MEMORANDUM

TO: Wayne McIntosh  
    Interim Dean, College of Behavioral and Social Sciences

FROM: Elizabeth Beise  
    Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Establish an Online Offering of the Post-Baccalaureate Certificate in Survey Statistics (PCC Log no. 13054)

On August 19, 2014, the Maryland Higher Education Commission approved your proposal to establish an online offering of the Post-Baccalaureate Certificate in Survey Statistics. A copy of the approved proposal is attached.

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

MDC/

Enclosure

cc: Gregory Miller, Chair, Senate PCC Committee  
    Barbara Gill, Office of Student Financial Aid  
    Reka Montfort, University Senate  
    Erin Taylor, Division of Information Technology  
    Pam Phillips, Institutional Research, Planning & Assessment  
    Anne Turkos, University Archives  
    Linda Yokoi, Office of the Registrar  
    Alex Chen, Graduate School  
    Katherine Russell, College of Behavioral and Social Sciences  
    Frederick Conrad, Joint Program in Survey Methodology
August 19, 2014

Dr. Mary Ann Rankin  
Provost and Senior Vice President  
Academic Affairs  
The University of Maryland College Park  
1119 Main Administration Building  
College Park, MD 20742

Dear Dr. Rankin:

The Maryland Higher Education Commission has reviewed a request from the University of Maryland College Park to substantially modify the existing Post-Baccalaureate Certificate (P.B.C.) in Survey Statistics for online delivery.

I am pleased to inform you that the substantial modification is approved. This decision is based on an analysis of the program proposal in conjunction with the laws and regulations governing academic program approval, in particular Code of Maryland Regulations (COMAR) 13B.02.03. As required by COMAR, the Commission circulated the program proposal to the Maryland higher education community for comment and objection. The program meets COMAR’s requirements and demonstrates potential for success, an essential factor in making this decision.

For the purposes of providing enrollment and degree data to the Commission, please use the following HEGIS and CIP codes:

<table>
<thead>
<tr>
<th>Program Title</th>
<th>Award Level</th>
<th>HEGIS</th>
<th>CIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Survey Statistics</td>
<td>P.B.C.</td>
<td>2299-31</td>
<td>27.0501</td>
</tr>
</tbody>
</table>

Should the University of Maryland College Park desire to make a substantial modification to the program in the future, approval from the Commission will be necessary. I wish you continued success.

Sincerely,

Catherine M. Shultz, J.D.
Acting Secretary of Higher Education

CMS:SAB:mrw

C: Ms. Theresa Hollander, Associate Vice Chancellor for Academic Affairs, USM  
   Mr. Mike Colson, Senior Coordinator for Academic Programs, UMCP
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

- Please submit the signed form to: Office of the Associate Provost for Academic Planning & Programs, 1119 Main Administration Building.
- Please e-mail the rest of the proposal as an MSWord attachment to pcc-submission@umd.edu.

DATE SUBMITTED: ______________ PCC LOG NO. 13054

COLLEGE/SCHOOL: College/School Unit Code—First 8 digits: 01202800
Unit Codes can be found at https://hypprod.umd.edu/Html_Reports/units.htm

DEPARTMENT/PROGRAM: Department/Program Unit code—Last 7 digits: 1282301

TYPE OF ACTION (choose one):
- Curriculum change (including information specializations)
- Renaming of program or formal Area of Concentration
- Addition/deletion of formal Area of Concentration
- Suspend/delete program

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

SUMMARY OF PROPOSED ACTION:
The Joint Program in Survey Methodology in the College of Behavioral and Social Sciences submits this proposal to create an online Graduate Certificate in Professional Studies in Survey Statistics. This 18-credit certificate will teach students statistical foundations of sampling and estimation in complex surveys, construction of questionnaires that reliably measure desired concepts, use of computer assistance in data collection, how different modes of data collection can be used to improve survey data, cognitive psychological applications to survey measurement, and methods of nonsampling error reduction. Students will also learn how to analyze survey data properly reflecting the complex survey design features.

APPROVAL SIGNATURES: Please print name, sign, and date

1. Department Committee Chair: _______________________________ February 10, 2014

2. Department Chair: _______________________________ February 10, 2014

3. College/School PCC Chair: _______________________________ Charles Stangor 3/10/14

4. Dean: _______________________________ Wayne McTavish 3/10/14

5. Dean of the Graduate School (if required): _______________________________

6. Chair, Senate PCC: _______________________________ 4/4/14

7. Chair of University Senate (if required): _______________________________

Vice President of Academic Affairs & Provost: _______________________________

Proposal for new instructional program (online/hybrid), Graduate Certificate in Professional Studies, OES-administered, p. 1
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

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- Addition/deletion of formal Area of Concentration
- Suspend/delete program

*Italicics* indicate that the proposed program action must be presented to the full University Senate for consideration.

SUMMARY OF PROPOSED ACTION:
The Joint Program in Survey Methodology in the College of Behavioral and Social Sciences submits this proposal to create an online Post Baccalaureate (Graduate) Certificate in Survey Statistics in addition to the on-site program at College Park.

APPROVAL SIGNATURES: *Please print name, sign, and date*

1. Department Committee Chair: ___________________________ March 21, 2014
2. Department Chair: ___________________________ March 21, 2014
3. College/School PCC Chair: ___________________________
4. Dean: ___________________________
5. Dean of the Graduate School (if required): ___________________________
6. Chair, Senate PCC: ___________________________
7. Chair of University Senate (if required): ___________________________

Proposal for new instructional program (online/hybrid), Graduate Certificate in Professional Studies, OES-administered, p. 1
PROPOSAL TO

OFFER ONLINE VERSION OF EXISTING PROGRAM

UNIVERSITY OF MARYLAND AT COLLEGE PARK, MARYLAND

Joint Program in Survey Methodology

*Post Baccalaureate* (Graduate) *Certificate in Survey Statistics*

PROPOSED INITIATION DATE: FALL 2014
I. OVERVIEW and RATIONALE

A. Briefly describe the nature of the proposed program and explain why the institution should offer it.

The Joint Program in Survey Methodology is a consortium undertaking of the University of Maryland, the University of Michigan, and Westat. Primary funding for the JPSM is provided by the Interagency Council on Statistical Policy, a group made up of the principal federal statistical agencies.

The faculty of Maryland’s Joint Program in Survey Methodology (JPSM) and its sister program, the Michigan Program in Survey Methodology (MPSM), includes many of the leading academics in the field of survey methodology. Both programs offer Masters and Ph.D. degrees. Together, these programs have the highest research and teaching throughput in the field. JPSM currently offers two certificates in survey methodology, both of which require onsite attendance at classes.

The proposed online Post Baccalaureate (Graduate) Certificate in Survey Statistics, offered through the JPSM, College of Behavioral and Social Sciences, University of Maryland, will provide post-baccalaureate training for individuals interested in broadening their knowledge and understanding of the statistical theory associated with survey methodology and the analysis of data collected through sample surveys.

