

MANUAL FOR POSTGRADUATE STUDIES



Patuakhali Science and Technology University

Dumki, Patuakhali-8602, Bangladesh

Manual for Postgraduate Studies



Vision: Patuakhali Science and Technology University aspires to be a home of excellence for producing competent professionals with improved knowledge and skills to meet national and global challenges.

Mission: The mission of Patuakhali Science and Technology University is to provide cutting-edge education, research, training and develop entrepreneurship at both undergraduate and postgraduate levels for creating skilled and enlightened personnel to serve the nation.

A University of Distinctive Identity

Patuakhali Science and Technology University

Dumki, Patuakhali-8602, Bangladesh

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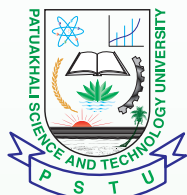
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Vice-Chancellor
PSTU

Message



Patuakhali Science and Technology University has been established with the aim of building a digital Bangladesh free from hunger and poverty. This University is playing an important role to improve the destiny of the people by creating opportunities of higher education and research; the core work of which is done by the Postgraduate Studies (PGS). The PGS is imparting specialized knowledge and skills in a specific field of Agriculture, Computer Science & Engineering, Business Administration, Animal Science & Veterinary Medicine, Fisheries, Environmental Science & Disaster Management, Nutrition & Food Science and Law & Land Administration.

This manual aims at providing the students with necessary information about admission procedures in LLM, MBA, MS and PhD programs, academic activities of different departments, rules and regulations that are currently in action at PSTU. The degree offering departments, Postgraduate Studies Committee, Academic Council and the Regent Board are mandated to build capacity in teaching, student research supervision and innovation amongst Postgraduate Students.

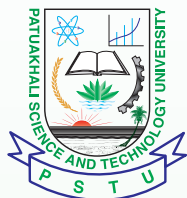
As the Vice-Chancellor of the University I am thus committed to ensure the highest standard of quality education for our students and the constant pursuit of excellence not only in academics but also in research and community services. I am looking forward to work alongside students and academicians as together we realize our vision by building technologically advanced digital Bangladesh free from hunger and poverty.

I am indeed very happy to learn that the Dean, Postgraduate Studies is going to publish a Manual containing information of its academic and research activities which I believe it will be immense use to the teacher, students, administrators and policy makers. I would like to congratulate and express my heart-felt thanks to the Dean, Postgraduate Studies, Postgraduate Studies Committee and the officials for their sincere effort in compiling this information in manual.

(Professor Dr. Swadesh Chandra Samanta)



Manual for Postgraduate Studies



Dean

Postgraduate Studies, PSTU

Message



Welcome to the Postgraduate Studies at the Patuakhali Science and Technology University (PSTU). The university prides itself on its excellent environment and support for students' education.

This manual published with a view to enabling postgraduate studies to have an easy access to information important to their studies at PSTU. It provides guidance concerning the education process which allows the student to confirm quality research and enable successful completion of the degree. The rules and guidelines are duly approved by the Academic Council followed by the Regent Board of PSTU. Hence it should be a valuable source of reference material and will help the students and the supervisors to navigate a path during postgraduate program.

The manual is written in an informal style just to meet the queries raised both from supervisors and graduate students. Actually, a manual should contain up-to-date information on the curriculum and the enabling regulations. Moreover, a manual should be revised regularly to take care of recent advanced in knowledge in the various disciplines and periodic change in aware of any periodic changes of rules and regulations made by the University.

I would like to express my sincere thanks and gratitude to all members of the manual preparation team. I am grateful to the Vice-Chancellor of PSTU for his encouragement, guidance and support towards publishing this Postgraduate Studies Manual.



(Professor Dr. Md. Fazlul Hoque)

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PGS at a Glance

i. Inauguration

Postgraduate studies program starts from July-December'2007 session.

ii. Degrees Offered

MS, MBA, LLM and PhD.

iii. Departments Involved

About 43 departments involved in postgraduate program.

iv. Degrees Awarded

About 2011 master and 31 PhD students upto JD'2021 semester.

v. Postgraduate Studies Committee

01.	Vice-Chancellor	Chairman
02.	Pro-Vice-Chancellor	Member
03.	Dean, Faculty of Agriculture	Member
04.	Dean, Faculty of Computer Science and Engineering	Member
05.	Dean, Faculty of Business Administration	Member
06.	Dean, Faculty of Animal Science and Veterinary Medicine	Member
07.	Dean, Faculty of Fisheries	Member
08.	Dean, Faculty of Disaster Management	Member
09.	Dean, Faculty of Nutrition and Food Science	Member
10.	Dean, Faculty of Law and Land Administration	Member
11.	Registrar	Member
12.	Dean, Postgraduate Studies	Member Secretary

vi. List of Deans, Postgraduate Studies

Sl.	Name of Dean	Duration
01.	Professor A.K.M Mostafa Zaman	13.03.2007 to 31.03.2009
02.	Professor Dr. Md. Harun-Or-Rashid	01.04.2009 to 31.03.2011
03.	Professor Dr. Abul Kashem Chowdhury	01.04.2011 to 06.04.2013
04.	Professor Dr. Md. Harun-Or-Rashid	07.04.2013 to 06.04.2015
05.	Professor Dr. Swadesh Chandra Samanta	07.04.2015 to 08.04.2017
06.	Professor Dr. Purnendu Biswas	09.04.2017 to 15.04.2019
07.	Professor Mohammad Ali	16.04.2019 to 31.05.2021
08.	Professor Dr. Md. Fazlul Hoque	01.06.2021 to -----

PSTU at a Glance

i. Establishment of the University

On 8th July 2000 the foundation-stone of Patuakhali Science and Technology University was set up with the framework of former Patuakhali Agricultural College by the then Prime Minister of the People's Republic of Bangladesh Government, Her Excellency Jananetri Sheikh Hasina. Later on 12th July 2001 the act regarding this university was passed in the parliament and the academic program formally started functioning after the promulgation of Government gazette notification on 26th February 2002.

ii. Location

The main campus of the University is located at 12 kilometers north from the district of Patuakhali, 26 kilometers south from the divisional city of Barishal, 5 kilometers east from Barishal-Patukhali highway, and the heart of Dumki upazila under Patuakhali district. The outer campus is situated at Babuganj upazila under Barishal district.

iii. Campus

The campus of this university is surrounded by the traditional artistic radiant and vibrant green texture of Bangladesh. The interior of the campus is decorated with different types of ornamental plants, wild plants, medicinal plants and fruit-bearing trees including rows of Coconut and Mehagani trees. There are a number of lakes and ponds inside the campus which enhances its beauty in many folds. Despite having small campus, along with the academic activities students have ample opportunities of performing different sports and cultural activities. All the necessary steps are made available at present to ensure appropriate environment for performing academic and research activities in a very harmonic situation.

iv. Area: 109.97 Acre

- a) Main Campus : 38 Acre
- b) Agricultural Research Farm: 59 Acre
- c) Outer Campus: 12.97 Acre

v. Academic Disciplines

Name of the Faculty	No. of Dept.
Faculty of Agriculture	14
Faculty of Computer Science and Engineering	5
Faculty of Business Administration	6
Faculty of Animal Science and Veterinary Medicine	11
Faculty of Fisheries	5
Faculty of Environmental Science and Disaster Management	5
Faculty of Nutrition and Food Science	7
Faculty of Law and Land Administration	1
Total	54

vi. Bachelor Degrees

1. Bachelor of Science in Agriculture (Hons.)
2. Bachelor of Science in Computer Science and Engineering
3. Bachelor of Business Administration
4. Doctor of Veterinary Medicine
5. Bachelor of Science in Fisheries (Hons.)
6. Bachelor of Science in Environmental Science & Disaster Management (Hons.)
7. Bachelor of Science in Nutrition and Food Science (Hons.)
8. Bachelor of Science in Animal Husbandry (Hons.)
9. Bachelor of Laws and Land Administration

vii. Postgraduate Degrees

MS, MBA, LLM and PhD.

viii. Academic Facilities

- a) Agricultural Research Farm: 01
- b) Integrated Farm: 01 (Babujanj Campus)
- c) Central Laboratory: 01
- d) Departmental Laboratory: Each department
- e) Main and Outer Campus have the following establishments: Library, Gymnasium, Auditorium, Mosque, Medical Center, School and College etc.

ix. Modern Digital Classroom

Multimedia projectors along with laptops and digital sound systems have been installed in every classroom as well as seminar room for conducting modern academic activities of the university. In consequence of these setting a new horizon of providing time befitting quality higher education has been disclosed.

x. High-Speed Internet Connection

The facilities of high-speed broadband and Wi-Fi network have been ensured for the teachers, students and officers of this university. It was the first and foremost access to the world of information technology for the southern part of the country.

xi. Database Management

The process of forming database management for the members of PSTU family has already been completed so that the authority if requires can instantly collect the data and information of the respective individual. This will enable to monitor the students' activities deeply and provide the excellence of environment as well as safety & security for the student in general. Moreover, the student belonging to different faculties have been categorized into several groups to ensure their counseling service by the concerned teachers aiming to enhance the teaching methodology of this university.

xii. PGD and Computer Lab

The number of computers has been increased at the computer laboratory in the faculty of CSE, besides there are 100 computers relating to the computers lab and PGD Lab which have effectively been connected with internet. Furthermore the internet connection is providing to the teachers and officers residences also offices.

