

TEL AVIV UNIVERSITY SCHOOL OF PUBLIC HEALTH PRESENTS



1st ANNUAL SUMMER INSTITUTE OF ADVANCED EPIDEMIOLOGY AND PREVENTIVE MEDICINE



<http://international.tau.ac.il/prospective-students/summer-programs/summer-eapm.html>

GENERAL INFORMATION

The Tel Aviv University's School of Public Health is pleased to announce its first annual Summer Institute of Advanced Epidemiology and Preventive Medicine. **It will be conducted from July 29th to August 10th, 2012.**

CURRICULUM

Our program offers intensive courses in a variety of themes that are as comprehensive as courses that are given in the regular academic term. They will be given by world-renowned faculty, from Johns Hopkins University, Harvard University and the Sackler Schools of Public Health and Medicine at Tel Aviv University. The courses are designed to develop critical skills in advanced epidemiology topics and preventive medicine. Such topic areas include environmental epidemiology and epidemiology of hospital infections. Each course is one week long, and is comprised of 26 teaching hours and a 2-hour final exam at the end of the week. Students may attend up to two courses per week; one course will be offered in the morning and the other in the afternoon/evening. Students are encouraged to take between 1 and 4 courses throughout the 2-week program.

COURSE CREDIT

Each course offered at the Summer Institute of Epidemiology and Preventive Medicine is worth 2 academic credits. Credit is received upon completion of the course with a passing exam grade. Certificate of Participation is also offered for those who wish not to take the final exams.

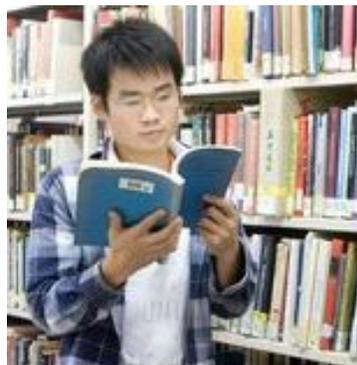
ADMISSIONS

Admissions are on a rolling basis. The application can be found at <http://international.tau.ac.il/apply-online.html>. There is a \$60 application fee.

This institute is intended for:

- ◆ Masters of Public Health and Masters of Science in Epidemiology students
- ◆ Medical students and others with special interest in Epidemiology and Preventive Medicine
- ◆ Physicians and nurses interested in developing advanced skills in Epidemiology and Preventive Medicine
- ◆ Qualified undergraduate students

All applicants must have completed Epidemiology 1 and Statistics.



REGISTRATION, TUITION, AND FEES

Space in each course is limited, and it is strongly encouraged that interested participants apply early.

Registration can be completed until 1 July 2012. Until then, students may choose which courses to take and may add/drop as desired.

Participants are required to pay **\$900** per course (2 credits). Payment is required upon registration.

HOUSING

There are short-term housing opportunities in Tel Aviv that we are happy to assist with. For more information please contact summerin@post.tau.ac.il

INFORMATION FOR INTERNATIONAL STUDENTS

Participants who are not Israeli citizens or who do not already contain a valid student visa may participate in the program on a valid tourist visa (given upon arrival to the country). This visa is valid for up to 3 months.

For assistance and inquiries, please contact summerin@post.tau.ac.il



ADMINISTRATION

PROGRAM DIRECTORS

Tamy Shohat, MD, MPH

Chair, Department of Epidemiology and Preventive Medicine
School of Public Health
Tel Aviv University

Dani Cohen, PhD, MPH

Director, School of Public Health
Sackler Faculty of Medicine
Tel Aviv University

Jonathan Zennilman, MD

Chief, Infectious Diseases Division
School of Medicine
Johns Hopkins University

PROGRAM COORDINATOR

Alexandra Fred, BA, MA

School of Public Health
Sackler Faculty of Medicine
Tel Aviv University



COURSE SCHEDULE**29 JULY – 3 AUGUST**

| TIME | COURSE NAME | COURSE INSTRUCTORS | CREDITS |
|---------------|---|---|---------|
| 8:30 – 13:00 | Intermediate Observational Epidemiology | Prof. Moyses Szklo | 2 |
| 14:00 – 18:30 | Selected Topics in Infectious Diseases Epidemiology | Profs. Jonathan Zennilman, Dani Cohen and Tamy Shohat | 2 |

5 AUGUST – 10 AUGUST

| TIME | COURSE NAME | COURSE INSTRUCTORS | CREDITS |
|---------------|---|--|---------|
| 8:30 – 13:00 | Environmental Epidemiology | Prof. Joel Schwartz | 2 |
| 14:00 – 18:30 | Hospital Epidemiology and Infection Control | Prof. Sara Cosgrove and Prof. Yehuda Carmeli | 2 |

COURSE DESCRIPTIONS**Intermediate Observational Epidemiology**

Moyes Szklo

Su M T W Th F

8:30 – 13:00

The course is aimed at students who already have an understanding of epidemiology's basic principles and methods. The course will consist of theoretical presentations and small group discussion of exercises.

