

**CHANGE GRADUATE/UNDERGRADUATE CERTIFICATE**

*Fill out this form to change an existing certificate. This form should be used for both undergraduate certificates and graduate certificates.*

*Once approved at the college level, your college will send the proposal to the appropriate Senate academic council (HCCC and/or GC) for review and approval. Once approved at the academic council level, the academic council will send your proposal to the Senate Council office for additional review and then a 10-day posting online, during which senators review on their own and have an option to register an objection if they so desire. If no objection is raised to the Senate Council Office within ten days of the posting the proposal, then the graduate certificate change is approved. The Senate Council Office will report approvals to the Provost, Registrar and other appropriate entities, including the contact person.*

For each change, you MUST enter the current language/requirement as well as the proposed change.

| <b>SUMMARY OF CHANGES</b>  |  |  |  |
|--|--|--|--|
| <b>Check all that apply.</b>   |  |  |  |
| <input checked="" type="checkbox"/> Courses                              | <input type="checkbox"/> Certificate Name  | <input type="checkbox"/> Total required credit hours       | <input type="checkbox"/> Certificate review  |
| <input type="checkbox"/> Criteria for admissions/progression/termination |  | <input type="checkbox"/> Other                             |  |
| <b>1. General Information</b>  |  |  |  |
| <b>1a</b>  | <b>Change is for:</b>  | <input type="checkbox"/> <b>UNDERGRADUATE CERTIFICATE</b>  | OR <input checked="" type="checkbox"/> <b>GRADUATE CERTIFICATE</b>                   |
| <b>1b</b>  | Date of contact with Institutional Effectiveness (IE) <sup>1</sup> :   | 11/30/2018   |  |
|  | <input checked="" type="checkbox"/> Appended to the end of this form is a PDF of the reply from Institutional Effectiveness.   |  |  |
| <b>1c</b>  | College <sup>2</sup> :   | Arts and Sciences  | Department <sup>2</sup> : Statistics   |
| <b>1d</b>  | CIP code:  | 27.0501  |  |
| <b>1e</b>  | Current certificate name:  | Applied Statistics   | Proposed certificate name: <i>Applied Statistics</i>                                 |
| <b>1f</b>  | Today's Date:  | 12/03/2018   |  |
| <b>1g</b>  | Requested effective date:  | <input type="checkbox"/> Fall semester following approval. | OR <input checked="" type="checkbox"/> Specific Date <sup>3</sup> : <i>Fall 2019</i> |
| <b>1h</b>  | Contact person name:   | William Rayens   | Phone / Email: 859 / 257-7061  |
| <b>2. Overview of Changes</b>  |  |  |  |
| <b>2a</b>  | Describe the rationale for the change(s), including (as appropriate) input from an advisory board, professional body, etc. (450 word limit)  |  |  |
|  | The on-campus Graduate Certificate in Applied Statistics has seen steady enrollment, with students from across the university, over the last 5 years. In order to grow the certificate program, the Department of Statistics would like to update the curriculum and move the Graduate Certificate in Applied Statistics online. |  |  |

<sup>1</sup> You can reach Institutional Effectiveness by phone or email (257-1962 or [OSPIE@l.uky.edu](mailto:OSPIE@l.uky.edu)).

<sup>2</sup> It is not possible to change the home academic unit of a certificate via this form. To change the home unit, visit <https://www.uky.edu/universitysenate/forms> and look for the heading, "Forms Related to Academic Organizational Structure."

<sup>3</sup> No certificate changes will be effective until all approvals are received.

By moving the certificate online, we ensure access to all students across the state making The University of Kentucky instrumental in training students to become productive professionals who further research in their own areas of study while engaging in multidisciplinary research relying on applied statistics techniques.

3a. Will the requested changes result in the use of courses from another unit? Yes  No

If "Yes," describe generally the courses and how they will used.

If "Yes," two pieces of supporting documentation are required.

Check to confirm that appended to the end of this form is a letter of support from the other units' chair/director<sup>4</sup> from which individual courses will be used.