xiii. Use of Wi-Fi Technology

Wi-Fi internet facilities have been provided in students, hall, library, academic and administrative wing where everybody could be able to have it using laptop anywhere around those places.

xiv. Central Library Automation

All the function and collection of the library are being devised in automation process and database management system. The access number belonging to 4000 books, journals and reports has been purchased and registered for the library from 41 international Publication. As a result, all the members of PSTU family could promptly collect, preserve and print the required teaching-learning resources through internet.

xv. Examination Controlling Section Automation

All the activities of examination section specially publishing results are being undertaken very successfully through automation system which requires only few hours to confirm the results.

xvi. Residential Hall: There are eight residential halls at PSTU

1. Sher-E-Bangla Hall-1
2. Sher-E-Bangla Hall-2
3. Kabi Begum Sufia Kamal Hall
4. M. Keramat Ali Hall
5. Bangabandhu Sheikh Mujib Hall
6. Sheikh Fazilatunnesa Mujib Hall
7. Bir Shrestha Mahiuddin Jahangir Hall
8. Sheikh Fazilatunnesa Mujib Hall

xvii. Guest House: There are four guest houses at PSTU named

1. Chandradwip Sudhinir
2. Anneshalay
3. ANSVM Guest House
4. PSTU Guest House-Dhaka.

xviii. Transport:

The transport division has enough bus, minibus, jeep, truck, pick up, ambulance etc.

xix. Function and Authority

The university exercises its authority in administrative and academic matters through the Board of Regent and Academic Council, Finance Committee, Planning, Development & Works Committee, Faculty Executive Committee, Postgraduate Studies Committee, Syllabus Committee and Academic Committee. The Vice-Chancellor is the chief executive of the university. He is responsible for conducting its overall affairs within the framework and policy directives of the board of regent and the government.

For details, please contact:

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Web: www.pstu.ac.bd

Rules for Master of Science (MS) Degree

1. Degrees offered

- 1.1 The degree of Masters of Science (MS) will be offered by the Patuakhali Science and Technology University (PSTU) Dumki, Patuakhali to a candidate subject to the fulfillment of the requirement prescribed hereunder. The admitted candidate shall have to abide by the rules and regulations that are currently in force and that will be promulgated by the university authority from time to time.
- 1.2 The MS degree will be offered in the following subjects of specialization: Agricultural Botany, Agricultural Chemistry, Agricultural Engineering, Agricultural Extension Rural Development, Agroforestry, Agronomy, Biotechnology, Entomology, Genetics and Plant Breeding, Horticulture, Plant Pathology, Soil Science, Computer Science and Information Technology, Computer and Communication Engineering, Electrical and Electronics Engineering, Physics and Mechanical Engineering, Mathematics, Economics and Sociology, Aquaculture, Fisheries Biology and Genetics, Fisheries Management, Fisheries Technology, Marine Fisheries and Oceanography, Animal Science, Animal Nutrition, Anatomy, Physiology, Pharmacology, Medicine, Surgery, Theriogenology, Microbiology, Veterinary Public Health and Food Hygiene, Pathology, Parasitology, Poultry Science, Disaster Resilience and Engineering, Disaster Risk Science and Sustainability, Emergency Management, Environmental Science, Geo-information Science and Earth Observation, Biochemistry and Food Analysis, Community Health and Hygiene, Environmental Sanitation, Food Microbiology, Food Technology and Engineering, Human Nutrition and Dietetics, Post-harvest Technology and Marketing.

The institution language of instruction and assessment are both in English.

2. Admission requirement

- 2.1 Candidates for admission into MS Study program must possess a Bachelor of Science or DVM degree from this University or an equivalent degree from other University including an MBBS degree.
- 2.2 Candidates having passed Bachelor degree in Course-Credit system must have secured a minimum CGPA of 2.25 out of 4.00 and GPA 2.50 in the requisite course(s) on an average.
- 2.3 Candidates having passed a Bachelor degree in annual course system must have secured a minimum of 50% of total marks and 55% in the concerned subject.
- 2.4 Those who are in-service with relevant field must have secured a minimum of 45% of total marks or second class or grade point 2.25 out of 4.00.
- 2.5 The academic committee will determine the pre-requisite course (s) in which the candidate must have GPA 2.50 on an average.
- 2.6 The eligibility of a candidate having degree from other university shall be assessed by an eligibility committee consisting of the proposed supervisor, the concerned chairman of the department and the Dean, Postgraduate Studies. The Dean, Postgraduate Studies will act as the convener of the committee.

- 2.7 A Candidate for admission into MS Program for Specialization in Agricultural Extension & Rural Development, Economics & Sociology, Biochemistry & Food Analysis and Agricultural Statistics must have studied and passed the relevant paper/course(s) carrying at least 4 credits hours (150 marks in annual system), at the Bachelor of Science /DVM degree of this university or an equivalent degree including MBBS from other recognized institutions.
- 2.8 An in-service candidate, if selected for admission must obtain necessary clearance and study leave or deputation for the stipulated period from his/her employer to be eligible for admission.
- 2.9 Candidate shall apply for admission in prescribed form of the university.
- 2.10 Each Student shall fill in five prescribed enrolment cards for each semester to have a coded roll number to carry through all semesters in order to maintain records in the office of the Dean, Postgraduate Studies, the Controller of examination, the Chairman of the department, the Registrar and the Students himself/herself.
- 2.11 Admission of students into MS study program shall be approved by the Dean, Postgraduate studies on recommendation of the respective academic committee on the basis of academic performance and satisfactory conduct at the Bachelor degree study/in a service.
- 2.12 The number of students to be admitted in a department in any particular semester will be decided by the respective academic committee on the basis of availability of teaching and research facilities in the department.
- 2.13 Candidates for admission into MS degree program shall get themselves admitted in the months of July and January in a year and shall pay the necessary fees including examination fees as per University Rules.
- 2.14 An admitted student to a subject in particular semester (clauses 2.13 & 3.1) may be allowed new admission to another subject for academic reasons, in the next semester. In such case he/she will have to take permission from the existing supervisor and chairman of the relevant department. This can be exercised for one time only.
- 2.15 Resolved that the second Master's degree admission to the different courses in this university will not be allowed as a general policy. However in some exceptional cases, the postgraduate studies will consider the merit of individual case for such admission on basis of the recommendations of their respective appointing authorities.
- 2.16 Foreign Student Admission Rules for Master Program**
A foreign student seeking admission to the Master course shall submit application through the respective government agencies to the chairman of the concerned department with letters of recommendation from two referees for admission. The admission shall be processed as per above mentioned criteria. A student who completed his/her Bachelor degree from this university will be eligible for admission without the letters of recommendation.
- 2.17 A candidate having degree from any other University, if selected for admission, must submit migration certificate from his/her University to be eligible for admission.

3. Duration of study

- 3.1 An academic year shall consist of two semesters of six month each extending from July to December and from January to June. There shall be 18 working weeks in each semester covering instructions, assignments and examinations/ or assessment.
- 3.2 The duration of the study for the degree of MS shall be three consecutive semesters. However, two additional consecutive semesters may be allowed to a student if the supervisor or supervisory committee (consisting of a supervisor and a co-supervisor) and the chairman of the relevant department of PSTU/Principal of affiliated colleges/director of institutes recommend such extension and the recommendation is approved by the Postgraduate Studies.
- 3.3 If a student fails to obtain an MS degree in five consecutive semesters, his/her admission shall stand cancelled automatically.

4. Course-Credit requirements

- 4.1 Sixteen lectures/contact hours of one-hour duration for a theoretical course and of two hour duration for a practical course in a semester shall be considered as one credit-hour.
- 4.2 The number of credits for course work required for each candidate shall be specified by the relevant academic committee. Minimum total credit requirements shall be 40. Out of this at least 24 credits shall be for course work and 16 credits for the research work.
 - 4.2.1 The supervisor may propose a co-supervisor for the research program. A student shall be required to complete two types of courses as follows:

a.	Compulsory courses	16 credits or more
b.	Elective courses	8 credits or more

However, a candidate may be required to take one or more audit courses as desired by his/her supervisor under intimation to the Dean, Postgraduate Studies.

- 4.3.1 Generally a student shall be required to register for research work in the "Thesis" semester usually third semester. But total credits for research work (16 credits) may have the following distribution (clause 6.5), with provision of semester adjustment if needed and suggested by the supervisor:
First Semester -- 3 credits
Second Semester -- 3 credits
Thesis Semester -- 2+8=10 credits (for research and thesis)
- 4.3.2 Earning of research credits: Of the 16 research credits, eight credits will be earned by a student's upon "Satisfactory" grading of research by the supervisor. The remaining eight credits will be earned through the successful presentation of thesis quality of which shall be evaluated as under and shall be linked with GPA and CGPA calculation:
Evaluation of thesis -5 credits
Thesis Defense - 3 credits

- 4.4 The Supervisor shall recommend a research program for a student to the Dean, Postgraduate Studies for approval by the middle of the first semester. Any subsequent change in the program shall have to be recommended by the supervisor and be approved by the Dean, Postgraduate Studies.
- 4.5 A particular course shall be taught by one or two teachers and evaluated accordingly as decided by the relevant Academic Committee.
- 4.6 A student shall be required to enroll for a minimum of 12 credits of courses in one of the two course semesters.
- 4.7 The performance of a student in an audit course shall be marked as satisfactory/unsatisfactory. The details of such audit courses shall be recorded in the grade card and in the transcript.
- 4.8 A student shall have to enroll himself/herself in each semester on payments of necessary fees as per university rules.