Survey methodology is increasingly important in our data driven world. Survey methodology is an interdisciplinary field that draws upon statistics, sociology, economics, political science, informatics, public health (with physical measures taken on respondents), and increasingly the geographic sciences (and their geographic information systems). As increasing numbers of public and private organizations produce and use data for decision making, needs for professional development related to survey methodology arise. The growing availability of high-quality software products suitable for online teaching now provide the opportunity to offer such professional development to talented employees who are not willing or able to leave their jobs in order to earn their degree at a traditional university campus. JPSM and MPSM have seen in the past year an increasing number of requests for class recordings and remote connections to classes from individual students and an increasing number of inquiries about the possibility of gaining fully online certificates. This and several recent and rapid developments, strongly suggest the need to develop an additional program with changes in delivery format.

We propose to extend our offerings through a online/long-distance Post Baccalaureate (Graduate) Certificate in Survey Statistics. This certificate program will target highly qualified working professionals. The following three considerations drive this proposal:

(1) An online program can reach the large numbers of potentially interested students who need the skills the program offers but for whom a traditional university-based program is not a feasible option;
(2) A high-quality online program is now more feasible than in the past because of improvements in technology;
(3) JPSM/MPSM are uniquely positioned as the world leaders in the field of survey methodology to develop the gold standard online offering in this field;

Effect on Existing Face-to-Face Certificate Programs

We anticipate that the online certificate program will have some effect on the enrollment in our onsite certificate program but that the net effect will be that JPSM can serve more students. JPSM is largely funded by a contract with the U.S. federal government. We have received a number of comments from our sponsoring agencies that some of their employees in the Washington DC area will not come to College Park because they reside in Virginia and elsewhere and do not want to add to already long commuting times. The federal agencies also have regional offices outside the Washington area. Employees in those remote offices have no opportunity to attend classes in College
Park. Both of these groups can be served by an online program. There are likely to be some government employees who will enroll for one of the certificates who might otherwise have studied for an onsite certificate. In addition, most new enrollees probably will opt for an online certificate. However, we anticipate that the total number of students enrolled in our certificate programs will increase substantially because of the ability of the online courses to serve students who would not commute to College Park or who live outside the Washington area.

**Format**

Similar to the existing face-to-face graduate certificate, the online Post Baccalaureate (Graduate) Certificate in Survey Statistics will require a total of 18 credits earned by taking six 3-credit courses. Online courses will be offered during the University of Maryland’s established term schedule, which is used for other graduate professional programs:

- Term I: September – November
- Term II: December – February
- Term III: March – May
- Term IV: June–August

Each 12-week term will have 11 weeks of classes and one week reserved for testing. To distinguish between the existing onsite program and the proposed online program, students in the online program will be assigned a separate major code and scheduled courses will be assigned separate section numbers.

Students admitted to the program can take as many as two courses a term and finish the certificate in three terms. Students will also be allowed to take courses over more than three terms if that would better accommodate their personal situations. The expectation is that students would complete the online certificate in two years or less. Students will participate online, providing necessary flexibility for working professionals. The lectures will be recorded and accompanied by real time online office hours via Adobe Connect.

- Recorded lecture material will be posted online at a pre-specified time each week.
- Students will be required to view the class within a set period (usually one week) and are required to submit regular homework assignments that will be graded by teaching assistants.
- An online discussion forum hosted by the instructor will be used for answering questions and reviewing material presented in lectures.

**B. How big is the program expected to be? From what other programs serving current students, or from what new populations of potential students, onsite or offsite, are you expecting to draw?**

JPSM currently has 7 students enrolled in its onsite certificate program. We anticipate that initial enrollment will be modest but will grow steadily over time as the availability of the program becomes widely known. Our projections of enrollment of certificate-seeking students for the first 5 years of the online program are:

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated enrollment</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>14</td>
<td>15</td>
</tr>
</tbody>
</table>

These are the projected new enrollees each year for the Post Baccalaureate (Graduate) Certificate in Survey Statistics. A separate proposal is being submitted for an online certificate in Survey Methodology. We anticipate that a number of the online courses will also attract students who will take one or two courses without formally enrolling in a Certificate program. Such students will help ensure the economic viability of the program.

**II. Curriculum**

**A. Provide a full catalog description of the proposed program, including educational objectives and any areas of concentration.**
The program 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. 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 probability sampling theory, applications in complex survey designs, inferential issues in complex sample survey estimation, and advanced topics in complex survey design. In the online Post Baccalaureate (Graduate) Certificate in Survey Statistics program, lectures will be delivered across the Internet using advanced audio and video technology. The entire online lectures (lecture slides, presentation, and Q&A interactions) are video-archived for reviewing. Students use webcams to participate in discussion sessions in real time.

B. List the courses (number, title, semester credit hours) that would constitute the requirements and other components of the proposed program. Provide a catalog description for any courses that will be newly developed or substantially modified for the program.

The online Post Baccalaureate (Graduate) Certificate in Survey Statistics consists of the same 18 credit hours, four required courses and two electives, as used in the face-to-face program:

- SURV 440: Sampling Theory
- SURV 625: Applied Sampling OR SURV 699E: Practical Tools for Designing and Weighting Survey Samples
- SURV 742: Inference from Complex Surveys
- SURV 744: Topics in Sampling
- Electives 3 credits
- Electives 3 credits

<table>
<thead>
<tr>
<th>Courses</th>
<th>Type</th>
<th>Certificate: Survey Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Course</td>
</tr>
<tr>
<td>SURV 440</td>
<td>Required</td>
<td>✓</td>
</tr>
<tr>
<td>SURV 625</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>SURV 742</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>SURV 744</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>SURV 632</td>
<td>Electives</td>
<td>✓ (2 courses)</td>
</tr>
<tr>
<td>SURV 650</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURV 699G</td>
<td></td>
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<tr>
<td>SURV 699K</td>
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<td>SURV 699L</td>
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<td>SURV 699P</td>
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<td>SURV 699Q</td>
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<td>SURV 699R</td>
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<tr>
<td>SURV 699Z</td>
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<td>SURV 772</td>
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<tr>
<td>SURV 760</td>
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<tr>
<td>SURV 798B</td>
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<tr>
<td>SURV 798Z</td>
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</tbody>
</table>

The electives would be selected based on a student’s particular interests from among the following:
SURV 632 Social and Cognitive Foundations of Survey Measurement
SURV 650 Economic Measurement
SURV 699G Envisioning the Survey Interview of the Future
SURV 699K Multi-level Analysis of Survey Data
SURV 699L Statistical Matching, Record Linkage, and Disclosure Avoidance
SURV 699P Attitudes and Public Opinion
SURV 699Q Prediction Approach to Sampling Theory

SURV 699R Advanced Modeling Methods
SURV 699Z Regression Models in Complex Sample Design Settings
SURV 722 Randomized and Nonrandomized Research Design
SURV 760 Survey Management
SURV 798B Small Area Estimation
SURV 798Z Bayesian Modeling and Inference

Some new courses may also be developed, as described in section IX, which can be used as electives. Generally, we plan to create online versions of existing special topic courses (SURV699** listed above) to serve as electives.

