

IUPUI GAC Reviewer Form

Reviewer:

School:

Department:

Email:

Date Reviewed: 1-11-07

Documents Reviewed: Proposal for certificate in Systems Engineering

Summary of Proposal: This is a proposal for a 12 credit graduate certificate in Systems Engineering. "Systems engineering is concerned with the overall process of defining, developing, operating, maintaining, and ultimately replacing quality systems. While other engineering disciplines concentrate on the details of individual aspects of a system (electronics, mechanics, ergonometics, aerodynamics, software, etc.), systems engineering is concerned with the integration of all of these aspects into a coherent and effective system."

The program consists of 2 required courses, and 2 additional courses to be selected from existing specialty engineering courses, statistics courses, and yet to be developed systems engineering courses.

Dialogue with community partners indicates a need for the program, though it is difficult to accurately predict numbers of students ready to enroll in such a program, and at this point, also difficult to predict a stable and sufficient enrollment.

1. Are the goals clear and achievable?

Yes—the focus of the program is clear, and the program plan is certainly achievable, assuming resources become available.

2. Is the program academically sound?

Hard to evaluate this aspect without seeing the new courses in more detail.

3. Are faculty resources available to offer this certificate without undercutting other key missions of the unit?

The appropriate faculty are not available currently. The probability of recruiting the two new faculty is not clear—it is partly a problem of financial resources, and partly a problem of availability. More detail on recruitment plans would be helpful here—perhaps such faculty are readily available and recruitable.

4. Is there overlap, either real or potential, with any other unit that could harm the program or be exploited to help the program?

The only overlap is that faculty already exist in other engineering disciplines, and I see that as a positive element—in support of the multidisciplinary nature of the program. Students in the certificate

program will be taking some courses in the other disciplines, thus contributing positively to enrollments.

5. My recommendation, comments/concerns regarding this proposal...

The admission process is not well defined (though the requirements are clear). This is perhaps a very minor point. Additionally, the TOEFL score requirement seems to be the older version of the exam—should this be updated?

My biggest concern is the program is being proposed before faculty are here to develop and teach it. The basic structure is fine—but the brief course descriptions are not very helpful in getting a sense of what the courses will be like. I think the two required courses should be more complete.

I am not sure what the procedure is in approving a program prior to having faculty available. I would like to see more detail in the courses before deciding to approve.