November 4, 2019

MEMORANDUM

TO: Gregory Ball
Dean, College of Behavioral and Social Sciences

FROM: Elizabeth Beise
Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Modify the Post-Baccalaureate Certificate in Survey Statistics (PCC Log No. 18084)

At its meeting on October 4, 2019, the Senate Committee on Programs, Curricula, and Courses approved the proposal to modify the Post-Baccalaureate Certificate in Survey Statistics. A copy of the approved proposal is attached.

The change is effective Spring 2020. Please ensure that the change is fully described in all relevant descriptive materials.

MDC/
Enclosure

cc: Janna Bianchini, Chair, Senate PCC Committee
Barbara Gill, Office of Enrollment Management
Reka Montfort, University Senate
Huifang Pan, Division of Information Technology
Pam Phillips, Institutional Research, Planning & Assessment
Kendall Aughenbaugh, University Archives
Linda Yokoi, Office of the Registrar
Ryan Long, Graduate School
Wayne McIntosh, College of Behavioral and Social Sciences
Frauke Kreuter, Joint Program in Survey Methodology
Certificate in Fundamentals of Survey Statistics (Z010)

Department/Unit: Joint Program in Survey Methodology

College/School: College of Behavioral and Social Sciences

Proposal Contact Person (with email): Jody D Williams, jodywill@umd.edu

Type of Action (check one):
☒ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
☐ Curriculum change is for an LEP Program
☐ Rename a program or formal Area of Concentration
☐ Establish/Discontinue a formal Area of Concentration
☐ Other:

Establish a new academic degree/certificate program
☐ Create an online version of an existing program
☐ Establish a new minor
☐ Suspend/Discontinue a degree/certificate program
☐ Establish a new Master or Certificate of Professional Studies program
☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).

1. Department Committee Chair: Jody Williams, 11/9/2018
2. Department Chair: Frank R. Knaul, 11/9/2018
3. College/School PCC Chair: Karol Sobian, 3/26/19
4. Dean: Wayne B. McMillan, 3/26/19
5. Dean of the Graduate School (if required): Ann L. Vatter, 10/25/19
6. Chair, Senate PCC: Sara B. Grambow, 10/7/19
7. University Senate Chair (if required): Elizabeth J. Beine, 11/4/19
8. Senior Vice President and Provost: Elizabeth J. Beine, 11/4/19

Instructions: When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, and email the proposal document as an MSWord attachment to pcc.admissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):

Modify the existing online Certificate in Survey Statistics (Z010) by reducing the number of credits from 18 to 12.
2018-2019 PCC Program Modification Proposal

In order to complete this form, you will need to copy this template to your own document, then complete, print, and submit this proposal with the PCC Cover Sheet.

Program: Certificate in Fundamentals of Survey Statistics
Modifying Graduate Certificate Z010 : Certificate in Survey Statistics

Date of Proposal: 11/9/18

Start Term for New Version of Program: Spring 2019

1. Current Catalog Description of Program. Include any special admissions information.

The Post Baccalaureate (Graduate) Certificate in Survey Statistics offers training in sampling design and estimation for individuals who have graduate-level coursework in statistics but desire specific knowledge and training in survey statistics. Both domestic U.S. and international students are welcome to apply. The program is taught at the graduate level but covers fewer topic areas than the onsite M.S. program in survey methodology offered by JPSM.

2. Current Requirements for Program. Include all course requirements for program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURV440</td>
<td>Sampling Theory</td>
<td>3</td>
</tr>
<tr>
<td>SURV625</td>
<td>Applied Sampling</td>
<td>3</td>
</tr>
<tr>
<td>or SURV745</td>
<td>Practical Tools for Sampling and Weighting</td>
<td></td>
</tr>
<tr>
<td>SURV742</td>
<td>Inference from Complex Surveys</td>
<td>3</td>
</tr>
<tr>
<td>SURVxxx</td>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURV699</td>
<td>Special Topics in Survey Methodology (SURV699X -Statistical Analysis with Missing Data)</td>
<td>3</td>
</tr>
<tr>
<td>SURV744</td>
<td>Topics in Survey Methodology</td>
<td></td>
</tr>
<tr>
<td>SURV798</td>
<td>Advanced Topics in Survey Methodology (SURV798B - Small Area Estimation)</td>
<td></td>
</tr>
<tr>
<td>SURV798Z</td>
<td>Advanced Topics in Survey Methodology (SURV798Z - Bayesian Modeling and Inference)</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 18

Course List
- Must be SURV620 or higher.

