2nd MS/PhD Program Self-Review (2023-2024)

Self-Review Report of MS and PhD Programs

Prepared by:
The Directorate of QA&C
in coordination with the Departments

HITEC University Taxila
2024

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1. University Overview

Heavy Industries Taxila Education City (HITEC) is a comparatively new addition to the hallmarks of Taxila located at the foothills of Margalla, 30 km North West of Islamabad and Rawalpindi. It is an integrated and purpose specific complex, housing educational institutes, catering for pre-school to university level education.

In November, 2007, HITEC University, in affiliation with UET Taxila, commenced classes with an intake of 250 students. It was granted its own charter in November, 2009 by the Government of Punjab. The University has a dynamic, industrious and highly committed full time faculty which keeps abreast with the latest development in teaching and research methodologies. In a short span of time HITEC University has emerged as a modern and vibrant place of learning and can be rightly called a citadel of knowledge. It hosts state of the art facilities and takes pride in offering learning environment having unmatched safety and security of the premises.

The University has spacious, air-conditioned and very well-equipped classrooms, laboratories, library, auditorium and excellent allied facilities. Library provides ample space for books, reading and research activities. Students get ample opportunities for internships and employment due to close proximity of the University to Heavy Industries Taxila (HIT), Pakistan Ordinance Factories (POFs), Heavy Mechanical Complex (HMC), Pakistan

Aeronautical Complex (PAC) Kamra, Telephone Industries of Pakistan (TIP) and FECTO Cement etc.

Purpose built boys hostel is available on first come first serve basis to accommodate over 300 students within the campus. Girl's hostel for 300 students has been completed and shall be operational from fall 2024 semester.

The University, besides imparting quality education, assigns equal importance to character building, extra and co-curricular activities. We aim to make our students morally and physically sound individuals and responsible citizens of Pakistan, with a strong urge of service to humanity.

2. Vision

HITEC University shall be a premier institution and bastion of academic excellence. It must become a citadel of our ideological moorings, national integration and socio-religious values. HITEC ought to trigger the human mind to think clearly perceiving the environment and issues confronting human beings, seeking intelligent, viable and practical solutions, leading to societal development and the overall betterment of human race. The campus shall provide our progeny the environment for intellectual flourishment, nurturing fertility of thought and creativity. HITEC University faculty will focus on preparing our youth to face the challenges of life with honor, confidence and fortitude through character building and grooming. In HITEC University merit, justice, honesty and adherence to moral and social values must prevail. The University shall provide a pedestal for fulfillment of our youth's aspirations and hopes to live an honorable life as citizens of Pakistan.

3. Mission

HITEC University will be a center of excellence in teaching; learning and research. We instill and inspire intellectual curiosity, lifelong quest for knowledge and a keen urge for social and moral responsibility. The University will establish strong linkages with industry, ensuring innovative research leading to economic prosperity of Pakistan.

4. MS/PhD Programs – A Brief Overview

The MS/PhD program aims to provide students with the chance to delve deeper into advanced fields of study, fostering a new realm of learning. The programs offered are to empower students and scholars to conduct independent research, with the aim of publishing their findings in reputable national and international journals. This initiative serves to bridge the gap between educational institutions and industries. The research conducted by students contributes to enhancing the industry's practices and elevating the quality of their workforce. Furthermore, it aims to cultivate innovative ideas to address the prevailing challenges faced by the country.

The details of MS/PhD programs offered in HITEC University along with the date of commencement and NOC status is given below in Table 1. HITEC University principally adopted revised graduate education policy 2023 by HEC and is in the process of getting it approved from Academic Council and Board of Governors. The academic regulations pertaining to award and academic standards for MS and PhD degree are mentioned in Chapter VII and VIII (enclosed in Annex-1).

The MS and PhD program is meticulously crafted to endow students with a sophisticated array of techniques and expertise, aligned with HEC guidelines and international best practices. Its aim is to cultivate both theoretical profundity and practical proficiency within chosen areas of interest, while nurturing the intellectual acumen of researchers by immersing them in the academic corpus of knowledge. Aligned with the mission of the University, which is to unearth and disseminate culturally and globally pertinent knowledge in engineering & technology and basic sciences, these programs are tailored to enable scholars to uncover both timeless principles and contemporary advancements in global and regional knowledge domains. They are geared towards preparing scholars to innovate and provide solutions, particularly tailored to the needs of local and regional businesses, industries, and societies. Emphasizing a research-centric approach, the MS and PhD program accentuates academic inquiry with tangible applications in real-world scenarios.

Table 1: MS/PhD Programs offered in the University

S. No.	Departments	Postgraduate Programs	Year of Commencement	*NOC Status
FACULTY OF ENGINEERING AND TECHNOLOGY				
1	**Electrical Engineering**	MS Electrical Engineering	2009	N/A
		PhD Electrical Engineering	2010	N/A

2	**Mechanical Engineering**	MS Mechanical Engineering	2009	N/A
		MS Design and Manufacturing	2022	Obtained
		PhD Mechanical Engineering	2010	N/A
3	**Computer Science**	MS Computer Science	2014	Obtained
		PhD Computer Science	2017	Obtained
		MS Software Engineering	2021	Obtained
4	**Computer Engineering**	MS Computer Engineering	2018	Obtained
		PhD Computer Engineering	2021	Obtained
FACULTY OF BASIC SCIENCES				
5	**Mathematics**	MS Mathematics	2010	N/A
		PhD Mathematics	2010	N/A
6	**Islamic Studies**	MS Islamic Studies	2012	N/A
		PhD Islamic Studies	2013	Obtained
*According to HEC guidelines, NOC is not required for programs started before 2013				

5. Postgraduate Programs Offered

5.1 Faculty of Engineering and Technology

5.1.1 Electrical Engineering Department

The Department of Electrical Engineering offers MS program which essentially entails specialization in Communication Systems, Digital Signal Processing, and Electrical Power and Control Systems. An MS degree in Electrical Engineering from HITEC University opens the doors for excellent job opportunities in telecommunication, power sector, and process industries as well as strategic organizations in the country and abroad. MS qualified electrical engineering postgraduates are also readily accepted in academic institutions.

PhD in Electrical Engineering is offered as per guidelines of Higher Education Commission (HEC). The program prepares students to think scientifically and conduct high-quality research independently. It provides the graduates with the broad as well as in-depth technical education necessary for productive employment in the public or private sector. It is designed towards development of understanding of advanced issues important for current and future needs of the region. The details of MS/PhD enrolled and graduated students are mentioned in Row 1 of Table 2. The courses offered in MS/PhD are mentioned in Annex-2.

5.1.2 Mechanical Engineering Department

The MS program in Mechanical Engineering offers students with an opportunity of exploring more and to step into the world of higher studies, where they can open a new vista of learning for themselves in the various fields of mechanical engineering in line with HEC/PEC guidelines. There are excellent research resources available in the university and the faculty that teaches and supervises the MS program is mostly foreign qualified.

The Mechanical Engineering departments is offering MS in Design & Manufacturing Engineering and aspires to develop expertise in other disciplines as well. The purpose of the program is to develop understanding of manufacturing and management techniques along with specialization in Manufacturing Engineering, Design Engineering and Industrial Engineering. The program provides a firm foundation in lean manufacturing, product engineering, quality systems, and skills for effective utilization of human and corporate resources necessary to improve manufacturing business performance.

The PhD program of Mechanical Engineering in line with HEC/PEC guidelines is highly recommended for those scholars, who aspire to further their careers in academia or research, both in public or private sector organizations. This program is designed to equip candidates with high level of scholarship, in the light of growing international trends and techniques, in the field of Mechanical Engineering. The program is supervised by foreign/local qualified and experienced faculty to cater for the needs of the scholars, to enhance their analytical skills and to enable them attain the required level of expertise in the selected area. The details of MS/PhD enrolled and graduated students are mentioned in Row 2 of Table 2. The courses offered in MS/PhD are mentioned in Annex-3.

5.1.3 Computer Science Department

The exponential growth in computing and technology has undoubtedly created a great demand for the professionals in the area of computer science. In order to fulfill qualified human resource for meeting demands of the IT industry, academia and software market, the Department of Computer Science (DCS) started its MS Computer Science (MSCS) program in Fall 2014. The vision of this program is to bridge the gap by producing qualified manpower for expansion and growth of software industry in Pakistan which will play a key role for the socio-economic upliſt of the country. MSCS Program offers an opportunity for the computer professionals to grab jobs in the software industry, academia and research-oriented organizations in order to contribute in the areas of advanced analysis of algorithms, theory of computation, simulation & modeling, multimedia communication, cryptography and security, computer vision, machine learning, decision support systems, data mining etc.

PhD computer science is a full-time study program for the scholars to enhance their expertise and professional skills by studying advanced courses and through the application of latest research methodologies. Department is committed to train and produce graduates that have comprehensive knowledge and are capable of integrating their professional education and experience to solve real-life problems through innovative ideas. Program emphasizes on

quality research as a gateway to new horizons of scientific knowledge and discovery. The PhD curriculum is flexible and has been designed considering HEC guidelines. Within the scope of general requirements, students may opt to suit their individual research interests based on their educational backgrounds. Experienced researchers and highly qualified faculty members working in multiple research domains are available to guide the students.

Computer Sciences department also offers masters in Software Engineering. Software plays a central and underpinning role in almost all aspects of daily life: communications, government, manufacturing, banking and finance, education, transportation, entertainment, medicine, agriculture, and law. The number, size, and application domains of computer programs have grown dramatically; as a result, huge sums are being spent on software development. They provide information, make us more effective problem solvers, and provide us with safer, more flexible, and less confining work, entertainment, and recreation environments. Software Engineering is the application of a systematic, disciplined and quantifiable approach to the design, development, operation, and maintenance of software systems. It is in fact the practice of designing and implementing large, reliable, efficient and economical software by applying the principles and practices of engineering. The details of MS/PhD enrolled and graduated students are mentioned in Row 3 of Table 2. The courses offered in MS/PhD are mentioned in Annex-4.

5.1.4 Computer Engineering Department

The Department of Computer Engineering offers the Master of Science degree in Computer Engineering (MSCE). The MSCE program is designed to prepare students for technically demanding careers in industry as well as for higher studies in computer engineering. It involves knowledge of hardware and software development. The students learn how to design new generations of computers and embedded computing systems such as those found in smartphones, cars, appliances, computer networks, smart factories, and the internet-of-things.

PhD program is offered in Computer Engineering with a view to prepare students to become skillful academicians, researchers, industrialists to pursue their careers. The program is designed as per HEC's latest 2021 guidelines having a strong inclination towards a research-oriented learning approach. This strategy pushes students to drill and explore the new research trends and hence acts as a driving force for them to conduct quality research. Within the scope of general requirements, students may opt to suit their research interests based on their educational backgrounds. Experienced researchers and highly qualified faculty members

working in multiple research domains are available to guide the students. The details of MS/PhD enrolled and graduated students are mentioned in Row 4 of Table 2. The courses offered in MS/PhD are mentioned in Annex-5.

5.2 Faculty of Basic Sciences

5.2.1 Mathematic Department

This program imparts specialized knowledge in various areas of Mathematics and exposes the students to latest developments. Special efforts are made to nurture and enhance the research capabilities of students through seminars, workshops and critique sessions. Typical research topics for MS students are Numerical Analysis, Analytical and Numerical techniques for Ordinary & Partial Differential Equations and Finite Element Analysis. Research opportunities are also available in Numerical Linear Algebra, Mechanics etc.

The Doctor of Philosophy (PhD) in Mathematics is the highest degree awarded by the Department. The program comprises 18 credit hours of course work and 30 credit hours of research thesis. The courses are selected in consultation with the Supervisor. The progress of student is continuously monitored through the Guidance and Evaluation Committee (GEC). The degree is awarded in recognition of high level of scholarship, the ability to carry out independent research, and the publication of research in national and international journals of repute. The department sponsors research activities involving analytic and numerical solutions of Ordinary & Partial Differential Equations, Finite Element Analysis, Numerical Linear Algebra, Newtonian and Non-Newtonian Fluid Mechanics and Computational Fluid Dynamics etc. The details of MS/PhD enrolled and graduated students are mentioned in Row 5 of Table 2. The courses offered in MS/PhD are mentioned in Annex-6.

5.2.2 Islamic Studies Department

The Department offers MS in Islamic Studies; it is a broad based program, focusing on contemporary socio-political and economic issues, Ijtihad, objectives of Islamic Shariah, Islamic philosophy, International relations, Islamic world view and contemporary study of major world religions. Researchers are encouraged to work on practical issues to fulfil the needs of our society in particular and humanity in large.

