and/or weekly) progress. If neither of the schedules above work for you, please feel free to create your own.

On average, we estimate 45 minutes to read and watch all content in each lesson, and to complete the Check Your Knowledge quiz. In addition, we estimate an additional 75 minutes of study time per lesson to prepare for Module Quizzes and to complete the Evidence activity for each module.

The table below provides the estimated study time required to complete a typical module in this course.

<table>
<thead>
<tr>
<th>Sample Module</th>
<th>Estimated Online Study Time</th>
<th>Estimated Offline Study Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 1</td>
<td>45 minutes</td>
<td>75 minutes</td>
</tr>
<tr>
<td>Lesson 2</td>
<td>45 minutes</td>
<td>75 minutes</td>
</tr>
<tr>
<td>Lesson 3</td>
<td>45 minutes</td>
<td>75 minutes</td>
</tr>
<tr>
<td>Lesson 4</td>
<td>45 minutes</td>
<td>75 minutes</td>
</tr>
<tr>
<td>Estimated Total Study Time</td>
<td>8 hours</td>
<td></td>
</tr>
</tbody>
</table>
Prerequisite(s)

None

Earning Credit

Minimum Passing Grade

To earn credit for this course, students must earn a minimum average grade of 70% or higher. A complete list of requirements is provided in the Course Requirements document.

Grading Policies

Grade Weighting

<table>
<thead>
<tr>
<th>Assignment Category</th>
<th>Number</th>
<th>Grade Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Your Knowledge Quizzes</td>
<td>55</td>
<td>5%</td>
</tr>
<tr>
<td>Module Practice</td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td>Module Evidence with Peer and Self-Evaluations</td>
<td>10</td>
<td>15%</td>
</tr>
<tr>
<td>Module Quizzes</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>Course Exam 1</td>
<td>1</td>
<td>25%</td>
</tr>
<tr>
<td>Course Exam 2</td>
<td>1</td>
<td>25%</td>
</tr>
</tbody>
</table>

Assignment Grading Descriptions

<table>
<thead>
<tr>
<th>Assignment Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Your Knowledge (CYK) Quizzes</td>
<td>Multiple-choice quizzes that are autograded. Students may take these as many times as desired to practice for Module quizzes. Students receive full credit for attempting each CYK quiz but must complete it at least once to earn participation credit.</td>
</tr>
</tbody>
</table>
Module Practice | Short answer, auto, and manual grading. Students may take only once. Students receive full credit for completing.
---|---
Module Evidence | Short answer activities that are either auto-graded or graded manually by an instructor with feedback provided according to an assignment rubric or peer/self-evaluated for students to learn evaluation and goal setting skills (participation points are awarded). Students receive full credit for completing each activity according to the assignment rubric.
---|---
Module Quizzes | Multiple-choice quizzes that are auto-graded. Students may take only once.
---|---
Course Exam 1 | Proctored, multiple-choice exam that is auto-graded. Students may take only once.
---|---
Course Exam 2 | Proctored, multiple-choice exam that is auto-graded. Students may take only once.

### Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90.0 – 100.0%</td>
</tr>
<tr>
<td>B</td>
<td>80.0 – 89.9%</td>
</tr>
<tr>
<td>C</td>
<td>70.0 – 79.9%</td>
</tr>
<tr>
<td>D</td>
<td>60.0 – 69.9%</td>
</tr>
<tr>
<td>F</td>
<td>59.9% or below</td>
</tr>
</tbody>
</table>

*To earn credit for this course, students must earn a minimum average grade of 70% or higher.

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### Course Policies

#### Academic Integrity

Students assume the responsibility for maintaining honesty and integrity in all work submitted (for credit and not for credit) in the course. Academic dishonesty includes, but is not limited to:

- Cheating
- Fabrication
- Hacking
Plagiarism
Reusing or re-purposing your own work
Unauthorized collaboration

Students engaging in academic dishonesty are subject to losing credit for a quiz or assignment, or being denied credit for the course.

Exams

In this class, you will take your midterm and final examinations online and they will be proctored by a service called ProctorExam from MonitorEDU. This service uses a Chrome browser extension to record your computer webcam, speakers, and desktop during the exam. A Student Quick-Guide will be provided on how to use this service in the exam modules.

