

University of Karachi Office of Dean, Faculty of Science

First Semester 2009

Compulsory Course for MS/PhD Students

ASR 701: Research Methodology I (3+0)

Activity	Dates	Class Schedule
Introduction day	March 19	Tue, Thu 1411h – 1540h
Teaching	March 20 – May 9	Auditorium, KIBGE
Semester Examinations	May 11–30	Administrative Assistants
Vacations	June 1 – July 15 (Summer)	Nooruddin, Ruby (9926 1300-6 ext. 2255)

Course Faculty
Prof. Dr. Syed Arif Kamal, Mathematics and others

Telephone: 9926 1300-6 ext. 2380

Homepage: https://www.ngds-ku.org/kamal
Profdrakamal@gmail.com
Office: Room No. G-5, Dept. of Mathematics

Course Coördinator
Prof. Dr. Darakhshan J. Haleem,
Department of Biochemistry
9926 1300-6 ext. 2371

Class Representative
Syed Mansoor Naqvi
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ku.org/kamal/contact.htm#Directions

Office Hours: Friday 1110h – 1149h

Course Objectives

To give the students an introduction to the methodology of research, taking the students from philosophical (philosophy of sciences) to practical (research-proposal writing, synopsis writing) topics. The course shall be conducted by various faculty members covering topics of their specialization. After completing this course the students should be able to identify a potential topic for conducting research.

Course Topics (to be covered by Prof. Kamal)

Section A (Philosophy of Science): The nature of scientific inquiry, positivism and the scientific method, philosophies of science, research in practice, phenomenological and fundamental approaches (March 24)

Section B (Research Objectives): Approaches to research (inductive and deductive, technological and simulational) (March 26)

Prof. Kamal's classes on Tuesdays

Section C (Research Hypothesis): Real hypothesis, use of hypothesis, writing and formalizing a hypothesis (March 31)

Section D (Types of Research Methods): Experimental, correlation, natural observational, survey, case study (April 7)

Section E (Research Proposal): Components, research economics, research budgeting, significance of research objectives (April 7)

Section F (MS/PhD Synopsis/Statement of Research): format, template, statement of research interests (April 14)

Sections A-D: https://www.ngds-ku.org/kamal/drak_articles.htm — has list of reference books

https://www.ngds-ku.org/articles/A14.pdf • https://www.ngds-ku.org/articles/A17.pdf https://www.ngds-ku.org/articles/A19.pdf • https://www.ngds-ku.org/articles/A20.pdf

Section E: https://www.ngds-ku.org/DFS/DFS01.pdf • https://www.ngds-ku.org/Industrial/Res_Prop.pdf •

https://www.ngds-ku.org/DFS/Template2008.pdf

Section F: https://www.ngds-ku.org/PhD/Synopsis.pdf

Hard Copies: Geology Photocopy Shop (some of the above material)

For course announcements and assignments, go to *Pedagogical Section*, click on "Courses (offered during the current semester)".