

Notes on Preflights

Preflights are short questions or tasks asked online, used to orient students to upcoming material (to encourage reading the textbook before coming to class, and to reflect on key points in the material), where their responses can be used by an instructor to inform their preparations for upcoming lectures, by focusing on specific difficulties students have with new material. They are loosely modeled on US Air Force Academy preflights, an upper-division offshoot of *Just-in-time Teaching* (JITT). For more information, see: G.M. Novak, E.T. Patterson, A.D. Gavrin and W. Christian, *Just-in-time Teaching* (Prentice-Hall, Englewood Cliffs NJ, 1999), and other publications associated with these authors.

The FA11 and SP12 transformed E&M II courses at CU assigned weekly preflights that were due online either on Monday (FA11) or Tuesday/Wednesday (SP12) before class. Preflight assignments represented a small percentage of their total grade (6% for FA11 and 3% for SP12), and were graded pass/fail, based solely on effort and not correctness. Preflights at CU were administered through the D2L (Desire2Learn) system: <http://learn.colorado.edu>

Overall, the preflights were not popular with our students, though they were extremely useful to us as instructors and education researchers. In other words, despite the valuable information we received from students, they did not find the preflights particularly useful for their learning (only 14% of SP12 and 30% of FA11 students rated preflights as either *useful* or *very useful* for their learning). This may be in part due to low student participation (they needed constant reminders in both courses that the preflights were due each week), and also that they were due on Monday mornings in the FA11 course – many students reported being averse to doing homework over the weekends (50% of FA11 students and 77% of SP12 students reported they usually did not begin working on homework assignments until one or two days before the assignments were due – both courses assigned homework on Wednesdays, and were due the following Wednesday – both held weekly problem-solving sessions on Mondays and Tuesdays, where students could work together on homework problems). Instructors should try to keep these factors in mind in deciding whether and how to implement preflights in their own courses.

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