

CAREER

Clinical Research and Quantitative Health Sciences are fields needing more experts. The Bureau of Labor Statistics predicts that employment in clinical and associated research will grow by 13% and in mathematics and statistics will grow by 33% in the U.S. from 2016-2026. The State of Hawai'i projects a higher (34.8%) growth rate in medical scientists, and a 13.9% growth rate in computer and mathematics-related occupations.

ADMISSION REQUIREMENTS

- ◆ Curriculum Vitae
- ◆ Personal statement with career goals
- ◆ Undergraduate (and Medical School, if applicable) GPA 3.2 or greater
- ◆ One semester of biology and one semester of pre-calculus
- ◆ At least three professional or academic letters of recommendation
- ◆ GRE or MCAT with scores above the 50th percentile of the national average
- ◆ For international students, TOEFL (at least 90 for IBT and 570 for PBT) or IELTS (at least 7 on 9-point scale)

HOW TO APPLY

Please visit the University of Hawai'i at Mānoa Graduate Division website to either fill out an online application or download a PDF form to submit.

<http://manoa.hawaii.edu/graduate/content/clinical-and-translational-research>



Master of Science in Clinical and Translational Research

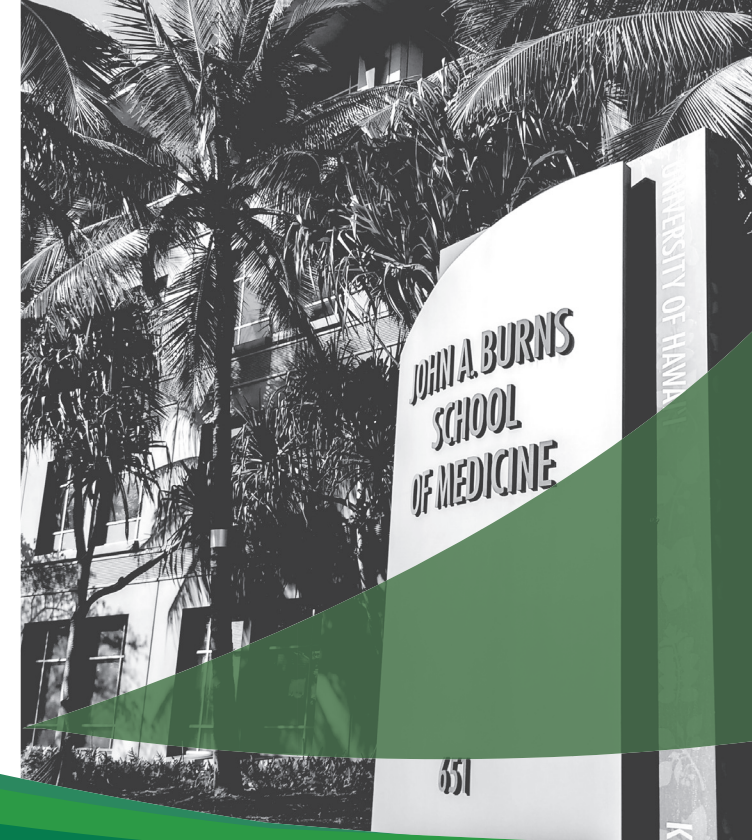
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UNIVERSITY OF HAWAII'I
JOHN A. BURNS SCHOOL OF MEDICINE



Master of Science in Clinical and Translational Research

Clinical Research Track
Quantitative Health Sciences Track





The Clinical and Translational Research (CTR) graduate program will prepare graduates with skills for successful careers in clinical and translational research and research support. The CTR program, leading to an MS degree, is currently offered with two tracks.

CLINICAL RESEARCH (CR) TRACK

The CR track focuses on the study of methods suitable to investigate clinical research topics. Students are required to complete a combination of coursework and clinical research projects. The competency domains include clinical and translational research, quantitative health skills, scientific writing, communication, and interdisciplinary collaboration. Students will also develop the ability to identify and resolve ethical issues in clinical research to ensure the safeguarding of human subjects as well as develop and/or increase their capacity in obtaining research funding from agencies.

QUANTITATIVE HEALTH SCIENCES (QHS) TRACK

The QHS track focuses on the improvement of population and individual health through the quantitative methodological innovation and application in clinical and translational research. Students will acquire skills in biostatistics and bioinformatics, including research design and large data analytic approaches, and master the scientific principles and methodologies that underlie basic science and clinical translation research methods.

MS PROGRAM CURRICULA

A 2-year, 34 total credit hours graduate program

- ◆ **Plan A (Thesis):** 24 credits of didactic courses
- ◆ **Plan B (Capstone Project):** 28 credits of didactic courses

PROGRAM CORE COURSES

Course #	Course Title
BIOM 640	Introduction to Clinical Research
BIOM 644	Translational Research Methods
BIOM 646	Clinical and Translational Research Seminar
QHS 601	Biomedical Statistics I
QHS 602	Biomedical Statistics II

CLINICAL RESEARCH TRACK REQUIRED COURSES

Course #	Course Title
BIOM 641	Legal and Regulatory Issues and Bioethics
BIOM 645	Clinical Protocol Development
QHS 620	Introduction to Clinical Trials

QUANTITATIVE HEALTH SCIENCES TRACK REQUIRED COURSES

Course #	Course Title
QHS 610	Bioinformatics I
QHS 621	Design and Analysis of Clinical Trials
QHS 650	Secondary Data Analysis

PROGRAM LEARNING OUTCOMES COMPETENCIES

All students are expected to have developed the following competencies upon completion of the graduate program:

- ◆ Knowledge of clinical and translational research
- ◆ Understanding the clinical trial process
- ◆ Demonstrated proficiency in written and verbal communication skills

SPECIFIC TO CLINICAL RESEARCH

- ◆ A knowledge based in various disciplines of clinical and translational research
- ◆ Knowledge and skills to form a foundation upon which to function in an ethical and professional manner throughout one's professional career
- ◆ Knowledge and skills required for clinical and translational research design and critical evaluation of data collection methodologies

SPECIFIC TO QUANTITATIVE HEALTH SCIENCES

- ◆ Knowledge and skills in quantitative health sciences, including biostatistics and bioinformatics
- ◆ Sufficient mastery and scientific maturity to assess the analytic work of peers in related fields
- ◆ Mastery of experimental, clinical and translational research design and data analysis methodologies, including clinical trials