

HEALTH COACHING COURSE DATA ANALYSIS AND EVALUATION

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Abstract

Background: The same knowledge and skills that make a great health coach, also make a quality healthcare provider. Currently, East Carolina University offers no course which trains pre-healthcare related majors in hands-on experiential health coaching skills.

Objective: The overarching goal is to evaluate the quality and feasibility of this health coaching course to maximize the impact it could have on students and their abilities to inflict positive behavior change and demonstrate the value it offers to our university.

Methods: East Carolina University undergraduate students majoring in kinesiology, nutrition, and other health science majors (N=15) participated in a health coaching course and completed self-assessments, evaluating their knowledge, skills, and confidence about health coaching. Descriptive statistics, T-test, and content analysis were utilized.

Results: Students completed self-assessments of their content knowledge prior to and after the completion of the health coaching course. Through analytical evaluation these questionnaires reflect the high quality of the health coparticipants' and the positive impact it has on the participants knowledge and skills.

Conclusions: Based on the data, the course grant could/should be renewed for further continuity of instruction due to the long-term positive impact it can have on the health science majors at ECU and their future health care careers.

Keywords: health coaching, behavior change, feasibility, impact

Introduction

Currently, East Carolina University does not offer an experiential, interdisciplinary health coaching course for undergraduates in healthcare related majors. This is an invaluable skill however, because the field of patient/client care is so strongly affected by the quality of the communication of risks and needs. As of now, healthcare costs surmount to a whopping 3.5 trillion dollars, and 90% of that is spent treating physical activity and nutrition related chronic diseases, both of which are immensely malleable aspects to health. Physical activity and nutrition are strong determinants in the development of individual body composition, which is why accurate education and guidance from properly trained health coaches is so valuable, and clearly that need is not effectively being met currently.

The term “health coaching” only truly arose in culture and literature around the early 2000’s. This idea of wellness and living a healthy lifestyle has not been around for much more than two decades. That being said, it is a fairly new idea, but has already shown to be extremely successful in facilitating positive behavior change. Health coaching is more than just teaching clients to be happy and live a fulfilling life (i.e. wellness coaching), but it can produce change on a larger, more clinically beneficial scale. Professional health coaching uses research-based approaches to support clients in their health behavior change processes towards improving quality of life. Whether the client's goals are weight loss, improving chronic health conditions, decreasing health care costs, enhancing wellness, or minimizing health risks, health coaching offers the tools to achieve those goals through self-management, clinical strategies and other interventions. Creating an undergraduate health coaching course for kinesiology, nutrition, and other health science majors (e.g. public health, pre-med, etc.), which elicits skills and interdisciplinary training through hands-on experiential learning environments, will produce

knowledgeable and successful health coaches. Ultimately, improving the quality of healthcare providers knowledge and coaching skills has the potential to reduce the large-scale annual healthcare costs which tremendously impact the economy.

Following the completion of the course, students will know the physical activity and nutrition standards suitable for effective health promotion, weight management, and chronic disease risk reduction. They will also be equipped with the skills to aid in successful client behavior change. According to Huffman's *Advancing the Practice of Health Coaching: Differentiation From Wellness Coaching*, "...it is the clinical professional who has the responsibility, liability, and an oath to protect the best interest of the patient/consumer with regard to health care and, in this developing field, to ensure that the public receive health coaching from qualified individuals who are best suited to safely guide them" (para. 10, 2016). If we do not address this gap in education and our responsibility to produce successful and knowledgeable professionals, then we will be failing our future generations' quality of healthcare. Due to the nature of creating a course for a specialty where one has not previously existed, it is pertinent to evaluate the quality and feasibility of said course, prior to launching broader availability among the university, with the end goal being to create something that improves healthcare careers and patient care overall.

There is some limited current literature on the topic of health coaching courses efficacy and value in pre-health professional university programs. However, an article in the *American Journal of Lifestyle Medicine* specifically addresses a health coaching class with experiential learning done in the last several years (Sibold J, Whitman S, Westervelt K, 2023). We currently know that there is a need for these pre-professional students to have hands-on experience in health coaching prior to their careers to be able to address the wellness needs that the general

population have which are not being met. For this study at ECU, we are presently evaluating the impact other similar programs have had on their students, so reviewing their data will be beneficial.