Check to confirm that appended to the end of this form is verification that the chair/director of the other unit has consent from the faculty members of the unit. This typically takes the form of meeting minutes.

**3. Non-Course Related Changes**

3a Will the certificate's admissions and/or application procedures change? Yes  No

If "Yes," describe below. (150 word limit)

Current:

Proposed:

**4. Course-Related Changes**

4a Will the required courses for the certificate change? (If "Yes," indicate and note the changes in the area below. If "No," indicate and proceed to 4b.) Yes  No

If "Yes," note the specific changes in the grid below.

| Current       |            |   | Proposed      |            |       |                            |
|---------------|------------|---|---------------|------------|-------|----------------------------|
| Prefix & Nmbr | Credit Hrs | Title   | Prefix & Nmbr | Credit Hrs | Title | Course Status <sup>5</sup> |
|               |            | Please see attachment 4a for course-related changes |               |            |       | Select one....             |
|               |            |   |               |            |       | Select one....             |
|               |            |   |               |            |       | Select one....             |
|               |            |   |               |            |       | Select one....             |
|               |            |   |               |            |       | Select one....             |

4b Provide the Bulletin language about required courses.

Students must earn a minimum of a B in all coursework to receive credit for the certificate.

4b Will the elective courses for the certificate change? (If "Yes," indicate and note the changes in the area below. If "No," indicate and proceed to 5a.) Yes  No

If "Yes," note the specific changes in the grid below.

| Prefix & | Credit | Title | Prefix | Credit | Title | Course Status <sup>6</sup> |
|----------|--------|-------|--------|--------|-------|----------------------------|
|----------|--------|-------|--------|--------|-------|----------------------------|

<sup>4</sup> A dean may submit a letter only when there is no educational unit below the college level, i.e. there is no department/school.

<sup>5</sup> Use the drop-down list to indicate if the course is a new course ("new"), an existing course that will change ("change"), or if the course is an existing course that will not change ("no change").

<sup>6</sup> Use the drop-down list to indicate if the course is a new course ("new"), an existing course that will change ("change"), or if the

**CHANGE GRADUATE/UNDERGRADUATE CERTIFICATE**

| Nmbr | Hrs |  | &<br>Nmbr | Hrs |  |                |
|------|-----|--|-----------|-----|--|----------------|
| xxx  | xxx | One additional STA course in applied statistics. Courses from outside the STA prefix may satisfy this requirement with approval from the director of graduate studies. (3ch) |           |     | N/A- Students will no longer have to take an additional 3ch in applied statistics. | Select one.... |
|      |     |  |           |     |  | Select one.... |
|      |     |  |           |     |  | Select one.... |
|      |     |  |           |     |  | Select one.... |
|      |     |  |           |     |  | Select one.... |
|      |     |  |           |     |  | Select one.... |

4c Provide the Bulletin language about elective courses.

N/A

**5. Other Changes**

5a Are there any other changes to the certificate? If "Yes," note below. (150 word limit) Yes  No

The Graduate Certificate in Applied Statistics will be offered 100% online.

**6. Approvals/Reviews**

Information below does not supersede the requirement for individual letters of support from educational unit administrators and verification of faculty support (typically takes the form of meeting minutes).

|    | Reviewing Group Name                         | Date Approved | Contact Person Name/Phone/Email  |
|----|--|---------------|----------------------------------|
| 6a | (Within College)                             |               |                                  |
|    | Statistics Department                        | 11/17/18      | Arny Stromberg / /               |
|    | A&S EPC                                      | 1/8/19        | Judy Prats / / <i>Judy Prats</i> |
|    | A&S Associate Dean                           | 1/8/19        | Anna Bosch / / <i>Anna Bosch</i> |
|    |  |               | / /                              |
| 6b | (Collaborating and/or Affected Units)        |               |                                  |
|    |  |               | / /                              |
|    |  |               | / /                              |
|    |  |               | / /                              |
|    |  |               | / /                              |
|    |  |               | / /                              |
| 6c | (Senate Academic Council)                    | Date Approved | Contact Person Name              |
|    | Health Care Colleges Council (if applicable) |               |                                  |

course is an existing course that will not change ("no change").