5. Examination procedure

- 5.1 There shall be at least two classroom examinations and one final examination for each course in a semester. The classroom examinations shall carry 40 percent and the final examination covering the entire course shall carry 40 percent of the total marks carried by a particular course. The remaining 20 percent of the marks shall be assigned to report writing homework or any other assignments given by the course teacher(s).
- 5.2 The duration of final examination shall be of 3 hours for 3 or 4 credit courses and it shall be of 2 hours for 1 or 2 credit courses. Regardless of differences in credits and exam duration all courses will be evaluated conveniently on 100 marks in total (covering class tests, assignment and final examination).
- 5.3 In order to qualify for final examination, a student must have attended at least 75 percent of the classes for the courses included to the program of courses recommended for him/her. Student must have to submit the examination entry forms to the controller of examinations through the relevant chairman of department and Dean, Postgraduate Studies.
 - 5.3.1 The Supervisor shall make his recommendation on the stipend bill form on the basis of 75 of attendance and send it to the Dean, Postgraduate Studies through the chairman of the department. The chairman of the department shall also make his recommendation on the examination entry form on the basis of 75 percent of attendance.
 - 5.3.2 Fulfillment of the residential requirement of each student shall be ensured by the relevant Academic Committee.
- 5.4 All examinations shall be conducted and evaluated by the course teacher(s). The final examinations shall commence at least 30 days before the end of the semester and shall be completed within fifteen working days. The course teacher(s) shall also evaluate the home assignments, report writing etc. and shall submit the marks to the chairman of the department and with a copy to the controller of examinations soon after evaluation under intimation to the Dean, Postgraduate Studies for further necessary action. The Chairman's of the relevant departments shall preserve all such records for a period of three years.

- 5.5 The Dean, PGS shall prepare and circulate the schedule for final examinations of the courses offered by different teachers in particular semester with consultation of the relevant chairman's of the departments at least 4 weeks before the commencement of the examinations.
- 5.6 The chairman of department along with course teacher(s) shall tabulate the results of the semester final examinations and send it to the controller of examinations for publication. The results of examinations shall be published at least a week before the end of the semester.
- 5.7.1 If a student has not sat for the classroom examination(s) for reasons satisfactory enough to the course teacher(s), the course teacher(s) may give him/ her another change for such examination(s) during the semester but it must be held before the semester final examination.
- 5.7.2 If a student fails to appear at the semester final examination or obtained 'F' grade marks obtained in the class room examination and the assignment will be forfeited.
- 5.8 Numerical marks given on all component examinations/ evaluations (for a course, thesis, thesis defense, etc.) shall be finally pooled and converted to letter grade and grade point (4 point scale) as follows:

Marks obtained	Latter Grade	Grade Point
80% and above	A+	4.00
75% to 79%	A	3.75
70% to 74%	A	3.50
65% to 69%	B+	3.25
60% to 64%	B	3.00
55% to 59%	B-	2.75
50% to 54%	C+	2.50
45% to 49%	C	2.25
40% to 45%	D	2.00
Less 40%	F	0.00

Percentage of numerical marks shall be calculated in round figures. A fraction of 0.5 or above shall be considered as next higher number.

- 5.9 The grade D shall be regarded as the minimum passing grade. A student shall be considered to have earned the requisite credit specified for each course or thesis or thesis defense if he/she secures D (GP 2.00) or a higher grade in it.
- 5.10.1 If a student obtains an F grade (Fail) in a particular course , thesis and thesis defense, the Dean, Postgraduate Studies may allow him/her to repeat the relevant course, thesis and thesis defense on recommendation of the supervisor and chairman of the department, provided the whole process is completed within study period as stipulated in articles 3.2 and 3.3 A student may be allowed to carry and repeat no more than two courses in a semester but a maximum of four courses during his/her entire study program to clear F grade(s)

- 5.10.2 If a student gets F grade in three or more courses in a semester, the concerned semester shall be deemed crashed and the student shall have to re-enroll to fulfill the course-credit requirement in available semester(s) subject to clauses 3.2 and 3.3.
- 5.11 The semester results and overall final results for different courses and thesis shall be presented in letter grades (clues 5.8) with Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA or Cumulative GPA) as applicable, respectively. The maximum attainable GPA or CGPA shall be 4. GPA or CGPA shall be calculated up to three decimal places.
- 5.12 The calculation of GPA and CGPA (for semester results and final results) shall be done as follows:

$$GPA = \frac{\sum (G_i \times C_i)}{\sum C_i}$$

$$CGPA = \frac{\sum (GPA_i \times TC_i)}{\sum TC_i}$$

Where, \sum = Sum of

G_i = Grade Point obtained in individual courses

C_i = Credit of respective course

GPA_i = Grade point Average obtained in individual semesters,

TC_i = Total credits of respective semesters.

- 5.13 Boycotting of an examination, adoption of unfair means and breach of discipline in an examination.
- 5.13.1 The followings shall be considered as examination offences:
- i) Copying from incriminating documents or from others script,
 - ii) Possession of incriminating documents,
 - iii) Communicating with other(s),
 - iv) Smuggling in/out of answer script,
 - v) Using abusive language or holding out threat to Invigilator/Chief Invigilator,
 - vi) Creating obstruction or disturbances inside examination hall,
 - vii) Assault or attempt to assault an Invigilator/Chief Invigilator,
 - viii) Possession of arms or other lethal weapons inside the examination hall,
 - ix) Using cell-phone inside examination hall, and
 - x) Any other offences not mentioned specifically above but consider by the chief invigilator as breach of discipline in the examination.
- 5.13.2 For any offence mentioned in 5.13.1 the concerned course examination of the examinee who committed the offence shall be cancelled by the chief invigilator subject to report to the examination discipline committee through the controller of examinations. The result of the said course shall be finalized with F grade.
- 5.13.3 Depending on the gravity of the offence, the chief invigilator may refer the case(s) to the examination discipline committee for further disciplinary action.

Disciplinary action shall be taken by the examination discipline committee and that shall be reported to the regent board. The decision of the examination discipline committee shall stand final. The committee shall comprise as follows:

i)	Vice-Chancellor	Chairman
ii-iii)	Two deans to be nominated by the Vice-Chancellor	Member
iv)	One non-salaried member of the regent board to be nominated by the Vice-Chancellor	Member
v)	Students' Affairs Advisor	Member
vi)	Proctor	Member
vii)	Registrar	Member
viii)	Controller of Examinations	Secretary

Nominated members shall hold office for a term of two years. Four members shall form quorum in meeting.

- 5.13.4 Student who either individually or jointly boycott the examination unlawfully shall be marked absent by the chief invigilator or the matter shall be referred to the examination discipline committee for further disciplinary action.
- 5.13.5 The chief invigilator shall submit the report on the offence committed by the examinee(s) to the controller of examinations in the prescribed form under sealed cover packet. The controller of examinations shall place the cases of unfair means along with relevant documents before the examination discipline committee.
- 5.13.6 Before taking any disciplinary action by the examination discipline committee, a notice shall be served upon the examinee found guilty of examination offences to show cause. The examinee shall be given a time not less than 72 hours for replying the notice.
- 5.13.7 The examinee who is identified in copying from incriminating documents or from others scrip or found creating disturbances inside the examination hall or found possessing incriminating documents may be debarred from appearing at examinations in the current semester.
- 5.13.8 The examinee who uses abusive languages or holds threat in the examination hall to the chief invigilator or invigilator(s) or other persons engaged in the examination shall be debarred from appearing at examinations for not more than three semesters.
- 5.13.9 The examinee who assaults or attempts to assault the chief invigilator or invigilators(s) any other person(s) engaged in the examination shall be liable to a maximum punishment of debarment from subsequent examinations of the university and expulsion for good from the university.
- 5.13.10 Any examinee found guilty of disclosing his/her identity or deliberately making symbolic marks in his/her answer script, the answer script shall be cancelled by script examiner and the matter be reported to the controller of examinations.
- 5.13.11 The script of the examinee who has committed an examination offence other than that defined in 5.13.10 shall not be sent to the examiner for the evaluation.

- 5.13.12 A student expelled for adopting unfair means, shall not get additional semester beyond the time limit defined in the "Rules for of Master of Science (MS) Degree".
- 5.13.13 Any other cases not covered by the above rules shall be dealt by the examination discipline committee in such a manner as it deems fit.

6. Research Requirements

- 6.1 A candidate for MS degree shall undertake a piece of research work under the supervision of a teacher university/affiliated colleges/affiliated institutes or under a scientist of any recognized research institute/organization. A teacher or a scientist must have prior approval from the Dean, Postgraduate Studies to act as a supervisor.
- 6.2 Research work of an MS degree student shall be supervised by a supervisory committee consisting of a supervisor and a co-supervisor.
- 6.3 The co-supervisor shall be chosen from among the supervisors recognized by the Dean, Postgraduate Studies.
- 6.4 The co-supervisor shall be proposed by the supervisor. The chairman's of the departments/ principals of affiliated colleges or head of institutes shall submit the proposals for supervisory committee to the Dean, Postgraduate Studies for approval during the first semester of the student`s enrolment.
- 6.5 A Student may begin his research work from the first semester and shall complete the research work and thesis writing and submit the same at least 30 days before the end of the last semester of the students approved study period (as defined in Clauses 3.1 and 3.2).