According to *Evaluation of a Health Coaching Experiential Learning Collaboration With Future Health Promotion Professionals*, “Students reported improved comfortability with the skills necessary to be a health coach ($p = .02$), improved self-efficacy for health coaching skills ($p \leq .05$), and improved knowledge scores ($p = .003$). The majority ($n = 6$; 75%) of the students also reported that the experiential learning and participation as a health coach was beneficial” (Ickes MJ, McMullen J., 2016). While this university’s program was not exactly the same as the one being evaluated in our study, it is similar enough on the crucial aspects to prove the efficacy and value of a health coaching class, even in another setting.

In addition, the study referenced above was only implemented for students in “...masters- or doctoral-level... within the field of health promotion or related fields at a public university in the United States”, so literature has narrowly addressed the positive implications that a health coaching program could have on undergraduate students intending to pursue higher education for the purpose of achieving a healthcare related career, and this class at ECU will bridge that gap (Ickes MJ, McMullen J., 2016).

Methods

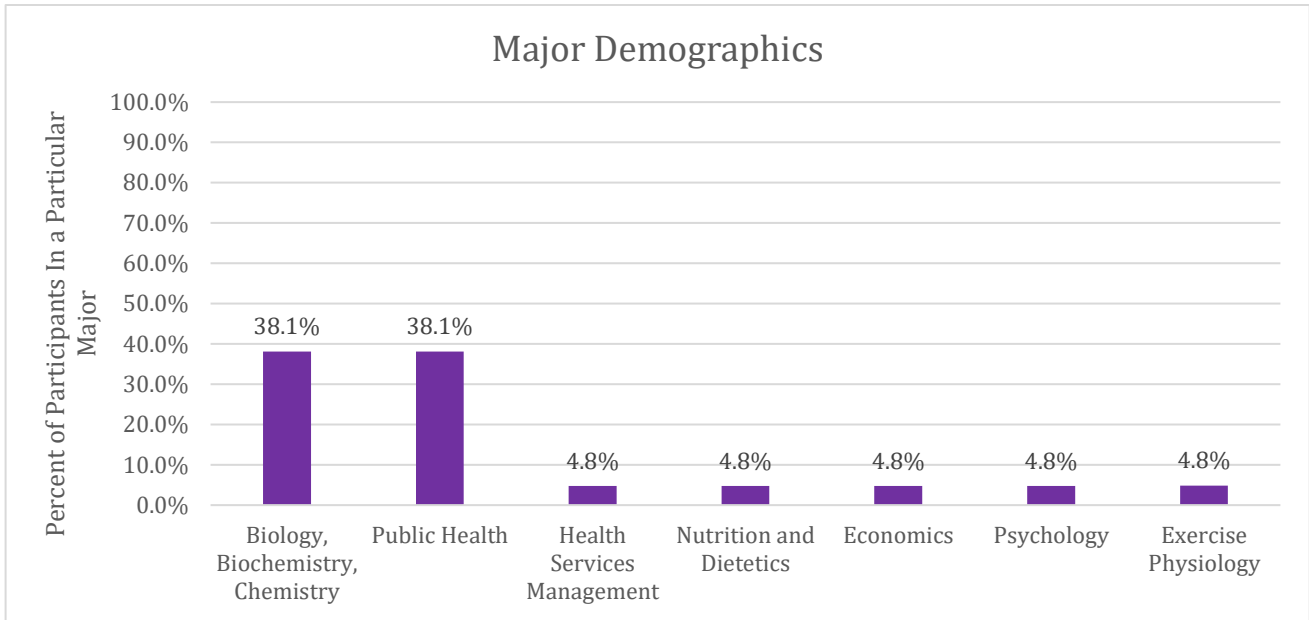
The health coaching course development stages to implementation was conducted between May 2022 to December 2022, with evaluation of efficacy for future implementation continuing through 2023.

