

To: Dr. Ahlquist's MET1010 class, fall 2006
From: Jon Ahlquist
Re: Exam 5 and grades
Date: 13 November 2006

To figure your grade at this point in the course, add together the best 4 out of 5 exams and then convert that to a percentage. Because 4 exams contain 120 points, here is the formula:

$$\text{Percentage} = 100\% \times (\text{sum of best 4 out of 5 exams})/120 = (\text{Sum of best 4 out of 5 exams})/1.20$$

Refer to grading scale below. Note that I will always determine your grade based on a sum of exam scores. I do not assign grades to individual exams.

Percent	Grade				
84-85.999	A-	86-100	A	(No A+ at FSU)	
74-75.999	B-	76-81.999	B	82-83.999	B+
64-65.999	C-	66-71.999	C	72-73.999	C+
54-55.999	D-	56-61.999	D	62-63.999	D+
				0-53.999	F

This grading scale currently puts 19% of the class in the A and A- range, which is even higher than the 15% of the class that the syllabus promises, but I did it to get the B-/C+ line near the middle of the class. With so many students in the class, there are no gaps in the distribution of scores, so there will be students just below the cut-off for each grade. That is, some students will miss a higher grade by one question. This grading scale is generous, though, and these percentages are AFTER your lowest exam score is dropped, so even students who just miss a higher grade will be treated fairly.

There may be a slight adjustment to the grading scale after the final exam, but:

- (1) It won't be large (0 to 1%), and
- (2) I will not raise the scale higher than what has been posted above. That way you can always know what it takes to earn a certain grade. Below, I show you how to do this.
- (3) As the syllabus says, no extra credit will be allowed.

At the end of the semester, I will compute your percentage like this:

$$\text{Percentage} = 100\% \times (\text{Sum of best 4 exams} + \text{Final exam}) / (120 + 60)$$

You can rearrange this formula (using MAC1105 Basic College Algebra) to compute the score you'll need on the final exam to earn a certain grade. Here is how. Let S = sum of top 4 exam scores, P = desired semester percentage, and F = Final exam score needed to get percentage P .

With these variables, the percentage formula becomes $P = (5/9)(S + F)$, because $100/180 = 5/9$.

Rearranging gives $F = (9/5)P - S = 1.8P - S$. In expanded form, this is

$$\text{Final exam score needed} = (1.8)(\text{Desired semester percentage}) - (\text{Sum of best 4 out of 5 exams})$$

Example: Suppose the sum of your best 4 exams is $S=88$ out of 120 points, and your desired semester percentage is $P=74$, so that you'll get a B-. Then, on the final exam you will need to score at least $F = (1.8)(74) - 88 = 45.2$. That is, you will need to score at least 46 out of 60 to reach your goal of 74% for your semester total, because 45 out of 60 won't be quite enough. For comparison, 46 out of 60 is the same ratio as 23 out of 30 on one of the five one-hour tests.

I will post a copy of this email at the course Web site under the title "Exam 5 and grades."
Jon Ahlquist