**American University of Beirut**

**Faculty of Health Sciences**

**Department of Epidemiology and Population Health**

**EPHD 203A: Bias in epidemiology [1 Cr]**

**Course Syllabus**

**Fall Semester, Academic Year 23/24**

**Course Instructors**

Dr. [Salim Adib](https://www.aub.edu.lb/pages/profile.aspx?memberID=sa193) (MD, DrPH)

Professor of Public Health Practice

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Office hours: Please send an email with several possible available times for that week

**Class time and venue**

**Common Lecture** Wednesdays 10:00-11:50 Room 103

**Course Description**

This course introduces undergraduate students to the sources of errors and their impact on methods in epidemiology. The course consists of a weekly lecture, and two exams. Material related to each session will be uploaded on Moodle prior to class time.

***Pre-requisite*: EPHD 203**

**Course learning objectives (LOs)**

By the end of this course, students should be able to:

1. Explain the role of biases when drawing appropriate causal inferences from epidemiological data.

2. Discuss specific selection and information biases of different observational epidemiological study designs

3. Discuss confounding bias and ways to control for this bias

4. Identify biases in observational epidemiological studies

**Assigned Textbook**

**Gordis L. Epidemiology. Philadelphia: Pennsylvania, WB Saunders Co.; 2013 fifth edition.**

* + AUB libraries e-books  <https://www.clinicalkey.com/#!/browse/book/3-s2.0-C20090629858> (you have to be on campus to access this)
  + There seems to be a floating free PDF version online – not sure how legit this is but it’s online at <http://sbmu.ac.ir/uploads/epidemiology_gordis_5_edi.pdf>

**Other Useful Online Resources** (recommended)

* OpenEpi (<http://www.openepi.com/Menu/OE_Menu.htm>) open source program works like a calculator where summary information is provided and calculations performed
* Epi Info (<https://www.cdc.gov/epiinfo/index.html>): statistical package for data entry and analysis **Attendance and participation**

You are required to attend all sessions. You are responsible for the material missed and for any announcements made. Students are expected to contribute their critical thoughts to class discussions.

**TURN OFF YOUR PHONES IN CLASS**

**Student Evaluation**

Exam 1 30%

Exam 2 (All course material) 60%

Attendance and participation 10%

**Policies and other General Notes:**

**Academic Integrity:**

Education is demanding and time management is essential. Do not hesitate to use the resources around you but do not cut corners. Cheating and plagiarism will not be tolerated. Please review the Student Code of Conduct in your handbook and familiarize yourself with definitions and penalties. If you’re in doubt about what constitutes plagiarism, ask your instructor because it is your responsibility to know. The American University of Beirut has a strict anti-cheating and anti-plagiarism policy. Penalties include failing marks on the assignment in question, suspension or expulsion from University and a permanent mention of the disciplinary action in the student’s records.

**Students with Disabilities:**

Staff members of the AUB Office of Student Affairs, Room 113, West Hall, coordinate accommodations and services for students with special needs. If you have a disability, for which you may request accommodation in AUB classes, consult the website for more information and arrange with the Coordinator (<https://www.aub.edu.lb/SAO/Pages/Accessible-Education.aspx>). Also, please see the instructor of this course privately about possible support services.

**Non-Discrimination-Title IX-AUB:**

AUB is committed to facilitating a campus free of all forms of discrimination including sex/gender-based harassment prohibited by Title IX. The University’s non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have experienced discrimination or harassment, including sexual misconduct, we encourage you to tell someone promptly. If you speak to a faculty or staff member about an issue such as harassment, sexual violence, or discrimination, the information will be kept as private as possible, however, faculty and designated staff are required to bring it to the attention of the University’s Title IX Coordinator. Faculty can refer you to fully confidential resources, and you can find information and contacts at[www.aub.edu.lb/titleix](https://www.aub.edu.lb/titleix). **To report an incident**, contact the University's Title IX Coordinator Trudi Hodges at 01-350000 ext. 2514, or [titleix@aub.edu.lb](mailto:titleix@aub.edu.lb). An anonymousreportmay be submittedonline via EthicsPoint at [www.aub.ethicspoint.com](https://www.aub.ethicspoint.com/).

**Detailed EPHD 203A outline (Wednesdays 10:00-11:50; room 103)**

| **Session** | **Date** | **Topic** |
| --- | --- | --- |
| Session 1 | Wed. Oct 18 | General review (1) |
| Session 2 | Wed. Nov 1 | General review (2) |
| Session 3 | Wed. Nov 8 | Sources of errors in science, validity and accuracy |
| Session 4 | Wed. Nov 15 | Bias in descriptive studies. Publication bias |
|  | Sat. Nov 18 | Exam 1 |
| Session 5 | Wed. Nov 29 | Bias types and bias control |
| Session 6 | Wed. Dec 6 | Confounding |
| Session 7 | Wed. Dec 13 | Remedial |
|  | TBD | Exam 2 |