7. Thesis evaluation and thesis defense

- 7.1 Thesis shall be prepared by the student shall be submitted to the relevant chairman of the department after having been signed by the supervisor committee.
- 7.2 Each thesis shall be individually evaluated on 100 marks by two examiners to be selected by the Postgraduate Studies from a four-member panel suggested by the relevant academic committee. The proposed thesis examiners will be from amongst recognized MS Supervisor. The examiners shall send the marks to the chairman of the department with a copy to the controller of examinations. The average of the marks given by the two thesis examiners shall be considered as the marks obtained, and the letter grade and grade point (GP) will be awarded, accordingly.
- 7.3 Supervisor and co-supervisor shall not be the thesis examiners of the students(s) under their guidance.
- 7.4 If a thesis examiner is absent or unavailable for some unavoidable reasons, or declines to act as an examiner the concerned chairman of the department may recommend for appointment of the next person in the proposed panel of examiners; or in case of non-availability of any person in the panel, the academic committee may propose a new panel of examiners.
- 7.4.1 In case of more than 20% variations in marks given by two thesis examiners a third examiner from the panel of examiner shall examine the thesis and the average of two nearest marks shall be taken as final.

- 7.4.2 The defense of the thesis of all students in a department shall be conducted and graded by a four-member defense committee of which the chairman of the concerned department shall be the chairman. The Postgraduate Studies shall select three members (of which one of the member from outside of the university) from a five member panel proposed by the relevant academic committee. The committee shall remain valid for consecutive three semesters. All members of the defense committee shall receive copies of the thesis at least seven days before the date of defense of thesis.
- 7.4.3 The defense of the thesis shall be held at least two weeks before the end of the semester in presence of a minimum of three members of the defense committee. If one or more members of the defense committee express their inability to be present during the defense due to some unavoidable reasons replacement may be made by the chairman of the department from the panel under intimation to the Dean, Postgraduate Studies. The date and time of defense shall be announced by the concerned chairman of the department of PSTU/Principal of affiliated college in consultation with the concerned supervisor and under intimation to the Dean, Postgraduate Studies.

8. Publication of results

- 8.1 The defense committee shall tabulate and finalize the result, and send those to the controller of examinations for publication with a certificate that a copy of the thesis has been sent to the Patuakhali Science and Technology University library.
- 8.2 The results of the candidates shall be published by the controller of examinations by order of the Vice-Chancellor subject to the approval of the regent board.

Instructions for Preparation of Master Thesis

(Parts of master thesis, in the order they should appear)

The best way of writing master thesis is to prepare an extended outline. Supervisor should carefully review the outline and check whether there are any unnecessary materials that are not directly related to the problem statement. It is expected that the master thesis is done with a defined research question that has been solved through well designed research work and the results have been presented systematically. Writing the thesis requires complete organization of the arguments and results. Choose section titles and wordings to clearly give the idea about the findings of the study. This guideline address the major issues related to the structure and style of master thesis.

The fundamental element of master thesis generally comprises the following:

- 1. Title:** The wording of the title should be simply a characterization of the theme. This may contain major elements the candidate will address. Preferably titles should be simple and direct, without a lot of qualifying terms or phrases. It is better to solicit the opinion of the research supervisor. Any abbreviation in the thesis title should be avoided.
- 2. Approval sheet:** This part should be followed as per proforma shown.
- 3. Table of contents:** This should list in sequence, with page number, all major subdivision of the dissertation such as chapters, the references, appendices etc.
- 4. Declaration:** I declare that the thesis hereby submitted by me for the MS degree at the Patuakhali Science and Technology University is my own independent work and has not previously been submitted by me at another university/faculty for any degree. This declaration must be signed by the candidate with date of submission of the thesis. This thesis is an independent compilation and attachment to your thesis. Work without this thesis will not be accepted. The name and signature of the candidate will appear in all hard binding copies of the thesis. Declaration page should not be given in soft binding copies. Candidates are strongly advised to check the regulations for specific requirements for the master degree.
- 5. Acknowledgements:** Any help received from any person or institution, in the provision of facilities, should be formally acknowledged. The full name and position of all persons acknowledged are essential.
- 6. Abstract:** This is the only section of the thesis that is read by most of the readers. The abstract extracts the key points of the thesis, highlighting its purpose, methods, major findings and brief conclusions. It does not include figures, table or citations. If more than one hypothesis is tested this should be stated in the abstract.

The abstract page contains: (i) Title of the Thesis; (ii) Full name of the author; (iii) The word ABSTRACT in bold uppercase just before the text; (iv) The text should be single paragraph in between 250-300 words, in single line spacing.

- 7. Introduction:** This section provides the background for the research work and focused on the topic investigated. The purpose is to convince the reader of the importance of the work done. It includes a historical basis for selecting the problem and shade light on some point of missing pieces of information that will prove pertinent to the problem studied. Brief background information is necessary to make the readers fully familiar to the problem addressed in the thesis.
- 8. Objectives:** This can be included with the introduction or presented as a separate section. The objectives should be very specific and quantifiable. Objectives should not be confused with the ultimate goal of the work.
- 9. Review of literature:** A separate section is necessary to cover the amount of published literature related to the topics studied. The review should be comprehensive but not too elaborative. It is not necessary to cite every study even remotely connected to the subject at hand. It is essential to cite those that are most important for the work done. The reference should be current, with the exception of historical, original work done. Ideally source should be primary ones, representing the relevant work done the field to date and relevant to the specific area of study. Sources whose theories or opinions conflict with the study should also be included. All information is to be appropriately cited, as plagiarism (it is define as presenting someone else's work as one's own) is illegal. It may require some discussion with the research supervisor to sort out the relative importance of the articles. Critically evaluate the articles and make some independent assessment of their importance to the research question that has been done for the thesis. Traditional "name and year" system should be followed for citation in the text.
- 10. Materials and Methods/Methodology:** Once the research experiments/studies are thoroughly planned, presenting the methodology can be the most straightforward part of the thesis work. The materials, methods and experimental designs should be described in a way that they can be repeated by other workers. This chapter may have one or several sections and subsections that can vary with the nature of the experiments. For instance, in case of the field experiment, the following information should be provided: (i) Site characteristics: geography, climate, soil properties (ii) Design of the experiments: Randomized Block Design, Split-plot Design, and number of replicates (iii) Agronomic practice: Plant materials, fertilization, irrigation, treatments (iv) Observation and Sampling Methods: phonological stages, light measurements, root sampling method, harvesting.

Precise description of the devices and methods including the citation are required as well. Appropriate data analysis procedures need to be written considering the hypotheses tested. Statistical methods should be described with sufficient clarity to allow the reader to verify the reported results. The appropriate tests together with the software used for the analysis should be cited.
- 11. Results and Discussion:** This section includes analyses of data and presentation of results. Before writing this section, the writer should organize his/her data in tables, graphs, photographs etc. Various alternatives should be tried to find out the best. Once the data are organized into tables and other illustrations, the textual part of the results can now be



written quite easily. Results should be presented logically rather than chronologically, using sub-headings and paragraphs for observations of different experiments. Tables and figures should be presented with clear, concise, self-evident captions and labels. The data presented in the tables should not be repeated in the text, rather the salient features and trends of the data presented the table should be indicated in the text. Statistical analysis should indicate the relationships between variables. Test statistics, level of significance, degrees of freedom and sample size need to be provided in brackets after each data analysis result.

Discussion should provide clear interpretation of results in the context of present state of knowledge. Writing a good discussion requires a lot of thinking. The writer must remember few basic points while writing discussion. A writer cannot discuss any data that have not been presented in the results; neither can he include any new data in the discussion section. Moreover, one should not reconsider every scrap of his/her results in the discussion. The thumb rule is "do not discuss if no discussion is needed". An ideal discussion should have the following components: Key message summarizing the major achievement, necessary interpretation of the findings, comparisons of the results with relevant findings of others to show how this result fits in the current state of the knowledge, and necessary explanation for any deviation. An honest writer would qualify his/her results in the discussion section by mentioning any limitations and shortcomings of his/her experiments.

12. Conclusion: It is not a rambling summary of the thesis: they are short, concise statements of the inferences that have been made out of the study. It helps to organize these as short numbered paragraphs, ordered, from most to least important. All conclusions should be directly related to selective objectives.

Future direction of research should be included, so that researchers can pick up the ideas that have been generated while this work was done.

13. References: Most examiners scan the list of references looking for the important works in the field, inclusive of their own if applicable. Make sure they are listed and referred to in section of review of literature. All references given must be listed in alphabetical order by author's surname. Works by the same author's should be listed in chronological order.

A. Citing References in the Text

Type of citation	Narrative citation in text	Parenthetical citation in text
One author	Walker (2007)	(Walker, 2007)
Two authors	Walker and Allen (2004)	(Walker & Allen, 2004)
Three and more authors	Wasserstein et al. (2005)	(Wasserstein et al., 2005)
Groups	National Institute of Mental Health (NIMH, 2003)	(National Institute of Mental Health [NIMH], 2003)
Reference with single page number/chapter, etc	Hedetoft (2013)	(Hedetoft, 2013)
Reference with page range	Haan (2005, pp. 36-37)	(Haan, 2005, pp. 36-37)
Same author, two works from different years	Todres (2011, 2012)	(Todres, 2011, 2012)
Same author, two works from same year	Derryberry and Reed (2005a, 2005b)	(Derryberry & Reed, 2005a, 2005b)

Important Notes:

1. Each reference cited in text must appear in the reference list and vice-versa.
2. When citing two or more works together, arrange the in-text citations alphabetically in the same order in which they appear in the reference list:
Recent research in developmental psychology has explored this issue (Bergstrom et al., 2006; Clément, 2010; Harris & Corriveau, 2011; Harris & Koenig, 2006; Heyman, 2008; Heyman & Legare, in press; Koenig & Harris, 2005).
3. If you want to include several different citations in one set of brackets, they should be in alphabetical order, separated by a semi-colon:
(Durie, 2003; McShane & Travaglione, 2007; Ministry of Education, 1996).
4. To cite more than one work by the same author(s), list the surname of the author(s) and then each different year of publication, separated by a comma:
(Ministry of Education, 1996, 1999).

