UNIVERSITY OF OREGON
College of Arts and Sciences

Peer Review for _____, Conducted by _____

Section 1: Overview: Indicate whether the visit was scheduled or unscheduled, the course name/number, time and date, and the topics under discussion that day. Include the context of the course, type and level of students (majors/non-majors, freshmen/seniors, elective/required course).

Section 2: Data Collected: Teaching Practices Inventory, COPUS, and six post-observation meeting questions**.**

Teaching Practices Inventory

E.g.:___(name)_____ completed the Teaching Practices Inventory (TPI), which represents the variety of evidence based teaching practices incorporated into the course. It is expected that there would be a wide range of TPI scores, since some courses may be better suited to using many different teaching practices, and others fewer. Points are only allotted for practices that are supported by the available evidence. As a comparator, Wieman & Gilbert (2014) provided average data for five science or mathematics departments including a total of 179 University Instructors. The highest department average was 33.4 (SD =9.4) and the lowest department average was 24.1 (SD=6.5). The maximum possible points is 67, although this score is neither desirable nor attainable (since using all possible teaching tools does not necessary lead to a good teaching environment). __(name)__ scored a ___. Therefore, the results of the Teaching Practices Inventory indicate that __(name)___ is using evidence based teaching practices to a _____ extent. For reference, the current HPHY Department TPI data include: (mean, range, SD, n, date).

Commented [SD1]: The chair of the HPHY Teaching Effectiveness Committee can provide up to date information for HPHY reviewers.

See **Appendix A** for a list of the specific evidence based teaching practices used by _(name)__, and documented in the TPI report, but to highlight just a few……(expand).

COPUS

The Classroom Observation Protocol for Undergraduate STEM (COPUS; Smith et al. 2013) was employed during the classroom observation. This tool outlines what the students are doing and what the instructor is doing during every 2-minute interval during class time. Multiple activities can be recorded during each interval. **Appendix B** includes different ways to visualize these data. What these charts illustrate is ……..

Commented [SD2]: Include here some brief interpretation of what stands out to you from these data. Perhaps their use of posing questions, or the timing of student activities, or their use of follow-up after student activities⋯.etc.

Post-Observation Interview Questions

During our post-observation meeting, I asked __(name)__ our standard six questions regarding teaching and learning adapted from Bain (2004).

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1. How do you think people learn?
2. What will your students be able to do as a result of learning in your class?
3. What do you do to help students to achieve these goals (described in #2)?
4. How do you and the students get feedback about student learning along the way?
5. How do you evaluate your efforts to foster student learning?
6. What can I and/or the HPHY Department do to further support for your efforts?

____(name)_____ indicated that people learn by……

Commented [SD3]: This should be a paragraph or two that incorporates the answers to the questions above in a way that highlights key elements of their teaching, and also includes relevant information from the following academic affairs list (otherwise include the information below in its own paragraph).

Intellectual content of the material taught, including relevance, breadth and depth.

Instructor's grasp of the material; ability to present content clearly and logically, to place specific material within thematic contexts and to demonstrate the significance and relevance of course content.

Instructor's ability to engage and challenge students and to teach critical thinking and questioning skills.

Instructor's ability to provide intellectual inspiration and leadership and to awaken new interests.

Instructor's use of innovative approaches to teaching and/or use of instructional technology to enhance the learning process.

Section 3: Provide **recommendations** to the individual being evaluated that will continue to increase the use of evidence based teaching methods, and continue to create the best learning outcomes for the students *(go back through the list of evidence based practices and consider suggesting some that were not included, but could be based on the course goals).*

Signature, name and title/rank of reviewer, date

References:

Bain K. (2004) *What the Best College Teachers Do*. Harvard University Press. Cambridge, MA.

Smith M., Jones F., Gilbert S., Wieman C. (2013) *The Classroom Observation Protocol for Undergraduate STEM (COPUS): A New Instrument to Characterize University STEM Classroom Practices*. CBE – Life Sciences Education, 12 p618-627.

Wieman C. & Gilbert S. (2014) *The Teaching Practices Inventory: A New Tool for Characterizing College and University Teaching in Mathematics and Science*. CBE – Life Sciences Education, 13, p552-569.

