AS&E Assessment Strategies During Times of COVID-19

This document has been designed to provide assistance to instructors. Resources and suggestions to help instructors assess student learning and modify assignments or exams in the new environment are also included. (Items in the list below are linked to the corresponding section of the document.)

Making Decisions about Adapting Course Grading

In considering their approach to adapting courses and grading, feasible options exist for modifying course materials, instruction, and student learning assessment. This document can be used to support grading choices in response to disruptions due to COVID-19. Focus on communicating with students regarding meeting of the stated learning outcomes for the course and providing extensive feedback to students is encouraged so that students can determine their standing in the course on an ongoing basis. Instructors can also provide appropriate guidance, upon request by the student, advisor, or departments and programs, about challenges a particular student, or group of students, may encounter in future courses that depend on mastery of the material in the current course.

As a general rule for the S/F option for undergraduate students or the S/E option for graduate students, instructors are encouraged to use "satisfactory" to indicate student proficiency in ability to demonstrate achievement in all/most of the intended course learning outcomes. "Fail" would indicate levels of achievement that are less than proficient for over half of the intended course learning outcomes.

Transparency in Grading

Instructors should clearly articulate their approach to grading and assessment of student work. This applies equally to students opting for the S/F and the letter-grade options. Transparent grading and assessment are key to students understanding how well they meet a course's learning outcomes and how prepared they are for subsequent courses.

Criterion-referenced grading depends on a set of performance criteria and articulation of these criteria for different levels of proficiency. This approach often involves grading rubrics and supports clear communication between instructor and students about the student's "demonstrated levels of mastery". While criterion-referenced grading involves pre-established criteria, the instructor may, if needed, adjust grading thresholds in response to students' performance, but only in situations where it would positively impact student grades. More information about rubrics and describing levels of student achievement is included below in "Using Rubrics to Support Holistic Grading".

Norm-referenced grading, often referred to as "grading on the curve", has both some benefits and drawbacks. The benefits include using "the curve to adjust scoring" to mitigate negative impacts of an assessment based on a variety of factors (e.g., level of difficulty of the assessment, issues with format and/or delivery, etc.) A major drawback, however, is the "relative" nature of evaluation, which hinders clear communication of expected levels of proficiency and makes it difficult for students to assess their degree of mastery and preparedness for subsequent courses. Additionally, it could serve to restrict the number of students who meet performance expectations because achievement is measured, in part, by peers' performance.

Student Learning Assessment -- Questions to Consider

During times of disruption due to COVID-19, instructors may need to modify assignments and workload, while holding expectations for learning key concepts, knowledge, and skills. The College continues to emphasize the importance of instructors and students working together to achieve the original learning outcomes of the courses to the greatest level possible.

Below are a few questions that instructors might ask of their course to see if a change in assessment would be beneficial to students and the attainment of course learning outcomes.

- Have students been provided with opportunity to demonstrate achievement of learning outcomes at some point(s) already during the semester?
- Do students need additional opportunities to demonstrate their learning achievement?
- Can the planned assessments continue as originally designed? Will assessments need to be modified?
    - Will current grading criteria differ from original grading criteria? (i.e., weight of each assessment counted in overall course "grade")
    - What will be the impact of grading criteria on final course grades?
    - Is a final exam necessary as evidence of student learning?
- What could I "look-for" that would confirm student achievement of learning?
    - What counts as "sufficient evidence of student learning achievement"?
    - What are some alternative assessments that could be used under the circumstances?
    - Could I use a rubric to support a holistic approach to assessment?
- How will group work be organized and/or assessed?

Course Adaptations and Student Learning Assessment Strategies

What's included in this section... *(each item is linked to related paragraphs for quick access)*

All instructors are strongly encouraged to design exams, papers and other assessments in ways consonant with the current online learning environment. There should also be sufficient opportunity for students to demonstrate achievement of learning.

Assessments designed to yield a numeric level of achievement (points, percentage, etc.) may continue to be used, and/or combined with other types of assessments, and/or replaced by equally valid strategies for assessment. Holistic grading can also be used fairly easy to assess the overall quality and level of student achievement based on the intended learning outcomes and the level of mastery to be achieved across any/all components of the assessment. **More about using rubrics to support holistic grading and mastery learning is included later in this document for easy reference.**

Outcomes-based Assessment Options and Alternatives to Formal Examinations

Beyond tests and exams, many types of assessments exist that could be deployed quickly. All of the assessment strategies included in the chart below can be used in online environments.

