

Faculty of Engineering, UM
KVX8001 / KQX7001: Research Methodology (For PhD)
Tentative Course Schedule*
 Session 2019-2020, Semester 1

Date	Time	Lecture / Discussion	Class room activities/Submission/Presentation	Instructor	Venue
21 Sep 2019 (Saturday)	10:00-11:00 hr	Introduction to research: Research: definition, type, methodology, and outcome. History and philosophy of scientific research. Scientific research method. Stages of research and development (R&D). Technology Readiness level (TRL). Introduction to research impact.	–	Prof. Dr. A. S. M. A. Haseeb	DK9, Block Y (Electrical Eng. Dept. Building, opposite to Eng. Fac. Car park)
	11:00-11:30 hr	–	Self-introduction to peers and discussion on motivation of your research		
	11:30-13:00 hr	Continued: Introduction to research	–		
28 Sep 2019 (Saturday)	10:00-11:00 hr	Attributes and skills of a researcher: Research skills and techniques, Research environment, Research management, Personal effectiveness, Communication skills, Networking and teamworking, Career management	–		
	11:00-12:00 hr		- Group discussion on traits of a successful graduate researcher - Formation of peer groups		
	12:00-13:00 hr	Review of basic writing skills, and writing in English	–		
05 Oct 2019 (Saturday)	10:00-11:00 hr	Research proposal writing: Main purposes, contents, length, format. Funding application and research proposal. IGS format for proposal. Examples of research grant proposal formats: IPPP, ministry of education formats.	–		
	11:00-12:00 hr	–	Class Work: Critically analyze research proposal of one of your colleagues, make comments on proposal and prepare a report		
	12:00-13:00 hr	Graduate research: Introduction to graduate research. Major steps: Identifying a research topic and developing research questions, proposal writing, literature study, experimental design, carrying out research, thesis writing, seminar/defence.	–		

**Subject to changes if unavoidable circumstances arise*

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12 Oct 2019 (Saturday)	10:00-11:00 hr	Graduate research: Literature review.	–	Prof. Dr. A. S. M. A. Haseeb	DK9, Block Y (Electrical Eng. Dept. Building, opposite to Eng. Fac. Car park)
	11:00-12:00 hr	–	Class Work: Group discussion on research proposal		
	12:00-13:00 hr	Graduate research: Tips and good practices. To be your own critic, planning and monitoring, time management, staying motivated, good research habits, networking, managing supervisor, research ethics and research best practices.	–		
19 Oct 2019 (Saturday)	10:00-11:00 hr	Graduate research: Time management.	SUBMISSION 1: a) Proposal with corrections on it, b) Individual report on research proposal, c) Assessment rubric, d) Group report		
	11:00-11:30 hr	–	Class Work: Group discussion on graduate research		
	11:30-13:00 hr	Graduate research: Introduction to experimental design.	–		
26 Oct 2019 (Saturday)	10:00-11:00 hr	Thesis writing: Contents of a thesis, IGS format, revision, language, examiners' expectation. Practical tips on how to develop a draft efficiently.			
	11:00-11:30 hr	–	Class Work: Critically analyze a thesis related to your research topic		
	11:30-13:00 hr	Continued: Thesis writing			
02 Nov 2019 (Saturday)	10:00-11:00 hr	Paper writing: - Introduction: history, IMRaD format, tips. - Journal impact factor, quartile, h-index etc.	–		
	11:00-11:00 hr	–	Class Work: Continue to work on the critical analysis of a thesis related to your topic		
	12:00-12:00 hr	Paper writing: Analysis of content of a scientific research paper			

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16 Nov 2019 (Saturday)	10:00-11:00 hr	Continued: Paper writing: Analysis of content of a scientific research paper	–	Prof. Dr. A. S. M. A. Haseeb	DK9, Block Y (Electrical Eng. Dept. Building, opposite to Eng. Fac. Car park)
	11:00-12:00 hr	–	Class Work: Critically analyze a 'poor' and a 'very good' paper in area closely related to your research		
	12:00-13:00 hr	Paper writing: Submission to journals and dealing with reviewers	–		
30 Nov 2019 (Saturday)	10:00-11:00 hr	Paper writing: - Ethical issues - Language	SUBMISSION 2: Report on critical analysis of a thesis closely related to your research		
	11:00-12:00 hr		Class Work: Group discussion on the characteristics of a good and a poor paper		
	12:00-13:00 hr	Scientific paper presentation: Analyzing of audience, structure, rehearsal, slide preparation, delivery, effective communication through eye contact, gesture, voice etc. Avoiding nervousness, question and answer			
07 Dec 2019 (Saturday)	10:00-11:00 hr	Attending conferences: Selection of conference. Things to do before, during, and after the conference. Networking. Maximizing benefit from conference. Poster presentation.	SUBMISSION 3: Report on critical analysis of research papers		
	11:00-13:00 hr	Student seminar and experience sharing session	–		
14 Dec 2019 (Saturday)	10:00-13:00 hr	Student seminar and experience sharing session	–		
Schedule to be announced by the Faculty	To be announced	–	Final presentation: Oral presentation of your research proposal SUBMISSION 4: Your Updated Research Proposal SUBMISSION 5: Literature Review following IPS format	To be appointed by Faculty	To be announced
Schedule to be announced by the Faculty	To be announced	–	Final presentation: Oral presentation of your research proposal SUBMISSION 4: Your Updated Research Proposal SUBMISSION 5: Literature Review following IPS format	To be appointed by Faculty	To be announced
Schedule to be announced by the Faculty	To be announced	Training on essential softwares: Turnitin, Endnotes etc.		To be appointed by Faculty	To be announced