

PROFESSIONAL TRAINING

ACADEMIC YEAR: 2021-2023

Department: MSc Bioinformatics and Data science (2021-2023)

Course Title: PROFESSIONAL TRAINING

Semester: 2



COURSE COORDINATOR

DR.D. Alex Anand

Associate Professor

Department of Bioinformatics

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

CHENNAI-600119

SUBMITTED BY:

MURUGULA RAGHAVENDRA

MSc. BIOINFORMATICS AND DATASCIENCE-2020-2022

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

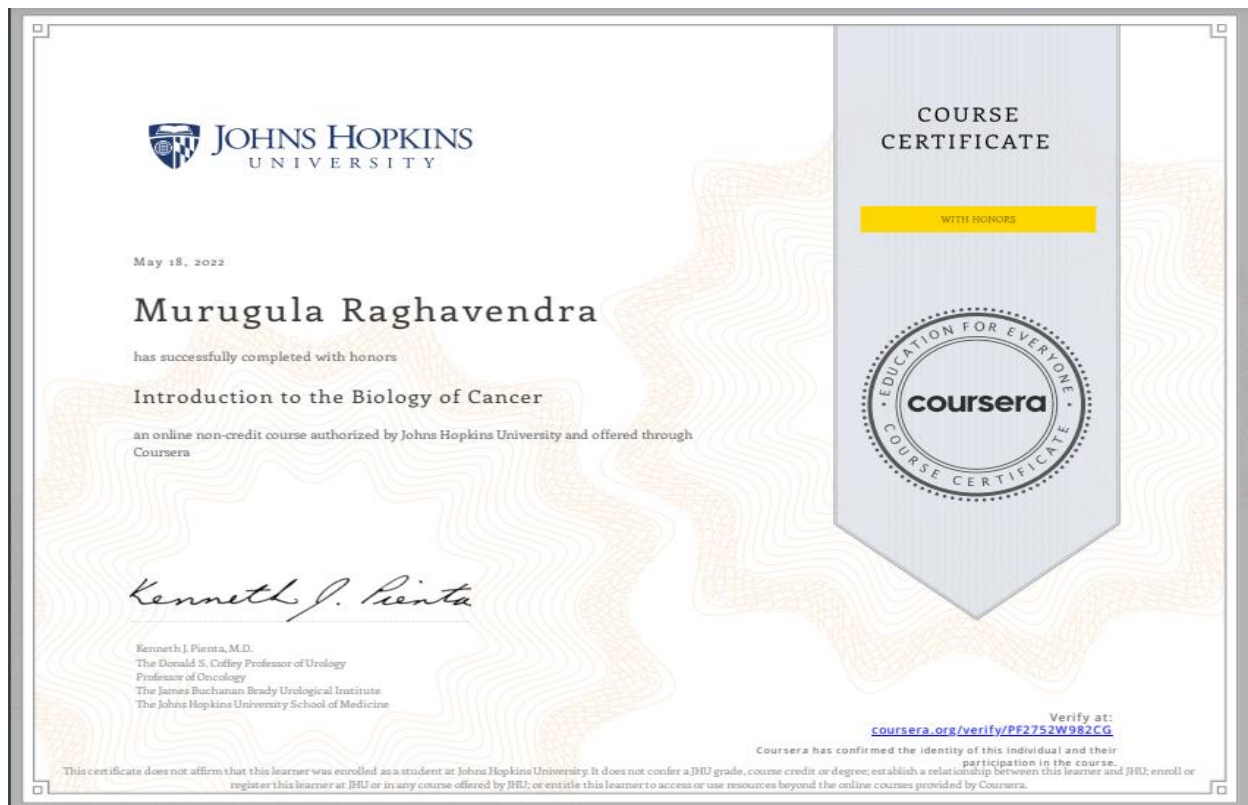
CHENNAI-600119

INTRODUCTION TO THE BIOLOGY OF CANCER

DURATION: 8 HRS

OBJECTIVE:

- ❖ The course introduces the molecular biology of cancer (oncogenes and tumor suppressor genes) as well as the biologic hallmarks of cancer. The course also describes the risk factors for the major cancers worldwide, including lung cancer, breast cancer, colon cancer, prostate cancer, liver cancer, and stomach cancer. We explain how cancer is staged, the major ways cancer is found by imaging, and how the major cancers are treated.