Appendix A

___(name)____ Use of Evidence Based Teaching Practices, Documented in the Teaching Practices Inventory (TPI)

- List of topics to be covered provided to the students.
- List of topic-specific competencies (skills, expertise, …) students should achieve (what students should be able to do) provided to the students.
- List of competencies that are not topic related (critical thinking, problem solving, …) provided to the students.
- Affective goals – changing students' attitudes and beliefs (interest, motivation, relevance, beliefs about their competencies, how to master the material) provided to the students.
- Student wikis or discussion boards with significant contribution from you or TA provided to the students.
- Solutions to homework assignments provided to the students.
- Worked examples (text, pencast, or other format) provided to the students.
- Practice or previous year's exams provided to the students.
- Animations, video clips, or simulations related to course material provided to the students.
- Lecture notes or course Powerpoint presentations (partial/skeletal or complete) provided to the students.
- Articles from scientific literature provided to the students.
- Pause >3 times per class to ask for questions.
- Multiple small group discussions or problem solving sessions per class period,
- Show demonstrations, simulations, or video clips in which students first record predictions and then explicitly compare observations with predictions.
- Discussion on why the material is useful and/or interesting from students' perspective,
- Students asked to read materials for upcoming class AND complete assignment on it shortly before class,
- Reflective activities at end of class,
- Student presentations (oral or poster),
- Fraction of class spent lecturing is <60%
- >10% of time spent on the process by which the concept was developed,
- Questions posed followed by student-student discussion,
- Problem sets/homework assigned and contributed to course grade at intervals of 2 weeks or less
- Paper or project (an assignment taking longer than two weeks and involving some degree of student control in choice of topic or design)
- Encouragement and facilitation for students to work collaboratively on their assignments

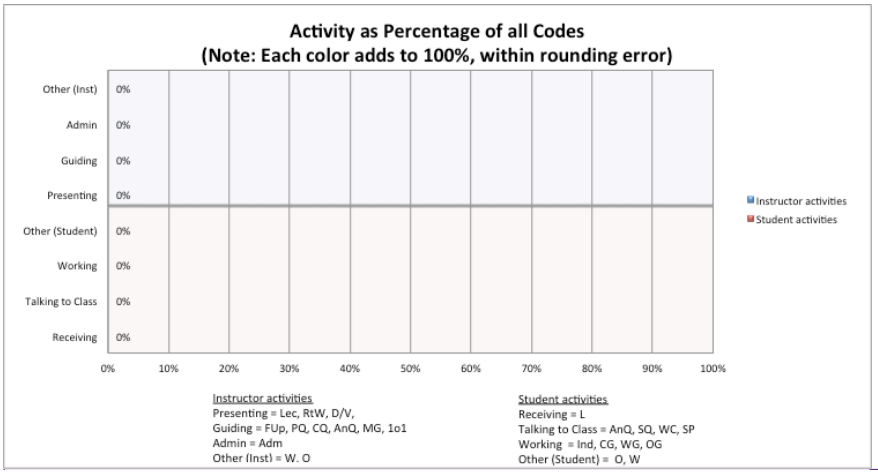
Commented [SD4]: **The following is a list of all evidence based practices (those that score >0) listed in the inventory. Delete those that are not checked on the faculty's TPI report, and keep the rest to document evidence based practices employed.*