B. The Reference List:

Type of Reference	Format	Examples
Journal Article (1 author)	Lastname, A. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage.doi Attention: The issue number is not compulsory. If the journal article has an article number instead of a page range, include the word "Article" and then the article number instead of the page range. Journal articles (but also other types of references, such as books) can have a doi or url at the end, but that is not compulsory.	Paivio, A. (1975). Perceptual comparisons through the mind's eye. <i>Memory & Cognition</i> , 3(1), 635-647.
		Jerrentrup, A. (2018). Teaching medicine with the help of "Dr. House." <i>PLoS ONE</i> , 13(3), Article e0193972.
		Andreff, W. (2000). The evolving European model of professional sports finance. <i>Journal of Sports Economics</i> , 1, 257-276. https://doi.org/10.1177/152700250000100304
Journal Article (2-7 authors)	Lastname, A., & Lastname, B. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage. doi	Becker, L. J., & Seligman, C. (1981). Welcome to the energy crisis. <i>Journal of Social Issues</i> , 37(2), 1-7.
		Cheryan, S., & Meltzoff, A. N. (2015). Cultural stereotypes as gatekeepers. <i>Frontiers in Psychology</i> , 6, Article e0214466. https://doi.org/10.3389/fpsyg.2015.00049

Type of Reference	Format	Examples
		<p>Frischlich, L., Hahn, L., & Rieger, D. (2021). The promises and pitfalls of inspirational media: What do we know, and where do we go from here? <i>Media and Communication</i>, 9(2), 162-166. https://doi.org/10.17645/mac.v9i2.4271</p>
Journal Article (more than 7 authors)	<p>Lastname, M., Lastname, N., Lastname, O., Lastname, P., Lastname, Q., Lastname, R., Lastname, M., ... Lastname, Z. (year). Title of the article in sentence case. <i>Journal in Title Case</i>, Volume(Issue), Firstpage-Lastpage. Doi</p>	<p>Gonzalez, W. L., Hughes, W., Carter, D., Campbell, C., Baker, A. B., Flores, T., Gray, W. E., ... Lee, L. H. (2018). National character does not reflect mean personality trait levels in 49 cultures. <i>Science</i>, 3(10), 96-100.</p>
Book	<p>Lastname, A. (year). Title of the book in sentence case (edition, Volume). Publisher. doi</p> <p>Attention: The edition, volume, and DOI are not compulsory.</p>	<p>Strunk, W., Becker, E., & White, E. B. (1979). <i>The guide to everything and then some more stuff</i> (3rd ed.) Macmillan.</p> <p>Lippe, T. L. (Ed.). (2016). <i>Student affairs for academic administrators</i>. Stylus Publishing; ACPA Books.</p> <p>Kearney, D. J., & Simpson, T. L. (2020). <i>Concise guides on trauma care. Mindfulness-based interventions for trauma and its consequences</i>. American Psychological Association. https://doi.org/10.1037/0000154-000.</p>
Book Chapter	<p>Last name, A. (year). Title of the chapter in sentence case. In B. Last name, C. Last name & D. Last name (Eds.), Title of the book in sentence case (Volume, pp. first page-last page). Publisher. doi</p>	<p>Bergquist, J. M. (1992). German Americans. In J. D. Buenker & L. A. Ratner (Eds.), <i>Multiculturalism in the United States: A comparative guide to acculturation and ethnicity</i> (Vol. 3, pp. 53-76). Greenwood.</p> <p>Baker, F. M., & Lightfoot, O. B. (1993). Psychiatric care of ethnic elders. In A. C. Gaw (Ed.), <i>Culture, ethnicity, and mental illness</i> (pp. 517-552). American Psychiatric Press.</p> <p>Scott, D. (2005). Colonial governmentality. In J. X. Inda (Ed.), <i>Anthropologies of modernity</i> (pp. 21-49). Retrieved from http://www3.interscience.wiley.com/cgi-bin/bookhome/117909832</p>

Type of Reference	Format	Examples
Newspaper Article / Newsletter (in paper)	Last name, A. (year, month day). Title of the article in sentence case. Title of the Newspaper/Newsletter in Title Case, Firstpage-Lastpage.	Schwartz, J. (1993, September 30). Obesity affects economic, social status. The Washington Post, 1-4.
Newspaper Article / Newsletter (online)	Last name, A. (year, month day). Title of the article in sentence case. Title of the Newspaper/Newsletter in Title Case. www.website.com	Carey, B. (2019, March 22). Can we get better at forgetting? The New York Times. https://www.nytimes.com/2019/03/22/health/memory-forgetting-psychology.html
Website (in person)	Last name, A. (year). Title of the website article in sentence case. Name of the Website in Title Case. www.website.com	Cain, K. (2012). The negative effects of Facebook on communication. Social Media Today. http://socialmediatoday.com
Website (in institute)	Institute Name (year). Title of the website article in sentence case. Name of the Website in Title Case. www.website.com Date	PSTU (2012). Annual performance agreement 2022-23. http://pstu.ac.bd 21st June 2022
Published Thesis or Dissertation	Last name, A. A. (year). Title of thesis in sentence case [Doctoral or Master's thesis or dissertation, Name of the Institution]. Repository. www.website.com	Kelly, C. B. D. (2018). The art of coffee roasting [Doctoral thesis, The University of Waikato]. The University of Waikato Research Commons. https://hdl.handle.net/10289/11614 .
Unpublished Thesis or Dissertation	Last name, A. A. (year). Title of thesis in sentence case [Unpublished doctoral or Master's thesis or dissertation]. University.	Imber, A. (2003). Applicant reactions to graduate recruitment and selection [Unpublished doctoral dissertation]. Curtin University.
Conference paper, keynote address, poster presentation, etc. (unpublished)	Last name, A. (Year, Month Day-Day). Title of paper in sentence case [Type of material]. Name of Conference, City, Country.	Whipple, S. (2018, March 6-9). Control beliefs as a moderator of stress on anxiety [Paper presentation]. Southeastern Psychological Association 64th Annual Meeting, Charleston, SC, United States.
Conference paper in Proceedings (published as a book)	Last name, A. B. (Year). Title of paper. In A. Last name (Ed.; if applicable), Proceedings book title in sentence case (pp. first page-last page). Publisher.	Cismas, S. C. (2010). Educating academic writing skills in engineering. In P. Dondon & O. Martin (Eds.), Latest trends on engineering education (pp. 225-247). WSEAS Press.

Type of Reference	Format	Examples
Comment on Facebook Post	Author of the comment, A. (Year). First sentence of the comment [Facebook comment on the Month Day, Year, post by Author of the Post]. www.website.com	Wangail, T. (2017). Since Kashmir mass uprising, all Wimax connections were suspended almost for more than three months [Facebook comment on the January 23, 2017, post by N Rigzin]. https://www.facebook.com/groups/904515826309195/permalink/1291073837653390/?comment_id=1293505600743547
Brochure	Author. (Year). Title of document [Brochure]. Publisher.	Ministry of the Environment. (2007). Conserving water in Ontario [Brochure]. Ministry of the Environment.

Notes: This report is prepared based on APA style of citation and reference.

APA style requires a hanging indent, which means that the first line of each reference entry is aligned flush with the left margin and each subsequent line has a hanging indent of 1.27 cm or 0.5 inch.

- 14. Appendices:** Any material which increases the main text volume, but is important to justify the results of a thesis should be appended. The material, which is either too detailed or not that central, should be included in the appendix. Examples include immense tables of data, program listings, detailed maps etc.
- 15. Page layout and paper:** The text and wherever possible, all the material of the thesis, including illustrations should be produced on A4-size using white paper of weight 80g/m² and printed in black ink. All margins should be 1.0 inches wide, except the left margin which should be 1.5 inches wide to allow for binding.
- 16. Typing and fonts:** The Times New Roman font should be used for the thesis text, headings and figure captions. A 12 pt font should be used for the main text. A 10 pt font should be used for the footnote. Although a slight larger 14 pt font may be used for headings and sub-headings, respectively. A 16 pt font may be used for title. Headings may be in a bold font. All submitted theses copies should be identical to one another.
- 17. Paragraph formatting:** One-and-a-half line spacing should be used throughout the text with the following exceptions; which should be single-line spacing: (i) the table of contents; (ii) tables; (iii) footnotes and endnotes; (iv) long quotations of more than 40 words; (v) computer program in listings/codes. A 6 pt extra space should be provided after each paragraph and each reference using paragraph formatting features of word processor.
- 18. Numbering:** The chapter headings begin at level 1 and numbered sequentially as 1, 2, 3 etc. The level 2 headings (sub-headings) should be numbered as 1.1, 1.2, 1.3 etc. while level 3 headings should be numbered as 1.1.1, 1.1.2, 1.1.3 etc. If more than one appendix is included, these should be numbered separately as Appendix 1, Appendix 2 etc. Figure should be numbered as Figure 1, Figure 2 etc. without distinguishing between different kinds of figure. Tables within the text should be numbered consecutively in a single sequence Table 1, Table 2.

