



NUMS

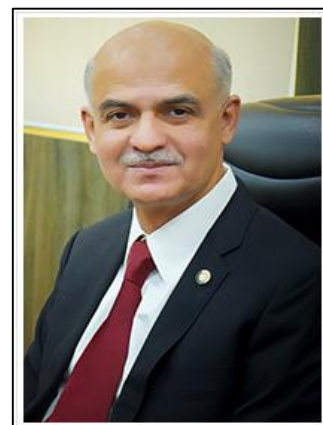
NATIONAL UNIVERSITY
OF MEDICAL SCIENCES

Students' Handbook for Postgraduate Studies 2021

If you require this document or any of the internal University online resources mentioned in this document in an alternative format, please contact the Postgraduate Studies Office

**MESSAGE BY VICE-CHANCELLOR
NATIONAL UNIVERSITY OF MEDICAL SCIENCES**

NUMS is a broad-based university with particular emphasis on ‘Understanding and Improving Life’, as our motto says. It has an important role to play in the health care sector in Pakistan and is envisioned to help bring in improvements in education, creation of hitherto largely missing research infrastructure, and establishment of a university-run health care delivery system as an adjunct to the existing federal and provincial systems, to help improve its capacity and quality. The concept of ‘one globe-one health’ care will be comprehensively addressed at NUMS through inclusion of veterinary sciences. NUMS’



undertakings are multifarious but necessary including medical, nursing, allied health, veterinary, biomedical technologies, genetics and biological sciences. Emphasis is being laid on the basic, pure and applied sciences. These are linked with studies in Philosophy, education, humanities, psychosocial and behavioral sciences, and multidisciplinary studies. NUMS bears a heavy responsibility to ensure quality of its educational offerings and training, innovation and pertinence in its research; that serve the neediest areas of the country and humanity at large. All those who join NUMS will be provided equal opportunities to grow as all round individuals and the best care givers, taking merit and transparency as our guiding principles. We intend to instill in our staff and students, a passion to be of service to mankind while embarking on a challenging but satisfying career. With our diversely experienced faculty at NUMS constituent and affiliated institutes, our students will be trained with a view to become a reference point for health care related studies in the country. At NUMS, we are working hard to push the boundary of knowledge, investing time and energy in creating a learning environment in all our fields of study and research and rise to the expectations of our society. As head of the university, I welcome you all to be part of NUMS, to carve out a promising future for yourself and humanity at large.

Lt Gen Syed Muhammad Imran Majeed, HI (M) Retd

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CHAPTER I

THE UNIVERSITY

1. Introduction

This handbook is designed to provide students with general information and guidance on academic matters related to NUMS Postgraduate Programs and should be read in conjunction with the University's Policies and Regulations.

It is the responsibility of students to make themselves familiar with the contents of this handbook and also the University-wide policies and regulations. Information provided in this handbook may help them avoid unnecessary problems. Please do not hesitate to contact the Postgraduate Studies Office if you have any queries about this handbook.

2. About NUMS

National University of Medical Sciences (NUMS) was established as a Federal Public Sector University through an Act of Parliament on October 31st, 2015. The honourable President of Pakistan is the Chancellor of the University and the Chief of the Army Staff is the Pro-Chancellor.

NUMS was founded to promote and achieve excellence in advanced healthcare education, research and service delivery. The University is backed up by an extensive network of Military Hospitals, Single Specialty Institutes, Medical and Nursing Colleges making it the country's largest healthcare provider in terms of trajectory and patient volume.

This research-led institution provides opportunities in undergraduate and postgraduate education in diverse fields of Medicine, Dentistry, Nursing, Allied Health and Veterinary Sciences with a necessary add-on the Social Sciences and Liberal Arts.

NUMS envisages to achieve set goals by adopting best international standards and practices in medical education, training, and research along with modernization of medical infrastructure, whereas the benefits will have broad based socio-economic impact within the country and beyond.

As it grows, NUMS has the potential to become a force multiplier by supporting other service providers in this field, developing partnerships with the several advanced national and international universities, industrial, governmental and community based stakeholders in consonance with national vision and plan to develop knowledge based economy.

3. Vision of NUMS

The vision of National University of Medical Sciences is to improve the quality of life through education, research, innovation, and healthcare, thereby, contributing to endeavors to make Pakistan and this world better place to live in.

4. Mission of NUMS

The University will endeavor to improve existing knowledge, and practices in the

fields of medical and allied life sciences; both pure and applied, including fields of biomedical engineering and technologies, veterinary, biogenetic, social and behavioral sciences through innovative and creative approaches in order to offer best possible services to the society and humanity at large.

5. NUMS Core Values

The guiding principles of NUMS are based upon the following three core values:

- a. Innovation
- b. Integrity
- c. Inclusivity

6. Constituent College/ Institute for Postgraduate Studies

NUMS offers its standardized postgraduate programs for the award of degrees at

- a. Army Medical College (AM College), Rawalpindi
- b. Armed Forces Post Graduate Medical Institute (AFPGMI), Rawalpindi
- c. Army College of Veterinary Sciences, Sargodha
- d. NUMS Institute of Advanced Studies & Research (NIASR), Rawalpindi

7. Postgraduate Studies Office (PSO)

The University has already established the Postgraduate Studies Office (PSO) in the Academics Directorate to deal with affairs relating to the postgraduate academic programs in the light of instructions and guidelines of PM&DC, HEC and other regulatory authorities. The PSO acts as a hub for the implementation and execution of all policies and practices about academic affairs of the University for postgraduate programs. It has two sections:

- a. **Section I:** This section, headed by Director Academics, is responsible for postgraduate programs related to Basic Medical Sciences and Clinical Disciplines as mentioned below:

NUMS Programs	Degree Nomenclature
Basic Medical Sciences	<ul style="list-style-type: none"> • MPhil • MSc • MPH • MHPE
Clinical Programs	<ul style="list-style-type: none"> • Clinical Fellowship • MSc • Clinical Diploma

- b. **Section II:** This section, headed by Director Academics (Clinical), is responsible for postgraduate programs including Nursing, AHS, Biological, Social Sciences as mentioned below or any other non-medical programs to be started in future

NUMS Programs	Degree Nomenclature
Nursing	MSc
Biological Sciences	MS
Social Sciences	MPhil

The Postgraduate Studies Office (PSO) provides administrative support for all postgraduate programs, courses, faculty and students in the college/ institute.

Each member of the PSO Team is available to help and provide advice on all aspects of postgraduate programs to faculty and students in the University. This Office operates an open door policy and is available as a first line for students and faculty support; if you have any questions, please do not hesitate to visit the office during the office hours mentioned below. The NUMS Postgraduate Studies Office is situated in NUMS Secretariat, Rawalpindi.

Office Hours: 08:00 AM - 04:00 PM

Tel: 051- 9270676

Email: acad.dte@numspak.edu.pk

8. Current Post Graduate Programs at NUMS

NUMS offers its standardized postgraduate programs for the award of degrees specified in the table below at Army Medical College (AM College) Rawalpindi, Armed Forces Post Graduate Medical Institute (AFPGMI) Rawalpindi and any other constituent college/ institute as may be specified by the competent authority of the University from time to time.

S. No	Title of the Program	Institutes
PhD Programs		
1.	Doctor of Philosophy in Biochemistry	AM College, Rawalpindi
2.	Doctor of Philosophy in Physiology	
3.	Doctor of Philosophy in Molecular Medicine	
4.	Doctor of Philosophy in Pharmacology	
5.	Doctor of Philosophy in Pathology	AFPGMI/ AFIP Rawalpindi
MPhil Programs		
6.	Master of Philosophy in Anatomy	AM College, Rawalpindi
7.	Master of Philosophy in Physiology	
8.	Master of Philosophy in Biochemistry	
9.	Master of Philosophy in Molecular Medicine	
10.	Master of Philosophy in Pharmacology	
11.	Master of Philosophy in Community Medicine	
12.	Master of Philosophy in Science of Dental Materials	
13.	Master of Philosophy in Chemical Pathology	AM College, Rawalpindi, AFPGMI/AFIP Rawalpindi
14.	Master of Philosophy in Microbiology	
15.	Master of Philosophy in Oral Pathology	AFPGMI/AFIP Rawalpindi

16.	Master of Philosophy in Transfusion Medicine	AFPGMI/AFIT Rawalpindi
Master Programs		
17.	Master of Public Health	AFPGMI Rawalpindi
18.	Master of Science in Healthcare Administration	
19.	Master of Science in Cardiac Anesthesia	AFPGMI/ AFIC Rawalpindi
20.	Masters in Health Professions Education	NUMS Department of Biological Sciences
21.	Master of Science in Human Genetics	
22.	Master of Science in Microbiology & Immunology	
23.	Master of Science in Biotechnology	
24.	Master of Science in Phytochemistry and Natural products	
Diploma Program		
25.	Diploma in Cardiology	AFPGMI/ AFIC Rawalpindi
Certificate Program		
26.	Certificate in Health Professions Education	NUMS

9. Program Specification

For all NUMS postgraduate academic programs, standardized scheme of studies with the course work requirements is tabulated below:

S. No	Disciplines	NUMS Titles	Programs Requirements	Duration
Doctoral Programs				
1.	Doctorate	Doctor of Philosophy	Total 78 credit hours consisting of 48 credit hours course work and 30 credit hours of research.	3-8 years
Master Programs				
2.	Basic Medical Sciences	Master of Philosophy	Credit Hours: 34 • Course work: 24 • Research work: 10	2-3 years
		MSc Healthcare Administration	Credit Hours: 36 • Course work: 24 • Practicum/Seminar: 06 • Research: 06	
		MPH	Credit Hours: 34 • Course work: 24 • Practicum: Non-Credit • Research: 10	

		MHPE	Credit Hours: 34 • Course work: 24 • Internship: 04 • Research: 06	2-3 years
3.	Clinical Disciplines	MSc Cardiac Anaesthesia	Credit Hours: 38 • Course work: 30 • Research: 06 • Clinical Rotation: 02	2-3 years
		Diploma in Cardiology	Credit Hours: 33 • Course work: 27 • Internship: 06	
5.	Biological Sciences	<ul style="list-style-type: none"> • MS in Human Genetics • MS in Microbiology & Immunology • MS in Biotechnology • MS in Phytochemistry and Natural products 	Credit Hours: 36 • Course work: 26 • Research work: 10	2-3 years

10. Faculty at NUMS

NUMS has a dedicated, experienced and highly qualified faculty that is responsible for teaching and training medical, dental and nursing students in their relevant departments and institutes. There are more than 50 PhD faculty members working in various programs being offered in NUMS colleges, hospitals/ institutes and their number is growing.

CHAPTER II

REGISTRATION AT NUMS

1. Registration of Student After Admission

- a. The College/ institute will send the duly filled registration form of each postgraduate student to the Registrar's Office (Form # PG-01).
- b. All admitted students will then be registered with NUMS and the relevant Regulatory Authority.
- c. For any unforeseen reason, when a student cannot continue with his/ her studies in the University, the student may send an official request through his HOD and Dean/ Head of institution to the Registrar for clearance and notification of release from the University
- d. HEC policy for enrollment in dual degree program shall be adhered to. However, permission for enrollment in dual degree program shall be taken from HOD and concerned Dean
- e. **Foreign Students Under Student Exchange Programs**
They may be enrolled for any semester or for any single course and NUMS will issue transcript with letter grades at the end of the semester.
- f. Postgraduate students will be governed by NUMS regulations and policies after registration in the University.

2. Payment of Dues & Refund of Fees

- a. Fee structure of all PG programs are available on NUMS website.
- b. Each student is required to pay the dues as may be prescribed by the University/institutes from time to time.
- c. Admission fee is non-refundable.
- d. Post-graduate program tuition fee may be refunded as follows:
 - 1) Up to 7 days of the commencement of classes: 100%.
 - 2) Within 8-15 days of classes: 50%
 - 3) More than 15 days of classes: No refund of fee.

3. Courses at other HEC Recognized Universities

The students may take courses at other HEC recognized universities subject to approval by the student supervisor and the concerned Dean.

4. NUMS Semester System

- a. NUMS shall follow semester system for all postgraduate academic programs each having two regular semesters in the academic year, Spring semester from January till May and Fall semester from August till December. However, in special circumstances program can be started other than above mentioned time with approval from VC. Each regular semester shall be for 18 weeks' duration (including examination). There is additional summer semester of 09 weeks with weekly contact hours for a course being double of the regular semester
- b. Student may opt for deficient/ improvement courses in summer semester or whenever the course is offered. However, in deficient/ improvement courses,

the student is required to complete all formalities applicable to repetition of a course, i.e., sessional, mid semester examination, project, assignments, quiz, etc and End Semester Examination

- c. **Course Credit.** A credit hour means teaching/ learning a theory course for one hour each week throughout the semester. One credit hour in laboratory or practical work/ project would require lab contact of three hours each week throughout the semester
- d. Course load per semester shall be maximum twelve credit hours. The credit hours are denoted by two digits within brackets with a plus in between. The first digit represents the theory part while the second digit represents the practical work like 3 (2+1) where 3 are total credit hours with 2 for theory and 1 for practical work. However, under unforeseen circumstances, student may take additional courses (02 courses of 03 CHs) in a semester with the approval of concerned dean
- e. Each department shall clearly define the details of credit hours of its academic program which shall be shared with all stakeholders along with curricula
- f. Course credit values awarded must reflect the quality and standards of the University and comply with the requirements of the NUMS/ regulatory bodies' qualification frameworks for that academic level
- g. Credits assigned to a course and course description shall be approved first from Faculty Board of Studies before sending to the University.
- h. Credits are earned only when the course and assessment have been completed successfully

5. Transfer of Credit Hours

- a. 'Transfer credit' is the granting of credit for academic work completed at another/ same HEC recognized institution
- b. Inward migration shall be allowed only from such institutions as have been approved or accredited by these authorities
- c. No credit hour of a course less than B-grade for post graduate programs shall be allowed. The student will have to cover the entire deficient course, if any
- d. A student desiring transfer of credits to NUMS shall file a formal application in the prescribed form along with no objection certificate (including character verification) for change of the University, copies of all previous transcripts/credit hours' transfers/course outline, HEC grant (if any) utilization and progress report. After verification of these documents by the Registrar, the concerned Dean shall, in consultation with the concerned heads of the department (HoDs) and supervisors, if any, determine the equivalency of the previous courses and furnish his/ her recommendations to the Vice Chancellor through the Registrar
- e. Up to 50% of course credit may be transferred provided the courses are of relevant field. Student may be required to take additional relevant courses if required
- f. Only relevant/common courses shall be transferred with grades to the opted program.

- g. The credits transferred are counted towards the degree requirement and GPA of the transferred credits shall be counted towards the calculation of CGPA
- h. For outward migrations from NUMS, no objection certificates, transcripts and other documents shall be issued by the Registrar.

6. Change of Program:

- a. Program transfer facility shall only be for semester based Master programs only where eligibility criteria is same for both programs. This policy is not for PhD programs
- b. He/ She will apply to Registrar Dte with the approval of concerned HoDs within two weeks of initiation of first semester. Such a student shall be issued a registration number for new program by Registrar Directorate
- c. Transfer will depend on the availability of seat in the opted program.
- d. NUMS reserve the right to reject cases without assigning any reason

7. Freezing/ Deferment of academic session

- a. Freezing not exceeding two semesters shall be allowed only after successful completion of the first semester against filing of application in prescribed form (Form #PG-03). All applications in this regard shall be submitted before the commencement of the freezable semester(s) to the concerned head of department (HOD) who will send his/her recommendations for final approval through the concerned Dean to the Registrar.
- b. Freezing of first semester or deferment for one year may be requested in first semester under special circumstances, considered after approval of competent authority.
- c. For freezing of semester, student shall submit 25% of the monthly tuition fee in advance to maintain his/her registration. However, the student shall complete his/her degree requirement within the stipulated time (not exceeding the maximum limit)
- d. In case of deferment, student shall take up his / her studies in the following academic year. Subsequent requests for deferred admission will not be considered
- e. Students granted deferred admission to a program of study will be admitted in the next academic session and will not be required to reappear the admissions test, re-sit for an interview or pay a new application fee
- f. Students shall not seek admission to another course/ program at any institute without prior written approval from the concerned Dean
- g. Where a request for deferred admission is denied, the individual will be required to reapply for admission

CHAPTER III

GENERAL ACADEMIC GUIDELINES FOR NUMS POSTGRADUATE STUDENTS

Following are the general guidelines for postgraduate students before the commencement of classes

1. Academic Activities

Our postgraduates are an important part of the community and students are strongly encouraged to participate in the various seminars, colloquia, workshops and conferences hosted by each subject area.

2. Core Courses

All core courses are compulsory.

3. Elective Courses

Elective courses may be selected according to the interests and with permission from the Academic Advisor/ Supervisor. Students will be assessed on these courses and the marks will be part of their overall coursework assessment.

4. Course Codes

All postgraduate courses have been allotted appropriate course code numbers preceded by suitable alphabets indicating the names of the respective course.

5. Description of Each Course

Course instructor will be responsible to provide his/ her students all the information regarding the course i.e. Course title, code and credit hours, objectives/ outcomes, course content, teaching methodology, assessment type and schedule.

6. Program Coordination.

To facilitate the students and to ensure timely and trouble-free successful completion of the program, HoD of respective department will appoint following faculty members at least one month before the start of each semester.

- a. **Program Coordinator.** He/she will be responsible for liaison & coordination with all concerned.
- b. **Academic Advisor.** He/she is available as a first line of pastoral support and advice to the student. It is the responsibility of a student to inform the Academic Advisor immediately about any problem that are interfering with his/her coursework or progression through the program.
- c. **Course Instructors.** He/she shall also be responsible for:
 - 1) Provision of all the information regarding the course to the students i.e. Course title, code and credit hours, objectives/ outcomes, course content, teaching methodology, assessment type and schedule
 - 2) Conduct of classes as well as continuous assessment i.e quizzes, sessional, mid-semester examinations, practical examination, evaluation of written course related assignments
 - 3) Maintenance of course files
 - 4) Submission of assessment results after approval of HoD to the Examination Directorate.

- 5) Submission of course file to the concerned HOD at the end of each semester/ academic year for record keeping purpose.
7. **Supervisor Nomination.** Preferably within one month of the commencement of the first semester, the Head of the Department shall, on approval from the Dean nominate supervisor (Form #PG-04) and confirmation will be given by supervisor (Form #PG-05), for each of the students from within the available faculty. Supervisor can be changed in case of exigencies or unavoidable circumstances (Form #PG-07).
8. **Supervisory Committee**
 - a. **Graduate Advisory Committee (GAC).** This shall be appointed for all students during the first quarter of first semester. This shall consist of three members (two internal from department including student's supervisor and one external member from other institution/research organization) shall be constituted. If HOD is not supervisor, he/she shall be taken as member of the Committee. The Chair of this Committee will be the student's supervisor (Form #PG-06). In case of multidisciplinary research, more than one external supervisor may be approved by the Pro Vice Chancellor (Academics)
 - b. **PhD Supervisory Committee.**
 - 1) Students who will qualify for continuation of PhD course work, PhD Supervisory Committee shall be appointed for each student. PhD Supervisory Committee must consist of at least four PhD degree holders in the relevant subject with at least 3 years post PhD research and/or academic experience and HEC approved PhD supervisor in the relevant field. At least two members should be from the concerned faculty including HOD and scholar's supervisor. However, if HOD is not PhD qualified, then any other member from the department may be included in the Committee. The Committee shall also have two external members from other institution/research organization.
 - 2) Members of the Supervisory Committee and even the Supervisor can be changed in case of exigencies or unavoidable circumstances. However, in case of any change of supervisor, co-supervisor or any committee members, HoD shall incorporate change in the prescribed form accordingly and send it to the Academics Directorate after approval from the Dean
 - 3) In case of multidisciplinary research, more than two external supervisors may be approved by the Pro Vice Chancellor (Academics)
9. **Course Enrolments and Academic Activities**
 - a. Student will be required to submit coursework, attend an examination or a combination of both for assessment normally. In addition to the formal assessment he/ she may be expected to carry out other assignments, such as class presentations. Details of requirements for particular assessment will be provided in detail during lectures by the concerned faculty
 - b. Students are solely responsible for ensuring that their course choices do not clash and that they are fully aware of when and where each course will take place.

10. Educational Strategy and Information Transfer

For all postgraduate academic programs, curriculum will allow the students to work collaboratively through collective involvement/ participation. The curriculum has been made more systematic with clear focus on predefined learning objectives. Problem- based learning will be used through most of the curriculum by using real world scenarios. Student will have to complete core curriculum comprehensively meanwhile covering extra topics or subjects of their own choice in electives.

11. Modes of Information Transfer (MIT)

Modes of information transfer (MIT) includes structured lectures (SL), small group discussions (SGD), workshops/ seminars/ conferences, journal club meetings (JCM), clinic-pathological conferences (CPC), laboratory work/ skill session, clinical rotation, on the job training (OJT)/ practical/ internship, study tours, and self-directed learning, depending upon the course taken. In case of unforeseen circumstances, online technology may be used for the continuation of academic program

12. Award of Degree

All postgraduate students must fulfil all such requirements for the award of degrees as have been prescribed by the University in respective chapters.