Topics covered include study designs in observational epidemiology, measures of frequency, survival analysis, person-time analysis, measures of association in traditional case-control and cohort studies. Other topics will be biases and confounding effects, principles and logic of statistical adjustment. The concept of interaction and evaluation of interaction in case-control and cohort studies will be covered. Topics in the interface of epidemiology and public health policy will be discussed.

Selected Topics in Infectious Diseases Epidemiology

Jonathan Zennilman, Dani Cohen, and Tamy Shohat

Su M T W Th F

14:00 – 18:30

The course will provide an update on the burden of infectious diseases in developing and developed countries, define the concept of "emerging infectious diseases," and characterize the risk factors of their occurrence.

The importance of enhanced surveillance in detecting modern naturally occurring epidemics and potential bioterrorism-related events will be presented. Other selected topics include integration of epidemiologic tools and modern laboratory capabilities in detection and characterization of endemic and epidemic agents, GIS and mathematical modeling, vaccinations, and selected diseases (such as foodborne and diarrheal, sexually transmitted, HIV/AIDS, tuberculosis, influenza and leishmaniasis).

The course will focus on recent trends in Israel, the US, and other countries.

Environmental Epidemiology

Joel Schwartz

Su M T W Th F

8:30 – 13:00

The course will be centered on three questions in environmental epidemiology, and examine different methodologies to address them.

Question 1 will be “How do we identify the effects of heat waves on mortality in a population, and who is particularly susceptible”. Following this we will ask “How do we identify the effects of hot, but less extreme temperatures on mortality?” To address these questions we will learn to use Poisson time series analyses and case-crossover analyses. For the last question, we will learn how to fit linear splines, nonlinear splines, and penalized splines to examine the shape of dose-response.

Question 2 will ask whether exposure to air pollution in a panel of subjects seen multiple times post discharge for an acute coronary event is associated with changes in heart rate variability. We will consider fixed effect and mixed effect models, discuss their differences, and also look at the shape of the dose-response relationship.

Question 3 will examine a closed longitudinal cohort and look at the association of particulate air pollution with lung function. Key issues to be addressed are informative censoring, inverse probability weights, and heterogeneity and its sources.

Hospital Epidemiology and Infection Control

Sara Cosgrove and Yehuda Carmeli

Su M T W Th F

14:00 – 18:30

The course of Infection Control of Hospital epidemiology is designed for physicians and other healthcare professionals with knowledge in microbiology, epidemiology and infectious diseases.

Topics covered include the role and importance of infection control, principles of patient safety, organization and structure of infection control at various levels, basic principles of transmission and prevention, and dealing with limited resources. Students will be presented with data for action subjects including surveillance, study design, applying literature-based knowledge, evidence based and epidemiology based interventions. Outbreak investigation and the role of the laboratory in infection control will be discussed.

“Clean care is safe care” will also be covered: hand hygiene, environmental cleaning, disinfection and sterilization including the reuse of “single use devices,” in addition to healthcare employee vaccination and infection control.

Participants will be addressing common nosocomial infections: surgical site infections, ventilator associated pneumonia, catheter associated UTI, and catheter associated blood stream infections. Infection control and antibiotic stewardship in response to emerging multidrug resistant organisms will also be introduced.

FACULTY

Tamy Shohat, MD, MPH

Director of the Israel Center for Disease Control (ICDC) since January 2008. She is also the Head of the Epidemiology Department of the Tel-Aviv University, School of Public Health.

From 2004-2007, Prof. Shohat acted as the Tel Aviv District Health Officer in the Ministry of Health. Back in 1994 she was one of the founders of the ICDC.

During 1983-2003, Prof. Shohat held various positions in the Israeli Defense Force (IDF), including the Head of the Epidemiology Unit (1989-1991) in the Army Health Branch. During this time period, she also completed a fellowship in Medical Genetics (1986-1989) in Cedars-Sinai Medical Center, Los-Angeles, California, where she later had a position of a Visiting Scientist (1991-1992).

Prof. Shohat received her MD degree cum laude from the Tel Aviv University and her MPH degree from the Hebrew University School of Public Health.

Prof. Shohat main areas of interest are establishing data sets and registries for non-communicable diseases, trends in health behaviors, and survey methods for communicable diseases. She headed the committee for health behaviors in the project "For Healthy Future, 2020" and is currently a member of the committee on immunization policy.