The program/course outline by initial cohort for the Certificate is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Term I</th>
<th>Term II</th>
<th>Term III</th>
<th>Term IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURV 440</td>
<td></td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURV 625</td>
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<td></td>
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<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>SURV 744</td>
<td></td>
<td></td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Elective</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

C. Describe any selective admissions policy of special criteria for students selecting this field of study.

Admissions criteria will be the same for the online certificate in Survey Statistics as for the face-to-face certificate in Survey Statistics. Applicants must meet the following minimum admission criteria as established by the Graduate School:

- Applicants must have earned a four-year baccalaureate degree from a regionally accredited U.S. institution, or an equivalent degree from a non-U.S. institution.
- Applicants must have earned a 3.0 GPA (on a 4.0 scale) in all prior undergraduate and graduate coursework.
- Applicants must provide an official copy of a transcript for all of their post-secondary work.
- International students must fulfill all requirements relating to international academic credentials, evidence of English proficiency, and financial certification. Since the students will not have to enter the U.S., visas will not be required. These requirements are found at the Graduate School's Web site: http://www.gradschool.umd.edu/prospectivestudents/internationaladmissions.html.

In addition, the online certificate will have the same pre-requisites as does the onsite certificate:

- Admission limited to those who have at least a graduate level degree in statistics or biostatistics from an accredited institution.
  OR
- Admission limited to those who have equivalent training in graduate level statistics or those who have successfully complete courses equivalent to SURV 410 (graduate-level probability theory course), 420 (graduate-level mathematical statistics course), 615 and 616 (a two-term sequence in statistical methods),
or passage of an entrance examination that tests their knowledge of the topics covered in SURV 615 and SURV 616.

- At least one year’s work experience in survey design or analysis.

Current students in the onsite certificate program will be permitted to finish their certificates by taking the online versions of any requirements or electives they need to fulfill.

III. STUDENT LEARNING OUTCOMES AND ASSESSMENT
The purpose of this assessment plan is to set clear guidelines, identify articulated outcomes, and ensure avenues for continuous improvement for each graduate certificate program managed by the Program Oversight Committee and housed in the Graduate School. It is our mission to provide programs that meet UMD’s institutional goals and objectives for educational activities.

Learning Outcomes:
Students will be able to:
1. Demonstrate competence in the understanding and application of basic concepts that form the foundation of statistical survey methods. This will include mastery of the main aspects of sample design, creation of estimators, understanding of specialized techniques for sampling and estimation, analysis, and data summarization.
2. Analyze solutions to survey design problems in a practical setting.
3. Critically examine published research to determine its strengths and weaknesses and appreciate the limitations and applicability of published findings.
4. Produce written documents of a professional quality to communicate such analyses and assessments.

Assessment Methods:
1. Mastery of content: Classroom performance as measured by participation in online discussion sessions and presentations, course exams and papers.
2. Professional communication (written and oral): Classroom performance as measured by participation in online discussion sessions and presentations, course exams and papers.
3. Critical and creative thinking: Classroom performance as measured by participation in online discussion sessions and presentations, course exams and papers.

To complete the certificates, students must have an overall GPA of 3.0 and must have no more than one C during the course of study.

IV. FACULTY AND ORGANIZATION
A. Who will provide academic direction and oversight for the program?

Graduate Director
Frederick Conrad, Research Professor & Director, JPSM
Joint Program in Survey Methodology
College of Behavioral and Social Sciences

Office of Extended Studies Administrative Coordination
Terrie Hruzd, Director of Programs

B. If the program is not to be housed and administered within a single academic unit, provide details of its administrative structure.
The Post Baccalaureate (Graduate) Certificate in Survey Statistic will be housed in the Joint Program for Survey Methodology, College of Behavioral and Social Sciences which will be responsible for oversight. The Office of Extended Studies will provide administrative coordination.

**Administrative Coordination**

The Office of Extended Studies will provide program development support (including budget development and projections), program management that includes scheduling, marketing research, planning and management, financial management (including faculty contracting and faculty pay processing), and student services management (including support for admissions, registration, payment, financial aid, and other campus services).

**V. OFF-CAMPUS PROGRAMS (if necessary)**

A. If at Shady Grove—indicate how students will access student services.

   Not applicable

B. If on-line—describe the concerns in “Principles and Guidelines for Online Programs” are to be addressed.

1. **Program Initiation and Choice:** The proposal should initiate with an academic unit, and must have the approval of the appropriate Dean (or Deans). It must develop naturally from the institution’s strengths and be consistent with its strategic goals. The proposal should have a clear and well-thought-out financial plan, providing net revenue to the institution over time, and should include a thorough analysis of the potential market.

The program was developed by the Joint Program in Survey Methodology (JPSM). JPSM is the nation’s oldest and largest program offering graduate training in the principles and practices of survey research and its mission is to educate the next generation of survey researchers, survey statisticians, and survey methodologists. Additionally, the program will help the University of Maryland continue to be a competitive university by addressing increasing demand for formal and informal online education and make real and measurable changes at the state, national, and international level through comprehensive, accessible, and credible education. The Office of Extended Studies and the Joint Program in Survey Methodology conducted a marketing research plan in January 2014 to identify target audiences and comparable competitors with distance learning program. Only two US institutions offer online programs in Survey Methodology so there is great opportunity for our online programs.

The target audiences are adults who have completed a bachelor’s degree and desire advanced knowledge in survey methodology to advance their current careers or to expand their career options. This would include individuals who are employed in either the private or public sector and may have other advanced degrees, or individuals who have recently graduated with a Bachelor’s and need to get advanced training to seek employment in a survey-related field. We anticipate that many students in the online certificate programs will be completely or partially funded by their employers.

Having the courses available online should allow some students to accelerate their progress through the programs since they will not have to arrange work schedules to attend classes in person. This flexibility should make the certificate programs attractive to more students.