- 19. Pagination:** The title page, approval pages, dedication, acknowledgements, abstract and contents pages etc. should be numbered with Roman numerals in lower case as i, iii, iv, etc. without showing number on the first page. The rest of the thesis should be numbered in a single sequence in Arabic numbers as 1, 2, 3, 4, 5 etc. starting again with 1 on the first page of the main text (Introduction). Illustration, charts, tables, diagrams etc., placed within the text of the thesis should be paginated as if they are pages of text. Page number should be in the bottom of the page in the centre, midway between the bottom edge of the paper and the last line of text on the page.
- 20. Submission of non-paper media:** One soft copy through e-mail along with the hard copy of the dissertation should be submitted to the Chairman of the relevant department and Central Library of PSTU. Where appropriate to the academic work being conducted, this additional soft copy may be useful. Electronic media must be unalterable and that soft copy submissions should normally be treated as supplementary to the paper dissertation.



(Specimen showing the layout of the cover page soft-binding for Master Thesis)

**CRITICAL PERIOD OF WEED COMPETITION IN
TRANSPLANT AUS RICE cv. BRRI dhan27 UNDER
NON-SALINE AGRO-ECOSYSTEM**

..... Thesis

Department of

Patuakhali Science and Technology University

Dumki, Patuakhali-8602, Bangladesh

May / November Year

N.B.: Soft-binding cover page should be in sky blue art paper



(Specimen page showing the layout of inner title page for soft-binding of Master Thesis)

**CRITICAL PERIOD OF WEED COMPETITION IN
TRANSPLANT AUS RICE cv. BRRI dhan27 UNDER
NON-SALINE AGRO-ECOSYSTEM**

A Thesis

Submitted to
Patuakhali Science and Technology University, Patuakhali
In Partial Fulfillment of the Requirements
for the Degree of Master of
in

.....
Roll/ID No.

Registration No.

Department of
Patuakhali Science and Technology University
Dumki, Patuakhali-8602, Bangladesh

May / November Year



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A Thesis

Submitted to

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In Partial Fulfillment of the Requirements

for the Degree of Master of

in

.....

Approved as to style and contents by

Signature
(Name)
Supervisor

Signature
(Name)
Co-Supervisor

Signature
(Name)
Chairman, Defense Committee
and

Chairman, Department of

May / November Year



(Specimen showing the layout of the cover page hard-binding for Master Thesis)

**CRITICAL PERIOD OF WEED COMPETITION IN
TRANSPLANT AUS RICE cv. BRRI dhan27 UNDER
NON-SALINE AGRO-ECOSYSTEM**

..... Thesis
Full name of the student

Department of
Patuakhali Science and Technology University
Dumki, Patuakhali-8602, Bangladesh

June / December Year

N.B.: Hard-binding cover page should be in royal blue rexin and typescripts on the cover should be in golden color.



(Specimen page showing the layout of inner title page for hard-binding of Master Thesis)

**CRITICAL PERIOD OF WEED COMPETITION IN
TRANSPLANT AUS RICE cv. BRRI dhan27 UNDER
NON-SALINE AGRO-ECOSYSTEM**

A Thesis

Submitted to

Patuakhali Science and Technology University, Patuakhali

In Partial Fulfillment of the Requirements

for the Degree of Master of

in

.....

By

Student's name

Roll/ID No.

Registration No.

Department of

Patuakhali Science and Technology University

Dumki, Patuakhali-8602, Bangladesh

June / December Year



(Specimen page showing the layout of inner title page for hard-binding of Master Thesis)

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Submitted to
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in Partial Fulfillment of the Requirements
for the Degree of Master of
in

.....

By
Student's name

Approved as to style and contents by

Signature
(Name)
Supervisor

Signature
(Name)
Co-Supervisor

Signature
(Name)
Chairman, Defense Committee
and
Chairman, Department of

June / December Year



DECLARATION

I declare that, the thesis hereby submitted by me for the Master degree at the Patuakhali Science and Technology University is my own independent work and has not previously been submitted by me at another university/faculty for any degree.

Signature and Date

.....
(Full name of the student)

Certified by

Signature and Date
.....
(Full name of the Supervisor)

N.B.: *The name and signature of the candidate will appear in all hard binding copies of the thesis. Declaration page should not be given in soft binding copies.*

Table of Contents

	Declaration	iii
	Acknowledgements*	iv
	Abstract	v
1.	Introduction	1
2.	Review of Literature
3.	Materials And Methods
4.	Results and Discussion
5.	Conclusion
6.	References
7.	Appendices (if any)

*This are not allowed to write in the soft binding copies of the dissertation.

Rules for Master of Business Administration (MBA) Degree

1. Degrees offered

- 1.1 The degree of Masters of Business Administration (MBA) will be offered by the Patuakhali Science and Technology University (PSTU) Dumki, Patuakhali to a candidate subject to the fulfillment of the requirement prescribed hereunder. The admitted candidate shall have to abide by the rules and regulations that are currently in force and that will be promulgated by the university authority from time to time.
- 1.2 The Masters of Business Administration (MBA) degree will be offered in the following subjects/Area of specialization:

Sl. No.	Name of the Department	Subjects/Area of specialization
01.	Accounting and Information Systems	i) Accounting and Information Systems ii) Corporate Financial Reporting iii) Tax Accounting
02.	Management Studies	i) Corporate Management ii) Human Resources Management
03.	Marketing	i) Marketing ii) Agricultural Marketing
04.	Finance and Banking	i) Finance ii) Banking

The institution language of instruction and assessment are both in English.

2. Admission requirement

- 2.1 Candidates for admission to MBA Study program must possess a Bachelor of Business Administration (BBA) degree from this University or an equivalent degree from other University.
- 2.2 Candidates having passed Bachelor degree in Course-Credit system must have secured a minimum CGPA of 2.25 out of 4.00 and GPA 2.50 in the requisite course(s) on an average.
- 2.3 A candidate for admission to MBA program in any subject of specialization/Area of specialization must have studied and passed the Bachelor of Business Administration (BBA) degree major in concerned department (earning fifteen credits) from this University or an equivalent degree from other recognized University.
- 2.4 Those who are in-service with relevant field must have secured a minimum of 45% of total marks or second class or grade point 2.25 out of 4.00.
- 2.5 The academic committee will determine the pre-requisite course (s) in which the candidate must have GPA 2.50 on an average.
- 2.6 The eligibility of a candidate having degree from other university shall be assessed by an eligibility committee consisting of the proposed internship supervisor, the concerned chairman of the department and the Dean, Postgraduate Studies. The Dean, Postgraduate Studies will act as the convener of the committee.
- 2.7 An in-service candidate, if selected for admission must obtain necessary clearance and study leave or deputation for the stipulated period from his/her employer to be eligible for admission.

- 2.8 Candidate shall apply for admission in prescribed form of the university.
- 2.9 Each Student shall fill in five prescribed enrolment cards for each semester to have a coded roll number to carry through all semesters in order to maintain records in the office of the Dean, Postgraduate Studies, the Controller of examination, the Chairman of the department, the Registrar and the Students himself/herself.
- 2.10 Admission of students into MBA study program shall be approved by the Dean, Postgraduate studies on recommendation of the respective academic committee on the basis of their academic performance and satisfactory conduct at the Bachelor degree study/in a service.
- 2.11 The number of students to be admitted in a department in any particular semester will be decided by the respective academic committee on the basis of availability of teaching and research facilities in the department.
- 2.12 Candidates for admission into MBA degree program shall get themselves admitted in the months of July and January in a year and shall pay the necessary fees including examination fees as per University Rules.
- 2.13 An admitted student to a subject in particular semester (clauses 2.12& 3.1) may be allowed new admission to another subject for academic reasons, in the next semester. In such case he/she will have to take permission from the existing internship supervisor and chairman of the relevant department. This can be exercised for one time only.
- 2.14 Resolved that the second Master's degree admission to the different courses in this university will not be allowed as a general policy. However in some exceptional cases, the postgraduate studies will consider the merit of individual case for such admission on basis of the recommendations of their respective appointing authorities.
- 2.15 A foreign student seeking admission to the MBA course shall submit application through the respective government agencies to the chairman of the concerned department with letters of recommendation from two referees for admission. The admission shall be processed as per above mentioned criteria. A student who completed his/her Bachelor degree from this university will be eligible for admission without the letters of recommendation.
- 2.16 A candidate having degree from any other University, if selected for admission, must submit migration certificate from his/her University to be eligible for admission.

3. Duration of study

- 3.1 An academic year shall consist of two semesters of six month each extending from July to December and from January to June. There shall be 18 working weeks in each semester covering instructions, assignments and examinations/ or assessment.
- 3.2 The duration of the study for the degree of MBA shall be two consecutive semesters and three months internship. However, two additional consecutive semesters may be allowed to a student if the internship supervisory committee (consisting of a supervisor and a co-supervisor) and the chairman of the relevant department of PSTU recommend such extension and the recommendation is approved by the Postgraduate Studies.
- 3.3 If a student fails to obtain an MBA degree in five consecutive semesters, his/her admission shall stand cancelled automatically.