CHAPTER IV

PhD PROGRAMS

1. Preamble

Doctor of Philosophy (PhD) programs are being offered in basic medical sciences and pathology with a view to impart focused research training to scholars and to prepare skilled personnel with innovative research capabilities to make meaningful and productive contribution towards the socio-economic development of the society.

2. Program Duration

Total duration of PhD program is 3-8 years. However, under unforeseen circumstances it may be extended to maximum 10 years after approval from AS&RB. Period for the completion of PhD will be counted from the date of admission to the final submission of thesis

3. General Information

Following is the approved scheme of study

Semester Duration	18 weeks
Regular Semesters	06
Masters' Courses	24 Credit Hours
Advance Course work	24 Credit Hours
Research	30 Credit Hours
Total	78 Credit Hours

4. Conduct of the Program (Annex-B)

- a. The Dean/ Head of Institute shall be responsible for proper implementation of program curriculum and periodical monitoring of students' progress through the HoD and program coordinator.
- b. Head of concerned Department is responsible for overall supervision of the program and proper compliance of NUMS policy for the conduct, assessment and timely submission of semester assessments results to the Academic and Examination Directorates. He/she shall also assign the courses to the faculty members at the commencement of academic session.
- c. After the completion of 24 CHs course work, student will continue in PhD program only if his/her CGPA is ≥ 3.00 and availability of slot in that department
- d. If his/her CGPA is between 2.50 -3.00, he/she may opt for Master program in relevant field
- e. Scholars shall be required to submit duly filled Postgraduate (PG) forms (Annex-A) downloadable from NUMS website
<https://numspak.edu.pk/upload/media/RevisedPGForms20201603945999.pdf>
 to be used for postgraduate studies
- f. Scholar shall submit their feedback at the end of each semester. (ANNEX-C)

- g. In case of any change of supervisor, co-supervisor or any committee members, HOD will incorporate change in the Supervisory Committee's petition form (Form #PG-07) accordingly and send it to the Academics Directorate after approval from the Dean
- h. The SC meetings shall be held at least once in six months during the research phase of the PhD scholar in the department or by conference call for external members. The proceedings of SC meetings shall be recorded and meetings shall be chaired by the supervisor.
- i. The HoD shall ensure proper compliance of NUMS regulations and policy for the conduct, assessment and timely submission of semester assessments' results to the Academic/Examination Directorates (Form #PG-08)
- j. The end-semester examinations will be conducted by the Examination Directorate and grading of scholars shall be done as per NUMS regulations
- k. For repetition/improvement of course, request shall be sent on the prescribed form (Form #PG-09)

5. Degree Requirement

- a. **Residency.** There shall be a residency requirement for a period of at least two year.
- b. **Course Work.** The 48 credit-hours coursework for this program consists of three components. If the MS/MPhil students 'CGPA is ≥ 3.00 , up to 50% of course credit from Master degree may be transferred provided the courses are of relevant field. Student may be required to take additional relevant courses if required
 - 1) **Masters' Courses- Level 7 (24 Credit Hours)** - The required courses cover the breadth of the relevant discipline and are the Masters' level courses in that discipline. These courses will be covered in first and second semester with 12 credit hours in each semester. These courses will be exempted only if the student has successfully completed his/her MPhil/Master program with CGPA ≥ 3.00 and the courses he/she studied are same
 - 2) **Advanced Courses- Level 8 (12 Credit Hours)** - These post graduate-level courses provide depth in the candidate's area of specialization as well as prepare him/her for research. Following courses will be covered in third semester: -

PhD Basic Medical Sciences & Pathology			
S. No	Course Code	Course Title	Credit Hours
1.	BMR-831	Advanced Research Methodology/ Biostatistics	3(2+1)
2.	BMR-832	Advanced Molecular Biology	3(2+1)
3.	BMR-833	Laboratory Instrumentation & Technique	3(2+1)
4.	BMR-834	Systematic Review & Meta Analyses	3(2+1)

- 3) **Elective Courses - Level 8 (12 Credit Hours)** - These post graduate-level courses allow the candidates to broaden his/her knowledge of the general discipline that they are working in. These courses will be covered in fourth

semester. Seminar of 03 credit hour is compulsory. In addition to this, students will select three elective courses of 03 credit hours each and intimate Academics Directorate with the approval of his/ her supervisor one month before the fourth semester.

4) Elective Courses: 9 Credit Hours (min.3 courses have to be selected)

PhD Pathology			
S.No	Course Code	Course Title	Credit Hours
1.	PTH-801	Recent Advances in Clinical Chemistry	3(2+1)
2.	PTH-802	Special Clinical Chemistry	3(2+1)
3.	PTH-803	Pediatric Metabolic Disorders	3(2+1)
4.	PTH-804	Toxicology and Therapeutic Drug Monitoring	3(2+1)
5.	PTH-805	Advanced Techniques in Diagnostic Microbiology	3(2+1)
6.	PTH-806	Industrial Bio-technology and Microbiology	3(2+1)
7.	PTH-807	Immunization and Vaccine Development	3(2+1)
8.	PTH-808	Nano Biotechnology: Concepts and Applications	3(2+1)
9.	PTH-809	Red Blood Cells Disorders/ Transfusion Medicine	3(2+1)
10.	PTH-810	Coagulation disorder and Thrombosis	3(2+1)
11.	PTH-811	Tumours of Haematopoietic and Lymphoid Tissues	3(2+1)
12.	PTH-812	Cellular Mechanisms of Disease	3(2+1)
13.	PTH-813	Special Pathology-1	3(2+1)
14.	PTH-814	Special Pathology-2	3(2+1)
PhD Biochemistry			
1.	BCH-821	Advanced Cell Biology	3(2+1)
2.	BCH-822	Genomics & proteomics	3(2+1)
3.	BCH-823	Signal transduction	3(2+1)
PhD Molecular Medicine			
Core Courses	MME-821	Molecular basis of diseases	3(2+1)
	MME-822	Human Genetics	3(2+1)
Elective Courses (anyone)	MME-801	Genomics & Proteomics	3(2+1)
	MME-802	Stem Cell Biology	3(2+1)
PhD Physiology			
1.	PHY-801	Advanced Cell Biology	3(2+1)
2.	PHY-802	Advanced course in Endocrine & Reproductive Physiology	3(2+1)
3.	PHY-803	Advanced course in Cardiovascular Physiology	3(2+1)
4.	PHY-804	Advanced course in Neurophysiology	3(2+1)
5.	PHY-805	Advanced course in Respiratory Physiology	3(2+1)
6.	PHY-806	Advanced course in Renal Physiology	3(2+1)
7.	PHY-807	Advanced course in Blood Physiology	3(2+1)
8.	PHY-808	Advanced course in Gastrointestinal and Liver Physiology	3(2+1)
9.	PHY-809	Nerve & Muscle Physiology	3(2+1)

- 5) After completion of course work of 48 CHs with CGPA ≥ 3.00 , scholar may appear in the doctoral comprehensive examination.
- 6) **Guidelines for Synopsis & Dissertation/Thesis Writing.** Available on NUMS website

6. Comprehensive Examination

- a. Following the completion of coursework with CGPA ≥ 3.00 , every PhD student shall be required to pass a comprehensive examination with $\geq 65\%$ marks in order to be granted candidacy as PhD researcher; provided that if the student fails to pass the comprehensive test, he or she shall be allowed one more attempt to take the test within three years
- b. It will test the scholar's ability to integrate and assimilate the knowledge obtained relevant to their field of research. Concerned Supervisory Committee will be responsible for PhD comprehensive examination in collaboration with NUMS Examination Directorate
- c. The examination will be conducted in two parts in the following manner:
 - 1) **Part A- Written Comprehensive Examination**
 - a) Concerned Supervisory Committee will prepare the written paper. A comprehensive examination consists of 100 Marks written paper of 03 hours' duration. Assessment blueprint of Comprehensive Examination is as under:

S No	Topics		Questions	Marks
1	Reflection	Student will provide a statement about the discipline and how they position themselves in this field	01	01x20
2	04 examination questions, all in the student's subject area, will be distributed as follows			
a	Area of specialization/ discipline	To assess in depth knowledge of the relevant discipline	02	02x15
b	Advanced Courses	To demonstrate the understanding of advanced research methods and techniques used in the relevant field	02	02x15
3	Research proposal	To check the adequacy of the candidate's background preparation to pursue the proposed research	01	01x20
	Total		06	100

The student result will be notified by the Controller of the Examination

2) Oral Examination

- a) It shall be conducted only after the scholar has qualified Part A of the Comprehensive examination. Scholar shall submit a research proposal on prescribed format. IRB approval shall be taken wherever required
- b) Every PhD scholar will be required to submit a research proposal request (Form #PG-12) in prescribed form along with two copies of the synopsis for approval of IRB (Form #PG-13) wherever required
- c) Thereafter, five copies of the synopsis shall be submitted to the concerned Dean's Office for synopsis defense
- d) The Dean will finalize the synopsis presentation schedule (Form #PG-14) and constitute a PhD Synopsis Evaluation Committee (SEC) comprising of supervisory committee with Dean himself being a Chair. The synopsis evaluation committee (Form #PG-15) along with schedule of synopsis presentation will be sent to each SEC member, NUMS Academics Directorate, Examination Directorate & QA Directorate
- e) Head of Department (HOD) and Dean/ Commandant/ Principal would be the voting members only if they are PhD qualified in the relevant field.
- f) The scholars shall present their synopsis before the Synopsis Evaluation Committee (SEC) and rep from NUMS Academics Directorate. The approval of synopsis shall be done by using the prescribed evaluation score form (Form #PG-16).
- g) The scholar has to defend his/ her thesis synopsis as a part of this oral examination. The Oral Examination Committee shall determine by majority vote. The examination will be graded as Pass/ Fail. Only pass scholar will be allowed to proceed for the doctoral research.
- h) The SEC may recommend changes in the synopsis and scholar shall repeat presentation within stipulated time. The approval of synopsis shall be finalized by a majority vote. The approved synopsis report in the prescribed form (Form #PG-17) shall be sent to the Academics Directorate under endorsement from the Dean concerned for approval from AS&RB
- i) If any observation/ revision in research title/ project is needed, student will resubmit the title/ project through concerned Dean with all above formalities for approval from AS&RB. (Form # PG-17-b)
- j) Upon failure in oral part, examination committee members will submit a comment's page, which would clearly document reasons for failure. These comment pages duly signed by each committee member will be submitted to Academic and Examination Directorates, NUMS by the concerned Dean. A duplicate copy of these would also be provided to the scholar
- k) Unsuccessful candidates in either part will be given one more chance only, to appear in the failed part within a time period to be decided by the Supervisory Committee.
- l) A scholar who has passed the comprehensive examination shall be deemed to have become a candidate for PhD degree.

7. Research Bench fee. NUMS shall pay to the concerned institute/ Department

minimum Rs. 300,000/- for each PhD student for research purpose, on the recommendation of HoD/ Dean, after approval of synopsis. However, it may be increased after approval from competent authority.

8. Research

- a. Every PhD scholar shall start research work under his/her supervisor and keep the Supervisory Committee members updated about the research work progress. He/she is required to complete 30 credits of PhD research within stipulated time
- b. **Bi-annual Progress Report.** The bi-annual progress report must be completed by the end of July and January after course work. The scholar is required to indicate the work carried out during the previous six months. The progress will include:
 - 1) Stages of the research work completed
 - 2) Goals met over the previous six months and goals set for the next six months
 - 3) Supervisor's satisfaction with scholar's performance/ remarks
 - 4) The supervisor through the concerned HOD/ Dean will send bi-annual report of each scholar in prescribed form (Form #PG-10) to the Academics Directorate.
- c. The candidate shall present a research paper in seminar/ national/international conference and publish abstract in the conference proceeding. Candidate shall submit evidence of participation to Academic Directorate
- d. All candidates must produce a PhD dissertation consisting of original research of high-impact. He/she shall write the dissertation in the NUMS prescribed format. He/ She will submit the draft to his/her supervisor who will review it thoroughly. Plagiarism test must be conducted by the supervisor on the dissertation before its submission for evaluation. Supervisor shall check the similarity index by using Turnitin software which should be <19% as per HEC's guidelines
- e. If satisfied, the Supervisor will recommend the thesis to be submitted for evaluation. The scholar will then submit prescribed dissertation verification form (Form #PG-19) with five copies of soft bound draft dissertation to the concerned Dean Office through HOD. NUMS Academic Directorate will be intimated through acknowledgment receipt (Form #PG-20) through Dean office.
 - 1) The PhD dissertation shall be evaluated by Dissertation Evaluation Committee comprising of respective Dean and two internal and two external examiners. If any member suggests any amendment, the supervisor shall ensure that necessary alterations are properly made in the dissertation.
 - 2) In addition to Dissertation Evaluation Committee, dissertation will be evaluated by two external experts, as approved by Advanced Studies and Research Board (AS&RB), who may be either
 - a) Pakistan-based Distinguished National Professors, Meritorious Professors, or Tenured Professors, or
 - b) PhD experts from academically advanced countries.
 - c) However, if the PhD candidate publishes at least one research paper as its first author during his or her doctoral studies in an HEC approved X category or above journal, the PhD dissertation will require evaluation by one expert only.

f. Research Publication

Every PhD scholar shall be required to publish at least one research paper as its first author during his or her doctoral studies in an HEC approved W category in all disciplines except social sciences (Y category) or above journals (National) and JCR of ISI or ISI master list journals (International) for the award of degree. Record of such publication(s) shall be furnished to the Academics Directorate in the prescribed form (Form #PG-18).

- g. The Dean shall approve the Dissertation Evaluation Committee comprising of the supervisor, one internal and two external examiners who shall evaluate the PhD dissertation and send the Dissertation Evaluation Report in the prescribed form to Dean office within four weeks.
- h. If any amendment is suggested by any member of Dissertation Evaluation Committee, the supervisor shall ensure that necessary alterations are properly made in the dissertation
- i. In addition to Dissertation Evaluation Committee, dissertation will be evaluated by two external experts, as approved by Advanced Studies and Research Board (AS&RB), who may be either
 - 1) Pakistan-based Distinguished National Professors, Meritorious Professors, or Tenured Professors, or
 - 2) PhD experts from academically advanced countries.
 - 3) However, if the PhD candidate publishes at least one research paper as its first author during his or her doctoral studies in an HEC approved X category or above journal, the PhD dissertation will require evaluation by one expert only.
- j. Supervisors of all PhD programs shall send names of at least two/ three external experts during the research phase of their PhD students to Academics Directorate
- k. After rectification of observations, dissertation will be sent through Dean's office to Academics Directorate which in turn will send it to external expert/s
- l. If any amendment is suggested by external expert/s, the supervisor shall ensure that necessary alterations are properly made in the dissertation.
- m. If satisfactory report is given by external expert/s, it will be considered approved. However, if report is not received from external expert/s within two months, dissertation shall be sent to second/ third external expert from the approved list
- n. The Dean shall review and send the external expert/s report through Academics Directorate for approval by Advanced Studies & Research Board

9. Dissertation/Thesis defense:

- a. There shall be open defense of PhD dissertation
- b. Final defense of the dissertation shall be in presence of the Dean and PhD Dissertation Evaluation Committee. However, for MPhil/Masters' thesis defense, final defense shall be in presence of the Dean and two internal and one external examiners.

- c. The grading of dissertation shall be done by a majority vote using prescribed evaluation score form (Form #PG-25). However, its scoring shall not be considered for CGPA calculation.
- d. The examiners may approve the dissertation as such, recommend minor or major changes in the dissertation, not approve and repeat the presentation if required. In case of approval of the dissertation, a prescribed report duly signed by all members of the Committee will be prepared. (Form #PG-26).
- e. The finally approved bound copies shall be submitted to the HoD through the supervisor within one month after dissertation/thesis defense. The date of notification of defense will be taken as degree award date.
- f. The HOD shall forward four bound copies & CDs of the final PhD dissertation and three bound copies & CDs of the final MPhil/Masters' thesis to the Academics Directorate. One hard and soft copy is kept in Academics Directorate, one for Examination Directorate, one for library and one copy of PhD Dissertation (both hard and soft) will be submitted to HEC for inclusion in PhD Country Directory and for attestation of PhD degree by the HEC in future

10. Award of MS/MPhil Degree During PhD Studies. A student may be awarded MS/MPhil Degree on the basis of PhD studies if:

- a. If a student has successfully completed the relevant course work of minimum 24 CHs with CGPA between 2.50 - 3.00
- b. 06 -10 credit hours of research
- c. Successful defense of Master's thesis
- d. MPhil degree may also be awarded if the student's PhD Dissertation Committee will recommend for award of MPhil/MS degree

11. Award of Doctoral Degree: A PhD scholar must fulfill all of the following requirements for award of PhD degree:

- a. Completed advanced course work of 48 CHs with CGPA ≥ 3.00
- b. Qualify comprehensive examination with ≥ 65 % marks
- c. Research work of 30 CHs
- d. At least one research paper as its first author during his or her doctoral studies in an HEC approved W category in all disciplines except social sciences (Y category) or above journals (National) and JCR of ISI or ISI master list journals (International)
- e. Satisfactory dissertation evaluation reports from external expert/s
- f. Successful defense of dissertation in the prescribed manner.

12. Reporting Requirements. The following documents shall be submitted to the HEC after the completion of studies:

- a. A duly filled completion form shall be sent to the HEC from the Office of the Controller of Examinations of the university notifying the HEC that the PhD scholar has completed all the requirements for the award of the PhD degree
- b. A copy of PhD Dissertation for including in PhD Country Directory and for attestation of the PhD degree by the HEC.
- c. A duly filled Proforma for the PhD Country Directory, signed by the Principal Supervisor, Controller of Examination and the Vice Chancellor

CHAPTER V

MASTER PROGRAMS

1. Preamble

NUMS offers Master programs in different disciplines of basic, biological, social and clinical medical sciences at its constituent institutions with aim to create high quality human resource in the country

2. Program Duration

The duration of all Master programs is 2-3 years extendable for further one year by the Faculty Board of Studies. The period will be counted from the date of commencement of classes to the final submission of thesis

3. Conduct of Program

- a. The Head of Institution in coordination with the Dean shall be responsible for overall proper implementation of the program courses. HOD shall assign courses to different faculty members under intimation to PGO of Academic Directorate. The HOD shall monitor the academic progress of the students with the help of the Program Coordinator
- b. Students shall be required to submit duly filled postgraduate forms (**Annex-A**) downloadable from NUMS website
<https://numspak.edu.pk/upload/media/RevisedPGForms20201603945999.pdf> to be used for postgraduate studies
- c. Scholar shall submit their feedback at the end of each semester. (ANNEX-C)
- d. The course-related assignments shall be given to the students by the faculty members and quizzes, sessional and mid semester examinations shall be conducted internally by the HODs through faculty members. Proper course file shall be maintained. Internal assessment results shall be compiled in this regard and furnished to the Examination Directorate (Form #PG-08). A student may improve or repeat the courses as per NUMS policy (Form #PG-09). End semester examinations shall be conducted by the Examination Directorate
- e. The supervisor through the concerned HoD/ Dean shall send bi-annual report of each student in prescribed form (Form #PG-10) to the Academics Directorate by the end of third semester and fourth semester if research work is not completed
- f. **Guidelines for Synopsis & Dissertation/ Thesis Writing.** Available on NUMS website/ PG Students handbook
- g. **Synopsis Approval.** Within first month of the third semester, every MPhil student is required to submit a research proposal request (Form #PG-12) to Dean's Office along with two copies of the synopsis for approval of IRB (Form #PG-13). Thereafter, three copies of the synopsis shall be submitted to the concerned Dean's Office for synopsis defense
- h. **Synopsis Evaluation Committee (SEC).** Dean will constitute Synopsis Evaluation Committee (SEC) (Form #PG-15) consisting of the supervisor, one internal and one external member with Dean himself being the chair. The Dean will decide about the synopsis presentation schedule (Form #PG-14). Assessment of the

synopsis will be done on the prescribed evaluation form (Form #PG-16) by SEC on presentation as per schedule. The Committee may accept, reject or direct for substitution or amendments of the synopsis. Approved synopsis (Form #PG-17) along with its assessment results should be furnished to the Academics Directorate. If any observation/ revision in research title/ project is needed, student will resubmit the title/ project through concerned institute with all above formalities after approval from FBS. (Form # PG-17-b).