This program will be particularly appealing to employees of the statistical agencies in federal government (e.g., Census Bureau, Bureau of Labor Statistics (BLS), National Center for Health Statistics, National Agricultural Statistics Service (NASS), Bureau of Justice Statistics, and Energy Information Agency) and private survey research companies who are not able to get release time from work to attend regular JPSM classes, are reluctant to commute to College Park, or do not work in the Washington DC area. We anticipate that the program will be especially attractive to professionals who seek continuing education but who live in other areas of the country.
Examples of the target audience living outside the Washington DC area include staff members currently employed at:

- Field offices of U.S. government agencies such as BLS, Census and NASS
- International organizations such as the World Bank, United Nations, Inter-American Development Bank, and Organization of American States
- U.S. survey organizations not based in the Washington area
- International survey organizations such as Gallup
- Market research departments at large companies

2. **Program Development, Control, and Implementation by Faculty:** Although professional help may be used in adapting it to the online medium, the academic content of the curriculum must be developed by institutional faculty. The instructional strategy proposed must be appropriate for this content. UMCP faculty must have overall control of the program, and should provide the bulk of the instruction. Appropriate resources, including technical support personnel, must be made available for course development and also for faculty support during the offering of these courses. The business plan for the proposal must spell out the arrangements whereby this will be accomplished.

The program will provide students with training from permanent and adjunct faculty in the University of Maryland’s Joint Program in Survey Methodology. Online lectures will be conducted via JPSM’s video system and Webinar tools that are provided through the Division of Information Technology (DIT). We expect that minimal technological assistance will be required. JPSM has an archive of recorded lectures from the classes listed in section II that will be edited or re-recorded as necessary to make them suitable for online delivery.

Instructors of the certificate courses will attend educational seminars offered by DIT to increase competency in the use of these systems. The Training and Consulting Services of DIT is available to provide consultation on the effective development of online courses, though all content will be developed by the certificate program instructors.

3. **Access to Academic Resources and Student Services:** The proposal must indicate how students will have access to needed resources, such as library materials, other information sources, laboratory facilities, and others as appropriate. The arrangements in place for interaction with instructors, for advising, and for help with technical problems must be described. It must be shown how student services such as admissions, enrollment, financial aid, bursar services, career advisement, bookstore, and similar services available to on-campus students will be provided.

As officially admitted students to the University of Maryland, students in this program will have access to all University resources that are accessible in the online environment. Students in online programs are assessed an online student services mandatory fee which supports access to these University resources. Extended Studies provides the management of all student services.

4. **Intellectual Property Rights:** The proposal must clearly delineate ownership and usage rights for materials that may be developed for courses in the program.

Intellectual property rights for this online degree and online courses will be addressed in a separate contract executed by the University of Maryland and the developer. Please see Article VIII On-Line Studies and Technology-Mediated (Enhanced) Courses in the UNIVERSITY OF MARYLAND POLICY ON INTELLECTUAL PROPERTY (Policy IV-3.20(A) (Approved by the President on March 13, 2003 and by the Chancellor on July 18, 2005) On-line at [http://www.president.umd.edu/policies/iv320a.html](http://www.president.umd.edu/policies/iv320a.html).
5. **Full Disclosure, Standards, and Evaluation:** All published materials describing the program must carefully lay out the instructional methods to be used, the skills and background required for success, and the arrangements in place for access to instructors, to technical help, to academic resources, and to student services. There should be a means available whereby potential students can evaluate their readiness for the special demands of the program. Academic admission standards must be clearly described, and must be consistent with those for the on-campus program. Outcome expectations must also be consistent. The proposal must set out a continuing process of evaluation that will determine if these requirements are being met.

The Oversight Committee, particularly the academic and administrative units, will ensure that all printed and digital materials provide exhaustive information about the program. The Web site, administered through the Office of Extended Studies, will provide complete and transparent policies and procedures regarding admission requirements (in full compliance of the Graduate School), including registration, financials, technical assistance, digital access to university resources, academic and university policies, and all issues relating to the successful completion of the program. Potential students will be able to evaluate their readiness for the program reviewing the goals and nature of the program, which will be thoroughly outlined on the program website, to determine whether the program meets their training needs and career goals. They will also have access to an academic advisor with whom to discuss their readiness and fit for the program. JPSM in the College of Behavioral and Social Sciences provides both incoming and admitted students with all academic advising assistance.

**VI. OTHER ISSUES**

A. Describe any cooperative arrangements with other institutions or organizations that will be important for the success of this program.

None

B. Will the program require or seek accreditation? Is it intended to provide certification or licensure for its graduates? Are there academic or administrative constraints as a consequence?

No

**VII. COMMITMENT TO DIVERSITY**

The University of Maryland is an equal opportunity institution with respect to both education and employment. The University does not discriminate on the basis of race, color, national origin, sex, age, or handicap in admission or access to, or treatment or employment in, its programs and activities as required by federal (Title VI, Title IX, Section 504) and state laws and regulations.

Through its actions and statements of policy the University of Maryland has demonstrated a commitment to diversity by creating programs of study which explore the experiences, perspectives, and contributions of a wide variety of cultures, groups, and individuals; and as sought to create a campus environment which encourages tolerance and respect for individuals regardless of differences in age, race, ethnicity, sex, religion, disability, sexual orientation, class, political affiliation, and national origin.

**VIII. REQUIRED PHYSICAL RESOURCES**

A. Additional library and other information resources required to support the proposed program. You must include a formal evaluation by Library staff.

See attached.
B. **Additional facilities, facility modifications, and equipment that will be required.** This is to include faculty and staff office space, laboratories, special classrooms, computers, etc.

Students will be instructed that to fully participate, they will need to purchase a webcam with microphone or a headset, and have a reliable computer and Internet access. Recorded lectures will be posted online at announced times and will be available online at any time thereafter. Weekly discussions or help sessions will be held at scheduled, fixed times once per week. Limited technical support for this online instructional delivery may be necessary and will be provided by JPSM IT staff with assistance from DIT.

C. **Impact, if any, on the use of existing facilities and equipment. Examples are laboratories, computer labs, specially equipped classrooms, and access to computer servers.**

This program does not require additional resources.

**IX. RESOURCES NEEDS AND SOURCES**

A. **List new courses to be taught and needed additional sections of existing courses. Describe the anticipated advising and administrative loads. Indicate the personnel resources (faculty, staff, and teaching assistants) that will be needed to cover all these responsibilities.**

The following courses are ones that may at some point be developed for use as electives. At present, JPSM has enough previously taught special topics courses to provide a set of electives sufficiently large to serve students in both the online certificates in Survey Methodology and Survey Statistics. All of the following, if developed, will need to be approved by VPAC:

**SURV XXX Data Management, Data Retrieval, Data Visualization (1 credit)**
Data Management and Data Retrieval will cover basic techniques of reading and writing different data formats from various different sources into files suited for data analysis. Methods for dealing with different types of numeric and alphanumerical variables will be introduced. General issues of data cleaning, data documentation and the combination of different data sets will be discussed. Real survey data will be used to illustrate the methods and discuss various visualization techniques. Students will learn the use of computer software to perform these tasks and will learn how to program routines.