Case Studies (p9)	Performance Task (e.g., tangible product and/or performance)
Essays (p11)	Homework (e.g., problem sets, short answer questions, etc.)
Interviews (p12)	Reviews (e.g., books, journal articles, films, etc.)
Multi-Choice Questions (p14)	Journal Entries (Blackboard)
Open Book Examinations (p15)	Interview-based exams (in lieu of written exam)
Scientific Paper (p16)	Research Paper or Research Project
Portfolio (p18)	Thesis, Dissertation, Oral defense (virtual only)
Podcast (p20)	Group discussion board (Blackboard) (e.g., posts, replies)
Poster (p22) (electronic file submission)	Knowledge/Concept Maps
Programming - Code and Video (p24)	Feedback from computer simulated tasks
Questionnaire (p27)	Student reflections on learning (e.g., metacognitive tasks)
Video Presentation (p28)	Oral Presentations (e.g., recorded, asynchronous)

(Where any of the options are included in The Hitch-hikers' Guide to Alternative Assessment *, a "guide [that] is designed to help people move onto on-line teaching and assessment, in light of the ongoing COVID-19 virus situation", the page number is noted.)*

Individual and/or Group Assignments

Group assignments continue to be important even with the transition to remote learning and the establishment of the new S/F policy. Both of these recent developments, however, make it challenging to ensure that groupwork will be completed among group members in a fair and equitable manner. For this reason, it may be advisable to assess learning achievement based on individual work unless there is

a way to ensure equal participation and access for all group members in a group project. If group assignments remain preferred, expectations and criteria for assessment should be well formulated and communicated by the instructor. The best ways to assess individual achievement while encouraging academically honest work within group projects include clearly spelling out expectations for how students should handle shared responsibilities (e.g., requiring students to provide a specific statement documenting each individual's contribution to the group in addition to any content-related deliverables instructors have already assigned), and requiring students to write up their own reports for the group projects rather than turning in a collaboratively written report. Additional information regarding collaboration, group work, and academic honesty, including example guideline statements for individual write-ups and for group contribution to large course projects, can be found on the Instructor Resources, Instructor Responsibilities, and Prevention pages of AS&E's Academic Honesty website.

Self-assessments and peer-feedback can also be collected as part of formative assessment that includes information about learning. Formative assessments are not typically included in the overall grade *(see more on this is Appendix B)*. Proportionally, the bulk of the grade for each member should reflect the student's individual contribution (e.g., research, written work, presentation skills, etc.) with a smaller portion of the student's grade reflecting the "group grade" (e.g., teamwork, communication skills, etc.)

(Additional resource "What are best practices for designing group projects?" at https://www.cmu.edu/teaching/designteach/design/instructionalstrategies/groupprojects/design.html)

Accessibility Considerations

Students are required to be provided with their approved accommodations in online or remote learning environments. Instructors should work with the Office of Disability Resources to ensure continuity of access services for students with disabilities.
Guidance for Accommodating Students During Remote Instruction (UR, Office of Disability Resources)
Online Teaching Information (UR, Office of Disability Resources)

Ensuring Academic Honesty

Guidance specific to encouraging academically honest work can be found on AS&E's Academic Honesty website. Follow-up questions pertaining to construction of rigorous, fair, and cheat-resistant assignments should be directed to Greer Murphy, Academic Honesty Liaison, at honestyliaison@ur.rochester.edu .

Continuing Course Learning Outcomes & Program Learning Outcomes Assessments

At the course level, instructors are encouraged to review successes and challenges within their course as part of the their own reflective practices and continual improvement of courses. While instructors should remain focused on the success of the course, it will be beneficial for the department if instructors can informally note content in the courses that must be covered or "remediated" due to the challenges of an online format. This could serve as useful information for program directors when there is time (e.g., summer) to evaluate the impact COVID-19 on curricular outcomes for the program.

Student work samples already collected electronically via Blackboard or other electronic gathering (Box, email, etc.) should be preserved by the instructor to potentially share with program directors to serve as exemplars for Satisfactory and Unsatisfactory levels of student achievement of intended program learning outcomes. *(Please note: Student exemplars will only be used for the purpose of continual improvement of programs.)* Program directors should continue, in collaboration with instructors, to note successes and challenges with respect to student learning achievement for the program as a whole. (Additional communications for program directors to follow.)

Please email the Director of Educational Effectiveness (josephine.seddon@rochester.edu) for guidance and support in these efforts.

Using Rubrics to Support Holistic Grading

A rubric or a set of criteria is used to support a more holistic assessment of achievement. In building a rubric, instructors should think about what they might "look-for" in student work that would indicate student learning outcome achievement. The corresponding levels of achievement for each of these indicators (or "look-fors") would then be combined with qualifiers that would assist in determining the corresponding "grade".

