



کراچی یونیورسٹی

University of Karachi

Office of Dean, Faculty of Sciences

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 (926 1300-6 ext. 2255)

Course Faculty
Prof. Dr. Syed Arif Kamal, *Mathematics* and others
Telephone: 926 1300-6 ext. 2380
Homepage: <http://ngds-ku.org/kamal>
e-mail: kamal(at the rate of)ngds-ku.org
Office: Room No. 6, Dept. of Mathematics
Directions: <http://www.ngds-ku.org/kamal/contact.htm#Directions>
Office Hours: Friday 1110h – 1149h

Course Coördinator
Prof. Dr. Darakhshan J. Haleem,
Department of Biochemistry
926 1300-6 ext. 2371
Class Representative
Syed Mansoor Naqvi
mansoor.naqvi(at the rate of)aku.edu
Prof. Kamal's classes on Tuesdays

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)

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: NGDS = <http://www.ngds-ku.org>; <NGDS/kamal/drak_articles.htm> — has list of reference books, <NGDS/drak_articles/drarticle1.pdf>, <NGDS/drak_articles/drarticle2.pdf>, <NGDS/drak_articles/drarticle3.pdf>, <NGDS/drak_articles/drarticle4.pdf>.

Section E: <NGDS/DFS/DFS01.htm>, <NGDS/Industrial/Res_Prop.pdf>, <NGDS/DFS/Template2008.pdf>

Section F: <NGDS/kamal/synopsis.htm>, <NGDS/PhD/Synopsis.pdf>

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