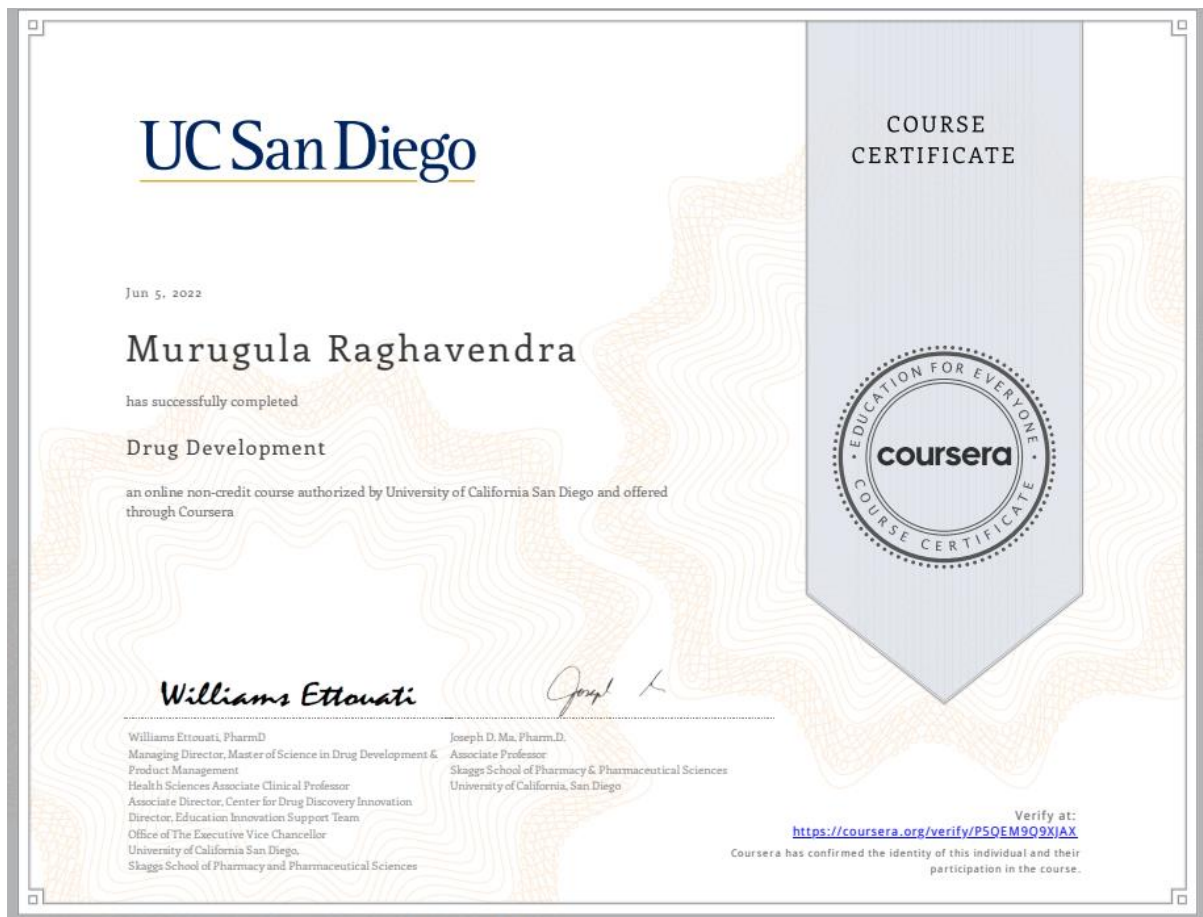


DRUG DEVELOPMENT

DURATION: 10 HRS

OBJECTIVE:

- ❖ In this course you will learn the different stages of clinical development as well as the regulatory including but not limited to, an Investigational New Drug Application (IND), New Drug Application (NDA), and product labeling. Additionally you will learn how to incorporate study design methods for consideration in the design of clinical protocols to assess safety, tolerability, and efficacy in multiple therapeutic areas.