Technical Requirements:

- Desktop or portable computer, including Windows PC, Macintosh OS, or Chromebook (tablets, cell phones and iPads are not supported).
- Google Chrome Browser, with the ProctorExam Screen Sharing Chrome Browser Extension and pop-up blocker disabled
- A working built-in or external webcam, speakers, and microphone
- Internet speed must be at least 2 Mbps download and 2 Mbps upload. Hot spots are not recommended. Test internet speed at: http://www.speedtest.net

Disability Services Statement

TEL Library is committed to providing equitable student access to course content and materials by providing reasonable accommodations for all persons with disabilities. Any student seeking to request academic accommodations on the basis of a documented disability should contact the TEL Library support team at disabilityservices@tellibrary.org to coordinate reasonable accommodations.

Course and Technical Support

If you have a question about course requirements, a technical issue, or other issue while taking this course, please contact our support team at support@tellibrary.org. The TEL Library support team member will prioritize your request and respond accordingly.
Technical Requirements

This course is delivered 100% online and you will be required to have access to a computer, laptop, or web-capable mobile device — along with consistent access to the internet — to access course material and complete assignments.

To access course materials including lectures, quizzes, assignments, and exams, you will need to be logged into your TEL Library account and enrolled in the course. Although you can access some course material without being logged into your TEL Library account, you will need to be logged in to access the entire course and to complete graded assessments.

To access detailed information about the minimum hardware requirements necessary to take full advantage of TEL Library courses, visit the course home page.
Course Schedule

General Due Dates:
All Module assignments are due Friday by 3:00 pm of the week unless otherwise indicated. You are welcome to turn in work early and work ahead. Please note, some of the assignments require a peer review - so make sure you give yourself and your reviewer plenty of time.

Week 0 (January 3rd - January 11th)

Module 0: Success in an Online College Course
- Lesson 1: Introduction to TEL Library Courses
  - Check Your Knowledge
- Lesson 2: Developing a College Mindset
  - Check Your Knowledge
- Lesson 3: Becoming a Successful Online Learner
  - Check Your Knowledge

Graded Assignments
- Check Your Knowledge Quizzes
- Module 0 Quiz
- Module 0 Evidence

Week 1 & 2 (January 14th - January 17th / January 22nd - January 25th)

Module 1: Number Sense: Part 1
- Lesson 1: Intro to Number Sense
  - Check Your Knowledge
- Lesson 2: Estimation
  - Check Your Knowledge
- Lesson 3: GCF and LCM
  - Check Your Knowledge
- Lesson 4: Fractions: Part 1
  - Check Your Knowledge
- Lesson 5: Fractions: Part 2
  - Check Your Knowledge
- Lesson 6: Applications: Visually Modeling Fractions
Graded Assignments
Check Your Knowledge Quizzes
Module 1 Quiz
Module 1 Evidence

Week 3 (January 28th - February 1st)

Module 2: Number Sense: Part 2
Lesson 1: Decimals
  ◦ Check Your Knowledge
Lesson 2: Ratios and Proportions
  ◦ Check Your Knowledge
Lesson 3: Rational Numbers
  ◦ Check Your Knowledge
Lesson 4: Percent Applications
  ◦ Check Your Knowledge
Lesson 5: Application: Mental Percents
  ◦ Check Your Knowledge

Graded Assignments
Check Your Knowledge Quiz
Module 2 Quiz
Module 2 Evidence

Week 4 & 5 (February 4th - February 8th / February 11th - February 14th)

Module 3: Algebra: Part 1
Lesson 1: Algebraic Expressions
  ◦ Check Your Knowledge
Lesson 2: Solving Equations
  ◦ Check Your Knowledge
Lesson 3: Solving Inequalities
  ◦ Check Your Knowledge
Lesson 4: Coordinate Plane
  ◦ Check Your Knowledge
Lesson 5: Slope and Lines
  ◦ Check Your Knowledge
Lesson 6: Application: Word Problems
  ◦ Check Your Knowledge
Graded Assignments

Check Your Knowledge Quizzes
Module 3 Quiz
Module 3 Evidence

Week 6 (February 19th - February 22nd)

Module 4: Algebra: Part 2

Lesson 1: Relations and Functions
  ◦ Check Your Knowledge
Lesson 2: System of Equations: Graphs and Substitution
  ◦ Check Your Knowledge
Lesson 3: Systems of Equations: Elimination and General Strategy
  ◦ Check Your Knowledge
Lesson 4: Exponential and Logarithmic Graphs
  ◦ Check Your Knowledge
Lesson 5: Application: Interest, Growth, and Decay
  ◦ Check Your Knowledge