Participants

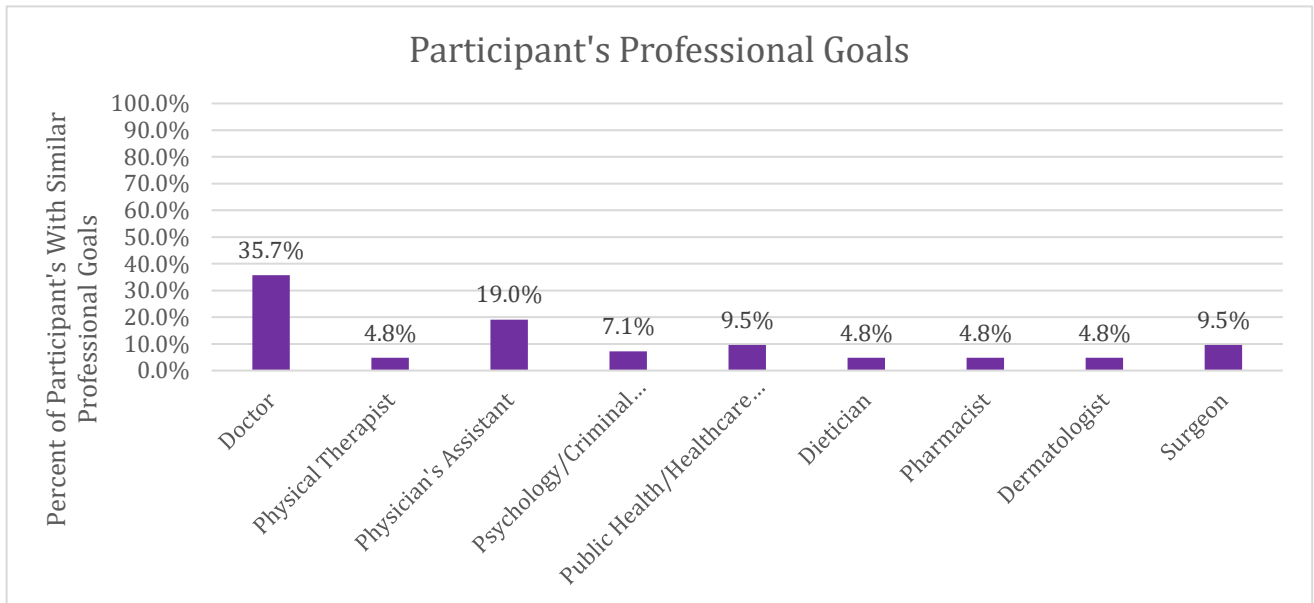
In order to evaluate the health coaching course's significance, impact and quality with accuracy, the sample pool of participants we used to issue feedback were college students enrolled in the course. Participant qualifications were as such: to be 18 years or older, an undergraduate student at ECU, male or female (no bias towards gender identification) and to be a Health Science major. In total, there were 15 student participants enrolled in the course which participated in evaluation of the course. Recruitment for the students to take KINE 4001 involved outreach through preexisting relationships with the participants by sending out emails or speaking in person about interest.

Demographics

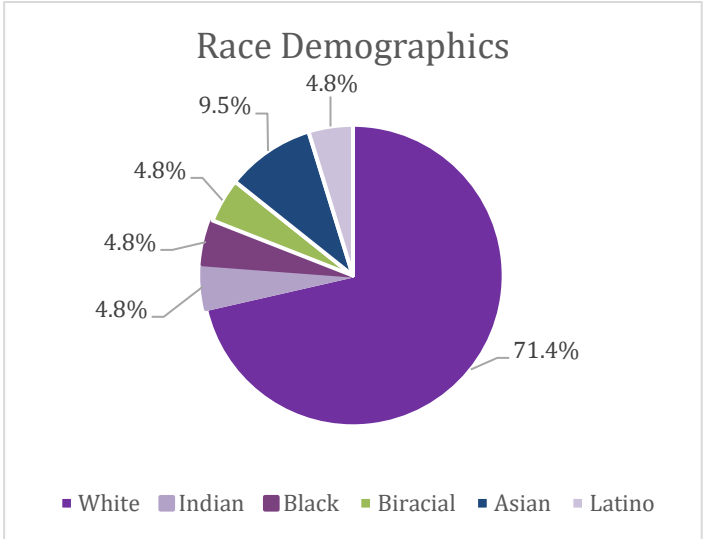
Participant Characteristics (<i>n</i>=21)	% or Mean +/- SD And % of Students
What is your age?	21.3 years +/- 5.7 years
What is your hometown zip code?	NA
What was your Spring 2021 GPA?	3.74 +/- 0.3
What is your overall GPA? (Table 1)	3.75 +/- 0.3



