

DIRECTORATE OF POSTGRADUATE STUDIES

PROSPECTUS 2023

MS/MPhil & PhD PROGRAMS



Shah Abdul Latif University, Khairpur

Sindh, Pakistan

A United Nations Academic Impact University

~Z.A. Shaikh~

Note: The Catalogue-2023 is under the review of “Catalogue Committee” the recommended suggestions in the draft will be incorporated later-on.

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Vice Chancellor's Message

It gives me immense pleasure while writing this message for young researchers who are enrolling in the postgraduate programs at SALU Khairpur. I am happy that your journey to become a research student starts from here. It is a journey of knowledge and discovery that makes you and your family proud of your endeavors. This is a journey that unfolds new destinations of unknown ideas, plains of new thoughts and valleys of exciting thought provoking activities during your residency



Prof. Dr. Khalil Ahmed Ibupoto
Vice Chancellor SALU

time at SALU. A researcher is a thinking mind who looks at the nooks and corners of the society from a very unique perspective. Shah Abdul Latif University Khairpur provides you a great opportunity to mingle and mix with more than 2000 research scholars who are already engaged in research activities in various fields and disciplines. The catalogue 2023 of MS/MPhil and PhD programs is in your hand. It reflects University's research requirements and procedures from enrollment to your synopsis approval and thesis submission across all postgraduate programs for your convenience.

In today's world, the research oriented postgraduate qualification has become somehow mandatory for a choice career in teaching profession and some financial benefits are also associated with it. However alongside, the key purpose of the research oriented postgraduate degrees is conducting of research that is socially, economically, politically etc. beneficial and relevant to the society.

In the year 2022, we have very good news for the research aspirants. First, after long and hard efforts we have got our 14 postgraduate programs cleared from HEC which were either halted or stopped due to non compliance with HEC during 2018-20. Second good news to share with you all is that SALU for the first time is being converted on fully automated system across the university covering admissions, examinations and finance sections. This will boost performance, transparency and efficiency of the university.

Further, our university is now member of United Nations Academic Impact (UNAI) universities.

In the year of 2021 we received 1132 applications in postgraduate programs despite of looming of COVID 19. Out of 1123 applications, 400 meritorious applicants passed the test and interview and are accepted in various postgraduate programs. The interviews were conducted in presence of external experts who came from various universities across the country.

My dear scholars

We are striving hard to provide you a very conducive environment of research at main campus along with fully equipped classrooms for course work. The timings of central library are also extended till 8.00 pm. The fast *wifi* connectivity is also available to access online journals and information sources. You can now have online access to research journals and reference books that will greatly facilitate your research work.

SALU has its own HEC recognized journals for our faculty and scholars to publish their work. Most of our faculty members are HEC approved supervisors.

Our team urges you to come forward and achieve your career objectives through our HEC recognized and endorsed postgraduate degree programs. Our research oriented degrees can give you a boost in your existing jobs and facilitate you in switching to better options or proceeding to foreign countries for higher education. SALU has signed MoUs with several international universities where your placement for higher studies may be faster and easier than other universities.

Finally, my advice to our young researchers is to focus on your studies, develop a strong belief in your positive energies. Our team at directorate of PGS will always be there during your residency and research period to assist you in all your procedures.

Prof. Dr. Khalil Ahmed Ibupoto
Vice Chancellor

1. Introduction

The Directorate of Postgraduate Studies (DPS) was established in 2012 in pursuance of Resolution No.10 passed by the Syndicate in its meeting held on 24.12.2012 to launch the postgraduate programs at Shah Abdul Latif University, Khairpur. The Directorate is responsible for coordinating and administering MS/MPhil & PhD programs in consultation with university management as well as Institutes/ Departments and Directorates of Quality Enhancement Cell (QEC) and Office of Research Innovation & Commercialization (ORIC). The Directorate not only manages all the functions of the postgraduate matters but also performs responsibilities of processing postgraduate students' admissions and looks after matters related to postgraduate Rules and Regulations.

The main objective of Directorate of Postgraduate Studies (DPS) is to provide an ideal environment for quality research and training to MS/MPhil/PhD scholars & supervisors to produce rich scholarly contribution. The Directorate is headed by a Director.

All the functions are running through approvals from Advanced Studies & Research Board (ASRB) comprising of the Nineteen (19) members including Vice Chancellor, 02 Pro-Vice Chancellors, 06 Deans and others. Director of DPS is the secretary of the ASRB.

In the beginning, the postgraduate programs were launched in few departments but after the establishment of the Directorate of Postgraduate (DPS) many departments commenced their research programs. Currently, twenty-two (22) departments are offering MS/MPhil and Ten (10) departments PhD (Doctoral programs).

Presently there are more than 1948 (MPhil/MS: 1564 and PhD: 384) actively enrolled scholars in MS/MPhil & PhD programs in various fields of studies. Moreover, the fresh enrollment in 2021 was 368 in MS/MPhil and 107 in PhD.

Since the establishment of Directorate of Postgraduate Studies, the University has planned to award a considerable number of degrees of MS/MPhil & PhD every year.

Up to 2022 the Directorate has produced 1300 MS/MPhil and 160 PhD scholars in various fields of Natural Science, Physical Sciences, Social Sciences, Management Sciences & Arts & Languages.

The general requirements for admission in MS/MPhil is four years BS/BBA/B.Com/BPA, LL.B or two years master degree in the relevant discipline with at least 50% from Shah Abdul Latif University, Khairpur or equivalent qualification from any other HEC recognized university. And pre-requisite for admission to PhD is MS/MPhil (New PhD policy approved from 67th ASRB meeting and Academic Council) or equivalent Degree with 1st division (in the Annual System) or minimum CGPA 3.00 (out of 4.00 in the semester system) in the relevant discipline from Shah Abdul Latif University, Khairpur or any other HEC recognized university.

Values and Norms

The Directorate believes in:

- To maintain an honest and transparent system
- To create academic liberty and healthy research trends on campus
- To perform professionally the assigned duties and responsibilities in the best possible way.
- To facilitate the scholars of all ages with sound academic guidance.
- To coordinate with all the Departments and Institutes for the betterment of research output.
- The Directorate has introduced an academic calendar for running all the programs smoothly.

It also provides proper guidance of management regarding postgraduate challenges, problems and opportunities up to the completion of study. The Directorate also ensures that all study programs are completed in the stipulated time.

Key Functions of the Directorate

1. To chalk-out and manage the advertisement of fresh admissions annually.
2. To ensure that all the academic record of students is checked and verified by the Departments concerned.
3. To coordinate and ensure that all the students who have applied for admissions of MS/MPhil & PhD are examined through the Departmental General/Subject Test equal to HEC NTC (GAT/GRE) test as per scheduled program.
4. To maintain a database to allow admissions and prepare enrollment lists of qualified students and maintain fee records of enrolled students.
5. To ensure the smooth running of classes of coursework and conduct of semester examinations in all the Institutes/Departments.
6. To ensure the quality of research proposals, coordinate to incorporate the recommendations of scrutiny committees for allocation of supervisors to be maintained as per standard policies.
7. To prepare the agenda of Advanced Studies & Research Board (ASRB) for getting approval of research plans/synopsis as per recommendations of the scrutiny committees of the Institutes/Departments. The scrutiny committees are headed by Deans of the Faculties.
8. To issue the approval letters to the scholars to start their research work on their approved topics.
9. To process applications for approval of panel of experts from various approved/assigned Research Supervisors.
10. To coordinate with all the Deans of Faculties for holding of MS/MPhil and PhD Seminars.
11. To process applications for the appointment of local external examiners for Evaluation of MS/MPhil dissertation & viva voce and 03 foreign external examiners for evaluation of PhD dissertation and 02 local experts/examiners for conduct of open defense and viva voce.

12. To collect fees i.e admission fee, semester fee, 2nd year fees (after approval of Research Plans), Plagiarism check and Evaluation fee, etc.
13. To coordinate with ORIC for checking the thesis through anti plagiarism software as per directives and policy of Higher Education Commission to maintain the quality assurance.
14. To initiate the applications for required extension in research up to the maximum period of study after strong justification of scrutiny committee on the recommendations of supervisors, chairpersons and Deans of Faculties.
15. To monitor matters of academic quality including writing proposals and thesis.

Vision

The broad vision of SALU includes following points:

- To provide scholars with a congenial research environment in the premises of the University.
- To promote expertise in research studies/skills with integrity, honour and dignity for taking active part in the development of human resources, educational and scientific research.
- To strive to be one of the leading Pakistani university with Postgraduate education systems offering research at par with national and international Universities

Motto

We facilitate to promote research that has social impact on modern lines.

Mission

- To produce competent MS/MPhil & PhD scholars in various fields to serve the society.
- To develop a strong liaison between society and the quality research for combined efforts to tackle the social problems.
- To develop a strong relationship between our graduated and the local and national industry and market for self employment, innovation in manufacturing and services sector and jobs.

The Directorate endeavors to impart quality research to the scholars on modern lines and trains them actively to contribute their best performance for the betterment and research oriented society.

Prospectus Preparation/Editing Committee comprises of the following:

1. Prof. Dr. Khalil Ahmed Ibupoto Vice Chancellor	Convener
<u>All the Deans</u>	
2. Prof. Dr. Ghulam Mustafa Mashori Dean, Faculty of Arts & Languages	Member
3. Prof. Dr. Taj Muhammad Lashari Dean, Faculty of Social Sciences	Member
4. Prof. Dr. Qasid Hussain Mallah Dean, Faculty of Physical Sciences	Member
5. Prof. Dr. Abdul Hussain Shar Dean, Faculty of Natural Sciences	Member
6. Prof. Dr. Amir Hussain Shar Dean, Faculty of Management Sciences	Member
7. Mr. Shahid Hussain Qureshi Dean, Faculty of Law	Member
<u>The Members of ASRB</u>	
8. Prof. Dr. Muhammad Masihullah Jatoti Institute of Business Administration	Member
9. Prof. Dr. Syed Zulfiqar Ali Shah Institute of English Language & Literature	Member
10. Prof. Dr. Khalida Parveen Mahar Institute of Chemistry	Member
11. Prof. Dr. Muhammad Saleem Rahapoto Department of Economics	Member
12. Prof. Dr. Ikhtiar Ali Ghumro Institute of Commerce & Management	Member
13. Prof. Dr. Noor Hussain Chandio Department of Geography	Member
14. Prof. Dr. Minhoon Khan Laghari, Advisor (Academics) to Vice Chancellor	Member
15. Prof. Dr. Samina Rajper, Director ORIC	Member
16. Prof. Dr. Iram Rani Shaikh, Director QEC	Member
17. Mr. Muhammad Hassan Halepoto Controller of Examinations (Semester)	Member
18. Mr. Mureed Hussain Ibupoto, Registrar	Member
19. Prof. Dr. Naveed Ahmed Shaikh Director, Postgraduate Studies	Member/Secretary

**Supporting Officers and Staff Members of
Directorate of Postgraduate Studies (DPS):**

1.	Dr. Zulfiqar Ali Shaikh, Assistant Director	2.	Mr. Inayat Ali Hajano, Superintendent
3.	Mr. Nisar Ahmed Lashari, Superintendent	4.	Mr. Abdul Razaque Shaikh, Accountant
5.	Syed Ahsan Ali Shah, Office Assistant	6.	Mr. Abdul Hameed Baloch, Computer Operator
7.	Syed Zeeshan Ali Shah, Clerk		

Authorities of the University

Following forums are the statutory bodies of the university as per the SALU act and the code.

1	Senate
2	Syndicate
3	Academic Council
4	Advanced Studies & Research Board (ASRB)
5	Selection Board
6	Board of Faculties
7	Board of Studies
8	Affiliation Committee
9	Finance & Planning Committee (FPC)
10	Students Discipline Committee

Academic Calendar 2023

Schedule of admissions MS/MPhil & PhD program

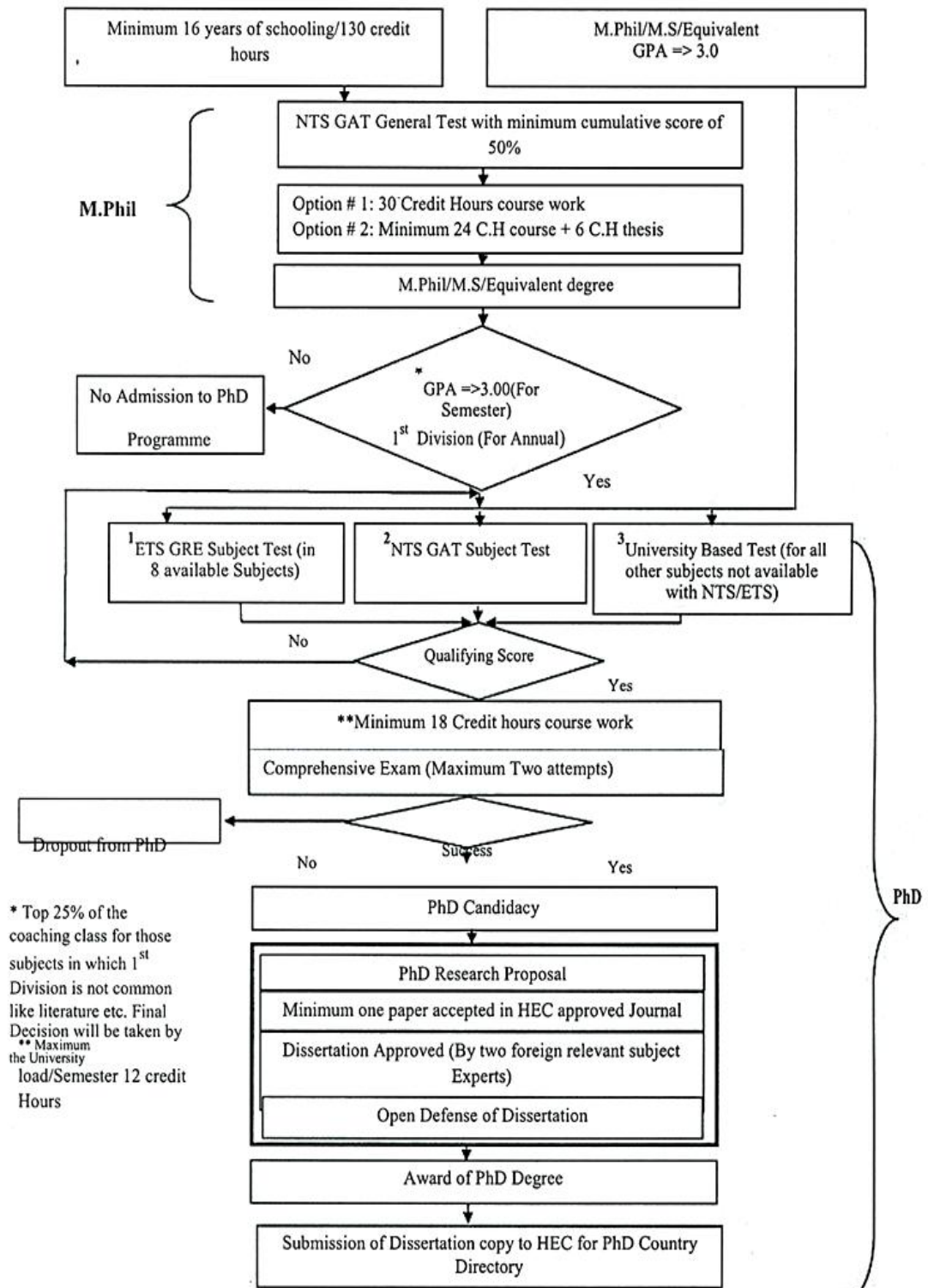
Sr.No.	Schedule	Dates
1.	Online submission of admission forms	02.01.2023 to 16.01.2023
2.	Last date of submission of application forms (hard copy alongwith copies of required certificates etc.) in the concerned Institute/Department	17.01.2023
3.	Scrutiny of application forms by the Concerned Director/Chairperson/Incharge	18.01.2023 to 19.01.2023
4.	Announcement of the list of eligible candidates by the Director/Chairperson/Incharge on the website of the university and the same be sent to the Director Postgraduates Studies (Hard & Soft copies)	20.01.2023
5.	Conduct of departmental pre-entry test by the concerned Directors/Chairpersons/Incharges	24.01.2023
6.	Results of the Departmental test to be sent by the Director/Chairperson/Incharge to the Director Postgraduates Studies (Hard & Soft copies), through the Dean of the Faculty.	26.01.2023
7.	Announcement of the first merit list by the DPS on the Website of the University www.salu.edu.pk	27.01.2023
8.	Last date for payment of 1st merit list and last date for payment of fee	06.02.2023
9.	Announcement of 2nd merit list	08.02.2023
10.	Last date for payment of 2nd merit list	13.02.2023
11.	Commencement of classes of 1st Semester	15.02.2023