Graded Assignments

Check Your Knowledge Quizzes
Module 4 Quiz
Module 4 Evidence

Week 7 (February 25th - March 1st)

Module 5: Geometry

Lesson 1: Measurement and Conversions: Part 1
  ◦ Check Your Knowledge
Lesson 2: Measurement and Conversions: Part 2
  ◦ Check Your Knowledge
Lesson 3: 2-D Shapes
  ◦ Check Your Knowledge
Lesson 4: 3-D Shapes
  ◦ Check Your Knowledge
Lesson 5: Composite Figures
  ◦ Check Your Knowledge
Lesson 6: Application: Scale and Maps
  ◦ Check Your Knowledge
Graded Assignments
Check Your Knowledge Quizzes
Module 5 Quiz
Module 5 Evidence

Week 8 (March 4th - March 8th)

Mid-Term (The mid-term will test over Modules 1 - 5)

Week 9 (March 11th - March 14th)

Module 6: Visual Modeling
  Lesson 1: Bar Graphs
  ◦ Check Your Knowledge
  Lesson 2: Line Graphs and Scatterplots
  ◦ Check Your Knowledge
  Lesson 3: Pie Graph
  ◦ Check Your Knowledge
  Lesson 4: Frequency Tables and Histograms
  ◦ Check Your Knowledge
  Lesson 5: Comparing Visual Models
  ◦ Check Your Knowledge
  Lesson 6: Application: Intentionally Misleading Tables, Graphs, and Charts
  ◦ Check Your Knowledge

Graded Assignments
Check Your Knowledge Quiz
Module 6 Quiz
Module 6 Evidence

Week 10 - Spring Break (March 15th - March 22nd)

Week 11 & 12 (March 25th - March 29th / April 1st - April 5th)

Module 7: Data Analysis: Part 1
  Lesson 1: What is Statistics?
  ◦ Check Your Knowledge
  Lesson 2: Data and Samples
  ◦ Check Your Knowledge
Lesson 3: Experimental Design
◦ Check Your Knowledge
Lesson 4: Organizing Data with Frequency Tables
◦ Check Your Knowledge
Lesson 5: Five Number Summary and Percentiles
◦ Check Your Knowledge
Lesson 6: Measures of Center and Shape
◦ Check Your Knowledge

Graded Assignments
Check Your Knowledge Quizzes
Module 7 Quiz
Module 7 Evidence

Week 13 (April 8th - April 12th)

Module 8: Data Analysis: Part 2
Lesson 1: Measures of Spread
◦ Check Your Knowledge
Lesson 2: Normal Distribution and Z-scores
◦ Check Your Knowledge
Lesson 3: Linear Equations
◦ Check Your Knowledge
Lesson 4: Scatter Plots and Lines of Best Fit
◦ Check Your Knowledge

Graded Assignments
Check Your Knowledge Quizzes
Module 8 Quiz
Module 8 Evidence

Week 14 (April 15th - April 18th)

Module 9: Probability By Counting
Lesson 1: Simple Probability
◦ Check Your Knowledge
Lesson 2: Independent and Dependent Events
◦ Check Your Knowledge
Lesson 3: Factorials
◦ Check Your Knowledge
Lesson 4: Permutations
◦ Check Your Knowledge
Lesson 5: Combinations
  ◦ Check Your Knowledge
Lesson 6: Application: Understanding Everyday Probability
  ◦ Check Your Knowledge

Graded Assignments
Check Your Knowledge Quizzes
Module 9 Quiz
Module 9 Evidence

Week 15 (April 22nd - April 26th)

Module 10: Probability By Calculation
  Lesson 1: Modeling Two Events
  ◦ Check Your Knowledge
  Lesson 2: Calculating “AND” Probability
  ◦ Check Your Knowledge
  Lesson 3: Calculating “OR” Probability
  ◦ Check Your Knowledge
  Lesson 4: Conditional Probability
  ◦ Check Your Knowledge
  Lesson 5: Application: Simulating Experimental Probability
  ◦ Check Your Knowledge

Graded Assignments
Check Your Knowledge Quizzes
Module 10 Quiz
Module 10 Evidence

Week 16 (April 30th - May 2nd)

Final Exam - (Modules 6 -10 are tested) Must Be Scheduled and Taken No Later than May 2nd 12:00pm