

Advanced Biostatistics & Research Methods (1st part MD, all disciplines)

Course Schedule 2021-2022

Week No.	Activity *	Date	Title	Time	Instructor(s)
Week 1	Lecture	29 Dec.	Course Orientation	5:00 – 6:00 PM	AMM/ NHR/AF/ HA
Week 2	Lecture	3 Jan.	Introduction: Selection of a research topic	5:00 – 7:00 PM	AMM/ NHR
		5 Jan.	Basic concepts in biostatistics	5:00 – 7:00 PM	AF
Week 3	Lab	5 Jan.	Searching for Literature	7:00 – 8:00 PM	HA
		10 Jan.	Research Aim, Objectives, Questions, Hypothesis	5:00 – 7:00 PM	AMM
	Lecture	12 Jan.	Descriptive statistics: Measures of location/ dispersion.	5:00 – 7:00 PM	HA
Week 4	Lab	12 Jan.	1- Formulate research question in a PICO format 2- Introduction to SPSS	7:00 – 8:00 PM	HA
		17 Jan.	Study Designs I: Overview, Cross-Sectional.	5:00 – 7:00 PM	AF
	Lecture	19 Jan.	Descriptive Statistics: tabular & graphical presentation	5:00 – 7:00 PM	AF
Week 5	Lab	19 Jan.	Descriptive Statistics (SPSS)	7:00 – 8:00 PM	HA
		24 Jan.	Study Designs II: Case-Control, Cohort.	5:00 – 7:00 PM	AMM
	Lecture	26 Jan.	Introduction to Inferential statistics: Confidence Interval (CI)	5:00 – 7:00 PM	NHR
Week 6	Lab	26 Jan.	Introduction to 2*2 Table OR, RR, and CI (SPSS)	7:00 – 8:00 PM	HA
		31 Jan.	Study Designs III: Quasi-experimental, RCT.	5:00 – 7:00 PM	NHR
	Lecture	2 Feb.	Introduction to Inferential statistics: Probability, Distribution, Hypothesis testing.	5:00 – 7:00 PM	AMM
			MID-YEAR HOLIDAY 5 - 18 Feb.		
Week 7	Lab	21 Feb.	Sampling criteria/ techniques	5:00 – 7:00 PM	NHR
		23 Feb.	Sample size & power	5:00 – 7:00 PM	AMM
	Lecture	23 Feb.	Tools for sample size calculation	7:00 – 8:00 PM	HA
Week 8	Lab	28 Feb.	Confounding and Effect Modification	5:00 – 7:00 PM	AF
		2 Mar.	Hypothesis testing: T-test & Chi-square test	5:00 – 7:00 PM	AF
	Lecture	2 Mar.	T-test & Chi-square test (SPSS) Testing for confounders & effect-modifiers	7:00 – 8:00 PM	AF
Week 9	Lab	7 Mar.	Data collection: Methods & Tools	5:00 – 7:00 PM	HA
		9 Mar.	Hypothesis testing: ANOVA	5:00 – 7:00 PM	HA
	Lecture	9 Mar.	ANOVA test (SPSS)	7:00 – 8:00 PM	HA
Week 10	Lab	14 Mar.	Research Ethics	5:00 – 7:00 PM	HA
		16 Mar.	Non-parametric tests	5:00 – 7:00 PM	AF
	Lecture	16 Mar.	Non-parametric tests (SPSS)	7:00 – 8:00 PM	AF
Week 11	Lab	21 Mar.	Measurement errors	5:00 – 7:00 PM	NHR
		23 Mar.	Hypothesis testing: Correlation & regression	5:00 – 7:00 PM	AMM
	Lecture	23 Mar.	Correlation & regression (SPSS).	7:00 – 8:00 PM	HA
Week 12	Lab	28 Mar.	Screening	5:00 – 7:00 PM	NHR
		30 Mar.	ROC analysis	5:00 – 7:00 PM	NHR
	Lecture	30 Mar.	1- ROC (SPSS) 2- Data management/ Dummy tables	7:00 – 8:00 PM	HA
Week 13	Lab	4 Apr.	Reliability	4:00 – 6:00 PM	AF
		6 Apr.	Introduction to survival analysis	3:00 – 5:00 PM	AF
	Lecture	6 Apr.	1- Survival analysis (SPSS) 2- Testing for reliability (SPSS)	5:00 – 6:00 PM	AF
Week 14	Lab	11 Apr.	Validity	4:00 – 6:00 PM	AMM
		13 Apr.	Systematic Review & Meta-analysis	3:00 – 5:00 PM	AMM
	Lecture	13 Apr.	Reporting Guidelines (STROBE, CONSORT, PRISMA)	5:00 – 6:00 PM	HA
Week 15	Session	18 Apr.	Revision & COURSE WRAP-UP	4:00 – 6:00 PM	NHR/ AMM
	Session	20 Apr.	Project Presentation (OPTIONAL)	4:00 – 6:00 PM	NHR/ AMM

****All sessions will be live online via Microsoft Teams (link will be available on the Moodle)**

AMM: Prof. Adel M. Mishriky

NHR: Prof. Nadia H. Rizkallah

AF: Dr. Ahmed Fouad

HA: Dr. Hebatallah Aly