Programs offered and allocated seats for Admission 2023

The University is offering the postgraduate programs of MS/MPhil & PhD in various faculties:

S.No.	Name of Institute/ Department	Allocated Seats			Programs
		MS	MPhil	PhD	
Faculty of Arts & Languages					
1.	English (Linguistics)	10	10	--	MS/MPhil
2.	Sindhi	05	10	--	MS/MPhil
Faculty of Management Sciences					
3.	Business Administration	09	17	20	MS/MPhil & PhD
4.	Commerce & Management	10	10	10	MS/MPhil & PhD
5.	Public Administration	10	10	10	MS/MPhil & PhD
Faculty of Natural Sciences					
6.	Biochemistry	10	10	--	MS/MPhil
7.	Botany	05	05	05	MS/MPhil & PhD
8.	Chemistry	25	10	15	MS/MPhil & PhD
9.	Microbiology	20	10	10	MS/MPhil & PhD
10.	Zoology	20	20	15	MS/MPhil & PhD
Faculty of Physical Sciences					
11.	Archaeology	10	05	--	MS/MPhil
12.	Computer Science	35	15	20	MS/MPhil & PhD
13.	Geography	05	05	--	MS/MPhil
14.	Mathematics	15	05	10	MS/MPhil & PhD
15.	Physics	10	05	--	MS/MPhil
16.	Statistics	05	05	--	MS/MPhil
Faculty of Social Sciences					
17.	Economics	20	10	15	MS/MPhil & PhD
18.	International Relations	10	05	--	MS/MPhil
19.	Islamic Studies	10	10	--	MS/MPhil
20.	Media & Communication Studies	10	10	--	MS/MPhil
21.	Pakistan Studies	05	15	--	MS/MPhil
22.	Sociology	05	15	--	MS/MPhil

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Note: These are minimum HEC requirements and universities may make them more stringent.

Regulations of MS/MPhil & PhD Program and HEC criteria

MS and MPhil

Name of Degree:

The Degree of MS/MPhil shall be awarded in Natural Sciences, Physical Sciences, Social Sciences, Arts & Languages, Management Sciences and Education subjects taught in the Shah Abdul Latif University, Khairpur, and its affiliated colleges/institutions, subject to the availability of the faculty, guide/co-guide in the university.

Nature of Degree:

- The degree shall be comprising of (a) coursework and (b) research by Thesis.
- Conduct of one seminar for MS/MPhil by Research Scholar:
- The MS/MPhil Research scholar will deliver **one seminar on his/her research topic which is mandatory (at least after six months from the date of recommendation of topic/proposal by the Scrutiny Committee)**. The Dean of the concerned Faculty shall preside over the seminar and the Dean, Director/Chairperson of the concerned Institute/Department, Supervisor and Director, Postgraduate Studies shall prepare the evaluation report. In case the seminar is found not satisfactory; another seminar shall be arranged after 02 months.
- The thesis shall be a piece of work embodying either a discovery of new facts or a fresh interpretation of existing facts or theories. In either case the work should show the candidate's capacity for critical examination and judgment.
- The standard of degree which indicates the standard of thesis submitted shall be higher than the master degree of Shah Abdul Latif University, Khairpur.

Duration of Degree:

The duration of studies for the MS/MPhil degree for full time regular scholars is prescribed by HEC as **02 years** (minimum) and **04 years** (maximum).

Course Work:

- The study shall be of four semesters duration, comprising mainly (a) coursework (1 year and 24 Credit Hours) during 1st & 2nd semester and (b) research work (noncredit hour or equal to 1 year research work) on the topic during the second/last year (3rd & 4th) semesters.
- Every concerned Institute/Department is responsible to design core and elective courses and, for obtaining approval for the same through the proper channel.
- If the research scholar of MS/MPhil Program completes his/ her maximum period of **04 years** and unable to qualify for award of MS/MPhil degree then, he/ she shall be liable to get fresh registration in MS/MPhil Program subject to the approval of ASRB.
- 75% attendance is mandatory for appearing in semesters' examinations for coursework.

The requirement for award of MS/ MPhil Degree shall be:

- The Scholar shall complete 30 credit hours out of which 24 Credit Hours will be reserved for coursework and 06 Credit hours for Dissertation/ Research Project, which may lead to the award of MS/MPhil/Equivalent Degree.
- The minimum CGPA 3.00 or First Division shall be for MPhil/MS/Equivalent Degree required for admission in PhD.
- Advanced Studies & Research Board in its 58th meeting held on 18.05.2016, vide resolution No.17(G) has approved the policy that the students of MS/MPhil & PhD programs may submit their synopsis immediately within 06 weeks from the date of completion of both semesters without marks sheet subject to the submission of certificate to be issued by concerned Director/Chairmen/In-charges to the effect that the student is appeared in both semesters and the students shall submit the final marks sheet to be issued by the Controller of Examinations at the time or before the submission of thesis.

Eligibility for Admission:

- BS/BBA/B.Com/BPA (4-years degree)/Sixteen years of schooling (130 credit hours) or M.A/M.Sc/M.Com/MBA/M.Ed/MBBS/LLB Examination in relevant disciplines in 2nd Division at least (50% marks) in the last examination from Shah Abdul Latif University, Khairpur or equivalent qualification from any other HEC recognized University shall be compulsory for admission in MS/MPhil Program leading to PhD.
- The students having NTS GRE (valid HEC approved test) test with a minimum 50% valid score will be exempted from appearing in pre-admission written entry test.
- A test equivalent to GRE general test will be necessary to pass by the candidate for admission to MS/MPhil leading to PhD.

Departmental Test equal to NTS (GAT/GRE) Test

Uniform policy/criteria for conducting the General test at par with ETC (or any other HEC recommended) test (GAT/GRE) at University Level to ensure and maintain quality of admissions in MS/MPhil program approved by Advanced Study and Research Board in its 54th meeting held on 20.12.2014 from the academic session 2014-15 and onwards considering the letter No1-340/A&C-Law/HEC/2014/505 dated May 27, 2014 received from Chairman HEC.

The criteria for admission in MS/MPhil:

- 1..1 The test/interview/oral test will be conducted by the Committee consisting:
 - a. The Director/Chairperson of the Institute/Department concerned.
 - b. Two Senior Teachers of the Institute/Department concerned who are Research Supervisors.
 - c. One expert as a member preferably a Professor with (PhD.) If Professor is not available in the Institute/Department, then one Associate Professor or Assistant Professor with (PhD.) other than Shah Abdul Latif University.
 - d. The Director, Postgraduate Studies.
- 1..2 The time recommended for the test will be one hour.
- 1..3 Entry test question paper will comprise of 50 questions.

The breakup of the content of the question paper will be as under.

- a. 35 Questions from the major subject.
- b. 10 Questions from General English.
- c. 05 Questions from Basic/ Analytical Math.
- d. Passing marks will be 25 which are 50% of the total.

The candidates who qualify the test will have to undertake oral exam/interview of 20 marks.

For the remaining 30 marks the breakup will be as under:

- a. Matriculation 05 Marks. i.e. (0.05%x% of Matriculation marks)
- b. Intermediate 10 Marks i.e. (0.10%x% of Intermediate marks)
- c. Terminal Degree i.e. BS/Master will be 15 marks i.e. (0.15%x%BS/Master marks)

Registration Requirements:

Applications for admission in MPhil shall be made on the prescribed form and shall be accompanied by:

- a. GAT (General) test result Score from NTS (Valid HEC test if cleared)
- b. Two attested copies of recent passport size photographs.
- c. Original marks sheet of BS/Master degree along with attested copies of all qualifications from matriculation to the last passing examination (Pass & Marks certificates).
- d. Attested copy of National Identity Card.
- e. Eligibility certificate (In case of different boards or universities: wherever necessary)
- f. Enrolment Card Number
- g. Service Certificate and No Objection/Spare ability Certificate from the employer (In case of govt job holders or wherever applicable).

In first instance, the candidate will appear in the subject test/GRE test or Departmental test and interview. The merit list would be comprised of the test score, interview score and the past academic performance. After aggregate marks the merit list would be published. The qualifying students will be accepted in the departments subject to the number of seats allocated for MS/MPhil or PhD.

Every MPhil candidate shall submit the prescribed application form duly recommended and signed by the Chairperson/Director and the Dean concerned.

Every student shall pursue his/her course work and research at Institute/Department/ Centre and other institutions within the jurisdiction of the Shah Abdul Latif University and other institutions within the country or out of the country with the approval of ASRB for data collection and research duly recognized for this purpose by ASRB. There shall be NO financial liability on this University.

The registration shall be effective from the date of payment of fees/issuance of notification after recommendation of chairperson/director, the Dean of concerned faculty.

MPhil students will be required to submit a certificate acknowledging to the fact that they were fully conversant with one of the foreign languages concerned with the subject of their research.

The Synopsis/Research Proposal of the MS/MPhil scholars (consisting of not more than 700 words) using the prescribed template with the topic approval application/ **(Form-B)** will be submitted to the Directorate of Postgraduate Studies along with soft copies and after getting the Similarity Index Checking Reports from the Directorate of ORIC the same will be sent to the Deans of concerned faculties through the Directors/Chairpersons/ Incharges of the teaching institutes/departments for placing before the Scrutiny Committees. The recommendations of SC will be placed before the Advanced Studies & Research Board (ASRB) for its final approval. **(Approved by ASRB vide Resolutions No.17 in its 60th meeting held on 03.05.2017).**

Any student who is registered as scholar shall not under-take any employment during the period of his/her work without the prior permission of the ASRB, and this shall not be applicable on the teachers/employees of the Shah Abdul Latif University or to employee of organization where research work is done.

No student shall, without the prior permission of the ASRB join any other course of studies or appear at any other examination conducted.

Scrutiny Committee (SC):

The Scrutiny Committee shall be comprised of the following members:

- a. Dean;
- b. Chairperson/Director concerned (wherever available).
- c. Two Professors/Associate Professors of the concerned Department/ Institute/Centre. If the Professors/Associate Professors are not available in any Department, an expert in the concerned field may be appointed by the Vice Chancellor on the recommendations of the Chairperson/Dean concerned.
- d. The Director, Postgraduate Studies.

(The Director of Postgraduate Studies shall attend all the MS/MPhil & PhD Seminars, Meetings of Scrutiny Committees, Comprehensive V. Voce of all the faculties/departments of Shah Abdul Latif University, Khairpur including all such research activities pertaining to the Directorate and the Signature of Director, Postgraduate Studies on Evaluation Reports/Minutes etc. will be mandatory).

Research Guidelines:

- The ASRB shall approve the students of MS/MPhil who qualify the GRE/ Subject Test on the recommendation of the Director/ Chairperson and Dean of concerned Faculty of the Institute/Department/ Centre.
- Once a person is enrolled for MPhil, he/she shall complete the coursework of 24 credit hours and select the Research Topic for Research Project under the supervision of approved Research Guide.
- The Research Scholar shall submit his/ her thesis complete. In case of a Supervisor being not available for 02 months or more, alternate arrangement should be made.
- Not more than Five (05) Research Scholars shall be registered under the guidance of a Supervisor in an academic year, provided that the total number of scholars does not exceed Twelve (12) at a time (for both MS/MPhil & PhD degree) but PhD scholars should not exceed from 05.
- Co-Supervisor/Co-Guide is a Teacher/Researcher or an expert who is a PhD holder. In case of collaborative research with approved Organizations, the

Supervisor will have to be from the University Department and Co-Supervisor/Co-Guide shall be taken from the collaborative HEC recognized Institute concerned or vice-versa.

- At the time of submission of MS/MPhil/PhD synopsis, the applicant should submit the **justification for the need of co-guide and the Scrutiny Committee shall consider the case in view of the justification.**
- The faculty members who possess MS/MPhil or equivalent degrees experience (with/without thesis) shall be considered for appointment as MS/MPhil research guide after minimum 5 years of relevant research/teaching/professional experience after getting MS/MPhil or equivalent degrees and can supervise up to 5 MS/MPhil or equivalent program students as per policy received from HEC vide letter No. No.1-3/AD-QA/HEC/NQAC(21)/2016/51 dated: March 18, 2016 duly **approved by ASRB vide resolution No.4 in its 58th meeting held on 18.05.2016.** However, their cases will be processed through the Scrutiny Committee.

Change of Guide/Co-Guide:

- In case the candidate desires to change his/her guide he/she shall have to apply through the Director/Chairperson and the Dean concerned. The “*No Objection Certificate*” from approved guide and the willingness of the proposed guide is necessary; the grounds for such a request shall be clearly specified. But this change of guide shall be at least SIX months after the approval of topic. However, in case of emergency, death of guide, the Research Scholar can change his/her guide at any time. In case, after written request the research guide does not give NOC to the scholar, the case will be referred to ASRB for the discussion and resolution.
- If the Guide is not satisfied with the progress of the candidate, he may at any time recommend to the ASRB for cancellation of registration to PhD. The decision of the Board shall be final and binding.

Modification/change of research topic:

A candidate may modify the topic within one year, after the approval of research topic from ASRB (before conduct of the seminar), with the approval of the scrutiny committee after submitting an application; duly forwarded by the supervisor and recommended by the director/chairperson and the dean of concerned faculty.