4. Course-Credit requirements

- 4.1 Sixteen lectures/contact hours of one-hour duration for a theoretical course and of two hour duration for a practical course in a semester shall be considered as one credit-hour.
- 4.2 The number of credits for course work required for any subject of specialization shall be specified by the relevant academic committee. Minimum total credit requirements shall be 38. Out of this at least 32 credits shall be for course work and 06 credits for the internship work.
 - 4.2.1 The supervisor may propose a co-supervisor for the internship program.
 - 4.2.2 A student shall be required to enroll all courses of the two course semester.
- 4.3.1 A student shall be required to register for internship work in 2nd semester.
- 4.3.2 Earning of research credits: Of the 06 internship credits will be earned through the successful presentation of internship report quality of which shall be evaluated as under and shall be linked with GPA and CGPA calculation:
Evaluation of internship report: 03 credits
Internship report defense: 03 credits
- 4.4 The Internship Supervisory committee shall recommend an internship program for a student to the Dean, Postgraduate Studies for approval by the middle of the second semester. Any subsequent change in the program shall have to be recommended by the supervisor committee and be approved by the Dean, Postgraduate Studies.
- 4.5 A particular course shall be taught by one or two teachers and evaluated accordingly as decided by the relevant Academic Committee.
- 4.6 A student shall have to enroll himself/herself in each semester on payments of necessary fees as per university rules.

5. Examination procedure

- 5.1 There shall be at least two classroom examinations and one final examination for each course in a semester. The classroom examinations shall carry 40 percent and the final examination covering the entire course shall carry 40 percent of the total marks carried by a particular course. The remaining 20 percent of the marks shall be assigned to report writing homework or any other assignments given by the course teacher(s).
- 5.2 The duration of final examination shall be of 3 hours for 3 or 4 credit courses and it shall be of 2 hours for 1 or 2 credit courses. Regardless of differences in credits and exam duration all courses will be evaluated conveniently on 100 marks in total (covering class tests, assignment and final examination).
- 5.3 In order to qualify for final examination, a student must have attended at least 75 percent of the classes for the courses included to the program of courses recommended for him/her. Student must have to submit the examination entry forms to the controller of examinations through the relevant chairman of department and Dean, Postgraduate Studies.
 - 5.3.1 The Supervisor shall make his recommendation on the stipend bill form on the basis of 75 of attendance and send it to the Dean, Postgraduate Studies through the chairman of the department. The chairman of the department shall also make his recommendation on the examination entry form on the basis of 75 percent of attendance.
 - 5.3.2 Fulfillment of the residential requirement of each student shall be ensured by the relevant Academic Committee.

- 5.4 All examinations shall be conducted and evaluated by the course teacher(s). The final examinations shall commence at least 30 days before the end of the semester and shall be completed within fifteen Working days. The course teacher(s) shall also evaluate the home assignments, report writing etc. and shall submit the marks to the chairman of the department and with a copy to the controller of examinations soon after evaluation under intimation to the Dean, Postgraduate Studies for further necessary action. The Chairmen of the relevant departments shall preserve all such records for a period of three years.
- 5.5 The Dean, PGS shall prepare and circulate the schedule for final examinations of the courses offered by different teachers in particular semester with consultation of the relevant chairmen of the departments at least 4 weeks before the commencement of the examinations.
- 5.6 The chairman of department along with course teacher(s) shall tabulate the results of the semester final examinations and send it to the controller of examinations for publication. The results of examinations shall be published at least a week before the end of the semester.
- 5.7.1 If a student has not sat for the classroom examination(s) for reasons satisfactory enough to the course teacher(s), the course teacher(s) may give him/her another change for such examination(s) during the semester but it must be held before the semester final examination.
- 5.7.2 If a student fails to appear at the semester final examination or obtained 'F' grade marks obtained by him/her in the class room examination and the assignment will be forfeited.
- 5.8 Numerical marks given on all component examinations/evaluations (for a course, internship report evaluation, internship report presentation, etc.) shall be finally pooled and converted to letter grade and grade point (4 point scale) as follows:

Marks obtained	Letter Grade	Grade Point
80% and above	A+	4.00
75% to 79%	A	3.75
70% to 74%	A	3.50
65% to 69%	B+	3.25
60% to 64%	B	3.00
55% to 59%	B-	2.75
50% to 54%	C+	2.50
45% to 49%	C	2.25
40% to 45%	D	2.00
Less 40%	F	0.00

Percentage of numerical marks shall be calculated in round figures. A fraction of 0.5 or above shall be considered as next higher number.

- 5.9 The grade D shall be regarded as the minimum passing grade. A student shall be considered to have earned the requisite credit specified for each course or internship report or internship report presentation if he/she secures D or a higher grade in it.

- 5.9.1 If a student obtains an F grade (Fail) in a particular course, internship report evaluation and internship report presentation, the Dean, Postgraduate Studies may allow him/her to repeat the relevant course, internship report evaluation and internship report presentation on recommendation of the supervisor and chairman of the department, provided the whole process is completed within study period as stipulated in articles 3.2 and 3.3. A student may be allowed to carry and repeat no more than two courses in a semester but a maximum of four courses during his/her entire study program to clear F grade(s).
- 5.9.2 If a student gets F grade in three or more courses in a semester, the concerned semester shall be deemed "crashed" and the student shall have to re-enroll to fulfill the course-credit requirement in available semester(s) subject to clauses 3.2 and 3.3.
- 5.10 The semester results and overall final results for different courses and internship report shall be presented in letter grades (clues 5.8) with Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA or Cumulative GPA) as applicable, respectively. The maximum attainable GPA or CGPA shall be 4. GPA or CGPA shall be calculated up to three decimal places.
- 5.11 The calculation of GPA and CGPA (for semester results and final results) shall be done as follows:

$$GPA = \frac{\sum (G_i \times C_i)}{\sum C_i}$$

$$CGPA = \frac{\sum (GPA_i \times TC_i)}{\sum TC_i}$$

Where, \sum = Sum of

G_i = Grade Point obtained in individual courses

C_i = Credit of respective course

GPA_i = Grade point Average obtained in individual semesters,

TC_i = Total credits of respective semesters.

- 5.12 Boycotting of an examination, adoption of unfair means and breach of discipline in an examination.
- 5.12.1 The followings shall be considered as examination offences:
- i) Copying from incriminating documents or from others script,
 - ii) Possession of incriminating documents,
 - iii) Communicating with other(s),
 - iv) Smuggling in/out of answer script,
 - v) Using abusive language or holding out threat to Invigilator/Chief Invigilator,
 - vi) Creating obstruction or disturbances inside examination hall,
 - vii) Assault or attempt to assault an Invigilator/Chief Invigilator,
 - viii) Possession of arms or other lethal weapons inside the examination hall,
 - ix) Using cell-phone inside examination hall, and
 - x) Any other offences not mentioned specifically above but consider by the chief invigilator as breach of discipline in the examination.

- 5.12.2 For any offence mentioned in 5.13.1 the concerned course examination of the examinee who committed the offence shall be cancelled by the chief invigilator subject to report to the examination discipline committee through the controller of examinations. The result of the said course shall be finalized with F grade.
- 5.12.3 Depending on the gravity of the offence, the chief invigilator may refer the case(s) to the examination discipline committee for further disciplinary action. Disciplinary action shall be taken by the examination discipline committee and that shall be reported to the regent board. The decision of the examination discipline committee shall stand final.

The committee shall comprise as follows:

i)	Vice-Chancellor	Chairman
ii-iii)	Two deans to be nominated by the Vice-Chancellor	Member
iv)	One non-salaried member of the regent board to be nominated by the Vice-Chancellor	Member
v)	Students' Affairs Advisor	Member
vi)	Proctor	Member
vii)	Registrar	Member
viii)	Controller of Examinations	Secretary

Nominated members shall hold office for a term of two years. Four members shall form quorum in meeting.

- 5.12.4 Student who either individually or jointly boycott the examination unlawfully shall be marked absent by the chief invigilator or the matter shall be referred to the examination discipline committee for further disciplinary action.
- 5.12.5 The chief invigilator shall submit the report on the offence committed by the examinee(s) to the controller of examinations in the prescribed form under sealed cover packet. The controller of examinations shall place the cases of unfair means along with relevant documents before the examination discipline committee.
- 5.12.6 Before taking any disciplinary action by the examination discipline committee, a notice shall be served upon the examinee found guilty of examination offences to show cause. The examinee shall be given a time not less than 72 hours for replying the notice.
- 5.12.7 The examinee who is identified in copying from incriminating documents or from others script or found creating disturbances inside the examination hall or found possessing incriminating documents may be debarred from appearing at examinations in the current semester.
- 5.12.8 The examinee who uses abusive languages or holds threat in the examination hall to the chief invigilator or invigilator(s) or other persons engaged in the examination shall be debarred from appearing at examinations for not more than three semesters.
- 5.12.9 The examinee who assaults or attempts to assault the chief invigilator or invigilators(s) or any other person(s) engaged in the examination shall be liable to a maximum punishment of debarment from subsequent examinations of the university and expulsion for good from the university.

