STEM Teaching Hacks Workshop #4: Syllabus Writing & Course Structure

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Workshop Expectations
Warm-up Activity

- Find a partner you don’t know well
- Introduce yourself
- Talk to discover two things in common
- High five
- Repeat with new partners until time is up
Hack #1 – Setting classroom environment

If you want students to interact during class, ask them to interact on the first day

- Basic question prompt, such as “What is your favorite restaurant in Austin?” Share with class.
- T/F quiz: Best if answers are not clearly true or false. Students complete quiz in groups and discuss with whole class.
- Students brainstorm about the course title and mind map their answers.
- Students discuss their goals or concerns about the class. Discuss and relate to your plan for the class.
Hack #2 – Course syllabus innovations

How can you make your syllabus more engaging/interesting so that students may actually read through it?
Hack #2a – Visually display course structure

- Visually display course structure around learning objectives or topics/units/modules so students see the natural flow of the course.
Hack #2a – Visually display course structure

http://thevisualcommunicationguy.com/2016/08/16/how-to-write-a-syllabus-students-may-actually-read-six-quick-tips/
Hack #2b – Write your syllabus like an ad

- Write headers as questions
  - *E.g.* “What is this course?”, and “What am I going to learn?”
- Write sections in second person
  - “You’ll get the opportunity to integrate the..” rather than “Students will learn how to apply...”
- Write in an engaging tone (not dry)
  - Write as if you were giving a sales pitch. Let your passion show!
- Formatting
  - Use at least two fonts. Maintain lots of white space.
  - Use bullet points and tables instead of paragraphs

Hack #3 – Evaluate your syllabus

- Is your syllabus content-focused or learning-focused?
- After developing/redesigning your syllabus, evaluate it as you would any piece of work....with a rubric.
- In groups of three, briefly evaluate the syllabus given to you using the provided rubric.

http://cte.virginia.edu/resources/syllabus-rubric/
http://enact.sonoma.edu/content.php?pid=218878&sid=2032318

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Activity
Syllabus Rubric

Overview
To enrich the resources for measuring the impact of educational development work, we have created a rubric to assess the degree to which a syllabus achieves a learning orientation. The rubric provides qualitative descriptions of components that distinguish learning-focused syllabi and uses a quantitative scoring system that places syllabi on a spectrum from content-focused to learning-focused. It is flexible enough to accommodate a diverse range of levels, disciplines, institutions, and learning environments yet nuanced enough to provide summative information to developers using the tool for assessment purposes and formative feedback to instructors interested in gauging the focus of their syllabi.

Our syllabus rubric was awarded the 2014 POD Network Innovation Award. Here's the project summary created for the annual conference in Dallas. TX: POD Innovation Award Poster.

User Guide
To help others use the rubric effectively, we've created a User Guide that includes 1) relevant background information and details about validity and reliability, 2) the complete rubric scoring directions, and a blank scoring sheet, 3) references, 4) and six reference syllabi which we've scored and fully annotated. Because this is a living document, check back regularly so that you have the most up-to-date version.

- Syllabus Rubric Guide (2-13-17)
- Syllabus Rubric Scoring Sheet - Excel (6-9-15)

http://cte.virginia.edu/resources/syllabus-rubric/
Hack #4 – Low stakes assignments

- Consider inclusion of low stakes assignments (<5% of grade) in your grading scheme which will enhance student participation, increase application exposure or promote effective study.

- Examples:
  - Pre-class reading quizzes
  - “Muddiest point” writings
  - Discussion Board posts
  - Find relevant news articles
  - Study Guide preparation
  - Classroom voting

- In-class activities
  - Syllabus quiz
  - Concept maps
  - Daily/weekly summaries
  - Reading notes, lecture notes
  - Campus/community event attendance
Activity

- Which of the following that are made of **wood**?
Hack #5 – Lesson planning: Engagement

- Pre-class reading: Students must post at least one discussion question on reading before start of class.
- Students bring relevant news articles (+ notecard) to discuss twice per semester. A few randomly chosen students present 1 minute overview during class each day.
- Instructor brings relevant news articles to class, and spend first 5 minutes discussing and connecting to course material.
Hack #6 – Lesson planning: Prepare questions ahead of lecture

- In your lecture notes/slides, insert discussion questions throughout that go beyond the typical “Are there any questions?”.
- Always give students time to think and answer.
- The 8-second rule
Hack #6 – Lesson planning: Prepare questions ahead of lecture

◦ Why do you think winemakers wait until temperatures reach -8°C (17°F) before harvesting their grapes for dessert wine?
Hack #7 – Leveraging Canvas

- Set up assignment shells to get due dates on the calendar
- Arrange modules in reverse order to keep recent material at the top
- Avoid the question “Can I still get an A in the course?”
  - “What if” function in student view
  - Provide a grade calculator
- Use graded surveys to grade based on completion
- Pre-stage class emails
Canvas: Assignment shells

- Students depend on calendar items in and alerts from Canvas.
- You can make and publish all of your assignments without content at the beginning of the semester.
- “Available from” determines when students can access the assignment.
Canvas: Modules

List in reverse order to keep new content at the top!
Canvas: “What if” function

Students can see how performance on assignments affects course grade.

| Midterm Exam 1 | Oct 4 by 7pm | 52 | 100 |
| Midterm Exam 2 | Nov 1 by 7pm | 65 | 100 |
| Midterm Exam 3 | Nov 20 by 7pm | 83 | 100 |
| Final Exam     | Dec 18 by 7pm | 100| 100 |

Total: 72.92%

- Show Saved "What-If" Scores
- Revert to Actual Score

*NOTE*: This is NOT your official score.
Grade calculator

If Canvas can’t calculate grades due to your grading scheme...

<table>
<thead>
<tr>
<th>BIO 325-Genetics</th>
<th>Fall 2017 Grade Calculator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lowest exam</td>
</tr>
<tr>
<td>Enter your grades here:</td>
<td>100</td>
</tr>
<tr>
<td>These are the weighted values in each category:</td>
<td>10</td>
</tr>
</tbody>
</table>

*See the syllabus to determine how percentage will be converted to letter grades.
Canvas: Graded surveys

- Go to your Canvas course
- Click on “Quizzes” on the left side
- Under “Quiz type” select “Graded survey”
Hack #8 – Lecture toolbox

• Prepare a “toolbox” of items you will return to throughout the lecture.
  ◦ This can be put in a saved space on the corner of the board, a page repeatedly displayed on doc cam, a handout, or a slide repeatedly used in PPT presentation.

• Examples of tool box items:
  ◦ Equations
  ◦ Figures
  ◦ Definitions
  ◦ Schematics