The Doctor of Philosophy (Ph.D.) in Islamic Studies is the highest degree awarded by the Department. The program comprises 18 credit hours of course work and 30 credit hours of research thesis. The courses are selected in consultation with the thesis supervisor. The progress of student is continuously monitored through the Guidance and Evaluation Committee (GEC). The degree is awarded in recognition of high level of scholarship, the

ability to carry out independent research, and the publication of such research in national and international journals of repute. The Department encourages the researchers to work on current problems and futuristic issues related to the renaissance of Islamic thought, philosophy and scientific knowledge, leading to the ultimate truth. The details of MS/PhD enrolled and graduated students are mentioned in Row 6 of Table 2. The courses offered in MS/PhD are mentioned in Annex-7.

Table 2: Details of MS/PhD Enrolled and Graduated Students

S. No.	Departments	Postgraduate Programs	Currently Enrolled Students	Graduated Students
FACULTY OF ENGINEERING AND TECHNOLOGY				
1	**Electrical Engineering**	MS Electrical Engineering	21	163
		PhD Electrical Engineering	15	3
2	**Mechanical Engineering**	MS Mechanical Engineering	17	83
		MS Design and Manufacturing	5	-
		PhD Mechanical Engineering	9	1
3	**Computer Science**	MS Computer Science	42	62
		PhD Computer Science	35	-
		MS Software Engineering	11	-
4	**Computer Engineering**	MS Computer Engineering	17	3
		PhD Computer Engineering	5	-
FACULTY OF BASIC SCIENCES				
5	**Mathematics**	MS Mathematics	17	185
		PhD Mathematics	15	22
6	**Islamic Studies**	MS Islamic Studies	59	192
		PhD Islamic Studies	39	14

6. MS and PhD Review Process: Background

Higher Education considers the capacity building of the Degree Awarding Institutions as pivotal for the purpose of socio-economic development of the country. Hence, quality of MS and PhD researchers/educators produced is the backbone for the development of Quality Education in the institutions of Higher Learning. To ensure the quality of postgraduate and doctorate level education, the HEC-QAA got the mandate to ensure and enhance the quality of higher education by devising viable strategies. Therefore, HEC-QAA took the initiative of starting MS and PhD Degree Program Review Process to ensure the quality of MS/PhD and Equivalent level education. HEC-QAA's mandate is to review the MS and PhD programs of the selected universities in a specific year. If the university is not in review list of the HEC-QAA for review, then it is the obligation of the university to conduct MS and PhD program

self-review for the specific period. The HEC-QAA MS/PhD Review Committee has so far completed three cycles to assess the programs at MS and PhD level throughout the institutions of the country. The fourth cycle of the MS/PhD Program Review visits is in process and HITEC University haven't received any intimation of MS/PhD Review by HEC-QAA Team. Consequently, the University has to arrange MS/PhD program self-review for the year 2023-2024.

7. 1st MS/PhD Program Self-Review Process (2022-2023)

The Directorate of QA&C in HITEC University in adherence to the guidelines of HEC and the regulatory bodies initiated 1st MS and PhD Program Self-Review process for the period of 2022-2023 on May 25, 2023 in order to:

- Ascertain whether MS / PhD programs offered by the department meet their educational objectives and outcomes as per HEC's criteria.
- Maintain uniformity in the documentation process among all the departments.
- Enhance the quality of the programs.
- Prepare our departments and programs for the upcoming HEC-QAA review visits.

The steps of HEC's review process is attached in Annex-8 for reference. According to HEC guidelines, following team was constituted on the recommendations of the Director Quality Assurance and Collaboration for MS/PhD Program Self-Review:

S. No.	Departments	Postgraduate Programs	Status
1	**Prof. Dr. Obaid Ullah**	Professor Electrical Engineering Department, UET Taxila	External
2	**Dr. Haris Masood Associate Professor**	Chairperson Software Engineering & Computer Engineering Department, Wah Engineering College Wah Cantt	External
3	**Prof. Dr. Junaid Ali Khan**	Dean Basic Sciences/ Chairperson Computer Sciences Department. HITEC University Taxila	Internal
4	**Prof. Dr. Liaqat Ali**	Chairperson Mechanical Engineering Department, HITEC University Taxila	Internal

On the basis of HEC approved proforma's, the report of the programs was sent to the visitation team before the review visit. The visitation team completed the review process on the scheduled date. All MS and PhD programs offered in all the departments have been reviewed by the Review Committee. The Review Committee examined the documents relevant to the faculty performance, their workload, supervision, students' enrollment and dismissal, graduate student details. Various other aspects were also discussed during the interaction of the visitation team with the respective Chairperson of the Departments for their clarification.

Interaction with the faculty members and postgraduate students was also arranged separately. During the interaction, various issues were discussed relevant to the programs, teaching, and research.

Finally, the Review Committee put across the plausible recommendations and reservations on some of the important issues.

The following observations has been made the MS and PhD Self Program Review Team during their visit:

a. Evidence of approval of all PG programs by statutory bodies should be made available.
b. NOC for all programs (where applicable) should be attached.
c. Approval of curriculum/course content is required from the relevant statutory bodies.
d. Minutes of meeting of following bodies for last three years should also be maintained in separate files (BASR, ACM, BOF, BOS)
e. The contents of faculty and student criteria folders must be maintained in order in accordance with relevant checklist. The relevant document must be complete in all respects.
f. Course file for each course offered in MS and PhD program must be maintained.
g. The course code of MS/PhD course must reflect the relevant degree.

The observations were sent to the respective departments for the compliance. The Chairperson of the department taken into account the observations and incorporated the changes in their program review documents submitted for the next review.

8. 2nd MS/PhD Program Self-Review Process (2023-2024)

The Directorate of QA&C initiated the 2nd MS/PhD Program Self-Review process in December 2023. The following process has been followed:

a. The competent authority on the recommendation of Director Quality Assurance & Collaboration has constituted the following committee vide letter No. REG/COM/1/23/12708 dated November 22, 2023 for MS/PhD program self-review in line with Higher Education Commission (HEC) guidelines.

S. No.	Departments	Postgraduate Programs	Status
1	**Prof. Dr. Abdul Khaliq**	Dean Faculty of Engineering Sir Syed CASE Institute of Technology (SS CASE IT)	External
2	**Prof. Dr. Imran Hafeez**	CIVIL Engineering Department University of Engineering & Technology (UET) Taxila	External
3	**Prof. Dr. Junaid Ali Khan**	A/Dean Faculty of Basic Sciences/ Chairperson Computer Science HITEC University Taxila	Internal
4	**Prof. Dr. Liaqat Ali Khan**	Chairperson Mechanical Engineering Department HITEC University Taxila	Internal
5	**Prof. Dr. Tahir Nadeem Malik**	Director QA&C HITEC University Taxila	Internal
6	**Ms. Samar Masood**	Deputy Director QA&C HITEC University Taxila	Internal

b. The Directorate of QA&C initiated the self-review process by arranging a training session of departmental postgraduate focal person and coordinators on January 17, 2024 for the preparation of the documents for the program self-review visit. During this session, they were briefed on the purpose of the visit and requested to provide relevant data according to the MS/PhD Program Review Pro-formas distributed to them.

c. The departments submitted the data in 2nd week of February. The Directorate of QA&C analyzed the data detail given below and sent the observations back to the departments.

   i. QAC-PGPR-01 – Program Summary.
   ii. QAC-PGPR-02 – Program Detailed Information.
   iii. QAC-PGPR-03 – Program Faculty Information (MS-Equivalent).
   iv. QAC-PGPR-04 – Program Faculty Information (PhD).
   v. QAC-PGPR-05 – Student Information (MS-Equivalent).
   vi. QAC-PGPR-06 – Student Information (PhD).
   vii. QAC-PGPR-06-A – Graduated Student Information.
   viii. QAC-PGPR-06-B – Graduated Student Information (PhD).

The department resubmitted the data after incorporating observations within two weeks.

8.1. Record/Documents Presentation for Self-Review:

The record/documents for examination/review of the visitation team has been arranged in the following forms:

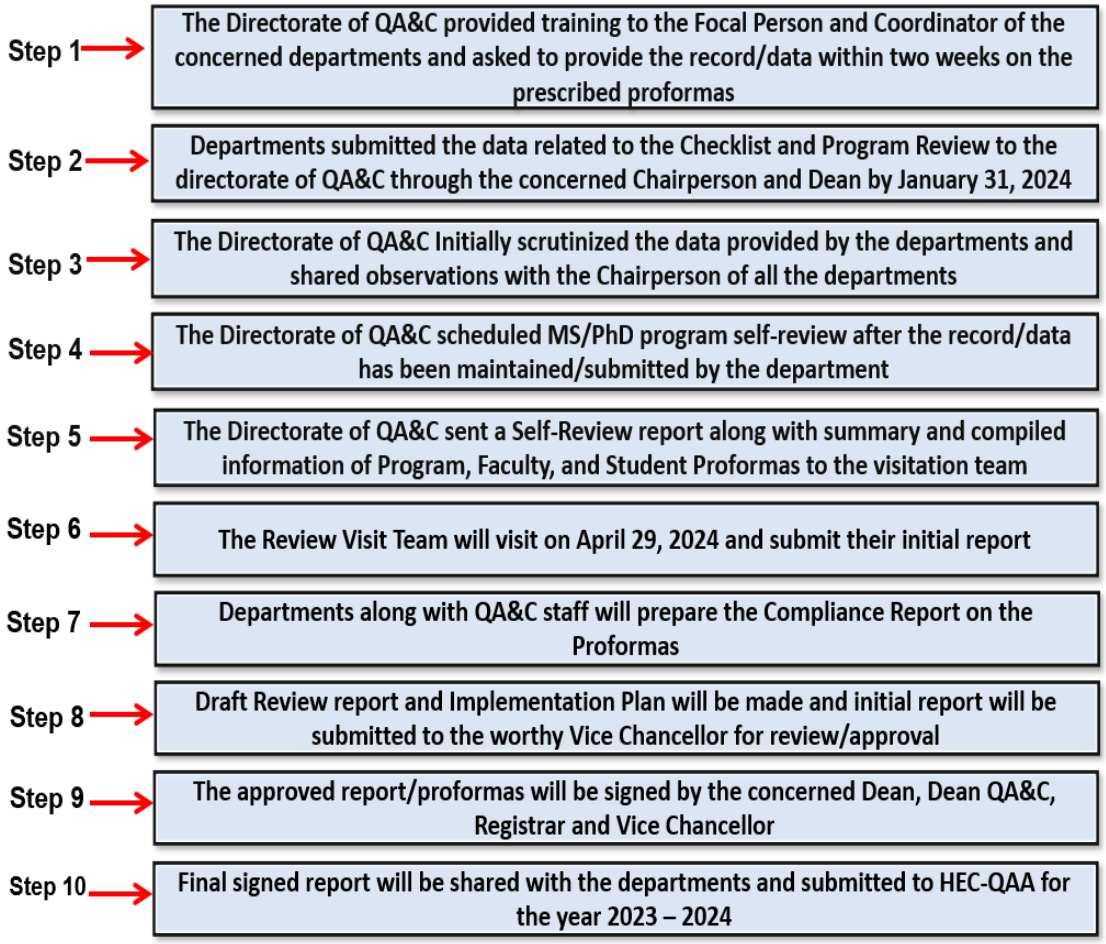
a. All the files and folders along with the supporting evidences and annexures related to program, faculty, and the students prepared by the departments shall be placed in the University Conference Room department wise.

b. PG Coordinators and Focal Persons of all the departments offering MS/PhD will be available throughout the review visit on April 29, 2024 to answer any query of the visitation team. The QA&C team will also be present in the University Conference Room to facilitate the review team.

d. ***A summary and compiled information in the Program, Student, and Faculty Proforma of MS/PhD programs under review are attached with this report.***

9. Steps adopted for preparation of MS/PhD Program Self-Review

In line with HEC guidelines, the MS/PhD program self-review process followed by the HITEC University is as follows:



10. Documentation Required for Completion of Self-Review

The newly designed proforma (checklist) prescribed by the HEC are circulated, before the actual visit of the review committee to all the departments that are offering MS/PhD Programs for gathering data pertaining to MS and PhD Scholars. The following documentation is required before and after the review visit from the departments are and will be analyzed and scrutinized by the Directorate of QA&C:

10.1 Prepared and Maintained by the Department

a. MS/PhD Program related information – Annex-9
b. PhD Student File (maintained for the individual student) – Annex-10.
c. MS Student File (maintained for the individual student) – Annex-11.
d. MS Faculty File (maintained for the individual faculty) – Annex-12.
e. PhD Faculty File (maintained for the individual faculty) – Annex-13.