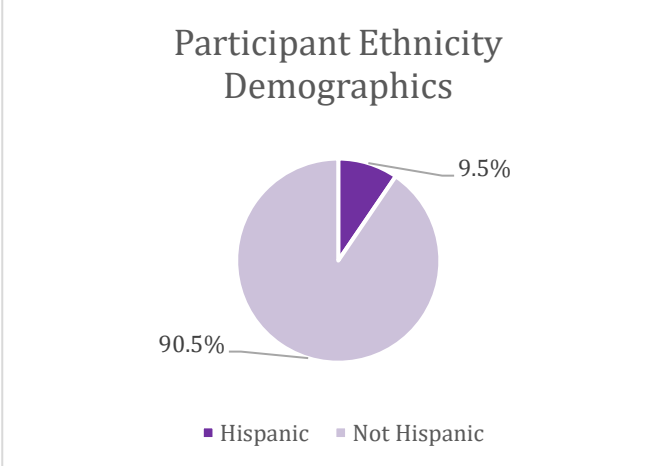
(Graph 1)



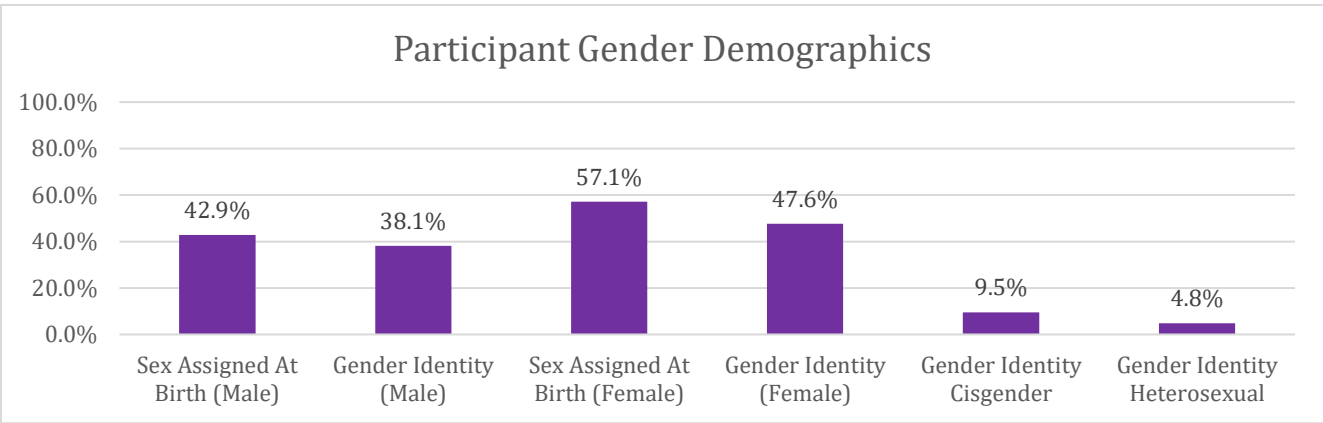
(Graph 2)



(Graph 3)



(Graph 4)



(Graph 5)

Measurements

The methods and procedures of data collection involved compiling surveys, questionnaires, interviews, focus groups, and the use of preexisting datasets into an Excel spreadsheet. The data which will be reflected in the table below is pre-course and post-course (Figure 1) student analysis questionnaire results. Those surveys were developed to attempt to accurately depict a student participant's confidence in their personal health coaching skills and knowledge prior to and after the completion of the course, containing the same questions each time. The questions asked provided five potential answers: Not at all confident, slightly confident, somewhat confident, fairly confident, and completely confident. Statistical analysis was accomplished through methods such as Descriptive Statistics and the T-test. By ranking the qualitative survey responses with a coinciding number, (1) "Not at all confident", (2) "Slightly confident", (3) "Somewhat confident", (4) "Fairly confident" and (5) "Completely confident" we were able to develop a quantitative representation of the mean, median and standard deviation of responses and their change over the course of the semester. Using those values, graphs were formulated for a visual representation. In addition, end of term final reflection papers written by the participants were also evaluated for common themes, issues, and personal improvements. The most prevalent themes throughout the reflection papers were increases in confidence, knowledge and understanding, positive changes in perception, and improvement in facilitation skills and motivational interviewing.

Results

The previously hypothesized results of this evaluation were that the course would be significantly impactful towards improving student’s knowledge and skills in health coaching. The resulting data shows that there was a statistically significant portion of students who completed the KINE 4001 course having substantially improved knowledge and skills in the topics discussed (See Table 2 and Table 3 below).

