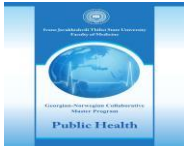


Ivane Javakhishvili Tbilisi State University, Faculty of Medicine



Course Syllabus

Course name	Research Methods and Scientific Writing
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Lecturer (Lecturers)	Paata Imnadze, MD, PhD, Professor, Tbilisi State University, Faculty of Medicine, Department of Public Health; Tel: 599 90 68 53 E-mail: pimnadze@ncdc.ge Nikoloz Chkhartishvili, MD, MS, PhD, Deputy Director for Research of the Infectious Diseases, AIDS and Clinical Immunology Research Center. Tel: +995 599 535366 E-mail: nikoloch@yahoo.com ; nc@aidscenter.ge
Code of the course	The code is awarded by the faculty in accordance with the general rules.
Status of the Course 	Faculty of Medicine. Georgian-Norwegian Collaborative Master Program "Public Health". Teaching languages is English. Teaching course is Mandatory.
Aims of the course	The overall aim of the course is to further enhance analytical skills through translating obtained research methodology skills into scientific writing. The course will specifically contribute to the practical application of research methods and development of scientific writing and presentation skills. The final product of the course will be research manuscript prepared by students.
ECTS (Number of contact hours and independent working hours)	10 credits (250 hours). Contact hours: - 45 hours (15 hrs - lectures, 30 hrs. – group work). Mid-term exam - 2 h.; Final exam – 3 h.; Independent work - 200 hours.
Prerequisites	- Epidemiology and Biostatistics I -Epidemiology and Biostatistics II
Learning outcomes	At the end of the course the student: Knowledge and Understanding: will know key research methods, structure and components of scientific paper, and will be able to critically appraise it. Applying knowledge in practice: will be able to design and execute research study and prepare scientific paper based on this study. Making Judgment: will be able to correctly interpret results of research study and formulate meaningful conclusions. Communication: will be able effectively communicate research methods, results and conclusions through scientific presentation and publication.

	<p>Learning skills: will be able to independently continue learning and development.</p> <p>Values: will follow standards and values of scientific integrity.</p>
Course Contents	See annex 1
Learning-Teaching Methods	<ul style="list-style-type: none"> • Interactive lectures and seminars; • Observation; • Presentation; • Homework assignments, including preparation of research manuscript.
Assessment forms/components/methods/criterias	<p>Homework assignments - 10; Midterm Exam-20; Presentation – 10; Manuscript – 20; Final exam – 40; Total: 100.</p> <p>For the detailed description of assessment criteria please refer to the students Guide.</p> <p>The evaluation system has:</p> <p>A) five positive grades: (A) Excellent – 91-100; (B) is very good - 81-90; (C) good - 71-80; (D) satisfactory - 61-70; (E) enough - 51-60;</p> <p>B) Two types of negative evaluation (FX) Fail - 41-50, which means that the student will need to work more and to retake an additional exam; Additional exam will be held no less than 5 days after the announcement of the results of the final exam. (F) Fail - 40 or less, which means that the student's work is not enough and the subject should be learned again.</p>
Basic Literature	<p>Cargill M, O'Connor P. Writing scientific research articles : strategy and steps. 2nd ed. Chichester, UK ; Hoboken, NJ: Wiley-Blackwell; 2013.</p> <p>Books are available at University library.</p>
Additional Literature	<ul style="list-style-type: none"> • Aschengrau A, Seage GR. Essentials of epidemiology in public health. Sudbury, Mass.: Jones and Bartlett; 2003. • Rothman KJ, Greenland S, Lash TL. Modern epidemiology. 3rd ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2008. • Hulley SB, Cummings SR, Browner WS, Grady DG, Newman TB. Designing clinical research. 3rd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2007. • Gustavii B. How to write & illustrate a scientific paper. 2nd ed. New York: Cambridge University Press; 2008. • Strunk W, White EB. The elements of style. 4th ed. Boston: Allyn and Bacon; 1999.

Week		Topic of lecture/group work	Number of hour per week
I	Lecture	Introduction to the course: from research idea to scientific paper.	1
	Group work	<p>Accessing scientific papers - Pubmed, HINARI, Google Scholar, ResearchGate.</p> <p>Homework assignments: 1. Read and carefully review scientific paper provided by course leader for the next class; 2. Open accounts at Google Scholar and ResearchGate.</p>	2
II	Lecture	How to read and understand scientific paper.	1
	Group work	<p>Reviewing paper provided by course leader for homework assignment.</p> <p>Homework assignment: Read and carefully review scientific papers provided by course leader for the next class.</p>	2
III	Lecture	Overview of research methods I: types of studies.	1
	Group work	Reviewing study designs based on scientific papers provided by course leader.	2
IV	Lecture	Overview of research methods II: data management and analysis.	1
	Group work	Introducing dataset to be used in the class for data analysis and further manuscript writing.	2
V	Lecture	Disseminating research data: poster presentation, oral presentation, scientific paper. Preparing abstract for conference.	1
	Group work	<p>Analyzing data from class dataset.</p> <p>Homework assignment: prepare tables/figures based on the results of data analysis.</p>	2
VI	Lecture	Preparing manuscript for publication in peer-reviewed journal I: structure of the manuscript, choosing the appropriate journal, getting know instructions	1
	Group work	<p>Reviewing previous assignment. Finalizing data analysis of class dataset.</p> <p>Homework assignment: prepare abstract based on the final results of data analysis.</p>	2
VII	Lecture	Preparing manuscript for publication in peer-reviewed journal II: writing methods and results section.	1
	Group work	Reviewing previous assignment.	2

		Homework assignment: prepare methods and results sections for class manuscript.	
		Midterm Exam	
VIII	Lecture	Preparing manuscript for publication in peer-reviewed journal III: Writing introduction section.	1
	Group work	Reviewing previous assignments. Homework assignment: prepare introduction section for class manuscript.	2
IX	Lecture	Preparing manuscript for publication in peer-reviewed journal IV: Writing discussion section.	1
	Group work	Review of previous assignment. Formatting references, reference managing programs. Homework assignment: prepare discussion section for class manuscript.	2
X	Lecture	Preparing manuscript for publication in peer-reviewed journal V: Finalizing and submitting manuscript; revision of manuscript.	1
	Group work	Review of previous assignment. Discussion of manuscript submission steps, preparing cover letter for submission. Homework assignment: Finalize class manuscript.	2
XI	Lecture	Publication ethics. The concepts of academic integrity and plagiarism.	1
	Group work	Review of previous assignment. Quiz on how to prepare manuscript. Homework assignment: identify peer-reviewed paper of your interest for preparing power point presentation based on this paper.	2
XII	Lecture	Presenting research: poster and oral presentation.	1
	Group work	Preparing slides for presenting research. Homework assignment: prepare slides for power point presentation.	2
XIII	Lecture	Critical appraisal of real-life presentations made at international conferences.	1
	Group work	Class discussion. Review of previous assignment. prepare power point oral presentation.	2
XIV	Lecture	Project description.	1
	Group work	Student presentations.	2

XV	Lecture	Project description (continue). Course overview for final exam.	1
	Group work	Student presentations. Course evaluation.	2
		Final Exam	