10.2 Documents Submitted before Program Review Committee Visit by Departments

a. Program Proforma – Annex-14.
b. Faculty Proforma – Annex-15.
c. Student Proforma – Annex-16.

*Submitted by the department and attached with this report for the information of the members of the visitation team

10.3 Proformas filled by the departments for Program Review

a. QAC-PGPR-01 - Program Summary – Annex-17.
b. QAC-PGPR-02 - Program Detailed Information – Annex-18.
c. QAC-PGPR-03 - Program Faculty Information (MS-Equivalent) – Annex-19.
d. QAC-PGPR-04 - Program Faculty Information (PhD) – Annex-20.
e. QAC-PGPR-05 - Student Information (MS-Equivalent) – Annex-21.
f. QAC-PGPR-06 - Student Information (PhD) – Annex-22.
g. QAC-PGPR-06-A - Graduated Student Information – Annex-23.
h. QAC-PGPR-06-B - Graduated Student Information (PhD) – Annex-24.

*Filled and maintained by the department for all the MS/PhD programs for 2023-2024.

10.4 Compliance Proformas filled by Departments after Program Review

a. QAC-CP-01 - Compliance Plan against PGPR Report of QAC – Annex-25.
b. QAC-CP-02 - Compliance Plan against PGPR Report of QAC (2) – Annex-26.

c. QAC-CP-03 - Program Proforma – Annex-27.
d. QAC-CP-04 - PhD Faculty Details – Annex-28.
e. QAC-CP-05 - MS Faculty Details – Annex-29.
f. QAC-CP-06 - Details of PhD Enrolled Students – Annex-30.
g. QAC-CP-07 - Details of MS Enrolled Students – Annex-31.
h. QAC-CP-08 - Details of MS Passed out Students – Annex-32.
i. QAC-CP-09 - Details of PhD Passed out Students – Annex-33.
j. QAC-CP-10 - Program Improvement Form – Annex-34.

*to be filled by the departments in coordination with QA&C after the visitation team submit the review report for all the MS/PhD programs for 2023-2024.

ANNEX-1

CHAPTER VII

AWARD OF MASTERS' DEGREE AND ACADEMIC STANDARDS FOR MASTER STUDENTS

1. **Award of Masters' Degree.** The University, on recommendations of Board of Faculty, shall award Masters' degree to the students who satisfy the following conditions:-

   a. **Course Work.** The minimum course work required shall be 24 credits of graduate level course work or as approved by PEC/HEC for each program of masters' degree.

   b. **Research Work.** In addition to the course work, all students should either enrol for 6 Cr Hrs of research thesis or two additional courses of 3 Cr Hrs each to complete the program.

   c. **Successful Thesis Defence.** Details are given in paragraphs 15-20 of this Chapter.

   d. **Other Conditions**. Should have:-

      (1) Achieved a minimum CGPA of 2.50.

      (2) No unclear 'F' grade(s)

      (3) Cleared all dues.

2. **Eligibility for Admission.** To be eligible for admission to Masters 'program in the concerned discipline, a candidate:-

   a. Shall possess bachelor's or equivalent degree in Engineering/Islamic Studies/Management Sciences/Mathematics etc (minimum 16 years of education), from a HEC recognized university/institute. It shall be candidate's responsibility to get the equivalence established through HEC/PEC/IBCC etc, if required.

   b. Shall be up to the medical standards for going through the intense studies and training in the University.

   c. Serving in a private or Government organization, shall also attach a "No Objection Certificate" of his employer/Head, and route the admission form through proper channel.

   d. A student previously withdrawn from HITEC University on disciplinary grounds will not be eligible to apply again for any degree program.

e. In case of any dispute, decision of the Vice Chancellor shall be final for the grant of admission to any student in any master' program.

3. **Application / Registration**

a. Desirous applicants shall apply for admission in response to advertisements appearing in the press by the University, on the prescribed Application Form along with necessary documents (in duplicate) to the Registrar (Admission Office) of the University. The Admission Office will issue a receipt of acknowledgement to the candidate.

b. After initial scrutiny, the application form of eligible candidates will be forwarded to the concerned department for evaluation and recommendations as described below:

(1) The admission will be granted by each Departmental Committee to be constituted by the University on the recommendation of Dean and concerned Chairperson.

(2) Candidates with good academic record from a local/foreign university/institution of repute, shall only be considered for admission at HITEC University. The minimum laid down standards as per policy including CGPA/percentages in Bachelors/Masters shall be strictly adhered to;

(3) Relevance, strength and GPA of the courses taken by the candidate during Bachelors/Masters at previous university/institution to the program applied for shall be given due weightage; and

(4) The score obtained in GRE (General)//GAT (General) conducted by National Testing Service (NTS)/HITEC University's Entrance Test should be as per policy guidelines of HEC.

(5) Evaluations and recommendations by the concerned departments will be forwarded to Admission Office.

c. Each successful candidate will be issued "Admission Letter" by the Admission Office.

4. **Transfer of Credits**. Course credits may be transferred from other local accredited or foreign HEC recognized institution(s), if they are relevant and appropriate to a Master's program in a discipline approved by the University. Following shall be applicable:-

a. Only the course(s) with 'B' grade, equivalent or higher shall be considered for transfer;

b. The candidate will have to complete the program in the stipulated time as laid down by the HEC / Universities, and it shall include the time already spent in the previous institution;

c. A maximum of 12 Cr Hrs (for MBA 50% of Cr Hrs) earned in the previous institution can be transferred to HITEC University; and

d. The transfer of credits is subject to acceptance by the concerned Departmental Board of Studies.

5. **Academic Deficiencies.** A student shall be dropped from the Masters' program if:-

a. Fails in more than one course in MS (six Courses for MBA) in whole course work;

b. First semester GPA is less than 2.00 (less than 0.75 for MBA);

c. CGPA remains below 2.50 after completion of course work even after availing repetition of courses allowed under the rules;

d. CGPA less than 2.50;

e. 'I' (Incomplete) grade in any course.

6. **Disposal of Academically Deficient Students.** The cases are disposed off by the Board of Faculty on the recommendation of Departmental Board of Studies. The Board may award one of the following disposals:-

a. **Masters less MBA Programs.** All master's programs except MBA will be governed under following conditions:-

(1) Probation; and

(2) Withdrawal

b. **MBA Program.** Will be governed under following conditions:-

(1) Probation;

(2) Relegation; and

(3) Withdrawal

7. **Probation**

a. **Definition.** Probation means that a student is deficient in academic standards and is either likely to be relegated or withdrawn from the program.

b. **Policy for Masters'/M Phil less MBA Program.** Board of Faculty shall recommend and place a student on academic probation under any of the following conditions if the:-

(1) CGPA is equal to 2.00 or above and less than 2.50 at the end of a semester; or

(2) Student fails in a subject.

c. **Policy for MBA Program Only.** Board of Faculty shall recommend and place a student on academic probation under any of the following conditions if the:-

(1) Semester GPA is equal to 1.00 or above and less than 1.25 at the end of first Semester.

(2) CGPA is equal to 1.50 or above and less than 2.00 at the end of second Semester

(3) CGPA is below 2.50 after third semester

(4) Student fails in a subject.

8. **Relegation (For MBA Only)**

a. **Definition.** "Relegation" means that the student is asked to join the next junior class when recommended by the Board of Faculty.

b. **Policy.** Board of Faculty shall recommend and place a student on relegation under any of the following conditions if :-

(1) First semester GPA is equal to 0.75 but below 1.00;

(2) CGPA at the end of second semester is equal to 1.00 but below 1.50

(3) CGPA at the end of third semester onwards is equal to 1.50 but below 2.00

(4) On disciplinary or medical grounds when so recommended.

9. **Withdrawal**

a. **Definition.** "Withdrawal" means that a student is considered unsuitable for further studies and shall be struck off the University rolls.

b. **Policy for Masters less MBA Program.** Board of Faculty shall recommend a student for withdrawal, under any of the following conditions if the:-

(1) First semester GPA is below 2.00;or

(2) Fails more than once in course work;

(3) or CGPA remains below 2.5 after completion of the course work even after availing the chances allowed under the provision of regulation "Repetition of Course"

c. **Policy for MBA Program.** Board of Faculty shall recommend a student for withdrawal, under any of the following conditions if the:-

(1) First semester GPA is less than 0.75; or CGPA at the end of second semester is below 1.00, or CGPA at the end third semester onwards is below 1.50; or

(2) Student receives 'F' grade in more than six courses; or

(3) Student fails to improve GPA / CGPA to 2.50 or above after relegation;

(4) On disciplinary or medical grounds when so recommended.

10. **Improvement of CGPA.** Before opting for thesis work or two additional courses in lieu for MS or thesis work by MBA, a student may repeat only two courses (six courses for MBA) having grade point of less than 3.00. Procedure for repeating the course(s) shall be as under:-

a. The candidate shall apply to the Chairperson for permission to repeat the course.

b. The student shall have to pay the prescribed tuition fee for the repeated course. The transcript shall show both the old grade and the new earned grade but the CGPA shall be based on the better grade.

c. In addition to clearance of the 'F' grade, a student shall be allowed to repeat a maximum of two courses only during his / her entire program.

d. Course replacement will only be allowed in case the same is not being offered and time to complete the program is short.

11. **Duration.** Minimum period for completion of MS program shall be one and a half years and maximum period shall be four years. Minimum period for MBA program shall be 1.5 or 3.5 and maximum period shall be 3.5 or 6 years keeping in view the credit hours.

12. **Appointment of Supervisor for Thesis (MS Program only).** On the written request of the student, the Chairperson with the @approval@ of the concerned Dean of faculty will send the case for formal notification.

12A. **Change of Supervisor for Thesis (MS Program only).** On the request of student, change in MS supervisor can be allowed by the Chairperson in consultation with Dean concerned with the approval of the Vice Chancellor under special circumstances.

12B. **Co-Supervisor/Co-Advisor** may be appointed if required who is a PhD qualified faculty/specialist from industry or an R&D organization (in a specific field in which requisite expertise/facilities are not available within the university). The co-supervisor/co-advisor shall assist in supervision/ guidance of thesis of MS student till completion of research work. The co-supervisor/co-advisor must have sufficient experience and relevant qualification in the field of research.

13. **Appointment of External Examiner/Supervisor**

a. Standing list of local external examiners/supervisors suggested from time to time by the Departmental Board of Studies and approved by Board of Faculty.
b. The supervisor shall suggest a panel of at least three external local examiners in order of priority from the approved list. The Dean shall appoint one external local examiner from the suggested panel to evaluate the Thesis.
c. Deleted.

14. **Submission of Thesis.** The candidate shall be eligible to submit the thesis, provided the course work formalities have been completed. The thesis should be written in English language except where recommended by the Chairpersons and allowed by the VC.

15. **Research during Master Program.** The procedure for thesis research shall be as under:
a. All students must successfully complete a minimum of 6 credits in Master's thesis.
b. Subject of research shall be agreed to by the student and the research Supervisor/ Advisor (thesis advisor). The research must not be plagiarized.
c. Thesis shall be graded and will be counted towards calculation of CGPA for all programs.
d. Change in the area of research, once it has been finalized, will be discouraged. However, if it becomes inevitable, then the matter will be discussed in Departmental Board of Studies. After detailed deliberations, the Board will forward its recommendations to the Dean for approval.

16. **Evaluation of Thesis**
a. The Thesis will be sent for evaluation to one local (external) expert.
b. Final presentation of Thesis will be given after obtaining positive evaluation report by the local (external) expert.
c. The expert shall submit his/her report to the Controller of Examinations.
d. In case, the expert asks for a resubmission, the candidate will be asked to work on the Thesis for a maximum period of six months before submitting it for re-evaluation.
e. The Thesis shall be resubmitted after incorporating revisions and suggested changes.
f. First resubmission may be allowed at least three months after intimation to the concerned supervisor.
g. Third resubmission is not allowed and the candidate shall be declared fail.
h. Chairperson will be responsible to arrange the open defence of the Thesis.

