

From: [Vankeerbergen, Bernadette](#)
To: [Richard Hughes](#)
Cc: [Hadad, Christopher](#); [Von frese, Ralph](#)
Subject: Physics 5800 and 5801
Date: Tuesday, January 24, 2012 2:14:25 PM

Dear Richard:

On Monday, January 23, the ASCC NMS Panel reviewed the conversions of Physics 5800 and 5801 via e-mail vote. The Panel unanimously approved both courses but requested that the following points be communicated to the Dept for informational purposes:

1. When the courses are offered under semesters the syllabi will need to contain a weekly outline, the standard statement of academic misconduct, and the standard statement about disability services (all mandatory for ASC syllabi).
2. One member made the following comment:

This sequence will be used to meet the Capstone Design requirement for accreditation of the Engineering Physics program by ABET. ABET requires several elements be present in the capstone design course, including incorporation of "appropriate engineering standards and multiple realistic constraints." I direct the Physics department's attention to the description of "Criterion 5. Curriculum" in the ABET "Criterion for Accrediting Engineering Programs"

(
http://www.abet.org/uploadedFiles/Accreditation/Accreditation_Process/Accreditation_Documents/Current/eac-criteria-2012-2013.pdf - page 4).

In the provided syllabi for Physics 5800 and 5801 course objective 6 hits multiple realistic constraints. However the course objectives are silent on incorporation of appropriate engineering standards. Both items are specifically targeted on the curriculum checklist ABET program evaluators use during their program evaluations.

The listed objectives for the syllabi for both of these courses appear to be modeled on older versions of the syllabi for ECE 582 and 682 (the quarter ECE capstone design sequence). In our internal program assessment process we (ECE undergraduate studies committee) observed that incorporation of appropriate engineering standards was variable from quarter-to-quarter. In our current syllabi for ECE 582 and 682, and in the syllabus for semester course ECE 4900, we added an additional objective to remind instructors that it must be part of the design projects: "Students apply engineering standards appropriate to their design project."

I suggest that Physics consider doing something similar to this to reduce the chance of problems during future accreditation evaluations. This is a recommendation/suggestion rather than a contingency, as the ABET requirement can be managed by the program's internal assessment processes without it being listed on the syllabus.

Having it as a course objective or goal on the syllabus can help in two ways.

1. The ABET evaluators will look at the syllabus and see it there.
2. Having it on the standard form of the course syllabus will remind instructors or project supervisors that they need to have students do that each semester.

But ultimately the ABET evaluators will want to see evidence of how the program ensures it is done, whether or not it is on the syllabus. So if the directors of the Engineering Physics program have some mechanism to ensure it is done, it doesn't have to be an explicit course objective on the syllabus.

Should you have any questions about this feedback, don't hesitate to contact me or Professor Ralph von Frese, Chair of ASCC NMS Panel (cc'd on this e-mail).

Best wishes,
Bernadette Vankeerbergen

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