**SURV XXX Surveying Hard to Reach Populations (2 credits)**
Certain segments of the populations are difficult to survey using standard probability methods. Often no sampling frame exists, members of the population are stigmatized or the population is rare and therefore hard to find. As a consequence surveying such population with regular frames is very expensive. Examples of such populations in a behavioral and social setting include injection drug users, men who have sex with men, and female sex workers. Examples in an economic setting include unregulated workers and the self-employed. This course discusses alternatives to address these methodological difficulties.

**SURV XXX The Use of Paradata and Process Data in Social Surveys (2 credits)**
During the last twenty years survey data have been increasingly collected through computer assisted modes. As a result, a new class of data – called paradata – is now available to survey methodologists. Typical examples are key-stroke files, capturing the navigation through the questionnaire, and time stamps, providing information such as date and time of each call attempt or the length of a question-answer sequence. Other examples are interviewer observations about a sampled household or
neighborhood, recordings of vocal properties of the interviewer and respondent, information about interviewers and interviewing strategies. The course will give an introduction and overview of methodological issues involved in the collection and analysis of paradata. We will discuss several research examples including the use of paradata to monitor fieldwork activity, guide intervention decisions during data collection (e.g. through responsive design), and to address various total survey error components (in particular measurement error and nonresponse bias). Case studies will draw attention to the challenges in automated data capturing and modeling of the complex structure of paradata.

SURV XXX Mixed Mode Surveys (3 credits)
Mixed-mode surveys have become increasingly important in surveys. The course studies factors that influence whether the use of multiple modes in a single study will improve data quality. A typology of different mixed-mode survey designs is introduced and used to organize the course. Three major factors that influence responses across modes are discussed in detail, including: 1) different question structures and wording, 2) the presence vs. absence of an interviewer, and 3) the influence of visual design and layout. Implementation strategies are discussed for using multiple modes of data collection. The effect of offering response modes consistent with respondent preferences is examined, along with the question of why offering a choice of response mode tends not to improve response rates. Special attention is focused on addressed-based sampling as a way of using mail to encourage response over the Internet.

SURV XXX Web Survey Design (2 credits)
The course will focus on the design of Web survey instruments and procedures, based on theories of human-computer interaction, interface design, and empirical research on Web survey design and implementation. The course will begin with a review of Web or Internet surveys in the general context of sources of survey error (sampling, coverage, nonresponse, measurement error, and costs). The course will then discuss different approaches to Web survey design (e.g., scrolling versus paging) and discuss various design approaches for developing effective Web surveys. The course will draw on empirical results from experiments on alternative design approaches as well as practical experience in the design and implementation of Web surveys. The course will not focus on the technical aspects of Web survey implementation, such as hardware, software or programming.

SURV XXX Advanced Statistical Modeling (3 credits)
The course emphasis will be on applications of models, for both substantive and methodological research. More specifically the course will cover multilevel models with applications to interviewer effects; structural equation models/latent class models with applications to measurement error problems; classification trees/regression trees with applications to analysis of "big data" or paradata; and models for longitudinal survey data.

SURV XXX Fitting Regression Models with Survey Data (3 credits)
This course examines a range of statistical regression analysis techniques for modeling survey data, and presents methods to compensate for design features for complex sample survey data. Course topics include likelihood estimation and testing; application of likelihood methods to linear and generalized linear models, including logistic, probit, generalized (multinomial) logit, Poisson, and negative binomial models; time-to-event (survival analysis) models; regression models for longitudinal data; accounting for item-level missing data via imputation; and causal models (propensity score and marginal structural models). In general the course will proceed by considering the particular regression model in the simple random sample setting, and then considering the effect of accounting for the complex sample survey design (stratification, clustering, and weighting) on the inference. Issues such as model misspecification and ignorable vs. non-ignorable sampling in the context of regression modeling will be addressed.
SURV XXX Imputation Methods (3 credits)
Having missing item data is a common problem in most surveys. A variety of methods of imputation will be covered including hot deck, cell mean, predictive mean, and sequential regression. Approaches for correctly estimating variances will also be studied including multiple imputation and adjusted replication methods such as the jackknife and balanced repeated replication.

SURV XXX Disclosure Protection (2 credits)
This course covers different statistical disclosure limitation methods for releasing specially created data derived from original data. The methods are intended to meet the two conflicting goals of protecting confidentiality of units and at the same time ensuring the beneficial use of the data for drawing useful statistical inferences. Other topics that are covered are methods for disclosure risk assessment, statistical disclosure limitations for both tabular and microdata, and measures of impact of disclosure limitation on data utility.

SURV XXX Record Linkage and Statistical Matching (2 credits)
A single available data source is often not sufficient in order to carry out required statistical data analyses to make certain decisions. To avoid high costs of collecting new data in such cases, there is a growing need to combine multiple survey and/or existing administrative data sources using appropriate statistical techniques. The course will cover various issues and methods in statistical data integration. Topics include various methods available in statistical matching, a body of statistical techniques that use a few common variables in combining multiple data sources with no or negligible overlapping units. Major issues include assumptions about conditional independence and the assessment of uncertainty. Another important data integration situation is one where there is a complete or significant overlap in units from different data sources and the common variables in different datasets are often misreported. Different classical and Bayesian methods in record linkage to combine data in such situations are covered.

SURV XXX Telephone and Address-based Sampling (2 credits)
Telephone sampling has been a staple of survey research for several decades. However, conducting telephone surveys with acceptable quality has become more difficult in the last few years. The shift from landline to cell phones has complicated the procedures needed for both sample selection and inference. A new development is the use of address-based sampling. Address lists procured from commercial vendors are a starting point for sample selection. Options are studied for using address and telephone lists for sampling, along with methods of contacting households based on information on the lists. Dual frame and calibration estimation techniques for making inferences to populations are covered.

SURV XXX Sampling and Estimation for Establishment Surveys (2 credits)
Economic surveys have a different set of problems than many social surveys. Business sizes tend to have a skewed distribution with many small units and few large ones. The populations are also dynamic with births and deaths being commonplace. These features require sampling and estimation methods that are adapted to the special problems associated with sampling establishments. We will examine the types of frames used, population parameters that are estimated, and methods of estimation. One common advantage of establishment surveys is the existence of continuous auxiliary data on the frame. We will give an overview of methods of stratification, allocation, sample size determination, uses of auxiliary data, variance estimation, and imputation for missing data.