17. **Change of External Expert**

a. In case, the expert fails to respond within two weeks, a new expert shall be recommended to the Dean.

b. In case, the second expert does not respond within two weeks, a new panel of two experts shall be recommended to the Dean.

18. **Submission of Final Thesis**. The thesis submitted by Masters 'candidate shall comply with the following conditions:-

a. This thesis should exhibit literature research, application of well proven knowledge and its simulation or practical implementation in creating a solution.

b. It shall not include research work for which a degree has already been conferred in this or any other university.

c. Initially, the candidate shall submit @two@ spiral bound copies of completed thesis along with an application on prescribed form, duly recommended by the Supervisor and the Chairman of the Department to the Controller of Examinations for evaluation.

d. At final submission four hard bound copies of Thesis having a soft copy on CD, will be prepared for submitting of one copy to the University, one copy for the Department, one copy for the Supervisor and one copy for the student.

19. **Award of Masters Degree**

a. The candidate who successfully completes all the requirements including passing of Viva-Voce examination shall be awarded, with the approval of the Board of Faculty; the degree of Masters of Science under the Seal of the University.

b. The Vice Chancellor may approve the recommendations of the Board of Faculty on behalf of the Board of Governors regarding the award of Masters 'degree to the candidate(s).

20. **Fee and Other Dues.** Each student shall be required to pay tuition fee and such other charges as may be prescribed from time to time.

21. **Thesis / Project MBA Program.** The submission and evaluation of MBA Thesis/Project will be done under Departmental Boards.

22. **Plagiarism Test.** Plagiarism test must be conducted on the thesis before its submission to external expert or as applicable by the QAC.

CHAPTER VIII

AWARD OF PhD DEGREE AND ACADEMIC STANDARDS FOR PhD STUDENTS

1. **Award of PhD Degree.** HITEC University, on recommendations of Board of Advance Studies and Research (BAS&R) shall award degree of Doctor of Philosophy (PhD) to the students who satisfy the following conditions:-

    a. **Course Work/Residency.** The minimum course work required shall be 18 credits of graduate level courses and two years of Residency. Only relevant graduate level courses or equivalent shall be counted towards the total course work requirements of PhD.

    b. **Research Work.** In addition to the course work, all students must register for 30 Credit Hours of doctoral research and volume of research work to be determined by the Supervisor.

    c. **Successful Dissertation Defence.** Details are given in paragraphs 18-21 of this Chapter.

1. **Eligibility for Admission.** To be eligible for admission to PhD a candidate:-

    a. Shall possess M S/M Phil (18 + years) degree or its equivalent with a minimum CGPA 3.00 out of 4.00 or first division in the relevant subject from a recognized university.

    b. In case the candidate is serving in a private or government organization, he/she shall also attach a "No Objection Certificate" from his/her employer, and route the admission form through proper channel.

    c. Shall define the area of research and proposed supervisor.

    d. Shall pass GAT/GRE subject test before the admission and meet HEC admission criterion as announced from time to time.

    e. A student previously withdrawn from HITEC University on disciplinary grounds will not be eligible to apply again for any degree program.

    f. In case of dispute, decision of the Vice Chancellor shall be final for grant of admission to any student in PhD program.

3. **Application /Registration**

a. Desirous applicants shall apply to the Registrar HITEC University on the prescribed application form along with necessary documents (in duplicate) to the Admission Office, as per advertised schedule of admissions. The Admission Office will issue a receipt of acknowledgement to the candidate.

b. After initial scrutiny as per the eligibility of the candidate, the application form will be forwarded to the concerned department for evaluation and recommendations.

c. Each department will form a PhD Admission Committee headed by the Chairperson with 2-3 PhD faculty members as approved by the VC. The Committee will scrutinize each case for the approval of VC, as per following guidelines:

   (1) Appraisal of academic profile of the candidate and the accompanying letters of recommendation.

   (2) The research proposal will also be carefully assessed.

   (3) The candidate could be called for an interview by the committee.

   (4) Availability of a suitably qualified and experienced supervisor in the relevant field of research and his acceptance of the candidate are essential for the grant of admission to a candidate.

d. After receiving approval of VC, the Registrar shall issue notification of the candidate as a provisional PhD student with intimation to all concerned. The letter will be issued to each successful/unsuccessful candidate.

e. At the beginning of the program, every student shall register with the University in the discipline for which he/she has been recommended by the Admission Committee.

f. Each student so selected shall be required to register and pay security and admission fee within 30 days from the date of issuance of the notification of registration.

g. All admissions shall be liable to be cancelled until the submission of:-

   (1) Required/pre-requisite and attested documents.

   (2) Full security and admission fee as laid down.

   (3) Any other supporting documents that may be required.

   (4) Attested copies of certificate within two weeks of declaration of results by the candidates awaiting result is mandatory, otherwise the University will cancel their admission.

Note: - At the time of registration, candidates will provide original certificates also, which will be retained by the Admission Office till completion of the program.

4. **Academic Deficiencies.** A student shall be dropped from the PhD degree program if:

   a. Receives 'F' grade in more than one course.
   b. Fails after repeating the course.
   c. On completion of course work and even after availing the chances for improvement of grades, the CGPA remains below 3.00
   d. Fails twice in the comprehensive examination.
   e. On disciplinary grounds when recommended by the Discipline Committee.
   f. Other conditions are also applicable as mentioned in these rules.

5. **Improvement of CGPA.** Before taking the comprehensive examination, a student may repeat only two courses having grade point average of less than 3.00. Procedure for repeating the course(s) shall be as under:-

   a. The candidate shall apply to the Chairperson for permission to repeat a course. The Chairperson, in consultation with the Supervisor, may permit the student to repeat the course, subject to its offering.
   b. The transcript shall show both the old and the new earned grades but the CGPA shall be based on the better grade.
   c. The student shall have to repeat the course within the time limit given by the supervisor.
   d. In addition to clearance of the 'F' grade, a student shall be allowed to repeat a maximum of two courses only during his/her entire PhD coursework.

6. **Confirmation of Admission**

   a. After successful completion of graduate level courses or equivalent (minimum 18 credit hours) with a minimum CGPA of 3.00 out of 4.00, a student shall take a comprehensive examination consisting of written and oral components.
   b. The comprehensive examination should be conducted as soon as possible after the completion of course. The pass percentage shall be 60%.
   c. A Department shall normally hold at least one comprehensive examination in an academic year which shall be conducted by the PhD Examination Committee approved by the VC on the recommendations of the Chairperson of the Department and Dean of the Faculty concerned in consultation with the Supervisor.
   d. The Supervisor of the student will be the Chairman of this Committee.

e. A maximum of two chances will be available for clearing the comprehensive examination.

f. The registration of a PhD student shall be cancelled if he/she does not pass the comprehensive examination even in the second attempt.

g. Within one year of passing the comprehensive examination, the student with the guidance of supervisor will submit a synopsis of the proposed research topic for the approval of Board of Advanced Studies and Research.

h. On approval of synopsis of the proposed research topic by Board of Advanced Studies and Research, the admission of the candidate to PhD program will be confirmed.

i. Failure to present the research proposal within the specified time may result in cancellation of admission of the candidate.

7. **Appointment of Supervisor.** Board of Advanced Studies and Research will appoint a supervisor from the relevant field as proposed and approve the field of research/title on the recommendation of the Department concerned.

7A. **Appointment of Guidance and Evaluation Committee.** A doctoral GEC shall be formed at the earliest after the acceptance of an applicant into PhD Program, within a month after the appointment of supervisor. The Chairperson in consultation with the student and his supervisor and also with the approval of Dean shall appoint the Committee. The student's supervisor shall chair the Committee. GEC shall comprise of minimum three PhD members including the supervisor, one member from the department and one external member from a reputed national university or research organization / relevant industry. One additional member (if required) can be from other department of the HITEC University keeping in view the research topic and expertise of the faculty.

7B. **Proposal Defense.** There shall be a proposal defense of PhD scholar before the GEC within 6 months after passing the Comprehensive Examination.

7 C. **Appointment of a Co-Supervisor.** A co-supervisor, if required, will be appointed with the mutual consent of student, supervisor, Department Chairperson and Dean. A co-supervisor should be a PhD, and shall be either from another department within HITEC University or outside the university/research organization.

8. **Medium of Instructions.** The medium of instructions, writing and examination shall be English unless otherwise approved by the VC.

9. **Progress Reports**

a. The Supervisor of a PhD student shall submit a detailed report to the BAS&R by 30th June and 31st December each year on the progress of the student.

b. In the absence of Supervisor, progress report will be submitted by the Chairman of the Department concerned.

c. In case of two consecutive unsatisfactory reports by the Supervisor, the case will be recommended to BAS&R for cancellation of admission.

10. **Change of Supervisor/Topic**

a. Any subsequent changes in the proposal will be forwarded to BAS&R through concerned Department and Dean.

b. Request for change in PhD supervisor or if a supervisor opts to withdraw from supervision of a candidate will be sent to BAS&R for approval, through the Chairperson of concerned department.

c. No relaxation in the completion time will be granted on this basis.

d. The change request of supervisor and topic is allowed once during entire PhD coursework.

11. **Duration**

a. Minimum period for completion of PhD program shall be three years whereas the maximum period shall be eight years and shall include two years of residency.

b. Deleted

c. During residency, the University staff(s) selected to undergo the PhD program shall temporarily discontinue teaching (for residency period only) and will be paid scholarship/stipend as applicable/authorized from time to time.

12. **Research Publication.** Publication of at least one research paper based on PhD research work in an HEC approved "W" or "X" category Journal is essential for the award of PhD Degree in Science disciplines, while for Social Sciences paper published in Y category journal is acceptable besides W and X category of Journals.

13. **Appointment of External Examiners**

a. Standing list of local external and foreign examiners suggested from time to time by the Departmental Board of Studies/Board of Faculty concerned and approved by the Board of Advanced Studies and Research will be maintained by each Department.

b. Deleted.

c. The Supervisor shall suggest a panel of at least eight external examiners (four local and four foreign experts) from the approved list. The VC in consultation with Dean shall appoint two external and two local examiners from the suggested panel to evaluate the dissertation.

d. Dissertation must be evaluated by at least two experts from technologically advanced countries and two local experts.

14. **Plagiarism Test.** Plagiarism Test must be conducted on the dissertation before its submission to foreign and local experts by the QAC.

15. **Evaluation of Research Dissertation**

a. The dissertation will be sent for evaluation to two experts from technologically/academically advanced foreign countries and two local experts (external).

b. Final presentation of dissertation will be given after obtaining unanimous positive evaluation report by all the four experts.

c. Each expert shall submit his/her report to the Controller of Examinations.

d. In case of rejection by one of the expert, the dissertation will be sent to the expert from the originally proposed panel for obtaining the final opinion.

e. In case, if two of the experts ask for a resubmission, the candidate will be asked to work on the dissertation for a maximum period of six months before submitting it for re-evaluation.

f. The dissertation shall be resubmitted after incorporating revisions and changes suggested by expert(s).

g. Re-submission may be allowed at least three months after intimation to the concerned supervisor.

16. **Interpretation of Reports**

a. If dissertation is approved by the four examiners, the Dean shall allow the candidate to defend the dissertation in open defence.

b. If any of the examiners suggests modification/revision of the dissertation, the candidate shall be required to resubmit a revised version of the dissertation, duly certified by the Supervisor, within one year.

c. The revised dissertation shall be approved by the same examiner.

d. Minor modifications will be incorporated without referring again to the examiner.

17. **Evaluation Process if External Examiners Fail to Respond**

a. In case, one of foreign/local experts fails to respond within three months, the dissertation would be sent to the third foreign/local expert and then to fourth expert, if the third foreign/local expert also fails to respond within three months.

b. In case, fourth foreign/local expert fails to respond within three months, a new panel shall be recommended for selection by the supervisor.

c. The process would be repeated until evaluation reports by two foreign and two local experts have been received.

18. **External Examiner for Defence of Dissertation**

a. The Supervisor, after receiving experts' unanimous positive opinion, will confirm to Controller of Examinations that all requirements of the program have been met successfully for the conduct of Dissertation defence.

b. The Dissertation defence shall be conducted by the panel of examiners consisting of two local examiners (who had reviewed the dissertation), members of the GEC (including the supervisor) and the Chairperson of the Department. All members of panel of examiners, well before the date of open defence, shall have complete access to the dissertation and the reports of external examiners. [@] In case of non availability of a local external examiner (who had reviewed the dissertation), another local external examiner(s) (already approved vide Para 13c) will be appointed by the VC in consultation with Dean.

c. The Controller of Examinations will notify the date and place for holding the open defence.

d. Prior to candidate's presentation, the Supervisor will introduce the student.

e. The candidate will make a detailed presentation of the research work.

f. For maximum participation, the schedule of open defence of the Dissertation by the candidate shall be announced at least four weeks prior to its conduct.

g. The Dissertation defence shall be open to the public but the evaluation will be done by the panel of examiners.

h. Consequent to the open defence, the panel of examiners will give its decision by a majority vote.