Submission of Thesis:

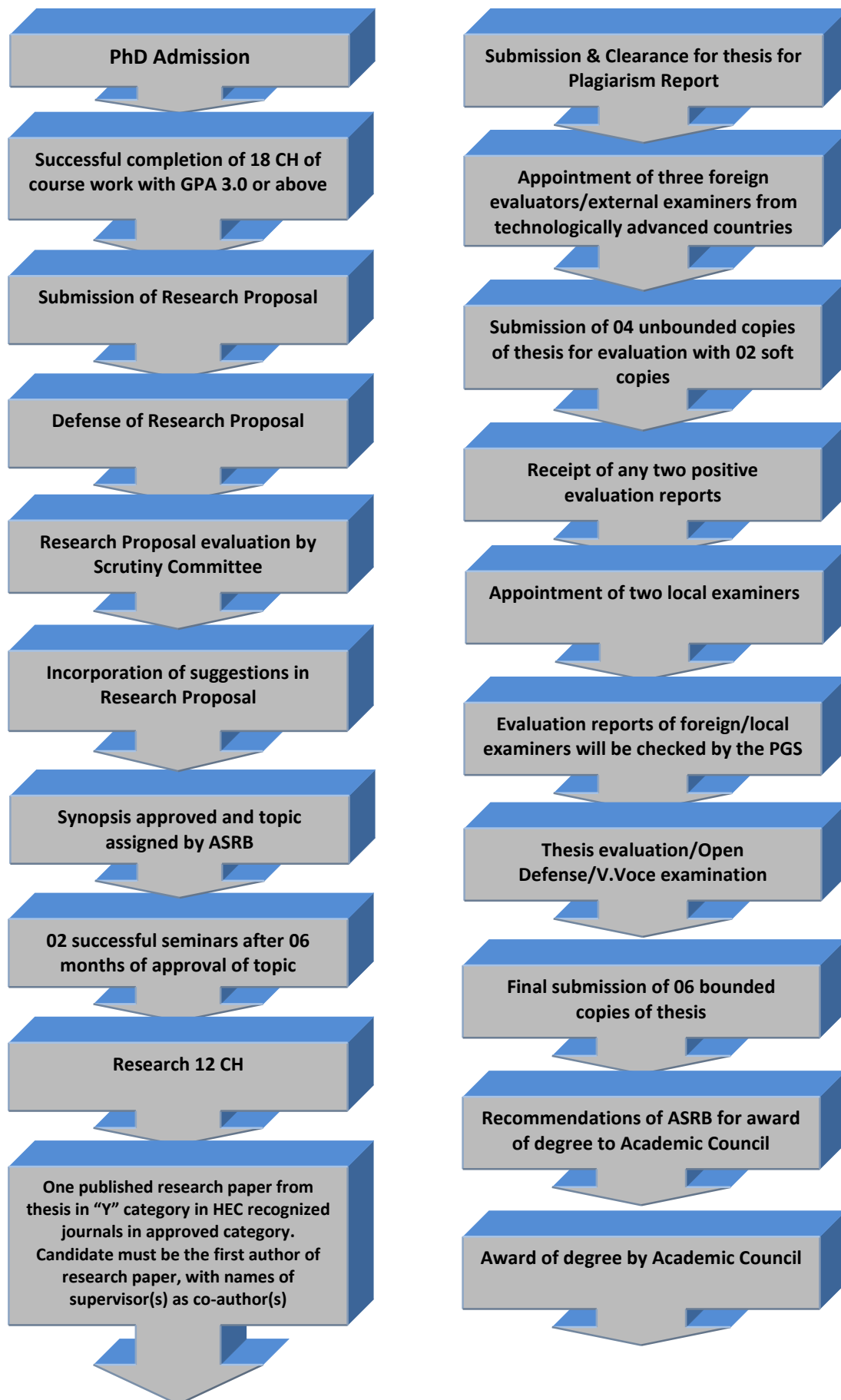
- The research scholar (full time) shall be eligible to submit his/her MS/MPhil Dissertation/Thesis after completing courses and research work within the approved period (minimum) **02 years** for full time and **04 years** (maximum period).

- The language of thesis in all faculties and all postgraduate programs shall be English only. The thesis, which is submitted in languages other than English, must have a summary of the thesis written in English as well.
- Inclusion of the reprints of published work may be optional, but the thesis must be self-contained and cover the whole of the subject matter presented for MS/ MPhil Degree.
- The supervisor shall certify that the thesis is examined through plagiarism software and cleared that is worthy of presentation to the university for the MS/ MPhil Degree. The research scholar shall submit that unbounded thesis (as per approved format) to the office of director ORIC through directorate of PGS for obtaining clearance through plagiarism software.
- The research scholar shall receive the clearance certificate from the office of the director ORIC than he/ she shall submit three unbounded copies of thesis (11" x 9" size) as per approved format duly certified by supervisor and forwarded/recommended by the director/chairperson and dean of concerned faculty.
- The guide through the director/chairperson and dean of the concerned faculty shall recommend the panel of 03 names of experts/external examiners and ASRB shall appoint one external examiner for evaluation of thesis and conduct of Viva-Voce Examination of the research scholar and the guide shall be internal examiner. The name(s) of appointed expert(s) and 03 copies of MS/MPhil will be sent to the controller of examinations for evaluation of thesis and conduct of Viva-Voce examination.
- If expert/external examiner gives an adverse opinion about a thesis, a second examiner shall be appointed and his/her opinion shall be final.
- The research scholar shall incorporate the suggestions given by external examiner(s) (if any) duly certified by supervisor and shall submit the bounded thesis (11" x 9" size) **04 Four Copies (along with a Softcopy on CD) in dark blue color as per approved format** to the controller of examination through the concerned department/institute and dean of faculty through directorate of PGS.
- The controller of examinations, on receipt of report(s) of examiners shall arrange Viva-Voce examination in office of the dean of concerned faculty to be conducted by the internal supervisor and external examiner after the approval of the Vice Chancellor.
- In case Viva Voce report is not found satisfactory another Viva Voce examination shall be held not before 01 months and not after 02 months and that will be the final examination.

Award of Degree:

- The controller of examinations shall submit the evaluation reports of the examiners and the Viva-Voce examination report before the ASRB. The Board shall recommend the case to the Academic Council about the conferment of MS/MPhil Degree.

PROCESS OF PHD DEGREE



Name of Degree:

The degree of Doctor of Philosophy (PhD) shall be awarded in Natural Sciences, Social Sciences, Arts and Languages, Management Sciences and Education¹ disciplines/subjects taught at the Shah Abdul Latif University, Khairpur and its affiliated colleges/institutions.

Nature of Degree:

- 1.1 The PhD degree shall be a (a) coursework of at least 18 credit hours in two semesters, and (b) Two seminars and open defense (c) research by dissertation/thesis followed by Viva-voce Examination along with thesis defense essential for the award of PhD Degree.
- 1.2 The thesis should be a piece of work embodying either a discovery of new facts or a fresh interpretation of facts or theories, in either case the work should show the candidates capacity for synthesis of data, its critical examination and judgment.
- 1.3 The standard of the research embodied in the thesis must be higher than that of MS/MPhil Thesis.

Duration of PhD Degree:

The duration for Doctor of Philosophy (PhD) Degree for full time research scholar should be **04 years** (Minimum) and **08 years** (Maximum). As per new HEC PhD policy (2021) (recommended from ASRB and approved from Academic Council), the time may be increased to 10 years in exceptional cases.

Course Work:

- 1.4 The coursework (18 Credit Hours) shall be in 1st and 2nd semester of first year followed by a comprehensive examination for granting candidacy of PhD research and thesis research work on the topic duly recommended by scrutiny committee and approved by the ASRB will be in **2nd and 3rd years**.
- 1.5 If the research scholar of PhD program completes his/ her maximum period of **08 years** (10 years in exceptional circumstances) and unable to qualify for the award of PhD degree then, he/ she shall be liable to get fresh registration in PhD program subject to the approval of ASRB.
- 1.6 Every concerned institute/department is responsible to design core and elective courses and, for obtaining approval for the same through proper channel.
- 1.7 75% attendance is mandatory for appearing in semesters' examinations for coursework.

Eligibility for admission:

- 1.8 A candidate possessing MS/MPhil or master degree with 17½ or 18 years education or equivalent qualification with 1st Division (annual system) or CGPA 3.00 (out of 4.00 in semester system) from Shah Abdul Latif University, Khairpur or from any other HEC recognized university shall be compulsory for admission in PhD Program.
- 1.9 A test equivalent to GRE test/subject test will be necessary to pass by the candidate for admission in PhD program.

¹ Subject to availability of faculty and approval from ASRB

- 1.10 The students having NTS GRE (Subject) or (other HEC recognized valid test score) test with a minimum 60% valid score will be exempted from appearing in pre-admission written entry test. However the candidate will appear in the interview for final merit.
- 1.11 The policy of conversion of MPhil/ MS program to PhD at any stage is not allowed.

Departmental Test equal to NTS (GAT/GRE) Test

Uniform policy/criteria for conducting the Subject test at par with NTS test (GAT/GRE) at university level to ensure and maintain quality for admissions in PhD program approved by Advanced Study and Research Board in its 54th meeting held on 20.12.2014 from the academic session 2014-15 and onwards considering the letter No1-340/A&C-Law/HEC/2014/505 dated May 27, 2014 received from Chairman HEC.

1.12 The entry test criteria for PhD. candidate:

- 1.1.1 The test/interview/oral test will be conducted by the following committee:
 - a. Dean of the concerned faculty
 - b. The director/chairperson of the institute/department concerned.
 - c. Three senior teachers of the institute/department concerned who are research supervisors.
 - d. One expert as a member preferably a professor with (PhD.). If professor is not available, then one Associate Professor or Assistant Professor with (PhD.) from other than Shah Abdul Latif University.
 - e. The Director Postgraduate Studies.
- 1.13 The time recommended for the test will be one hour.
- 1.14 A test will be designed with a weightage of 50 marks and the passing marks/percentage will be 60%.
- 1.15 The candidates who qualify will have to undertake oral exam/interview of 25 marks.
- 1.16 Total maximum marks will be 75.

Foreign Degree Equivalence:

A candidate who has a degree from the country other than Pakistan may first obtain the attested equivalence of his/ her degree from HEC Pakistan.

Registration Requirement:

- 1.17 The synopsis/research proposal of the PhD scholars (consisting of not more than 1000 words) using the prescribed template with the topic approval application/(Form-B) will be submitted to the directorate of Postgraduate Studies along with soft copies and after getting the Similarity Index checking report from the Directorate of ORIC the same will be sent to the deans of concerned faculties through the directors/chairpersons/incharges of the teaching institutes/departments for placing before the scrutiny committees. The recommendations of SC will be placed before the Advanced Studies & Research Board (ASRB) for its final approval. (Approved by ASRB vide Resolutions No.17 in its 60th meeting held on 03.05.2017).

- 1.18 The application form for registration of research work (**Form B**) shall be accompanied by:
 - a. Outline of the topic.
 - b. Justification and scope of Research
 - c. Bibliography.
 - d. Eligibility Certificate (where ever necessary).
 - e. Service Certificate along with No Objection/Spar ability Certificate where ever applicable).
- 1.19 Every student shall pursue his/her research at institute/department/centre and other institutions within the jurisdiction of the Shah Abdul Latif University and duly recognized for this purpose by ASRB.
- 1.20 After getting plagiarism report of synopsis from directorate of ORIC the same will be placed before the ASRB for its final approval in light of the recommendations of scrutiny committee.
- 1.21 The registration shall be effective from the notifying date/commencement of PhD coursework classes.
- 1.22 The candidate registered as PhD research scholar shall submit study leave, duly granted by the competent authority of the concerned department.
- 1.23 Registration will not be allowed in subject not being taught in the university.
- 1.24 The approved Supervisors shall only be recognized as guides for MS/MPhil/PhD candidates in their own institutes/departments whereas they can be allowed to be co-guide in any other related department/field.
- 1.25 A comprehensive Exam (maximum 2 attempts) is requirement for all doctoral program, and precedes defense for the PhD research proposal. The student must pass both written and oral components after the completion of 18 credit hours coursework. successful completion of the both the comprehensive exam and the PhD research proposal must be completed before a student can be granted Doctoral Candidacy status.

2. Scrutiny Committee (SC):

- 2.1 The Scrutiny Committee shall be comprised of the following members:
 - 9.1.1 Dean
 - 9.1.2 Chairperson/director concerned
 - 9.1.3 Three professors/associate professor of the concerned department/institute/centre. If the professors/associate professors are not available in any department, an expert in the concerned field may be appointed by the vice chancellor on the recommendations of the chairperson/dean concerned.
 - 9.1.4 The Director Postgraduate Studies
(The Director of Postgraduate Studies shall attend all the MS/MPhil& PhD Seminars, Meetings of Scrutiny Committees, Comprehensive V. Voce of all the faculties/departments of Shah Abdul Latif University, Khairpur including all such research activities pertaining to the Directorate and the Signature of Director, Postgraduate Studies on Evaluation Reports/Minutes etc. will be mandatory).

3. Requirements for award of PhD Degree:

- 3.1 MS/MPhil/ MA/ MBA/ M.Com/ MIT/ MCS with 18 Years education with 1st division or CGPA 3.00
- 3.2 Subject to qualify the subject GRE Test/GRE Test (or any other HEC approved test i.e. NTS or ETC)

- 3.3 Coursework of PhD level minimum 18 credit hours
- 3.4 Two seminars on approved topic of dissertation/research project/thesis and 3rd seminar/open defense/Viva Voce.
- 3.5 Only published (not accepted) research paper in the recognized category journals is a requirement ("Y" category for all disciplines) for the award of PhD degree. The candidate must be the first author of the research paper, with names of supervisor(s) as co-author(s).

4. Cancellation of Registration:

- 4.1 The research scholar is required to carry on his/her studies and research regularly under the guidance of supervisor. If the guide is not satisfied with the progress of the candidate, he/she may at any time recommend to the Vice Chancellor for cancellation of registration.
- 4.2 The research scholar is required to pay the prescribed fees regularly, failing which his/her registration, may be cancelled.
- 4.3 The research scholar is required to carry on his/her studies and research regularly within prescribed period, and shall submit thesis within a prescribed maximum period from the date of registration.
- 4.4 No student shall without the prior permission of the ASRB, join any other examination conducted by any university during the period he/she is continuing registration for research work in PhD degree.

5. Research Guidelines:

- 5.1 He/She shall be a professor or an associate professor, assistant professor and emeritus professor of recognized university as approved by the ASRB.
- 5.2 There shall be evidence of active independent research work on his/her credit.
- 5.3 Co-guide/co-supervisor is a teacher, researcher or an expert who is a PhD degree holder. In case collaborative research with the approved institutes/organization, the supervisor shall have to be from the university department and co-guide shall be taken from the collaborative institute concerned.
- 5.4 Faculty members who possess the PhD degree having **2 research articles published in the International Repute Journals** shall be considered for appointment as research supervisor/co-supervisor for MS/MPhil/PhD. However, their cases will be processed through the scrutiny Committee. (Amendment approved by ASRB in its 57th meeting vide Resolution No.9(G) held on 08.02.2016).

