Cemal Ozemek, PhD, ACSM-CEP, FACSM, FAACVPR
Registered Clinical Exercise Physiologist
Associate Editor, Journal of Clinical Exercise Physiology
Director, Doctor of Clinical Exercise Physiology Program
Director, Cardiac Rehabilitation
University of Illinois at Chicago

Creating the First Professional Doctor of Clinical Exercise Physiology Program and a Call to Expand the Model

The inaugural cohort of the professional Doctor of Clinical Exercise Physiology (DCEP) program started its training during the Fall 2022 semester at the University of Illinois at Chicago (UIC). This first-of-its-kind program in CEP provides unique didactic and applied training opportunities beyond what is currently available at the masters level. Our model is an accelerated 1-year extension to masters level training in CEP and aims to: (a) prepare students to effectively work with clinically complex patients, (b) build leadership skills to manage clinical personnel, and (c) prepare students to understand the foundations of creating and maintaining financially sound clinical programs (1–3).

In conceptualizing the DCEP program's offerings, an internal review (not published) of CEP masters graduate programs across the nation was conducted to understand areas of training that received great attention and areas feasibly within the CEP's professional prevue that received little attention. As anticipated, many programs placed a heavy emphasis on delivering didactic and practical training to prepare students to work with individuals with cardiovascular diseases, which correlates well with the high percentage of CEPs who report working in cardiac rehabilitation (4). Moreover, programs emphasized preparing students for the American College of Sports Medicine Certified Clinical Exercise Physiologist (ACSM-CEP) exam with little or no focus on other specialty certifications available through the ACSM (i.e., Certified Cancer Exercise Trainer, Certified Inclusive Fitness Trainer). Accordingly, we have developed advanced courses on the assessment and delivery of exercise in individuals with musculoskeletal conditions, spinal cord lesions, neuromuscular conditions, cognitive disabilities, various cancers, and chronic kidney disease. In addition to ACSM's certifications and certificates, another professionally meaningful and rewarding certification that many programs do not prepare their students for is the Certified Diabetes Care and Education Specialist (CDCES) through the Association of Diabetes Care and Education Specialists. The DCEP program thus offers a course, clinical observations with CDCES professionals, and opportunities to directly deliver diabetes education in order to give students the necessary information and hours to sit for the exam. Lastly, we have included our department's existing cardiovascular imaging courses to teach students the knowledge and skills to perform and analyze cardiac echocardiograms as well as other vascular images. This presents another opportunity for the DCEP student to expand their toolkit and increase their marketability when applying for clinical or academic/research positions that have cardiovascular imaging as a part of their department or research studies.

In our review of programs, another common observation was the incorporation of a course that reviews the professional responsibilities of an employee working in a cardiac rehabilitation and/or pulmonary rehabilitation setting. However, it did not appear that programs offered high level training that builds strong foundations in leadership, personnel and business management, marketing, or clinical program development that ensures financial stability. Many of these professional skills are instead acquired on the job over the course of a career. For this reason, UIC's professional DCEP program offers professional development courses that prepare students to be effective leaders and future program managers earlier in their careers.

To continue to hone and grow our DCEP program, an additional goal is to increase the number of DCEP programs nationally and internationally. The University of Mary in Bismarck, North Dakota, is currently in the process of completing and submitting their proposal to their institution to launch a DCEP program along with other institutions beginning conversations within their departments. Departments interested in developing a DCEP option can follow a similar model that allows students to decide whether or not they want to continue after completing their masters degree. Key aspects of UIC'S DCEP program that fosters applied training opportunities is the existence of a Faculty Practice where faculty deliver services to high risk and clinically diverse patients as well as agreements with hospitals that gives our students access to multidisciplinary practitioners and unique

clinical cases. Lastly, it is important to acknowledge that a DCEP degree is not mandatory nor anticipated to be the entry level degree to be an effective or competent CEP. Our students' primary motivating factor for pursuing a DCEP degree is to grow their clinical knowledge and skills in ways that are not currently available through the traditional PhD model. From our current observations, we have seen students quickly expand their ability to confidently work with patients with clinically complex conditions, deliver diabetes care and education, as well as understand and apply the fundamentals of leadership. These collective experiences have provided reassurance that the DCEP model will indeed elevate the CEPs and ultimately the field.

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