**CHANGE GRADUATE/UNDERGRADUATE CERTIFICATE**

|  |                  |         |              |
|--|------------------|---------|--------------|
|  | Graduate Council | 3/18/19 | Roshan Nikou |
|  |                  |         |              |

**From:** [noreply@qualtrics-survey.com](mailto:noreply@qualtrics-survey.com)  
**To:** [Harmon, Camille](#)  
**Subject:** Substantive Change Decision  
**Date:** Friday, December 7, 2018 9:22:04 AM

---

Dear Camille Harmon,

Thank you for your email regarding the proposed program change(s) to **Graduate Certificate in Applied Statistics, Graduate Certificate (27.0501)**.

My email will serve 2 purposes: 1.) Next steps for SACSCOC, and 2.) Verification and notification that you have contacted OSPIE—a Senate requirement for proposal approval.

1. **Next steps for SACSCOC:** None required
2. **Verification that OSPIE has reviewed the proposal:** Based on the proposal documentation presented and Substantive Change Checklist, the proposed program changes (refer to list below) are not substantive changes as defined by the University or SACSCOC, the university's regional accreditor. Therefore, no additional information is required by the Office of Strategic Planning & Institutional Effectiveness at this time. The proposed program change(s) may move forward in accordance with college and university-level approval processes.

**Description of Proposed Change(s):**

· The Department of Statistics is moving their already approved face-to-face Graduate Certificate in Applied Statistics online. In addition to moving the certificate online, they are making a few course changes in their curriculum. They are changing an already existing 500-level course to a 600-level course. They are combining STA 671 and STA 672 into a new course, and they are creating one completely new course.

**Should you have questions or concerns about UK's substantive change policy and its procedures, please do not hesitate contacting our office.**

Office of Strategic Planning & Institutional Effectiveness  
University of Kentucky

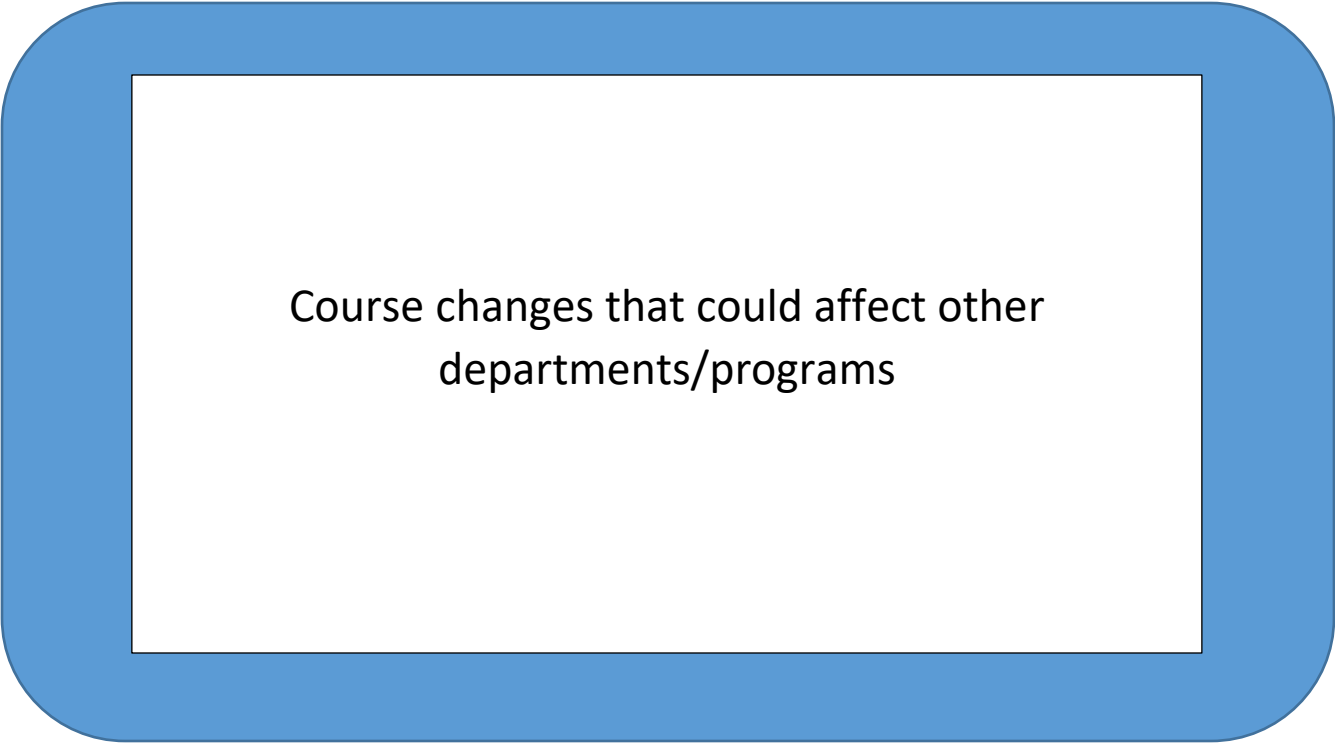
Visit the Institutional Effectiveness Website: <https://proxy.qualtrics.com/proxy/?>