6. Research Guide Lines:

- 6.1 The ASRB shall appoint a guide (and co-guide where ever deemed necessary) for research scholar.
- 6.2 In case of PhD, a supervisory committee will be mandatory with one Principal supervisor and at least one co supervisor (max. two co supervisors).
- 6.3 At the time of submission of synopsis, the applicant should submit the **justification for the need of co-guide and the scrutiny committee shall consider the case in view of the justification.**
- 6.4 Not more than **Five (05)** PhD research scholars shall be registered under the guidance of a supervisor in an academic year, provided that the total number

of scholars does not exceed **Twelve (12)** at a time (**for both MS/MPhil & PhD degree**) but PhD scholars should not exceed from **05**.

7. Modification/Change of Research Topic:

A candidate may, within one year after the approval of the topic, modify/change the topic of his/her research. The research scholar shall submit his/ her application duly recommended by the supervisor, recommended by the scrutiny committee and forwarded by the chairperson/director/dean of the concerned faculty to PGS for final approval from ASRB.

8. Change of Guide:

8.1 In case the candidate desires to change his/her guide he/she shall have to apply through the director/chairperson and the dean concerned. The “*No Objection Certificate*” from approved guide and the willingness of the proposed guide is necessary; the grounds for such a request shall be clearly specified. But this change of supervisor shall be at least SIX months after the approval of Topic.

However, in case of emergency or death of Guide the Research Scholar can change his/her guide at any time. In case, after written request by the scholar, the research guide does not give NOC to the scholar, the case will be referred to ASRB for the discussion and resolution.

8.2 If the guide is not satisfied with the progress of the candidate, he may at any time recommend to the ASRB for cancellation of registration to PhD. The decision of the Board shall be final and binding.

9. The Policy Guidelines for Transfer of Credit Hours

(APPROVED BY ASRB IN ITS 59TH MEETING HELD ON 25.10.2016, VIDE RESOLUTION NO.7):

9.1 In case of MS/MPhil the applicants must have completed 24 credit hours coursework at parent university/institute and at least 01 year period is remained out of 04 years maximum period as per HEC criteria. **NO ANY CASE SHALL BE CONSIDERED WHOSE MAXIMUM PERIOD IS EXPIRED.**

9.2 In case of PhD. the applicants must have completed 18 credit hours coursework followed by comprehensive examination at parent university/institute and at least 02 years period is remained out of 08 years maximum period as per HEC criteria. **NO ANY CASE SHALL BE CONSIDERED WHOSE MAXIMUM PERIOD IS EXPIRED.**

9.3 The following documents should be produced by the applicant.

1. Justification/reasons for transfer of credit hours
2. NOC from parent university/institute
3. Admission letter in MS/MPhil & PhD from parent university/institute.
4. Certificate from parent universities/institute whether the applicant was admitted on basis of departmental test/NTS test.
5. Willingness/NOC from the guide/director/chairperson and concerned dean of the faculty of this university.
6. To submit the research proposal for research work.
7. The scrutiny committee of the concerned institute/department of this university should properly scrutinize the above requirements then the case may be recommended to ASRB for approval.

10. Procedure for Conduct of Comprehensive Examination of PhD students

- 10.1 After completing the 18 credit hours of the coursework of PhD Program the Comprehensive Examination as Per HEC criteria may be conducted.
- 10.2 The Committee consisting of the following in each department will conduct the Comprehensive Examinations:
- | | |
|---|----------|
| 1. The dean of the concerned Faculty | Convener |
| 2. The chairperson of the department | Member |
| 3. Three senior PhD faculty members, who conducted the classes of the coursework of PhD students. | Member |
| 4. The Director Postgraduate Studies. | Member |
- 10.3 The marks distribution of comprehensive examination shall be:
- | | |
|---------------------------|-----------------|
| i. Written paper (MCQ) | 50 marks |
| ii. Viva-voce Examination | <u>50 marks</u> |

Total 100 marks

NOTE: The 50% shall be passing marks and below 50% shall be declared fail.

- 10.4 The controller of examinations will include the marks in the ledger of the coursework of PhD students and also same may be mentioned in the transcript to be issued to the students.

11. Pre-requisite for submission of Thesis:

- 11.1 Conduct of two seminars of PhD research scholar: The PhD research scholar will deliver **two seminars on the research topic, which shall be mandatory**. The dean of the concerned faculty shall preside over the seminars, also the dean, chairperson/director of the concerned department/institute, supervisor and the director Postgraduate Studies shall prepare the evaluation report of the seminars. In case any seminar is found not satisfactory the same shall be arranged after 02 months
- 11.2 The language of the thesis in case of all faculties shall be English only.
- 11.3 The thesis may be written in a language approved by the ASRB. The thesis, which is submitted in language other than in disciplines such as Islamic Culture and Religion, must have a summary of the thesis written in English as well.
- 11.4 The thesis must make a distinct contribution to knowledge and afford evidence of original independent research.
- 11.5 The supervisor shall submit progress report of research scholar after every six months through director/chairperson and the dean concerned institute/department which shall be placed before the ASRB.
- 11.6 The supervisor shall certify that the thesis is examined through plagiarism software and clear that is worthy of presentation to the university for the PhD degree. The research scholar shall submit unbounded thesis for obtaining clearance through plagiarism software from office of the Director ORIC through directorate of PGS.
- 11.7 The research scholar shall receive the clearance certificate from the office of the director ORIC than he/she shall submit the 06 unbounded copies of thesis (11" x 9" size) duly certified by supervisor and forwarded/recommended by the director/chairperson and dean of concerned faculty.
- 11.8 The dean of the concerned faculty shall recommend the names of foreign experts and external examiners with consultation of the supervisor/

chairperson to the Vice Chancellor for evaluation and examination of the research scholar for award of PhD Degree.

12. Evaluation of Thesis:

12.1 PhD Thesis Evaluation:

The PhD research thesis will be sent to two foreign examiners for evaluation by the controller of examinations.

12.2 Three (03) foreign examiners from technologically advanced countries must be appointed for evaluation of PhD dissertation. **The Supervisor shall recommend a panel of six foreign external examiners** in the relevant field through the chairperson/director of the department/institute and the dean of the concerned faculty. **The Vice Chancellor shall appoint three external examiners** from them for evaluation of PhD dissertation and out of three two evaluation reports should be positive. In case two foreign examiners disagree with the award of the PhD degree than another foreign examiner shall be appointed and his/her decision shall be final.

12.3 The research scholar shall incorporate the suggestions given by expert(s)/external examiner(s) (in any) duly certified by supervisor, then he/she shall submit the unbounded Thesis (11" x 9" size) **06 Six Copies (along with Softcopy on CD) in brown Color with Golden writing/approved format** to the controller of examination through the concerned Department/ Institute and Dean of faculty and through PGS.

12.4 The remuneration will be paid to the foreign external examiners by the university. The suggested remuneration by the HEC is US \$300 for each foreign examiner.

12.5 Appointment of local examiners:

Conduct of open defense instead of Viva Voce examination

As per HEC minimum criteria for PhD Program **under para-5** an open defense of dissertation is essential part of PhD Program after positive evaluation reports received from foreign and local examiners. In this regards supervisor through chairperson/director of the department/institute and the dean of the concerned faculty shall recommend the panel of **04 local examiners from the universities of Pakistan and the vice chancellor shall appoint two local examiners to evaluate the open defense of the PhD scholar.**

12.6 The open defense shall be presided over by the **Vice Chancellor or his/her nominee** and two local examiners. The local examiners shall prepare the evaluation report of the open defense duly signed by the supervisor and dean of the concerned faculty and to submit the same to the Vice Chancellor for approval. In case the open defense is not found satisfactory, another chance may be given to the research scholar after 02 months. In case the suggestions or comments are presented by the audience which are to be incorporated in the thesis before submission, a compliance report will be prepared with indicated page numbers and the changes made. The report must be endorsed by supervisor and local examiners who attended the open defense and reviewed the thesis.

However, this will be done only when positive reports are obtained from the two foreign examiners and local examiners for evaluation of thesis.

13. Award of PhD Degree:

13.1 The controller of examination shall place the reports before the ASRB, which may take any of the following decisions:

- 19.1.1 To reject the thesis if the examiners have agreed that the thesis is not adequate.
- 19.1.2 To permit the candidate to re-submit his/her thesis in a revised form within a period of six month or;
- 19.1.3 To recommend the Academic Council for award of PhD Degree to the candidate.

FEES STRUCTURE

MS/MPhil (All General Departments) (Except the Business Administration and Computer Science):

S. No	Particulars	Fees Structure	
		1 st Year	2 nd Year
1	Form Fee	2500	--
2	Admission Fee	8000	8000
3	Registration/Tuition Fee	26000	26000
4	Examination Fee (Two Semesters)	16000	--
5	Thesis Evaluation Fee to be deposited at the time of submission of Thesis	--	23000
Total Rs.		52,500	57,000

MS/MPhil (Departments of Computer Sciences and Business Administration):

S. No	Particulars	Fees Structure	
		1 st Year	2 nd Year
1	Form Fee	2500	--
2	Admission Fee	20000	20000
3	Registration/Tuition Fee	40000	40000
4	Laboratory/ Computer Charges	6000	6000
5	Conferences/Journal Membership charges	--	10000
6	Examination Fee (For two Semesters)	20000	--
7	Seminars, proposals and colloquiums	5000	5000
8	Thesis Evaluation Fee to be deposited at the time of submission of Thesis	--	30000
Total Rs.		93,500	111,000

PhD (All General Departments):

S. No.	Particulars	Fees Structure		
		1 st Year	2 nd Year	3 rd Year
1	Form Fee	3000	--	--
2	Admission Fee	20000	--	--
3	Registration/Tuition Fee	32000	32000	32000
4	Examination Fee (For two Semesters)	20000	--	--
5	Thesis Evaluation Fee to be deposited at the time of submission of Thesis	--	--	30000
Total Rs:		75000	32000	62000

PhD (Departments of Computer Sciences and Business Administration):

S. No	Particulars	Fees Structure		
		1 st Year	2 nd Year	3 rd Year
1	Form Fee	3000	--	--
2	Admission Fee	40000	--	--
3	Registration/Tuition Fee	45000	45000	45000
4	Laboratory/ Computer Charges	6000	6000	6000
5	Conferences/Journal Membership charges	--	12000	--
6	Examination Fee (For two Semesters)	26000	--	--
7	Seminars, proposals and colloquiums	9000	9000	9000
8	Dissertation Evaluation Fee to be deposited at the time of submission of Dissertation	--	--	40000
Total Rs:		129000	72000	100000

Details of other fees as under:

S.#	Details of fee	Amount	S.#	Details of fee	Amount
1.	To whom it may concern	Rs.500/-	4.	Duplicate Students ID Card	Rs.500/-
2.	Duplicate synopsis approval letter	Rs.500/-	5.	Duplicate Admission letter	Rs.500/-
3.	Correction in particulars (if no fault of university admn)	Rs.1000/-	6.	Semester Freezing fee	
		-		For MS/MPhil &	Rs.10000/-
				For PhD	Rs.15000/-

International student fee (in USD)

A. All programs [except Computer Science & Business Administration]

	1 st Year	2 nd Year	3 rd Year
MS/MPhil	\$1000	\$900	\$900
PhD	\$1500	\$1400	\$1400

B. For programs of Computer Science & Business Administration

	1 st Year	2 nd Year	3 rd Year
MS/MPhil	\$1300	\$1200	1200
PhD	\$1800	\$1700	\$1700

Note-I: Extension fee shall be charged equal to one year tuition fee.

Note-II: Failure/improver fee will be charged equal to current semester examination fee.

Note-III: Students who are offered relaxation/extension through (ASRB) and for less than a year will be charged as per extension fee for the number of months.

Note-IV: International student fee is inclusive of admission, prospectus, tuition and other fees.

COURSE OUT LINES/CURRICULUM & DETAIL OF CREDIT HOURS

FACULTY OF ARTS & LANGUAGES
Institute of English Language & Literature

MS/MPhil (Linguistics) (2 Years 4 Semesters)

MS/MPhil(Linguistics Group)

1st Semester Credit Hours -12

CourseNo.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Eng-650	Critical Discourse Analysis	03	-----	03	100
Eng-651	Language Testing & Assessment	03	-----	03	100
Eng-652	Applied Linguistics or English for Specific Purpose (ESP)	03	-----	03	100
Eng-653	Research Methodology in Linguistics -I	03	-----	03	100
Total		12	----	12	400

2nd Semester Credit Hours 12

CourseNo.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Eng-700	Research Methodology in Linguistics –II	03	-----	03	100
Eng-701	Issues in Syntax	03	-----	03	100
Eng-702	Sociolinguistics	03	-----	03	100
Eng-703	S.L.A OR Pragmatics	03	-----	03	100
Total		12	----	12	400

Year-II 3rd and 4th Semester Credit Hours 06

CourseNo.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Eng-800	Thesis Writing (20,000 to 25000 words)	06	-----	06	100

Total Credit hrs. 30

Note: The Candidates seeking admission in MS/MPhil program in Applied Linguistics group must have passed at least one course of yearly duration in Linguistics.