Reflecting on a themes content analysis of the post course student reflections, overarching themes include 1) improved facilitation skills and motivational interviewing, 2) positive changes in perception of physical activity and nutrition, and 3) improved knowledge and understanding. Supporting student quotes can be found in the table below.

Theme	Salient Quotation
Improved facilitation skills and motivational interviewing	“I love how this course not only teaches about the technical “wrongs” and “rights” but also teaches about rural community barriers and motivational interviewing.” (Student Participant A, 2022). “I now feel more confident in talking with patients after learning about facilitation skills, motivational interviewing, health behavior theories, and behavior change strategies.” (Student Participant B, 2022).
Positive changes in perception of physical activity and nutrition	“My perception of physical activity and nutrition completely changed after this course” (Student Participant C, 2022)

	<p>“In regard to my perception of health coaching, I have a newfound understanding of the nature of this job. Health coaching requires the utmost compassion and empathy for your patient population, and it’s very unique to how connected you can get to you patients to help them achieve their goals.” (Student Participant D, 2022).</p>
<p>Improved knowledge and understanding</p>	<p>“Prior to the course I had no understanding of what a health coach was, and now I have a newfound respect for their tremendous role in representing patients and being a powerful health resource.” (Student Participant E, 2022)</p> <p>“The biggest takeaway separate from nutrition and physical activity is that health coaches are a resource for support and understanding – fundamental skills that can be applied to any profession.” (Student Participant F, 2022)</p>

(Table 2)

Self-Assessment Questions [Please assess honestly your skills and confidence for the following statements]	Pre-Course Self-Assessment [Mean and Standard Deviation]	Post-Course Self-Assessment [Mean and Standard Deviation]
Q1: How confident are you that you can define health coaching?	3.7±0.5	4.4±0.5
Q2: How confident do you feel about your knowledge of how health coaching facilitates behavior change to improve health?	3.5±0.8	4.2±0.7
Q3: How confident do you feel about the optimal combination of the knowledge of the skills, attributes, and personality traits of a successful health coach?	3.4±0.9	4.4±0.7
Q4: How confident do you feel about your knowledge of how health coaching can be applied in clinical settings?	3.8±0.7	4.4±0.7
Q5: How confident do you feel about your knowledge of what physical activity is?	4.5±0.8	4.7±0.7
Q6: How confident do you feel about your knowledge of what the physical activity and public health guidelines are?	3.2±1.1	3.9±0.9
Q7: How confident do you feel that you could explain the dietary guidelines to another person who had never heard of them?	3.0±1.1	3.9±1.1
Q8: How confident do you feel about your knowledge of how to make nutrition recommendations within a patient's health needs and resources?	2.8±1.2	4.1±0.9
Q9: How confident do you feel about your knowledge regarding lifestyle medicine and preventative care approaches to type 2 diabetes management?	2.8±1.2	4.2±0.4
Q10: How confident do you feel about your knowledge regarding type 2 diabetes medication and type 2 disease progression/potential complications?	2.8±1.0	3.9±0.8

Q11: How confident do you feel about your knowledge of what health behavior theories are?	2.8±1.0	3.9±0.9
Q12: How confident do you feel in your ability to apply health behavior theories as a health coach?	2.8±1.3	3.7±1.2
Q13: How confident do you feel about your knowledge of facilitation skills?	3.4±1.0	4.1±0.9
Q14: How confident do you feel in your ability to integrate facilitation skills with health coaching?	3.2±0.8	3.9±1.2
Q15: How confident do you feel about your knowledge of behavior change strategies?	2.9±1.0	4.3±1.0
Q16: How confident to you feel in your ability to integrate behavior change strategies with health coaching?	2.9±1.0	4.2±1.1
Q17: How confident do you feel about your knowledge of the key constructs of motivational interviewing?	2.6±1.1	4.2±0.8
Q18: How confident do you feel in your ability to integrate motivational interviewing strategies with health coaching?	2.7±1.3	4.4±0.5
Q19: How confident do you feel about your knowledge and ability to assess a patient with regards to lifestyle and related resources?	3.3±1.0	4.3±1.0
Q20: How confident do you feel about your knowledge and ability to integrate initial assessments with health coaching of your patient to promote nutrition and physical activity?	3.4±0.9	4.4±0.5
Q21: How confident do you feel in your knowledge and ability to conduct follow-up assessments of a patient to adjust and/or expand goals around nutrition and physical activity?	3.5±1.1	4.4±0.5

