

Assessment Design, Academic Integrity, and Generative AI

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Prepared by	Teaching and Learning Services (TLS)
Audience	Instructors, teaching support staff, lab coordinators
Purpose	To support instructors in reviewing and adapting assessment practices to ensure meaningful evidence of student learning in the context of generative and agentic AI.

Introduction

We know that generative AI (GenAI) has prompted you to rethink how you assess student learning. While these technologies create new challenges, they also provide an opportunity to re-visit broader questions about assessment design: What learning matters most? What evidence demonstrates that learning? How can assessment support both student success and academic integrity?

This briefing note is designed to help you reflect on your current assessment strategies and identify practical opportunities for change in the era of GenAI. We do not assume or imply that all your assessments need to be completely redesigned; rather, we encourage you to consider small, achievable changes that can strengthen learning, make students' thinking more visible, and improve your confidence in the evidence of learning that your course assessments provide.

The sections that follow provide:

1. a checklist of questions to help you review your assessment design;
2. key principles of effective assessment and ideas for implementation; and
3. examples of practical adjustments to your assessments that may be useful in the age of Gen AI.

Section 1: Assessment Review Checklist

Alignment with Learning Outcomes

- What learning outcome(s) do I want this assessment to measure?
- What evidence would convince me that students have achieved those outcomes?
- Have students had opportunities to develop and practice the required knowledge and skills before being graded?
- Does the assessment actually measure the intended learning outcome or mainly the ability to produce a polished product?
- Do my chosen learning outcomes still reflect the knowledge, skills, and judgements students need to develop in a context where AI tools are increasingly available?

Clarity and Expectations

- Are my instructions, expectations, and grading criteria clear?
- Will students understand how the assessment contributes to their learning?
- Have I clearly communicated my expectations regarding collaboration, sources, and AI use?
- Have I provided exemplars, rubrics, or checklists where appropriate?

Assessment Structure

- Does a single assessment determine a large proportion (>50%) of students' final grade?
- Could learning be demonstrated across multiple submissions or stages?
- Are there opportunities to gather evidence of learning throughout the term?
- Would a proposal, draft, checkpoint, or reflection strengthen the assessment?
- Does each assessment serve a clear learning purpose, or have too many small assessments been added without providing additional value to student learning?

Feedback and Learning

- Have students had opportunities to practice and receive feedback on this type of activity before encountering it in a high-stakes assessment?
- Could a large assessment be scaffolded into smaller stages with opportunities for feedback?
- Does the assessment plan provide multiple opportunities for students to demonstrate their learning?

Visibility of Learning

- How will students demonstrate their reasoning and decision-making?
- How will I know the submitted work reflects the student's understanding?
- Where might AI use make student learning difficult to verify?
- Could a brief explanation, reflection, draft, or oral component make learning more visible?

AI and Academic Integrity

- Can AI complete substantial portions of this task? If yes, what learning would become difficult to verify?
- Have I clearly communicated my expectations regarding AI use?
- If AI use is allowed, how will students document or disclose it?

Practicality

- Is the assessment plan manageable for students and for me?
- Can I realistically provide feedback at points where students can use it?
- Is this assessment approach feasible given my class size and teaching supports?
- Can I build in assignment structures or policies that might reduce the need for significant accommodation or extension requests (e.g., grace days, best of structure)?

Not sure where to start? [TLS can help you](#) review existing assessments and identify small, high-impact changes that fit your course goals and context.

Section 2: Principles for Effective Assessment Design

Principle 1: Align Assessments with Learning Outcomes

Assessments are most effective when students are evaluated on the knowledge, skills, and judgement they have had opportunities to develop and practice throughout the course.

In practice:

- Early practice activities before high-stakes evaluation
- Scaffolding of assignments
- Matching assessment methods to learning outcomes
- Program-level coordination where appropriate

Principle 2: Make Learning Visible

Assessments can better capture deep learning when they invite students to show how they think, decide, revise, and apply course material.

In practice:

- Process documentation (proposals, drafts, design logs, etc.)
- Reflection or rationale statements explaining key decisions and connections to course materials and discussions
- Annotated feedback response statements
- Opportunities for students to explain or justify their thinking through written, visual, oral, or practical means

Principle 3: Use Authentic and Meaningful Tasks

Assessments can support engagement when they are authentic, i.e., mirror real-world disciplinary, professional, or community practices and/or create value beyond the life of the course.

In practice:

- Applied research and case studies
- Community projects
- Labs
- Design projects
- Portfolios
- Authentic group work with reflective components

Principle 4: Support Learning through Feedback

Feedback is most effective when students can use it to improve future work.

In practice:

- Early low-stakes tasks that mirror later high-stakes assessments
- Scaffolding (e.g., proposals and drafts)
- Structured peer feedback
- Revision opportunities

Principle 5: Design for Academic Integrity

Assessments can support academic integrity while reducing reliance on enforcement strategies when they are designed to allow students to demonstrate their own learning.