Department of Sindhi

MS/MPhil (2 Years 4 Semesters)

Semester-I

Course No.	Title of Course	Credit Hours	Marks
SNDH- 600	Research Methodology- Importance & History/تحقيق جو فن - اهميت ۽ تاريخ	03	100
SNDH- 601	History of Sindhi Literature/سنڌي ادب جي تاريخ	03	100
SNDH- 602	Linguistics /لسانيات	03	100
SNDH- 603	Study of Research in Sindhi/سنڌيءَ ۾ ٿيل تحقيق جو مطالعو	03	100
Total Credit Hours: 12			

Semester-II

Course No.	Title of Course	Credit Hours	Marks
SNDH- 600	Research Methodology- Importance & History/تحقيق جو فن - اهميت ۽ تاريخ	03	100
SNDH- 601	History of Sindhi Literature/سنڌي ادب جي تاريخ	03	100
SNDH- 602	Linguistics /لسانيات	03	100
SNDH- 603	Study of Research in Sindhi/سنڌيءَ ۾ ٿيل تحقيق جو مطالعو	03	100
Total Credit Hours: 12			
Total credit hours of two semesters: 24			

Thesis write-up equals to minimum two semesters (3rd and 4th semesters)

FACULTY OF MANAGEMENT SCIENCES

Institute of Business Administration:

MS/MPhil(2 Years, 4 Semesters)

1st Semester

Course No.	Title of Course	Th.CH	Cr.CH	Marks
1.	Advanced Research Methodology	03	03	100
2.	Strategic Management and Innovation	03	03	100
3.	Advanced Macro Economics	03	03	100
4.	Elective-I	03	03	100
Total		12		

2nd Semester

Course No.	Title of Course	Th.CH	Cr.CH	Marks
1.	Qualitative Techniques for Research	03	03	100
2.	Quantitative Techniques for Analysis	03	03	100
3.	Elective-I	03	03	100
4.	Elective-II	03	03	100
Total		12		

Total credit hours of two semesters: 24

Thesis write-up equals to minimum two semesters (3rd and 4th semesters)

List of elective courses for MS/MPhil Program

Course No.	Title of Course	Th.CH	Cr.CH	Marks
1.	Islamic Principles of Finance	03	03	100
2.	Banking Management	03	03	100
3.	Insurance Management	03	03	100
4.	Behavioral Finance	03	03	100
5.	Case Studies in Corporate Finance	03	03	100
6.	Financial Management of MNCs	03	03	100
7.	Issues in Financial Reporting	03	03	100
8.	International Finance	03	03	100
9.	Venture Capital	03	03	100
10.	Corporate Finance	03	03	100
11.	Finance & International Business	03	03	100
12.	Islamic Banking System	03	03	100

Marketing

Course No.	Title of Course	Th.CH	Cr.CH	Marks
13	Customer Relationship Management	03	03	100
14	Seminars in Consumer Behavior	03	03	100
15	Behavioral Factors in Marketing	03	03	100
16	Product Management	03	03	100
17	Marketing Strategies	03	03	100
18	Seminar in Brand Management	03	03	100
19	Issues in Advertising Management	03	03	100
20	Issues in Marketing	03	03	100
21	Seminars in Entrepreneurial Marketing	03	03	100
22	Service Marketing	03	03	100
23	Brand Management	03	03	100
24	Practices in Marketing Research	03	03	100
25	Sales Management	03	03	100

26	Supply Chain Management	03	03	100
27	Logistic Management	03	03	100
28	Relationship Marketing	03	03	100
29	Experiential Marketing	03	03	100

Human Resource Management

Course No.	Title of Course	Th.CH	Cr.CH	Marks
30	Advances in Human Resource Development and Management	03	03	100
31	Career Management and Planning	03	03	100
32	Comparative Human Resource Management	03	03	100
33	Human Resource Information System	03	03	100
34	HRM in Public and Private Sector	03	03	100
35	Advances of Organization Planning and Accountability	03	03	100
36	Organization Development	03	03	100
37	Industrial Relations and labor Laws in Pakistan	03	03	100
38	Work Force Diversity Management	03	03	100
39.	Advance Topics in Compensation Management	03	03	100
40.	Conflict and Negotiation Management	03	03	100
41.	Talent Management	03	03	100
42.	Art of Leadership and Motivation	03	03	100
43.	Decision Making and Job Satisfaction	03	03	100
44.	Advanced Topics in Change Management	03	03	100

PhD (3 Years 6 Semesters)

Course No.	Title of Course	Cr.CH
1.	Core Courses	09
2.	Elective Courses & Independent Research Studies	09
3.	Dissertation	30
Total		48

1st Semester

Course #	Title of Course	Th.CH	Cr.CH	Marks
1.	Philosophy of Management Sciences.	03	03	
2.	Qualitative Research Methods in Management.	03	03	
3.	Quantitative Research Techniques in Management Sciences.	03	03	
Total Credit Hours			09	

2nd Semester

Course No.	Title of Course	Th.CH	Cr.CH	Marks
1.	Independent Study	03	03	
2.	Elective-I	03	03	
3.	Elective-II	03	03	
Total Credit Hours			09	
Total credit hours of two semesters			18	

Thesis write-up equals to minimum two years (four semesters)

Note: Coursework include core, elective and independent studies

(i) List of elective course (09 Credit Hours) (Specialization Finance)

Course No.	Title of Course	Th.CH
FIN-706	Financial Economics	3 (3+0)

FIN-707	Case Studies in Corporate Finance	3 (3+0)
FIN-701	Financial Risk Management	3 (3+0)
FIN-708	Financial Strategy and Corporate Restructuring	3 (3+0)
FIN-709	Valuation and capital investment	3 (3+0)
FIN-704	Financial Modeling	3 (3+0)
FIN-710	Portfolio Management-1	3 (3+0)
FIN-711	Portfolio Management -2	3 (3+0)
FIN-712	Advanced Topics in investment	3 (3+0)
GE-702	Corporate Governance	3 (3+0)
FIN-702	Issues in Financial Reporting	3 (3+0)
FIN-713	Strategic Financial Management	3 (3+0)
FIN-714	Research Techniques in Finance	3 (3+0)
FIN-715	Financial Theory	3 (3+0)
FIN-716	Essentials in Islamic Finance	3 (3+0)

(ii) List of Elective courses (09 CH. Specialization Human Resources Management)

Course Code	Course Name	CH
HRM-707	Strategic HRM	3 (3+0)
HRM -708	Human Resources information technology	3 (3+0)
HRM -709	Legal and ethical environment of business	3 (3+0)
HRM -710	Organizational Diagnoses and transformation	3 (3+0)
HRM -711	Strategic Planning & HRM Challenges	3 (3+0)
HRM -705	Consulting In HRM	3 (3+0)
HRM -712	Directed Research in HR development	3 (3+0)
HRM -713	Moral Leadership: Human resources & organization development values & ethics	3 (3+0)
HRM -714	Salary & Compensation Management	3 (3+0)
HRM -715	Case Studies in HRM	3 (3+0)
HRM -702	Conflict & Negotiation Management	3 (3+0)
HRM -716	Change Management	3 (3+0)
HRM -717	Effective Training skills	3 (3+0)
HRM -718	International HRM Challenges	3 (3+0)
HRM -719	Performance Evaluation	3 (3+0)
HRM -720	Workforce Diversity Management	3 (3+0)
HRM -721	Decision Making Techniques for Managers	3 (3+0)
HRM-722	Staffing & Performance Management	
HRM -723	Industrial & Organizational Psychology	3 (3+0)
HRM -724	Performance & Compensation Management	3 (3+0)

(iii) List of Elective Courses (12 Credit Hours) (Specialization Marketing)

Course Code	Course Name	CH
MKT-705	Relationship Marketing	3 (3+0)
MKT-706	Strategic Services Marketing	3 (3+0)
MKT-707	Advanced Marketing Research	3 (3+0)
MKT-704	Integrated Marketing Communications	3 (3+0)
MKT-702	New Product development	3 (3+0)
MKT-708	Marketing Planning and Analysis	3 (3+0)
MKT-709	Contemporary Pricing Strategies	3 (3+0)
MKT-710	Distribution Management	3 (3+0)
MKT-711	Strategic Supply Chain Management	3 (3+0)
MKT-712	Customer Relationship Management	3 (3+0)

1st Semester

Code	Course Title	Credit Hours
COM	Advance Research Methodology	3
COM	International Trade and Finance	3
XXX	Elective-I	3
XXX	Elective-II	3
	Total Credit Hours	12

2nd Semester

Code	Course Title	Credit Hours
COM	Advance Quantitative Techniques and Tools	3
COM	Strategic Management (Case Studies)	3
XXX	Elective-III	3
XXX	Elective-IV	3
	Total Credit Hours	12

PhD. (03Years, 06 Semesters)

1st Semester Credit Hours 09

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
	Advanced Topics in Management/Marketing Finance (Field of Specialization)	03	-	03	100
	Philosophy of Research Methods	03	-	03	100
	Independent Studies	03	-	03	100
Total				09	300

2nd Semester Credit Hours 09

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
	Advance Topics in Management /Marketing /Finance (Field of Specializations)	03	-	03	100
	Advanced Quantitative Techniques and Tools	03	-	03	100
	Independent Studies	03	-	03	100
Total				09	300
Total credit hours of two semesters				18	

Thesis write-up equals to minimum two years (four semesters)

Field of Specializations

Finance

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
FIN-701	International Financial Management	03	-	03	100
FIN-702	Exporting and Importing	03	-	03	100
FIN-703	Global Competitive Analysis	03	-	03	100

FIN-704	Global Financial Markets	03	-	03	100
FIN-705	Global Equity Investments	03	-	03	100
FIN-706	Currency Markets, Exchange Risk and Currency Derivatives	03	-	03	100

Marketing

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
MKT-701	International Marketing	03	-	03	100
MKT-702	Cross-Cultural Behavior and Negotiations	03	-	03	100
MKT-703	Business in Asia	03	-	03	100
MKT-704	Global Corporate Valuation	03	-	03	100
MKT-705	Advanced International Marketing	03	-	03	100

Human Resource Management

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
HRM-701	Occupational Psychology	03	-	03	100
HRM-702	Advance Topics in Human Resource Management	03	-	03	100
HRM-703	Cross-Cultural Behavior and Negotiations	03	-	03	100
HRM-704	Competitive Human Resource Strategies in Developing Countries	03	-	03	100
HRM-705	Workplace Diversity Issues	03	-	03	100
HRM-706	Strategic Management of Global Supply Chain	03	-	03	100

Management

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
MGT-701	Conflict & Negotiation Management	03	-	03	100
MGT-702	Change Management	03	-	03	100
MGT-703	Industrial & Organizational Psychology	03	-	03	100
MGT-704	Performance & Compensation Management	03	-	03	100
MGT-705	Organizational Development	03	-	03	100
MGT-706	Leadership in Organization	03	-	03	100

Specific allied subjects for purpose of eligibility for admission in MS/MPhil & PhD program

1. Business Administration 2. Economics 3. Public Administration subject to the recommendation of departmental scrutiny committee.

1st Semester Credit Hours 12

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
M.S- 701	Advanced Research Methods	03	-	03	100
M.S-702	Human Behavior in Public Organization	03	-	03	100
M.S-703	Organizational Theory & Public Management	03	-	03	100
M.S-704	Governance Issues in Pakistan (Seminar)	03	-	03	100
Total				12	400

2nd Semester Credit Hours 12

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
M.S-705	Government & Politics	03	-	03	100
M.S-706	Advanced Marketing Research	03	-	03	100
M.S -707	Independent Studies-I	03	-	03	100
M.S-708	Independent Studies-II	03	-	03	100
Total				12	400
Total credit hours of two semesters				24	

Thesis write-up equals to minimum two semesters (3rd & 4th semesters)

Optional courses for MS/MPhil program from various Fields of Specialization

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Marketing					
1	Global Marketing Management	03	-	03	100
2	Marketing Communication & Consumer Behavior	03	-	03	100
3	Strategic Marketing Planning	03	-	03	100
4	Strategic Services Marketing	03	-	03	100
Human Resources Management					
1	International HRM	03	-	03	100
2	Human Resource Development(HRD)	03	-	03	100
3	HRP & Performance Management	03	-	03	100
4	Strategic HRM	03	-	03	100
Financial Management					
1	Financial Marketing Investment /Financial Engineering	03	-	03	100
2	Portfolio Management	03	-	03	100
3	Risk Management	03	-	03	100
4	International Financial Management	03	-	03	100
Development Studies					
1	Community Development	03	-	03	100
2	Development Economics	03	-	03	100
3	Media Public Opinions & Public Policy	03	-	03	100

Public Policy

1	Introduction to policy Analysis	03	-	03	100
2	Law & Public Policy	03	-	03	100
3	Political and Agency Management Aspects of Public Policy	03	-	03	100
4	Welfare Policy Analysis	03	-	03	100
5	Media and Public Policy	03	-	03	100
Governance					
16	Dynamics of Governance	03	-	03	100
17	Law policy and Governance	03	-	03	100
18	Urban Management and Governance in Developing Countries	03	-	03	100
19	Politics of Development	03	-	03	100
20	Globalization and Global Governance	03	-	03	100

PhD(3Years, 6 Semesters)

1st Semester Credit Hours 09

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
900	Organization theory & Research	03	-	03	100
901	Qualitative/Quantitative Techniques Analysis	03	-	03	100
902	Optional-I	03	-	03	100
Total				09	300

2nd Semester Credit Hours 09

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
903	Research Ethics	03	-	03	100
904	Optional-I	03	-	03	100
905	Optional-II	03	-	03	100
Total				09	300

Total Credit Hrs. in both semesters 18

Optional Subjects

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
	Strategic Management	03	-	03	100
	Management Economics	03	-	03	100
	Leadership Management	03	-	03	100
	Research Methodology	03	-	03	100
	Change Management	03	-	03	100

FACULTY OF NATURAL SCIENCES

Department of Biochemistry

MS/MPhil (2 Years, 4 Semesters)

1st Semester (Credit Hours 12)

Course No.	Title of Course	TH.CH	PR.CH	CR.CH	Marks
BIOC-704/705	Advanced Biochemical Techniques	03	01	04	100+100
BIOC-702/703	Advanced Bio-statistical Applications	03	01	04	100+100
BIOC-706/707	Advanced Nutritional Biochemistry	03	01	04	100+100
Total				12	600

2nd Semester (Credit Hours 12)

Course No.	Title of Course	TH.CH	PR.CH	CR.CH	Marks
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BIOC-710/711	Advanced Research Methodology & Report writing	03	01	04	100+100
BIOC-712/713	Advanced Metabolic disorders	03	01	04	100+100
BIOC-708/709	Advanced Biotechnology	03	01	04	100+100
Total				12	600
Grand Total				24	1200

Subjects for the purpose of eligibility for Admission in MS/MPhil Biochemistry are as under:

1. BS/M.Sc Biochemistry
2. MBBS

Thesis write-up equals to minimum two semesters (3rd & 4th semesters)

Department of Botany

MS/MPhil (2 Years, 4 Semesters)

1st Semester

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
700	Research Methodology –I (Core)	2	1	3	60+40 = 100
701	Lab. Techniques –I (Core)	2	1	3	100
702	Genetics-I (Optional)	2	1	3	100
703	Taxonomy-I (Optional)	2	1	3	100
Total				12	

2nd Semester

Course No.	Title of Course	Th. Cr	Pr: Cr	Cr. H	Marks
708	Research Methodology–II (Core)	2	1	3	60+40 = 100
709	Lab. Techniques –II (Core)	---	1	3	100
710	Genetics-II (Optional)	2	1	3	100
711	Taxonomy-II	2	1	3	300
Total				12	
Total credit hours of two semesters				24	

Note: Core courses are compulsory and **two optional** courses per semester may be selected from specialized fields. 1. Core Courses=6 Cr.H2. Optional Courses=6 Cr. Hr **Total: 12 Cr. Hr.**

Thesis write-up equals to minimum two semesters (3rd & 4th semesters)

Optional Course for MS/MPhil (Fields of Specialization for 1st & 2nd Semesters)

Course No.	Title of Course	Th. Cr	Pr: Cr	Cr. H	Marks
704	Mycology/Pathology-I	2	1	3	100
705	Advanced Plant Physiology-I	2	1	3	100
706	Ecology-I	2	1	3	100
707	Plant Breeding/Soil Science-I	2	1	3	100
708	Plant Biotechnology-I	2	1	3	100
712	Mycology/Pathology-II	2	1	3	100
713	Advanced Plant Physiology-II	2	1	3	100
714	Ecology-II	2	1	3	100
715	Plant Breeding/Soil Science-II	2	1	3	100
716	Plant Biotechnology-II	2	1	3	100

PhD (3 Years 6 Semesters)

1st Semester

S. No.	Title of Course	Th.Ch	Pr.Ch	Cr. H	Marks
1	Advanced Research Methodology-I (Core)	3	--	3	100
2	Modern Lab Equipment techniques (Core)	2	--	2	100
3	Modern Lab Equipment techniques (Core)	--	1	1	100
4.	Optional Subject	3	--	3	100
Total				09	

2nd Semester

S. No.	Title of Course	Th. H	Pr. H	Cr. H	Marks
1	Advanced Research Methodology- II (Core)	3	--	3	100
2	Modern Lab Equipment techniques- II (Core)	2	--	2	100
3	Modern Lab Equipment techniques- II (Core)	--	1	1	100
4.	Optional Subject	3	--	3	100
Total				09	
Total credit hours of two semesters				18	

Note: Core courses are compulsory and **one optional** course per semester may be selected from specialized fields. 1. Core Courses=6 Cr.H2. Optional Courses=3 Cr. Hr **Total:09 Cr. H**

Thesis write-up equals to minimum two years (four semesters)

Optional Course for PhD (Fields of Specialization for 1st & 2nd Semesters)

1.	Advanced Genetics & Biotechnology-I	3	--	3	100
2.	Advanced Breeding Techniques-I	3	--	3	100
3.	Developmental Physiology-I	3	--	3	100
4.	Advanced Ecology-I	3	--	3	100
5.	Environment Mycology-I	3	--	3	100
6.	Modern Plant Taxonomy Techniques-I	3	--	3	100
7.	Soil Science-I	3	--	3	100
8.	Advanced Genetics and Biotechnology –II	3	--	3	100
9.	Advanced Breeding Techniques–II	3	--	3	100
10.	Developmental Physiology –II	3	--	3	100
11.	Advanced Ecology –II	3	--	3	100
12.	Environment Mycology –II	3	--	3	100
13.	Modern Plant Taxonomy techniques-II	3	--	3	100
14.	Soil Science-II	3	--	3	100

Names of allied subjects/Departments:

- BS (4 years program)/M.Sc in Botany/Agriculture/Forestry of relevant subject for MS/MPhil.
- MS/MPhil Botany/Agriculture/Forestry of relevant subject for PhD.
- Subject to the recommendation of departmental scrutiny committee.

