



# Northeastern University

## Office of the University Registrar

# Semester Course Number Registry Form

### Purpose of Form

This form is designed to gather information on proposed courses and course revisions for the Banner database.

### Directions

1. Complete this form electronically. Paper copy will not be accepted.  
Important: If this is a new course, complete all applicable sections of the form.  
If this is a course revision, complete sections 1–4, and then complete only those sections that contain information that is actually changing.
2. Save the completed form to your hard drive and send it as an e-mail attachment (together with any ancillary information or forms your college may require) to the following individual:  
*Undergraduate courses:* the college undergraduate curriculum committee chairperson, associate dean, or formally appointed delegate for your college.  
*Graduate courses:* the graduate director or formally appointed delegate for your college.
3. After the course has been approved within the college, the following individual should send this form as an e-mail attachment to [courseform@neu.edu](mailto:courseform@neu.edu):  
*Undergraduate courses:* the college associate dean or formally appointed delegate for your college.  
*Graduate courses:* the graduate director or formally appointed delegate for your college.  
This should occur at least thirty days prior to the planned listing of the new course with the Registrar's Office.
4. The Registrar's Office will forward the form to the Provost's Office. The Provost's Office will then circulate the form to the following individuals:  
*Undergraduate courses:* the chair of each undergraduate curriculum committee and associate dean; also the dean of University libraries.  
*Graduate courses:* graduate directors.  
Some courses, such as directed studies, special topics (with varying topic matter), theses, or dissertations are not forwarded to the Provost's Office since there is no substantive description to approve.
5. If there are objections to a proposed course (e.g., redundancy with an existing course), the objector must take the following actions prior to the default approval date ("approval date if no reply") indicated by the Provost's Office:  
*Undergraduate courses:* notify the proposer in writing with copy to the Provost's Office. The departments involved should then attempt to negotiate the issue. If negotiation fails, the course will be considered by the UCC at the next available meeting.  
*Graduate courses:* notify the proposer in writing with copies to the Provost's Office, to the chairperson of the Executive Committee of the Graduate Council, and to the graduate director of the college proposing the course.
6. If there are no objections to a proposed course prior to the default approval date, the Provost's Office will so notify the Registrar's Office. Courses that have not received this final approval may not appear in any University publication.

### Additional steps after the course is approved

*To create one or more sections of this course:* Complete a Class Record Add Form for each class section you wish to add. The form can be found at [www.northeastern.edu/registrar/schedfrms.html](http://www.northeastern.edu/registrar/schedfrms.html). The completed form should be submitted to [scheduling@neu.edu](mailto:scheduling@neu.edu).

*To add this course to one or more curricula as a requirement or elective (undergraduate day only):* E-mail the addition to the DARS team at [dars@neu.edu](mailto:dars@neu.edu). The DARS team will shepherd your curricular change(s) through the UCC approval process before making changes to the degree audit. *Please note:* Changes to major requirements must first be approved at the college level.

Please proceed to next page.

1. Departmental contact person

Name: Ellen Zierk

Date: October 16, 2013

Phone: 2165

E-mail: ezierk@ece.neu.edu

Explanatory remarks (not to be published):

2. Purpose of form submission

Click in box: Revision WITHOUT change in subject matter content

Explanatory remarks (not to be published): Renumber/retitle as part of major curriculum revision.

3. Term effective

**Important:** For changes to an existing course, term effective must be a term in which registration has not yet begun.

Indicate the first semester and year in which the data on this form is to become effective:

Semester (click in box): Spring

Year (click in box): 2015

Explanatory remarks (not to be published):

4. Course number/department/college

**Important:** Course number must match the level of the course.

Where to find Banner codes/standards: [www.northeastern.edu/registrar/banner.html](http://www.northeastern.edu/registrar/banner.html)

To find course leveling standards, click on "Course Number System/Leveling" on the above Web page.

To find subject codes and department codes, click on "College/Department/Subject Codes" on the above Web page.

Subject code  
(2 or 4 letters)

Number  
(4 digits)

Department code  
(required)

College code  
(click in box)

EECE

2530

ECE

EN - College of Engineering

Explanatory remarks (not to be published):

**STOP!**

If this is a new course, complete all applicable sections below.