Q22: How confident do you feel about your knowledge and ability to integrate follow-up assessments with health coaching of your patients to adjust/expand goals around nutrition and physical activity for your patient?	3.4±0.9	4.6±0.5
Q23: How confident do you feel about your knowledge of cultural competency and its role in providing care to underserved/under resourced patients?	3.6±1.1	4.6±0.5
Q24: How confident do you feel about your knowledge of the role of empathy and cultural humility in providing care to underserved/under resourced patients?	3.8±1.0	4.4±0.5
Q25: How confident do you feel about your knowledge of the role your privilege plays in providing care to underserved/under resourced patients?	4±0.8	4.4±0.5

(Table 3)

Discussion

Evaluating a health coaching course that addresses the gaps in pre-professional healthcare major’s curriculum is somewhat difficult when there are not many comparable programs to use for reference. There is very limited literature addressing the gap between undergraduate health coaching courses and curriculum for pre-health professionals. Due to that, this course development has been distinct.

Contrarily, there was a new 12 credit hour program rolled out at the University of Vermont as a Health and Wellness Coaching (NBHWC) certificate accredited by the National Board for Health and Wellness Coaching that was so successful across the board that they evolved it into a health and wellness coaching minor (Sibold J, Whitman S, Westervelt K, 2023). According to this study, “The Bureau of Labor Statistics forecasts that HWC jobs will grow 12%

in the next decade, which is more than double that of the 5% average rate of growth for occupations as a whole. Given the projected demand for HWC in the healthcare arena, and the burgeoning interest in HWC training across the country, the purpose of this paper is to provide an evidence-based rationale for HWC as a complementary area of study to non-licensure granting health-related degrees in higher education.” (Sibold J, Whitman S, Westervelt K, 2023, p. 2). This specific program in Vermont in the last few years has seen such success that they currently possess a 100% pass rate for those who choose to sit for the National Board of Health and Wellness Coaching certification (Sibold J, Whitman S, Westervelt K, 2023, p. 2).

The University of Vermont’s Health and Wellness Coaching program is designed to prepare and qualify undergraduate students intending to end the workforce directly, rather than pursuing a graduate-level degree (Sibold J, Whitman S, Westervelt K, 2023, p. 2). Meanwhile, our health coaching course imparts a unique and alternative skill set to students opting for higher education, distinguishing them from graduates of other institutions as they enter the healthcare field. As similar programs have proven to be successful at improving student’s levels of self-efficacy and skill, as well as increasing preparedness for the work force, adding the health coaching course as an option to the standard curriculum at ECU would be invaluable.

Adequately preparing students with the knowledge of physical activity and nutrition guidelines, weight management tools, behavior change facilitation and chronic disease risk reduction awareness through course objectives, does not solely qualify healthcare practitioners, but it also sets them apart in a system of reactionary healthcare to be able to assist in disease prevention, that as previously noted, amounts to 3.5 trillion dollars.

Conclusion

The previously displayed results display that there has been a statistically significant improvement in health coaching knowledge and skills of the undergraduate students who participated in the KINE 4001 course. Reimplementing the course for future health science majors as an optional elective would be beneficial, given the positive impact that has already occurred for those who have completed it in this study.

Limitations:

Due to the study/course only evaluating the experiential outcomes of 15 students, there could have potentially been a lack of representation or skewed results for such a small sample population. That being said, there was no incentive or pressure for them to answer positively the way they did in their personal journal reflections on their course experience and knowledge improvement. Additionally, this health coaching course was not a byproduct or subsidiary of the National Board for Health and Wellness Coaching, which could have slightly impacted the course content and delivery. However, proven the positive outcome from the course trial run, that does not appear to have withheld the student participants from benefitting.

Strengths:

The strength of this course roots in the development stages of who was involved in creating the curriculum. The ECU faculty that contributed to creating the curriculum and skills that would be covered in the course came from different departments (nutrition and public health), providing well-rounded perspectives, broader overarching goals, and unparalleled experience. This course is already striding ahead other programs being offered at state schools due to the lack of undergraduate courses in health coaching nationwide, but in addition to that, it is not common practice for multiple departments to work together to create such a balanced

course that is available and applicable for so many students. The course also attained 3rd party evaluation for efficacy and feasibility for further impartial assessment. KINE 4001 was not designed to replace or devalue other courses or degree programs, but to further improve the product of East Carolina University's student body representation and success in the healthcare field.

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