1st Semester (Physical Chemistry)

Credit Hours 12

Course No.	Course Title	Credit Hrs.	Marks
CHEM-710	Research Methodology & Statistical Methods (Core Subject)	3	100
CHEM-711	Advanced Kinetics of Chemical Reaction & Photochemistry	3	100
CHEM-712	Physical Chemistry of Colloids Surfactants and Solutions	3	100
CHEM-713	Practical	3	100
	Total	12	400

1st Semester (Organic)

CHEM-710	Research Methodology & Statistical Methods (Core Subject)	3	100
CHEM-718	Advanced Synthetic Organic Chemistry	3	100
CHEM-719	Advanced Natural Products	3	100
CHEM-720	Practical	3	100
	Total	12	400

1st Semester (Inorganic)

CHEM-710	Research Methodology & Statistical Methods (Core Subject)	3	100
CHEM-724	Solid State Chemistry (Inorganic)	3	100
CHEM-725	Kinetics and Reaction Mechanism (Inorganic)	3	100
CHEM-726	Practical	3	100
	Total	12	400

1st Semester (Analytical Chemistry)

CHEM-710	Research Methodology & Statistical Methods (Core Subject)	3	100
CHEM-730	Atomic Spectroscopy	3	100
CHEM-731	Electro Analytical Techniques	3	100
CHEM-732	Practical	3	100
	Total	12	400

2nd Semester (Physical Chemistry)

Course No.	Course Title	Credit Hrs. E	Marks
CHEM-714	Instrumental Methods of Analysis (Core Subject)	3	100
CHEM-715	Biophysical Chemistry & Physical Chemistry of Environment	3	100
CHEM-716	Physical Chemistry of High Polymers and Composite materials	3	100
CHEM-717	Practical	3	100
	Total	12	400

2nd Semester (Organic)

CHEM-714	Instrumental Methods of Analysis (Core Subject)	3	100
CHEM-721	Advanced Stereochemistry	3	100
CHEM-722	Physico-organic Chemistry and Reaction Mechanism	3	100
CHEM-723	Practical	3	100
	Total	12	400

2nd Semester (Inorganic)

CHEM-714	Instrumental Methods of Analysis (Core Subject)	3	100
CHEM-727	Bioinorganic Chemistry	3	100
CHEM-728	Inorganic Environmental Chemistry	3	100
CHEM-729	Practical	3	100
	Total	12	400

2nd Semester (Analytical Chemistry)

CHEM-714	Instrumental Methods of Analysis (Core Subject)	3	100
CHEM-733	Chromatographic Techniques	3	100
CHEM-734	Thermal Methods of Analysis	3	100
CHEM-735	Practical	3	100
	Total	12	400

SCHEDULE OF STUDIES FOR PhD PROGRAM

1st Semester

Course No.	Course Title	Cr. Hr.	Marks
CHEM-800	Advanced Spectroscopy (Core Subject-I)	4	100
CHEM-801	Material Organic Chemistry (Optional)	4	100
CHEM-802	Inorganic Material Chemistry (Optional)	4	100
CHEM-803	Physical Material Chemistry (optional)	4	100

2nd Semester

CHEM-801	Separation Techniques and their Applications (core Subject-2)	4	100
CHEM-803	Advance Organic Polymer Chemistry (Optional-1)	3	100
CHEM-804	Organic Synthetic Chemistry (Optional-2)	3	100
CHEM-803	Advanced Electrochemical and Electro Analytical Technique (Optional-1)	3	100
CHEM-804	Statistical Thermodynamics & Reaction Dynamics (Optional-2)	3	100
CHEM-803	Medicinal Uses of inorganic compounds (Optional-2)	3	100
CHEM-804	Synthetic Inorganic Chemistry (Optional-2)	3	100

Total CH=18 (1st & 2nd Semester)

Note: The student opt their optional subjects as per their BS/M.Sc Final Degree

(FIRST SEMESTER)

Courses	Cr. No.	Title of Course	Th. H	Pr.H	Cr. H	Marks	Semester
CORE COURSES	Mic701	Molecular Biology	2	-	2	100	1 st
	Mic702	Molecular Biology Lab:	-	1	1	50	1 st
	Mic703	Instrumentation techniques.	2	-	2	100	1 st
	Mic704	Instrumentation techniques lab:	-	1	1	50	1 st

SPECIALIZED FIELDS

A- Health & Medical Microbiology

OPTIONAL COURSES	Mic705	Molecular Biology of Cancer/Cell & Tissue culture Technology	2	-	2	100	1 st
	Mic706	Molecular Biology of Cancer/Cell & Tissue culture Technology Lab:	0	1	1	50	1 st
	Mic707	Molecular Mechanisms of Anti-Microbial drugs	2	-	2	100	1 st
	Mic708	Molecular Mechanisms of Anti-Microbial drugs Lab:	0	1	1	50	1 st

B- Industrial & Environmental Microbiology

	Mic709	Fermentation technology & Its applications	2	-	2	100	1 st
	Mic710	Fermentation technology & Its applications Lab:	-	1	1	50	1 st
	Mic711	Microbial enzyme technology	2	-	2	100	1 st
	Mic712	Microbial enzyme technology Lab:	-	1	1	50	1 st

C- Agriculture Microbiology

	Mic713	Advances in Soil Microbiology	2	-	2	100	1 st
	Mic714	Advances in Soil Microbiology Lab	-	1	1	50	1 st
	Mic715	Advanced Veterinary Microbiology	2	-	2	100	1 st
	Mic716	Advanced Veterinary Microbiology Lab:	-	1	1	50	1 st

D- Food & Dairy Microbiology

	Mic717	Advanced Food & dairy Microbiology	2	-	2	100	1 st
	Mic718	Advanced Food & dairy Microbiology Lab:	-	1	1	50	1 st
	Mic719	Current Advances in Food Preservation & Packaging	2	-	2	100	1 st
	Mic720	Current Advances in Food Preservation & Packaging Lab:	-	1	1	50	1 st

(SECOND SEMESTER)

CORE COURSES	Mic721	Biometry, Biomathematics & Computer	2	-	2	100	2 nd
	Mic722	Biometry, Biomathematics & Computer Lab:	-	1	1	50	2 nd
	Mic723	Research Methodology	2	-	2	100	2 nd
	Mic724	Research Methodology Lab:	-	1	1	50	2 nd

SPECIALIZED FIELDS

A- Health & Medical Microbiology

OPTIONAL COURSES	Mic725	Genetic Engineering Technology	2	-	2	100	2 nd
	Mic726	Genetic Engineering Technology Lab:	-	1	1	50	2 nd
	Mic727	Microbial toxins & enzymes pathogenesis	2	-	2	100	2 nd
	Mic728	Microbial toxins & enzymes pathogenesis Lab:	-	1	1	50	2 nd

B- Industrial & Environmental Microbiology

OPTIONAL COURSES	Mic729	Environmental Pollution & Waste management	2	-	2	100	2 nd
	Mic730	Environmental Pollution & Waste management Lab:	-	1	1	50	2 nd
	Mic731	Vaccines development	2	-	2	100	2 nd
	Mic732	Vaccines development Lab:	-	1	1	50	2 nd

C- Agriculture Microbiology

OPTIONAL COURSES	Mic733	Microbiology of Plant Diseases	2	-	2	100	2 nd
	Mic734	Microbiology of Plant Diseases Lab	-	1	1	50	2 nd
	Mic735	Control of Plant Microbial diseases	2	-	2	100	2 nd
	Mic736	Control of Plant Microbial diseases Lab:	-	1	1	50	2 nd

D- Food & Dairy Microbiology

Course No.	Mic737	Microbiology of Poultry Diseases	2	-	2	100	2 nd
	Mic738	Microbiology of Poultry Diseases Lab:	-	1	1	50	2 nd
	Mic739	Food borne diseases	2	-	2	100	2 nd
	Mic740	Food borne diseases Lab:	-	1	1	50	2 nd

Note: Core courses per semester are compulsory and two courses per semester from optional courses may be selected from any one specialized field.

SYLLABUS OUTLINE FOR PhD. (MICROBIOLOGY)

The program will be comprised of course work (two semesters) and research work (Minimum of 02 years). Students will take course work of 09 credit hours during each semester.

Course No.	Title of Course	Credit Hours	Marks
Mic 801	Proteomics & Genomics	3+0	100
Mic 802	Instrumentation & Analytical	3+0	100
Mic 803	Biostatistics	3+0	100
Mic 804	Advances in Sol Microbiology	3+0	100
Mic 805	Bioinformatics	3+0	100
Mic 806	Bio-Safety and Risk Management	3+0	100
Mic 807	Epidemiology & Analytical Approaches	3+0	100

Note: Three courses will be offered in each semester, after completion of course work the Comprehensive Viva Voce is mandatory for the degree of PhD

MS/MPhil (2 Years, 4 Semesters)

1st Semester Credit Hours -12

CourseNo.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Zool.701	Research Methodology (Core Course)	04	—	04	100
Zool.702	Insect diversity and Physiology (Optional)	04	—	04	100
Zool.703	Molecular Genetics (Optional)	04	—	04	100
Total				12	

Note: Students may opt **optional** courses from Optional fields, subject to availability of faculty.

1. Core Courses=04 Cr. H 2. Optional Courses=08 Cr. H **Total: 12 Cr. Hr.**

2nd Semester Credit Hours 12

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Zool.706	Biostatistics (Core Course)	04	—	04	100
Zool.707	General Parasitology	04	—	04	100
Zool.708	Biosystematics and Taxonomy	04	—	04	100
Total				12	

Note: Students may opt **optional** courses from Optional fields, subject to availability of faculty.

Optional fields. 1. Core Courses=04 Cr.H 2. Optional Courses=08 Cr.H**Total:12 Cr.Hr.**

List of Optional/additional courses for scheme of two semester(s) coursework for MS/MPhil Program

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Zool.704	Wild Life Management (Optional)	04	—	04	100
Zool.705	Environment Biology (Optional)	04	—	04	100
Zool.709	General Endocrinology	04	—	04	100
Zool.710	Toxicology	04	—	04	100
Zool.711	Advances in Biological Control of Insect	04	—	04	100
Zool.712	Insect Pathology	04	—	04	100
Zool.713	Forensic Entomology	04	—	04	100
Zool.714	Insect Reaping Techniques	04	—	04	100
Zool.715	Advances in Mammalogy	04	—	04	100
Zool. 716	Advances in Wild Life Management and Conservation	04	—	04	100

PhD (3 Years 6 Semesters)

1st Semester Credit Hours-09

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Zool.801	Advanced Instrumental Techniques (Core)	03	—	03	100
Zool.802	Advanced Development Biology (Optional)	03	—	03	100
Zool.803	Applied Entomology	03	—	03	100
Total				09	

Note: Core courses are compulsory and **optional** courses can be selected from Optional fields.

2nd Semester Credit Hours-09

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Zool. 806	Biotechnology	03	—	03	100
Zool. 807	Insecticides and their Application	03	—	03	100
Zool. 808	Economic Zoology	03	—	03	100
Total				09	

Note: Core courses are compulsory and **optional** courses can be selected from Optional fields.

List of additional course for scheme of two semester coursework for PhD program

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
Zool.804	Medical Parasitology	03	—	03	100
Zool.805	Bioinformatics	03	—	03	100
Zool. 809	Helminthology	03	—	03	100
Zool. 810	Advances in Clinical and Molecular Endocrinology	03	—	03	100
Zool. 811	Advance in Ornithology	03	—	03	100
Zool. 812	Advances in Herpetology	03	—	03	100
Zool. 813	Medical and Veterinary Entomology	03	—	03	100
Zool. 814	Insect Nutrition	03	—	03	100
Zool. 815	Advances in Pest Management Research	03	—	03	100

Note: Additional Courses will be offered according to the expertise available in two semester schemes already approved.

FACULTY OF PHYSICAL SCIENCES

Department of Archeology

MS/MPhil(2 Years, 4 Semesters)

1ST Semester:

Course No.	Title of Course	MS/MPhil	PhD
1	Research Methodology-I	Comp: 03	03
2	Theories in Archaeology	Comp: 03	03

OPTIONAL COURSES (Any 01 for PhD and 2 for MPhil)

1	Stone Age of South Asia	03	03
2	Process of Urbanization in South Asia	03	03
3	Muslim Art & Architecture	03	03
4	Field Archaeology	03	03
5	Late and Post Indus Cultures in India & Pakistan	03	03
6	Geomorphology of Indus Valley and Emergence of Civilization	03	03
7	Zoo archaeology	03	03
8	Archaeobotany	03	03
9	Museum Architecture and Operative Administration	03	03
10	Anthropology and Cultural Traditions of Pakistan	03	03
11	Traditional Arts and Crafts of Pakistan	03	03

2nd Semester:

1	Research Methodology-II	03	03
2	Formation of Research Project for Dissertation	Comp: 03	03

OPTIONAL COURSE (Any 01 for PhD and 02 for MS/MPhil)

1	Origin and Growth of Indus Archaeology in South Asia	03	03
2	Archaeological Heritage of Pakistan	03	03
3	Coinage: Origin & Development in Pakistan	03	03
4	Gandharan Civilization	03	03
5	Archaeological Conservation	03	03
6	Indus Valley Civilization	03	03
7	Anthropology and Environmental Archaeology	03	03
8	Tourism and Hospitality	03	03

9	Museum Environment, Climate Control, Conservation of Collection	03	03
10	Ethno archaeology	03	03
11	Folk Heritage of Pakistan	03	03

Institute of Computer Science

MS/MPhil(CS) (2 Years 4 Semesters)

The following is distribution of required courses along with total credit hours:

Category or Area	Credit Hours
Core	12
Minimum Electives in Area of Specialization	6
Electives	6
Thesis	6
Total Credit Hours	30

Core courses

#	Code	Course Title	Credit Hrs.
1	CS	Advanced Theory of Computation	3
2	CS	Advanced Operating Systems	3
3	CS	Advanced Algorithm Analysis	3
4	CS	Advanced Computer Architecture	3
			(12/30)

Elective (specialized areas) not limited to the list given in detailed curriculum book (four courses of 12 credit Hours). Each course is of 3 credit hours.