19. **Submission of Dissertation**. The dissertation submitted by PhD candidate shall comply with the following conditions:-

a. It shall form a distinct contribution to knowledge and afford evidence of originality, shown by the discovery of new facts, by the exercise of independent critical judgment, and/by the invention of new methods of investigation.

b. It shall not include research work for which a degree has already been conferred in this or any other university.

c. Initially, the candidate shall submit four spiral bound copies of completed dissertation along with an application on prescribed form, duly recommended by the supervisor and the Chairman of the Department to the CoE, for evaluation of dissertation.

d. At final submission six hard bound copies of dissertation with a soft copy each on CD, will be prepared for submitting of four copies to the University (out of which one set will be sent to HEC), one copy for the Department, one copy for the Supervisor, one for Library and one student copy.

20. **Award of PhD Degree**

a. The candidate who successfully completes all the requirements including passing of Dissertation defence shall be awarded, with the approval of the Board of Advanced Studies and Research; the degree of PhD under the Seal of the University in the relevant discipline.

b. The VC may approve the recommendations of the Board of Advanced Studies and Research on behalf of the Board of Governors regarding the award of PhD degree to the candidate.

21. **Code of Ethics**

a. The candidate or his spouse or his relatives shall not communicate with external examiner(s) directly or indirectly.

b. Any faculty member of the department shall not participate in the PhD process of a candidate at any stage, if the candidate is his blood relation or his spouse or the faculty member is a candidate himself.

c. External examiners may not be co-author of any publication with the candidate or his spouse or his blood relative or supervisor.

ANNEX-2

DEPARTMENT OF ELECTRICAL ENGINEERING

COURSES OFFERED IN MS/PHD

S. No.	Code	Course Title	Cr. Hr.
1	EE-811	Advanced Digital Signal Processing	3 + 0
2	EE-812	Digital Image Processing	3 + 0
3	EE-813	Real-Time DSP Design & Applications	3 + 0
4	EE-814	GIS and Remote Sensing	3 + 0
5	EE-817	Statistical Signal Processing	3 + 0
6	EE-818	Adaptive Signal Processing	3 + 0
7	EE-819	Array Signal Processing	3 + 0
8	EE-820	Advanced Computer Architecture	3 + 0
9	EE-821	Stochastic Systems	3 + 0
10	EE-822	Information Coding & Theory	3 + 0
11	EE-823	Advanced Digital Communication	3 + 0
12	EE-824	Secure Communication	3 + 0
13	EE-825	Fuzzy Control Systems	3 + 0
14	EE-826	Telecommunication & Switching Principles	3 + 0
15	EE-827	Optical Fiber Communication	3 + 0
16	EE-828	Smart Antennas	3 + 0
17	EE-831	Advanced Linear Control Systems	3 + 0
18	EE-832	Nonlinear Control Systems	3 + 0
19	EE-838	Modern Electrical Drives	3 + 0
20	EE-847	Advanced topics in Image & Video Processing	3 + 0
21	EE-849	Special topics in Wireless Communications	3 + 0
22	EE-844	Research Methodologies	3 + 0

23	EE-851	RF Transmission and Antenna Design	3 + 0
24	EE-852	Advanced Engineering Electromagnetic	3 + 0
25	EE-853	Nanomaterials Engineering Applications	3 + 0
26	EE-854	Network Optimization	3 + 0
27	EE-855	Power System Transients	3 + 0
28	EE-856	Satellite Communication	3 + 0
29	EE-857	Advanced Power Electronics	3 + 0
30	EE-858	High Voltage Engineering	3 + 0
31	EE-859	Optimization Techniques in Power System	3 + 0
32	EE-860	Power System Operation	3 + 0
33	EE-861	Electrical Power Distribution Systems	3 + 0
34	EE-862	Reliability Analysis for Power Systems	3 + 0
35	EE-863	Advanced Topics in Antenna Design	3 + 0
36	EE-866	Semiconductor Physics and Devices	3 + 0
37	EE-867	Microwave Network Analysis and Passive Components	3 + 0
38	EE-868	Electrical Machine Design	3 + 0
39	EE-869	Advance Power System Protection	3 + 0
40	EE-870	Wind Energy and Distributed Generation	3 + 0
41	EE-872	Advanced Power System Stability & Control	3 + 0
42	EE-873	Dielectric and Electrical Insulation Materials	3 + 0
43	CS-829	Advanced Computer Vision	3 + 0
44	CS-811	Advanced Computer Networks	3 + 0
45	EC-802	Advanced Digital Systems Design	3 + 0

ANNEX-3

DEPARTMENT OF MECHANICAL ENGINEERING

COURSES OFFERED IN MS/PHD

S. No.	Code	Course Title	Cr. Hr.
1	ME-838	Advanced Heat Transfer	3 + 0
2	ME-818	Advanced Fluid Mechanics	3 + 0
3	ME-813	Advanced Solid Mechanics	3 + 0
4	ME-811	Finite Element Analysis	3 + 0
5	ME-816	Advanced Thermodynamics	3 + 0
6	ME-819	Computational Fluid Dynamics	3 + 0
7	ME-829	Engineering Design and Optimization	3 + 0
8	ME-837	Radiation Heat Transfer	3 + 0
9	MT-839	Advanced Numerical Techniques	3 + 0
10	ME-840	Gas Dynamics	3 + 0
11	ME-843	Advanced Refrigeration	3 + 0
12	ME-861	Boundary layer Flows	3 + 0
13	ME-862	Introduction to Turbulent Flows	3 + 0
14	ME-838	Theory of Turbo Machinery	3 + 0
15	ME-869	Flow Induced Vibrations	3 + 0
16	ME-832	Advanced Dynamics	3 + 0
17	ME-824	Advanced Robotics	3 + 0
18	ME-865	Advanced Control Systems	3 + 0
19	ME-860	Solar Thermal Systems	3 + 0
20	ME-868	Advanced Mechanical Vibrations	3 + 0
21	ME-844	Design of Thermal System	3 + 0
22	ME-867	Sustainable Renewable Energy Systems	3 + 0

23	ME-812	Advanced Material Science and Engineering	3 + 0
24	ME-900	Special Topics	3 + 0
25	ME-823	Manufacturing System	3 + 0
26	ME-835	Theory of Plates and Shell	3 + 0
27	ME-842	Finite Element Analysis of Composite	3 + 0
28	ME-863	Materials	3 + 0
29	ME-870	Mechanics of Manufacturing Processes	3 + 0
30	ME-866	Additive Manufacturing	3 + 0
31	ME-820	Design for Manufacture and Assembly	3 + 0
32	ME-831	Experimental Stress Analysis	3 + 0
33	ME-830	Fracture Mechanics	3 + 0
34	ME-841	Mechanics of Composite Materials	3 + 0
35	ME-815	Advanced Mechanical Behavior of Materials	3 + 0

ANNEX-4

DEPARTMENT OF COMPUTER SCIENCE

COURSES OFFERED IN MS/PHD

MS Core Courses

S. No.	Code	Course Title	Cr. Hr.
1	CS-801	Advanced Theory of Computation	3 + 0
2	CS-802	Advanced Algorithm Analysis	3 + 0
3	EE-801	Advanced Computer Architecture	3 + 0
4	EC-861	Advanced Operating Systems	3 + 0

MS Elective Courses

S. No.	Code	Course Title	Cr. Hr.
1	CS-811	Advanced Computer Networks	3 + 0
2	CS-812	Wireless Networks	3 + 0
3	CS-813	Network Simulation & Modeling	3 + 0
4	CS-814	Multimedia Communication	3 + 0
5	CS-815	Cryptography & Network Security	3 + 0
6	CS-822	Advanced Digital Image Processing	3 + 0
7	CS-823	Machine Learning	3 + 0
8	CS-824	Advanced Neural Networks	3 + 0
9	CS-825	Decision Support Systems	3 + 0
10	CS-829	Advanced Computer Vision	3 + 0
11	CS-831	Advanced Database Management Systems	3 + 0
12	CS-832	Data Mining	3 + 0
13	CS-833	Data Warehousing	3 + 0

14	CS-834	Web Engineering	3 + 0
15	CS-835	Advanced Web Analytics	3 + 0
16	CS-836	Semantic Web	3 + 0
17	CS-841	Advanced Software Engineering	3 + 0
18	CS-842	Advanced Software Project Management	3 + 0
19	EC-842	Wireless and Mobile Communication	3 + 0
20	CS-843	Software Quality Assurance	3 + 0
21	CS-844	Information Security	3 + 0
22	CS-853	Next Generation Networks	3 + 0
23	EC-853	Pattern Recognition & Analysis	3 + 0
24	CS-854	Advanced Information Management Systems	3 + 0
25	EC-854	Neural and Fuzzy Systems	3 + 0
26	CS-855	Object Oriented Databases	3 + 0
27	CS-856	Software Architecture	3 + 0
28	CS-857	Parallel & Distributed Systems	3 + 0
29	CS-858	Research Methods	3 + 0
30	CS-859	Mobile & Pervasive Computing	3 + 0
31	CS-861	Operation Research	3 + 0
32	EC-872	Data Communication & Networks	3 + 0
33	EC-876	Embedded Wireless Sensor Networks	3 + 0
34	CS-877	Soft Computing	3 + 0
35	CS-878	Intelligent Systems	3 + 0
36	EC-878	Adhoc Networks	3 + 0
37	CS-879	Multimedia Systems and Applications	3 + 0
38	EC-879	Distributed Embedded Computing	3 + 0
39	CS-880	Mobile Communication Systems	3 + 0

40	CS-883	Advanced Cloud Computing	3 + 0
41	CS-885	High Performance Computing	3 + 0
42	EC-891	Pervasive Devices and Technology	3 + 0
43	EC-892	Real-time Systems	3 + 0
44	CS-940	Special Topics in Requirement Engineering	3 + 0
45	CS-950	Selected Topics in Human Computer Interface	3 + 0
46	EE-8XX	Research Methodologies	3 + 0
47	ME-8XX	Modeling and Simulation	3 + 0
48	CS-899	MS Thesis	3 + 0

PhD Elective Courses

S. No.	Code	Course Title	Cr. Hr.
1	EE-801	Advanced Computer Architecture	3 + 0
2	CS-802	Advanced Algorithm Analysis	3 + 0
3	EC-803	VLSI Architecture & Design	3 + 0
4	EC-805	Microcontroller system design & applications	3 + 0
5	EC-809	High performance programming with multicore & GPUs	3 + 0
6	CS-811	Advanced Computer Networks	3 + 0
7	CS-813	Network Simulation & Modeling	3 + 0
8	CS-814	Multimedia Communication	3 + 0
9	CS-815	Cryptography & Network Security	3 + 0
10	CS-816	Advanced Wireless Networks	3 + 0
11	CS-817	Research Trends in Pervasive Computing	3 + 0
12	CS-818	Network Performance Evaluation	3 + 0
13	CS-819	Information Theory & Coding	3 + 0
14	CS-822	Advanced Digital Image Processing	3 + 0

15	CS-823	Machine Learning	3 + 0
16	EC-825	Embedded Control Systems	3 + 0
17	CS-827	Advanced Pattern Recognition	3 + 0
18	CS-829	Advanced Computer Vision	3 + 0
19	CS-831	Advanced Database Management Systems	3 + 0
20	EC-831	Advanced Digital Signal Processing	3 + 0
21	CS-832	Data Mining	3 + 0
22	CS-835	Advanced Web Analytics	3 + 0
23	CS-837	Distributed Database Systems	3 + 0
24	CS-838	Data Visualization	3 + 0
25	CS-839	Multimedia and Web Databases	3 + 0
26	CS-841	Advanced Software Engineering	3 + 0
27	CS-844	Information Security	3 + 0
28	CS-845	Research Trends in Requirement Engineering	3 + 0
29	CS-846	Intelligent User Interfaces	3 + 0
30	CS-847	Global System Development	3 + 0
31	EC-853	Pattern Recognition & Analysis	3 + 0
32	CS-857	Parallel & Distributed Systems	3 + 0
33	CS-876	Neural and Fuzzy Systems	3 + 0
34	CS-877	Soft Computing	3 + 0
35	CS-878	Intelligent Systems	3 + 0
36	CS-879	Multimedia Systems and Applications	3 + 0
37	CS-880	Mobile Communication Systems	3 + 0
38	CS-881	Advanced Big Data Analysis	3 + 0
39	CS-882	Contemporary Issues in Distributed Database Systems	3 + 0
40	CS-883	Advanced Cloud Computing	3 + 0

41	CS-884	Advanced Evolutionary Computing	3 + 0
42	CS-885	High Performance Computing	3 + 0
43	EC-892	Real Time Systems	3 + 0
44	CS-910	Selected Topics in Computer Networks	3 + 0
45	CS-920	Selected Topics in Digital Image Processing	3 + 0
46	CS-930	Special Topics in Database Management Systems	3 + 0
47	CS-941	Selected Topics in Software Engineering	3 + 0
48	EE-8XX	Research Methodologies	3 + 0
49	ME-8XX	Modeling and Simulation	3 + 0
50	CS-999	PhD Thesis	3 + 0

ANNEX-5

DEPARTMENT OF COMPUTER ENGINEERING

COURSES OFFERED IN MS/PHD

MS Core Courses

S. No.	Code	Course Title	Cr. Hr.
1	EC-801	Advanced Computer Architecture	3 + 0
2	EC-802	Advanced Digital Systems Design	3 + 0
3	EC-803	VLSI Architecture and Design	3 + 0
4	EC-821	Methodologies	3 + 0
5	EC-831	Advanced Embedded Systems	3 + 0
6	EC-899	Advanced Digital Signal Processing	6 + 0

MS Specialization Courses

S. No.	Code	Course Title	Cr. Hr.
1	EC-804	Advanced Microprocessor and Microcontroller Design	3 + 0
2	EC-805	Microcontroller System Design and Applications	3 + 0
3	EC-806	System on Chip Design	3 + 0
4	EC-807	HW/SW Co-Design	3 + 0
5	EC-808	FPGA Based Systems	3 + 0
6	EC-809	DSP Integrated Circuits	3 + 0
7	EC-810	Advanced FPGA Design	3 + 0
8	EC-811	Parallel Processing Architecture	3 + 0
9	EC-812	RISC Processor Architecture and Programming	3 + 0
10	EC-813	High Performance Programming with Multicore and GPUs	3 + 0
11	EC-822	Embedded Communication Software Design	3 + 0

12	EC-823	Architecture and Design of Distributed Embedded Systems	3 + 0
13	EC-824	Software Modeling for Embedded System	3 + 0
14	EC-825	Embedded Control Systems	3 + 0
15	EC-826	Application of MEMS Technology	3 + 0
16	EC-829	Real Time Operating Systems	3 + 0
17	EC-851	Soft Computing	3 + 0
18	CS-878	Intelligent Systems	3 + 0
19	EC-853	Pattern Recognition & Analysis	3 + 0
20	EC-854	Neural and Fuzzy Systems	3 + 0
21	CS-823	Machine Learning	3 + 0
22	CS-824	Artificial Neural Networks	3 + 0
23	EC-872	Data Communication & Networks	3 + 0
24	EC-876	Embedded Wireless Sensor Networks	3 + 0
25	EC-877	Embedded Networking	3 + 0
26	EC-878	Adhoc Networks	3 + 0
27	EC-879	Distributed Embedded Computing	3 + 0
28	CS-811	Advanced Computer Networks	3 + 0
29	CS-815	Cryptography & Network Security	3 + 0
30	CS-844	Information Security	3 + 0
31	CS-859	Mobile and Pervasive Computing	3 + 0

General Electives Courses

S. No.	Code	Course Title	Cr. Hr.
1	CS-802	Advanced Algorithms Analysis	3 + 0
2	CS-814	Multimedia Communication	3 + 0
3	CS-819	Information Theory & Coding	3 + 0

4	CS-822	Advanced Digital Image Processing	3 + 0
5	CS-827	Advanced Pattern Recognition	3 + 0
6	EC-832	Advanced Digital Image Processing and Applications	3 + 0
7	CS-829	Advanced Computer Vision	3 + 0
8	EC-842	Wireless and Mobile Communication	3 + 0
9	EE-844	Research Methodologies (Compulsory)	3 + 0
10	CS-857	Parallel & Distributed Systems	3 + 0

PhD Courses

S. No.	Code	Course Title	Cr. Hr.
1	EC-801	Advanced Computer Architecture	3 + 0
2	EC-802	Advanced Digital Systems Design	3 + 0
3	EC-803	VLSI Architecture and Design	3 + 0
4	EC-804	Methodologies	3 + 0
5	EC-805	Advanced Microprocessor and	3 + 0
6	EC-806	Microcontroller Design	3 + 0
7	EC-807	Microcontroller System Design and	3 + 0
8	EC-808	Applications	3 + 0
9	EC-809	System on Chip Design	3 + 0
10	EC-810	HW/SW Co-Design	3 + 0
11	EC-811	FPGA Based Systems	3 + 0
12	EC-812	DSP Integrated Circuits	3 + 0
13	EC-813	Advanced FPGA Design	3 + 0
14	EC-814	Parallel Processing Architecture	3 + 0
15	EC-821	RISC Processor Architecture and	3 + 0
16	EC-822	Programming	3 + 0

17	EC-823	High Performance Programming with	3 + 0
18	EC-824	Multicore and GPUs	3 + 0
19	EC-825	Embedded Control Systems	3 + 0
20	EC-826	Application of MEMS Technology	3 + 0
21	EC-829	Real Time Operating Systems	3 + 0
22	EC-831	Advanced Digital Signal Processing	3 + 0
23	EC-832	Advanced Digital Image Processing and Applications	3 + 0
24	EC-842	Soft Computing	3 + 0
25	EC-851	Pattern Recognition and Analysis	3 + 0
26	EC-853	Neural and Fuzzy Systems	3 + 0
27	EC-854	Advanced Operating Systems	3 + 0
28	EC-861	Soft Computing	3 + 0
29	EC-955	Advance Pattern Recognition	3 + 0
30	EC-871	Mobile Communication Systems	3 + 0
31	EC-872	Data Communication and Networks	3 + 0
32	EC-873	Multimedia Communication	3 + 0
33	EC-874	Information Theory and Coding	3 + 0
34	EC-876	Embedded Wireless Sensor Networks	3 + 0
35	EC-877	Embedded Networking	3 + 0
36	EC-878	Adhoc Networks	3 + 0
37	EC-879	Distributed Embedded Computing	3 + 0
38	EC-880	Advance Cloud Computing	3 + 0
39	EC-882	Distributed Database Systems	3 + 0
40	EC-884	Advanced Fault Tolerant Computing	3 + 0
41	EC-890	Robotics and Control	3 + 0
42	EC-891	Pervasive Devices and Technology	3 + 0

43	EC-892	Real Time Systems	3 + 0
44	EC-893	Applied Mathematics for Engineers	3 + 0
45	EC-920	Advance Systems Programming	3 + 0
46	EC-921	Advanced Multimedia Communication	3 + 0
47	EC-922	Advanced Human-Computer Interaction	3 + 0
48	EC-930	Selected topics in Digital Image Processing	3 + 0
49	EC-935	Big Data Analysis	3 + 0
50	EC-950	Advanced Neural Networks and Fuzzy logic	3 + 0
51	EC-951	Advanced Deep Learning	3 + 0

ANNEX-6

DEPARTMENT OF MATHEMATICS

COURSES OFFERED IN MS/PHD

S. No.	Code	Course Title	Cr. Hr.
1	MTH-801	Perturbation Methods-I	3 + 0
2	MTH-805	Mathematical Modeling	3 + 0
3	MTH-806	Mathematical Essentials for Cryptography	3 + 0
4	MTH-807	Relativistic Astrophysics	3 + 0
5	MTH-808	Advanced Ordinary Differential Equations with Applications	3 + 0
6	MTH-809	Advanced Numerical Analysis	3 + 0
7	MTH-810	Numerical Linear Algebra	3 + 0
8	MTH-812	Computational Fluid Dynamics	3 + 0
9	MTH-815	Boundary Value Problems-I	3 + 0
10	MTH-817	Integral Equations and Applications	3 + 0
11	MTH-818	Advanced Partial Differential Equations and Applications	3 + 0
12	MTH-820	Variational Inequalities and Applications	3 + 0
13	MTH-821	Numerical Solution of Partial Differential Equations	3 + 0
14	MTH-823	Finite Element Analysis-I	3 + 0
15	MTH-824	Advanced Numerical Linear Algebra	3 + 0
16	MTH-826	Advanced Mathematical Physics	3 + 0
17	MTH-828	Advanced Cryptography	3 + 0
	MTH-829	Fractional Calculus & Applications	3 + 0
	MTH-831	Numerical Solution of Boundary Value Problems for ODEs	3 + 0
	MTH-832	Advanced Fluid Mechanics	3 + 0
	MTH-833	Non-Newtonian Fluid Mechanics	3 + 0

	MTH-834	Numerical Optimization & Applications	3 + 0
	MTH-835	Integral Transforms & their Applications	3 + 0
	MTH-836	Turbulence Modeling	3 + 0
	MTH-837	Thermal and Concentration Boundary Layer	3 + 0
	MTH-838	Mathematical Theory of Elastodynamics	3 + 0
	MTH-839	Advanced Numerical Techniques	3 + 0
	MTH-840	Mathematical Theory of Liquid Chromatography	3 + 0
	MTH-841	Statistical Mechanics	3 + 0
	MTH-900	Special Topics	3 + 0
	EM-501	Topics of Engineering for Mathematicians	3 + 0
	MTH-869	Thesis (MS level)	3 + 0
	MTH-886	PhD Thesis	30 + 0