Daniel Cohen, PhD, MPH

Prof. Daniel (Dani) Cohen became director of the Tel Aviv University School of Public Health on October 1, 2011.

Prof. Cohen received his PhD degree from the Tel Aviv University Sackler Faculty of Medicine in 1990. He served for many years in the Israel Defense Forces and was the director of the Infectious Diseases Research Institute of the Medical Corps. In 2002 Prof. Cohen joined the Tel Aviv University for a full time academic position. He is Full Professor of Epidemiology and Preventive Medicine since 2006. Prof. Cohen is also incumbent of Diana & Stanley Steyer Chair of Cancer Prevention and Control, Director of the Stanley Steyer Institute for Cancer Epidemiology and Research and Director of the Tel Aviv University Center for the Study of Bioterrorism. He founded the Tiberio Swartz Forum on Epidemiology of Infectious Diseases and Biosecurity and is member of the executive board of the Middle East Consortium for Infectious Diseases Surveillance (MECIDS). He is a member of several national and international advisory boards in the field of infectious diseases and vaccines and served several times as consultant for the World Health Organization.

Prof. Cohen's main research interests include the study of risk and protective host factors associated with enteric infectious diseases and in particular shigellosis, clinical development of enteric vaccines, development of laboratory based surveillance methods and serosurveillance and the study of the association between infectious agents (e.g. *Helicobacter pylori*, Human Papilloma Virus) and cancer.

Prof. Cohen is the author of more than 150 peer-reviewed manuscripts; he supervised many graduate and postgraduate students and received several awards for outstanding contribution to research.

Jonathan Zenilman, MD

Jonathan Zenilman, MD is Professor of Medicine and Chief of the Infectious Diseases Division at the Johns Hopkins Bayview Medical Center. From 1985-1989 he was at the US Centers for Disease Control (CDC) as an Epidemic Intelligence Service (EIS) officer (1987-89) and as a medical epidemiologist. In 1989 he led the effort to coordinate and write the 1989 STD Treatment Guidelines, and has been part of every STD Treatment Guidelines committee since. Since 1989, he has been at the Johns Hopkins University Schools of Medicine and Public Health, where he has developed an active clinical and translational research program focusing on STD epidemiology.

Prof. Zenilman has >240 publications and has led research efforts in a number of areas. He is well known for understanding the role of biomarkers as validators for risky sexual behavior and has developed methods ascertaining the validity (or non- validity) of self-reported condom use, for further understandings of the interactions between STDs and HIV infection.

In 2003, he became director of the Bayview ID Division, and has developed a clinical research focus in wound infections, and is exploring specifically how the microbiome and biofilm characteristics of chronic wounds impact wound healing.

Moyses Szklo, MD, DrPH, MPH

Professor in the Bloomberg School's Department of Epidemiology and director of the Graduate Summer Institute of Epidemiology and Biostatistics of the Johns Hopkins University. Prof. Szklo is the Editor-in-Chief of the American Journal of Epidemiology. Prof. Szklo has been interested in both the natural history and the etiology of cardiovascular diseases. He was involved in a total metropolitan Baltimore study of the prognosis of patients with acute myocardial infarction, and was one of the first investigators to clearly demonstrate on a population-wide basis the prognostic importance of non-Q infarction, particularly relevant to the assessment of subclinical cardiovascular disease.

Prof. Szklo was principal investigator for the Hopkins field center (based in Washington County, Maryland) and chairman of the Steering Committee of the Atherosclerosis Risk in Communities (ARIC) study from 1986 through 2000, in addition to acting as its editor for internal review of manuscripts. He is currently principal investigator of the Multi-Ethnic Study of Atherosclerosis, and chair of its publications committee.

Leon Gordis, MD, MPH, DrPH

Dr. Leon Gordis is Professor Emeritus of Epidemiology in the Johns Hopkins University (JHU) Bloomberg School of Public Health and Professor Emeritus of Pediatrics in the JHU School of Medicine in Baltimore, MD.

Dr. Gordis served as chairman of the Department of Epidemiology at JHU for 18 years and as Associate Dean for Admissions and Academic Affairs of the JHU School of Medicine for 6 years. He and his wife Hadassah came on Aliyah in 2009 and live in Jerusalem. Dr. Gordis is Visiting Professor at the Tel Aviv University School of Public Health and a faculty member of the Hebrew University-Hadassah Braun School of Public Health and Community Medicine in Jerusalem. Among his current research interests are impediments to the development of evidence-based policy and the impact of uncertainty on the translation of scientific data into public policy.