3. Description and Rationale for Modifications. Be sure to specify whether modifications apply to the entire program or to a particular specialization, concentration, or offering (e.g., online offering) of the program.

The modification applies to the existing Graduate Certificate in Survey Statistics, reducing the required number of credits from 18 to 12 and renaming the certificate to reflect the learning outcomes will cover the fundamentals of survey statistics. This will attract the growing number of students looking to complete a graduate certificate program in 15 months or less, and encourage participants to enter into JPSM programs through a certificate program instead of as a Non-Degree Seeking student.

4. New course requirements. For curriculum changes, the clearest way to present curriculum
2018-2019 PCC Program Modification Proposal

<table>
<thead>
<tr>
<th>Current Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURV625 Applied Sampling OR SURV699E Practical Tools for Designing and Weighting Survey Samples (3)</td>
</tr>
<tr>
<td>SURV742 Inference from Complex Surveys (3)</td>
</tr>
<tr>
<td>SURV744 Topics in Sampling</td>
</tr>
<tr>
<td>Electives (3)</td>
</tr>
<tr>
<td>Electives (3)</td>
</tr>
<tr>
<td>Total Credits: 18</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>New Curriculum in the left column and the new</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Curriculum (12 Credits)</td>
</tr>
<tr>
<td>Certificate in Fundamentals of Survey Statistics</td>
</tr>
<tr>
<td>SURV400 Fundamentals in Survey and Data Science (3)</td>
</tr>
<tr>
<td>SURV626 Sampling I (2)</td>
</tr>
<tr>
<td>SURV742 Inference from Complex Surveys (2)</td>
</tr>
<tr>
<td>At least two (2) credits from the following list:</td>
</tr>
<tr>
<td>SURVXXXX Sampling II (2)</td>
</tr>
<tr>
<td>SURV662 Introduction to Small Area Estimation (3)</td>
</tr>
<tr>
<td>SURV667 Introduction to Record Linkage with Big Data Applications (1)</td>
</tr>
<tr>
<td>SURV726 Multiple Imputation (1)</td>
</tr>
<tr>
<td>SURV730 Measurement Error (1)</td>
</tr>
<tr>
<td>SURV735 Data Confidentiality and Statistical Disclosure Control (1)</td>
</tr>
<tr>
<td>SURV747 Practical Tools for Sampling and Weighting (2)</td>
</tr>
<tr>
<td>An additional three credits of elective online SURV courses numbered 620 or above, including those listed above.</td>
</tr>
<tr>
<td>Total Credits: 12</td>
</tr>
</tbody>
</table>

Start by using the table provided in the space below, or add your own table as an appendix. For a new concentration or specialization, add the requirements in lieu of the table. For a new term structure offering of the program, indicate the courses that will be offered through the new option only if they differ from the requirements or offerings in the existing program.

5. Use the space below for any additional comments on the courses or other requirements selected for the revised curriculum. Typical comments may be clarifications of why certain courses are being replaced or added.

Online courses developed or in the process of begin developed:

- SURV626 Sampling I (2 credits)
- SURV627 Experimental Design in Surveys (2 credits)
- SURV631 Questionnaire Design (2 credits)
- SURV635 Usability Testing for Survey Research (1 credit)
- SURV656 Web Survey Methodology (1 credit)
- SURV662 Introduction to Small Area Estimation (3 credits)
- SURV665 Introduction to Real World Data Management (1 credit)
- SURV667 Introduction to Record Linkage with Big Data Applications (1 credit)
- SURV699C Python/SQL (1 credit)
- SURV699M Review of Statistical Concepts (3 credits)
- SURV702 Analysis of Complex Survey Data (2 credits)
- SURV725 Item Nonresponse and Imputation (1 credit)
- SURV726 Multiple Imputation – Why and How (1 credit)
2018-2019 PCC Program Modification Proposal

