

Scheduling due dates in an online BIO class, a comparison between two approaches.

What is the Need/Assessment?:

To determine how scheduling of due dates for assignments in an 8 week online biology course effects the engagement and success of students in the class.

Describe the necessity for this change:

An 8 week online anatomy and physiology class requires students to perform a substantial amount of course work in a condensed time frame, therefore, they must manage and schedule their time effectively to be successful. Does having daily due dates help promote student success or does allowing them to complete the work on a more flexible schedule lead to better performance in the class?

Describe what will be (or was) implemented to affect change:

During the Summer semester due dates for assignments were placed throughout the week to try and keep students from falling behind, but this led to frequent late submissions. Due dates for the Fall semester were changed to the end of the week to give students more flexibility in completing assignments on their schedule, but also affords the possibility for students to complete all weekly assignments at the last minute without adequately preparing.

Interpret, compare and describe the results of the change:

Missed assignments, final grades, and completion rates for two Summer 2020 BIO202 sections with daily due dates were compared to three Fall 2020 BIO 2020 sections with end of the week due dates to determine which method produced more successful student understanding and completion. After reviewing the data, the sections that had all due dates at the end of the week had better class completion rate, passing rate and better average grade, but surprisingly, more missed assignments. A close inspection of the grade data showed that the vast majority of the missed assignments came from 1 or 2 students in each semester, which skewed that data set. After eliminating those students and reexamining the remaining data, the missed assignment averages were essentially equal. Therefore, based on this initial evaluation, that setting due dates at the end of the week allowing students to complete the work on their own schedule results in a slightly better average grade, passing rate, and completion rate for the course as compared to setting daily assignment due dates. Once accounting for the few outlier students who missed a disproportionate number of assignments, the timing of due dates (daily vs. end of the week) doesn't effect student's ability to complete assignments.

After analyzing the information, what are the next steps?:

The next steps are to implement end of the week due dates for all assignments in the BIO 202 course master along with a recommended schedule to complete assignments so that students do not fall behind. Additionally, we will attempt to expand on the due date protocol by setting due dates for the end of the week (Friday PM) so that those dates appear in the student's calendar, then locking the assignments a few days later (Sunday). No penalties will be given for completing the assignment between Friday and Sunday but students will not be able to access the assignment after Sunday. We will also try giving each student a few late passes which they can use to unlock missed assignments as they see fit. This will hopefully help to keep students on track but not penalize them too much for

missing some “soft” due dates and allows for a more consistent late penalty policy across all sections on BIO202 at EMCC.

Summary:

In the Summer 2020 semester I had two sections of an 8 week online BIO 202 course. In order to ensure students would complete the assigned material on time and not fall behind, a recipe for disaster in an 8 week class, I set daily due dates during the week. Essentially, there was an assignment due almost every day of the week for the entire class. Students could work ahead but were penalized for submitting late assignments. During that semester I was inundated with requests for extensions on assignments and came to realize that my best intentions for keeping students on track may, in fact, not be the best format for success.

In the Fall 2020 semester I has 3 sections 8 week sections of BIO 202. In this semester I set the due dates for all weekly assignments at the end of week, allowing students to complete the assignments when they had time during the week. They could still work ahead but were penalized for late submission. I did notice that many students waited until the last day to submit all assignments, meaning they probably did not afford much time to learn the material causing them to submit inferior work, which may have led to lower scores overall.

To test which due date method produced more successful students I decided to compare the missed assignments, completion, passing and average grades between the two semesters. The results are listed below:

Semester	Number of students to start the class	Number of students to complete the class	Completion %	Number of students with passing grade	Passing %	Number of missed assignments	Average missed assignments per student	Average grade (%)
SUM20	46	36	78%	32	69.6	46	1.28	79.7
FALL20	65	52	80%	47	72.3	80	1.54	82.27

The data above shows that having due dates at the end of the semester improves the student success measures of completion, passing and grade averages. The missed assignments data seemed odd, I thought that having daily assignment due dates would lead to more missed assignments. After reviewing that data again, I found that the majority of missed assignments were due to just a few students, 1 student in the Summer semester and 2 students in the Fall semester. After eliminating those outlier students from the data set it yielded the following results:

Semester	Number of students to complete the class	Adjusted missed assignments	Adjust missed assignments/student
SUM20	35	19	0.54
FALL20	50	28	0.56

The missed assignment averages are essentially equal, suggesting that due date variation doesn't really effect the ability of the majority of students to complete assignments. Therefore, it appears from this simple evaluation of 5 sections of BIO 202, that having the due dates at the end of the week allows the students some flexibility in planning and scheduling their time to study and prepare for the quizzes which is translated into a slightly higher success rate.

Based on these results we are moving forward with a modified due date protocol for the Spring 2021 semester. We will be setting due dates for the end of the week (Friday PM) so that those dates appear in the student's calendar, then locking the assignments a few days later (Sunday). No penalties will be given for completing the assignment between Friday and Sunday but students will not be able to access the assignment after Sunday. We will also try giving each student a few late passes which they can use to unlock missed assignments as they see fit, capped at a set number, no exceptions. This will hopefully help to keep students on track but not penalize them too much for missing some "soft" due dates and allows for a more consistent late penalty policy across all sections on BIO202 at EMCC. It will also generate more equality in the grading policy as every student will get the same number of extensions, not just the ones who ask.