- i. **Research Bench fee.** NUMS shall pay to the concerned institute/ Department minimum Rs 100,000/- to each MPhil student for research purpose, on the recommendation of HoD/ Dean, after approval of synopsis. However, it may be increased after approval from competent authority.
- j. **Research Work.** The research work will be carried out under the direct guidance and supervision of the supervisor who will keep the members of the said committee abreast of the progress of the research work as per the procedures prevalent in the institution. Research work should be completed within stipulated time. However, time may be extended by the committee on concurrence from the Academics Directorate provided a student has completed 50% of the research work as certified by the supervisor. If extension is required, student will give an application to the HOD through the supervisor. The HOD will forward the application to the Dean along with a certificate clearly indicating that the student has completed 50% or more of the research work. The Dean will recommend the case for extension period on merit and send to the Academics Directorate for approval prior to the start of the extension period.
- k. **Research Paper.** In MPhil, MS and MHPE programs, each student will have to submit one research paper with acknowledgment of concerned journal to corresponding author, in any of the PMC/ HEC approved journals (Form #PG-18)
- l. **Thesis Preparation/ Submission.** Every MPhil student should write his/her thesis in the prescribed manner and format. After careful review and similarity index check by using 'Turnitin' software which should be <19% as per HEC's guidelines, the concerned supervisor will recommend the thesis for final evaluation. The student will submit against acknowledgement receipt (Form #PG-20), his prescribed thesis verification form (Form #PG-19) with five copies of soft bound draft thesis to the concerned Dean's Office through the concerned departmental head
- m. **Thesis Evaluation.** The Dean will approve the thesis examiners comprising of the supervisor, one internal and one external examiners (Form #PG-21). On reference from the Dean, the examiners will review and send the thesis evaluation report in the prescribed form (Form #PG-22) to Dean office within four weeks. If the internal and external examiners give satisfactory report, the student shall be allowed to proceed for defense of thesis examination. The changes/ amendments, if suggested by the examiners, shall be incorporated in the thesis
- n. **Thesis Defense.** After receiving a satisfactory thesis evaluation report, the Dean will schedule a date (Form #PG-24) under intimation to the Academics

Directorate/ Controller of Examinations/ Director QA and Heads of the concerned College or Institute for final defense of the thesis in presence of the Dean and the examiners concerned. Abstract shall be submitted on (Form #PG 24-b). The thesis and its research will be evaluated (Form #PG-25) and approved through scores-based grading in the prescribed form (Form #PG-26).

Final defense of the thesis shall be in presence of the Dean and nominated Examiners. The grading of thesis research shall be done by a majority vote using prescribed evaluation score form. However, its scoring shall not be considered for CGPA calculation.

The examiners may approve the thesis as such, recommend minor or major changes in the dissertation, not approve and repeat the presentation if required

The finally approved bound copies shall be submitted to the HoD through the supervisor within one month after thesis defense. The date of signatures by the Dean will be taken as degree award date.

The HOD shall forward three bound copies & CDs of the final thesis to the Academics Directorate. One hard and soft copy is kept in Academic Directorate, one for Examination Directorate and one for library

The Academics Directorate will check the documents required for award of degree (Form #PG-27) and forward the dossier, result and bound copies of thesis to the Examination Directorate for record and gazette notification

Student will be allowed to go for thesis defense only if he/ she has completed minimum 24 CH of coursework with CGPA ≥ 2.50

4. Award of Master's degree.

- The student must have completed total credit hours of course work with CGPA ≥ 2.50 and research work of 06 - 10 credit hours followed by successful defense of thesis.
- Masters in clinical subjects, as research is optional, student must have completed total credit hours of course work with CGPA ≥ 2.50
- For MPhil/ MS/ MHPE only. One research paper submitted with acknowledgment of concerned journal to corresponding author, in any of the PMC / HEC approved journals.

5. MPHIL PROGRAM

a. Introduction.

The aim of this program is to create high quality human resource in country in the diversified fields of medical and social sciences. NUMS is currently offering MPhil programs in multiple disciplines of basic medical sciences and pathology. Well-qualified and experienced faculty is available in our constituent institutions

b. General Scheme of Studies of MPhil Program.

Semester Duration	18 weeks
Course Duration	2-3 years

Regular Semesters	04
Course Load per Semester	12 Credit Hours
Core Courses	24 Credit Hours
Research	10 Credit Hours
Total	34 Credit Hours

c. **Conduct of MPhil Course.**

1) MPhil programs comprise of four semesters with following course work.

Semesters	Course Work	Credit Hours
1st Semester	Core Courses	12 Credit Hours
Summer Semester	Any deficient course/ improvement	
2nd Semester	Core Courses	12 Credit Hours
3rd Semester	Research Work	04 Credit Hours
Summer Semester	Any deficient course/ improvement	
4th Semester	Research Work	06 Credit Hours

2) In the first and second semesters, there are 04 core courses relevant to the discipline of 03 credit hours each.

3) Course details of core courses for MPhil programs are given below:

Course Code	Course Title	Credit Hours
ANATOMY		
FIRST SEMESTER		
ANT-711	Regional Anatomy-I	03(2+1)
ANT-712	Basic Histology	03(2+1)
ANT-713	Systemic Histology	03(2+1)
ANT-714	Limbs	03(2+1)
SECOND SEMESTER		
ANT-721	Regional Anatomy-II	03(2+1)
ANT-722	Embryology	03(2+1)
ANT-723	Human Neuroanatomy	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
BIOCHEMISTRY		
FIRST SEMESTER		
BIO-711	Biochemistry of Cell and Enzymes	03(2+1)
BIO-712	Cellular Metabolism I	03(2+1)
BIO-713	Cellular Metabolism II	03(2+1)
BIO-714	Bioenergetics and Blood Chemistry	03(2+1)
SECOND SEMESTER		
BIO-721	Nutrition, Electrolytes and Acid-Base	03(2+1)
BIO-722	Endocrinology	03(2+1)
RMS-723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
PHYSIOLOGY		
FIRST SEMESTER		

PHY-711	Physiology of cell & excitable tissues	03(2+1)
PHY-712	Blood Physiology	03(2+1)
PHY-713	Gastrointestinal and Renal Physiology	03(2+1)
PHY-714	Neurosciences	03(2+1)
SECOND SEMESTER		
PHY-721	Physiology of Endocrines and Reproduction	03(2+1)
PHY-722	Cardiopulmonary Physiology	03(2+1)
RMS-723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
COMMUNITY MEDICINE		
FIRST SEMESTER		
CME-711	General Epidemiology	03(2+1)
CME-712	Disease Epidemiology	03(2+1)
CME-713	Community Nutrition	03(2+1)
CME-714	Environmental and Occupational Health	03(2+1)
SECOND SEMESTER		
CME-721	Reproductive Health and Demography	03(2+1)
CME-722	Basic and Applied Biostatistics	03(2+1)
CME-723	Health Education and Communication	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
PHARMACOLOGY		
FIRST SEMESTER		
PHR-711	General Pharmacology	03(2+1)
PHR-712	ANS/ Respiratory System	03(2+1)
PHR-713	CNS/ Drugs used in Inflammatory conditions/NSAIDS/Opoid Analgesics	03(2+1)
PHR-714	Endocrinology/GIT/Miscellaneous topics	03(3+0)
SECOND SEMESTER		
PHR-721	Drugs acting on CVS/ Diuretics/Blood	03(2+1)
PHR-722	Chemotherapy/ Antineoplastics	03(3+0)
RMS-723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
DENTAL MATERIAL		
FIRST SEMESTER		
DNM-711	Biocompatibility of Dental Materials	03(2+1)
DNM-712	Tissue Engineering	03(2+1)
DNM-713	Dental Materials-I	03(3+0)
DNM-714	Advanced Topics in Dental Materials-I	03(3+0)
SECOND SEMESTER		
DNM-721	Dental Materials-II	03(3+0)
DNM-722	Advanced Topics in Dental Materials-II	03(3+0)
DNM-723	Biomaterials	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
MOLECULAR MEDICINE		
FIRST SEMESTER		
MME-711	Cell Signaling	03(2+1)
MME-712	Cellular Biology	03(2+1)

MME-713	Human Genetic	03(2+1)
MME-714	Advances in Medical Biochemistry	03(2+1)
SECOND SEMESTER		
MME-721	Applied Genetics in Medicine	03(2+1)
MME-722	Trends in Biotechnology & Bioinformatics	03(2+1)
RMS-723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
CHEMICAL PATHOLOGY		
FIRST SEMESTER		
CHP-711	Pathophysiology of Human Diseases	03(2+1)
CHP-712	Endocrine Disorders	03(2+1)
CHP-713	Basic Laboratory Principles & Analytical Techniques	03(2+1)
CHP-714	Clinical Chemistry Analytes	03(2+1)
SECOND SEMESTER		
CHP-721	Special Clinical Chemistry	03(2+1)
CHP-722	Laboratory Management	03(2+1)
RMS-723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
MICROBIOLOGY		
FIRST SEMESTER		
MIB-711	Fundamental Bacteriology & Microbiology	03(2+1)
MIB-712	Infection control & Prevention	03(2+1)
MIB-713	Special Microbiology	03(2+1)
MIB-714	Immunology	03(2+1)
SECOND SEMESTER		
MIB-721	Parasitology & Mycology	03(2+1)
MIB-722	Virology	03(2+1)
RMS-723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
ORAL PATHOLOGY		
FIRST SEMESTER		
ORP-711	Histological & Gross Techniques	03(2+1)
ORP-712	FNAC & General Pathology	03(2+1)
ORP-713	Dental Disorders	03(2+1)
ORP-714	Salivary Glands & Soft Tissue Pathology	03(2+1)
SECOND SEMESTER		
ORP-721	Hematological, Immunological & Dermatological Diseases and epithelial pathology	03(2+1)
ORP-722	Bone Pathology, Infections and Odontogenic Cysts & Tumors	03(2+1)
RMS-723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)
HAEMATOLOGY		
FIRST SEMESTER		
HAE-711	Haematology-Introduction	03(2+1)
HAE-712	Disorders of Red Cells	03(2+1)

HAE-713	Non-Malignant Disorders of Leucocytes, The Spleen and Immunoglobins	03(2+1)
HAE-714	Disorders of Hemostasis and Coagulation & Laboratory Methods	03(2+1)
SECOND SEMESTER		
HAE-721	Malignant Disorders of Haemopoietic System	03(2+1)
HAE-722	Principles and Practice of Transfusion Medicine	03(2+1)
RMS -723	Molecular Biology	03(2+1)
RMS-724	Research Methodology and Biostatistics	03(2+1)

- d. Course instructor will maintain the results of quizzes, sessional, mid semester and practical exam. Exam and Academics directorate will be intimated before end semester exam
- e. **Noncredit course.** Student may take additional elective course as a noncredit course with permission of HoD for acquisition of knowledge
- f. 04 credit hours of Research will be carried out in third semester and 06 credit hours of Research will be carried out in fourth semesters

6. Master of Public Health

a. Introduction

MPH curriculum emphasizes on basic public health sciences, essential managerial and analytical skills including project planning and evaluation, epidemiological investigations, health systems analysis, reproductive and child health, environmental and occupational health, disease control and research. Practical consist of individual fieldwork, group fieldwork, field visits, individual assignments and class exercises in all semesters.

b. General Scheme of Studies of MPH Program

Ser	Points	Details
a.	Degree Offered	MPH
b.	Duration	2-3 Years
c.	Total Credit Hours	34 Credit Hours
	1. Core Course	Credit Hours
	2. Practicum	Non Credit
	3. MPH Thesis Research	10 Credit Hours

c. Semester wise Breakdown of Courses

Semester-I (Total Credit Hours: 12)

Code	Core Courses	Credit Hours
MPH-711	Epidemiology	3(2+1)
MPH-712	Communicable & non communicable disease control	3(2+1)
MPH-713	Environmental and Occupational Health	3(2+1)
MPH-714	Foundation of Public Health and Health Promotion	3(2+1)

Semester-II (Total Credit Hours: 12)

Code	Core Courses	Credit Hours
MPH-721	Health Systems	3(2+1)
MPH-722	Applied Epidemiology and Biostatistics	3(2+1)
MPH-723	Communicable & non communicable disease control	3(2+1)
MPH-724	Research Methods: Quantitative and Qualitative	3(2+1)

Semester-III (Total Credit Hours: 6)

Code	Core Courses	Credit Hours
MPH- 741	Practicum	2
MPH -799	Research	4

Semester-IV (Total Credit Hours:6)

Code	Core Courses: 2	Credit Hours
MPH -799	Research	6

7. MSc Healthcare Administration**a. Introduction**

Effective management in health care is the key to success for implementing programs in health sector. The significance of MSc Healthcare Administration is much higher in the 21st century compared to the previous years. MSc Healthcare Administration will be a two years' program designed to give in-depth education in managing healthcare problems as well. The instructional and training components will be carried out by the qualified faculty of health management at Armed Forces Post Graduate Medical Institute (AFPGMI) Rawalpindi. The award of the course will require evidence of satisfactory completion of course and research. All students will be assessed during the course and through end semester examinations as per HEC grading system/ policy.

b. General Scheme of Studies

1.	Course Duration	24 Months
2.	Semester Duration	16 Weeks
3.	Semesters	4
4.	Course load per Semester	12 Credit hours
5.	Course Work	24 Credit hours
6.	Practicum + Seminar	03+03 (06) Credit hours
7.	Research	06 Credit hours
Total Credit Hours		36 Credit hours

c. Semester wise Breakdown of Courses

FIRST SEMESTER (12 CHs)			
(Management Sciences)			
Ser	Code	Subjects	Credit Hours
1.	HLA-711	Human Resource Management & Leadership	3 (2+1)
2.	HLA-712	Health Economics and Financial Management	3 (2+1)
3.	HLA-713	Supply Chain Management	2 (1+1)
4.	HLA-714	Project Management	2 (1+1)
5.	HLA-715	Health System Management	2 (1+1)
SECOND SEMESTER (12 CHs)			
(Public Health, Health Policy and Planning)			
Ser	Code	Subjects	Credit Hours
1.	HLA-721	Health Policy, Planning & Promotion	3 (2+1)
2.	HLA-722	Hospital Management, Planning & Designing	3 (2+1)
3.	HLA-723	Epidemiology and Occupational Health	2 (1+1)
4.	HLA-724	Quality Assurance in Healthcare	2 (1+1)
5.	HLA-725	Research Methodology and Biostatistics	2 (1+1)
THIRD SEMESTER (06 CHs)			
Ser	Code	Subjects	Credit Hours
1.	HLA-731	Seminar	3
2.	HLA-732	Practicum	3
FOURTH SEMESTER (06 CHs)			
Ser	Code	Subjects	Credit Hours
1.	HLA-799	Research	6
Total			36

8. MSc in Cardiac Anaesthesia

a. Introduction

This program is offered by the National University of Medical Sciences (NUMS), Islamabad. The two-years training will be done at the Department of Cardiac Anaesthesia & Intensive Care of the Armed Forces Institute of Cardiology & National Institute of Heart Diseases (AFIC-NIHD). The Focus of the MSc Cardiac Anesthesia program is to provide a nurturing environment to acquire the knowledge and develop the technical skills necessary to provide superb clinical care and cultivate high quality research.

b. Duration of Program & Scheme of study

MSc in Cardiac Anaesthesia is 24 months' program consisting of core courses and clinical training in the wards. There will be 4 regular semesters of 16 weeks' duration and 38 credit hours have to be completed. Successful MSc completion will require a minimum CGPA of 2.50.

Log Book. Proper log books of clinical procedures and cases along with written reflections by all students will be maintained with the help of Program

Coordinator. The reflections written by the students will be commented and endorsed by the supervisors.

1	Degree Offered	MSc in Cardiac Anaesthesia
2	Duration	24 months
3	Total semesters	04
4	Course load per semester	09-12 hrs
5	Core courses	24 hrs
6	Elective courses	06 hrs
8	Research	06 hrs
9	Clinical Rotation	02 CH
Total Credit Hours		38 Hrs

c. **Semester-Wise break-up of Courses of Credit hours**

First Semester

Core Courses: 12 Credit Hrs (one course X 3 Credit Hrs)

Code	Subject	CHs
MCA-711	Applied Cardiovascular Sciences	03 (3+0)
MCA-712	Cardiac Investigations & Pre-operative Evaluation	03 (1+2)
MCA-713	Monitoring in Cardiac Anaesthesia	03 (1+2)
MCA-714	Principles of Cardiopulmonary Bypass	03 (1+2)

Second Semester

Core Courses: 12 Credit Hrs (one course X 3 Credit Hrs)

Code	Subject	CHs
MCA-721	Practical Conduct of Adult Cardiac Anaesthesia	03 (1+2)
MCA-722	Management of Coronary Heart Surgery	03 (1+2)
MCA-723	Management of Valvular Heart Surgery	03 (1+2)
RMS-724	Research Methodology & Biostatistics	03 (2+1)

Third Semester

Core Courses: 06 Credit Hrs (one course X 3 Credit Hrs)
(Select any two of the following)

Code	Subject	CHs
MCA-701	Cardiac Surgical ICU	03 (1+2)
MCA-702	Basics of Paediatric Cardiac Anaesthesia	03 (1+2)
MCA-703	Paediatric Cardiac ICU	03 (1+2)

Fourth Semester

Credit Hours=08 (Research: 06)

Code	Subject	CHs
MCA-799	Research Work	06
MCA-741	Clinical Rotation	02 (0+2)

9. MS in Human Genetics

a. Introduction

The vision behind this post-graduate program is to produce highly skilled professionals who will be actively engaged in research in the field of human genetics. Pakistan is facing a challenge of ever-increasing burden of genetic disorders due to the high incidence of consanguineous marriages, cancer and other non-communicable diseases. Our graduates will contribute towards mitigating these challenges, by undertaking basic and translational research, using the latest tools and techniques in molecular biology. The faculty members at the Department of Biological Sciences are highly qualified and experienced PhDs with diverse research expertise and background. This set of the highly competent faculty members will provide an educational program in Human Genetics at par with that of any internationally recognized university. The emphasis of this post-graduate program will be problem solving research for the benefit of our patients and the community at large. The program aims to nurture confident individuals who are effective contributors towards the growth of the nation

b. Duration of the Program & Scheme of Study

Degree Offered	MS
Duration	2-3 Years
Total Credit Hours	36 Credit Hours
Course Work	26 Credit Hours
➤ Core Course	➤ 12 Credit Hours
➤ Elective Course	➤ 12 Credit Hours
➤ Seminar	➤ 2 credit hours
MS Research Work	10 Credit Hours

c. Semester wise Distribution of Credit Hours

Year 1	Semester 1 (12 CHs)		
Course code	Course Title	Category	Credits
MBS-711	Current Trends in Research Techniques	Core	3(1+2)
MBS-712	Advances in Cell and Molecular Biology	Core	3(3+0)
GEN-713	Advances in OMICs studies	Core	3(3+0)
	Elective-I	Elective	3
Year-1	Semester 2 (12 CHs)		
GEN-721	Human Molecular Genetics	Core	3(3+0)
	Elective-II	Elective	3
	Elective-III	Elective	3
RMS-724	Research Methodology and Biostatistics	Core	3(2+1)
Year-2	Semester 3 (06 CHs)		
MBS-731	Seminar	Core	2
GEN-799-1	MS Research work		4
Year-2	Semester 4 (06 CHs)		
GEN-799-2	MS Research work		6
	Grand Total		36

d. List of Elective Courses

Ser	Course code	Course Title	Credits
1	BIF-711	Advances in Bioinformatics	3+0
2	MIC-712	Advances in Immunology	3+0
3	GEN-701	Cell Signaling and Signal Transduction	3+0
4	GEN-702	Molecular Bases of Cancer	3+0
5	GEN-703	Human Disease Modeling	3+0
6	GEN-704	Developmental Mechanism of Human Diseases	3+0
7	GEN-705	Human Stem Cell Biology	3+0
8	GEN-706	Evolutionary and Population Genetics	3+0
9	GEN-707	Current Topics in Medical Genetics	3+0

10. MS in Microbiology & Immunology

a. Introduction

The MS program in Microbiology & Immunology will provide exceptional avenues for graduate training at the MS levels in advanced concepts of Microbiology & Immunology.

In line with the diverse expertise of the department faculty, core research areas include bacteriology, virology, environmental microbiology, microbial ecology, microbial physiology, immunology, bacterial and viral-based infectious diseases, antimicrobial resistance, microbiomes and antimicrobials. A particular emphasis is placed on tackling scientific problems with a multi-disciplinary approach.

In this regard, national and international research collaborations with major research groups and industries is the primary focus of the department. Our graduate program will not only provide a strong foundation in microbiology major but also strong scientific background to do research in basic, applied, advanced and emerging areas of the field.

b. Duration of the Program & Scheme of Study

Degree Offered	MS
Duration	2-3 Years
Total Credit Hours	36 Credit Hours
Course Work	26 Credit Hours
➤ Core Course	➤ 12 Credit Hours
➤ Elective Course	➤ 12 Credit Hours
➤ Seminar	➤ 2 credit hours
MS Research Work	10 Credit Hours

c. Semester wise Distribution of Credit Hours

Year 1	Semester 1 (12 CHs)		
Course code	Course Title	Category	Credits
MBS-711	Current Trends in Research Techniques	Core	3(1+2)
MIC-712	Advances in Microbiology	Core	3(3+0)
MIC-713	Advances in Immunology	Core	3(3+0)
	Elective-I	Elective	3
Year-1	Semester 2 (12 CHs)		
MIC-721	Microbial Biotechnology	Core	3(3+0)
	Elective-II	Elective	3
	Elective-III	Elective	3
RMS-724	Research Methodology and Biostatistics	Core	3(2+1)
Year-2	Semester 3 (06 CHs)		
MBS-731	Seminar	Core	2
GEN-799-1	MS Research work		4
Year-2	Semester 4 (06 CHs)		
GEN-799-2	MS Research work		6
	Grand Total		36

d. List of Elective Courses

Ser	Course Code	Credit hours
MIC-701	Advances in Virology	3(3+0)
MIC-702	Advances in Fungal Biotechnology	3(3+0)
MIC-703	Advances in Medical Parasitology	3(3+0)
MIC-704	Antimicrobial Resistance & therapeutics	3(3+0)
MIC-705	Extremophiles	3(3+0)
MIC-706	Immunotherapeutics	3(3+0)
MIC-707	Microbiome	3(3+0)
MIC-708	Probiotics and Synbiotics	3(3+0)
MIC-709	Vaccinology	3(3+0)

11. MS in Biotechnology**a. Introduction**

The vision behind the post-graduate program in Biotechnology is to produce competent Biotechnologists who can employ quality processes and applications, which will profoundly influence the existing paradigm of agricultural, industrial, healthcare, and environmental Biotechnology by providing sustainable competitive edge to the society. The faculty members at the Department of Biological Sciences having obtained Ph.D. and post-Ph.D. experience from various technologically advanced countries of the world possess diverse research and teaching expertise. This diverse skill set of highly competent faculty members will provide Biotechnology Educational Program with impetus to generate quality workforce. The post-graduate program will also create

awareness about the potential of Biotechnology with economical and socio-ethical implications. Moreover, this program is designed to instill the spirit of innovation and creativity in young minds with sound research aptitude. The program aims to nurture confident individuals who are effective contributors to the growth of the nation. This program in our department will not only potentially increase the employability of students, but will also increase the potential of biotechnology-related startups and entrepreneurship Pakistan.

b. Duration of the Program & Scheme of Study

Degree Offered	MS
Duration	2-3 Years
Total Credit Hours	36 Credit Hours
Course Work	26 Credit Hours
➤ Core Course	➤ 12 Credit Hours
➤ Elective Course	➤ 12 Credit Hours
➤ Seminar	➤ 2 credit hours
MS Research Work	10 credit Hours

c. Semester wise Distribution of Credit Hours

Year 1	Semester 1 (12 CHs)		
Course code	Course Title	Category	Credits
BTE-711	Current Trends in Research Techniques	Core	3(1+2)
MBS-712	Advances in Cell and Molecular Biology	Core	3(3+0)
BTE-713	Modern Biotechnology: Principles & Applications	Core	3(3+0)
	Elective-I	Elective	3
Year-1	Semester 2 (12 CHs)		
MBS-721	Advances in Microbial Biotechnology	Core	3(3+0)
	Elective-II	Elective	3
	Elective-III	Elective	3
RMS-724	Research Methodology and Biostatistics	Core	3(2+1)
Year-2	Semester 3 (06 CHs)		
MBS-731	Seminar	Core	2
GEN-799-1	MS Research work		4
Year-2	Semester 4 (06 CHs)		
GEN-799-2	MS Research work		6
	Grand Total		36

d. List of Elective Courses

Course Code	Course Name	Credit hours
EBS-701	Applications of Nano-biotechnology	3+0
BTE-701	Cell and Tissue culture	3+0
BTE-702	Advances in Industrial Biotechnology	3+0
BTE-703	Advances in Health Biotechnology	3+0
BTE-704	Advances in Agriculture Biotechnology	3+0
BTE-705	Advances in Food Biotechnology	3+0
BTE-706	Metabolic Engineering and Synthetic Biology	3+0
GEN-713	Advances in OMIC studies	3+0
MIC-713	Advances in Immunology	3+0

12. MS in Photochemistry and Natural Products

a. Introduction

Our graduate program will provide a new generation of scientists with a solid broad-spectrum background in the disciplines dealing with chemical, biological, phytochemical, and technological aspects of drugs discovery from natural sources. This program aims to train students in the methods used to analyze and characterize medicinal natural products and ethno-pharmaceutical uses of plants from traditional systems of medicines.

b. Duration of the Program & Scheme of Study

Degree Offered	MS
Duration	2-3 Years
Total Credit Hours	36 Credit Hours
Course Work	26 Credit Hours
➤ Core Course	➤ 12 Credit Hours
➤ Elective Course	➤ 12 Credit Hours
➤ Seminar	➤ 2 credit hours
MS Research Work	10 credit Hours

c. Semester wise Distribution of Credit Hours

Year 1	Semester 1 (12 CHs)		
Course code	Course Title	Category	Credits
MBS-711	Current Trends in Research Techniques	Core	3(1+2)
MPC-711	Phytochemistry	Core	3(3+0)
MPC-712	Drug Discovery and Mechanism of Natural Products	Core	3(3+0)
	Elective-I	Elective	3
Year-1	Semester 2 (12 CHs)		
MPC-721	Plant Cell and Molecular Biology	Core	3(3+0)
	Elective-II	Elective	3

	Elective-III	Elective	3
RMS-724	Research Methodology and Biostatistics	Core	3(2+1)
Year-2	Semester 3 (06 CHs)		
MBS-731	Seminar	Core	2
GEN-799-1	MS Research work		4
Year-2	Semester 4 (06 CHs)		
GEN-799-2	MS Research work		6
	Grand Total		36

d. List of Elective Courses

Course Code	Course Name	Credit hours
MPC-701	Metabolic Pathways in Plants	3+0
MPC-702	Applications of Plant Biotechnology	3+0
MPC-703	Clinical Applications of Medicinal Plants	3+0
MPC-704	Advances in Plant Physiology	3+0
MPC-705	Advances in Pharmacognosy	3+0
MPC-706	Formulation of Natural Products and Cosmeceuticals	3+0
MPC-707	Principles of Structures Determination and Analysis	3+0
MPC-708	Advances in Biodiversity of Medicinal Plants	3+0
MPC-709	Pharmaceutical Dosage Forms and Drug Delivery System	3+0

13. Masters in Health Professions Education (MHPE)

a. Introduction

MHPE is a two-year program that aims to develop medical educationists who will help to improve quality of healthcare delivery through improvements in health professions education with an emphasis on Inter Professional Education (IPE).

The program further aims to improve patient care by producing leaders who, via understanding the interrelationship of theory, research and clinical practice, can ensure continuous use of evidence-based insights while making informed decisions in education of all health professions, at national and international levels

b. Scheme of Study

Details	Masters
Program Duration	02 years
Number of Semesters (excluding Summer semester)	04
Course Load per Semester (excluding Summer semester)	09 CH
Core Courses	24 CH
Internship	04 CHs
Remedial (summer semester)	
Thesis / Research	06 CH
Total Credit Hours	34 CH

c. Semester Wise Distribution of Credit Hours

Semester I: 18 weeks (including assessments) Total Credit hours= 09

Code	Core Courses: 03	Credit Hrs.
MHP-711	Theory and Application of Teaching and Learning	03(1+2)
MHP-712	Curriculum Planning & Implementation	03(1+2)
MHP-713	Assessment for Learning	03(1+2)

Semester II: 18 weeks (including assessments) Total Credit hours= 09

Code	Core Courses: 03	Credit Hrs.
MHP-721	Assessment of Learning	03(1+2)
MHP-722	Program Evaluation	03(1+2)
MHP-723	Leadership in Education	03(1+2)

Summer Semester: 09 weeks

SUMMER SEMESTER - REMEDIAL BLOCK
For repetition and improvement of courses

Semester III: 18 weeks (including assessments) Total Credit hours= 10

Course Code	Course Title	Credit Hours
MHP-731	Educational Scholarship of Discovery	03(1+2)
MHP-732	Opportunities & Challenges of Contemporary Medical Education	03(1+2)
MHP-733	Internship	04(0+4)

Semester IV: 18 weeks (including assessments) Total Credit hours= 06

Course Code	Course Title	Credit Hours
MHP-799	Research/Thesis	06

14. POSTGRADUATE DIPLOMA IN CARDIOLOGY (DIP CARD)

a. Aim

The aim of this program is to train medical graduates with professional skills in the clinical fields so that they can apply their acquired expertise at health care system.

b. General Scheme of Studies of Diploma Program.

Semester Duration	18 weeks
Course Duration	2 Year
Number of Regular Semesters	04
Course Load per Semester	09-12 Credit Hours

Core Courses	30 Credit Hours
Internship	06 Credit Hours
Total Credit Hours	36 Credit Hours

c. **Log Book.**

Proper log books of clinical procedures and cases along with written reflections by all students will be maintained with the help of Program Coordinator. The reflections written by the students will be commented and endorsed by the supervisors.

d. **Scheme of study & Courses- (Semester wise Breakdown)**

First Semester: Core Courses: 12 Credit Hours

S. No	Course Code	Course Title	Credit Hours
1.	DPC-711	Cardiac Anatomy/ Physiology	3 (3+0)
2.	DPC-712	Cardiac Pathology/ Pharmacology	3 (3+0)
3.	DPC-713	Introduction to Clinical Cardiology	3 (0+3)
4.	DPC-714	Cardiac Emergencies Management/ ACLS	3 (1+2)

Second Semester: Core Courses: 12 Credit Hours

S. No	Course Code	Course Title	Credit Hours
1	DPC-721	Diseases of Heart	3 (1+2)
2	DPC-722	Diseases of Circulating System	3 (1+2)
3	DPC-723	Pediatric Cardiology	3 (1+2)
	RMS-724	Research Methodology and Biostatistics	3 (2+1)

Third Semester: Core Courses: 08 Credit Hours

S. No	Course Code	Course Title	Credit Hours
1	DPC-731	Investigative Cardiology	3 (1+2)
2	DPC-732	Cardiac Surgery	3 (1+2)
3	DPC-799	Internship	02

Fourth Semester: Core Courses: 04 Credit Hours

S. No	Course Code	Course Title	Credit Hours
1	DPC-799	Internship	04

15. CERTIFICATE IN HEALTH PROFESSION EDUCATION

a. **Duration of Program & Scheme of Studies.**

Duration of Program is 6 months during which 1 x Contact Session of 5 days' duration each will be held, at the beginning of program

b. **Frequency.**

Once a Year

c. **Credits:** 12 Credit Hours

d. **No of Courses:** 04

e. **Description of Course & Scheme of Study.**

The Course will be hybrid, with a face to face and online self-study components. Each course will be of 05 to 06-week duration

Weeks																					
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	5	6
Adult learning-Theory and Application					Curriculum Planning & Evaluation					Evidence-based Teaching and Learning						Assessment for Learning					
Face to Face I																					

f. Overview of Learning and Instruction.

1) One face to face sessions of a 5 days near the start of program

2) Distance Learning

Distance learning will be using Moodle software, customized for the program, will be used by students and faculty for access to learning materials, discussion and assessment of each course.

g. Assessment Plan: Assessment will be continuous, end of course summative and certification exams

Weeks					
1	2	3	4	5	6
Assessment and Weighting in %age					
Face to Face				10	
Discussion Board				10	
Critical Questions/ Quiz				10	
Assignments				15	
End of Course					15
Certifying Exam					40
50% cumulative score of all four courses will be consider certified					200/400

CHAPTER VI

ASSESSMENTS & EXAMINATIONS

1. Introduction

- a. NUMS shall follow semester- based examination system for all postgraduate and non-medical undergraduate academic programs each having two regular semesters in the academic year, Spring semester from January till May and Fall semester from August till December. However, in special circumstances program can be started other than above mentioned time with approval from VC. Each regular semester shall be for 18 weeks' duration (16 weeks of teaching & learning and 2 weeks for examination). There is additional summer semester of 09 weeks with weekly contact hours for a course being double of the regular semester
- b. In the beginning of a semester, the teacher of each course will guide the students about the successful completion of the course requirements.
- c. Minimum 75% (85% for Nursing) attendance in each course is mandatory. In case of deficient attendance, student has to repeat that course. Where required, the course instructor shall report student's absences to the HoD.
- d. Student may opt for deficient/ improvement courses in summer semester or whenever the course is offered. However, in deficient/ improvement courses, the student is required to complete all formalities applicable to repetition of a course, i.e., sessional, mid semester examination, project, assignments, quiz, etc and End Semester Examination
- e. **Taking Alternative Elective/Optional Course.** A student may take an alternative elective for repetition with the approval of Dean or HOD. A student's transcript shall show the grades of both the courses. However, the better grade will be used in the computation of CGPA
- f. **Noncredit courses.** Courses may be taught as non-credit courses as well. The assessment marks of these courses shall not contribute towards CGPA.

2. Policy Guidelines

- a. NUMS considers student assessment as a means of refining its academic programs and to improve student learning and performance.
- b. Multiple assessment methods are necessary to capture all or most aspects of clinical competency and any single method is not sufficient to do the job. Therefore, following assessment tools may be selected by the faculty:
 - 1) For knowledge, concepts, application of knowledge ('Knows' and 'Knows How' of Miller's conceptual pyramid for clinical competence): context-based MCQ, short answer questions and Essay questions
 - 2) For 'Shows How': multi-station OSCE/ OSPE, Long case (observed and structured) and Short case
 - 3) For performance-based assessment ('does'): portfolio or log book
- c. All assessment blue prints shall give clear educational rationale for adopting proposed forms of assessment. However, number of questions may vary from program to program

- d. Assessment tools shall be appropriate and match learning outcome being assessed
- e. Level of difficulty of all questions shall be mentioned as Recall and/or Application
- f. All information regarding scheduling and nature of examinations shall be known to the students in time
- g. The performance of each student in a course will be assessed periodically throughout the semester to check as to how well the students' learning outcomes are being achieved and how effectively are the teaching standards being maintained
- h. Continuous/Internal assessment (60%) and End Semester Examination (40%) shall be cleared separately with minimum 50% marks. However, the cumulative result shall be calculated as per NUMS Grading Policy
- i. These assessments will have different weighting as given below, that contribute towards the overall assessment in percent marks.

Nature of Examination	Weightings	
Quizzes	5%	60 %
Sessional examination	10%	
Mid semester examination	25%	
Practical/Assignments/Presentation	20%	
Final semester examination	40%	40 %
Total	100%	

- j. Ratio of theory and practical will be adjusted as per their credit hours division e.g in case of course 4(3+1), the weightage of practical shall be 25%
- k. **Quizzes/ Sessional tests/ mid-semester examinations:**
 - 1) Assessment tool for quizzes, sessional and mid semester exams shall be decided by the course instructor
 - 2) Quizzes, sessional exams and Mid-Semester examination of each course shall be evaluated by the respective course instructor. Results will be sent to the Controller of Examination through Institutional Examination Cell
 - 3) Whenever a student misses mid-semester examination/ sessional test due to reasons acceptable to the Departmental Board of Studies, make up test may be arranged within the 04 weeks
- l. **Practical/Assignments/Presentation**
 - 1) Practical examination is the responsibility of the course instructor and DBS
 - 2) The course instructor as per the course requirement shall decide assessment tool for practical exams. Proposed assessment tools for different programs are:

For PG Programs (Basic Sciences & Pathology)		
Assessment	40	20%
▪ Critical Appraisal of Article/ Assignment	10	05%
▪ OSPE/ Practical/ Viva/ Assignments/Presentations	30	15%
For Clinical Sciences Programs		
Assessment	40	20%
▪ Portfolio/ Log book	10	05%
▪ OSCE (at least 07 stations)/ Short case/Assignments/Presentations	30	15%

m. Final semester examinations:

- 1) The end semester theory paper of each course shall be prepared and evaluated by the panel of examiners approved by the Controller of Examinations
- 2) There will be no supplementary/ special examination for end semester exam and if a student fails in a course, he/she is required to repeat it
- 3) Whenever a student misses End Semester Examination due to a reason acceptable to the Dean/ HoD provided his/her attendance is not less than the program requirement, he/ she can appear in the examination whenever offered.
- 4) The HoD and Institutional Deputy Controller of Examinations shall supervise and oversee the conduct of examination in the departments

n. Sessional tests/ mid-semester examinations:

The performance of each student in a course will be assessed periodically throughout the semester to check as to how well the students' learning objectives are being achieved and how effectively are the teaching standards being maintained. There shall be two quizzes, two sessional and one mid semester examination in each semester. The respective faculty member of the course shall evaluate mid-Semester examination of each course. Results of mid-semester examinations will be prepared by respective departments and will be sent to the examination cell periodically for final approval of the Principal/Dean.

Whenever a student misses mid-semester examination/ sessional test due to reasons acceptable to the Departmental Examination Committee, provided his attendance is not less than 75%, make up test may be arranged within the 04 weeks.

CHAPTER VII

NUMS GRADING POLICY

1. Grade Point Average

- a. The student's final assessment shall be done by Grade Point Average (GPA).
- b. For calculation of GPA, absolute grading on the scale of 4.00 points shall be used
- c. Following grade calculations are used as per HEC policy for use by all concerned:

S No	Percentage	Grade Points	Grade
1	85 & above	4.00	A
2	84	3.93	A-
3	83	3.86	
4	82	3.80	
5	81	3.73	
6	80	3.66	
7	79	3.60	B+
8	78	3.52	
9	77	3.46	
10	76	3.40	
11	75	3.33	
12	74	3.24	B
13	73	3.16	
14	72	3.08	
15	71	3.00	
16	70	2.88	B-
17	69	2.77	
18	68	2.66	
19	67	2.58	C+
20	66	2.50	
21	65	2.42	
22	64	2.33	

S No	Percentage	Grade Points	Grade
23	63	2.22	C
24	62	2.11	
25	61	2.00	
26	60	1.88	C-
27	59	1.77	
28	58	1.70	
	Below 58	0.00	F

- d. **Computation of GPA/ CGPA and degree award:** GPA is a figure ranging from 0.00 to 4.00 used to indicate the performance of a student in the semester. It is calculated as follows:

$$\text{Semester Grade Point Average (GPA)} = \frac{\text{Sum over all courses in a semester (course credit hrs x grade point earned)}}{\text{Total Semester Credit Hours}}$$

$$\text{Cumulative Grade Point Averages (CGPA)} = \frac{\text{Sum over all courses in all Semester (Courses Crd Hrs x Grade Point Earned)}}{\text{Total Semester Credit Hours}}$$

- e. Minimum qualifying CGPAs for PhD and MPhil/ Master programs shall be 3.00 and 2.50 respectively and for Undergraduate programs shall be 2.00

- 2. Academic Deficiencies.** A student who obtains one or more of the following grades in the semester result shall be considered academically deficient:
- Semester GPA less than 2.00 for PG programs and 1.70 for UG programs
 - Earns CGPA less than 3.00 for PhD, 2.50 for MPhil/Masters programs and 2.00 for UG programs *in any semester other than first semester* or after completion of the coursework
 - 'F' grade in any course
 - 'I' (incomplete) grade in any course.
 - Award of Grade "F".** "F" grade is awarded on the basis of:
 - Academic failure i.e. below 1.70 GPA in any course of PG programs and below 1.00 in any course of UG programs
 - Attendance less than 75% in any course (85% for Nursing programs)
 - Incomplete "I" grade.** An incomplete "I" grade will be awarded by the faculty only in exceptional cases only when where beyond the control of a student such as serious accident, family tragedy, serious health ailment, etc. The grade will be approved by the concerned Dean provided the attendance of a student is not less than 75% (and 85% in case of nursing program). The student will be given a proper grade after examination as per NUMS grading policy without prejudice to the previous grade "I". In case a student fails to make up the required score, s/he will be awarded an "F" grade
- 3. Recommendations for academic deficiencies.**
The cases of academically deficient students shall be discussed in the Departmental Board of Studies meeting and issue one of following recommendations where applicable, as mentioned below:
- Warning - issued to the student by the concerned HOD
 - Probation.
 - Withdrawal.
- For probation and withdrawal, recommendations shall be sent to Controller of Examination NUMS who will notify it in the result.
- 4. Warning.** A PG student should be placed on warning under the following condition at the time of declaration of semester result by Controller of Examination of the University:
- Semester GPA less than 2.00
 - CGPA 2.50-3.00 for PhD and between 2.00 - 2.50 for MPhil/Masters programs
 - Failing in any paper(s)
 - While on warning, a student is to:
 - Contact concerned faculty for guidance.
 - Improve semester work comprising home assignments, laboratory reports, quiz, mid semester and the marks obtained
- 5. Probation.** A PG student should be placed on academic probation under the following conditions:
- CGPA less than 2.00
 - Maximum two probations
 - While on probation, a student is to:
 - Contact concerned faculty for guidance.

- 2) Improve semester work comprising home assignments, laboratory reports, quiz, mid semester and the marks obtained

6. Withdrawal. A student is recommended for withdrawal from the University on the recommendation of Dean/ HOD, by Registrar Directorate NUMS subject to any of the conditions listed below:

- a. Earns four F grades or more in first semester only
- c. Cannot complete his/her degree requirements within the maximum stipulated time, even if s/he utilizes the summer semester.
- d. A student who remains absent for more than 45 days continuously without valid reasons
- e. **Withdraw from a particular course.** Students can withdraw from a particular course with the consent of the concerned dean. Students can withdraw from a maximum of 01 courses in one semester. This should be within four week after the start of classes.
- f. More than two academic probations.
- g. Students with CGPA less than 1.70 in two consecutive semesters of the program even after attending summer semester. However, he will be eligible to seek re-admission if applied for in the next available admission season. Re-admission will be allowed only once on payment of full admission fee
- h. PhD students if fails twice in the comprehensive examination or fails to qualify coursework requirements including comprehensive examination within 03 years.
- i. On consistent unsatisfactory academic performance when reported by the supervisor of the PhD students
- j. A student can seek withdrawal from any program at any stage of his degree on his own request duly recommended by supervisor and for PhD students by Supervisory Committee of the Institute/ College and take readmission within two years from the stage on which withdrawal was taken

Note: *If a student is likely to be withdrawn on academic deficiencies, s/he will be duly warned and counseled.*

7. Repeating Courses

- a. If a student gets 'F' grade, he will be required to repeat the course or its recommended alternate, if any. However, "F" grade obtained earlier will also be recorded on the transcript. A student who fails in a subject, and after repeating fails again the number of F's counted in this case will be one "F" only
- b. It is the student's responsibility to clear the failed / dropped courses, subject to availability of resources at the respective institution and approval of Dean / Associate Dean / HoD

8. Improvement of CGPA. A student may repeat a course, within the maximum permissible duration, to improve his/her CGPA subject to the following provisions:

- a. Course may be repeated/improved in summer semester or when the course is offered.
- b. The student should register for the course(s) to be repeated after formal permission from the respective HoD.
- c. The student shall not be allowed to improve his/her CGPA after completion of the degree.

- d. The terms and conditions of repeat courses shall be the same as per regular courses.
- e. Students may repeat a course with grade "C" & below, however if a PhD student's CGPA is less than 3.00, he/ she may repeat course/s with grade "B-" & below to qualify for comprehensive examination.
- f. A student may repeat up to three (03) courses in the PG program. In such a case, both the course and the grade obtained will be recorded on the transcript, however, only the better grade shall be calculated in the CGPA. In case of CGPA improvement, it would be recorded with (Imp) on the transcript
- g. A student can repeat the course twice if he desires to improve the grade.

9. Indiscipline in examinations

- a. Any candidate found guilty of following matters; his/her case will be submitted to Unfair Means Cases Committee constituted by the University. This committee will be constituted of 02 senior faculty members, Director of student's affairs, headed by senior Professor of the University.
 - 1) Removes a leaf from his/her answer book, the answer book shall be cancelled.
 - 2) Submits forged or fake documents in connection with the examination.
 - 3) Commits impersonation in the examination.
 - 4) Copies from any paper, book or notes.
 - 5) Mutilates the Answer Book.
 - 6) Possesses any kind of material, which may be helpful to his/her in the examination.
 - 7) Does anything that is immoral or illegal in connection with the examination and which may be helpful to him/her in the examination.
 - 8) Refuses to obey the invigilation staff or refuses to follow the instructions issued by the University in connection with the examination.
 - 9) misbehaves or creates any kind of disturbance in or around the examination centre
 - 10) Uses abusive or obscene language on the answer script.
 - 11) Possesses any kind of weapon in or around examination centre.
 - 12) Possesses any kind of electronic device which may be helpful in the examination
- b. His/her case shall result in penalties keeping in view the nature and intensity of offence.
 - 1) Cancellation of paper
 - 2) Suspension from programme for one semester.
 - 3) Heavy and light Fine
 - 4) Expulsion forever from the University.
 - 5) Any other.
- c. All serious cases of indiscipline shall be subjected to enquiry by the Unfair Means Cases Committee will decide that the student will have to appear in summer semester/with regular semester for the cancelled paper provided that nothing

will restrict the inherent powers of the Vice Chancellor to award any suitable punishment in any disciplinary case without reference to the said committee

- d. While dealing in student disciplinary cases, the principles of natural justice shall not be compromised under any circumstances even in the situations where such cases are decided on summary basis.
- e. If a student is not satisfied by the decision of the Unfair Means Cases Committee, s/he can submit his/her appeal within a week after the decision of the Committee to the Vice Chancellor whose decision will be final

10. Rechecking of Examination Script. The answer book of a candidate shall not be re-assessed under any circumstances.

- a. Whereas the re-checking does not mean re-assessment/re-evaluation/re-marking of the answer book. The Controller of Examination can arrange for re-checking of examination script by any faculty member from the relevant discipline on the complaint/request of students. The Controller of Examination or any officer or rechecking committee appointed shall see that:

- 1) There is no computational mistake in the grand total on the title page of the answer book
- 2) The total of various parts of a question has been correctly made at the end of each question
- 3) All totals have been correctly brought forward on the title page of the answer book
- 4) No portion of any answer has been left un-marked
- 5) Total marks in the answer book tally with the marks sheet
- 6) The hand-writing of the candidate tally in the questions/answer book.

- b. The candidate or anybody on his behalf has no right to see or examine the answer books for any purpose
- c. The marks of a candidate could even decrease in light of (a) (iii) above. In the event of reduction of marks, the record shall be corrected accordingly and revised transcript will be issued.

11. Medical Certificate: Medical certificate from a registered medical practitioner duly endorsed by the University Medical Officer is acceptable for the examination purposes

12. Permission of writer for special students:

- a. A visually impaired student may be allowed to attempt examinations on Braille/ computer/ any other specialized means of facilitation.
- b. In case a student is physically handicapped/visually impaired, he may in advance apply to HoD with acceptable proof of disability or impairment at least two weeks before the start of examination, for permission to engage a writer in tests/ examinations. Such student shall be allowed 45 minutes (maximum) extra time for a question paper.
- c. The qualification of the person who acts as writer of a handicapped student must be at least one step lower than that of the student.

13. Damaged/ lost answer script: In an exceptional case where an answer script is damaged, lost or destroyed due to unavoidable circumstances, the student concerned may be given following options:

- a. Average marking shall be awarded to the student in that subject/ course
- b. In case of final examination, if the candidate desires so, s/he shall be given another chance as a special case to take examination in that subject/ course in the next examination and no examination fee shall be charged from the student
- c. In case of internal assessment, if the candidate desires so, s/he shall be given another chance as a special case to take the Make-up assessment in that subject/ course in the same academic session.

14. Medals and awards:

- a. University medals/awards and distinction certificates shall be given to the students in view of their academic performance in various examinations and academic exercises or activities as decided by the Award Committee.
- b. Degrees and medals shall be awarded at the time of “convocation”. The concerned students entitled to such recognitions shall be informed in advance.
- c. The Award Committee shall have powers to recommend to the Vice Chancellor to withdraw or cancel any medal/award or distinction in circumstances of exceptional nature
- d. Positions would be decided on the basis of CGPA. In case two or more students have the same CGPA, the position would be decided on the basis of percentage among those students. No medal and award will be awarded in the case of improving CGPA in semester system.

15. Matters related to Degree/Transcript Award

a. Transcript.

- 1) Examination Directorate may issue two types of transcripts i.e. interim and final.
- 2) Interim transcript shall be issued to such students who have not completed their programs. It will show the grades of all semesters which a student has completed along with GPA/ CGPA. It will show program status as well. In MBBS/BDS, it will show marks/ percentage of all subjects in every professional examination
- 3) Final transcript shall be issued to the students who have completed their degree requirements showing complete academic record of the students along with GPA/ CGPA in semester based programs and show marks/ percentage of all subjects in every professional examination. It will show program status as well with academic honor, if any.
- 4) The final transcript shall at least cover the following information:

Front:

- a) Name of student, father's name, date of birth, registration number/ roll number.
- b) Name of the program.
- c) Date of admission into degree program.
- d) Semester wise break-up with dates.
- e) Subjects detail along with credit hours.
- f) Type of enrollment - full time or part time.

- g) Picture of the applicant be printed on transcript date of completion of degree requirements.
- h) Date of completion of degree requirements.
- i) Mode of study - regular or private or distance learning.
- j) Online result verification key/ID (front side at the end of the transcript).
- k) GPA/CGPA and overall percentage against earned CGPA (at the end of the front side of transcript) for semester based programs.

Back:

- a) Basic Admission Requirement of the Programme
- b) Previous Degree held by the Student along with Institution Name
- c) Credit Hours Exempted/ Transferred if any/ applicable.
- d) CNIC No. for Pakistani and Passport No. for Foreign Students
- e) Grading System must be mentioned on Back Side of the Transcript
- f) Charter Date of the University/ DAI may be mentioned
- g) Name of Campus/ College be mentioned along with HEC Permission Date
- h) Signature of Issuing Officer(s) (Front and Back Side at the end of the Transcript)
- i) The degree/ diploma/ transcript must have the water-mark seal on it.

5) **Duplicate Transcripts.** The students may request for additional or duplicate copies of transcripts on payment of prescribed fee. Each type of transcript shall depict transcripts definition and legend of grades on its reverse side

b. Award of degree.

- 1) Degrees shall be issued against payment of prescribed fee.
- 2) Urgent degree can be issued upon the request of student on payment of special fee, if any.
- 3) Duplicate degree may be issued (with completion of all requirements) to a student in case the original degree is lost/damaged or in case of change in the name of candidate. The duplicate degree shall be signed by the Controller of Examinations only

CHAPTER VIII

GUIDELINES FOR SYNOPSIS & THESIS WRITING

Synopsis writing

1. Introductory

The aim of this compilation is to guide NUMS PhD, MPhil and Masters students in writing research proposal of reasonable quality. The Postgraduate Studies Office is always pleased to provide guidance and support for postgraduate students for completion and timely submission of their synopsis and thesis. Students are expected to be fully aware of their responsibilities to meet all deadlines, formatting requirements and paperwork needed to be done for the completion and submission of their synopsis/ thesis.

2. Synopsis Contents/ Structure

A synopsis is an outline of the proposed research project to be conducted in the University for postgraduate studies. It highlights a clear research question and approaches to solve the problem, its originality and significance.

It should be concise, avoid repetitions and provide sufficient details to be accepted on academic merits. A synopsis should be constructed in a manner that facilitates the supervisory committee to assess the originality of the idea, background information, methodology, outcome and feasibility of the research project. It should be structured in the manner explained hereinafter.

3. Title Page

The title page of a synopsis should include:

- a. title of the research project
- b. name of the student
- c. degree for which synopsis is being written (e.g. MSc, MPhil, PhD etc) name of discipline (e.g. pathology)
- d. name of the supervisor, department, institution, university and supervisory committee members along with their qualifications, designations & place of work

4. Title

The title should be brief, specific and reflect the main objectives of study. It should neither be too short nor too long to exceed fifty words. Superfluous phrases or expressions such as 'an investigation into' must be avoided

5. Project Summary

A project summary describes the proposed research giving a clear idea about the background information, research question and student's intent to explore the key issues. The student should summarize the major components of the research proposal including a background/ rationale of study, short statement of the problem, objectives/ hypothesis of the study, research design, methodology of data analysis and anticipated results and their significance.

6. Keywords

This section is an alphabetically ordered list of the appropriate keywords up to 5-8

that would help to find out the recent literature on the relevant subject in a search engine. The words should be separated by semi-colon (;)

7. Introduction

It gives the background of the project and the rationale for conducting the study. The introduction consists of well-written three paragraphs to efficiently and meaningfully set the context of the proposed research. The first paragraph introduces the main area of research and relevant background in the subject area in precise manner. The problem under study must be relevant to the community and national needs to improve the healthcare system. The second paragraph introduces the project by describing the specific gap in the present knowledge or existing problem in the basic biomedical field/ healthcare system particularly in Pakistan. It should further describe critical analysis of the problem being studied in precise and clear terms based on the review of recent scientific literature. It is important that in this paragraph, the research question for which the proposed investigation aims to find an answer is explicitly formulated. The third which is the final paragraph should highlight the proposed objectives and justification for the conduct of the study. An explanation of its significance should be used as an opportunity to demonstrate that research has not been conducted/ performed before and that the proposed project will really add something new to the existing scientific literature

8. Objectives of the Study

All research projects should have 'SMART' objectives (Specific, Measureable, Achievable, Relevant and Time-bound). They must be consistent with the problem and identify the variables involved in the research. The objectives should be clearly stated and logically presented. Students are advised to resist any temptation to put too many objectives or over-ambitious objectives that cannot be adequately achieved under the protocol. Objectives are written in 'action verbs' 1. to determine 2. to compare.... etc. After statement of the primary objective, secondary objectives may be mentioned.

9. Hypothesis

The researchers formulate a hypothesis as an expectation concerning the relationship between the variables in the research project. Generally, there are two types of hypotheses, null and alternate. The null hypothesis: where the researcher makes a statement of no difference from an expected outcome. In the alternate hypothesis: the researcher makes a statement that a true difference does exist between expected and obtained outcomes. However, it must be kept in mind that descriptive studies do not carry or involve any hypothesis.

10. Significance/ Impact/ Benefits of Study.

It emphasizes on the significance/ importance of the research work/ study; vital contribution of the results of the study and who will benefit from it. Convince the reviewers that the proposed research will make a significant and substantial contribution to increase the knowledge in the particular subject/area /literature. It should be possible in most cases to predict the specific and general benefits for

people and policy-maker on completion of the proposed research.

11. Review of Literature/ Justification for the Research Problem.

Review of literature in a synopsis helps the reviewer in assessing the knowledge of the researcher. It familiarizes the reviewers to the problem under study and the work done by other researchers at local or international level on similar subjects. A comprehensive and upto-date literature review clearly highlights the existing gaps. It assists in identifying various variables in the research project and conceptualizes their relationship. Research methodology of the researcher can be structured and modified after reviewing the literature. It helps the researcher to understand the difficulties faced by others and the corrective steps taken or modifications made by them. The reviewer can assess the work put in by the researcher, assists in the feasibility and justification of the proposed research project to address the national needs. Use of very old references (more than 5 years old) when adding information from literature should be avoided. References must be properly cited in all paragraphs using author/ year format.

12. Research Methodology (plan).

Student should specify what research methodology is chosen to conduct the study and justify the specific approach selected to substantiate the proposed research project. This section should also include the following:

- a) **Setting:** State the place where research work will be undertaken and data will be collected. This may be a hospital and / or its department(s)/ labs or the community or both.
- b) **Study Design:** Mention the name of the appropriate study design which should preferably relate to objectives (qualitative or quantitative research). A single study design or a combination can be selected e.g. cross-sectional study or survey; observational analytical designs; prospective study; experimental designs or clinical or field trials.
- c) **Sample Size:** The sample size should be adequate to apply all relevant tests of statistical significance and has appropriate power. The sample size depends on the study design. The sample size must be justified scientifically as how it was calculated. The parameters used for sample size calculations must be clearly mentioned and referenced.
- d) **Sampling Technique:** The study population can be healthy people, patients or recipients of certain treatment, animal or medical device. There are many methods for sampling like simple random, systemic and stratified sampling, cluster sampling, etc. The sample should be representative of the population and should be reliable. This minimizes sampling errors. Type of sampling employed for each category of subjects under study should be mentioned.
 - (1) **Inclusion criteria**, on what bases will the study subject be inducted in the study? Background variables which are considered for inclusion must be stated. In case of special circumstances, the criteria must clearly state the inclusion strategy.
 - (2) **Exclusion criteria**, on what bases will the study subject be excluded from the study? How the variables mentioned in exclusion criteria are detected?

Exclusion must also be justified as what pushed the researcher to exclude a particular subject from the study.

13. Ethical Approval.

Wherever necessary, Ethical Committee's approval from the institute must be obtained and attached with the synopsis. Ethical approval is required in all human and animal studies. Consent as approved by Institutional Review Board should invariably be used.

14. Analytical Methods/ Data Collection Procedure.

Complete details of data collection procedure should be mentioned. The researcher will have to describe the method of data collection, which may be in the form of a questionnaire(s), interviews, screening procedures, medical examination, laboratory investigations/ experiments/ instruments and quality control to get reliable and valid data. Clinical trials should have the proprietary names, chemical composition, dose and frequency of administration of drugs in the trial protocol.

15. Data/ Statistical Analysis.

Data analysis is an important part of a research project and must mention the statistical package use for data analysis like SPSS. A good analysis leads to good results. The plans for data analysis should be mentioned as follows:

- Type of variables along with analysis plan must be mentioned.
- Type of statistical test in case of analytical studies, corresponding to type of comparing variables, correlation, regression, ANOVA must be mentioned.
- Level of significance for rejecting the null hypothesis must be mentioned (less than 0.05 is significant).
- Computer program/ software used and data sorting method must be mentioned.

16. Collaborating Organizations.

The researchers are encouraged to collaborate with partner(s) within and outside Pakistan. In this regard, the researcher is required to identify complementarity and/ or justify the need for collaboration, clearly identify the part(s) of research that will be carried out in the collaborator's laboratory and include a letter from collaborating partner/ agency expressing willingness to collaborate.

17. Facilities and Budget.

The details of facilities (equipment available for the research project in the host university/ institution and budget estimate for proposed project should be reported as under:

Description	% of time devoted to Project	Year 1	Year 2	Amount (in million Rs.)
Equipment				
Subtotal:				

Reagents/kits				
Subtotal:				
Subtotal:				
Subtotal:				

18. Duration/ Timeline.

The expected duration of research study and why this duration is required (number of patients, hospital tests, data collection and analysis, report writing, etc.). A detailed timetable (Gantt chart) of students' activities on a weekly or monthly basis, outlining targets that he expects to achieve per week or month for the entire duration of the study.

19. References:

References are given in Harvard style i.e. body of the text and take the form of the author's surname followed by the date of the publication, all within parentheses, e.g., (Johnston, 1917). Detail is given in the Appendix E.

20. Official documents required:

All applicants are required to fill in the following forms as related to their study. Blank forms can be downloaded from NUMS' website. e.g. ***synopsis format and forms, etc.***

- Covering letter** (subject: consideration of synopsis)
- Ethical Approval letter** from the concerned Institution Review Board (IRB)
- Informed consent form** Consent form taken must also be attached
- Plagiarism report**

21. Format of Synopsis.

- Language:** English.
- Text:** should be in a single column and black in color.
- Page size:** Page size should be A4.
- Margins:** The left margin should measure 1.5 inches. The right, bottom and top margins should each measure 1 inch.
- Line spacing:** Line spacing, of all text, including bibliographic references, should be 1.5. Figures, tables and their captions should be single-spaced. Line

spacing should be 6 points (before and after) between the paragraphs.

- f. **Font style:** Times New Roman font style should be used.
- g. **Font size:** should be 12 points in main body text. For figures, tables, captions and charts, a font size of 10 points is to be used.
- h. **Headings and sub-headings:** Headings should appear at center of the page, all in capitals, bold 14-point font, sub-headings should be left aligned, all in capitals, bold and 12-point font.
- i. **Page numbering:** Page numbers should be placed at the center bottom of the page. Page numbers must be in the same font and font size as your text. Except for the title page, page numbers must be placed on each page of the synopsis. All pages of the synopsis should be numbered consecutively in Arabic numerals (1, 2, 3...).

SYNOPSIS

Title:

Dr.

PhD Trainee in -----

(Registration No. -----)



Academic Supervisor

Department of -----

Institute -----

National University of Medical Sciences (NUMS)
Rawalpindi



Title of Research Project:	
Synopsis submitted for: <input type="checkbox"/> Master <input type="checkbox"/> MPhil <input type="checkbox"/> PhD	Discipline: Pathology (Chemical Pathology)
Name of the Applicant: Dr. -----	Qualifications (list all; with date)
Date of Enrollment: —	Registration No. —
<u>Supervisor</u> Signature: _____ Name: _____ Qualification: _____ Designation: _____	
Address: Department of Chemical Pathology & Endocrinology, AFIP/AFPGMI Rawalpindi.	
Phone No: 03-----	Email: @yahoo.com
Head of Department Signature: _____ Name: _____	

References

References are given in Harvard style i.e. body of the text and take the form of the author's surname followed by the date of the publication, all within parentheses, e.g., (Johnston, 1917).