Specialization Area	Specialization Area
Software Engineering	Artificial Intelligence
Computer Architecture and Organization	Programming Language Design and Translators
System Engineering	Computer Science Education
Operating System	Human Computer Interaction
Digital Image Processing	Network Performance Evaluation
Web Engineering	Computational Science
Net Centric Computing	Discrete Structure

1st Semester (Credit Hours 12)

S.NO.	Title of Course	Cr.CH
1	CS Advanced Theory of Computation	3
2	CS Advanced Operating Systems	3
3	CS Elective I	3
4	CS Elective II	3
Total Credit Hrs.		12

2nd Semester (Credit Hours 12)

S.NO.	Title of Course	Cr.CH
1	CS Advanced AlgorithmAnalysis	3
2	CS Advanced Computer Architecture	3
3	CS Elective III	3
4	CS Elective IV	3
Total Credit Hrs.		12

3rd & 4th Semester (Credit Hours 06)

S.NO.	Title of Course	Cr.CH
1	CS Thesis	6

Total Credit Hrs.	6
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Total Credit Hours (All Semesters) =30

PhD (CS) (3 Years 6 Semesters)

1st Semester (Credit Hours 09)

S.NO.	Code	Title of Course	Cr.CH
1	CS	Advanced Research Techniques	3
2	CS	Advanced Graph Theory	3
3	CS	Advanced Digital Processing	3
Total			09

2nd Semester (Credit Hours 09)

S.NO.	Code	Title of Course	Cr.CH
1	CS	Scientific Computing	3
2	CS	Cloud Computing	3
3	CS	Advance Software Engineering	3
Total			09

Department of Geography

MS/MPhil (2 Years 4 Semesters)

1st Semester (Credit Hours 12)

S.NO.	Title of Course	Cr.CH
1	Geographical Information Sciences/System	4
2	Advanced Quantitative Techniques	4
3	Advanced Research Methods	4
Total Credit Hrs.		12

2nd Semester (Credit Hours 12)

S.NO.	Title of Course	Cr.CH
1	Population Geography Comp:	3
2	Climate Changes Studies Comp:	3
3	Soil Geography	3
4	Settlement Geography Comp:	3
Total Credit Hrs.		12

Department of Mathematics

MS/MPhil: (2 Years, 4 Semesters)

1st Semester (24 Cr.Hr.)

Course No.	Title of Course	CH	Marks
1.	Statistical Mechanics	03	100
2.	Computer Programming	03	100
3.	Advanced Numerical Analysis	03	100
4.	Advanced Differential Equations	03	100

2nd Semester

Course No.	Title of Course	CH	Marks
1.	Advanced mathematical Physics	03	100

2.	Advanced mathematical Physics	03	100
3.	Numerical Solution of PDE	03	100
4.	Operations Research	03	100

PhD: (3 Years, 6 Semesters)

1st Semester (18 Cr.Hr.)

Course No.	Title of Course	CH	Marks
1.	Game Theory	03	100
2.	Mathematical and Computational Modeling	03	100
3.	Advance Partial Differential Equations	03	100

2nd Semester

Course No.	Title of Course	CH	Marks
1.	Elective	03	100
2.	Elective	03	100
3.	Elective	03	100

Note: Currently there is NO any allied subject for the purpose of eligibility for admission in MS/MPhil/PhD Mathematics

Department of Physics

MS/MPhil (2 Years 4 Semesters)

1st Semester

Course No.	Title of Course	Cr.CH	Marks
PHY-800	Advanced Computational Techniques	03	100
PHY-802	Q. Mechanics	03	100
PHY-804	Electrodynamics-I	03	100
PHY-806	Frontiers in Physics/Research Methodology	03	100
Total		12	400

2nd Semester

Course No.	Title of Course	Cr.CH	Marks
PHY-800	M.M Physics	03	100
PHY-810	Electrodynamics-II	03	100
PHY-812	Computer Programming	03	100
PHY-814	LASER Physics	03	100
Total		12	400

Department of Statistics

MS/MPhil (2 Years 4 Semesters)

Total Credit Hours 40 (Two Semester Courses)

1st Semester

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
	Logical Reasoning and Research Methods	03	-	03	100
	Econometrics	03	-	03	100
	Analysis of Clinical Trials	03	-	03	100
	Survey Sampling	03		03	100
Total				12	400

2nd Semester

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
	Time Series forecasting	03	-	03	100
	Advanced Design and Analysis of experiments	03	-	03	100
	Optimization Techniques	03	-	03	100
	Statistical Genetics	03		03	100
Total				12	400

FACULTY OF SOCIAL SCIENCES

Department of Economics

MS/MPhil(2 Years, 4 Semesters)

1st Semester Credit Hours 12

CourseNo.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
	Advanced Micro Economics	03	-	03	100
	Advanced Macro Economics	03	-	03	100
	Issues in Pakistan Economy	03	-	03	100
	Research Methodology	03	-	03	100
Total				12	400

2nd Semester Credit Hours 12

CourseNo.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
	Econometrics	03	-	03	100
	Topics in Advance Monetary Economics	03	-	03	100
	World Trade Organization & Globalization	03	-	03	100
	Human Resource Management	03	-	03	100
Total				12	400

Any two optional courses will be offered subject to availability of teachers. (Total 24 Credit hours)

PhD(3 Years 6 Semesters)

1st Semester

Course No.	Course Title	Credit hours	Marks
Eco-901	Quantitative Methods-I (Core)	03	100
Eco-903	Economic analysis (Core)	03	100
Eco-905	Trends in Eco. Development (Optional)	03	100
Total Credit Hrs.		09	300

2nd Semester

Course No.	Course Title	Credit hours	Marks
Eco-902	Quantitative Methods-II(Core)	03	100
Eco-906	Techniques of Social Research(Core)	03	100
Eco-909	Urban Economics(Optional)	03	100
Total Credit Hrs.		09	300

Optional Course(s)

Eco-908	Economic of Environment(Optional)	03	100
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Note: Total 18 credit hours, Scholars can opt any optional course, subject to availability of faculty.

Specific allied subjects for purpose of eligibility for admission in MS/MPhil&PhD. program

Business Administration	Commerce	Public Administration
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Note: Preference will be given to the candidates of Economics.

Institute of International Relations

MS/MPhil (2 Years 4 Semesters)

1st Semester

Course #	Course Title	CR. HR
IR-501	International Relations: Advanced Theory and Practice (Compulsory)	03
IR-502	Advanced Research Methodology (Compulsory)	03
IR-503	Traditional and Non-Traditional Security Paradigms (Compulsory)	03
IR-504	Optional-I (Major)	03

2nd Semester

Course #	Course Title	CR. HR
IR-505	Optional-II (Major)	03
IR-506	Optional-III (Major)	03
IR-507	Optional-IV (Major)	03
IR-508	Optional-V(Major)	03

3rd and 4th Semesters

Course #	Name of Subjects	CR. HR
IR-509	Thesis (Major)	06

List of Optional Subjects for MS/MPhil course work in International Relations

Following is an optional list of courses to be offered by the departments/institutes concerned. The teacher too would provide the course contents and the core/recommended books at the time of the offering of a course. Universities are free to add other titles as well in the given list of optional courses.

1. Global Political Economy
2. Politics of South Asia
3. Ethnic Conflict in Global Perspective
4. Politics of Middle East
5. International Law and Use of Force

6. Contemporary Trends in International Law
7. Comparative Analyses of Foreign Policy of Major Powers (any two)
8. Foreign Policy Analyses
9. Role of International Financial Institutions in International Relations
10. An Analysis of Pakistan's Foreign Policy
11. Politics and Security of Asia-Pacific Region
12. National Security Issues in Contemporary Pakistan
13. Contemporary Environmental Issues
14. Major Issues of Muslim World
15. Conflict and Cooperation in South Asia
16. Peace Building in Post-conflict Societies
17. International Organizations
18. Power Sharing in Multiethnic States
19. International Security, Arms Control, and Nuclear Non-Proliferation
20. Chemical, Biological, Nuclear, and Radiological Terrorism
21. Maritime Security in the Indian Ocean
22. Kinetic and Non-Kinetic Warfare
23. Central Asian and Caucasus Regions
24. Politics of Human Rights
25. Contemporary Political Theories
26. Global Issues in International Relations

Institute of Islamic Studies

MS/MPhil (2 Years 4 Semesters)

1st Semester

Credit Hours 12

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
IS-711	Research Methodology	04	-	04	100
IS-721	Tafseer, Uloom-ul-Quran and Hadith	04	-	04	100
IS-741	Fiqh (Islamic law and jurisprudence)	04	-	04	100
Total				12	400

2nd Semester

Credit Hours 12

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
IS -712	Philosophy and Ilmul Kalam	04	-	04	100
IS-722	Comparative Religion and Intellectual activism in Islam	04	-	04	100
IS-742	Basic Creeds of Islam Identification of God and Nature	04	-	04	100
Total				12	400
Total credit hours of two semesters				24	

Thesis write-up equals to minimum two semesters (3rd & 4th semesters)

Department of Media Studies

MS/MPhil(2 Years, 4 Semesters)

1st Semester Credit Hours -16

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
MC 800	Advanced Mass Communication Theories	04	-	04	100
MC 801	Advanced Research Method	04	-	04	100
MC 802	The Study of Audiences	04	-	04	100
MC 803	International Communication	04	-	04	100
Total				16	400

2nd Semester Credit Hours -08

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
MC 804	Research Application in Mass Media	04	-	4	100
MC 805	Advanced Development Communication	04	-	4	100
Total				08	200

Semester 3rd and 4th

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
MC 895	Research on Approved Topic Thesis, Dissertation and its defense	06	-	06	100
Total				06	100

Specific allied Subjects

1. International Relations	2. Pakistan Studies	3. Public Administration	4. Political Science
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Department of Pakistan Studies

MS/MPhil (2 Years 4 Semesters)

1st Semester Credit Hours -12

Course No.	Title of Course	CR. HR	Marks
PS-501	Research Methodology (Compulsory)	03	100
PS-502	Contemporary issues in Pakistan's Foreign Policy	03	100
PS-503	Muslim Nationalism in South Asia and the Struggle for Pakistan	03	100
PS-504	Seminar Paper (on any of the titles given below) (1).History (2). Political and Constitutional Developments: (3). Foreign policy (4). Economic Development (5). Culture and Society (6). Literature	03	100
Total		12	400

2nd Semester Credit Hours -12

Course No.	Title of Course	CR. HR	Marks
PS-505	Philosophy of Social Sciences (Compulsory)	03	100
PS-506	Political and Constitutional History of Pakistan Rationale and Scope	03	100
PS-507	Social Change and Cultural Transformation	03	100
PS-508	Seminar on Quaid-i-Azam Muhammad Ali Jinnah life and career	03	100
Total		12	400

Semester 3rd and 4th

Course No.	Title of Course	Th.CH	Pr.CH	Cr.CH	Marks
MC 895	Research on Approved Topic Thesis, Dissertation and its defense	06	-	06	100
Total				06	100

Note: Following Optional Courses will be offered subject to the availability of Faculty.

Optional Courses:

PS-509 Historiography in Pakistan

PS-510 Pakistan's Economy: Challenges and Responses

PS-511 Pakistani Society as Reflected in Pakistani Literature (1947-till date)

PS-512 Study of Archives

PS-513 Study of Leadership

PS-514 Migration Studies

PS-515 Study of Colonialism

PS-516 History of Punjab (1849- 1947)/Regional History

PS-517 Hate and Extremism in British Punjab (or Any Region)

Department of Sociology**MS/MPhil (2 Years 4 Semesters)****1st Semester Credit Hours -12**

Course No.	Title of Course	CR. HR	Marks
	Advance Concepts of Sociology	04	
	Research Methodology	04	
	Social Problems of Pakistan	04	
Total		12	

2nd Semester Credit Hours -12

Course No.	Title of Course	CR. HR	Marks
	Social Statistics	04	
	Gender Studies	04	
	Human Rights	04	
Total		12	

Note: The approved list of guides/co-guides is available in the directorate of postgraduate studies

SHAH ABDUL LATIF UNIVERSITY, KHAIRPUR



RESEARCH MANUAL

For
MS/MPhil & PhD Scholars

Shah Abdul Latif University, Khairpur, Sindh, Pakistan

www.salu.edu.pk

FORMAT GUIDELINES

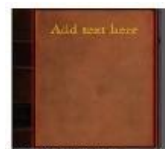
Candidates must provide or (present) their full name as it is officially recorded at SHAH ABDUL LATIF UNIVERSITY (first name, middle name, last name). This official name must be used in thesis, and all other required forms.

COLOR OF THE HARD BINDING:

- **MPhil/MS Thesis:** Dark Blue cover with Silver Text (Imprinted)



- **PhD Thesis:** Brown cover with Golden Text (Imprinted)



Note: (a) At time of the submission of the spiral copies of MS/MPhil & PhD thesis/dissertation for evaluation the face sheet should be in proper color.

(b) Same rules will be followed for preparation of synopsis.

ARRANGEMENT OF THESIS

Each thesis must be arranged in the following order:

A. Initial Pages:

1. **Title Page** (Outer title page): Include this page in the pretext page count, but do not place a page number on it (Sample A).
2. **Title Page** (Inner title page): Include this page in the pretext page count, but do not place a page number on it (Sample B).
3. **Declaration Page** (by the Student): Include this page in the pretext page count, but do not place a page number on it (Sample C).
4. **Plagiarism understanding** (by the Scholar): Include this page in the pretext page count, but do not place a page number on it (Sample D).
5. **Certificate Page:** (by Research Guide(s): Include this page in the pretext page count, but do not place a page number on it (Sample E).
6. **Certificate of Approval:** Include this page in the pretext page count, but do not place a page number on it (Sample F).
7. **Dedication Page:** Include this page in the pretext page count, but do not place a page number on it (Sample G).
8. **Table of Contents:** Include this page in the pretext page count, but do not place a page number on it (Sample H).
9. **List of Tables:** Begin placing pretext lowercase Roman numerals at the bottom of this page, counting all preceding pretext material except for the fly page. Page numbers are centered one inch from the bottom of the page. For example: i, ii, iii, iv, v, and so on (Sample I).
10. **List of Figures:** Continue pretext page numbering with lower case Roman numerals (Sample J).
11. **List of Illustrations/Maps/Slides:** Continue pretext page numbering with lowercase Roman numerals (Sample K).
12. **Acknowledgements** and/or **Preface Page:** Continue pretext page numbering with lowercase Roman numerals (Sample L)
13. **Abstract** or **Summary Page:** Continue pretext page numbering with lowercase Roman numerals (Sample M).