[url=http%3A%2F%2Fwww.uky.edu%2Fie&token=w%2BXHkAS0tASxS4xDceQ8e0MxnHdI2Eu4smnkDcYodCE%3D](http://3A%2F%2Fwww.uky.edu%2Fie&token=w%2BXHkAS0tASxS4xDceQ8e0MxnHdI2Eu4smnkDcYodCE%3D)

## 4a. Course Related Changes

4a. Course-Related Changes

| Current Curriculum   | Proposed Curriculum   | Course Status  |
|--|---|--|
| Students must earn a minimum of a B in all coursework to receive credit for the certificate.   |   | <i>No change</i>   |
| STA 570 (4ch) or STA 580 (3ch)   | <b>STA 570</b> Basic Statistical Analysis (3ch)   | <i>Course change: STA 570- 4ch to 3ch and add DL</i>   |
| Four credit hours from STA 671 (2ch), STA 672 (2ch), STA 673 (2ch), STA 675 (2ch)  | <b>STA 674</b> Regression Analysis and Design of Experiments (3ch)                      | <i>New course that combines material from STA 671 and STA 672. STA 671 and STA 672 will be dropped.</i>                |
| STA 677 Applied Multivariate Methods (3ch) or STA 681 (3ch)  | <b>STA 677</b> Applied Multivariate Methods (3ch)                                       | <i>Course Change: Add DL to STA 677</i>  |
|  | <b>STA 678</b> Statistical Computational Theory and Data Visualization: R and SAS (3ch) | <i>New Course</i>  |
| Current Electives  | Proposed Electives  |  |
| One additional STA course in applied statistics. Courses from outside the STA prefix may satisfy this requirement with approval from the director of graduate studies. (3ch) |   | With the addition of STA 678 as a required course, students will not take an additional elective in applied statistics |
| <b>Total Credit Hours 12-15</b>  | <b>Total Credit Hours 12</b>  |  |



Course changes that could affect other  
departments/programs



### Course changes that could affect other departments/programs

On Friday, November 30, 2018, Dr. Bill Rayens sent out an email to all department chairs whose courses/programs could be affected by the changes to the STA prefix courses.

