

## Department of Civil Engineering and Surveying University of Puerto Rico - Mayagüez



## Faculty Course Assessment Report (FCAR) <sup>1</sup> Description & Instructions

The Faculty Course Assessment Report (FCAR) provides an assessment format for documenting ABET EAC Criterion 3 *Student Outcomes (SOs) assessment* and continuous improvement at the course level. In addition to assessment reporting, the FCAR lists modifications incorporated into the course, reflection on the part of the instructor as to what was or was not effective, and suggestions for further improvements. Additional information collected by other means can be incorporated into the FCAR. Reports are collected, discussed within the areas, and disseminated to allow instructors to inspect prior offerings of specific courses and adopt the accepted suggestions, thereby improving the course with each offering. Therefore, *the FCAR effectively documents the "closing of loops" at course* and program levels.

The FCAR consists of the following sections:

- 1. **Header** Provide both the subject code and course number, followed by course title. If the course is taught by different faculty, then each faculty should submit an FCAR that summarizes the assessment of all sections for which he/she is responsible. Indicate the section(s) within parentheses that the Report is covering. Also provide the academic term and the Instructor's name for the reporting period.
- 2. **Current Catalog Description** Give the *exact* catalog description under which this course was taught. Providing this information will, over time, document changes made to the catalog description and why it was changed, indicating the feedback elements of the assessment process which led to the change. The FCAR documents this activity (change) in the "*Course Modifications*" section.
- 3. **Grade Distribution** List the distribution of grades for the course, including withdrawals. By actively engaging in this computation, the instructor can better reflect upon the results.
- 4. **Improvements/Modifications Made to Course** This section mentions the course improvements made based on recommendations coming from previous assessments. Please list any substantive changes made to the current offering of the course, and cite the source of the improvement (e.g. a previous FCAR, an action plan, minutes of a committee meeting, etc.), especially if it has been documented. These references are necessary so that each modification can be traced back to its source and to demonstrate how the *loop was closed* for any particular modification. When the continuous quality improvement process is working, changes are fed back into the program, which is often referred to as "closing the loop" on the assessment process.
- 5. Course Learning Outcomes (CLOs)/Assessment Tools List and address course learning outcomes (from *Course Syllabus*) separately. Appropriate documentation stating what items are used for the assessment. There is no need to assess every question on every assignment; keep your workload manageable by picking an appropriate selection of items (e.g. specific exam questions, noteworthy assignments) and use those for your assessment.

- 6. Student Outcomes (SOs) Assessment ("by Components") Start by pasting here a copy of the applicable (a-k) Student Outcomes (SOs) matrix for the course (right from the Course Syllabus). The assessment of course outcomes is, by itself, insufficient to meet the criteria for student outcomes and assessment. The data presented for satisfying the requirements for Criterion 3 have to be relative to the adopted (a-k) Student Outcomes (SOs). This section of the Report is organized into "components" that roughly correspond to the individual items listed in the ABET (a-k) Student Outcomes that are applicable to the course. Merely stating that this activity is being accomplished is insufficient and would likely result in the citing of a shortcoming; RATE your Direct Assessment using the Assessment Rating TABLE in next page. Documentation is needed to back up the claim. Some of the areas that would be worth documenting if you are doing something of "sufficient substance" are the following: design of experiments, professional/ethical responsibility, communications (both written and oral), impact of solutions in a global and societal context, and contemporary issues. By providing contemporaneous documentation here, it at least demonstrates that these items have been addressed. A component should be listed only when there is something to report or when one is specifically instructed to do so as part of an assessment plan.
- 7. **Student Feedback** When performing assessment, input should be obtained from all of the appropriate constituents; accordingly, *student feedback is of utmost importance*. Please provide a synopsis of the course evaluation form student feedback as it relates to the course. While some of the comments received from students are of dubious quality, or are of constructive criticism toward the instructor, there are other comments regarding course content and organization that are worthy of being shared. Sharing this information increases the likelihood that these comments will find their way into an action plan for improving the content of the course.
- 8. **Reflection** The primary purpose of this section is *to promote self-awareness on the part of the instructor*. It is imperative to keep an open mind while looking at the results so that shortcomings can be identified and corrected. This allows for documenting impressions regarding the effectiveness of instruction, extenuating circumstances that might have affected student performance or items that fall outside the scope of the current set of course and student outcomes. It also allows for the documentation of those things that are not easily measurable and of things that are measurable but not encapsulated into the current set of course or student outcomes.
- 9. **Proposed Actions for Course Improvement** The specification of proposed actions for course improvement begins the "closing the loop" process, as these items constitute the result of the instructor's evaluation of the course via assessment, student feedback, and reflection. There are no restrictions as to what can be proposed; it could be as simple as a note to include material on a certain subject in an assignment, or a recommendation to the curriculum committee to modify or create a course to better deal with some of the subject material. Whatever suggestions are recorded by the instructor, it is essential that the appropriate parties incorporate the FCAR review into the overall assessment process as a regularly scheduled activity.

The FCAR templates/samples for INCI-UPRM should be used as a guide when completing your FCAR Reports. Once reviewed by the areas and appropriate follow up (corrective or improvement) actions are identified and planned for, the FCARs will be placed/maintained in the particular Course Binders at the SEED Office, as documentary evidence of the continued assessment and improvement process.

**TABLE:** Direct Assessment Ratings for Exams, Quizzes, Projects, and/or Specific Questions (on a Scale of 1.00 to 5.00, where the achievement benchmark has been established at 3.00)

Course	Assess										
Score (%)	Rating										
40	1.00	50	1.66	60	2.33	70	3.00	80	3.68	90	4.35
41	1.06	51	1.73	61	2.40	71	3.07	81	3.74	91	4.41
42	1.12	52	1.79	62	2.46	72	3.13	82	3.81	92	4.48
43	1.19	53	1.86	63	2.53	73	3.20	83	3.88	93	4.55
44	1.26	54	1.93	64	2.60	74	3.27	84	3.95	94	4.61
45	1.33	55	2.00	65	2.67	75	3.34	85	4.01	95	4.68
46	1.39	56	2.06	66	2.73	76	3.40	86	4.08	96	4.74
47	1.46	57	2.13	67	2.80	77	3.47	87	4.15	97	4.81
48	1.53	58	2.20	68	2.87	78	3.54	88	4.21	98	4.87
49	1.59	59	2.26	69	2.93	79	3.61	89	4.28	99	4.94
										100	5.00

## STUDENT OUTCOMES (SOs)

Civil Engineering Program - UPRM

The Civil Engineering Program faculty at UPRM has adopted the engineering criteria "a" through "k" as its Student Outcomes (SOs).

## We expect that by the time of their graduation, our students will develop:

- a. An ability to apply knowledge of mathematics, science, and engineering
- **b.** An ability to design and conduct experiments, as well as to analyze and interpret data
- **c.** An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- **d.** An ability to function on multi-disciplinary teams
- e. An ability to identify, formulate, and solve engineering problems
- **f.** An understanding of professional and ethical responsibility
- g. An ability to communicate effectively
- **h.** The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- A recognition of the need for, and an ability to engage in life-long learning
- A knowledge of contemporary issues
- **k.** An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice