A 2015-2016 Proposal to the CSU Commission on the Extended University

Health Professions Post-Baccalaureate Certificate

Submitted by:
California State University, Long Beach

Dr. Jane Close Conoley, President
California State University, Long Beach

Dr. Jeet Joshee, AVP and Dean
College of Continuing and Professional Education
California State University, Long Beach
Abstract

There is rapid and consistent growth in the healthcare industry in the U.S. Due to this growth there is also a need for additional healthcare practitioners. Of the 30 occupations projected to experience the largest employment increases, five are in healthcare. According to the December 2013 Bureau of Labor Statistics Monthly Labor Review, these five occupations combined are projected to add 1.6 million jobs over the 2012-2022 decade. Additionally, the California Hospital Association has indicated that California will need an additional one million healthcare practitioners by 2030.

Congruent with the increase in demand for healthcare practitioners, there is also an increase in demand from numerous undergraduates with a non-science bachelor’s degree (as well as students who possess a background in the sciences), who are seeking to bolster their academic credentials and extend their scientific studies with the intention of gaining entry into medical school or other healthcare related programs. CSULB’s College of Natural Sciences and Mathematics (CNSM) currently provides advising/counseling to undergraduate students and those seeking to become members of the health/allied health professions i.e. physicians, dentists, pharmacists, dietitians, clinical laboratory scientists, for entry to post-baccalaureate health professions. CNSM receives several inquiries each month about post-baccalaureate options available for the completion of prerequisites for entry into medical, dental, veterinary and physician assistant programs. Due to the number of inquiries and the success of other programs of this type in California and nation-wide, it is clear that there is both a need and demand for this type of program.
Through this proposed credit certificate program, CSULB will address one of the most critical needs of the state and its people by providing a high-quality education and an important stepping stone to this uniquely motivated population of students.

The primary target audience is recent bachelor degree graduates whose interest in the health/allied health professions has surfaced (or re-surfaced) and who need coursework to prepare them for medical, dental, pharmacy, and optometry schools; or programs in clinical laboratory science, dietetics, and related fields. Some of these graduates may have taken few pre-requisite courses. Others may have been non-science majors as undergraduates interested in one of the health/allied health programs. There are also those who have been in the workforce for a year or more and now desire a career change to one of the health/allied health professions.

In addition to a recommended sequence of courses (ensuring availability) and a required volunteer experience, students will receive tutoring, discussion sessions, and student support mechanisms to enhance their educational experience and support their overall success.

The proposed program will achieve four of the seven objectives identified by the Commission on the Extended University having to do with workforce development, outreach to broader constituencies, providing creatively developed programs, and lifelong learning opportunities (pg. 8).

California’s medical doctors and other leaders of the state’s healthcare community do not reflect the increasing diversity of the state. This has been shown to contribute to the inequitable distribution of convenient, high-quality healthcare. Through this program CSULB will extend its widely recognized success in attracting and graduating underserved groups.
Program/Project Description

The Health Professions Certificate will be a four-term, 15-month, credit certificate program designed for students who have previously completed a bachelor’s degree and now want to complete the necessary pre-requisite coursework to apply to health/allied health professional schools/programs.

The program will provide a cohort of students with intensive laboratory and lecture courses, supportive discussion sessions, and community service opportunities in the health professions. CSULB’s Health Professions Advising Office will provide advising/counseling and help with professional school applications, writing personal statements, and access to standardized test preparation courses. The unit cost of the program is planned at $660. Total units necessary to complete the certificate will be 44 - 50 units, depending on the student’s background.

A student completing the Health Professions Certificate will be able to:

- Describe and explain the basic principles of chemistry, physics, math and biological sciences.
- Successfully demonstrate the level of their knowledge on required health/allied health professional admission exams such as the MCAT, DAT, OAT, PSAT, etc.
- Demonstrate the communication skills, teamwork abilities, and responsible attitudes necessary to function as competent, health/allied health professionals.
**Curriculum**

Below is an outline of our planned curriculum and the recommended sequence of courses:

**Certificate Curriculum**

Applicant Enters Program with Credit in
- MATH 119A or 122 – Survey of Calculus or Calculus I
- BIOL 260 or STAT 108 – Biostatistics or Statistics for Everyday Life
- PSY 100 or SOC 100 – General Psychology or Principles of Sociology

**First Term (Summer I)**
- CHEM 111A – General Chemistry w/Laboratory | 5 units
- SI 60 – Supplemental Instruction for CHEM 111A | 1 unit
- NSCI 308 – Community & Careers in Health Professions | 3 units

Total = 9 units

**Second Term (Fall I)**
- CHEM 111B – General Chemistry w/Laboratory | 5 units
- SI 60 – Supplemental Instruction for CHEM 111B1 | 1 unit
- BIOL 208 – Human Anatomy w/Laboratory | 4 units
- SI 60 – Supplemental Instruction for BIOL 208 | 1 unit
- Continue Volunteer experience | 11 units

Total = 11 units

**Third Term (Spring I)**
- BIOL 207 – Human Physiology w/Laboratory | 4 units
- SI 60 – Supplemental Instruction for BIOL 207 | 1 unit
- PHYS 100A – General Physics w/Laboratory | 4 units
- SI 60 – Supplemental Instruction for PHYS 100A | 1 unit
- CHEM 227 – Survey of Organic Chemistry | 3 units
- SI 60 – Supplemental Instruction for CHEM 227 | 1 unit
- Or
- CHEM 220A – Organic Chemistry Lecture | 3 units
- CHEM 223A – Organic Chemistry Laboratory | 1 unit
- SI 60 – Supplemental Instruction for CHEM 220A | 1 unit
- 14-15 units

**Fourth Term (Summer II)**
- BIOL 212 – Intro to Cell & Molecular Biology w/Laboratory | 4 units
- SI 60 – Supplemental Instruction for BIOL 212 | 1 unit
- PHYS 100B – General Physics w/Laboratory | 4 units
SI 60 – Supplemental Instruction for PHYS 100B 1

CHEM 448 - Fundamentals of Biological Chemistry
or
CHEM 220B – Organic Chemistry Lecture 3
CHEM 223B – Organic Chemistry Laboratory 1
SI 60 – Supplemental Instruction for CHEM 220B1 10-15 units

Total Units for Certificate = 49 or 50 units depending upon the Organic Chemistry course(s) needed.

As part of the preparation of this proposal, CCPE contracted with the Education Advisory Board (EAB), an educational research and consulting firm, and requested a scan of existing similar programs. Highlights from the EAB report shows data supportive of this project.

- Almost 80% of students who participated in the contact institution’s programs attained acceptance into graduate programs (nearly double the national average)
- Student demand has been high, exceeding capacity at some institutions

EAB's findings are summarized in the chart on the following page:
<table>
<thead>
<tr>
<th>Pre-health Professional Program Elements at Contact Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year Launched</strong></td>
</tr>
<tr>
<td><strong>Program Cohort</strong></td>
</tr>
<tr>
<td><strong>Number of Courses Required</strong></td>
</tr>
<tr>
<td><strong>Cost</strong></td>
</tr>
<tr>
<td><strong>Schedule</strong></td>
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<tr>
<td><strong>Time to Completion</strong></td>
</tr>
<tr>
<td><strong>Student Focus</strong></td>
</tr>
<tr>
<td><strong>Medical School Attainment Rate</strong></td>
</tr>
</tbody>
</table>
**Goals, Objectives, and Outcomes**

As stated, this program will prepare bachelor-level graduates who have taken few, if any, pre-requisite courses for medical, dental, pharmacy, optometry school; or programs in clinical laboratory science, dietetics, etc. Thus, part of the target audience includes graduates with non-science degrees. Many may have been in the workforce for a year or more and now seek career change in one of the health/allied health professions.

The program will have tutoring, discussion sessions, and student support mechanisms to help non-science graduates succeed. The curriculum is structured so that students will be able to take the courses in a recommended sequence and assure availability of the courses when needed. Built into the curriculum within the first term is a service learning course which will give students an opportunity to volunteer in health related non-profit organizations devoted to serving the poor, children and the elderly. This volunteer experience may be extended through multiple terms. It will increase the students’ experience and appreciation for working with diverse populations.

This project will be a collaborative effort by the College of Health and Human Services, the College of Natural Science and Mathematics, and the College of Continuing and Professional Education. As mentioned above, this program will not only help meet California’s workforce needs, but will also help produce highly qualified healthcare professionals for the global market. Here is how the proposed program will achieve at least four of the goals identified by the Commission on the Extended University:
1. **Meet California's economic and workforce development needs** by preparing a new, diverse, and highly-motivated population of students to enter programs that will give them the opportunity to become tomorrow’s health professionals.

2. **Increase access to educational opportunities by serving broader constituencies** through the recruitment of students who better reflect the diversity of California.

3. **Creatively develop a new program** that builds on existing courses and support resources to create an opportunity where none had existed among Southern California CSUs.

4. **Provide personal and lifelong learning opportunities**, partly by attracting mature, returning students who dream of dedicating themselves to helping others.

We will accomplish these as the program serves students and generates revenue.

**Our objectives and anticipated outcomes are:**

1. To form an advisory board to assist in prioritizing of immediate and future proposed program deliverables. The board will include three industry leaders, three faculty members, and one representative from CCPE. The board will play a significant role in the design and evaluation of survey results that will assess industry needs and target audience. (Faculty and staff).

2. To conduct a wide-ranging market survey to determine potential student interest and expectations. We will analyze the results of the survey and use it to guide our curriculum development. The advisory board will be asked to review and comment on the survey results. (Faculty, advisory board members, and CCPE Marketing and Communication Department).
3. To develop a program with a comprehensive curriculum and defined learning outcomes that responds directly to the needs of the market. Included will be a program website and assessment procedures. We will create a comprehensive curriculum, assessment procedures, and teaching and evaluation materials. (Faculty, advisory board members, and CCPE staff).

4. To develop a dissemination plan to share the development process and results with other CSU campuses. The plan will include marketing strategies. (CCPE Marketing & Communications staff).

Implementation Plan

We estimate it will take a year to complete the development of the proposed program. It is anticipated that the program will be launched in Fall 2016. The following is our implementation plan schedule:

Task 1

Form an advisory board. In addition to three faculty members and one CCPE representative, three industry leaders will be crucial for ensuring that the proposed program offers a solid and comprehensive curriculum (Spring 2015).

Task 2

Coordinate regular meetings for the advisory board between CSULB faculty members and industry leaders to collect feedback and to present, discuss, and finalize the curriculum, assessment, and evaluation plan. (Spring 2015)
Task 3
Prepare and disseminate a survey that will determine the regional, national, and international curriculum needs for employment and continuing education. (Spring 2015)

Task 4
Prepare and disseminate a survey that will determine the regional, national, and international target students for the proposed program. (Spring 2015)

Task 5
Design and develop a non-traditional certificate program with a rigorous curriculum, and define its learning outcomes to fulfill the needs of post-baccalaureate students wishing to pursue a health profession. We will use the results of the surveys to analyze and develop a comprehensive curriculum. The objectives of the program will be revised based on the findings of the surveys. The advisory board will determine the final objectives. (Fall 2015)

Task 6
Develop assessment tools and procedures. Faculty will create assessment tools that will ensure the continuous improvement of the program. The advisory board will review, discuss, and approve these tools and procedures. (Fall 2015)

Task 7
Disseminate the program within CSULB colleges and throughout the CSU system through presentations and posting of online resources and reference material (Spring and Summer 2016).
Task 8

Disseminate the program regionally, nationally, and internationally through publication and presentations at professional conferences (Spring and Summer 2016).

Task 9

Launch the first cohort (Fall 2016).

**Project Impact**

Through this proposed post baccalaureate certificate program, CSULB will provide high-quality education to a uniquely motivated population of students. As mentioned previously, there is an increase in demand from numerous undergraduates seeking to gain the courses necessary to apply to medical school or other healthcare related programs. At the same time, there is a high demand for healthcare professionals to serve in high-need areas throughout the state of California and nationwide.

Additionally, diversity is needed in our healthcare work force. CSULB is noted for its diversity and attracts enrollment from all segments of the surrounding community. A culturally diverse campus, such as CSULB, can be an important player in helping to provide the medical professionals of the future.

In summary, the proposed program will meet the following goals:

1. Meet California’s economic and workforce development needs
2. Increase access to educational opportunities by serving broader constituencies
3. Creatively develop new programs
4. Provide personal and lifelong learning opportunities
Dissemination Plan

The following actions will be implemented to disseminate the program development process and outcomes so that other CSU campuses may replicate best practices:

1. Publication of the following information on the CSULB program website:
   - Survey results
   - Curriculum vitae of advisory board members
   - Program goals, objectives, and outcomes
   - Suggestions of industry leaders
   - Preliminary and final curriculum
   - Assessment process and results

2. Publication of the program description, admissions requirements, and final curriculum in the CSULB catalog.

3. Presentation of survey results, the program description and final program curriculum in national and international conferences.

4. CSULB campus presentations regarding program development.

5. Development of an online communication tool to address requirements of CSU campuses that may need additional help.
The following methods will be utilized to disseminate the program:

1. Collaboration with the CSULB Public Affairs Office and CCPE’s Marketing and Communications Department to generate media coverage.
2. Collaboration with CSULB’s Center for International Education to ensure current and potential international students are aware of the program.
3. Advertising through national and international professional association magazines, websites, and other publications.
4. Coordination through CCPE’s Marketing and Communications Department for creation of social media outlets, blogs, and digital contents.
5. Participation in local and international events, seminars, conferences, and professional community meetings.

Evaluation Plan

The outcomes of the project objectives will be assessed by the following methods:

1. Form an advisory board. In addition to three faculty members and one CCPE representative, three industry leaders will be crucial for making sure that proposed program offers a solid and comprehensive curriculum (Spring 2015).
   
   **Assessment:** The advisory board will be able to assess the outcomes based on the input from industry experts.

2. Survey market demands and target audience.

   **Assessment:** CCPE Marketing and Communications Department will conduct the surveys and obtain the results. The advisory board will help achieve this objective by analyzing the survey results.
3. Design and develop an innovative non-traditional certificate program with a rigorous curriculum and define its learning outcomes to fulfill the needs of post-baccalaureate students wishing to pursue a health profession. We will use the results of the surveys to analyze and develop a comprehensive curriculum. The objectives of the program will be revised based on the findings of the surveys. The advisory board will determine the final objectives.

**Assessment:** Faculty members and advisory board members will compare our comprehensive curriculum, assessment procedures, and program course teaching materials with other existing programs.

4. Disseminate program objectives, outcomes, and assessment procedures to other CSU campuses.

**Assessment:** We will gather feedback from other CSU campuses. The advisory board will use the feedback of all dissemination methods (presentation, publication, and media) to assess the effectiveness.

5. Market the proposed program both nationally and internationally.

**Assessment:** The advisory board and CCPE will be able to use the response rate and feedback of all dissemination methods (website and postal mailings, presentations, publications, and media) to assess the effectiveness.
Budget and Budget Narrative (2-year project):

<table>
<thead>
<tr>
<th>Description</th>
<th>CEU Grant Funds</th>
<th>Local Funds (CCPE)</th>
<th>Project Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
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<tr>
<td>Salaries</td>
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<tr>
<td>Benefits</td>
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<td>Student Workers</td>
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<tr>
<td>Salaries</td>
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<td>Travel</td>
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<tr>
<td>Initial Materials/Marketing</td>
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<td>Miscellaneous</td>
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<tr>
<td><strong>TOTALS</strong></td>
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<td><strong>$35,000</strong></td>
<td><strong>$85,000</strong></td>
</tr>
</tbody>
</table>

Budget Narrative:

**Faculty Stipends:** $50,000 is needed to compensate two faculty members for development activities.

**Student Workers:** From a total of $11,860, $5,930 will compensate one student web programmer. This student will design the proposed program website and post program information online. The programmer will also design the online dissemination tool that facilitates posting and response processes for questions raised by other CSU campuses. An additional $5,930 will compensate a second student who will support sending and receiving survey information, analyzing and summarizing information,
and following up with national and international industry experts.

**Fringe Benefits:** $5,152 (8% for all faculty and student assistants).

**Conferences and Travel:** $3,000 is needed to cover the cost of traveling to and presenting the program development findings at a leading conference.

**Initial Marketing and Dissemination:** $15,000 is needed to cover the cost of preliminary regional, national, and international marketing and dissemination efforts, including design and mailing of brochures, flyers, and posters. It will also cover light refreshments for hosting one CSULB on-campus dissemination presentation, and advertisement through regional, national, and international professional association magazines.

**Letters of Support:**

Letters of support are attached from the Deans of the College of Health and Human Services, the College of Natural Science and Mathematics, and the College of Continuing and Professional Education, as well as a letter from the Director of CSULB’s Center for Community Engagement.
February 16, 2015

Dr. Jeet Joshee, AVP and Dean
College of Continuing and Professional Education
6300 State University Drive, Suite #104
California State University, Long Beach
Long Beach, CA 90840

Dear Associate Vice President Joshee,

I am writing now in full support of your proposed “Health Professions Post-Baccalaureate Certificate.” As clearly articulated in your proposed certificate proposal, there is an urgent need in our local community and across the state for trained health care professionals. The certificate will be a significant adjunct to the mission of the College of Health and Human Services (CHHS), to promote the advanced training of students for ever changing professional practices in the health care industry. Your target population of prospective students, those with bachelor’s degrees in disciplines often unrelated to educational foundational courses most often associated with health professions, e.g., anatomy and physiology, or chemistry, represent pre-professionals who have already demonstrated academic competence. Your certificate can steer these post baccalaureate students to careers wherein they are immediately employable.

As noted in your proposal, the model for post-baccalaureate health services-related certificates has already been successfully demonstrated on other Cal State campuses. CHHS is ready to support your efforts in bringing the “best practices,” of our sister campuses to CSULB. Presently, we are directly contributing to your certificate’s curriculum through coursework in nutritional sciences. Our college too, can be available to possibly connect the post-baccalaureate students to internship and service learning sites already in place for majors within many of our eleven departments housed within CHHS. We look forward to collaborating with your college and those of others on campus to develop this very worthwhile certificate program.

Should you have any questions, please do not hesitate to contact me.

Best,

James E. Koval, Ph.D., MFT
Interim Dean
College of Health and Human Services, ET-200
1250 Bellflower Boulevard
Long Beach, CA 90840-5606
Office: 562-985-4691
FAX: 562-985-7581
Email: James.Koval@csulb.edu
February 16, 2015

CSU Commission on the Extended University
CSU Office of the Chancellor
401 Golden Shore, 6th Floor
Long Beach, California 90802

Dear Members of the CSU Commission on the Extended University:

The CSULB College of Natural Sciences and Mathematics (CNSM) is pleased to support and collaborate with the College of Health and Human Services (CHHS) and College of Continuing and Professional Education (CCPE) in offering the proposed Health Professions Post-Baccalaureate Certificate program.

This proposed program will help provide opportunities for recent baccalaureates who are interested in helping meet the growing demands and needs for health care professionals in our nation’s communities. In addition, this program supports the goals identified by the Commission to increase the access to educational opportunities by serving the broader constituencies, provide personal and lifelong learning opportunities, enhance California’s economic and workforce development needs, and build on existing courses and support resources to create opportunities.

The CNSM is committed to collaborating with CHHS to develop and to offer this program through CCPE and to make it a successful one.

Sincerely,

Laura Kingsford, Ph.D.
Dean
February 16, 2015

CSU Commission on Extended University
CSU Office of the Chancellor
401 Golden Shore
Long Beach, CA 90802

Dear Commissioners and the members of the RFP Committee,

On behalf of the College of Continuing and Professional Education (CCPE) at California State University, Long Beach (CSULB) I am delighted to support the grant proposal submitted to the CSU Commission on Extended University to develop the *Health Professions Post-Baccalaureate Certificate* program.

CCPE is committed to providing additional access to high quality higher education degree and certificate programs to the citizens of the State of California and beyond. This program will meet the high-demand growth that exists in the healthcare sector. Over the next several years it is anticipated that demand for healthcare workers will continue to grow. This program will fulfill the needs of those who do not have the necessary academic coursework to enter the healthcare field.

For the aforementioned reasons, CCPE will support the grant proposal by providing the necessary matching funds of $35,000. Matching fund will be provided through CCPE’s new program development fund.

Thank you for your consideration of funding the *Health Professions Post-Baccalaureate Certificate* program proposal.

Sincerely,

\[Signature\]

Dr. Jeet Joshee
Associate Vice President and Dean
February 16, 2015

The Center for Community Engagement (CCE) at California State University, Long Beach (CSULB) is supportive of the proposal for Health Professions Post-Baccalaureate Certificate. This proposal is a collaborative effort by the College of Health and Human Services, the College of Natural Science and Mathematics, and the College of Continuing and Professional Education. The CCE is committed to strengthening our university-community partnerships addressing community identified needs.

This program will prepare bachelor-level graduates who have taken few, if any, prerequisite courses for medical, dental, pharmacy, optometry school; or programs in clinical laboratory science, dietetics, nursing, etc. Given that there is a great demand for health care professionals in underserved communities throughout California and the nation, and that there is strong alignment with CSULB’s institutional mission around the public good, we feel that the proposed program will successfully achieve the intended goals.

Sincerely,

[Signature]

Juan M. Benitez, PhD
Executive Director