SURV XXX Cross-Cultural and Multipopulation Survey Research (2 credits)
The course provides an introduction to survey research methods for designing multinational and multicultural surveys, beginning with an overview of the field of comparative surveys. It introduces students to the origin and development of important comparative surveys and discusses some unique design features and implementation challenges inherent in their design and implementation. Quality and risk management frameworks for comparative surveys are presented, as are tools for monitoring quality processes and outcomes. One section of the course focuses on issues in study design, considering organizational structure, data collection infrastructure and issues in defining objectives, identifying constructs, developing questions, and monitoring design process quality that are particular to or especially complex in the field of comparative surveys. It also covers some technical challenges in crafting questions into actual instruments for different modes of application in a multilingual and multicultural context, dealing with issues such as the visual display of text in various languages, placement of response categories and instructions, use of color, screen density, and other features of contemporary survey instruments. The large section on design and implementation concludes with a module on question adaptation and translation focusing on the critical role that version production often plays and treatment of harmonization issues as these relate to the development and implementation of socio-demographic background variables. Examples will be drawn from demographic and social indicator surveys, attitudinal surveys, health and education surveys, and quality of life surveys.

SURV XXX Editing Survey Data (2 credits)
Data editing is the process of reviewing and adjusting collected survey data. The purpose is to control the quality of the collected data. This process is divided into four major sub-process areas: Survey Management, Data Capture, Data Review, and Data Adjustment. Survey management includes quality control of the data collection process. Data capture is the conversion of data to electronic media. Data review consists of both error detection and data analysis. Data Adjustment includes data editing and imputation for missing items or cases. Modern techniques for each of the facets of survey processing will be studied.

The Joint Program in Survey Methodology will hire for the following position(s) to ensure that this self-support program has no impact on advising and administrative resources for the unit’s traditional programs: Online Manager (1) and Post-doc (1). Tuition revenue will be used to support all salaries and benefits.

It is proposed that tuition be charged at a fixed rate for the program’s first year (anticipated 2014-2015) of $588 per credit with an estimated increase of 3% per year. All students will pay all associated student mandatory fees and the graduate application fee.

B. List new faculty, staff, and teaching assistants needed for the responsibilities in A, and indicate the source of the resources for hiring them.

A permanent staff member will be hired to manage the online certificate programs and an online Master’s program described in a separate proposal. This person also will teach one course per term. A postdoctoral faculty member will also be hired on a two-year contract. The postdoc will teach one course per term and will be given 50% time to conduct his/her own research. These positions will initially be paid for by accumulated JPSM DRIF funds. By the third year of the online certificate and Master’s programs, these personnel will be covered by current revenue from the certificate programs and the online Master’s Program described in a separate proposal. Adjunct faculty will also be hired to teach specific courses.
C. Some of these teaching, advising, and administrative duties may be covered by existing faculty and staff. Describe your expectations for this, and indicate how the current duties of these individuals will be covered, and the source of any needed resources.

Approval of all faculty overloads for teaching and advising will be in accordance with University of Maryland policy and procedures. The Oversight Committee is responsible for the overall administrative management of the program.

D. Identify the source to pay for the required physical resources identified in Section VIII. above.

Initial startup cost will be covered by accumulated JPSM DRIF funds. Tuition revenue will be used to cover the ongoing program expenses (see separate budget page).

E. List any other required resources and the anticipated source for them.

None.

F. Complete the additional proposal and financial tables as required by MHEC.

See Appendix I.

New Courses that may be developed that will require VPAC Approval

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## Budget: Post Baccalaureate (Graduate) Certificate in Survey Statistics

[This program is self-support. Instructors may not teach on-load.]

<table>
<thead>
<tr>
<th>Estimated Program Revenue &amp; Support</th>
<th>Development</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Total Tuition Revenue</strong></td>
<td>$61,200</td>
<td>$89,964</td>
<td>$121,451</td>
<td>$198,371</td>
<td>$223,167</td>
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<tr>
<td>A. Total Annual Cohort</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>14</td>
<td>15</td>
<td></td>
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<tr>
<td>B. Total Credits:</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>C. Per credit rate; Assumes 5% increase</td>
<td>$680</td>
<td>$714</td>
<td>$750</td>
<td>$787</td>
<td>$827</td>
<td></td>
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<tr>
<td><strong>II. Student Fee: Online Mandatory Fee</strong></td>
<td>$450</td>
<td>$649</td>
<td>$859</td>
<td>$1,377</td>
<td>$1,519</td>
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<tr>
<td>A. Rate per year (4 Terms); assumes 3% increase</td>
<td>90</td>
<td>93</td>
<td>95</td>
<td>98</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td>B. Ttl number of students (per year)</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>14</td>
<td>15</td>
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<tr>
<td><strong>III. Student Fee: Graduate School Application Fee</strong></td>
<td>$375</td>
<td>$525</td>
<td>$675</td>
<td>$1,050</td>
<td>$1,125</td>
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<td>A. Fee (one-time)</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>75</td>
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<tr>
<td>B. Total students in new incoming cohort</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>14</td>
<td>15</td>
<td></td>
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<tr>
<td><strong>IV. Development Support (Courses, Marketing, etc.)</strong></td>
<td>$53,482</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. JPSM DRIF</td>
<td>53,482</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>B. Extended Studies</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

| Total Estimated Program Revenue & Support | $53,482 | $62,025 | $91,138 | $122,986 | $200,797 | $225,811 |

<table>
<thead>
<tr>
<th>Estimated Expenses</th>
<th>Development</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td><strong>I. Total Instructional and Administration</strong></td>
<td>$86,940</td>
<td>$89,548</td>
<td>$92,235</td>
<td>$95,002</td>
<td>$97,852</td>
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<tr>
<td>A. Instructional Totals (Salaries &amp; FICA)</td>
<td>$19,440</td>
<td>$20,023</td>
<td>$20,624</td>
<td>$21,243</td>
<td>$21,880</td>
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<tr>
<td>1.Total Instructional Salaries</td>
<td>$18,000</td>
<td>$18,540</td>
<td>$19,096</td>
<td>$19,669</td>
<td>$20,259</td>
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<tr>
<td>a. Total # of courses that need instructors per year</td>
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<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Online Manager: # of courses teaching per year (part of salary)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Post-Doc: # of courses teaching per year (part of salary)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>UMD Faculty: #</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>UMD Faculty Salary: assumes a 3% annual increase</td>
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<td>6,180</td>
<td>6,365</td>
<td>6,556</td>
<td>6,753</td>
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<tr>
<td>2. Total FICA (8%)</td>
<td>1,440</td>
<td>1,483</td>
<td>1,528</td>
<td>1,574</td>
<td>1,621</td>
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<td>B. Academic Administration</td>
<td>$67,500</td>
<td>$69,525</td>
<td>$71,611</td>
<td>$73,759</td>
<td>$75,972</td>
<td></td>
</tr>
<tr>
<td>1. Total Salary (assumes 3% increase)</td>
<td>67,500</td>
<td>69,525</td>
<td>71,611</td>
<td>73,759</td>
<td>75,972</td>
<td></td>
</tr>
<tr>
<td>a. Online Manager 1/2 time (teaches 2 courses per year)</td>
<td>37,500</td>
<td>38,625</td>
<td>39,784</td>
<td>40,977</td>
<td>42,207</td>
<td></td>
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<tr>
<td>b. Post-Doc: 1/2 time (teaches 1 course per year)</td>
<td>30,000</td>
<td>30,900</td>
<td>31,827</td>
<td>32,782</td>
<td>33,765</td>
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<tr>
<td><strong>II. Equipment</strong></td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,030</td>
<td>$1,061</td>
<td>$1,093</td>
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</tr>
<tr>
<td>Equipment Needs (est.)</td>
<td>1,000</td>
<td>1,000</td>
<td>1,030</td>
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III. Materials & Supplies