References book. The standard reference format for a book is: author(s) or editor(s) surname (s)/ and the initial(s) of their first name(s), year of publication, title of book (italicised), book edition (where the book is beyond the 1st edition), place of publication, publisher, page numbers you have taken information from (in case of a direct quote or a diagram, picture, etc.). Examples are given below:

Material Type	In-text Example	Reference List Example
Book: Single author	Costanzo (2006) wrote that... OR (Costanzo, 2006).	Costanzo L. (2006). Physiology, Philadelphia: Saunders Elsevier.
Book: 2 authors	Pears & Shields (2008) OR (Pears & Shields, 2008).	Pears, R. and Shields, G. (2008). Cite them right: The essential referencing guide, 3rd ed. New York: Springer Publishing Co.
Book: 3 authors	Simon, Lipman and Jacox (2002) OR (Simon, Lipman and Jacox, 2002)	Simon, L.S., Lipman, A.G. and Jacox, A.K. (2002). Pain in Osteoarthritis, Rheumatoid Arthritis and Juvenile Chronic Arthritis, 2nd ed. Glenview, IL: American Pain Society.
Book: more than 3 authors	(Darlow et al., 2013).	Darlow, B., Dowell, A., Baxter, G.D., Mathieson, F., Perry, M. and Dean, S, (2013). 'The enduring impact of what clinicians say to people with low back pain', Annals of Family Medicine, 11 (6), pp.527-534.
Book: no author	Black's medical (1979).	Black's medical dictionary, (1979). 32nd ed. London: A. & C. Black.
Book: editor	(Galanter, 2001).	Galanter, M. (ed.) (2001). Services Research in the Era of Managed Care, New York: Kluwer Academic/Plenum.
Book: 2 or more editors	(Patrick & Scambler, 1986).	Patrick, D. & Scambler, G. (eds.) 1986. Sociology as applied to medicine, London: Balliere Tindall.
Book: chapter or article in an	Bergeron and Lowe (2003) stated	Bergeron, C. and Lowe, J. (2003). Frontotemporal degeneration:

edited book	that...	introduction. In: Dickson, D.W. (ed.) <i>Neurodegeneration: The Molecular Pathology of Dementia and Movement Disorders</i> , Switzerland: Neuropath Press, pp.342-348.
eBook	Veletsianos (2010) stated that.....	Veletsianos, G. (2010). <i>Emerging technologies in medical education</i> , London: Routledge. Retrieved from: eBrary database. [Accessed 29 September 2015].
eBook: chapter in an eBook	(Resnick, 2001). stated that. ...	Resnick, N.M. (2001). Geriatric medicine. In: Braunwald, E., A.S. and Isselbacher, K.J. (eds.) <i>Harrison's Online</i> . Based on: Braunwald, E., Hauser, S.L., Fauci, A.S., Kasper, D.L., Longon, D.L. and Jameson, J.L. (eds.) <i>Harrison's Principles of Internal Medicine</i> . New York: McGraw-Hill. Retrieved from: http://www.hslls.pitt.edu/resources/documentation/harrisonsinfo.html . [Accessed 6 December 2015]. from: eBrary database. [Accessed 29 September 2015].
eBook: chapter in an eBook	(Resnick, 2001).	Resnick, N.M. (2001). Geriatric medicine. In: Braunwald, E., A.S. and Isselbacher, K.J. (eds.) <i>Harrison's Online</i> . Based on: Braunwald, E., Hauser, S.L., Fauci, A.S., Kasper, D.L., Longon, D.L. and Jameson, J.L. (eds.) <i>Harrison's Principles of Internal Medicine</i> . New York: McGraw-Hill. Retrieved from: http://www.hslls.pitt.edu/resources/documentation/harrisonsinfo.html . [Accessed 6 December 2015].

References from journals' articles. use last name followed by authors' first name initials. Write the year of publication (in parentheses), title of article, name of journal (in italics, capitalise the first letter of each word). Mention volume of journal and issue (in parentheses). Write pages of articles at the end with hyphen in between the first and last page of article. Examples are as under:

Material Type	In-Text Example	Reference List Example
Journal article: print	(Henderson, 2005) (Arrami & Garner, 2008) (Nowotny et al., 2015)	Henderson, J. (2005). Google Scholar: A source for clinicians? <i>Canadian Medical Association Journal</i> , 172 (12) 1549-1550. Arrami, M. & Garner, H. (2008). A tale of two citations. <i>Nature</i> , 451 (7177) 397-399. Nowotny, K., Jung, T. and Grune, T. (2015). Advanced glycation end products and oxidative stress in type 2 diabetes mellitus. <i>Biomolecules</i> , 5 (1) 194-222.
Journal article: electronic database	(Castell, 2008)	Castell, F. (2008). Professionalism in nursing practice. <i>Nursing Journal</i> , 12(9) 13-17. Retrieved from CINAHL. [Accessed 13 October 2015].
Journal article: online only journal (volume & issue number available)	(Koopman, 2001)	Koopman, W. J. (2001). Prospects for autoimmune disease: Research advances in rheumatoid arthritis. <i>JAMA: Journal of the American Medical Association</i> , 285(5) 648-650. Retrieved from: http://jama.ama-assn.org/ [Accessed 13 October 2015].
Journal article: Digital Object Identifier (DOI)	(Strachan et al., 2008)	Strachan, M.W., Price, J.F. & Frier, B.M. (2008). Diabetes, cognitive impairment, and dementia. <i>BMJ</i> , 336 (7634) 6. doi: 10.1136/bmj. [Accessed 10 November 2016].
Website	World Health Organization, (2010)	World Health Organization. (2010). Tuberculosis. http://www.who.int/mediacentre/factsheets/fs104/en/ [Accessed 14 February 2012].
Dissertations and Theses	(Khan, 2016)	Khan, N.A. (2016). <i>Mechanisms of Antibiotic Resistance</i> . PhD thesis, National University of Medical Sciences.
Conference proceedings/abstracts		Khuri, F.R., Lee, J.J. and Lippman, S.M.(2003). Effects on head and neck cancer tumors. In: Proceedings from the American Society of Clinical Oncology; May 30-31; Chicago, IL. Abstract 359.

THESIS GUIDELINES

1. General Guidelines.

The objective of a thesis is to produce quality research work which should be creative and innovative. The guidelines given hereinafter for preparation of MPhil thesis and PhD dissertation of reasonable quality which are binding on all NUMS' enrolled postgraduate students. Thesis/ dissertation is a product of your hard work and original research which will become a part of records in several libraries (Department, University/ Institute, HEC etc.).

2. Format of Thesis/ Dissertation.

a. **Language:** English

b. **Word Count**

1) PhD - Minimum 35000 words.

2) MPhil/ Masters - Minimum 20000 words

3) Bibliography, appendices, acknowledgements page, table of contents and title page will not be included in the overall word count.

c. **Text:** should be in a single column and black in color

d. **Page Size:** Page size should be A4 to be used as guided below:

1) **Margins:** The left margin should measure 1.5 inches and the right, bottom and top margins should each measure 1 inch.

2) **Line Spacing:** Line spacing of all text including bibliographic references, should be 1.5. Long quotations, headings and captions should be single-spaced. Multi-lined subdivision headings, figures and table captions, footnotes and endnotes should all be single-spaced. Line spacing should be 6 points (before and after) between the paragraphs.

3) **Font Style and Size:** 'Times New Roman' font style should be used. All text, page numbers, table numbers, figure numbers, captions, references, and footnotes must be in Times New Roman style. Font size should be 12 points in main body text and type on one side of the page. For figures, tables, captions, charts, graphs and footnotes, a font size of 10 points is to be used.

4) **Major headings and sub-headings:**

a) **Major headings:** Chapter titles are considered major headings. A major heading should appear at the center of the page, all in capitals, bold 16 points font, preceded by 'Chapter number'. Begin new chapters on a fresh page.

b) **Sub-headings**

(1) **First-order sub-heading:** First-order sub-headings should be left aligned, bold and 14 points font. A mix of upper and lower case letters are used.

(2) **Second and third-order sub-headings:** Second and third order sub-headings should be left aligned, bold and 12 points font. A mix of upper and lower case letters are used.

3. Figures/ Tables/ Charts and Graphs.

Figures, tables, charts and graphs may be presented horizontally or vertically and must fit within the required margins. They should be placed adjacent to the related text (i.e., usually either on the same page or the page immediately following). Labels or symbols are preferred rather than colors for identifying lines on a graph. Colored graphs and pictures can be used as per need. Tables and figures should be numbered consecutively within individual chapters; one sequence for tables (e.g., Table 1.1; Table 1.2; etc.), and a separate sequence for figures (e.g., Figure 1.1; Figure 1.2; etc.). Captions must be as concise as possible. Numbers and captions should appear at the bottom of the figure and top of the table. Single-space line spacing is used for tables, figures and captions. Refer to figures/ tables within the main text as table 1.2, figure 2.3, etc. The top of tables/ figures should align to the left of the page.

4. Page Numbering.

Page numbers should be placed at the center bottom of the page. Page numbers must be in the same font and font size as your text. Except for the title page and cover pages, page numbers must be placed on each page of the thesis. Page numbers for the preliminary pages (e.g. dedications, abstract, acknowledgements, tables of contents, abbreviations and preface) should be numbered consecutively in lower case Roman numerals (i, ii, iii...). All pages starting from introduction to the end of the thesis should be numbered consecutively in Arabic numerals (1, 2, 3...).

5. Binding/ Submission Procedure.

- a. **Electronic format:** All students need to submit an electronic version (PDF) of their thesis or dissertation to the office of the Postgraduate Studies in NUMS' Secretariat. Electronic versions will be checked for structure/ format. They will also be checked with 'Turnitin' for plagiarism before approval.
- b. **Binding of soft bound thesis:** The students will prepare soft bound copies (either spiral or gum-bound) of their thesis for examination. Copies must be printed on one side of white, acid-free A4 paper. All PhD/ MPhil/ Master enrolled students need to make 5 soft bound copies (1 for the University, 1 Supervisor and 3 for Internal /External examiners). The copies must be submitted to the postgraduate studies office of NUMS as aforesaid alongwith the submission form.
- c. **Binding of hard bound thesis:** Five permanent/hard bound copies of thesis will be submitted after successful defense of the thesis (1 for University library, 1 for Exam Branch, 1 for the supervisor, 1 student own copy and 1 for HEC).
- d. **Front cover should bear:** Full title of the thesis, name of the candidate and the name of the Institute/ Department/ Centre/ College through which submitted, in the same order from top to bottom. The lettering may be in boldface and properly spaced. Their font sizes should be: title 24 points, name of the candidate 18 points and the name of the department/ institute/ college/ university 18 points.
- e. **Spine of the thesis** should show 'M. Phil / PhD thesis' on top across the width of

spine, name of the candidate in the middle and the year of submission across the width at the bottom.

- f. **The color of binding:** The colour of hard bound cover shall be dark brown.
- g. **Published work:** Published work from the thesis has to be included as appendix (reprints/ proof/ preprint).

6. Structure of Thesis/ Dissertation.

The main structure of thesis/ dissertation should contain the following:

- a. Title Page
- b. Approval Certificate
- c. Dedication (optional)
- d. Abstract
- e. Acknowledgements (optional)
- f. Table of Contents
- g. List of Tables
- h. List of Figures
- i. List of Abbreviations
- j. Introduction
- k. Literature Review
- l. Materials and methods
- m. Results/ findings
- n. Discussion
- o. Conclusions
- p. References (Harvard style)
- q. Appendices

Title Page (Font 20, Regular)

Topic:



NUMS
NATIONAL UNIVERSITY
OF MEDICAL SCIENCES

By

Dr. _____

(Registration No. _____)

Department of -----

Institute -----

National University of Medical Sciences, Rawalpindi
Month Year

Thesis 2nd Page (Font 20, Regular)

Topic: _____

By

Dr. _____

(Registration No. _____)

A thesis submitted in partial fulfillment of the requirement for the degree of

Master of Philosophy

In

Chemical Pathology

Academic Supervisor

Department of -----

Institute -----

National University of Medical Sciences (NUMS)

Rawalpindi

APPROVAL CERTIFICATE

It is hereby certified that the thesis titled 'Effects of Delta-tocotrienol Supplementation in Nonalcoholic Fatty Liver Disease' submitted by Dr. _____ is accepted in its present form, by the Department of Chemical Pathology & Endocrinology, Armed Forces Institute of Pathology, National University of Medical Sciences, Rawalpindi. The thesis is satisfactory and fulfills the requirements for the award of degree of Master of Philosophy in Chemical Pathology.

1. Supervisor _____

2. Internal Examiner _____

3. External Examiner _____

4. External Examiner _____

Date: _____

DEDICATION (Optional)

To my amazing (children/ siblings, etc.), (names), wise beyond their years

and

To my beloved (family/ parents, husband, etc.) (name, infinitely supportive)

(You can always choose your own wordings this is only a format to be followed for uniformity of all thesis/ dissertation under NUMS).

Begin printing page numbers here, using lower case Roman numerals and continue consecutive Roman numeral numbering throughout the preliminary pages.

ABSTRACT

An abstract is a short summary of a longer work. The abstract concisely reports the aims and outcomes of your research so that readers know exactly about the research. The abstract should be structured and consists of introduction, objectives, methods including study design, sampling, data collection, major results and the conclusions. The final sentences explain the major implications of the work. The abstract should be single spaced. The abstract page is not numbered. Abstracts should not have any citations. A good abstract is concise, readable and quantitative. Length should be limited to a maximum of 1-2 pages.

ACKNOWLEDGEMENT

In the name of Allah, the most Gracious, the most Merciful.

I am extremely thankful to Almighty 'Allah' Who is the entire source of knowledge and wisdom endowed to mankind, for providing me with the acumen and vision to complete this endeavor.

I would like to express my profound gratitude to my supervisor (name) for his wise counsel and encouraging attitude towards this study. I am extremely grateful to him for immensely facilitating me during my study period by ensuring the provision of favorable circumstances and conducive environment. This project would not have been possible without his support and expert guidance.

In the end, I would like to extend my deepest gratitude to my family members. Without their encouragement, I would not have been able to complete this endeavor. (You can always choose your own wordings; this is only a format/ sample to be followed for uniformity of all thesis/ dissertation under NUMS)

Dr. _____

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ACC	Acyl CoA-Carboxylase
AFIP	Armed Forces Institute of Pathology
AGEs	Advanced Glycation End Products
BMI	Body Mass Index
DNL	de novo hepatic lipogenesis
ETC	Electron Transport Chain
FDA	Food and Drug Administration

(Centered, 16 Bold, Upper-case, all Major Headings)

CHAPTER-1 INTRODUCTION (Centered, 16 Bold)

1.1 Objectives (left aligned, 14 bold)

Main body text (Justified, 12 points)

1.2 Hypothesis (left aligned, 14 bold)

CHAPTER-2 REVIEW OF LITERATURE (Centered, 16 Bold)

2.1 Prevalence

2.1.1 Pathogenesis (left aligned, 14 bold)

2.1.1.1 Evolution of Hypotheses (left aligned, 12 bold)

CHAPTER-3 MATERIAL AND METHODS (Centered, 16 Bold)

3.1 Setting (Left aligned, 14 bold)

3.2 Study design (Left aligned, 14 bold)

CHAPTER-4 RESULTS (Centered, 16 Bold)

4.1 Demographic and Baseline Characteristics (Left aligned, 14 Bold)

4.2 Results-----

CHAPTER-5 DISCUSSION (Centered, 16 Bold)

5.1 Discussion

5.2 Conclusions (Left aligned, 14 Bold)

5.3 Future Study (Left aligned, 14 Bold)

References: References are given in Harvard style i.e. body of the text and take the form of the author's surname followed by the date of the publication, all within parentheses, e.g., (Johnston, 1917). Detail is given in the Appendix E.

CHAPTER XI

STUDENTS AFFAIRS

1. Attendance.

Every postgraduate student will be required to attend at least 75% of the lectures, seminars, practical and clinical classes of each subject in each class failing which his name will not be forwarded to the Controller of Examinations for the purpose of appearing in the concerned examination

2. Leave.

For more than three days, a student may directly or through his/her parents or guardian send a written application to the Head of the Institution reporting cause of absence. Sick leave will be granted only on production of a medical certificate from an authorized medical officer appointed by the Head of the Institution. In all cases, leave taken will be at the student's own risk as far as the percentage of attendance is concerned and even the medical certificate will not condone a deficiency in attendance. A student, who is absent without leave continuously for a period of four weeks, will be struck off the university roll.

3. Correspondence.

The students are forbidden to address any member or person in authority directly. Joint applications are entirely prohibited and will not receive attention. Any student wishing to make a representation on any subject has the right of direct access to the head of the institution during the college hours.

4. Etiquettes and Conduct Norms.

- a. Students are expected to extend highest level of courtesy and respect towards their teachers. Any student misbehaving in the classroom shall at once be reported by the teacher to the Head of the College/ Institution for disciplinary action.
- b. No student is allowed to leave the lecture room without prior permission of his teacher or until the class is dismissed. Every student is required to be punctual according to the schedule notified for clinical teaching and ward duty.
- c. Students attending hospitals are required to abide by the hospital rules and while in the hospital, they are under the head of the concerned medical/dental institution for all disciplinary purpose.

5. Social Media Use.

Students are expected to use social media responsibly and be aware of the unexpected and long-term consequences of its irresponsible use. No derogatory/negative discussions about the country, NUMS, or army should be discussed on social media. At campus, use of social media should be restricted to academic purposes only.

6. Student Welfare Services.

A range of services is available to support students during their studies at NUMS. NUMS strives to create a student support system, where every student will be taken care of in terms of personal, emotional, social or in academic terms. Course Coordinator will help you to assist in academic, personal, financial and extra-curricular domains.

7. Student Engagement.

Students shall be required to actively participate in various co-curricular activities for personal and professional grooming

8. Conflict of interest.

Faculty and other Staff with a close personal or familial relationship with a student or a student's family should not be involved in decisions about that student's admission, supervision or academic progress, or the award of any studentships, prizes or other grants to the student.

9. Disciplinary matters.

The disciplinary matters shall be investigated as per Disciplinary policy issued by Registrar Directorate

10. Academic Integrity and Plagiarism.

Referred to NUMS Plagiarism policy available on NUMS website

11. NUMS Grievances Policy

- a. The Grievance Policy applies principally to employees including faculty and staff and students of NUMS. However, any member of the NUMS community, including but not limited to students, employees, and alumni, has a right to express a grievance. This policy also applies to those who interact with the NUMS or its affiliated programs
- b. This policy applies to all university-related activities both on and off campus and applies to all individuals involved in these activities, as well as to the conduct by or directed toward third parties, which are not themselves employees or students of NUMS.
- c. It covers individual grievance of specific nature raised individually by the concerned stakeholder only and not the grievances of general applicability or of collective nature or raised collectively by more than one stake holder.
- d. This procedure does not apply to complaints, grievances or appeals where other policies or procedures are in place like sexual harassment, dismissal or disciplinary action; or where the grievance relates to matters that are already being considered pursuant to another policy or procedure.
- e. Academic matter shall be dealt with as per HEC/ PMC policy
- f. Referred to NUMS Student Grievances Policy available at Registrar Directorate

12. Scholarship policy.

Referred to HEC need based scholarship policy and NUMS scholarship policy

13. Regulations Relating to Expulsion.

- a. The punishment of expulsion whenever imposed on a student mean a loss of a specific duration of studies as determined by the authority concerned and will mean his being debarred from the university examination during the period of his/her expulsion.
- b. A student expelled from the university will not be readmitted before the expiry of the period of his expulsion.
- c. All cases of expulsion should be reported to the Academics Directorate by the concerned College/ Institution concerned for registration and notification.

Annex-A**Postgraduate (PG) Forms**

S. No	Form No	Title
i.	PG-01	Post-graduation Registration Form
ii.	PG-02	Migration/Transfer of Credit Application Form
iii.	PG-03	Request for Freezing of Semester
iv.	PG-04	Appointment of Supervisor/Co- Supervisor
v.	PG-05	Willingness of the Supervisor/Co-Supervisor
vi.	PG-06	Appointment of Supervisory Committee
vii.	PG-07	Petition for Change in Supervisory Committee
viii.	PG-08	Semester Assessment/Examination Results
ix.	PG-09	Improvement/Repeat Course Form
x.	PG-10	Bi-annual Progress Report
xi.	PG-11	Report of Qualifying Examination Comprehensive Exam
xii.	PG-12	Synopsis Submission Form
xiii.	PG-13	Institutional Review Board Approval Letter
xiv.	PG-14	Schedule for Synopsis Presentation
xv.	PG-15	Synopsis Evaluation Request
xvi.	PG-16	Synopsis Evaluation Report
xvii.	PG-17 (a)	Synopsis Approval/ Qualifying Examination (B) Report
xviii.	PG-17 (b)	Change of Synopsis Title/ Project
xix.	PG-18	Publication Record
xx.	PG-19	Thesis/Dissertation Submission/ Verification
xxi.	PG-20	Acknowledgement Receipt of Thesis/ Dissertation
xxii.	PG-21 (a)	Thesis Evaluation Request for Master programs
xxiii.	PG-21 (b)	Dissertation Evaluation Request for PhD programs
xxiv.	PG-22	Thesis/Dissertation Evaluation Report
xxv.	PG-23	Dissertation Foreign Evaluation Report
xxvi.	PG-24 (a)	Schedule for Thesis/Dissertation Presentation
xxvii.	PG-24 (b)	Abstract Submission
xxviii.	PG-25	Final Thesis/Dissertation Grading Report
xxix.	PG-26	Final Thesis/Dissertation Approval Report
xxx.	PG-27	Check List for Approval of Degree

ANNEX-PG-01

POSTGRADUATION REGISTRATION FORM

1. Name_____ 2. Father's Name_____
3. Date of Birth_____ 4. Gender_____
5. Nationality_____ 6. District of Domicile_____
7. CNIC Number_____ 8. PM&DC Registration No_____
9. Mailing Address_____
10. Telephone/Mobile Number_____ 11. Email address_____

12. Academic Data/ Qualification

	School/ College/ University	From	To	Division GPA/ Grade	Marks obtained (%)	Major subjects taken
• Matric • O'Level/ Other						
• F.A./ F.Sc. • A'Level/ Other						
• MBBS/ BDS • BS/ Other						
• MPhil/ MSc/ • Equivalent						

Department: _____ College/Institute: _____

Program: Diploma _____ MSc/ MPH _____ MPhil _____ PhD _____

CERTIFICATE BY THE APPLICANT

I, hereby, solemnly declare that the information provided and statements made by me in this form are true and correct to the best of my knowledge and belief. I fully understand that any false statement of mine shall render me liable for termination from the college/institute/program.