| <b>STA 570</b>   | <b>STA 677</b>                                     | <b>STA 671</b>   | <b>STA 672</b>   |
|--|--|--|--|
| Biology BA- General Biology Track- Elective  | Pharmaceutical Sciences graduate program- elective | Doctor of Philosophy Degree in Rehabilitation Sciences- Elective | Doctor of Philosophy Degree in Rehabilitation Sciences- Elective |
| Biology BA- Genetics, Genomics, and Bioinformatics Track- Course from outside the department | Master of applied statistics- elective             | Integrated plant and soil science graduate program- suggested    | Integrated plant and soil science graduate program- suggested    |
| Biology BS- General Biology Track- Elective  |  | Nutrition and food science graduate program- Core course         | PhD Pharmaceutical Sciences- Strongly suggested                  |
| Biology BS- Genetics, Genomics, and Bioinformatics Track- Course from outside the department |  | PhD Pharmaceutical Sciences- strongly suggested                  | Rehabilitation sciences graduate program- option                 |
| Biology Minor- Elective  |  | Rehabilitation sciences graduate program- option                 | Master of applied statistics- elective                           |
| Statistics Minor- Required   |  | Master of applied statistics- elective                           |  |
| Post M.S.N. – D.N.P. in Nursing- Required for admission                                      |  |  |  |
| M.S.P.A.S program core course  |  |  |  |
| Retailing and Tourism Management Graduate  |  |  |  |

|  |  |                       |                       |
|--|--|-----------------------|-----------------------|
| Program- RTM<br>Required Course  |  |                       |                       |
| Master of Applied<br>Statistics- Elective                                |  |                       |                       |
| PhD in Social Work-<br>Core course                                       |  |                       |                       |
| Vet Science Program-<br>They have to take STA<br>570 or STA 580          |  |                       |                       |
| Communication MA –<br>Required   |  |                       |                       |
| Gerontology PhD- STA<br>570 or STA 580                                   |  |                       |                       |
| Integrated plant and<br>soil science graduate<br>program-<br>Recommended |  |                       |                       |
| Entomology graduate<br>program- Required                                 |  |                       |                       |
| Nutritional Science<br>graduate program-<br>option                       |  |                       |                       |
| Kinesiology and Health<br>Promotion- Option                              |  |                       |                       |
| <b>Courses</b>   |  |                       |                       |
| AEC 531- Prerequisite  |  | ASC 664- Prerequisite | ASC 664- Prerequisite |
| ANA 625- Prerequisite  |  | NUR 794- Prerequisite | PLS 676- Prerequisite |
| CPH 630- Prerequisite  |  | PLS 676- Prerequisite | STA 676- Prerequisite |
| CPH 664- Prerequisite  |  | STA 672- Prerequisite | STA 677- Prerequisite |
| CPH 995- Prerequisite  |  | STA 676- Prerequisite | STA 679- Prerequisite |
| DIP 725- Prerequisite  |  | STA 677- Prerequisite |                       |
| FAM 661- Prerequisite  |  | STA 679- Prerequisite |                       |
| FAM 777- Prerequisite  |  |                       |                       |

|                       |  |  |  |
|-----------------------|--|--|--|
| GEO 610- Prerequisite |  |  |  |
| NUR 765- Prerequisite |  |  |  |
| NUR 792- Prerequisite |  |  |  |
| NUR 903- Prerequisite |  |  |  |
| NUR 915- Prerequisite |  |  |  |
| PAS 645- Prerequisite |  |  |  |
| PGY 603- Prerequisite |  |  |  |
| PLS 655- Prerequisite |  |  |  |
| PLS 664- Prerequisite |  |  |  |
| PLS 676- Prerequisite |  |  |  |
| PM 670- Prerequisite  |  |  |  |
| STA 671- Prerequisite |  |  |  |
| STA 673- Prerequisite |  |  |  |
| STA 675- Prerequisite |  |  |  |
| STA 676- Prerequisite |  |  |  |
| STA 681- Prerequisite |  |  |  |
| SW 773- Prerequisite  |  |  |  |
|                       |  |  |  |

**From:** [Rayens, William](#)  
**To:** [Rayens, William](#)  
**Cc:** [Harmon, Camille](#); [Stromberg, Arnold](#)  
**Subject:** Proposed Changes to the Statistics Curriculum  
**Date:** Friday, November 30, 2018 10:02:50 AM

---

Dear Colleagues – The Department of Statistics is in the process of changing some of its graduate service courses. The College of Arts and Sciences has identified each of your programs as programs that would be affected by the change. First, let me apologize if I have contacted you in error, and you are wondering why you are getting this email. Second, let me reassure you that the changes are all positive. Some may involve some small amount of work on your behalf down the road to change your program requirements. As you all know, the process for changing courses is a long one and there are a lot of committees to go through. So we won't know for some time if any of our proposed changes are successful, but we expect they all will be.

