

Course Title



Department of Kinesiology

KIN 6067 – Disruptive Health Technologies

3 Units

Course Information

Meeting days: Tuesday (as needed)

Instructor title and name: Dr. Ted Vickey

Meeting times: 5:30pm Pacific Phone: 619.849.7111

Meeting location: Online

E-mail: tvickey@pointloma.edu

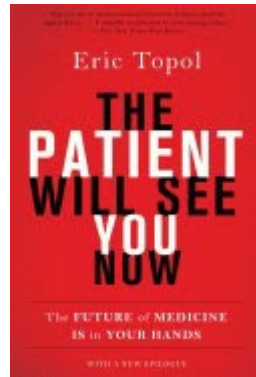
Final Exam: None

Office location and hours: Kinesiology 11 (main campus); [By appointment](#)

Required Text:

Topol, E. J. (2015). *The patient will see you now: the future of medicine is in your hands*. New York: Basic Books.

Additional info: None



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PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE DESCRIPTION

Former Surgeon Dr. Richard Carmona once said: “We don’t have a healthcare system, we have a sick-care system”. To change this narrative, a change in the industry is

needed. One such change is through innovation through technology. For this course, we will focus on the consumer-facing aspect of health technology that could be used by a wellness provider.

Disruptive Health Technology (DHT) is a broad term that encompasses the use of digital devices and platforms, including consumer-facing health, fitness and wellness apps, mobile health (mHealth) applications, and wearable device biosensors to improve the process and outcomes of wellness delivery.

In this course, we will explore how digital interventions are being employed to drive decisions and offer value to both client and wellness provider. We will begin by focusing on the need for the evaluation of these types of DHT and the impact they can have on consumers. Over 80% of the US population now owns a smartphone. The ubiquity of smartphones offers a digital portal for wellness clients to collect data about their physical activity, sleep patterns, symptoms, and health-related quality of life.

Advances in micro-computing and smartphone adoption have enabled the development of wearable biosensors for everyday use to measure a wide range of physiologic parameters. Off-the-shelf wearables enable convenient acquisition of free-range activity data among large patient populations.

However, despite the promise of using different types of disruptive health technology, many of these claims have not yet been rigorously tested at scale. There is currently a need for a greater understanding of how wellness providers use such technology and more research supporting population health monitoring with digital devices.

- Some Tips on Succeeding in this Class.
- The goal is for everyone to do well in this class!
- Enjoy the class, first and foremost.
- You will learn more from this class if you try and do the readings.
- Most of the questions in this class do not really have a best answer. There is a lot of uncertainty in this field, so it's most important to justify your answer to at least get partial credit.
- In the discussion boards, challenge each other, ask each other lots of questions, and get deep into the problem. Try not to wait until the end or you won't get as much out of the problem.
- Post questions during class. Your instructor looks forward to discussion and dialogue. If you have a question, then someone else probably has the same question.

INSTITUTIONAL LEARNING OUTCOMES (ILO)

Learning, Informed by our Faith in Christ:

Students will acquire knowledge of human cultures and the physical and natural world while developing skills and habits of the mind that foster lifelong learning;

Growing, In a Christ-Centered Faith Community:

Students will develop a deeper and more informed understanding of others as they negotiate complex professional, environmental and social contexts.

Serving, In a Context of Christian Faith:

Students will serve locally and/or globally in vocational and social settings.

PROGRAM LEARNING OUTCOMES (PLO)

The Point Loma Nazarene University MS-KIN graduate will be able to:

1. Appraise current research data in Kinesiology and integrate it into professional practice to solve relevant problems and make effective decisions.
2. Work independently and with a team to persuasively communicate essential information in their discipline.
3. Demonstrate appropriate breadth of knowledge of the background and principle research in their specialization in order to conduct an independent research project.
4. Serve various populations, integrating compassionate care and the Christian faith with their professional practice.
5. Pursue an active and growing involvement in their discipline by achieving advanced certification and/or membership in a related professional organization

COURSE LEARNING OUTCOMES (CLO)

After completing this course students will be able to:

1. Develop a conceptual framework for how digital health technology and the quantified self-movement can improve the value of wellness;
2. Demonstrate proficiency in best practices for developing, validating, and testing wearables and apps in wellness;
3. Recognize when best to use social media as a database for wellness;
4. Analyze the pros and cons of different wearable and app architectures and features;
5. Acknowledge the challenges of implementing digital health technology interventions within wellness industry;
6. Demonstrate proficiency in best practices for developing and evaluating mobile health (mHealth) applications

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 3 unit class delivered over 8 weeks. Specific details about how the class meets the credit hour requirement can be provided upon request.

ASSESSMENT AND GRADING

The total number of points accumulated on assignments exams, quizzes, determines your final letter grade in this course. This course has been divided into four segments every week. This is a rolling class with the same assignments due every week. There is NO milestone assignment. Assignments are due by 11:59 pm every Sunday.

Assignment distribution by points:

1. Weekly Discussion Posts - 200 points
2. Twitter assignments - 200 points
3. The Patient Will See You Now Discussion Posts - 100 points
4. Group Research Project - 100 points
5. DHT Project - 400 points

Standard Grade Scale Based on Percentage of Points Earned

A	B	C	D	F
A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	F ≤ 59
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

A score of "C" (730 points) must be earned to pass this course.