B. Text Pages:

1. **Main Chapters:** All pages from the first text page of Chapter 1 through the last page of the thesis should be numbered consecutively in Arabic numerals, beginning with Arabic numerals, i.e. "1, 2, 3, 4, ... and so on". Page numbers should be centered one inch from the bottom of the page.
9. **Aims and Objectives of the Study Page:** Continue page numbering with Arabic numerals. A brief and to the point, aims and objectives page should follow the introduction and review but not later than materials and methods chapter. The page should clearly highlight main aims and objectives of the study in bullets.
2. **Conclusion and Future Prospects:** Continue page numbering with Arabic numerals. Include the key conclusions in bullets or highlights and also provide the future directions or recommendations from the work.
3. **References or Bibliography:** Continue page numbering with Arabic numerals.
4. **Appendix:** Continue page numbering with Arabic numerals. The appendix pages are the last pages of the thesis and must be listed in the Table of Contents.

PAGE FORMAT AND LAYOUT

A. Font

Times New Roman Font size 12 shall be used throughout the thesis, exceptions being in tables, graphs, and appendices. Headings may be of size 14 and bold. Thesis must be presented on a good quality (80gm) A4 paper. Pages must be printed on one side of the paper.

1. **CHAPTER NO.:** (Font Style: Time New Roman, Size: 14pt, **bold-face**, ALL CAPS). The chapters' title should be preceded by the chapter number Arabic numerical (1,2,3,4.....). For example **CHAPTER NO. 1, CHAPTER NO. 2, CHAPTER NO. 3** etc.
2. **CHAPTER HEADING:** (Font Style: Time New Roman, Size: 14pt, **bold-face**, ALL CAPS). For example **INTRODUCTION, LITERATURE REVIEW, MATERIALS AND METHODS, RESULTS, DISCUSSION, CONCLUSION AND FUTURE PROSPECTS, REFERENCES OR BIBLIOGRAPHY, APPENDIX.**
 - 2.1 **Main Headings inside each chapter** should be given also the numbers. Every heading should reflect the chapter number followed by Decimal. For example: 1.1, 2.1, 3.1, 4.1, 5.1, and so on.
 - 2.1.1 **Sub Headings (first-level)** should followed the main headings and be indicated in sequences using the decimal places, indicating chapter no, main heading and sub-heading numbers. For example (1.1.1, 1.2.1, 2.1.1, 2.3.2, 3.1.3 etc.).

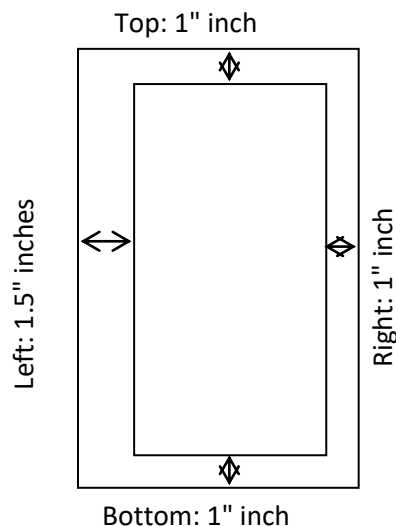
B. Margins

Top – 1.0 inch.

Bottom – 1.0 inch.

Right – margin: 1.0 inch.

Left margin: 1.5 inch.



C. Spacing

The thesis must be 1.5-spaced. Single spacing may be used only in the Table of Contents, footnotes and endnotes, charts, graphs, tables, quotations, captions, glossary, appendices, and bibliography.

D. Numbering of Pages

Beginning with the first page of the Acknowledgement, all preliminary pages preceding the actual text must be numbered in lowercase Roman numerals; e.g., iii, iv, v, etc. These numerals must be centered under the text with at least one inch of space between the number and the bottom of the page. If no optional pages are used, the page numbers must begin on the Abstract. Do not number the copyright page, signature page, title page, dedication, or acknowledgements page but do include each of them in the pretext page count.

The first page of the text should begin at Arabic numeral 1. All the pages within the text must contain an Arabic page number, bottom-centered, at least one inch from the bottom edge of the page. The first page of every major section (chapters, appendices, bibliography/references) must be begin on a new page.

E. Tables and Illustrations

Pages carrying illustrative material must be given page numbers appropriate to their place in the document. Illustrative material may not be inserted after the document has been numbered and given numbers such as “10a.” All tables, figures, illustrations, and other types of examples included and referenced in the text of the thesis should be numbered for identification. There should be no duplication of these numbers; i.e., no two tables should be assigned the same number. Figures may be numbered in one of two ways: consecutively throughout the document (Table 1, Table 2, Table 3, etc.), or double-numbered so that illustrations’ numbers reflect their locations in the document (Figure 2 A). Captions and legends must be placed on the same page with the figure, graph, table or illustration they describe. In order to fit both figure and caption on the same page, captions may be single-spaced, margins may be decreased to one inch, and figures may be reduced in size to fit. Figures, captions, and page numbers must be easily readable when the electronic document is viewed at 100 percent.

F. Acronyms and Abbreviations

(Such as SAARC, ASEAN, WHO) should not be used to Identify Organizations until the Organizational names have first been provided in full for example “World Health Organization (WHO)”.

G. References and Bibliography

Bibliography should be in alphabetical order with each entry single space and 1.5 space between each entry. A Bibliography or Reference section must always appear at the end of the thesis, even in the thesis where chapter end notes have been used. The bibliography should be on the last page in thesis. Referencing or citing your sources is an important part of academic writing. It lets you acknowledge the ideas or words of others if you use them in your work and helps avoid plagiarism.

Referencing also demonstrates that you have read relevant background literature and you can provide authority for the statements you make in your assignments.

The **Harvard citation style** is the compulsory referencing style for the Faculties of Natural and Physical Sciences at Shah Abdul Latif University. For scholars doing research in Faculties of Social Sciences, Management Sciences, Education and Law, the preferred method of citation is: either Harvard citation or Turabian/Chicago referencing. ("Turabian/Chicago" both refers to the same basic style of citation) and for faculty of Arts and Languages reference style will be APA/Harvard/Turabian/Chicago and the review literature and research methodology will be the part of introductory chapter.

Faculties of Natural Sciences and Physical Sciences:

a. *Harvard citation style:*

It is an in-text referencing style. If two or more works by different authors are cited at one point in the text, use a semi-colon to separate them: (Larson 2000; Malinowski 1999). The authors should be listed in alphabetical order. When citing a work by two or three authors, cite the names in the order in which they appear on the title page: (Malinowski, Miller & Gupta 1995).

b. *Reference style:*

Journal reference:

Author(s) family name, Initial(s) (e.g. Yasmeen Faiz Kazi will be written as Kazi YF), year of publication, title of article, title of journal; volume (issue):location, page numbers.

Books reference:

Author(s) family name, Initial(s) Year of publication, *Title*, Publisher, Place of publication. Material Type In-Text Example Reference List Examples

Single author

Holt, DH (1997) wrote that... Holt, DH 1997, *Management principles and practices*, Prentice-Hall, Sydney.

2 or 3 authors

McCarthy, EJ, William, DP & Pascale, GQ 1997, *Basic marketing*, Irwin, Sydney.

More than 3 authors

Bond, WR, Smith, JT, Brown, KL & George, M 1996, *Management of small firms*, McGraw-Hill, Sydney.

no author:

A history of Greece 1994, Irwin, Sydney.

Edited book reference:

Jones, MD (ed.) 1998, *Management in Australia*, Academic Press, London. Book: 2 or more editors (eds Bullinger & Warnecke 1985) Bullinger, HJ & Warnecke HJ (eds) 1985, *Toward the factory of the future*, Springer-Verlag, Berlin.

Translated book reference:

Colorado, JA 2006, *Economic theory in the Mexican context: recent developments on the ground*, trans. K Smith, Oxford University Press, Oxford.

Book: organization as author (Australian Bureau of Agriculture and Resource Economics 2001) Australian Bureau of Agriculture and Resource Economics 2001, *Aquaculture developments in Australia: a review of key economic issues*, ABARE, Canberra.

Chapter or article in edited book:

Milkman, R 1998 "The new American workplace: high road or low road?" in *Workplaces of the future*, eds P Thompson & C Warhust, Macmillan Press, London, pp. 22-34.

Online references

When citing online journals that have a volume and/or issue number, follow the format for a Journal Article from an Electronic• Database, substituting the database name for the URL of the article. Material Type In-Text Example Ref

Websites and Other Online Formats

References to websites and other online formats follow the same general principles as for printed references, with the addition of a date of update/revision (if available) along with an access date and a URL. A DOI (Digital Object Identifier) may be included in the notes in addition to a URL, if available:

i. Website reference

title of Homepage, Date of publication, edition, place of publication: publisher; [date updated; date accessed]. Notes.

If no date of publication can be determined, use a copyright date (if available), proceeded by "c". Include the URL in the notes.

Example: APSnet: plant pathology online. c1994–2005. St Paul (MN): American Psychopathological Association; [accessed 2005 Jun 20]. <http://www.apsnet.org/>.

ii. Online journal article

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1. Malcolm Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference* (Boston: Little, Brown, 2000), 64-65.

2. Gladwell, *Tipping Point*, 71.

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1. Peter Morey and Amina Yaqin, *Framing Muslims: Stereotyping and Representation after 9/11* (Cambridge, MA: Harvard University Press, 2011), 52.

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For four or more authors.

List all of the authors in the bibliography; in the note, list only the first author, followed by "et al." ("and others"):

1. Jay M. Bernstein et al., *Art and Aesthetics after Adorno* (Berkeley: University of California Press, 2010), 276.

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1. Richmond Lattimore, trans., *The Iliad of Homer* (Chicago: University of Chicago Press, 1951), 91-92.

2. Lattimore, *Iliad*, 24.

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1. Jane Austen, *Persuasion: An Annotated Edition*, ed. Robert Morrison (Cambridge, MA: Belknap Press of Harvard University Press, 2011), 311-12. 2. Austen, *Persuasion*, 315.

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1. Angeles Ramirez, "Muslim Women in the Spanish Press: The Persistence of Subaltern Images," in *Muslim Women in War and Crisis: Representation and Reality*, ed. Faegheh Shirazi (Austin: University of Texas Press, 2010), 231.

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1. William Cronon, foreword to *The Republic of Nature*, by Mark Fiege (Seattle: University of Washington Press, 2012), ix.

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1. Isabel Wilkerson, *The Warmth of Other Suns: The Epic Story of America's Great Migration* (New York: Vintage, 2010), 183-84, Kindle.

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3. Joseph P. Quinlan, *The Last Economic Superpower: The Retreat of Globalization, the End of American Dominance, and What We Can Do about It* (New York: McGraw-Hill, 2010), 211, accessed December 8, 2012, ProQuest Ebrary.

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1. Campbell Brown, "Consequentialize This," *Ethics* 121, no. 4 (July 2011): 752, accessed December 1, 2012, <http://dx.doi.org/10.1086/660696>.
 2. Anastacia Kurylo, "Linsanity: The Construction of (Asian) Identity in an Online New York Knicks Basketball Forum," *China Media Research* 8, no. 4 (October 2012): 16, accessed March 9, 2013, Academic OneFile.
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Paper presented at a meeting or conference

1. Rachel Adelman, "'Such Stuff as Dreams Are Made On': God's Footstool in the Aramaic Targumim and Midrashic Tradition" (paper presented at the annual meeting for the Society of Biblical Literature, New Orleans, Louisiana, November 21-24, 2009).
 2. Adelman, "Such Stuff as Dreams".
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1. John Doe, e-mail message to author, July 21, 2012.

Comment posted on a social networking service

1. Sarah Palin, Twitter post, August 25, 2011 (10:23 p.m.), accessed September 4, 2011, <http://twitter.com/sarahpalinusa>.

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(Ramirez 2010, 231)

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(Cronon 2012, ix)

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(Wilkerson 2010, 183-84)

(Kurland and Lerner 1987, chap. 10, doc. 19) (Quinlan 2010, 211)

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Google. 2012. "Privacy Policy." Google Policies & Principles. Last modified July 27. Accessed January 3, 2013. <http://www.google.com/policies/privacy/>.

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Becker, Gary. 2012. "Is Capitalism in Crisis?" *The Becker-Posner Blog*, February 12. Accessed February 16, 2012. <http://www.becker-posner-blog.com/2012/02/is-capitalism-in-crisis-becker.html>.

(Becker 2012)

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DEDICATION

To my parents

Teachers

friends

&

my family

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LIST OF ABBREVIATIONS

%	Percent	IMF	International Monetary Fund
°C	Degree Centigrade		
µg	Micrograms	HEC	Higher Education Commission
µm	Micrometer		
ANOVA	Analysis of Variance	EU	European Union
ATCC	American Type Culture Collection	OAU	Organization of African Unity
BC	Before Christ	OAAU	Organization of Afro-American Unity
BLAST	Basic Local Alignment Search Tool	WHO	World Health Organization
BP	Base Pairs	UNESCO	United Nations Educational Scientific and Cultural Organization
BTEX	Benzene, Toulene, ethylbenzene and xylene		
CS	Capsule Staining	SAARC	South Asian Association of Regional Cooperation
DMP	Di-methoxy phenol		
DNA	De-oxy ribonucleic acid	ASEAN	Association of South East Asian Nations
DPPH	Diphenyl picryl hydrazine		
DTMS	Direct thermally resolved mass spectroscopy	UN	United Nations
E	East	ADB	Asian Development Bank
EM	Effective Microorganism	SCO	Shanghai Cooperation Organization
EPA	Environmental Protection Agency		
F	Far ward		
FCBP	Fungal Cultural Bank of Pakistan		
FTIR	Fourier Transform Infra-Red		
g	gram		
g/l	gram per liter		
gb	Gene Bank		
HDT	Hanging Drop Technique		
IARC	International Agency for Research on Cancer		
IMVIC	Indole, methyl red, Voges proskaur and citrate		
IND	Indole		
Kb	Kilo base		
L	Liter		
lb	Pound		
ml	Milliliter		
mm	Millimeter		
MPN	Most Probable Number Technique		
MR	Methyl red		
MSM	Mineral Salt Medium		

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Praise be to Al-Mighty Allah, The Lord of Entire Universe. The Beneficent, the Merciful, Who is the entire source of knowledge and wisdom. Who gave me courage and potential to chase this goal that I believe that he never spoils the efforts of any deeds. Blessing of Al-Mighty Allah be upon his Prophet Mohammad (P. B. U. H), the city of knowledge and blessing for entire beings and enable me to win this honor of life.

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