

SAMPLE COMPLETED FORM

SEAS New Course Proposal Form

Version: 2015-09-28 (v21)

New course proposal submission deadlines

Semester course to be offered	Submit by	Expect to hear back by
Spring 2016	Nov 4, 2015	Mid-November 2015
Fall 2016 or Spring 2017	Nov 4, 2015 or February 3, 2016 (case-by-case for new faculty hired after January 2016)	Mid-November 2015 Mid-February 2016

Background: New SEAS courses require approval from the SEAS Education Policy Committee.

Prior to submitting the proposal, it would be helpful to the committee if you could consult with your Area Dean and the faculty most affected by your course (e.g., DUS, DGS, faculty teaching courses in overlapping fields, etc.) and note their comments on this form.

New SEAS courses include completely new courses as well as existing courses listed in another Harvard school or FAS department that seek co-listing at SEAS (i.e., a SEAS course number). Note that co-listing a course between SEAS and an FAS department typically requires two faculty members, one with a primary appointment in SEAS and one with a primary appointment in the FAS department.

A new course proposal form is not required to change the topic of an existing, repeatable topics course (e.g., 229r).

Course proposal and approval process:

- Prior to submission, prepare proposal and discuss with Area Dean and other faculty that would be affected by your course
- Submit via email a completed course proposal form and a draft syllabus to the Assistant Dean for Education, David Hwang (dhwang@seas.harvard.edu) by the appropriate deadline above
- The Assistant Dean will work with the EPC to review the course and ask for additional input as necessary. Undergraduate engineering courses also need approval from the Undergraduate Engineering Committee (UEC) for ABET accreditation reasons.
- The Assistant Dean for Education will notify you of the outcome of the review

This form, along with a “sample” completed form and a list of DUSes and DGSes can be found on the SEAS Education and Teaching policies website: <http://www.seas.harvard.edu/education-and-teaching-policies>.

PLEASE INCLUDE A DRAFT SYLLABUS WITH YOUR PROPOSAL SUBMISSION

Basic information

Name of lead instructor(s)/proposer(s)

XXXX XXXX

Instructor's position/title at SEAS

XXXXXXXXXX

Other possible instructors (future terms)

XXXX XXXX

Title of course for course catalog (100 character limit)

Feedback Control Systems: Analysis and Design

Title of course for transcript (optional) (32 character limit)

Feedback Control Systems

Course description for course catalog (~100 word limit)

This course provides an introduction to feedback and control in physical, biological, engineering, information, financial, and social sciences. The focus is on the basic principles of feedback and its use as a tool for inferring and/or altering the dynamics of systems under uncertainty. Key themes throughout the course will include linear system analysis, state/output feedback, frequency response, reference tracking, PID controller, dynamic programming, and limit of performance. This includes both the practical and theoretical aspects of the topic.

Prerequisites

AM 21b or Math 21b or equivalent (ordinary differential equations and basic linear algebra)

First term to be offered (i.e., Spring 201X)

Fall 2015

Course meeting length (i.e., 1.5 hour classes twice per week)

Lecture 1.5 hours twice per week (plus recitation)

Requested times/days (optional) (i.e., Tue and Thu, 2:30 pm – 4 pm)

Tue/Th 1-2:30 pm

Offering type (offered one-time only, offered once as a pilot course and re-evaluated, or offered as a permanent course)?

Permanent course

Offering frequency (if a permanent course, how often will it be offered: each term, each year, every two years, etc.?)

Each year

Graduate or undergraduate course?

Undergraduate

If graduate, will it be open to undergrads?

Proposed course number (optional)

ES 15X

Range of expected enrollment

15-25

Do you anticipate an enrollment limit? What is the limit and how will you choose students?

No limit anticipated

How will this course affect the lead instructor's teaching responsibilities (i.e., what course will no longer be taught)?

New faculty. This will be my regularly taught undergraduate course.

Will this course require support from the SEAS Active Learning Labs? If so, have you discussed it with Anas Chalah, Exec Director

Yes, the teaching labs staff have been contacted and are working together with me to develop the labs.

of the labs (achalah@seas.harvard.edu)?

Curriculum and pedagogy

Describe the course rationale (e.g., new field, student demand, etc.) **and curriculum fit/need**

There has been no undergraduate feedback control class at SEAS. However, feedback is central to various systems and networks: physical, biological, electrical and mechanical engineering, information, financial, and social sciences. The focus is on the basic principles of feedback and its use as a tool for inferring and/or altering the dynamics of systems under uncertainty.

Is this course replacing a current course or is it a new topic? Are there other courses at SEAS or FAS similar in content? If so, why is this course different?

New topic

Teaching format (e.g., lecture, flipped, lab only, etc.)

Lectures, plus a separate lab

List of expected learning outcomes for students when they complete the course (this field is required)

By the end of the course, students will understand basic principles of feedback and control systems and use these principles to design tools for inferring and/or altering the dynamics of systems under uncertainty.

How will you assess/grade students in your course (i.e., homeworks, labs, exams, etc.)?

Homeworks, labs, projects, exams

Who is the intended audience (i.e. freshmen, concentrators, G1 Ph.D. students, etc.)?

Sophomore through senior undergraduates, mainly for engineering students: BE, EE, ME. The course is also targeted toward AM students with an interest in control.

Do you expect this to count for undergraduate concentration credit? If yes, which concentration: Applied Math, Computer Science, Engineering?

Yes, for engineering concentrations.

For grad courses: do you expect this to count as a standard technical course for PhD credit? Note: 294r, 297r, and 298r courses typically do not count as standard technical courses.

Financial resources

Will this course require extra financial resources beyond regular TF allocations (e.g. lab materials, software, equipment, trips, etc.)? Explain estimated budget needs.

There will be lab component as mentioned earlier.

Other special requests/items

Other unique requests (e.g. co-listing course

with another school/department, IP issues)?

Any specific classroom requirement (e.g. specific teaching lab room, Pierce 301, etc.)?

Discussions with other SEAS faculty

Have you discussed this course with your Area Dean (or Exec Dean for Education and Research, for non-ladder faculty)? Please list the Area Dean and any comments.

Yes, Area Dean XXXXX has approved.

Which other SEAS ladder faculty (if any) have you discussed the course with? Please comment.

Yes, I have spoken with XXXXX who was supportive. I have also discussed the courses with XXXX and XXXX, the DUSes in areas XX and XX to determine how this course could best serve the needs of their areas.

DRAFT SYLLABUS

Along with this completed form, please submit a draft syllabus either attached to the Word doc or as a separate file.