

TEACHING ELEMENTS

DISCUSSION

ACTIVITY: PROBLEM

OF THE WEEK

VERSION 1.0 | 6/30/14

Description:

The instructor creates a “Problem of the Week” Discussion forum in which he/she posts 1-2 problems for students to solve on a weekly basis that are related to concepts, formulas, or methods that students typically have the most difficulty with and require extensive analysis.

Purpose:

This activity will encourage students to:

- Apply complex concepts, formulas, and methods to a variety of different problems and scenarios.
- Explain their approaches to complex problem solving in their own words and to one another.
- Analyze and evaluate a variety of approaches and methods presented by one another and that can be used to solve the same problem.

Activity Steps:

1. The instructor sets up discussion forum in which they post 1-2 problems related to concepts, formulas, or methods being covered for the week.
2. Students are asked not only to post their solution, but to also explain the method they used and comment on why they chose this approach.
3. As students post solutions, each student is asked to comment on why or how they feel their way or another student’s way of solving is different or more or less effective than others posted.

Tips for this Activity:

- Consider setting up a “Problem of the Week” Forum that consists of topics for each problem. For each of those topics, use subject headings that indicate the week it is posted. For example, *Week 1: Problem A*, *Week 1: Problem B*, and so on.
- To incentivize student participation, assign points to this activity, and consider how students can leverage this type of activity for other graded components of the course such as homework assignments, projects, or exams. Be sure to communicate this to students so they, too, see the value in it as an exercise.
- Make it clear to students how you will be participating in this activity. Rather than posting solutions, yourself, you might ‘jump in’ to reinforce a concept, highlight good problem-solving examples that have been posted, provide clarification where there is confusion, or encourage someone to elaborate on their solution when appropriate.
- Use ‘staggered’ deadlines so that students’ initial solution posts are due earlier in the week and their responses to one another’s posts are due later in the week. This will encourage them to allocate time to problem solving and explaining their approach, first, then reviewing and responding to one another’s posts, second.