Dr. Gordis taught introductory epidemiology at Johns Hopkins to more than 17,000 medical students and public health students over 32 years. He is the author of several books including a textbook, *Epidemiology*, now in its fourth edition, and is currently preparing the fifth edition. He served as President of the American Epidemiological Society and the Society for Epidemiologic Research. He is a member of the Institute of Medicine and a Fellow of the American Association for the Advancement of Science.

Joel Schwartz, PhD

Joel Schwartz is a Professor in the departments of Environmental Health and Epidemiology at the Harvard School of Public Health, on the steering committee of the Harvard University Center for the Environment, and Director of the Harvard Center for Risk Analysis. His major research interests include health effects of air pollution, of heavy metals, of weather, and of drinking water. He has examined these questions using a variety of methods including time series, case-crossover, and case-only analyses of administrative data, survival and repeated measures analyses of cohorts, panel studies, etc. He has recently focused on environmental epigenetics, as well as gene-environment interaction studies. In addition, he has been involved in exposure modeling, including both land use regression approaches as well as use of remote sensing data.

A final area of interest is risk assessment and the use of cost benefit analysis to make environmental decisions. Prof. Schwartz has developed benefit methodologies for assessing the benefits of lead control, and applied those methodologies to the decision to remove lead from gasoline and to revise the Centers for Disease Control's screening guidelines. A recent analysis examined the extent of variability of the benefits of controlling coal-fired power plants based on location. He is also interested in extending risk assessment to include estimates of the distributional effects of exposure and control strategies by SES, geography, and medical conditions to better incorporate equity considerations into risk management. Prof. Schwartz was a recipient of a John D and Catherine T MacArthur Fellowship.

Sara Cosgrove, MD

Associate Professor of Medicine in the Division of Infectious Disease at Johns Hopkins University School of Medicine. She serves as the Director of the Antimicrobial Stewardship Program and the Associate Hospital Epidemiologist at The Johns Hopkins Hospital in Baltimore, Maryland. Prof. Cosgrove received her undergraduate degree from Columbia College in New York, New York, her medical degree from Baylor College of Medicine in Houston, Texas, and her Master of Science degree in epidemiology from Harvard School of Public Health in Boston, Massachusetts. She completed her postgraduate training in internal medicine at The Johns Hopkins Hospital and underwent subsequent training in infectious disease at Beth Israel Deaconess Medical Center in Boston. Prof. Cosgrove's research interests include the epidemiology and outcomes of antimicrobial resistance, the development of tools and programs to promote the rational use of antimicrobials, and the prevention of hospital-acquired infections

Yehuda Carmeli, MD, MPH

Yehuda Carmeli, MD, MPH is the chief of the Division of Epidemiology, National Center for Antibiotic Resistance, and a Senior Staff physician in the Division of Infectious Diseases at the Tel Aviv Medical Center, and a professor in Medicine, Tel Aviv University, Israel. He is also on the research staff at the Division of Infectious Diseases, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA. Prof. Carmeli received his MD degree from Ben Gurion University, Israel and his MPH degree at Harvard School of Public Health. He served his residency at Hadassah Medical Center, Hebrew University, Jerusalem, and then served as a fellow in Medicine at Massachusetts General Hospital, Boston. Prof. Carmeli completed his fellowship in Infectious Diseases at Beth Israel Deaconess Medical Center. His primary research interest is the epidemiology of resistance to antibiotics. Prof. Carmeli is the recipient of the Finland research award of the Massachusetts Infectious Disease Society, and the John T. Smith award on research of new quinolones, and The ICAAC program award for Pathogenesis of Microbial Diseases. Prof. Carmeli is the author of over 150 research articles, and is on the editorial board of several major journals in infectious diseases and hospital epidemiology.

ABOUT TEL AVIV UNIVERSITY

Tel Aviv University (TAU) is Israel's largest academic institution in Israel. Its faculty comprises nationally and internationally renowned scholars and scientists, many of whom are leaders in their fields. TAU is a major center of teaching and research and is composed of nine faculties, 106 departments, and 90 research institutes. There are currently around 29,000 students studying at the university in various degree programs.



TAU was founded in 1956 when three small education units – The Tel Aviv School of Law and Economics, the Institute

of Natural Sciences, and the Institute of Jewish Studies – joined together to form a comprehensive university.

Today, TAU offers an extensive range of degrees in the arts and sciences, within its Faculties of Engineering, Exact Sciences, Life Sciences, Medicine, Humanities, Law, Social Sciences, Arts and Management. The original 170-acre campus has been expanded to include an additional 50-acre tract, now being developed.