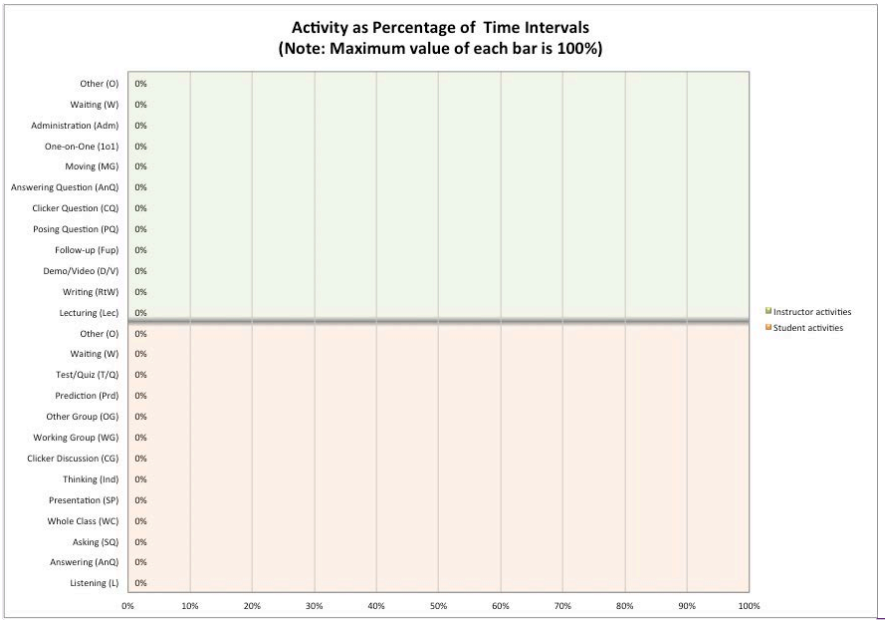
Commented [SD5]: As you delete items not marked on the TPI – consider sometimes cutting and pasting into the Recommendations section, if you think it would enhance the learning experience.

- Explicit group assignments,
- Midterm course evaluation
- Repeated feedback from students to instructor throughout the term,
- Assignments with feedback before grading or with opportunity to redo work to improve grade
- Students see graded assignments
- Students see assignment answer key and/or grading rubric
- Students see graded midterm exam(s)
- Students see midterm exam(s) answer key(s)
- Students explicitly encouraged to meet individually with instructor
- Students see their graded assignment, and answer key/rubric,
- midterm exams utilized
- >15% of exam grade requires students to explain their reasoning.
- Final exam less than or equal to 60% of course grade
- Assessment given at the beginning of course to assess background knowledge,
- Use of instructor-independent pre-post test (e.g. concept inventory) to measure learning
- Use of a consistent measure of learning that is repeated in multiple offerings of the course to compare learning
- Use of pre-post survey of student interest and/or perceptions about the subject
- Opportunities for students' self-evaluation of learning
- Students provided with opportunities to have some control over their learning, such as choice of topics for course, paper, or project, choice of assessment methods, etc.
- New teaching methods or materials were tried along with measurements to determine their impact on student learning,
- TAs must satisfy English language skills criteria
- TAs receive ½ day or more of training in teaching
- There are Instructor-TA meetings every two weeks or more frequently where student learning and difficulties, and the teaching of upcoming material are discussed.
- Used "Departmental" course materials that all instructor of this course are expected to use
- Discussed how to teach the course with colleagues
- Read literature about teaching and learning relevant to this course
- Sat in on colleagues' class to get/share ideas for teaching.

Appendix B

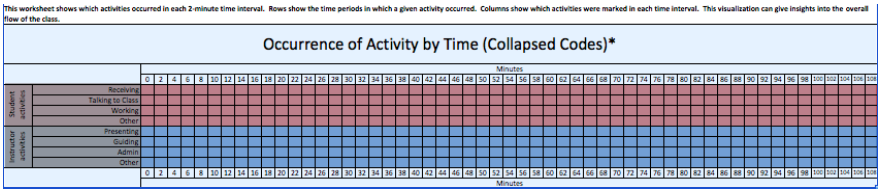
Classroom Observation Protocol for Undergraduate STEM





Commented [SD6]: Note – for formatting purposes, you can "copy" the chart in Excel and then "Paste Special" as a picture.

Commented [SD7]: There are 3 types of graphs to choose from and each has a collapsed version and a version that has every code. Ideally the Department would be consistent regarding to consistently include. Choices are:
1. Occurrence of activity by time
2. Activity as a percentage of activities.
3. Activity as a percentage of time intervals.

Commented [SD8]: Add Figure numbers and captions that highlight predominant activities.

This worksheet shows which activities occurred in each 2-minute time interval. Rows show the time periods in which a given activity occurred. Columns show which activities were marked in each time interval. This visualization can give insights into the overall flow of the class.