In practice:

- Multiple sources of evidence of student learning
Course-specific materials

- Explanation of reasoning
- Transparent expectations
- Oral assessment
- In-class demonstrations of learning (e.g., group discussions, worksheets)
- Appropriate use of proctoring where necessary

Very high-stakes assessments (i.e., assessments worth more than 50% of the final grade) merit careful review, as they can increase student anxiety and raise academic integrity concerns.

Do you want to explore new assessment approaches? [TLS can help you](#) apply these assessment principles to your discipline, class size, learning outcomes, and teaching environment.

Section 3: Practical Adjustments in the Age of Generative AI

Adjustments to Syllabus

Clearly communicate to your students your expectations regarding AI usage in your course. Below are some possible positions you might choose to adopt in your course, along with sample wording you might incorporate into your syllabus.

AI-use position	What it means	What students need to know	Sample wording
AI use prohibited	Students may not use AI tools for this assessment.	What counts as AI use; whether basic tools such as spelling or grammar support are included or excluded; consequences of non-compliance.	For this assessment, you may not use generative AI tools to develop, draft, revise, analyze, or generate any part of your submission. Your submission should represent your own work and thinking.
AI use permitted with restrictions	Students may use AI for specific purposes or stages only.	Which uses are allowed; what must be disclosed; how AI-assisted work should be cited or documented.	You may use generative AI tools for specified preparatory purposes, such as brainstorming or identifying possible questions. You must disclose any AI use and briefly explain how you used the tool and how you evaluated or revised its output. The submitted work must demonstrate your own

			understanding of the course material.
AI use integrated	AI use is part of the learning task.	Which tools or functions may be used; what students must evaluate, critique, revise, or explain; how their own learning will be assessed.	This assessment asks you to work with AI-generated material as part of the learning activity. You are responsible for evaluating the output, identifying limitations or inaccuracies, connecting your analysis to course concepts, and explaining your decisions.

Adjustments to Assessments

Did You Know? AI detection tools are unreliable and are not accepted as sole evidence of academic integrity violations at Carleton. Assessment design is generally a more effective response than detection-based approaches.

Adjusting your assessments is another strategy you might consider to generate stronger and more visible evidence of student learning in contexts where AI tools are available. The table below provides suggestions for ways instructors might operationalize that strategy.

Current Assessment	Potential Adjustment	Why it helps
General writing assignment	Required engagement with course materials	Connects work directly to course learning
Essay	Process memo	Makes reasoning visible
Report	Draft & revision reflection	Shows development over time
Coding assignment	Debugging commentary	Assesses understanding rather than only the final answer
Lab report	Interpretation of unexpected findings	Makes scientific reasoning visible

Case study	Local or current case Require justification for rejecting alternative approaches/solutions	Requires contextual judgement. Helps surface evaluation and decision-making process.
Problem set exercises	Include explanation of assumptions and approach	Helps makes conceptual understanding visible
Data analysis assignment	Include justification of approaches takes, interpretation, and recommendations were applicable	Makes reasoning more visible, helps surface judgement and understanding
Research paper	Bounded source set based on course materials	Focuses attention on course-specific learning
50%+ final exam Final paper only Single presentation	Midterm(s) + final + application assignment Proposal + draft + final paper Multiple opportunities to demonstrate/share learning	Reduces reliance on a single polished output

AI Literacy as a Learning Outcome

In some courses, particularly those preparing students for professional, research, or knowledge-work environments, the ability to critically evaluate and appropriately use AI tools may itself be an important learning outcome. In these contexts, assessment may intentionally incorporate activities that require students to analyse, critique, verify, or improve AI-generated outputs.

Current Assessment	Potential Adjustment	Why it helps
Any traditional written assignment	Students evaluate, fact-check, revise, or critique AI-generated output	Builds AI literacy while assessing disciplinary knowledge

Adjustments to Rubrics

Another strategy to help make your assessments more AI-resilient is to update/revise your rubrics.

Consider *increasing* emphasis on:

- Engagement with specific course content (e.g., readings, lectures, labs, discussions)
- Analysis and interpretation
- Disciplinary judgement and decision-making
- Reflection on process

And *reducing* emphasis on:

- Mechanical correctness alone
- Formulaic structure

- Features that can be readily generated by an AI tool

Assessing Individual Work

If you need individual verification of work, consider the following assessment guidelines:

Goal	Options
Verify independent work	In-person assessment, staged submissions
Verify authorship	Process documentation, reflections, oral follow up where appropriate
Verify problem-solving	Supervised assessment
Verify coding ability	Live coding exercise, debugging commentary

Where the primary purpose of an assessment is to verify independent student performance, instructors should consider whether the assessment generates sufficient evidence of individual learning. Traditional unproctored online tests and examinations may present challenges in this regard. Depending on the learning outcomes and assessment context, instructors may wish to consider assessment redesign, additional process evidence, supervised assessment conditions, or online proctoring solutions.

Looking for practical ideas? [TLS can help you](#) revise assignments, redesign rubrics, clarify AI expectations, and develop assessment strategies that generate stronger evidence of student learning.