

Fall Semester, 2013

PM 512 PRINCIPLES OF EPIDEMIOLOGY

University of Southern California Keck School of Medicine
Department of Preventive Medicine

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Thursday 10am – 11am, or by appointment

Wangjing Ke and Vladimir Kogan and Sandy Lopez Najera

Class Schedule:

Mondays, 9:00 to 11:00 AM

Lectures/exams:

SSB 115/116

Labs:

Mondays 11:10-1:00 PM

Required Text:

Rothman, K.J. (2012) 2nd Edition. Epidemiology: An Introduction.

New York: Oxford University Press. ISBN 978-0-19-975455-7

Hennekens, C.H., & Buring, J.E (1987) 1st Edition. Epidemiology in Medicine

Lippincott Williams & Wilkins. ISBN-13: 978-0316356367

Mausner JS, Kramer S. (1985) 2nd Edition. Epidemiology: An Introductory Text. WB. Saunders Co.

Kelsey, J.L., Whittemore, A.S., Evans. S.A. & Thompson, W.D. (1996)

Methods in Observational Epidemiology

Recommended Text:

Grading Plan:

Epi in the News

5%

Participation

5%

Quiz

5%

Midterm I

25%

Study Critique 1

30%

Final Exam

30%

PM512 SCHEDULE -- FALL 2013

Date	Format	No.	Content	Readings ¹	Homework Assignments
M 8/26	LECT:	1	The Nature of Epidemiology Causal Inference	Rothman: Ch 1-3 Hennekens: Ch 1-3	HW 1: Definitions and Prevention HW 2: Snow on Cholera Article: Rothman, Causation & Causal
M 9/2	LECT:	2	NO CLASS – Labor Day		
M 9/9	LECT: LAB:	3	Measures of Disease Occurrence Age-Adjustment Discuss Homeworks 1-2, Rothman paper	Rothman: Ch 4 Hennekens: Ch 4 (54-73), Ch 5	HW 3: Rates HW 4: Age-Adjustment
M 9/16	LECT: LAB:	3	Descriptive Epidemiology (person, place, time) Cohort Effect (time: age, period, birth cohort) Discuss Homeworks 3-4 Assign Epi in the News	Mausner D, E, F Kelsey: Ch 3	HW 5: Cohort Effect Article: McKiernan, Rising Rates of Testicular Cancer
M 9/23	LECT: LAB:	4	Introduction to Study Designs Descriptive Studies Experimental Designs Cohort Studies Discuss Homework 5 and McKiernan paper Quiz: rates and age-adjustment	Rothman: Ch 5 Hennekens: Ch 7 & 8	Article: Jemal, Contemporary Lung Cancer Trends Article: MacMahon, Short Term Temporal Cycles

Date	Format	No.	Content	Readings ¹	Homework Assignments
M 9/30	LECT:	5	Case-Control Studies Cross-Sectional Studies Ecological Studies Comparing Study Designs	Rothman: Ch 5 Hennekens: Ch 6 & 9	HW 6: Study Designs Article: Varma, Prevalence of diabetic retinopathy
M 10/7	LAB: LECT:	6	Discuss Jemal and MacMahon papers Relative Risk Attributable Risk	Rothman: Ch 3 (27-28); Ch 4 (65-66) Hennekens: Ch 4 (73-96) Kelsey: pp 34-40	HW 9: Relative Risk HW 10: Attributable Risk Article: Hulley, Randomized Trial of Estrogen (HERS paper) (will be referred to in Dr. Mack's lecture) DUE: EPI IN THE NEWS
M 10/14	LECT: LAB:	7	Randomized Trials (<i>Dr. Wendy Mack</i>) Survival Analysis (<i>Dr. Wendy Mack</i>) Discuss Homework 9, 10	Rothman: Ch 4 (49-51); Ch 13 (243-246) Hennekens: Ch 8	HW 11: Bladder Cancer (Review) HW 7: Survival Analysis HW 8: RCT
M 10/21	LECT: LAB:	8	Bias, Confounding Introduction to Study Critique Outline Review Homework 7,8,11	Rothman: Ch 7 Hennekens: Ch 10,11,12	HW 12: Read and Critique Article: NHL pesticide
M 10/28	LECT:	9	MIDTERM 9:00-1:00 PM		
M 11/4	LECT: LAB:	10	Bias, Confounding, Effect Modification Discuss Homework 12	Rothman: Ch 11 (198-205) Hennekens: Ch 11,12	

Date	Format	No.	Content	Readings ¹	Homework Assignments
M 11/11	LECT: LAB:	11	Validity & Reliability of Tests Evaluation of Screening Programs Discuss Outbreak Background Discuss Confounding & Effect Modification examples	Rothman: Ch 13 (235-242) Hennekens: Ch 13	HW 14: Validity & Reliability of Tests HW 15: Screening Evaluation HANDOUT: STUDY CRITIQUE 1 Syllabus H READ OUTBREAK INTRO
M 11/18	LECT: LAB:	12	Acute Disease Epidemiology (<i>Dr. Tom Mack</i>) Outbreak Investigation (see Syllabus G)	Mausner H Kelsey: Ch 11	READ OUTBREAK INTRO BEFORE LAB
M 11/25	LECT: LAB:	13	Environmental Health (<i>Dr. Ed Avol</i>)		DUE at 5 PM: Study Critique 1
M 12/2	LECT: LAB:	14	Meta-Analysis Review for final exam Review Homework 14,15		
M 12/9			NO CLASS – STUDY WEEK		
M 12/16			FINAL EXAM 9:00-1:00 PM		

¹Chapters in required textbook: Rothman, K., Epidemiology an Introduction.; Hennekens, Epidemiology in Medicine.

Recommended textbook: Kelsey, J.L., Methods in Observational Epidemiology. Mausner's book chapters are available online.

* Homeworks are not graded, but are an essential part of the course. Homework should be completed students should be prepared for discussion the week after assignment. Participation scores are based on student's preparation for and involvement in the lab.