The TAU campus is located in suburban Ramat Aviv, just north of the city and a twenty-minute bus ride from downtown Tel Aviv.

ABOUT THE SACKLER FACULTY OF MEDICINE

The Sackler Faculty of Medicine is Israel's largest institute of higher medical education. The Faculty consists of six schools: The School of Medicine, The School of Dental Medicine, The School of Continuing Medical Education, The Graduate School, The School of Public Health, and The School of Health Professions.

The Sackler Faculty of Medicine offers professional degrees (PhD, Masters, and Bachelors degrees) as well as postdoctoral fellowships. The School of Medicine was established in 1964, and in 1972, the school was officially named the Sackler School of Medicine and moved into its current home on TAU's campus.

ABOUT THE SCHOOL OF PUBLIC HEALTH

The School of Public Health (SPH) at the Sackler Faculty of Medicine, Tel Aviv University aims to improve the health of the population through teaching, scientific research, and the dissemination of information to the public and to policy makers. The School teaches and trains both graduate and medical students to develop, implement, and assess strategies in order to deal with a wide range of subjects within the public health arena.

ABOUT TEL AVIV

Only three years ago celebrating its centennial, Tel Aviv was founded during the Ottoman Empire in 1909. The first modern Hebrew-speaking city, the name "Tel Aviv" is derived from the Hebrew word "Tel," an archaeological term for an area where you can see the stratum on old cities built upon one another, and the word "Aviv" which means spring. The name is meant to represent "a rebirth."

Just south of Tel Aviv is the city of Jaffa – a city whose foundations date farther back than Jerusalem and hosts the oldest operating port in the world. In the early 1900s a group of Jewish Jaffa residents chose to leave the city of Jaffa in order to establish a new residential neighborhood just outside the city's boards. This area turned out to be the first neighborhood of Tel Aviv.

With the influx of Jewish immigrants from Europe between the years 1924-1939, Tel Aviv became Israel's major center of commerce, culture and arts. In 1950, Tel Aviv and Jaffa merged into one municipality known as Tel Aviv - Yafo.

The Tel Aviv of today has maintained its distinction as the cultural and economic hub of the country. In addition, the city boasts a plethora of restaurants, beaches, museums, movie theaters, outdoor cafes, fruit juice stands, boutique shops, bars and clubs. This combination has attracted the nation's youth and young professional crowd in droves. It has also earned the city the reputation of Israel's non-stop city and one of the party highlights of the Mediterranean.

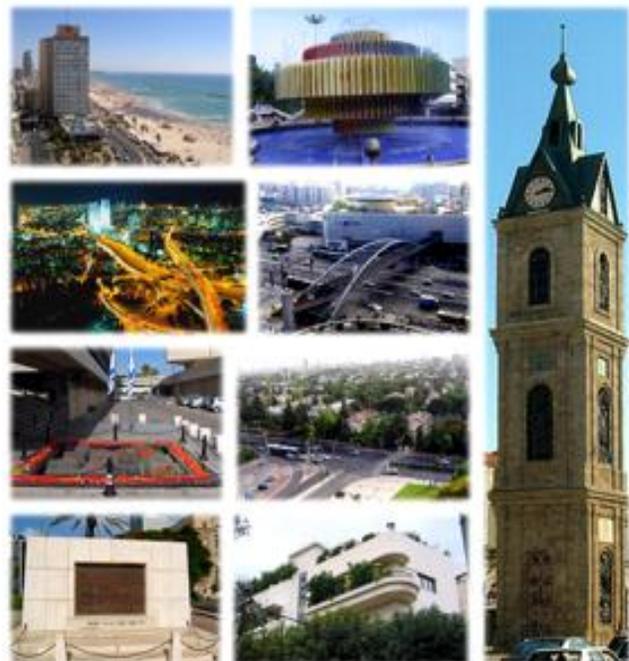
Tel Aviv and surrounding areas (known as Gush Dan) are composed of approximately 2.5 million people, which is about one third of Israel's population. While the actual population within the city's limits is around 350,000, over one million people visit Tel Aviv daily.

We hope you enjoy living in this exciting city throughout the duration of the Summer Institute of Advanced Epidemiology and Preventive Medicine and encourage you to get out of the classroom and campus as much as possible to discover and enjoy (while keeping a focus on your studies of course!).

DID YOU KNOW?

Tel Aviv is a UNESCO World Heritage Site

Tel Aviv is home to over 5000 Bauhaus buildings - the largest concentration per city in the world. The city is undergoing a massive reconstruction and preservation effort, which has earned it the status of a world heritage site by UNESCO. Take a tour of the building at the Bauhaus Center: www.bauhaus-center.com/



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