**Purpose**

The purpose of this protocol is to provide clear directions on how to extract relevant information from a college-level course syllabus and identify Learning outcomes and DEIJ statements. The data gathered will be used to assess whether or not AAAS competencies are taught in a course and which competencies are taught. Examining numerous course syllabi will elucidate how teaching biology is approached by different department and programs and where the emphasis lies. Further it will aid in determining the alignment of a department or programs with national recommendations.

Outstanding questions:

How to definitively identify the unit of a learning outcome?

How to identify functionally duplicate syllabi?

Steps for syllabus extraction:

1. Open syllabus document (may be pdf, html, or doc)
2. Enter Department code (e.g. BIOL), course number (e.g. 1104), and course number suffix (e.g L, E) into syllabus-data spreadsheet.
3. Enter year and semester of syllabus into syllabus-data data sheet. Some syllabi may lack this information. Check the name of the syllabus file to see if date or semester are present there. If no evidence of year or semester enter NA.
4. Enter the last name of the lead instructor in the Lead\_Instructor column of the syllabus-data data sheet. If there is more than one instructor and a lead instructor is not designated the first instructor listed should be used as the lead instructor.
5. Enter the last name of all other instructors into the Other\_Instructors column. All names should be in a single cell separated by semi-colons (;). Do not include Teaching Assistants in this column.
6. Review syllabus for the presence of learning outcomes/learning objectives/learning goals. If present enter Yes. Into the Learning\_Outcomes\_Present column. Then copy the text of the entire learning outcomes section from the syllabus into a text file (e.g. in notepad). Each separate learning outcome should be on a separate line in the file (and be sure that a single learning outcome is not spread across multiple lines). Do not copy over introductory text in this section prior to the actual learning outcomes. Older syllabi may not list learning outcomes in an expected format but rather in a paragraph, in this case separate the paragraph into component learning outcomes on separate lines in the file (do not add any additional text). Save this file as [index number]-LO.txt in the learning-outcomes folder, where the [index number] is replaced by the number in the index column of the datasheet. Copy this filename into the Learning\_Outcome\_File column.
7. Review syllabus for the presence of a diversity/DEI/DEIJ statement. If present enter Yes. Into the DEI\_Statement\_Present column. Then copy the text of the entire DEI statement section from the syllabus into a text file (e.g. in notepad). Save this file as [index number]-DEI.txt in the dei-statements folder, where the [index number] is replaced by the number in the index column of the datasheet. Copy this filename into the DEI\_Statement\_File column.
8. Identify the grading scheme within the syllabus. This area should specify the proportion of the final grade that each type of assignment provides. This step requires some interpretation. Record in the syllabus-data spreadsheet the proportion of the final grade that is from Exams, Quizzes, Participation, and Projects/Assignments in the appropriate columns. Presentations, group-work, homework sets, and research papers are among the things that would qualify as projects/assignments. If there is a grade proportion that does not fall into one of the specified categories place that proportion into the Other\_Grade\_Proportion column and enter the words describing the source of the grade in the Other\_Grade\_Description column. Enter proportions as decimal numbers (i.e. 0.6, NOT 60%)
9. Rename the syllabus file which you are currently reading to add -INDEX-[index number] to the end of the file (before the file extension), where the [index number] is replaced by the number in the index column of the datasheet.
10. Move on to the next syllabus file and the next row of the syllabus-data data sheet.