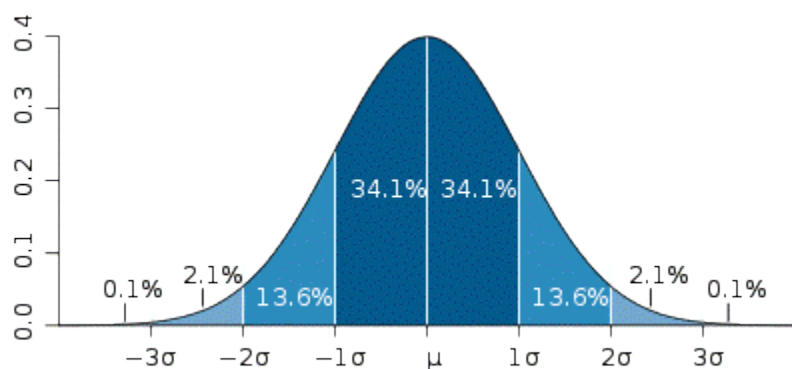


Here at TouroCOM, we grade our exams using Z-Scores. I have attempted to explain them below.

What is a Z-Score?

A Z-Score (or a standard score if you want to look this up on Wikipedia later) is a number that tells you how far away from the average score you did in terms of standard deviations. It is based on a normal distribution (pictured below).



μ = mean

σ = standard deviation

Classically, Z-Scores are calculated using this formula:

$$Z - Score = \frac{(Your\ Raw\ \% - Mean)}{Standard\ Deviation}$$

Example: Let's say that the Biochem average is 80% and the Biochem standard deviation is 10%. Student A takes Exam 1 and gets 90% of the questions correct. Student B scores 80%, Student C scores 75% and Student D scores 60%. We can calculate their Z-Scores using the formula above.

Student	Percent Score	Z-Score
A	90%	1.00
B	80%	0.00
C	75%	-0.50
D	60%	-2.00

Student A scored 10% higher than the average. Since 10% is 1 standard deviation, their Z-Score is 1.00.

Student B scored exactly the average. Since there is no difference between their score and the average, their Z-Score is 0.00.

Student C scored 5% lower than the average. Since 5% is $\frac{1}{2}$ of a standard deviation, their Z-Score is -0.50.

Student D scored 20% lower than the average. Since 20% is 2 standard deviations, their Z-Score is -2.00.

How are our Z-Scores different from classic Z-Scores?

Normally, Z-Scores are calculated using the mean and standard deviation from the exam itself. This means that your score directly affects the Z-Scores of everyone else in the class. “Wrecking the curve” is possible in this situation if one student scores much higher than everyone else in the class.

We want to encourage participation and community between students, so we set the mean and standard deviation at the beginning of the year for each course. This means that it is possible for everyone to get an A on an exam or that one person who gets a high grade will not bring down the scores of everyone else. You are not competing against your peers.

How did you set the mean and standard deviation for each course?

In order to set the scores, we looked at student performance from the past five years.

For example, to set the numbers for Physiology Fall 2014, we took all the scores from Physiology Fall 2013, Physiology Fall 2012, Physiology Fall 2011, Physiology Fall 2010 and Physiology Fall 2009. In order to keep our standards rising, we didn’t include the scores of students who failed that class or of students who didn’t perform to our standard on COMLEX Level 1.

The mean and standard deviation for each course is listed in the syllabus. These numbers are constant and will be used to grade every exam for the entire semester.

What is Faculty Adjustment?

Sometimes the calculated numbers don’t fall where we want them to. This would happen for a class that the majority of students did poorly in or for a class that was very easy and everyone got very high scores. We don’t want to grade you on a scale that is unfair and needed to find a solution.

Example: Imagine there was a class whose calculated mean and standard deviation are 90% and 2% respectively. (These numbers show that in the past three years, all of the students scored very well and very close to each other.) If you were to take an exam and score an 86%, your Z-Score would be -2.00 which is in the failing range. Would you consider 86% a failing score?

In order to make sure that doesn’t happen, we introduced another number into our Z-Score formula called Faculty Adjustment. Below is the formula we use to calculate our Z-Scores:

$$Z - Score = \frac{(Your\ Raw\ \% - Mean)}{Standard\ Deviation} + Faculty\ Adjustment$$

The Faculty Adjustment value either raises or lowers the calculated Z-Score slightly in order to adjust the grade distribution and ensure that you are being graded fairly.

Earlier, I said that everyone can get an A on an exam. While this is true, we don’t want every single student to get an A in the same class. That is not helpful to us or to you. We want to differentiate between who is actually doing well and who isn’t. Our goal as a school is to make our classes as difficult

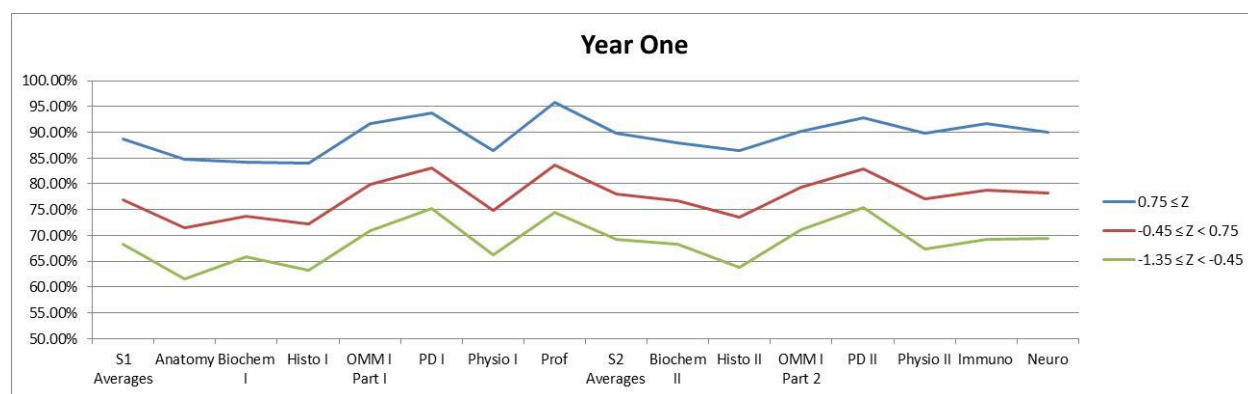
to pass as the board exams are. In theory, if you pass all of your classes here at TouroCOM, you should pass your boards.

How do Z-Scores affect me?

For every exam, your Z-Score will be posted on Blackboard. You will just know from the score what letter grade you got.

Letter Grade	Z-Score
A	$0.75 \leq Z$
B	$-0.45 \leq Z < 0.75$
C	$-1.35 \leq Z < -0.45$
F	$Z < -1.35$

These grade cutoffs are the same for every class. However, the percent score you need to achieve a certain Z-Score is different for each class. This is because some classes are more difficult to pass than others.



Letter Grade	Z-Score	Anatomy Fall 2014
A	$0.75 \leq Z$	$84.75\% \leq \%$
B	$-0.45 \leq Z < 0.75$	$71.53\% \leq \% < 84.75\%$
C	$-1.35 \leq Z < -0.45$	$61.62\% \leq \% < 71.53\%$
U	$Z < -1.35$	$\% < 61.62\%$

Note: Exam scores are never curved. The Faculty Adjustment number is not a curve. If a curve were to occur (and that's a big if), it only happens at the end of the semester on final course grades.

What if I don't like Z-Scores and I still don't understand them even after all this explanation?

You can look at your percent scores on your ExamSoft score reports. You will still be able to track what grade range you are in using the percent column of the graph above.