Date: _____ Student Signature: _____

Head of Department: _____ Head of Institute/ Dean: _____

Date: _____ Date: _____

FOR REGISTRAR OFFICE USE ONLY**Registration No. issued** _____**Checked by****Registrar**

Signature: _____

Signature: _____

Name: _____

Name: _____

Date: _____

Date: _____

INSTRUCTIONS

1. Attach Following:
 - a) Two 1" x 1" size photographs of the candidate with sky blue background attested on the back
 - b) Photocopies of the certificates of Matric/ Intermediate or equivalent (including equivalence certificates)
 - c) Photocopy of Entry Test result of NUMS/ NTS/ GAT
 - d) Original NOC to be attached, if migrating from other Board/ University/ Institution
 - e) Photocopy of Passport/ (_____)
 - f) Photocopy of CNIC/Form 'B'
2. The Principal/ Dean of all Colleges/ Institutions shall submit the Registration Form along with attested copies of Academic Record and Registration Fee at prescribed rates to the Registrar within 20 days of admission
3. The form, photocopies of Academic record and Photographs must be attested by the Principal/ Dean or applicant's duly authorised nominee
4. In case of a student migrating from any other University/ Board, Migration Certificate/ NOC in original should also be submitted
5. If any student is struck off from the rolls of a College/ Institution/ Department, migrates/ shifts to another College/ Institution/ Department, rusticated or expelled or is readmitted, such facts shall be reported to the Registrar within seven days
6. In case of a student already registered with University, getting admission to another course at the same/ another College/ Institution/ Department, the Principal/ Dean/ Head of the College/ Institution/ Department shall forward a fresh registration form dully filled from all respects quoting the registration number of such student along with the prescribed registration fee for the course.

Distribution:

- 1 x copy to be maintained in the concerned Institute, Registrar Office/ Academics Directorate & Controller of Examinations.

ANNEX-PG-02

APPLICATION FORM FOR MIGRATION/ TRANSFER OF CREDIT HOURS

1. Name: _____ 2. Registration No: _____
 3. Date of Birth (dd/ mm/ yyyy): _____ 4. Gender: _____
 5. Nationality: _____ 6. District of Domicile: _____
 7. CNIC Number: _____ 8. PM&DC Registration No: _____
 9. Mailing Address (mention all relevant information like H. No., St No., Sector, etc.): _____

10. Telephone/ Mobile Number: _____ 11. Email address: _____

12. Academic Data/Qualification

	Name and Location of School/ College/ University	From	To	Division GPA/ Grade	Marks obtained (In%)	Major subjects taken
• Matric • O'Level/ Other						
• F.A./F.Sc. • A'Level/ Other						
• MBBS/ BDS • BS/ Other						
• MPhil/ MSc/ • Equivalent						

Academic Achievements

Distinctions, awards paper published and other recognitions of academic achievements (please indicate the basis of selection and date of each listing).

13. Current Academic Program

Program (currently studying):

Institution/ university: _____ Entry date: _____

Semesters completed: _____ Credits earned: _____ CGPA: _____

14. Reason of Transfer

(Be specific and to the point. Clearly indicate changes in circumstances, which render it difficult for you to continue education in your present institution)

15. **Undertaking:** I have read the details given in application form for Transfer of Students. I, hereby, apply for admission to the MPhil/ PhD Program at NUMS as a Transfer student and certify that, to the best of my knowledge, all the above statements are complete and correct. I also declare that I have never been involved in any illegal activity. I understand that any

attempt to influence the admission process or providing false or incomplete information would result in my disqualification or dismissal from the program at any stage.

Date: _____

Applicant's Signature: _____

16. (TO BE FILLED BY CONCERNED NUMS' COLLEGE / INSTITUTE)

Details of Accepted Courses / Credits Course Code

Course Code	Course Title	Credits	Grade

Details of Deficient Courses

Course Code	Course Title	Credits	Grade

The case for migration from above mentioned institution to our College/ School/ Institute has been critically examined by faculty and it is recommended that Migration/ transfer of credits of student be accepted to join _____ semester with _____ credit hours _____ of course work.

Recommended/ Not Recommended

Dated: _____

Signature of Head of Department: _____

Approved/ Not Approved

Dated: _____

Signature Head of Institute/ Dean: _____

Please attach the following documents with the migration form:

- Official transcript of semesters studied at Parent University.
- Photocopy of mark sheets of Matric and FSc/ equivalent examinations (equivalence certificates from IBCC, Pakistan in case of O/ A level/ equivalent exams).
- Detailed courses outline of courses already studied.
- No Objection Certificate (NOC) from Parent University.
- Character certificate
- Bank Draft amounting to Rs. 5000/- (Rupees five thousand) in favour of NUMS as processing fee (non-refundable).

Distribution:

- 1 x copy to be maintained in the concerned Institute, Registrar Office/ Academics Directorate & Controller of Examinations.

ANNEX-PG-03

REQUEST FOR FREEZING OF SEMESTER (PhD & Master Programs)

Name: _____ Registration No: _____
 Department: _____ Institute: _____
 Cell No: _____ E-mail: _____
 Freezing Requested for: Semester _____ Date _____
 Will rejoin: Semester _____ Date _____
 Reasons for freezing (Tick (✓))
 a. Domestic / Personal b. Medical Reason
 c. any other reason: _____
 Present Postal Address _____
 Date _____ Student's Signature _____

1. Previous record of freezing _____
2. Copy of Fee Challan attached Amounting to Rs. _____
3. Remarks of Head of Department _____

Date: _____ Signature of Head of Department: _____

Recommendation of Dean/ Head of Institute

Recommended/ Not Recommended

Date: _____ Signature: _____
Dean/ Head of Institute

(For Registrar Office use only)

1. Freezing semester: _____
2. Will rejoin: Date _____ Semester _____

Approved/ Not Approved

Date: _____ Registrar: _____

Notes: Freezing period will be counted toward overall allowed duration for completion of PG program.

- a) Applicant will be charged registration fee @ of 25% of tuition fee per month for the freezing period.
- b) Copy of approved form will be sent to Registrar/Academics Directorate & Controller of Examinations.

ANNEX-PG-04

**APPOINTMENT OF SUPERVISOR/ CO-SUPERVISOR
(PhD & Master Programs)**

Professor _____

Department _____

Dear Sir/ Madam,

The Head of Department of _____, (College/ Institute) _____ is pleased to appoint you as the Supervisor/Co-Supervisor for the following Student:

Student's Name: _____

Registration No: _____

Program/ Subject: _____

During the period of research work, you are requested to supervise the course work, synopsis, thesis defense and to send us the progress report on the prescribed form. You will also be required to be present at the time of thesis defense. Kindly send us your acceptance in writing or through an email _____ (signed scanned copy), so that we may formally intimate your name to the Academics Directorate, NUMS.

I hope the student will greatly benefit from your valuable experience towards completing his/ her degree in time.

Date: _____

(Head of Department)**Countersigned**

Date: _____

Dean/ Head of Institute**Distribution:**

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-05

**WILLINGNESS OF THE SUPERVISOR/ CO-SUPERVISOR
(PhD & Master Programs)**

Professor (HoD) _____

Department _____

Dear Sir/ Madam,

I am willing to supervise (Mr./ Ms.) _____ Registration
No. _____ throughout the enrolled degree program _____

I will facilitate the student in all steps of his/ her degree program including completion of his/ her
research work in time and will intimate any change in supervisor-ship during the enrolled program.

Date: _____

(Supervisor/Co-supervisor)**Distribution:**

- 1 x copy to be maintained in the concerned Institute, Registrar Office/ Academics Directorate & Controller of Examinations.

**PHD SUPERVISORY COMMITTEE (SC)
(PhD Programs)****ANNEX-PG-06 (a)**

Name: _____ Registration No: _____
Department: _____ Institution: _____
Subject: _____ Date of Admission: _____
Contact No: _____ Email: _____
Date: _____ Student's Signature: _____

Supervisory Committee Members

1. Supervisor: _____ Signature: _____

Qualification/ Dept./ Institute: _____

2. Internal member: _____ Signature: _____

Qualification/ Dept./ Institute: _____

3. External member: _____ Signature: _____

Qualification/ Dept./ Institute: _____

4. External member: _____ Signature: _____

Qualification/ Dept./ Institute: _____

5. Co-Supervisor (if any): _____ Signature: _____

6. Qualification/ Dept./ Institute: _____

Recommended/ Not Recommended

Dated: _____ Signature of Head of Department: _____

Approved/ Not Approved

Dated: _____ Signature Head of Institute/ Dean: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

**GRADUATE ADVISORY COMMITTEE (GAC)
(Master Programs)****ANNEX-PG-06 (b)**

Name: _____ Registration No: _____

Department: _____ Institution: _____

Subject: _____ Date of Admission: _____

Contact No: _____ Email: _____

Date: _____ Student's Signature: _____

Supervisory Committee Members

1. Supervisor: _____ Signature: _____

Qualification/ Dept./ Institute: _____

2. Internal member: _____ Signature: _____

Qualification/ Dept./ Institute: _____

3. External member: _____ Signature: _____

Qualification/ Dept./ Institute: _____

4. Co-Supervisor (if any): _____ Signature: _____

Qualification/ Dept./ Institute: _____

Recommended/ Not Recommended

Dated: _____ Signature of Head of Department: _____

Approved/ Not Approved

Dated: _____ Signature Head of Institute/ Dean: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-07

PETITION FOR CHANGE IN THE SUPERVISORY COMMITTEE (PhD & Master Programs)

Name: _____ Registration No: _____
 Department: _____ Program/ Subject: _____
 Contact no: _____ Email: _____
 Student' Signature: _____ Date: _____

COMMITTEE MEMBERS CHANGES

Delete

Add

Name: _____	Name: _____
Department: _____	Department: _____
Signature: _____	Signature: _____
Name: _____	Name: _____
Department: _____	Department: _____
Signature: _____	Signature: _____

SUPERVISOR/ CO-SUPERVISOR CHANGES

Delete

Add

Name: _____	Name: _____
Department: _____	Department: _____
Signature: _____	Signature: _____

Recommended/ Not Recommended

Dated: _____ Signature of Head of Department: _____

Approved/ Not Approved

Dated: _____ Signature Head of Institute/ Dean: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-08

**SEMESTER ASSESSMENT/ EXAMINATION RESULTS
(PhD & Master Programs)**

Faculty/ Course Instructor: _____

Program: _____ Department: _____

Institution: _____ Semester: _____

Course Code: _____ Course Title: _____ Credit Hour: _____

Internal Assessment

S. No.	Registration No.	Name	Quizzes (5 %)	Sessional Examination (10%)	Mid Semester Examination (25 %)	Assignments/ Presentations / Practical/ OSCE/ OSPE (20%)

Date _____ Faculty/ Course Instructor Signature: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-09

IMPROVEMENT/ REPEAT COURSE FORM (PhD & Master Programs)

Name: _____ Registration No: _____

Department: _____ Institution: _____

Program: _____ Subject: _____ Admission Date: _____

GPA Semester-I: _____ GPA Semester-II: _____ GPA Semester-III: _____ GPA Semester-IV: _____ CGPA: _____

FOR REPEAT/ IMPROVEMENT

S. No.	Course Code	Course Title	Credit Hrs	Grade	Grade Points
1.					
2.					

Chances availed: 1st/ 2ndCourse offer in Semester: Spring/ Summer/ Fall_____

Date: _____

Student's Signature: _____

Recommended/ Not Recommended

Date: _____

Supervisor' Signature: _____

Countersigned

Head of Department: _____ Head of Institute/ Dean: _____

Approved/ Not Approved

Date: _____

Controller of Examinations: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Registrar Office/ Academics Directorate & Controller of Examinations.

ANNEX-PG-10

BI-ANNUAL PROGRESS REPORT (PhD & Master Programs)

Name: _____ Registration No: _____

Department: _____ Institution: _____

Subject: _____ Admission Date: _____ Date of Registration: _____

Degree completion date: _____ Semester: _____ Duration of progress report: _____

Coursework

S. No.	Course Code	Course Title	Credit Hrs	Core/ Elective	Grade	Grade Points
1.						
2.						
3.						
4.						

GPA Semester-I: ____ GPA Semester-II: ____ GPA Semester-III: ____ GPA Semester-IV: ____ CGPA: ____

Research work:

Research Topic: _____

Date of Approval from SC (MPhil)/ AS&RB (PhD) _____

Research Progress: _____

Academic Achievements:

S. No.	Descriptions	During Reporting Period	Total
a	Number of Publications in HEC recognized Journals (Please attach E-Copy of Papers)		
b	Presentations in Conferences/ Seminars/ Workshops Participated (Please attach details)		
c	Any other significant achievements (Please attach details)		

Supervisory Committee remarks on student's progress:

Date: _____

Supervisor's Signature: _____

Countersigned

Head of Department: _____ Head of institute/ Dean: _____

Distribution:

- 1 x copy to be maintained by the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-11

PhD COMPREHENSIVE EXAM REPORT

Name: _____ Registration No.: _____

Department: _____ Institution: _____

1st Attempt☐

Date: _____ CGPA of Course work: _____

Exam	Date of Examination	Marks obtained (%)	Grade

Date: _____

Signature of Supervisor: _____

Date for next exam: _____

2nd Attempt☐

Date: _____ CGPA of Course work: _____

Exam	Date of Examination	Marks obtained (%)	Grade

Supervisor's Remarks _____

Date: _____

Signature of Supervisor

Recommended/ Not Recommended

Dated: _____ Signature of Head of Department: _____

Approved/ Not Approved

Dated: _____ Signature Head of Institute/ Dean: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX- PG-12

SYNOPSIS SUBMISSION FORM (PhD & Master Programs)

Name: _____ Registration No: _____

Department: _____ Institution: _____

Subject: _____ Date of synopsis submission: _____

Research Work

1. Topic:

2. Academic Policies Awareness/ Proposed Timeline:

Check list	YES	NO
Are you aware of the NUMS academic policies for Masters/ MPhil/ PhD programs?		
Is synopsis prepared according to NUMS' guidelines?		
Are you aware of the plagiarism policy?		
Proposed timeline for completion of research work/ thesis	Date: _____	

Date: _____ Student's Signature: _____

Date: _____ Supervisor's Signature: _____

Date: _____ Head of Department: _____

Note: Attach the copy of synopsis with this form.

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX - PG-13

**INSTITUTIONAL REVIEW BOARD APPROVAL LETTER
(PhD & Master Programs)**

Name: _____ Registration No: _____

Department: _____ Institution: _____

Subject: _____

Dear _____
(Student/ Principal Investigator)

We are pleased to inform you that your proposed study entitled

_____ vides your
application received on _____ was reviewed on _____ by _____ IRB&EC.The board has approved/ approved with minor changes in the protocol/ informed consent form
vide IRB&EC No. _____ date _____ for period from _____ to _____.

You are reminded to submit reports in a timely manner as per our IRB&EC policy.

Date: _____

Signature of Secretary IRB&EC**Distribution:**

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-14

**SCHEDULE FOR SYNOPSIS PRESENTATION
(PhD. & Master Programs)**

Name: _____ Registration No: _____

Department: _____ Institute: _____

Subject: _____ CGPA of coursework: _____

Research Topic:_____
_____**Synopsis Evaluation Committee:**

1. Chairperson: _____

2. Supervisor: _____

3. Internal Member: _____

4. External Member: _____

Proposed date of Synopsis Presentation: _____

Date: _____ Supervisor' Signature: _____

Date: _____ Head of Department Signature: _____

Dean Office:

Faculty: _____

Final date of Schedule for Synopsis Presentation/ Approval: _____

Dean Name: _____ Signature: _____

Date: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-15

**SYNOPSIS EVALUATION REQUEST
(PhD & Master Programs)****A: Formulation of Synopsis Evaluation Committee:**

1. Chairperson: _____
2. Supervisor: _____
3. Internal Member: _____
4. External Member: _____
5. External Member: _____

Dean/ Head of Institute: _____

B: Request for Synopsis Evaluation for PhD/Master Program:

Dear Sir/Madam,

Subject: Request for Synopsis Evaluation for PhD/ Master Program

1. I am pleased to forward you the synopsis of Mr./ Ms. _____ Registration No. _____ for your assessment/ evaluation. The student is registered in MPhil/ PhD Program in the department of _____ of the Institute _____, NUMS. Title of Synopsis is as follows:

2. You are requested to attend the synopsis presentation Scheduled on _____ at _____ and provide your valuable assessment on attached Form No. PG-16.

3. The University is thankful to you for sparing your precious time for the required assessment.

Dated: _____

Dean/ Head of Institute

ANNEX-PG-16

SYNOPSIS EVALUATION REPORT (PhD & Master Programs)

Name: _____ Registration No: _____

Department: _____ Subject: _____

Supervisor: _____ CGPA of Course work: _____

Thesis/ Dissertation Topic: _____

Part A-Synopsis Evaluation (75 Marks)

Evaluation Criteria	Marks*				Comments
	2	3	4	5	
I. Introduction/ Review					
1. Project Summary					
2. Introduction/ Problem Statements					
3. Literature Review					
4. Research Question/ Hypothesis					
5. Research Objectives/ Originality					
Total Marks in (I)					_____ / 25
II. Research Methodology					
6. Study site/ design					
7. Sampling techniques/ size					
8. Methods and data collection					
9. Statistical analysis					
Total Marks in (II)					_____ / 20
III. Feasibility/ Outcome of Study					
10. Plan of work/ Gantt Chart					
11. Practicality to conduct research					
12. Application/ relevance					
13. Estimated cost/ budget					
Total Marks in (III)					_____ / 20
IV. Structure of synopsis					
14. References, language, grammar & annexes					
15. Overall Quality & Clarity of synopsis					
Total Marks in (IV)					_____ / 10
Total Marks in Part - A					_____ / 75

* 2 = unsatisfactory, 3 = satisfactory, 4 = Good, 5 = Excellent

Part-B Presentation & QA session (25 Marks)

Presentation skills/ slides	____/10
Q&A session/ Viva	____/15

Overall Performance

Part-A ____ out of 75 Marks) Part-B ____ out of 25 Marks) Total (100 Marks) ____

Overall Rating

Overall Rating by Evaluators			
Accepted <input type="checkbox"/>	Accepted with conditions		Rejected <input type="checkbox"/>
	Minor Revisions <input type="checkbox"/>	Major Revisions <input type="checkbox"/>	

Remarks:

Name of Examiner: _____ Institute: _____

Date: _____ Signature: _____

Grading Scale:

Excellent >80% (A)	<i>An excellent performance, clearly outstanding. The candidate demonstrates excellent knowledge/skills</i>
Good 68-80% (B)	<i>The candidate demonstrates sound knowledge and a very good degree of independent thinking and research methods.</i>
Satisfactory 60-67% (C)	<i>The candidate demonstrates a reasonable degree of knowledge and application/ research</i>
Unsatisfactory Below 60% (D)	<i>The candidate demonstrates a very limited degree of knowledge/ presentation skills</i>

Rating Scale:

Accepted with Minor/Major Correction	<i>The synopsis conditionally approved , subject to corrections, as outlined in comments report</i>
Rejected	<i>Synopsis requires major, substantive amendment in objectives and methods, and submission for re-examination within the time frame specified.</i>

Distribution:

- 1x copy to be maintained in the concerned Institute, student file and Academics Directorate

ANNEX- PG-17 (a)

SYNOPSIS APPROVAL/ QUALIFYING EXAMINATION (B) REPORT (PhD & Master Programs)

Name: _____ Registration No: _____

Department: _____ Institute: _____

Subject: _____ Date of Synopsis Meeting: _____

Title: _____

Synopsis Evaluation Committee

First Attempt: _____ Second Attempt: _____

1 _____ Approved/Not Approved _____
Supervisor Signature

2 _____ Approved/Not Approved _____
Internal Examiner Signature

3 _____ Approved/Not Approved _____
External Examiner (1) Signature

4 _____ Approved/Not Approved _____
External Examiner (2) Signature

Head of Department _____ Signature _____

Committee Chair/ Dean remarks _____

Approved/Not Approved _____

Date _____
Dean/ Head of Institute

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX- PG-17 (b)

CHANGE OF SYNOPSIS TITLE / PROJECT (PhD & Master Programs)

Name: _____ Registration No: _____

Department: _____ Institute: _____

Subject: _____ Date of Approved Synopsis Defense: _____

Approved Title: (Please attach already approved title of synopsis as Annex-A)

Reason of revision: _____

Revised Title: (Please attach approval of revised title of synopsis as Annex-B)

Synopsis Evaluation Committee

1 _____ Supervisor	_____ Signature
-----------------------	--------------------

2 _____ Internal Examiner	_____ Signature
------------------------------	--------------------

3 _____ External Examiner	_____ Signature
------------------------------	--------------------

4 _____ External Examiner	_____ Signature
------------------------------	--------------------

Head of Department _____	Signature _____
--------------------------	-----------------

Committee Chair/ Dean remarks _____

Approved / Not Approved _____

Date _____

Dean/ Head of Institute**Distribution:**

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

Note: In case of change of title of synopsis/ Project, student will resubmit the title/ project through concerned institute with all formalities of synopsis after approval from FBS.

