UTHealth The University of Texas Health Science Center at Houston | THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

Graduate School of Biomedical Sciences

MD Anderson UTHealth Graduate School
Cancer Prevention Research Training Program

GS21-1112 Bio-Behavioral Research Methods in Cancer Prevention and Addiction

Course Information

Title: Bio-behavioral Research Methods in Cancer Prevention and Addiction
GSBS Course number: GS21 1112, Section 100
UTSPH Course number: PH 1498 Section 125
Credits: 2-credit hours
Grade scale: Pass/Fail
Prerequisites: None required
Semester: Spring 2020
Day & Time: Thursdays, Noon to 2:00pm
Course Dates: January 9 – April 23, 2020

Course Coordinators & Office Hours

Shine Chang, PhD
Director, CPRTP
Professor, Epidemiology
CPB7.3552, 713-563-3573
ShineChang@MDAnderson.org

Lotis Batan
Senior Secretary, CPRTP
CPB7.3550.01
713-792-1899
LBBatan@MDAnderson.org

Instructor Office Hours:
By appointment only.

Please contact Lotis Batan to request a meeting.

Course Objectives

Bio-behavioral research methods in cancer prevention and addiction addresses the growing demand for multi-disciplinary research in disease prevention. Going beyond traditional behavioral research, the bio-behavioral approach investigates the biological mechanisms underlying risk-related behaviors such as tobacco use, unhealthy diet, sedentary lifestyle, chronic stress, and social isolation and aims at understanding their role in determining cancer risk.

The primary objective of this survey course will be to provide students with a greater understanding of the basic mechanisms involved in the complex interplay of genetic, neurobiological, psychological, and environmental factors in the initiation of smoking, dietary practices, exercise habits, and other healthful behaviors as well as the methodological approaches used in cancer prevention research.

Other objectives include developing students' appreciation of how different disciplines can contribute to cancer prevention as well as their awareness of the promise and potential pitfalls of multidisciplinary approaches. Topics include: 1) risk modeling; 2) bio-behavioral basis of nicotine dependence; 3) neurophysiological mechanisms of addiction; 4) psychophysiological response to exercise; 5) genetics of risk-taking behaviors; 6) psychological influences on immune function, subsequent cancer risk, and risk reduction techniques; 7) genetic determinants of behavior; and 8) psychophysiological, cognitive, and motivational mechanisms underlying persuasion in response to cancer prevention messages. Emerging areas of future research will be identified and discussed.

Student Discussion Leaders & Final Ted Talk-style Presentations

Each student will be asked to sign up at the beginning of the semester to be a discussion leader for at least one class. The discussion leader will review the slides for the given lecture in advance and prepare some questions to facilitate discussion at the end of the lecture. Leading a discussion is a part of the participation requirement. A 10-minute Ted Talk-style presentation is required as the culmination of the course. Class time will be allotted to work on the presentation.

Attendance, Grading Criteria & Make-up Classes

- **Students must sign in on the attendance sheet at each class**. Course instructors require advance notification of any absence planned or otherwise. Because the classes are recorded, no absences will be excused.
- The course is offered **pass/fail**, and a passing grade is earned based on active participation and attendance. Students will be considered to have passed the course if they have not missed any or if they have made up **all** missed class periods.
- Students must **make up** each missed class period by watching a recorded TechSmith Relay PowerPoint of the lecture and creating and answering three questions suitable for inclusion in an instructional assessment to demonstrate their understanding of the lecture. Submit questions and answers on the "Missed Class" form by email for review and approval **within two weeks of missed classes.**
- Recorded classes will be available after each class in the Box. Failure to submit completed form within two weeks of lecture will result in a grade of "Incomplete." Students will be responsible for communicating with teammates to complete their contributions to the team activity for the missed class period.

Course Materials

- All registered students will be invited to the box folder at https://mdacc.box.com/v/BioBehavioral and must confirm access to this folder prior to the start of class.
- Students are responsible for retrieving and reviewing all class materials on **Box** prior to the start of class.

Course Locations

Classes will take place at either of the two (2) locations below on MD Anderson campus and invitations to each class will be sent via MS Outlook. Notifications of room changes will be sent via email and Outlook. Walking and driving directions are available at access.mdanderson.org or the MAPS AND DIRECTIONS folder on box.

