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 – Online Option (PCC Log. No. 16025)

The proposal to modify the Post-Baccalaureate Certificate in Survey Statistics - Online Option has been administratively approved. A copy of the proposal is attached.

The change is effective Spring 2017. Please ensure that the change is fully described in the Graduate Catalog and in all relevant descriptive materials.

MDC/Enclosure

cc: Andrew Harris, Chair, Senate PCC Committee  
Barbara Gill, Office of Enrollment Management  
Reka Montfort, University Senate  
Chip Denman, Division of Information Technology  
Pam Phillips, Institutional Research, Planning & Assessment  
Anne Turkos, University Archives  
Linda Yokoi, Office of the Registrar  
Alex Chen, Graduate School  
Wayne McIntosh, College of Behavioral and Social Sciences  
Frauke Kreuter, Joint Program in Survey Methodology
University of Maryland PCC  
Program/Curriculum/Unit Proposal

Program: JPSM Online Certificate in Survey Statistics

Department/Unit: The Joint Program in Survey Methodology (JPSM)

College/School: Behavioral and Social Sciences (BSOS)

Proposal Contact Person (with email): Richard Valliant (rvallian@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

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

1. Department Committee Chair
   Richard Valliant  Richard Valliant  29 Jul 2016

2. Department Chair
   [Signature]

3. College/School PCC Chair
   KAROL COLMAR  KAROL COLMAR  4 Oct 2016

4. Dean
   [Signature]  19/4/16

5. Dean of the Graduate School (if required)
   [Signature]  1/21/16

6. Chair, Senate PCC
   [Signature]  11/4/16

7. University Senate Chair (if required)
   [Signature]  12/4/16

8. Senior Vice President and Provost
   [Signature]

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-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):
The Joint Program in Survey Methodology proposes to change the requirements for the Online Certificate in Survey Statistics.

Please see the attached for the new, proposed curriculum. SURV

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):
JPSM proposes the following changes to the requirements for the Certificate in Survey Statistics:

**Four Required Courses**

1. SURV 440: Sampling Theory
2. SURV 625: Applied Sampling OR SURV 745: Practical Tools for Designing and Weighting Survey Samples
3. SURV 742: Inference from Complex Surveys
4. One of the following courses:
   - SURV 662: An Introduction to Small Area Estimation
   - SURV 699X: Statistical Analysis with Missing Data
   - SURV 744: Topics in Sampling
   - SURV 798B: Small Area Estimation
   - SURV 798Z: Bayesian Modeling and Inference

**6 credits of elective SURV courses (620 and above)**

- See more at: [http://jointprogram.umd.edu/certificates/survey-statistics](http://jointprogram.umd.edu/certificates/survey-statistics)

**Total of 18 credits**

The new proposed curriculum provides a selection of additional courses for the 4th requirement.

The current required courses are:

1. SURV 440: Sampling Theory
2. SURV 625: Applied Sampling OR SURV 745: Practical Tools for Designing and Weighting Survey Samples
3. SURV 742: Inference from Complex Surveys
4. SURV 744: Topics in Survey Methodology

**6 credits of elective SURV courses (620 and above)**

- See more at: [http://jointprogram.umd.edu/certificates/survey-statistics](http://jointprogram.umd.edu/certificates/survey-statistics)
Background:

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.

The program provides graduate-level certification of knowledge of the theories and application of survey sampling and estimation. The program assumes that entering students have graduate-level preparation in probability theory, mathematical statistics, and statistical methods. The certificate program supplements this knowledge with exposure to finite population sampling theory, applications in complex survey designs, inferential issues in complex sample survey estimation, and advanced topics in complex survey design.

Rationale:

The original fourth requirement was SURV 744 Topics in Sampling. The course originally covered a variety of topics including survey weighting, nonresponse adjustments, calibration, dual frame estimation, small area estimation, measurement error models, imputation methods, and other topics. In the last five years, JPSM has developed new courses or modified other existing courses to cover some of these topics in more depth. For example, there is now overlap between coverage of SURV 742 and 745 with SURV 744.

Allowing additional choices for the fourth required course permits students with different interests to have more flexibility to build their own curriculum. A student that is particularly interested in small area estimation or imputation (missing data analysis), for example, can now take an entire course on either of those topics rather than getting the brief overview given in SURV 744.

The additional choices also allow students to complete the certificate in a timely way in case all courses are not taught each year.