SURV730 Measurement Error Models (1 credit)
SURV735 Data Confidentiality and Statistical Disclosure Control (2 credits)
SURV736 Web Scraping and API (1 credit)
SURV742 Inference from Complex Surveys (3 credits)
SURV747 Practical Tools for Sampling and Weighting: Part 1 (2 credits)
SURV751 Big Data and Machine Learning (1 credit)
SURV752 Data Visualization (1 credit)

6. Sample plan. Provide a term by term sample plan that shows how a hypothetical student would progress through the program to completion. For undergraduate programs, this should be the four-year plan.

Year 1 Fall:
- SURV400 Fundamentals of Survey and Data Science (3 credits)
- SURV626 Sampling I (2 credits)

Year 1 Spring:
- SURV747 Practical Tools for Sampling & Weighting (2 credits)
- SURV726 Multiple Imputation (1 credit)
- SURV735 Data Confidentiality and Statistical Disclosure Control (1 credit)
- SURV667 Introduction to Record Linkage with Big Data Applications (1 credit)

Year 2 Fall:
- SURV742 Inference from Complex Surveys (2 credits)

7. For new or modified courses, please provide the course catalog information (credits, description, prerequisites, etc.). Suffix "Selected" or "Special" topics courses should be avoided. If suffixed - Selected or Special Topics courses are offered regularly in the new program, you should make the courses permanent.

Please note: new courses or modifications to courses need to be submitted through the Textudo Curriculum Management system and will need to follow the normal VPAC course proposal review process. You may submit individual course changes to VPAC concurrently with the PCC proposal; however, the course changes may be held depending on the outcome of the PCC proposal.

The following have not yet been offered and are at various stages of development for the online program:

SURV703 Computer-Based Content Analysis I (1 credit)
SURV704 Computer-Based Content Analysis II (1 credit)
SURVXXXX Editing Survey Data (2 credits): This course will focus on modern techniques for reviewing and adjusting collected survey data.
SURVXXXX Mixed Mode Surveys (3 credits): This course studies the factors that influence whether the use of multiple modes in a single study will improve data quality.
SURVXXXX Fitting Regression Models with Survey Data (3 credits): This course examines a range of statistical regression analysis techniques for modeling survey data.
8. Supporting documentation. Correspondence from any department(s) or programs whose courses will be required or otherwise impacted. If the change in curriculum introduces a requirement (or recommendation) that majors take a course offered by another department, it is important to establish that such a requirement will not unduly burden faculty and resources elsewhere on campus. Use space below for any comments, otherwise add supporting correspondence as an appendix.

N/A

9. Impact on current students. It should be specifically acknowledged that students enrolled in the program prior to the effective date of any curriculum change may complete their program under the old requirements if they wish. The courses required must remain available, or suitable substitutions specifically designated.

Please note: If the proposed curriculum change affects articulation or transfer programs, the proposal should explain how currently-enrolled community college students will be able to complete their projected programs. Any necessary modifications to articulation agreements should be attached.

Students currently enrolled in the certificate program prior to the effective date will complete the program under the old requirements.

10. If changing the term-structure of the program, identify the term structure that will be used for the program:
   - Traditional Semester
   - Approved Campus 12-Week Term (see Academic Calendars)
   - *Non-Standard Term

*If you are using a non-standard term structure, indicate whether relevant offices, such as the Registrar’s Office and International Scholar & Student Services, have been notified and support the program. Non-standard terms need to fit within the university’s scheduling system calendar, and non-standard terms need to work with international student visa requirements.

Term structure: no change

11. Additional Information. Depending on the nature of the changes, other information may also be necessary for review.
   - New learning outcomes and assessment plan for new concentration or specialization, or if changes to curriculum warrant.
- **New program description for the catalog.**
- **If the program is linked to another program, such as in a combined bachelor/master program, a dual master or dual master/doctoral program, or a joint-program with another university, provide as an appendix the new curriculum for each arrangement. Supporting correspondence from the director of the linked program should be included.**