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<tr>
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<th>$500</th>
<th>$515</th>
<th>$530</th>
<th>$546</th>
<th>$563</th>
<th>$580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials &amp; Supplies (est.)</td>
<td>500</td>
<td>515</td>
<td>530</td>
<td>546</td>
<td>563</td>
<td>580</td>
</tr>
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</table>

II. Marketing

<table>
<thead>
<tr>
<th></th>
<th>$7,500</th>
<th>$15,000</th>
<th>$15,000</th>
<th>$15,000</th>
<th>$15,000</th>
<th>$15,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Ongoing Marketing (15,000 per year minimum)</td>
<td>7,500</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
</tr>
</tbody>
</table>

III. Course Development

<table>
<thead>
<tr>
<th></th>
<th>$44,482</th>
<th>$0</th>
<th>$0</th>
<th>$0</th>
<th>$0</th>
<th>$0</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. UMD Online Manager</td>
<td>$3,409</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Development of New Courses: UMD Faculty</td>
<td>$10,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a2. FICA (8%)</td>
<td>$1,073</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Development of New Courses: Adjuncts</td>
<td>$30,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SUBTOTAL: DIRECT PROGRAM EXPENSES

<table>
<thead>
<tr>
<th></th>
<th>53,482</th>
<th>103,455</th>
<th>106,109</th>
<th>108,842</th>
<th>111,657</th>
<th>114,557</th>
</tr>
</thead>
</table>

IV. Student Fees (100% returned to campus)

<table>
<thead>
<tr>
<th></th>
<th>$825</th>
<th>$1,174</th>
<th>$1,534</th>
<th>$2,427</th>
<th>$2,644</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Campus Mandatory Fee</td>
<td>450</td>
<td>649</td>
<td>859</td>
<td>1,377</td>
<td>1,519</td>
</tr>
<tr>
<td>B. Graduate School Application Fee</td>
<td>375</td>
<td>525</td>
<td>675</td>
<td>1,050</td>
<td>1,125</td>
</tr>
</tbody>
</table>

V. OES Administrative Fee

<table>
<thead>
<tr>
<th></th>
<th>$6,120</th>
<th>$8,996</th>
<th>$12,145</th>
<th>$19,837</th>
<th>$22,317</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 10% of tuition revenue for OES administrative costs</td>
<td>6,120</td>
<td>8,996</td>
<td>12,145</td>
<td>19,837</td>
<td>22,317</td>
</tr>
</tbody>
</table>

Total Estimated Expenses

<table>
<thead>
<tr>
<th></th>
<th>$53,481.72</th>
<th>$110,400</th>
<th>$116,279</th>
<th>$122,521</th>
<th>$133,921</th>
<th>$139,518</th>
</tr>
</thead>
</table>

Total Estimated Program Revenue & Support

<table>
<thead>
<tr>
<th></th>
<th>$53,482</th>
<th>$62,025</th>
<th>$91,138</th>
<th>$122,986</th>
<th>$200,797</th>
<th>$225,811</th>
</tr>
</thead>
</table>

Net

<table>
<thead>
<tr>
<th></th>
<th>$0</th>
<th>$-48,375</th>
<th>$-25,141</th>
<th>$464</th>
<th>$66,876</th>
<th>$86,293</th>
</tr>
</thead>
</table>

SurvStat Certificate Completion Assumptions

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>#' of terms per year</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#' of courses per term</td>
<td>1 or 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#' of courses per year</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#' of instructors per year</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To complete the 18-credit; 6 course program:

Students take 6 courses (18 credits) | 18

Cumulative 5 Yr

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TTL Expenses</td>
<td>$676,121</td>
</tr>
<tr>
<td>TTL Revenue/Support</td>
<td>$756,239</td>
</tr>
<tr>
<td>TTL Net</td>
<td>$80,118</td>
</tr>
</tbody>
</table>
DATE: February 13, 2014

TO: Kimberly A. Bethea  
   Associate Director, Office of Extended Studies

CC: Daniel Mack  
    Associate Dean for Collections, Libraries
   Gerri Foudy  
    Manager for Collections and Scholarly Communication, Libraries

FROM: Otis Chadley, Librarian for African American Studies, Anthropology, Sociology  
      Lily Griner, Librarian for Business, Economics, Agricultural & Resource Economics  
      Judy Markowitz, Librarian for Government and Politics, Public Policy, Women’s Studies

RE: Library Resources to Support Graduate Certificate in Professional Studies in Survey Statistics

The University of Maryland (UM) Libraries currently support the graduate students in a number of online/distance programs. With this new proposal, the University of Maryland Libraries collections can adequately support the instruction and research needs of the newly proposed Graduate Certificate in Professional Studies in Survey Statistics.

As an online program, the Graduate Certificate in Professional Studies in Survey Statistics has special concerns. Ease of access and flexible availability of library materials is paramount, and as a University of Maryland program, students will expect this flexibility to be coupled with high academic quality and integrity. The current purchasing practices and available collections at the UM Libraries will ensure that these two goals can be met, both now and for the life of the program.

Monographs

The Libraries’ current collection of eBooks related to survey statistics is sufficient to meet the needs of the proposed program. The ongoing acquisition of scholarly books is expected to be adequately covered through existing acquisition practices and budgeting. The current collection development practices in the Libraries already support all aspects of the program topics such as survey methods, sampling, design and statistical data. In addition, the University of Maryland has a robust tradition of emphasizing innovation and access to online resources.

Beginning in 2005 through early February 2014, approximately 31.53% of the total monograph collection in the areas of social sciences statistical methods, statistical models, sampling statistics, mathematical statistics, questionnaires, survey methodology, research methodology, statistical mathematics, research design, and data interpretation is available in eBook format. The materials are accessible both on and off campus. Due to the UM Libraries’ purchasing preference for electronic materials, this percentage is expected to continue to increase significantly in the coming years.
Electronic Resources: Journals and Databases

Journals

The Libraries’ current list of subscriptions includes both core and related journals that support research and teaching in survey methodology.

A search was performed in Journal Citation Reports 2012 (JCR), a database that uses citation data to rank and determine the impact factor of journals in an academic field. While Survey Statistics does not fall neatly into a JCR-specified category, the UM Libraries provide access to the top 10 ranked journals from cross sections of the JCR categories of Social Sciences Mathematical Methods, Economics, Geography, Sociology, Political Science, Health Sciences and Services, as well as the majority of top ten ranked journals from other related disciplines which conduct surveys.