If this is a course revision, complete below ONLY those sections that contain information that is actually changing.

5. Course title

Abbreviated (30 characters max): Fundamentals Electromagnetics

Unabbreviated (85 characters max): Fundamentals of Electromagnetics

Explanatory remarks (not to be published):

6. Credits (semester hours)

Select either fixed credit or variable credit (click in box): Fixed credit

If fixed credit, enter fixed credit value: 4.000

If variable credit, enter low credit limit:

or/to?

Enter high credit limit:

Explanatory remarks (not to be published):

7. Repeatability for credit (if applicable)

**Note:** "Repeatable for credit" means that a student may pass the course multiple times and receive additional credit for it each time.

If course is repeatable for credit and if course has fixed credit, enter maximum times course may be repeated:

If course is repeatable for credit and if course has variable credit, enter maximum total credit hours that may be earned in course:

Explanatory remarks (not to be published):

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8. Course properties

Where to find Banner codes: [www.northeastern.edu/registrar/banner.html](http://www.northeastern.edu/registrar/banner.html)  
To find billing attribute codes, click on "Billing Attribute Codes" on the above Web page.

Billing attribute code (required):

Course type (required—click in box):

This course will ALWAYS be graded on pass/fail (satisfactory/unsatisfactory) basis

This course will NOT be evaluated in TRACE

Explanatory remarks (not to be published):

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9. Course description

Maximum: One paragraph, 125 words. Do not include prereqs or coreqs in the course description.

Introduces electromagnetics and high-frequency applications. Topics include transmission lines: transmission line model with distributed circuit elements, transmission line equations and solutions, one-dimensional traveling and standing waves, and applications; electromagnetic field theory: Lorentz force equations, Maxwell's equations, Poynting theorem, and application to the transmission line's TEM waves. Also studies uniform plane wave propagation along a coordinate axis and along an arbitrary direction; equivalent transmission lines for TEM, TE, and TM waves; reflection and refraction of uniform plane waves by conducting and dielectric surfaces. Discusses applications to wave guides, resonators, and optical fibers and radiation and elementary antennas. Introduces modern techniques (computational methods) and applications (optics, bioelectromagnetics, and electromagnetic effects in high-speed digital circuits).

Explanatory remarks (not to be published):

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10. Corequisite courses

Note: These fields are used only for lectures with associated labs, clinicals, and/or recitations.

1.  and 2.  and 3.

Explanatory remarks (not to be published):

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11. Equivalent courses

List Banner semester courses that this course will replace.

1.  and 2.  and 3.  and  
4.  and 5.  and 6.

Explanatory remarks (not to be published):

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12. Prerequisite courses

Note: Include only immediate prerequisites. Do not include prerequisites of prerequisites.

In addition to indicating courses and "and/or" relationships, also indicate whether each prerequisite course may be taken concurrently.

Please also note that Banner supports the use of parentheses to indicate logical priorities.

Example: (BIOL 1101 or BIOL 1111) and CHEM 1103

|   |  |                              |
|---|--|------------------------------|
| 1. <input type="text" value="EECE 2150"/> | <input type="checkbox"/> May be taken concurrently | and/or? <input type="text"/> |
| 2. <input type="text" value="MATH 2321"/> | <input type="checkbox"/> May be taken concurrently | and/or? <input type="text"/> |
| 3. <input type="text" value="PHYS1155"/>  | <input type="checkbox"/> May be taken concurrently | and/or? <input type="text"/> |
| 4. <input type="text"/>                   | <input type="checkbox"/> May be taken concurrently | and/or? <input type="text"/> |
| 5. <input type="text"/>                   | <input type="checkbox"/> May be taken concurrently | and/or? <input type="text"/> |
| 6. <input type="text"/>                   | <input type="checkbox"/> May be taken concurrently |                              |

Explanatory remarks (not to be published):

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13. Restrictions by college/school

Select one of the following:

- Registration in this course is restricted to students in the following college(s)/school(s):
- Students in the following college(s)/school(s) are not allowed to register for this course:

Then select one or more of the following:

- College of Arts, Media, and Design
- D'Amore-McKim School of Business
- College of Computer and Information Science
- College of Engineering
- Bouvé College of Health Sciences
- School of Law
- College of Professional Studies
- College of Science
- College of Social Sciences and Humanities
- Provost's Office

Explanatory remarks (not to be published):

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14. Restrictions by major or program

Note: Please enter EITHER major codes OR program codes in this section.  
Do not enter both major codes and program codes.  
Do not enter concentration codes, minor codes, or subject codes.

