



Part I. Curriculum Proposal Cover Sheet (see above)

Part II. Description of Curriculum Change

1. Complete catalog description for the new track. This includes both the

Catalog Description

Bachelor of Science – Physics / Pre- Engineering Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44
Mathematics: MATH 125 **Natural Sciences:** PHYS 131, 141 and 132, 142 **Liberal Studies:**

Electives: 3cr, MATH 126, no courses with PHYS prefix 34
Major:
Required Core Courses:

PHYS 131 Physics I-C Lecture *cr (1)
PHYS 132 Physics II-C Lecture *cr (1)
PHYS 141 Physics I-C Lab *cr (1)

(#) Total Degree Requirements:

120

(1) Credits counted in the Liberal Studies Natural Science requirement

(2) courses may be taken at Pitt

(3) 6cr of computer programming will substitute for the foreign language requirement: COSC 110, COSC 210 or higher-level computer science courses (COSC 250 recommended), with department permission.

(4) ...

Part III. Implementation - Provide answers to the following questions:

1. How will the proposed new track affect students already in the existing program?

Students in the current B.S. Natural Science / pre-engineering program will be able to transfer to the new B.S. Physics / pre-engineering track without much difficulty. The Natural Science Pre-engineering students are required to take the same sequence of introductory courses; the courses they are currently taking are prerequisites to upper level physics course. The upper level physics courses will be able to accommodate the pre-engineering students. (see resource questions to follow)

2. Are faculty resources adequate? If you are not requesting or have not been authorized to hire additional faculty, demonstrate how this course will fit into the schedule(s) of current faculty.

While it is anticipated that the enrollment in some of the upper level class will increase, the

no additional need for added sections, and therefore no additional faculty resources will be required

3. Are other resources adequate? (Space, equipment, supplies, travel funds)

Most classrooms where physics courses are taught can hold 30 to 50 students; currently there are about 20 per class, so space is adequate. Equipment and supplies are only an issue in one class,

first physics course (PHYS 121) all students must take the Force Concept Inventory (FCI) -

nationally recognized assessment on physics thinking. The test distinguishes between

Aristotelian thinkers and Newtonian thinkers. Students below a certain score are required to talk

to their advisor during the second week of class. During this advisement meeting, the advisor

E mails with read receipts were sent to the chairs of Philosophy, Political Science and Economics.

Stanley Sobolewski

From: Stanley Sobolewski <sobolews@iup.edu> **Sent:** Tuesday 5 April 2011 1:49 PM **To:** 'mmacleod@iup.edu' S
Notification of Change in pre-engineering curriculum

Dr. MacLeod,

The College of Natural Science and Mathematics is reorganizing some of its programs. The Pre-Engineering Progr:

moved from the Natural Science Department into the Physics Department, as a track in the B.S. Physics Degree. T

Specifically, the new track will not have a proscribed Philosophy course. In the NSM pre-engineering track, PHIL 2
required. This constraint is being removed since the track is being deleted. The number of students involved in th
fewer than ten per year.

Stanley Sobolewski

From: Stanley Sobolewski <sobolews@iup.edu> **Sent:** Tuesday 5 April 2011 1:49 PM **To:** 'jfsitton@iup.edu' **Subject:** Notification of Change in pre-engineering curriculum

Dr. Sitton,

The College of Natural Science and Mathematics is reorganizing some of its programs. The Pre-Engineering Program moved from the Natural Science Department into the Physics Department, as a track in the B.S. Physics Degree. This result in curriculum changes.

Specifically, the new track will not have a proscribed Social Science course. In the NS pre-engineering track, PLSC 111 were required. This constraint is being removed since the track is being deleted. The number of students involved in the change is fewer than ten per year.

For our curriculum process, all I need is verification that I have informed your department of this change, hence an acknowledgement is all I need.

Thanks,

Stan.

Your message

To: jfsitton@iup.edu

Subject: Notification of Change in pre-engineering curriculum

Sent: 4/5/2011 1:49 PM

was read on 4/5/2011 3:39 PM.

Stanley Sobolewski

Subject: Notification of Change in pre-engineering curriculum

Dr. Karatjas,

The College of Natural Science and Mathematics is reorganizing some of its programs. The Pre-Engineering Program moved from the Natural Science Department into the Physics Department, as a track in the B.S. Physics Degree. This result in curriculum changes.

Specifically, the new track will not have a proscribed Social Science course. In the NSM pre-engineering track, ECC required. This constraint is being removed since the track is being deleted. The number of students involved in th