

Mastery-Based Assessment: An Implementation with Reflective Writing

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Motivations

- Grading process: less noise and workload
- Student experience: lower stakes and more opportunities to grow

Shortcomings

- Mainly test-based
- Not fully standards-based

distinctive aspects

- Safety net
- Revision focuses on reflective writing
- Extends to larger class sizes

- Intermediate Algebra
- Calculus I
- Linear Algebra

Grading Breakdown

Homework: 10%

Tests (3): 60%

Final (cumulative): 30% – Why?

mastery-based setup

- Tests: 3-4 questions in class (50-60 minutes).
- Each question: Mastery, Progressing, Needs Improvement
- Mandatory revisions: 1 week and must attain Mastery

- If Mastery-level revisions:

M	100%
P	85%
N	70%

- If not: lower scores to taste. Not public info.
- Safety net: soft guarantee of C- going into final exam

- Mastery on each question required
- Explain difference between original and new answers
- Reflect on source of error (careless, unprepared, missing concept)

Note

Generally able to grade these on completion. – Why?

results (quantitative)

- At most ± 0.3 to final grades compared to traditional – How measured?
- Calculus I DFW rate: 1/0/1 out of 35

results (qualitative)

- "First time I've looked over a graded test"
- "I would be dead without the safety net"
- Improvement to grading speed: 100 tests in 2 hours (faster for revisions)

Progressing

- Fast grading
- Gives safety net without inflating scores
- Formative aspect of revisions

Needs Improvement

- Very test-focused, less formative
- How to deal with non-participation?

questions?