For example, if the instructor is looking for student ability to engage in critical thinking or, more specifically, student ability in "selecting and using information to investigate a point of view or conclusion", descriptive language would be associated with the indicator or "look-for" to designate the various levels of "satisfactory" achievement.

Adapted from AAC&U's Critical Thinking Value Rubric (https://www.aacu.org/value/rubrics)

"Look-for"	Excellent	Good	Fair	Limited
Selecting and using information to investigate a point of view or conclusion	Information is taken from source(s) *with enough* interpretation/evaluation to *develop a comprehensive* analysis or synthesis. Viewpoints of experts are *questioned thoroughly.*	Information is taken from source(s) *with enough* interpretation/evaluation to *develop a coherent* analysis or synthesis. Viewpoints of experts are *subject to questioning.*	Information is taken from source(s) *with some* interpretation/evaluation, but *not enough to develop a coherent* analysis or synthesis. Viewpoints of experts are taken as mostly fact, *with little questioning.*	Information is taken from source(s) *without any* interpretation/evaluation. Viewpoints of experts are taken *without questioning.*

Mastery Learning (or "learning for mastery")

The goal of "learning for mastery" is to support students through sufficient learning and assessment opportunities so that students can achieve the desired level of mastery needed to underpin future success in the course and/or program.

Instructors are encouraged to consider what the minimum "level of mastery" required for the student to earn a "satisfactory" grade should be for any/all assessment(s) to be used in determining overall course achievement. A "satisfactory" level of achievement would imply that the needed level of knowledge, skills and/or competencies have been achieved. Given the circumstances surrounding COVID-19, a focus on student success in future coursework, especially in course sequences or pre-requisite courses, may be the most appropriate focus for course assignments.

In keeping with the Mastery Learning philosophy:

- Students should be provided with any needed support in learning to increase likelihood of success
- Sufficient opportunities to demonstrate learning achievement should be included
- Universal Design for Learning (UDL) principles should guide design of learning experiences and assessment *(additional resources available at http://udlguidelines.cast.org/)*
- If mastery of learning is eventually demonstrated by the student, students should not be penalized for any previous challenges they were eventually able to overcome within the semester

Some questions to consider:

- Should successes on homework be weighted more heavily if the final exam does not go as well?
- Should the homework related assessments be removed from the grade weighting if the student achieves a superior grade on the final exam?
- Is one-time demonstration of ability sufficient?
- Is consistency in performing a task important to success?
- Is it important at which point in the semester the student demonstrates ability to perform the required task or demonstrate the required skill?
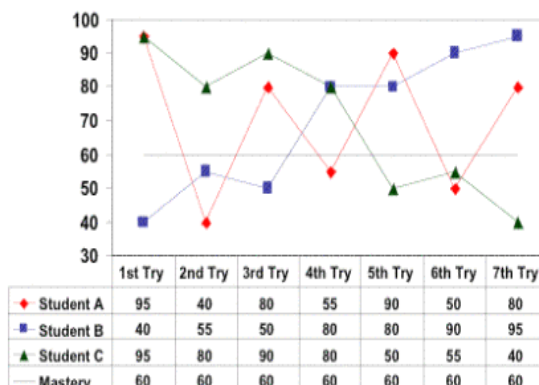
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The scenario presented in the article, **"Who Would You Want to Pack Your Parachute?"**, can serve as an example of the "learning for mastery" grading approach. Excerpts and a graphic from the article are included here. (Note that mastery is set at 60% in the graphic.) In the scenario, there were three students provided with several opportunities to develop and demonstrate ability to pack a parachute (i.e., a performance task). **Student A** "packed it perfectly the first time, but didn't do it well the next time, did alright the next time, and so on." **Student C** packed it perfectly the first time, but, over time, actually appeared to no longer be able to pack the parachute at all. **Student B** "...started out not knowing how to do it, but then, over time, built up a proficiency to pack it well every time."

Adapted from How to Grade for Learning (O'Connor, 2002)

	1st Try	2nd Try	3rd Try	4th Try	5th Try	6th Try	7th Try
Student A	95	40	80	55	90	50	80
Student B	40	55	50	80	80	90	95
Student C	95	80	90	80	50	55	40
Mastery	60	60	60	60	60	60	60

In making a final evaluation determination for this task, and considering the scenario where you might be relying on your parachute being packed well, what are the options? Would you average all successes as might be the case for Student A? Would you average all initial successes and disregard the downward trend for Student C since they were able to demonstrate mastery at some point? Would you disregard the initial challenges faced by Student B and assign a grade based on ability to ultimately demonstrate success? *(Example and visual aid accessed at "Who Would You Want to Pack Your Parachute?")*

Drawing an equivalent scenario using the demonstrating of mathematical understanding, would it be considered "satisfactory" if, over time, students demonstrate "...consistency in their [mathematical understanding], even if they start out not understanding how..." to perform the needed task?
(Of note, in any situation, changes to the grading criteria or weighting should always be to the benefit, and not the detriment, of the learner.)