ANNEX-7

DEPARTMENT OF ISLAMIC STUDIES

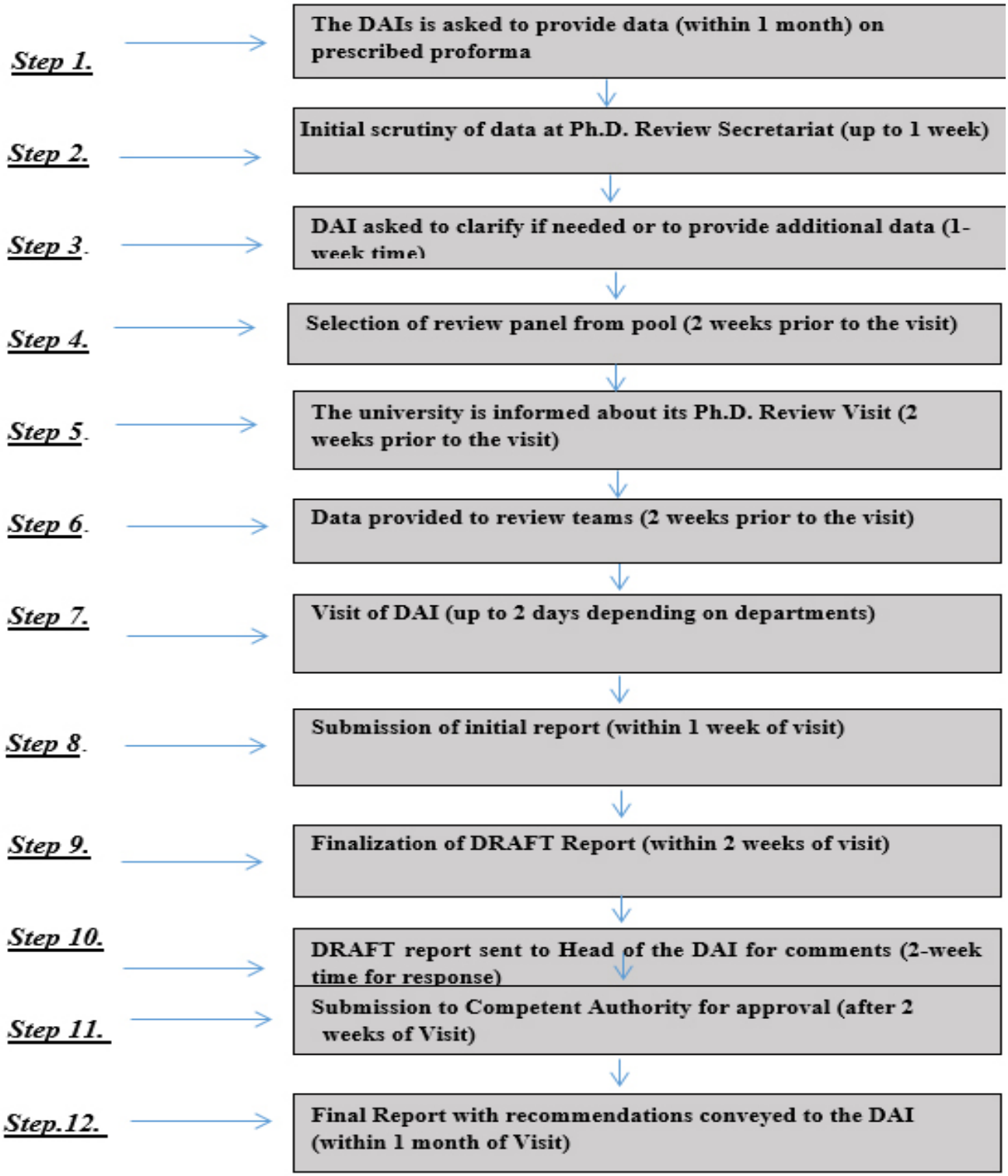
COURSES OFFERED IN MS/PHD

S. No.	Code	Course Title	Cr. Hr.
1	IS-801	Development of Quranic Commentary Literature and its Trends	3 + 0
2	IS-802	Diligence in Islam (Ijtihad)	3 + 0
3	IS-803	Objectives of Islamic Shariah (Maqasid al-Shariah)	3 + 0
4	IS-804	Islamic Thoughts and Sciences: Source Literature	3 + 0
5	IS-805	Islamic Philosophy	3 + 0
6	IS-806	Contemporary Issues: Islamic View Point	3 + 0
7	IS-807	Hadith Studies	3 + 0
8	IS-808	Principles of Tafsir	3 + 0
9	IS-809	Principles of Hadith	3 + 0
10	IS-810	Comparative Study of Tafsir Literature	3 + 0
11	IS-811	Principles of Fiqh	3 + 0
12	IS-812	Comparative Study of Different Juristic Schools of Thought	3 + 0
13	IS-813	Islamic Banking and Finance	3 + 0
14	IS-814	Management & Administration in Islam	3 + 0
15	IS-815	Islamic World View	3 + 0
16	IS-816	International Relations and Islam	3 + 0
17	IS-817	Comparative Study of Major World Religions	3 + 0
18	IS-818	Islam and Science	3 + 0
19	IS-819	Research Methodology	3 + 0
20	IS-820	Analytical Study of Seerah	3 + 0

21	IS-821	Ethics of Disagreement in Islam (Adab al-Ikhtalaf)	3 + 0
22	IS-822	Dawah Principles & Techniques	3 + 0
23	IS-823	Islamic Economics	3 + 0
24	IS-824	Islamic Political System	3 + 0
25	IS-886	MS Thesis/Two Courses	6 + 0

ANNEX-8

HEC MS/PHD PROGRAM REVIEW PROCESS



ANNEX-9

MS/PHD PROGRAM RELATED INFORMATION

S. No.	Name of Document	Evidence Attached		
		Yes	No	N/A
1	Rules & Regulations for Graduate Programs			
2	Approval of Program from Concerned Statutory Bodies			
3	Approval of Scheme of Studies			
4	Scheme of Studies			
5	NOC of program from HEC if applicable			
6	Time Table			

ANNEX-10

PHD STUDENT FILE
(Maintained for individual student)

S. No.	Name of Document	Evidence Attached		
		Yes	No	N/A
1	Secondary School Certificate or Equivalent			
2	Mark Sheet of Secondary School Certificate or Equivalent			
3	Higher Secondary School Certificate or Equivalent			
4	Mark Sheet of Higher Secondary School Certificate or Equivalent			
5	Bachelors or Equivalent Degree (16 years qualification)			
6	Transcript of Bachelors or Equivalent (16 years qualification)			
7	Equivalence Certificate from HEC			
8	MS/M.Phil. or Equivalent Degree (18 years qualification)			
9	Transcript of MS/M.Phil. or Equivalent (18 years qualification)			
10	Equivalence Certificate from HEC			
11	Admission Form			
12	CNIC			
13	GAT Subject or Equivalent			
14	Proposal at the time of Admission			
15	Allocation of Supervisor (provisionally)			
16	Admission Confirmation Letter			
17	Transcript of 1st Semester			
18	Transcript of 2nd Semester			
19	Transcript of 3rd Semester			
20	Transcript of 4th Semester			
21	Comprehensive Examination			
22	Approval of Synopsis from BASR or Equivalent			
23	Approval of Supervisor allocation			
24	Semester wise Progress Report			
25	Publication of Research Paper in HEC Recognized Journal			
26	Thesis Submission			
27	Selection of Foreign Evaluators			
28	Foreign Evaluators Reports			
29	Notification of Public Defense			
30	Notification of Successful Defense			
31	Notification of Degree Completion			

ANNEX-11

MS STUDENT FILE
(Maintained for individual student)

S. No.	Name of Document	Evidence Attached		
		Yes	No	N/A
1	Secondary School Certificate or Equivalent			
2	Mark Sheet of Secondary School Certificate or Equivalent			
3	Higher Secondary School Certificate or Equivalent			
4	Mark Sheet of Higher Secondary School Certificate or Equivalent			
5	Bachelors or Equivalent Degree (16 years qualification)			
6	Transcript of Bachelors or Equivalent (16 years qualification)			
7	Equivalence Certificate from HEC			
8	Admission Form			
9	CNIC			
10	GAT General or Equivalent			
11	Admission Confirmation Letter			
12	Transcript of 1st Semester			
13	Transcript of 2nd Semester			
14	Transcript of 3rd Semester			
15	Transcript of 4th Semester			
16	Completing Degree through Thesis/ Project			
17	Approval of Thesis Title (minutes of BASR or equivalent body)			
18	Approval of Supervisor allocation			
19	Progress of Thesis			

ANNEX-12

MS FACULTY FILE
(Maintained for individual faculty member)

S. No.	Name of Document	Evidence Attached		
		Yes	No	N/A
1	Offer Letter			
2	Joining Report			
3	Contract/ Notification of Appointment			
4	Detailed CV			
5	Degree of MS/M.Phil. Or Equivalent			
6	Transcript of MS/M.Phil. Or Equivalent			
7	Equivalence of MS/M.Phil. from HEC			
8	Degree of Bachelors or Equivalent			
9	Transcript of Bachelors of Equivalent			
10	Semester work load			
11	Details of courses being taught in current semester			
12	List of MS/M.Phil. Students being currently Supervised			
13	Certificate of undertaking that no student is being supervised outside the University			

ANNEX-13

PHD FACULTY FILE
(Maintained for individual faculty member)

S. No.	Name of Document	Evidence Attached		
		Yes	No	N/A
1	Offer Letter			
2	Joining Report			
3	Contract/ Notification of Appointment			
4	Detailed CV			
5	Degree of Ph.D. or Equivalent			
6	Transcript of Ph.D. or Equivalent			
7	Equivalence of Ph.D. from HEC			
8	Degree of MS/M.Phil. Or Equivalent			
9	Transcript of MS/M.Phil. Or Equivalent			
10	Equivalence of MS/M.Phil. from HEC			
11	Semester work load			
12	Details of courses being taught in current semester			
13	List of Ph.D. Students being currently Supervised			
14	List of MS/M.Phil. Students being currently Supervised			
15	Certificate of undertaking that no student is being supervised outside the University			

ANNEX-14

PROGRAM PROFORMA

Program Proforma

QUALITY ASSURANCE AGENCY

MS/M.Phil./Eequivalent Program Review University Proforma

This Proforma is to be completed by the university prior to the
HEC Program Review Committee Visit

Name of University	
Name of Degree Program	
Duration of Degree	
Type of Program	
Total Cr. hours of Degree	
Total No. of Enrolled Students (Attach Details as per given Tamplet)	
Total No. of Ph.D Faculty (Attach Details as per given Tamplet)	
Total No. of MS/M.Phil Faculty (Attach Details as per given Tamplet)	

The following details may also be provided

1- List of Courses (Attach Scheme of Study)

2- Time Table (Attach Current Time table)

3- Approval of Concerned statutory body of scheme of studies, launching of program etc.

ANNEX-15

FACULTY PROFORMA

Faculty Proforma

QUALITY ASSURANCE AGENCY
MS/M.Phil./Eequivalent Program Review University Proforma
This Proforma is to be completed by the university prior to the
HEC Program Review Committee Visit

Program Name		(e.g Management Sciences)

(Details regarding Ph.D Faculty)

Sr. No.	Qualification Details							Total No. of students being currently supervised
	Name of Faculty Member	Designation	Status Permanent / Visiting	Title of Degree	Area of Specialization	Awarding University	Year of Award of Degree	
1								
2								
3								
4								
5								

(Details regarding MS/M.Phil. OR Equivalent Faculty)

Sr. No.	Qualification Details							Total No. of students being currently supervised
	Name of Faculty Member	Designation	Status Permanent / Visiting	Title of Degree	Area of Specialization	Awarding University	Year of Award of Degree	
1								
2								
3								
4								
5								

Note:

1- The details of Faculty (Program wise) may please be attached, on the same tamplate.

2- Please Attach extra sheets as per requirement, on the same template.

ANNEX-16

STUDENTS PROFORMA

Students Proforma

QUALITY ASSURANCE AGENCY

MS/M.Phil./Eequivalent Program Review University Proforma

This Proforma is to be completed by the university prior to the HEC Program Review Committee Visit

(Semester wise details of Enrolled Students)

Program Name		(e.g Management Sciences)
Semester		(e.g Fall 2014)

Sr. No.	Name of Student	16 Year Education Completed	GAT General / Equivalent Test	Last Degree Obtained (e.g Bsc. Eng)	Semester Load (How much credit hours registered for this semester)	For Research Base Program		
						Thesis Topic	Approval of Synopsis	Allocation of Supervisor
		Yes/No	Yes/No				Yes/No	if yes, mention the name of Supervisor
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Note:

1- The details of students (Semester wise) may please be attached, on the same template.

2- For Annual System, Please provide details on yearly bases.

3- Please Attach extra sheets as per requirement, on the same Template.

ANNEX-17

QAC-PGPR-01 – PROGRAM SUMMARY

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

SUMMARY OF MS and PhD PROGRAMS									
Sr. #	PROGRAM TITLE[1]	STUDENTS[2]		FACULTY[3]		DATE OF LAUNCH		Date of NOC obtained (if applicable)	
		PhD	MS	PhD	MS	PhD	MS	PhD	MS
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-18

QAC-PGPR-02 – PROGRAM DETAILED INFORMATION

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Program Detailed Information

(This pro-forma is to be filled for each degree program)

Name of the Program:_____

University/DAI:_____

Faculty:_____

Department:_____

Title of Degree Program:_____

(Annex-Copy Of Notification, Transcript & Degree)

Title of Specialization (if applicable):_____

Sr. #	PARTICULARS	DETAILS
1	Copy of Gazzate notification of act and provision in university's act (Annex-i relevant page of act/charter)	
2	Approval of statutory bodies (Annex-ii notification)	
3	Duration of program (Annex-iii notification)	
4	Total credit hours (Annex-iv scheme of studies)	
5	Year of commencement (Annex-v notification)	

_____ Dean

_____ Registrar

_____ Director QA&C

_____ Vice Chancellor

Date: ____/____/20_ ___

6	NOC status from HEC (Annex-vi NOC)	
7	Total number of admitted students: Admission rate: Drop rate in 1st semester: Completion rate in minimum time: (Annex-vii if any)	
8	What is statutory requirement of frequency of BASR/Academic Council/BoS/BoF meetings (Annex-viii Relevant page of act/charter and dates of meetings)	
9	Total no. of MS faculty (Annex-ix; details on PGPR-03; program faculty information)	
10	Total no. of PhD faculty (Annex-x; details on PGPR-04; program faculty information)	
11	Total no. of enrolled students (Annex-xi-a For MS program use PGPR-05; student information (Annex–xi-b For PhD program use PGPR-06; student information	
12	Number of degrees awarded (Annex-xii-a MS details on PGPR-06-a; Graduated students information) (Annex-xii-b PhD details on PGPR-06-b; graduated students information)	
13	Findings of self-assessment report (SAR) and action taken: (Annex-xiii program SAR)	