Where to find Banner codes: [www.northeastern.edu/registrar/banner.html](http://www.northeastern.edu/registrar/banner.html)  
To find program codes and major codes, click on "Program/Major/Concentration Codes" on the above Web page.

Select one of the following:

- Registration in this course is restricted to students in the following program(s)/major(s):
- Students in the following program(s)/major(s) are not allowed to register for this course:

Then enter one or more Banner major codes OR program codes below:

- |                          |     |                          |     |                          |     |
|--------------------------|-----|--------------------------|-----|--------------------------|-----|
| 1. <input type="text"/>  | and | 2. <input type="text"/>  | and | 3. <input type="text"/>  | and |
| 4. <input type="text"/>  | and | 5. <input type="text"/>  | and | 6. <input type="text"/>  | and |
| 7. <input type="text"/>  | and | 8. <input type="text"/>  | and | 9. <input type="text"/>  | and |
| 10. <input type="text"/> | and | 11. <input type="text"/> | and | 12. <input type="text"/> | and |
| 13. <input type="text"/> | and | 14. <input type="text"/> | and | 15. <input type="text"/> | and |
| 16. <input type="text"/> | and | 17. <input type="text"/> | and | 18. <input type="text"/> | and |
| 19. <input type="text"/> | and | 20. <input type="text"/> | and | 21. <input type="text"/> | and |
| 22. <input type="text"/> | and | 23. <input type="text"/> | and | 24. <input type="text"/> |     |

Explanatory remarks (not to be published):

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15. Restrictions by class year (freshman, sophomore, junior, senior, graduate)

Select one of the following:

- Registration in this course is restricted to students in the following class year(s):
- Students in the following class year(s) are not allowed to register for this course:

Then select one or more of the following:

- Freshman
- Sophomore
- Junior
- Senior
- Graduate

Explanatory remarks (not to be published):

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16. Restrictions by attribute

- Honors Program only

Explanatory remarks (not to be published):

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17. Prerequisites/restrictions—miscellaneous

Note: Miscellaneous restrictions cannot be enforced by the Office of the Registrar.

Indicate in words:

Explanatory remarks (not to be published):

18. NU Core applicability—for undergraduate day students entering in Fall 2007 or after

If this course is to be part of the NU Core for students entering in Fall 2007 or after, indicate core category/categories below.

Note 1: Changes to the NU Core are first approved at the college level and are then approved through the Office of the Provost. Checking one or more of the boxes below will automatically initiate the approval process through the Office of the Provost.

Note 2: Knowledge domains level 1: entry level courses, with numbering in the 1000–1999 range, that introduce students to broad new ways of thinking. Intermediate/advanced level courses (with numbering in the 2000 range and above) will automatically be categorized as knowledge domain level-2 courses that present more focused, in-depth experiences than do level-1 courses.

Where to find further NU Core information: [www.northeastern.edu/registrar/nucore.html](http://www.northeastern.edu/registrar/nucore.html)

- |   |   |                                  |
|---|---|----------------------------------|
| <input type="checkbox"/> Capstone                       | Knowledge domains level 1                   | Mathematical/analytical thinking |
| <input type="checkbox"/> Comparative study of cultures  | (Important: See Note 2 above)               | <input type="checkbox"/> Level 1 |
| <input type="checkbox"/> Experiential learning          | <input type="checkbox"/> Arts               | <input type="checkbox"/> Level 2 |
| <input type="checkbox"/> Writing intensive in the major | <input type="checkbox"/> Humanities         |                                  |
|   | <input type="checkbox"/> Social science     |                                  |
|   | <input type="checkbox"/> Science/technology |                                  |

Explanatory remarks (not to be published):

Additional steps after the course is approved

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