ANNEX - PG-18

PUBLICATION RECORD (MS/ MPhil/ PhD Program)

Name: _____ Registration No: _____

Department: _____ Subject: _____

Certificate of Research Paper Submission/ Acceptance

1. MPhil/ MS

It is certified that the manuscript entitled _____

has been submitted/accepted in journal _____

on _____ and likely to be published within six months. The copy of
submitted/ accepted manuscript and acknowledgment is attached.

Student' Signature: _____ Supervisor' Signature: _____

2. PhD

The paper titled _____

has been published in Journal Name: _____

Issue: _____ Volume: _____ Pages: _____

DOI (if any): _____

Journal Impact factor: _____ Category journal as per HEC: _____

Student's Signature: _____ Supervisor' Signature: _____

Dated: _____

Signature of Head of Department: _____

Dated: _____

Signature of Head of Institute/ Dean: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX- PG-19

THESIS/ DISSERTATION SUBMISSION/ VERIFICATION

(PhD & Master Programs)

Full Name: _____ Registration No: _____

Department: _____ Institute: _____

Degree Program: _____ Date of Submission: _____

Thesis Title: _____

1. Student's Declaration:

- a. I declare that the contents/ research presented in this thesis/ dissertation is my own work, which was done at NUMS unless otherwise stated/ acknowledged in text/ references. The research work/ thesis has not been previously submitted for any other degree.
- b. My thesis is as per guideline of NUMS and has been reviewed by the Supervisor.
- c. At any time, if my statement is found to be incorrect even after my Graduation, the university has the right to withdraw my MPhil/ PhD degree.

Date: _____ Name/ Signature of student _____

2. Endorsement by Supervisor:

- a. I, hereby, confirm that (Name) _____ has completed the course work of _____ credit hours with CGPA _____ required for the program _____.
- b. I have screened the thesis by using Turnitin Software and similarity index is _____% report is attached.
- c. I am satisfied with the quality of the research work presented and therefore, have no hesitation in recommending that the thesis be submitted for examination.

Date: _____ Name/ Signature of Supervisor: _____

3. Head of Department:**Recommended/ Not Recommended**

Dated: _____ Signature of Head of Department: _____

For Dean Office:

Check List	YES	NO
Whether the thesis submitted is on prescribed NUMS' format?		
Turnitin report attached/ similarity index is acceptable as per HEC?		
Approved copy of Synopsis is attached?		
Five (5) copies of soft binding thesis are submitted?		
Soft-copy of the thesis is provided in CD/ USB?		
Data on Thesis submission form is as per the University record?		
All dues clear ?		

Name of Staff (received the document) _____

Dated: _____

COUNTERSIGNED

Dated: _____

Signature Head of Institute/ Dean: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations, IRB&EC & Dean Office.

ANNEX- PG-20

**ACKNOWLEDGEMENT RECEIPT OF THESIS/ DISSERTATION
(PhD & Master Programs)**

This is to acknowledge that Mr./ Ms. _____

Registration No. _____ has submitted five (5) hard copies and one softcopy of the thesis to the department. The other pertinent details are as follows:

Title of Thesis/ Dissertation	
Degree	
Program	
Faculty/ Subject	
College/ Institute	
Date of Admission	
Due Date of Submission	

*where applicable

(Supervisor)

(Head of Department)

Date: _____

Date: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX- PG-21 (a)

THESIS EVALUATION REQUEST
(Master Programs)**A: Formulation of Thesis Evaluation Committee**

1. Chairperson _____
2. Supervisor _____
3. Internal Examiner _____
4. External Examiner _____
5. External Examiner _____

B: Request for Thesis Evaluation for Master Program

Dear Sir/ Madam,

Subject: Request for Thesis Evaluation for Master Program

1. I am pleased to forward you the thesis of Mr./ Ms. _____ Registration No. _____ for your assessment/ evaluation. The student is registered in ----- Program in the faculty of _____ at the _____ (College/ Institute). Other pertinent details are as follows:

a. Title of Thesis _____

2. You are requested to provide your valuable assessment on the form attached herewith.
3. The University is thankful to you for sparing your precious time for the required assessment.

Date: _____
(Dean/ Head of Institute)

NOTE: One hard copy of the Thesis, One Digital Copy, Thesis evaluation Form.

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX- PG-21 (b)

DISSERTATION EVALUATION REQUEST
(PhD Program)

Dear Sir/Madam,

A. Formulation of Dissertation Evaluation Committee

1. Chairperson _____
2. Supervisor _____
3. Internal Examiner _____
4. External Examiner _____
5. External Examiner _____

B. Request for Thesis Evaluation for Master Program

Subject: Request for Thesis Evaluation for PhD Program

I am pleased to forward you the thesis of Mr./Ms. _____ Registration No. _____ for your assessment/evaluation. The student is registered in PhD Program in the faculty of _____ at the _____ (College/Institute). Other pertinent details are as follows:

a. Title of Thesis _____

You are requested to provide your valuable assessment on the form attached herewith. The University is thankful to you for sparing your precious time for the required assessment.

Date: _____

(Dean/Head of Institute)

NOTE: One hard copy of the Thesis, One Digital Copy, Thesis evaluation Form.

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-22

THESIS/DISSERTATION EVALUATION REPORT **(PhD & Master Programs)**

(To be used by Individual Examiner)

Student Name: _____ Registration No: _____

Degree enrolled: _____ Department: _____

Thesis Topic: _____

Evaluation Criteria	Observations/ Comments
Introduction/ Review	
1. Abstract	
2. Introduction / statement of problem	
3. Research objectives/ originality	
4. Literature review (relevant and clearly phrased)	
Research Methodology	
5. Experimental design/Sampling	
6. Research methods and techniques	
7. Statistical analysis	
Results	
8. Enough data to achieve objectives	
9. Research findings/originality of results	
10. Clarity of results descriptions (graphs, tables & figures)	
Discussions/ Conclusion	
11. Scientific interpretation of results & comparison with published literature	
12. Original contribution to knowledge/ application	
13. Conclusions/recommendations	
Structure of thesis	
14. References, annexures language and grammar	
15. Overall Quality & Clarity of thesis	

Select ONE:

- The thesis is ready to proceed to the Oral Defense ☐
- Minor revisions before to proceed to the Oral Defense ☐
- Major revisions before to proceed to the Oral Defense ☐

Date: _____

Evaluator' Signature: _____

NOTE: Report must include a description of the shortcomings /observations you would expect the student to address in order for the thesis to be and proceeded to the Oral Defense. (please use separate sheet for comments if required)

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-23

**DISSERTATION EXTERNAL EXPERTS REPORT
(PhD Program)**

I hereby, recommend that the dissertation prepared under my supervision by Mr./Ms.

_____ Registration No. _____

entitled _____

may be submitted for AS&RB approval.

Reports of the following External Experts are attached:

External Expert 1: Name: _____

Institute: _____ Country _____

External Expert 2: Name: _____

Institute: _____ Country _____

1. Supervisor: _____ Signature: _____

Date: _____

Recommended/ Not Recommended

2. Dean: _____ Signature: _____

3. AS&RB Approval/Meeting No./Date _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-24 (a)

**SCHEDULE FOR THESIS/DISSERTATION PRESENTATION
(PhD & Master Programs)**

Name: _____ Registration No: _____

Department: _____ Institute: _____

Subject: _____ CGPA of Coursework: _____

Research Topic:

Proposed dates of thesis Presentation: _____

Date: _____ Supervisor Signature: _____

Date: _____ Head of Department Signature: _____

Dean Office:

Faculty _____

Final date of Schedule for thesis Presentation/Approval: _____

Dean Name: _____ Signature: _____

Date: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-24 (b)**ABSTRACT SUBMISSION
(PhD & Master Programs)**

Name: _____ Registration No: _____

Department: _____ Subject: _____ Institute: _____

Abstract:

Supervisor Name: _____ Signature _____

Date: _____

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations

ANNEX-PG-25

THESIS/ DISSERTATION EVALUATION REPORT**(PhD & Master Programs)**

(To be used by Individual Evaluator)

Name: _____ Registration No: _____

Department: _____ Subject: _____

Supervisor: _____ CGPA of Course work: _____

Thesis/ Dissertation Topic: _____

A-Internal/ External Thesis Evaluator (75 Marks)

Internal/ External Thesis Evaluator (15 marks)					Comments
Evaluation Criteria	2	3	4	5	
I. Introduction/ Review					
1. Abstract					
2. Introduction / statement of problem					
3. Research objectives/ originality					
4. Literature review (relevant & clearly phrased)					
Total Marks in (I)					____ / 20
II. Research Methodology					
5. Experimental design/ Sampling techniques					
6. Research methods and techniques					
7. Statistical analysis					
Total Marks in (II)					
III. Results					
8. Enough data to achieve objectives					
9. Research findings/originality of results					
10. Clarity of results descriptions (graphs, tables etc)					
Total Marks in (III)					
IV. Discussions/ Conclusion					
11. Scientific interpretation of results & comparison with published literature					
12. Original contribution to knowledge/ application					
13. Conclusions/recommendations					
Total Marks in (IV)					
V. Structure of synopsis					
14. References, annexures language, grammar					
15. Overall Quality & Clarity of thesis					
Total Marks in (V)					____ / 10
Total Marks in Part - A					____ / 75

* 2 = unsatisfactory, 3 = satisfactory, 4 = Good, 5 = Excellent

RECOMMENDATION BY THE EXAMINER

I recommend the thesis to be accepted /accepted subject to suggest correction are incorporated in the thesis and duly certified by the supervisor before the conduct of defense/viva-voce thesis examination

Accepted <input type="checkbox"/>	Accepted with conditions		Rejected <input type="checkbox"/>
	Minor Revisions <input type="checkbox"/>	Major Revisions <input type="checkbox"/>	

Remarks:

Note: attach additional page for comments.

B- Defense of thesis (25 Marks)			
Presentation & QA session			
	Total Marks	Marks obtained	Comments
1. Presentation skills/slides	(10 Marks)		
2. Q&A session	(15 Marks)		

C- Overall Performance

Part-A (75 Marks) _____ Part-B (25 Marks) _____ Total (100 Marks) _____ (___ Grade*)

Name of Examiner: _____

Qualification: _____ Institute _____

Date: _____ Signature: _____

*** Grading Scale:**

Excellent ≥80% (A)	<i>An excellent performance, clearly outstanding. The candidate demonstrates excellent knowledge.</i>
Good 79-70 % (B)	<i>A very good performance. The candidate demonstrates sound knowledge and a very good degree of independent thinking.</i>
Satisfactory 69-60% (C)	<i>A good performance in most areas. The candidate demonstrates a reasonable degree of knowledge.</i>
Unsatisfactory Less than 60% (D)	<i>A performance that meets the minimum criteria, but no more. The candidate demonstrates a very limited degree of knowledge.</i>

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations

ANNEX-PG-26

FINAL THESIS/ DISSERTATION APPROVAL REPORT (PhD & Masters Programs)

We hereby, recommend that the thesis/ dissertation prepared under supervision of _____ by _____
Registration ID No _____ entitled _____

be accepted as fulfilling in part of Masters/ MPhil/Doctor of Philosophy Degree.

THESIS/ DISSERTATION APPROVAL COMMITTEE

1 _____ **Approved/Not Approved** _____
Supervisor Signature

2 _____ **Approved/Not Approved** _____
Internal Examiner Signature

3 _____ **Approved/Not Approved** _____
External Examiner Signature

4 _____ **Approved/Not Approved** _____
External Examiner Signature

Examiner 1: -----/100	Examiner 2: -----/100	} Total Marks 400
Examiner 3: -----/100	Examiner 4: -----/100	
*Final Average Score _____ (_____ % , Grade _____)		

Head of Department _____ Signature _____
Committee Chair/ Dean remarks _____

Approved/Not Approved

Date _____ Dean/ Head of Institute

* Calculation of Final score: Add score of all examiners, divide by 400 and multiply by 100

Distribution:

- 1 x copy to be maintained in the concerned Institute, Academics Directorate & Controller of Examinations.

ANNEX-PG-27

CHECK LIST FOR AWARD OF DEGREE

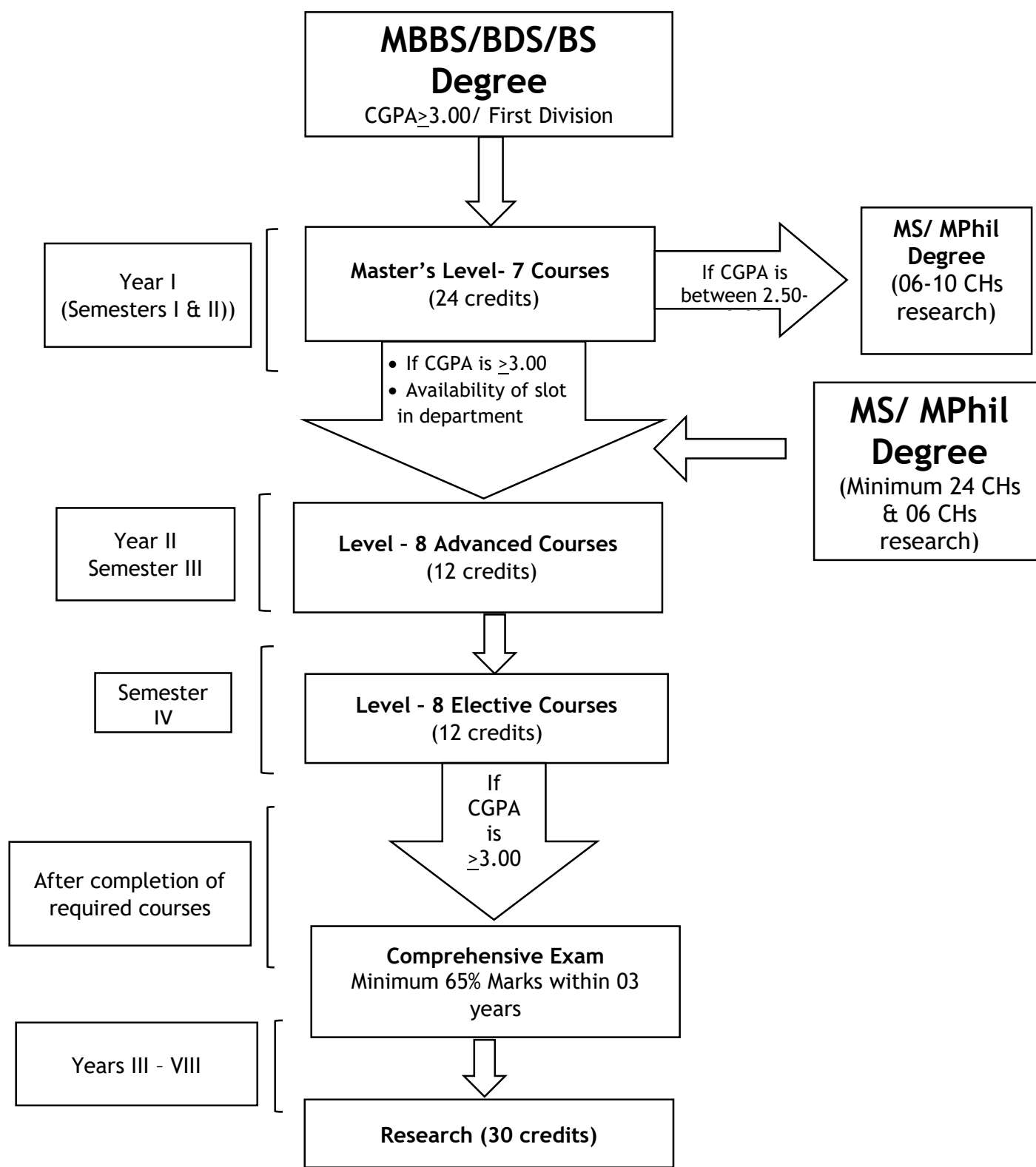
Name: _____

Registration No: _____

S. No	Name of the Document	Evidence Attached		
		YES	NO	NA
PG-01	Post-Graduation Registration Form			
PG-02	Migration/ Transfer of Credit Application Form			
PG-03	Request for Freezing of Semester			
PG-04	Appointment of Supervisor/ Co- Supervisor			
PG-05	Willingness of the Supervisor/ Co-Supervisor			
PG-06	Appointment of Supervisory Committee			
PG-07	Petition for Change in Supervisory Committee			
PG-08	Semester Assessment/ Examination Results			
PG-09	Improvement/ Repeat Course Form			
PG-10	Bi-annual Progress Report			
PG-11	Report of Qualifying Examination Comprehensive Exam			
PG-12	Synopsis Submission Form			
PG-13	Institutional Review Board Approval Letter			
PG-14	Schedule for Synopsis Presentation			
PG-15	Synopsis Evaluation Committee			
PG-16	Synopsis Evaluation Report			
PG-17(a)	Synopsis Approval/ Qualifying Examination (B) Report			
PG-17(b)	Change of Research Title			
PG-18	Publication Record			
PG-19	Thesis/ Dissertation Submission/ Verification			
PG-20	Acknowledgement Receipt of Thesis/ Dissertation			
PG-21(a)	Thesis/ Dissertation Evaluation Committee			
PG-21(b)	Thesis/ Dissertation Evaluation Committee (PhD only)			
PG-22	Thesis/ Dissertation Evaluation Report			
PG-23	Dissertation Foreign Evaluation Report			
PG-24(a)	Schedule for Thesis/ Dissertation Presentation			
PG-24(b)	Abstract Submission			
PG-25	Final Thesis/ Dissertation Grading Report			
PG-26	Final Thesis/ Dissertation Approval Report			
PG-27	Check List for Approval of Degree			

Date: _____ Reviewed by: _____ Signature _____

CONDUCT OF PhD PROGRAM

ANNEX-B

**ANNEX-C****STUDENTS' FEEDBACK PROFORMA**

Academic year **2021** Semester **First** Date of feedback _____

Please mark appropriate column by ✓

(Rating: **1** - Excellent, **2** - Very good, **3** - Good, **4** - Fair, **5** - Below average)

Name of Course:		Course Code:				
Core Questions: Course		1	2	3	4	5
1.	Course outcomes/contents were clearly mentioned & provided at the start of course					
2.	Course contents were aligned with learning outcome					
3.	Teaching and learning methods encouraged your participation					
4.	Time allocated to the course was sufficient and manageable					
5.	Learning environment was comfortable and conducive to learning					
6.	Learning resources were relevant & helpful					
7.	The provision of learning resources in the library was adequate and appropriate					
8.	The course stimulated my interest and thought on the subject area					
9.	Assignments were helpful for learning of core concepts					
10.	Practical / skill development sessions were helpful for learning of core concepts					
11.	Assessment was in line with the provided Table of Specifications					
12.	Methods of assessment were appropriate					
13.	Satisfied with over all conduct of the course					
Core Questions: Faculty		1	2	3	4	5
1.	The Instructor is prepared for each class					
2.	The Instructor demonstrates knowledge of the subject					
3.	The Instructor has completed the whole course					
4.	The Instructor provides additional material apart from the textbook					
5.	The Instructor communicates the subject matter effectively					
6.	The Instructor shows respect towards students and encourages class participation					
7.	The Instructor maintains an environment that is conducive to learning					
8.	The Instructor is punctual					
9.	The Instructor is fair in examination					
10.	The Instructor was responsive to student's need and problems					
11.	The Instructor dealt effectively with my problems					
Comments/ Suggestions:						
Name & Signature of the student (Optional): _____						