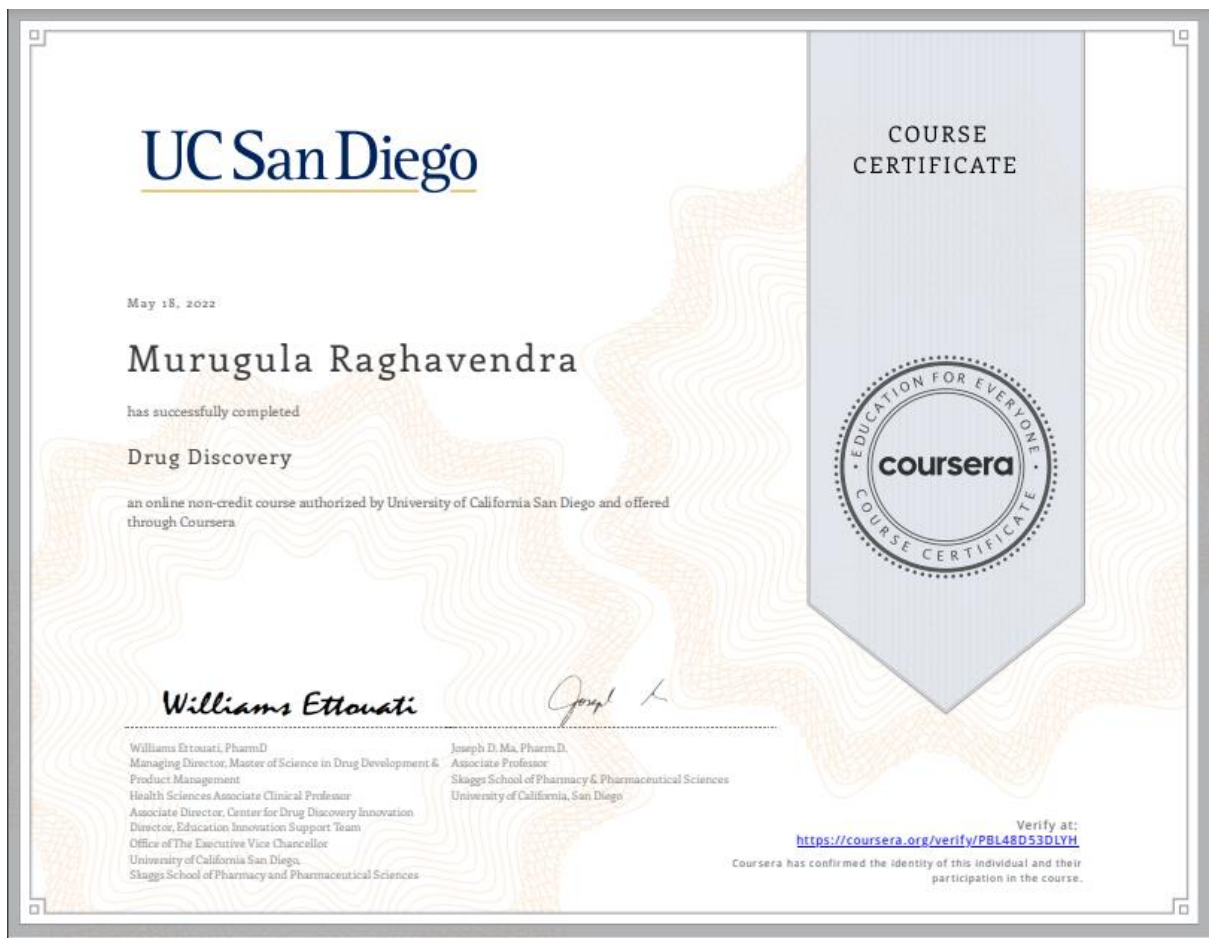


DRUG DISCOVERY

DURATION:9HRS

OBJECTIVE:

- ❖ In this course you will learn the drug discovery process up to the filing of an Initial New Drug Application or IND. Each week you will learn the steps that a pharmaceutical or biotech company goes through to discover a new therapeutic drug.