1) The Dan. L. Duncan Building (*also* known as ***The Duncan Building*** OR ***Cancer Prevention Building (CPB)***), 1155 Pressler Street, Floor 8, Houston, TX 77030
2) Lowry and Peggy Mays Clinic (*also* known as the ***Mays Ambulatory Clinic*** OR ***Mays Clinic***), 1220 Holcombe Blvd., Houston, TX 77030

DATE & LOCATION	SESSION TITLE	STUDENT ASSTS.	SPEAKER & TOPIC	SPEAKER'S INSTITUION/ AFFILIATION
January 9 ACB8.2680	Course orientation	**None**	**Shine Chang, Ph.D.** "Introduction to bio-behavioral research"	UT MD Anderson
January 16 CPB 8 Room 5	Class activity	**None**	**Shine Chang, Ph.D.**	UT MD Anderson
January 23 ACB8.2680	Physical Activity and Cancer Survivorship		**Keri L Schadler**, Ph.D. **Nate Parker, Ph.D.** **"Exercise and pancreatic cancer survivorship"**	Rice University UT MD Anderson
January 30 ACB8.2680	HPV prevention research		**Michael Scheurer, Ph.D., MPH** "Cervical cancer screening in the molecular era" **Kristina Dahlstrom, Ph.D.** "The Epidemiology of HPV-Related Oropharyngeal Cancer"	Baylor College of Medicine UT MD Anderson
February 6 ACB8.2680	Genetics & Behavior		**Charles Green Ph.D.** **David Nielsen, Ph.D.** **"Overview: Genetics, Biology, & Behavior"**	Baylor College of Medicine UT McGovern Medical School
February 13 ACB8.2680	Physical activity: behavioral interventions and the role of immunology in survivorship		**Larkin Strong, Ph.D.** "Social Contextual Correlates of Physical Activity/Obesity" **Melissa Markofski, Ph.D.** "Using Acute and Chronic Exercise to Benefit Cancer Patients: An Immunology Perspective"	UT MD Anderson University of Houston
February 20 ACB8.1281	Addiction: marijuana & tobacco		**Christopher Verrico, Ph.D.** **Francesco Versace, Ph.D.** "Addiction: Human Laboratory Research"	UT MD Anderson Baylor College of Medicine
February 27 ACB8.2680	Disease risk and biomarkers of caloric restriction and various diets		**Joya Chandra, Ph.D.** **Carrie Daniel-MacDougall, Ph.D.** "Bio-behavioral aspects of energy imbalance in disease risk"	UT MD Anderson UT MD Anderson
March 5 ACB8.2680	STUDENT WORKDAY			
March 12 ACB8.2680	Genetics, risk communication, and patient decision-making		**Aubri Hoffmann, Ph.D.** **Abenaa Brewster, B.S., M.D., M.H.S.** "Contralateral Prophylactic Mastectomy: Clinical Benefit and Psychosocial Predictors"	UT MD Anderson UT MD Anderson
March 19	**SPRING BREAK – NO CLASS**			
March 26 ACB8.2680	Long term stress, and Inflammation		**Chris Fagundes, Ph.D.** **Kathrin Milbury, Ph.D.** **"Together Through the Cancer Journey"**	Rice University UT MD Anderson
April 2 ACB8.2680	Integrative Medicine		**Lorenzo Cohen, Ph.D.** **Anil Sood, M.D.** "Stress, Cancer Biology, and an Integrative Approach to Cancer Care"	UT MD Anderson UT MD Anderson
April 9 ACB8.2680	**STUDENT WORKDAY**			
April 16 CPB8.3059	**STUDENT WORKDAY**			
April 23 ACB8.2680	**STUDENT PRESENTATIONS**			

UTGSBS Calendar

Spring Term	Spring 2020
Registration Opens - 8:00a.m.	November 13
New Year's Day Holiday-University Closed	January 1
Tuition & Fees Due	January 3
Semester Begins	January 6
Late Registration	January 6-10
Add/Drop	January 6-23
Martin Luther King Holiday-University Closed	January 20
Census Day & drop for non-payment	January 23
Presidents Day Holiday-University Closed	February 17
Spring Break	March 16-20
Registration Opens for Summer 8:00a.m.	April 15
Last Day of Class	April 24
Final Exams	April 27-May 1
Grades Due	May 5