A 3.0 grade point average is required to remain in good academic standing in the program.

New Cohorts starting January 2018:

Students must complete the required program hours in the major (program) from Point Loma Nazarene University with a minimum grade of "C" in each course and an overall 2.00 grade point average.

LEARNING MODULES

Module Schedule

Module 1 **Overview, methods for evaluation and course set up**

Module 2 Physical Activity technology evaluations and course content for discussion groups. Please see Module for links.

- Module 3** Health coach technology evaluations and course content for discussion groups. Please see Module for links.
- Module 4** Sleep technology evaluations and course content for discussion groups. Please see Module for links.
- Module 5** Nutrition technology evaluations and course content for discussion groups. Please see Module for links.
- Module 6** Mindfulness technology evaluations and course content for discussion groups. Please see Module for links.
- Module 7** Stress technology evaluations and course content for discussion groups. Please see Module for links.
- Module 8** Wellness technology evaluations and course content for discussion groups. Please see Module for links.

ASSESSMENT AND GRADING

Course Requirements: Assessment of Course Learning Outcomes

Discussion Board Participation: Assesses Course Learning Outcomes #1-5

We have supplemented the course text and lecture materials with current evidence-based journal articles, relevant videos, books and other types of journals. These readings will be provided via electronic access to journal articles. It is expected that course material will be read before posting to the discussion board so that informed and lively discussion may be the primary focus of class meetings. After readings, you will respond to questions on the Discussion Board on Canvas. Your initial post is due Friday, your reply post is due Sunday.

Twitter posts: Assesses Course Learning Outcomes #2-6

At the end of each week, you will send 10 tweets that contain #KIN667. These tweets should highlight the major themes, facts, and/or key points we discussed or that you learned during the week.

Participation: There is an expectation that students come prepared and participate fully in discussions and meetings.

Note: If there is a change in the course schedule, a message will be posted on Canvas. For example, guest speakers are possible depending on their availability. Any video instruction by the Professor or presentation will take place on Zoom and will be recorded.

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted to Canvas by the assigned due date. Late assignments will be subject to a deduction of 10% per day. Even if the deadline is missed, all assignments are expected to be submitted.

NOTE: It is your responsibility to maintain your class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), you have the responsibility to first contact the professors. Then if no accommodations can be made, you are responsible for following through (provided the drop date meets the stated calendar deadline established by the university).

COPYRIGHT POLICY

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ACADEMIC HONESTY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See the [Academic Honesty Policy](#) in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic

accommodation plan (“AP”) to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student’s responsibility to make the first contact with the EAC.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all **synchronous** class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions (virtual or face-to-face), the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. In some courses, a portion of the credit hour content will be delivered **asynchronously** and attendance will be determined by submitting the assignments by the posted due dates. See [Academic Policies](#) in the Graduate and Professional Studies Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

Asynchronous Attendance/Participation Definition

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

Students taking online courses are expected to attend each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes posting in a graded activity in the course. (Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.)

Students who do not attend at least once in any 3 consecutive days will be issued an attendance warning. Students who do not attend at least once in any 7 consecutive days will be dropped from the course retroactive to the last date of recorded attendance.

Students who anticipate being absent for an entire week of a course should contact the instructor in advance for approval and make arrangements to complete the required coursework and/or alternative assignments assigned at the discretion of the instructor.

ACADEMIC STANDING

Graduate students at Point Loma must obtain a 3.0 GPA to remain in good standing in the MS Kinesiology program. Additionally, all graduate students need to earn a C or

higher in all graduate courses according to the catalog grading policy found here: [GPS Academic Standing](#)

GRADING SYSTEM

Traditional letter grades (A, B, C, D, F) including plus and minus grades are used to indicate the level of scholarship earned for each course. Except for the correction of an error, all traditional letter grades are final at the conclusion of the academic term. Once the degree has been posted on the student's official transcript, no change of grade action is allowed for courses leading to the degree. The grade of C is the lowest grade acceptable for graduate credit.

INFORMATION LITERACY

The curriculum of the MS-KIN is designed so that you develop skills in scientific writing, performing statistical analysis of data, reading and critically appraising primary literature, and incorporating current best evidence into your professional practice. Not all information is equally sound or applicable to your practice. Various assignments within this course are designed to accomplish the goal of informational literacy—to evaluate the validity and importance of information obtained from any source and use the information appropriately to solve relevant problems.

SPIRITUAL CARE

PLNU strives to be a place where you grow as a whole person. To this end we provide resources for our Graduate and Adult Degree Completion students to encounter God and grow in their Christian faith. At the Mission Valley (MV) campus we have an onsite chaplain, Rev. Gordon Wong, who is available during class break times across the week. If you have questions for, desire to meet or share a prayer request with Rev. Wong you can contact him directly at mvchaplain@pointloma.edu or gordonwong@pointloma.edu. Rev. Wong's cell number is 808-429-1129 if you need a more immediate response.

In addition, on the MV campus there is a prayer chapel on the third floor which is open for use as a space set apart for quiet reflection and prayer.

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the [map](#) using the below link to view which states allow online (distance education) outside of California.

USE OF TECHNOLOGY

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the [*Technology and System Requirements*](#) information. Additionally, students are required to have headphone speakers compatible with their computer available to use

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.