#### Summary of Changes:

1. STA 570 – Currently 4 credit hours with a lab. Proposing that it become 3 credit hours with no lab and have DL status. We are modernizing the content and will probably teach it online more often than not. Asking that it be renumbered as STA 670 at the request of several graduate programs that prefer their students only take 600 level courses. If passed, 570 will be removed from the books since 670 would be taking its place. Again, 670 likely to be taught online more often than not, increasing seats available and increasing access.
2. STA 671/672 – Currently a first-half/second-half semester sequence in regression and design, with labs. Proposing that the two be combined into a four-hour modern regression and design course numbered STA 674, no labs. Applying for DL status. If approved 671/672 would have to be dropped from books. 674 likely to be taught online more often than not, increasing seats available and increasing access.
3. STA 677 – Currently 3 credit hours w/o DL status. Updating curriculum and requesting DL status. If approved, would likely be taught online more often than not, increasing seats available and increasing access.
4. Graduate Certificate in Statistics – this will also be changing to reflect the changes to courses above, and the addition of a new online course in R and SAS (combined).

As Associate Chair I have been asked to do the Curriculog work on these changes (got the short straw), and part of that responsibility is to contact affected programs to let them know what we are in the process of initiating. If you have questions or concerns, please contact me, or one or both of:

1. Arny Stromberg, Chair and Director of Certificate Program
2. Connie Wood, Director of Undergraduate Studies

Thanks!

Bill Rayens

*Dr. William S. Rayens*

*Professor and Associate Chair*

*Director of Undergraduate Studies and Educational Initiatives*

*Department of Statistics*

*349 Multidisciplinary Sciences Building*

**From:** [Rayens, William](#)  
**To:** [Rayens, William](#)  
**Cc:** [Harmon, Camille](#); [Stromberg, Arnold](#)  
**Subject:** Update on Proposed Changes to the Statistics Curriculum  
**Date:** Monday, December 17, 2018 3:40:40 PM

---

**Contact persons in Departments or Programs that might be affected by proposed changes to the Graduate Certificate in Applied Statistics are Bcc'd on this email.**

Dear Colleagues – Since I last contacted you about the proposed changes to the Certificate I can report the following:

1. All new or revised courses are in Curriculog and currently with the Educational Policy Committee in the College of Arts and Sciences.
2. As the process got underway, the College and the Department decided to leave STA 570 as 570, and not pursue a change to 670 at this time, as originally planned.

I will keep you posted as the approval process continues.

Thanks

Bill Rayens

*Dr. William S. Rayens  
Professor and Associate Chair  
Director of Undergraduate Studies and Educational Initiatives  
Department of Statistics  
349 Multidisciplinary Sciences Building*



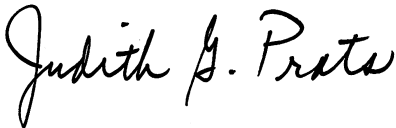
Letters

January 18, 2019

Dear Graduate Council,

On behalf of the faculty of the College of Arts and Sciences, the Education Policy Committee discussed and approved the changes to the Graduate Certificate in Applied Statistics 6:0:3 on Tuesday, January 8, 2019.

Sincerely,



Judith Prats  
Chair, Education Policy Committee





**University of Kentucky**  
**College of Arts and Sciences**

311 Multidisciplinary  
Science Building  
Lexington, KY 40536-0082  
P: 859-257-6115  
<https://stat.as.uky.edu>

November 11th, 2018

The Statistics faculty voted (14-0) on 11/7/18 to approve the changes to the Graduate Certificate in Applied Statistics and to approve moving the certificate online.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Arnold Stromberg', written over a blue diagonal line that extends from the top left towards the bottom right.

Arnold Stromberg, PhD  
Professor and Chair

see blue.

An Equal Opportunity University