Determining final grades for undergrad classes

Prof. Felix Lin, Spring 2020

Many students wonder how I determine the final grades. “Will there be a curve?” They asked.

The short answer is yes. Yet with a specific algorithm. Read on.

1. Baseline

A student’s raw score forms the general basis for the final grade:

>= 80% A (will give A+, A, A-)

>= 60% B (will give B+, B, B-)

>= 50% C (will give C+, C, C-)

>= 40% D (will give D+, D, D-)

< 40% F

2. The upgrade process

Principle: students with similar raw scores will be likely to receive the same grade.

Here is a **real** sample from ECE368 I taught before. The student names are fake.

Name (pseudonyms)	Raw score	gap vs. prev	Final grade
Hailey	80.08333	-	A-
Kermit	79.86667	-0.21667	A-
Jared	79.72667	-0.14	A-
Stasia	79.66	-0.06667	A-
Divina	79.455	-0.205	A-
Katelyn	79.41	-0.045	A-
Kelley	79.35167	-0.05833	A-
Danica	79.17667	-0.175	A-
Annice	78.85	-0.32667	A-
Malcom	78.80333	-0.04667	A-
Shalon	78.78167	-0.02167	A-
Alex	77.98333	-0.79833	B+

The student names in yellow are below the cutoff line for A-. Nevertheless, they receive A-. Because each of their raw scores is just *slightly* worse than the student ranked right above. See the “gap” column.

Alex receives B+ because his score is notably worse than **Shalon** (a 0.79 gap)**.** Of course, his raw score is below the cutoff for A.

Notes:

- We never downgrade. For instance, if a student gets B as the baseline, he/she will get B or higher as the final grade.
- How large a gap is deemed as "notable"? It is at the instructor's discretion. Often obvious. See the example above.

3. Who will receive A+?

I normally give A+ to top 1-3 students, subject to principle 2 above.

4. How to determine cutoffs between A/A-, B+/B/B-, etc?

A/A-: We split the range of A in two halves. Then follow principles 1 & 2 to upgrade students from A- to A.

B+/B/B-: Same idea. We split the range of B in three (roughly) equal portions. Follow principles 1 & 2 above.

4. Who will fail?

That means lower than C- (not including C-) for Spring 2020.

We are very cautious when getting into that zone. My philosophy is looking for reasons NOT to fail students. The questions I asked: "If this student passes, would it be fair to other students in the class? Would it embarrass Purdue? Would it send a wrong message to future students?"

Historically, only <10% students in my class failed, for whom I could not find valid reasons to let them pass.

I cannot promise NOT to fail individual students in the future.