American Journal of Evaluation
American Journal of Public Health
American Journal of Sociology
Annual Review of Sociology
American Sociological Review
Applied Geography
Econometrica
Geographical Analysis
International Journal of Geographical Information Science
Journal of Applied Econometrics
Journal of Business & Economic Statistics
Journal of Econometrics
Journal of Educational and Behavioral Statistics
Journal of the American Medical Informatics Association
Journal of the American Statistical Society
Milbank Quarterly
Multivariate Behavioral Research
Political Geography
Public Opinion Quarterly
Review of Economics and Statistics
Risk Analysis
Sociological Methodology
Sociological Methods & Research
Structural Equation Modeling – A Multidisciplinary Journal

Databases

In addition to journal subscriptions, the UM Libraries subscribe to a large number of significant databases that will support the program by providing access to the previously mentioned journals as well as other relevant resources.
**EbscoHost Databases**

Databases from this vendor may be searched together to remove duplicate items. Of the more than 90 subscribed EbscoHost databases, many cover topics in the area of survey statistics and all the related areas (sampling, research design, measurement...). Database titles include but are not limited to:

- Academic Search Premier (multidisciplinary)
- Business Source Complete (business)
- Criminal Justice Abstracts (criminology)
- EconLit (economics)
- ERIC (education)
- Education Research Complete (education)
- Health and Psychosocial Instruments (measurement instruments (i.e. questionnaires, interview schedules, checklists, coding schemes, rating scales, etc.) in the fields of health and psychosocial sciences)
- Health Policy Reference Center (health)
- Mental Measurements Yearbook with Tests in Print (index to educational, psychological, and vocational tests and measurements commercially published in the English language.)
- SocINDEX with Full Text (sociology)
- PsychARTICLES (psychology)
- PsychINFO (psychology)
- Psychology and Behavioral Sciences Collection (psychology and behavioral sciences)

**Additional Databases**

- ArXiv, E-Print Archive (physics, mathematics, non-linear science, computer science, quantitative biology and statistics.)
- Collection of Biostatistics Research Archive (COBRA) (repository of biostatistics technical reports and working papers. Topics include epidemiology, genetics, bioinformatics, and much more)
- Dissertations and Theses (dissertations and theses)
- JSTOR (humanities, social sciences, and sciences)
- MathSciNet Mathematical Reviews (mathematics)
- Mintel (market research studies, analyzing market sizes and trends, market segmentation, consumer attitudes and purchasing habits, opportunities, weaknesses and the future of the market)
- Project Muse (social sciences, arts and humanities)
- PubMed (health and medicine)
- Public Health (public health)
- ScienceDirect (science, technology and medicine)
- Scopus (science, technology, medicine, social sciences and arts and humanities)
- SIAM eBooks (applied mathematics and computational science)
- Springer eBooks (2005-2011) (sciences, social sciences, arts and humanities)
- Springer Online Journal Archive (pre-1996) (Behavioral Sciences, Biomedical and Life Sciences, Business and Economics, Chemistry and Materials Science, Computer Science, Earth and Environmental Sciences, Engineering, Humanities, Social Sciences and Law, Mathematics, Medicine, Physics and Astronomy)
- Web of Science (social sciences, sciences)

**Statistical Databases**

- Balance of Payments Statistics (IMF - total goods, services, factor income, and current transfers an economy receives from or provides to the rest of the world, capital transfers and changes in each economy’s external financial claims and liabilities and world totals of balance of payments components and aggregates)
- Data-Planet Statistical Datasets (statistics produced by the U.S. government, major international and
intergovernmental organizations, professional and trade organizations, state government agencies, and universities)

- Historical Statistics of the United States (standard source for the quantitative facts of American history)
- International Financial Statistics (IMF-exchange rates, international liquidity, international interest rates, prices, national accounts, and international transaction)
- RDS TableBase (Tabular data on companies, industries, demographics, and products)
- World Development Indicators Online (550 development indicators, with time series for 200 countries and 18 country groups)
- Statistical Insight (statistics produced by the U.S. government, major international and intergovernmental organizations, professional and trade organizations, state government agencies, and universities)
- Statistical Abstract of the United States (social and economic conditions in the United States, comprised of data from the Census Bureau, other Federal agencies, and private organizations)

At this time, the UM Libraries’ purchasing preference is for electronic materials (i.e. those that can be accessed online), a trend that will serve to place face-to-face and online students on the same educational footing. This is especially relevant to the online Professional Studies in Survey Statistics program, where online flexibility is presented with no reduction in educational quality. The UM Libraries purchasing and access priorities are in line with this goal.

GIS Online Courses

Access to the following GIS online courses relating to geographic survey methodology and data analysis is available through our educational license of Esri GIS software.

Performing Spatial Interpolation Using ArcGIS

Performing Spatial Interpolation Using ArcGIS

Learning ArcGIS Spatial Analyst

Regression Analysis Using ArcGIS

Solving Spatial Problems Using ArcGIS

Distance Analysis Using ArcGIS

Building Models for GIS Analysis Using ArcGIS

Subject Librarians

The UM Libraries’ have a professional staff of Librarian Subject Specialists (http://www.lib.umd.edu/directory/specialists) who may be consulted for help in locating information in their areas of expertise, and may be available to conduct instruction sessions for university courses (http://www.lib.umd.edu/tl/course-guides/all).
Interlibrary Loan & Article Express

When resources are not part of our holdings within the sixteen University System of Maryland and Affiliated Institutions (USMAI) libraries or the Committee on Institutional Cooperation (CIC), the Interlibrary Loan unit can obtain materials from other libraries at no charge to the student or faculty. Most recent journal articles can be provided through electronic delivery, allowing students in online programs to make the most flexible use of their time.

Additionally, through the auspices of the Interlibrary Loan unit, graduate students and faculty can make use of Article Express, an electronic document delivery service for in-house materials. Article Express allows graduate students and faculty to place requests for book chapters and journal and/or conference papers that are available in print in the Libraries, and have them scanned and delivered electronically within three business days. This service is also free of charge.

These enhanced access services will support the instruction and research needs of the technology entrepreneurship faculty and students.

Conclusions

At the present time, UM Libraries holdings are adequate to support the proposed set of courses, and current purchasing preferences and trends are especially beneficial for an online program. While it is anticipated that this will continue, the Libraries collections are vulnerable to budget and market fluctuations. Journal collections and other continuing resources remain particularly vulnerable. The level of future support is thus dependent upon ongoing funding and other circumstances affecting continuing subscriptions.
Clarification on Administration of Program

Please note that during the proposal review process, the Joint Program in Survey Methodology decided to administer the program and not use the Office of Extended Studies.