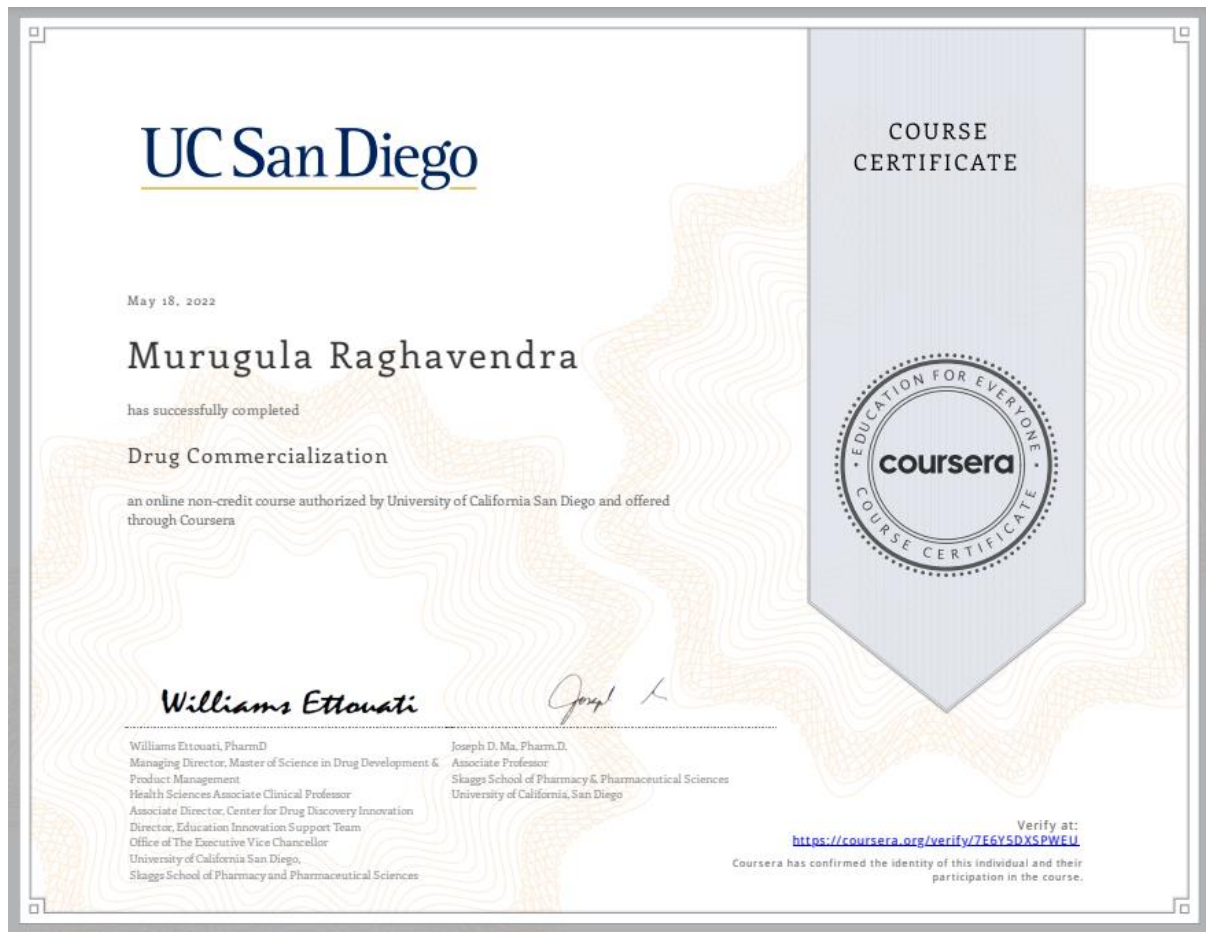


DRUG COMMERCIALIZATION

DURATION: 13HRS

OBJECTIVE:

- ❖ This course will cover pharmacoeconomic, marketing strategy, intellectual property strategy, portfolio management, managed markets and strategic alliances. It will also have a lecture case study from startup to success. These are conducted after a new drug has been approved by the regulatory agencies and launched. In these studies, the new drug is prescribed in an everyday healthcare environment using a much larger group of patients.



DRUG DEVELOPMENT PRODUCT MANAGEMENT

OBJECTIVE:

- ❖ Pharmaceutical and biotech companies are spending years and millions of dollars developing drugs or promising new biologics, all with the hopes of saving or enhancing patients' lives. This specialization will provide you with a bird's-eye view of the entire process of drug discovery and development process.



3 Courses

Drug Discovery
Drug Development
Drug Commercialization



Jun 5, 2022

Murugula Raghavendra
has successfully completed the online, non-credit Specialization

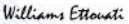
Drug Development Product Management

Pharmaceutical and biotech companies are spending years and millions of dollars developing drugs or promising new biologics, all with the hopes of saving or enhancing patients' lives. This specialization will provide you with a bird's-eye view of the entire process of drug discovery and development process. In the first course you will begin with learning how scientists go from selecting a drug discovery target to filing an Initial New Drug application (IND). In the second course you will then learn the intricacy of drug development from Phase 0 to Phase 3 clinical trials and filing a New Drug Application. Finally, in course three, the specialization will provide you an understanding of the complexities in launching new pharmaceutical products and ensure sales success.

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.



Joseph D. Ma, Pharm.D.
Associate Professor
Skaggs School of
Pharmacy &
Pharmaceutical
Sciences
University of California,
San Diego



Williams Ettouati,
PharmD
Managing Director,
Master of Science in
Drug Development &
Product Management
Health Sciences
Associate Clinical
Professor
Associate Director,
Center for Drug
Discovery Innovation
Director, Education
Innovation Support
Team
Office of The Executive
Vice Chancellor
University of California
San Diego,
Skaggs School of
Pharmacy and
Pharmaceutical
Sciences

Verify this certificate at:
<https://coursera.org/verify/specialization/SUMJVLWML7YK>

BACTERIA AND CHRONIC INFECTIONS

DURATION: 10 HRS

OBJECTIVE:

- ❖ This course will give you an introduction to bacteria and chronic infections. Leading experts in the field will make you familiar with the fundamental concepts of microbiology and bacteriology such as single cell bacteria, biofilm formation, and acute and chronic infections.