Dean Registrar Director QA&C

Vice Chancellor Date: ____/____/20_ ___

ANNEX-19

QAC-PGPR-03 – PROGRAM FACULTY INFORMATION (MS-EQUIVALENT)

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Program Faculty Information (MS/Equivalent)												
Degree Program Title:												
Sr. No.	Name	Designation	Date of Joining	Post MS/MPhil Experience	BPS / TTS/ Contract	MS Degree Status				No. of Students being Supervised	Teaching Load per semester (Cr. Hrs.)	Administrative Roles/ Responsibilities
						Title	Area of Specialization	University	HEC Attested/ Equivalency	MS		
1												
2												
3												
4												
5												
6												
7												

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-20

QAC-PGPR-04 – PROGRAM FACULTY INFORMATION (PHD)

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Program Faculty Information (PhD)														
Degree Program Title:														
Sr. #	Name	Designation	Date of Joining	Post PhD Experience (In years)	BPS / TTS/ Contract	PhD Degree Status				HEC Approved Supervisor Y/N	No. of Students being Supervised		Teaching Load per semester (Cr. Hrs.)	Administrative Roles/ Responsibilities
						Title	Area of Specialization	University	HEC Attested/ Equivalency		PhD	MS		
1														
2														
3														
4														
5														
6														
7														
8														

Dean Registrar Dean QA&C

Vice Chancellor Date: ___/___/20___

ANNEX-21

QAC-PGPR-05 – STUDENT INFORMATION (MS)
(DETAILS OF ENROLLED STUDENTS MS-EQUIVALENT)

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Students Information (Details of Enrolled MS/MPhil/Equivalent Students)										
Degree Program Title:										
Sr. #	Name of Student	Date of Admission Test Cleared	Date of Admission	Meets Minimum Required Qualification	Last Degree Title	Current Stage of Degree				Name of Supervisor
						Degree with Coursework/ Research	Date of Synopsis Defense	Date of Successful Thesis Evaluation	Date of Final Defense	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Dean Registrar Dean QA&C

Vice Chancellor Date: ___/___/20____

ANNEX-22

QAC-PGPR-06 – STUDENT INFORMATION (PhD)
(DETAILS OF ENROLLED PhD STUDENTS)

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Students Information (Details of Enrolled PhD Students)													
Degree Program Title:													
Sr. #	Name of Student	Date of Subject Test Cleared	Date of Admission	Meets Minimum Required Qualification	Last Degree Title	Current Stage of Degree							Name of Supervisor
						Coursework	Date of Comprehensive Exam Clearance	Date of Synopsis Defense	Date of Thesis Submission	Date of Successful Evaluation	Date of Paper Publication	Date of Final Defense	
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-23

QAC-PGPR-06-A – GRADUATED STUDENT INFORMATION (MS)

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Graduated Students Information (MS/Equivalent)							
Degree Program Title:							
S #	Name of Student	Date of Admission	Date of Result Declaration	Date of Degree Issuance	Date of Convocation	Supervisor	Remarks (if any)
1							
2							
3							
4							
5							
6							
7							
8							
9							

Dean Registrar Dean QA&C

Vice Chancellor Date: ___/___/20____

ANNEX-24

QAC-PGPR-06-B – GRADUATED STUDENT INFORMATION (PHD)

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Graduated Students Information (PhD)							
Degree Program Title:							
S #	Name of Student	Date of Admission	Date of Result Declaration	Date of Degree Issuance	Date of Convocation	Supervisor	Remarks (if any)
1							
2							
3							
4							
5							
6							
7							
8							
9							

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-25

QAC-CP-01 – COMPLIANCE PLAN AGAINST PGPR REPORT OF QAC

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Name of University: _____ Date of Compliance Plan: _____

Date of PGPR Visit: _____ Date of PGPR Final Report: _____

Summary of Statistics of all post-graduate Programs in HITEC University:

PhD Programs		MS/Equivalent Programs	
PhD Qualified Faculty		MS/Equivalent Faculty	
PhD Students		MS/Equivalent Students	

_____ _____
Registrar Dean QA&C

_____ Date: ___/___/20____
Vice Chancellor

1. PROGRAM WISE

STATUS OF PROGRAMS AS PER PGPR REPORT								COMPLIANCE PLAN		
Sr.	Program Name	Program Level	No. of Enrolled Students	No. of Faculty Allocated		Status as per PGPR Report	Remarks / Deficiency	Description of Plan	Responsible Person / Department	Tentative Date of Completion
				PhD	MS					
1		MS								
2		PhD								
3		MS								
4		PhD								
5		MS								
6		PhD								
7		MS								
8		PhD								
9		MS								
10		PhD								

2. OTHER FINDINGS

FINDINGS AS PER PGPR REPORT		COMPLIANCE PLAN		
Sr.	Description of Findings	Description of Plan	Responsible Person	Tentative Date of Completion

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-26

QAC-CP-02 – COMPLIANCE PLAN AGAINST PGPR REPORT OF QAC

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Name of University: _____

Date of Compliance Plan: _____ Date of Implementation: _____

Date of PGPR Visit: _____ Date of PGPR Final Report: _____

Summary of Statistics of all Programs in HITEC University:

PhD Programs		MS/Equivalent Programs	
PhD Qualified Faculty		MS/Equivalent Faculty	
PhD Students		MS/Equivalent Students	
BS Programs		Total Enrollment in BS Programs	

_____ _____
Registrar Dean QA&C

_____ Date: ___/___/20____
Vice Chancellor

1. PROGRAM WISE

STATUS OF PROGRAMS AS PER PGPR REPORT							NEW STATUS AFTER COMPLIANCE					
Sr.	Program Name	Program Level	No. of Enrolled Students	No. of Faculty Allocated		Status as per PGPR Report	Total No. of Enrolled Students	Total No. of Relevant Faculty Allocated [don't include part time or adjunct]		Student : Faculty Ratio	Requested New Status	Support Docs.
				PhD	MS			PhD	MS			
1		MS										Annex-1
2		PhD										Annex-2
3		MS										Annex-3
4		PhD										Annex-4
5		MS										Annex-4
6		PhD										Annex-6
7		MS										Annex-7
8		PhD										Annex-8
9		MS										Annex-9
10		PhD										Annex-10

2. OTHER FINDINGS

FINDINGS AS PER PGPR REPORT		STATUS AFTER COMPLIANCE	
Sr. No.	Description of Findings	Description of Compliance	Support Docs.
1			Annex-1
2			Annex-2
3			Annex-3
4			Annex-4
5			Annex-4
6			Annex-6
7			Annex-7
8			Annex-8
9			Annex-9
10			Annex-10

ANNEX-27

QAC-CP-03 – PROGRAM PROFORMA

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

This pro-forma is to be filled for each degree program		
S.NO.	**PARTICULARS**	**DETAILS**
1.	DEGREE PROGRAM TITLE (Annex copy of transcript & Degree)	
2.	DEPARTMENT	
3.	FACULTY	
4.	UNIVERSITY	
5.	PROVISION IN UNIVERSITY'S ACT (Web link of the relevant page of Act/Charter)	
6.	YEAR OF COMMENCEMENT (Web link of notification)	
7.	NOC STATUS FROM HEC (Web link of NOC and also attached documents provided to seek NOC)	
8.	Students' Admission Rate (admitted students/total applications) (Web link of approved policy)	
9.	Students' dropout rate (total students failed to complete degree/total admissions)	
10.	WHAT IS STATUTORY REQUIREMENT OF FREQUENCY OF BASR/ACADEMIC COUNCIL/BOS/BOF MEETINGS (Web link of relevant page of Act/Charter and	

_____ Dean

_____ Registrar

_____ Director QA&C

_____ Vice Chancellor

Date: ____/____/20_ ___

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

	dates of meetings)	
11.	TOTAL NO. OF PH.D. FACULTY (Web link of details as per template-A)	
12.	TOTAL NO. OF M.S./M.PHIL. FACULTY (Web link of details as per template-B)	
13.	TOTAL NO. OF ENROLLED STUDENTS (for Ph.D. program use template-C : for M.Phil./MS program use template-D)	
14.	PLAGIARISM POLICY (Web link of approved policy)	
15.	EXAMINATION POLICY (Web link of approved policy)	
16.	PUBLICATION POLICY FOR DEGREE COMPLETION (Web link of approved policy)	
17.	TOTAL NUMBER OF PUBLICATIONS IN LAST ONE YEAR (Web link of publication list of faculty & students)	
18.	EVALUATION OF THESES (Web link of approved policy)	
19.	NUMBER OF DEGREES AWARDED (Annex details as Template-E)	

_____ _____ _____
Dean Registrar Director QA&C

_____
Vice Chancellor Date: ____/____/20_ ___

ANNEX-28

QAC-CP-04 – PHD FACULTY DETAILS

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

TEMPLATE - A: PhD Faculty Details											
Degree Program Title:											
SR.	Name& Designation	BPS / TTS / Adjunct / Visiting	Courses allocated	Basic Degree	MS/ Equivalent Degree	PhD Degree Status	Research Area (based on key words given in published articles & books) [annex scatter plot of most frequently occurring key words]	Experience		No. of Students being Supervised	
				Title& Subject Area [provide transcripts]	Title& Subject Area [provide transcripts]	Title& Subject Area [provide transcripts]		Teaching	Other	PhD	MS
1											
2											
3											
4											
5											
6											
7											
8											

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-29

QAC-CP-05 – MS FACULTY DETAILS

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

TEMPLATE – B: Faculty Details of MS or Equivalent Degree										
Degree Program Title:										
Sl.	Name & Designation	BPS / TTS / Adjunct / Visiting	Courses allocated	Basic Degree	MS or Equivalent Degree	Research Area (based on key words given in published articles & books) [annex scatter plot of most frequently occurring key words]	Experience		No. of students being Supervised	
				Title& Subject Area [annex transcript]	Title& Subject Area [annex transcript]		Teaching	Other	PhD	MS
1										
2										
3										
4										
5										
6										
7										
8										
9										

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: __/__/20____

ANNEX-30

QAC-CP-06 – DETAILS OF PHD ENROLLED STUDENTS

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

TEMPLATE – C: Details of PhD Enrolled Students										
Degree Program Title:										
S. No.	Name of Student	Date of Admission	18 Years Education Completed	Previous Degree by Research	Last Degree Title	GAT Subject / Equivalent Test Cleared	Course Work Completed	Comprehensive Cleared	Approval of Synopsis	Name of Supervisor
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-31

QAC-CP-07 – DETAILS OF MS ENROLLED STUDENTS

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

TEMPLATE – D: Details of MS Enrolled Students								
Degree Program Title:								
S. No.	Name of Student	Date of Admission	16 Years Education Completed	Last Degree Title	GAT Subject / Equivalent Test Cleared	Course Work Completed	Approval of Synopsis	Name of Supervisor
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Dean Registrar Dean QA&C

Vice Chancellor Date: ___/___/20____

ANNEX-32

QAC-CP-08 – DETAILS OF MS PASSED OUT STUDENTS

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Template-E-1: Details of MS Passed out Students					
Degree Program Title:					
S. No.	Name of Student	Date of Admission	Date of Completion	Thesis Title	Supervisor
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Dean Registrar Dean QA&C

Vice Chancellor Date: ___/___/20____

ANNEX-33

QAC-CP-09 – DETAILS OF PHD PASSED OUT STUDENTS

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Template-E-2: Details of PhD Passed out Students					
Degree Program Title:					
S. No.	Name of Student	Date of Admission	Date of Completion	Thesis Title	Supervisor
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____

ANNEX-34

QAC-CP-10 – PROGRAM IMPROVEMENT FORM

HITEC UNIVERSITY TAXILA
DIRECTORATE OF QUALITY ASSURANCE & COLLABORATIONS

Template-F: Compliance Evaluation for Postgraduate Program Review Program improvement from the date of review: ..... Till date:				
Degree Program Title:				
	A brief description of each **proposed change**	Action and evidence to support the **proposed change**	Timeline required for the implementation	Self-assessment team report
1	Curriculum / program changes proposed by the review team and process of implementation			
2	Evaluation of the teaching and learning process and improvements recorded			
3	Possible adjustments in faculty priorities or responsibilities			
4	Program alignment with the learning outcomes			
5	Physical and financial resources required and allocated to improve learning outcomes			
6	Other important changes			

Dean

Registrar

Dean QA&C

Vice Chancellor

Date: ___/___/20____