CETL Recommended Teaching and Learning Resources

Teaching In Times of Disruption (University of Rochester)
Resources for Teaching Online (University of Rochester)
Teaching in Times of Disruption - Zoom Workshops (University of Rochester)
Teaching During Times of Disruption - Faculty Resources (University of Rochester)
Faculty Guide to Online Learning (University of Rochester)
Teaching Disruption Workshop Signup (University of Rochester, GoogleDocs)
Instructional Continuity Resources Around the Web (Georgetown University
Online Teaching Toolkit (Association of College and University Educators)
COVID-19 Related Resources (Association of College and University Educators)
Helping you deliver on your online promise (Quality Matters)
QM Emergency Remote Instruction Checklist (Quality Matters)
Moving Teaching Online (Online Learning Consortium)
Information Technology Management and Leadership (Educause)
COVID-19 IHE Resources (Educause)
Webinars: Quality Equity & Inclusion during Covid (Association of American Colleges and Universities,)
Teaching Effectively Online (CIRTL - Center for the Integration of Research, Teaching & Learning, YouTube videos)
Online Resources for Science Laboratories (GoogleDocs Resource)
ACUE's Online Teaching Toolkit (Association of College and University Educators)
COVID-19 and Helpful Things to Keep in Mind (Association of College and University Educators)

Pivoting from In-Person to Online Teaching: Tips and Discussion (Macmillan Learning)

Appendix A: AS&E Course Grading & Mapping to Learning Outcomes Chart

A "Course Grading and Mapping to Learning Outcomes Chart" may be helpful in noting and/or reviewing grading criteria (i.e., weighting of assessments in calculating final grade) at both the course and/or program level.

Instructors are encouraged to note changes needed to provide context for any future reviews of the impact of COVID-19 on assessment results.

Course Grading Criteria	Course Learning Outcomes Assessed	Instructional Plan (format, delivery, considerations, etc.)	Assessment Plan (format, timing, criteria/rubrics, etc.)	Notes
e.g., Homework: 30%				
e.g., Research Project OR Capstone Project: 40%				
e.g., Presentation: 10%				
e.g., Quizzes/Tests: 20%				

(Please email josephine.seddon@rochester.edu for guidance and/or assistance.)

Appendix B: Basic Rubric Template for Student Learning Assessment (converting "look-fors")

Focus of Assessment * (e.g., assignment, test, project, overall grade):

Evaluation Criteria	Associated language to combine with criteria or "look-for"	Excellent/A 3.7-4.0 Highly/very able to..., Can, without assistance, ...	Good/B 2.7-3.3 Mostly able to..., With minimal assistance, can...	Fair/C 1.7-2.3 Somewhat able to..., With some assistance, can...	Limited/D 1.0-1.3 Hardly able to..., With extensive assistance, can...	Not proficient at any level	Other (I, N, etc.)	Comments (if any)
	% of grade	**Satisfactory** (Excellent, Good, Fair, Limited OR letter grade)				**Unsatisfactory**		
e.g., Content "Look-fors": comprehensiveness, use of sources, etc.	40%							
e.g., Format "Look-fors": complexity, quality, etc.	25%							
e.g., Structure "Look-fors": language use, organization, etc.	35%							
Total	100%	***Overall average grade based on assessments across all criteria ("S" or letter)**						

(*Where available, assignment prompts or question sets can be included with the rubric for easier reference.)   *Josephine Seddon, UR, 2020*

Formative vs Summative Assessment? What's the Difference?

Formative assessments are designed to inform teaching and/or learning. They are typically not included in final grade calculations unless they would benefit summative assessment of student achievement in a positive manner. Formative assessments may include diagnostic quizzes, pre-lecture questions, post-lecture or "exit" questions, initial drafts/attempts, discussion board posts, etc.

Summative assessments are designed to determine level of achievement and are typically included in the final grade. Summative assessments should be identified as such in advance so that students are aware of the purpose of the assessment. A variety of types of assessments can be, and really should be, used for summative assessment purposes. This will allow students with different learning and assessment strengths to excel and provide a more accurate measure of level of mastery achieved.

While both assessment strategies are typically used across courses in all semesters, they are especially during times of COVID-19 when teaching and assessment strategies previously planned may need to be modified. Ensuring lots of opportunity for students to demonstrate learning will help guide teaching, assessments and grading.

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