- 5.12.10 Any examinee found guilty of disclosing his/her identity or deliberately making symbolic marks in his/her answer script, the answer script shall be cancelled by script examiner and the matter be reported to the controller of examinations.
- 5.12.11 The script of the examinee who has committed an examination offence other than that defined in 5.13.10 shall not be sent to the examiner for the evaluation.
- 5.12.12 A student expelled for adopting unfair means, shall not get additional semester beyond the time limit defined in the "Rules for of Master Business Administration (MBA) Degree".
- 5.12.13 Any other cases not covered by the above rules shall be dealt by the examination discipline committee in such a manner as it deems fit.

6. Internship Requirements

- 6.1 Students themselves will arrange the internship placement. The internship supervisor will help in necessary correspondence with the public and private organizations. If any student fails to arrange the internship placement the supervisor will give him a research work on field survey.
- 6.2 A candidate for MBA degree shall undertake a piece of internship work under the supervision of a teacher university or under a researcher of any recognized research institute/organization. A teacher or a researcher must have prior approval from the Dean, Postgraduate Studies to act as an internship supervisor.
- 6.3 Internship work of an MBA degree student shall be supervised by a supervisory committee consisting of a supervisor and a co-supervisor.
- 6.4 The co-supervisor shall be chosen from among the supervisors recognized by the Dean, Postgraduate Studies.
- 6.5 The co-supervisor shall be proposed by the supervisor. The chairman's of the departments shall submit the proposals for supervisory committee to the Dean, Postgraduate Studies for approval during the first semester of the student's enrolment.
- 6.6 At the end of the 1st semester each student will select a topic in consultation with guide/supervisor approved by the supervisory committee towards fulfillment of the program. Throughout the second semester the student will filled up the theoretical framework in consultation with the supervisor along with carrying out normal course load. After completion of the final examination at the second semester, each student should undertake a three months internship program in an organization, selected by the MBA supervisory committee and submit the report within twelve weeks.

7. Report evaluation and defense

- 7.1 Internship report prepared by the student shall be submitted to the relevant chairman of the department after having been signed by the supervisor committee.
- 7.2 Each internship report shall be individually evaluated on 100 marks by an examiner to be selected by the Dean, Postgraduate Studies from a three-member panel suggested by the relevant academic committee. The proposed internship report examiners will be from amongst recognized MBA Supervisor. The examiner will send the marks to the chairman of the department with a copy to the controller of examinations.
- 7.3 Supervisor and co-supervisor shall not be the internship report examiner of the students(s) under their guidance.

- 7.4.1 If an internship report examiner is absent or unavailable for some unavoidable reasons, or declines to act as an examiner the concerned chairman of the department may recommend for appointment of the next person in the proposed panel of examiners; or in case of non-availability of any person in the panel, the academic committee may propose a new panel of examiners.
- 7.4.2 The defense of the internship report of all students in a department shall be conducted and graded by a three-member defense committee of which the chairman of the concerned department shall be the chairman. The Postgraduate Studies shall select two members (of which one of the member from outside of the university) from a four member panel proposed by the relevant academic committee. The committee shall remain valid for consecutive two semesters. All members of the defense committee shall receive copies of the internship report at least seven days before the date of internship report defense.
- 7.4.3 The defense of the internship report shall be held within two weeks after the completion of internship period in presence of a minimum of two members of the defense committee. If one or more members of the defense committee express their inability to be present during the defense due to some unavoidable reasons replacement may be made by the chairman of the department from the panel under intimation to the Dean, Postgraduate Studies. The date and time of defense shall be announced by the concerned chairman of the department of PSTU in consultation with the concerned supervisor and under intimation to the Dean, Postgraduate Studies.

8. Publication of results

- 8.1 The defense committee shall tabulate and finalize the result, and send those to the controller of examinations for publication with a certificate that a copy of the internship report has been sent to the Patuakhali Science and Technology University library.
- 8.2 The results of the candidates shall be published by the controller of examinations by order of the Vice-Chancellor subject to the approval of the regent board.

Instructions for Preparation of Master Internship Report

(Parts of master Internship Report, in the order they should appear)

The best way of writing master internship report is to prepare an extended outline. Supervisor should carefully review the outline and check whether there are any unnecessary materials that are not directly related to the problem statement. It is expected that the Master Internship Report is done with a defined research question that has been solved through well designed analytical work and the results have been presented systematically. Writing the report requires complete organization of the arguments and results. Choose section titles and wordings to clearly give the idea about the findings of the study. This guideline addresses the major issues related to the structure and style of Master Internship Report.

The fundamental element of master internship report generally comprises the following:

- 1. Title:** The wording of the title should be simply a characterization of the theme. This may contain major elements the candidate will address. Preferably titles should be simple and direct, without a lot of qualifying terms or phrases. It is better to solicit the opinion of the internship supervisor. Any abbreviation in the thesis title should be avoided.
- 2. Certificate:** The certificate should have details such as name of the student, title of the report, and duration. The above details should be certified by the concern supervisor under whom the work was carried out.
- 3. Acknowledgement:** Student should acknowledge the supervisor, company/ organization and other relevant persons who have helped for successful completion of the internship.
- 4. Glossary/Abbreviations/Acronyms (mandatory):** The glossary establishes a priori understanding of concepts that will be used in the body of the report.
- 5. Table of Contents:** The table of contents must indicate all the titles of the text (divisions and subdivisions) and their page numbers. The table of contents should also include the appendices in an itemized way and the appendices should be identified. The formatting of the table of contents should facilitate the reading of these contents and the relationship between them.
- 6. List of tables, figures and graphics:** Tables, figures and graphics should be listed separately by number, followed by the title and respective page.
- 7. Executive Summary:** This is the only section of the report that is read by most of the readers. The executive summary extracts the key points of the internship report highlighting its purpose, methods, major findings and brief conclusions. It does not include figures, table or citations. The executive summary contains: (i) Title of the internship report; (ii) the word EXECUTIVE SUMMARY in bold upper case just before the text; (iii) the text should be single paragraph in between 250-300 words, in single line spacing.

8. Introduction: The introduction explains the objectives of the internship, the parts that make up the report and the contents included in it. Therefore, in an introduction, it is desirable to have a first paragraph in which the reader's curiosity is stimulated, using for this purpose the most appealing and relevant aspects related to the theme that should be explained in the following paragraph.

The introduction should:

- > Present the internship project.
- > Present the (general and specific) objectives and the interest of the work developed.
- > Briefly describe the project/activities planned for the internship.
- > Identify the methodology used for the development of the work.
- > Describe the structure of the report.

9. Objectives: This can be included with the introduction or presented as a separate section. The objectives should be very specific and quantifiable. Objectives should not be confused with the ultimate goal of the work.

10. General characterization of the organization: The characterization of the organization should include the name, sector of activity, location, history, mission, objectives, values, strategy, billing, organizational chart, etc., and brief characterization of elements associated with the specificity of the master course (e.g. characterization of policies, human resources, marketing-mix, logistic processes, information management, etc.).

11. Theoretical framework: The existence of a possible theoretical conceptual framework depends on the specificity of the master course and internship. The main sources of the different curricular units of the master course which the student used to plan and carry out the different activities of the Internship should be presented. Other sources should also be cited, particularly those to which the students had access through study on their own initiative or as a result of training provided by the host organization.

12. Results and Discussion: This division corresponds to the essential part of the report, in which the set of events that took place during the activity is described and reported. This description and analysis should be brief and clear, and may require the definition of concepts to better understand their contents. It is desirable to introduce the internship plan and its schedule of activities. In this part, the student demonstrates the results obtained and presents any improvement proposals to the organization. A reflection should also be made on the contribution of the internship to the development of the student's technical and behavioral skills.

13. Conclusion: The conclusion highlights the essential aspects of the work, as well as the prospects of future work for the internship in question, it should contain a summary of the activities undertaken by the student during the internship period and the skills mobilized to carry out these activities, as well as its results, namely the contribution of these activities to solving the different problems listed in the scope and objectives of the approved internship plan. The student can present prospects of work that can be done in the near future to improve or conclude the work done. The conclusion cannot include anything that does not derive from the content of the body of the report (avoid comments on how difficult the internship was or how satisfying it was).

- 14. References:** Most examiners scan the list of references looking for the important works in the field, inclusive of their own if applicable. Make sure they are listed and referred to in section of review of literature. All references given must be listed in alphabetical order by author's surname. Works by the same author's should be listed in chronological order.

A. Citing References in the Text

Type of citation	Narrative citation in text	Parentetical citation in text
One author	Walker (2007)	(Walker, 2007)
Two authors	Walker and Allen (2004)	(Walker & Allen, 2004)
Three and more authors	Wasserstein et al. (2005)	(Wasserstein et al., 2005)
Groups	National Institute of Mental Health (NIMH, 2003)	(National Institute of Mental Health [NIMH], 2003)
Reference with single page number/chapter, etc	Hedetoft (2013)	(Hedetoft, 2013)
Reference with page range	Haan (2005, pp. 36-37)	(Haan, 2005, pp. 36-37)
Same author, two works from different years	Todres (2011, 2012)	(Todres, 2011, 2012)
Same author, two works from same year	Derryberry and Reed (2005a, 2005b)	(Derryberry & Reed, 2005a, 2005b)

Important Notes:

- Each reference cited in text must appear in the reference list and vice-versa.
- When citing two or more works together, arrange the in-text citations alphabetically in the same order in which they appear in the reference list:
Recent research in developmental psychology has explored this issue (Bergstrom et al., 2006; Clément, 2010; Harris & Corriveau, 2011; Harris & Koenig, 2006; Heyman, 2008; Heyman & Legare, in press; Koenig & Harris, 2005).
- If you want to include several different citations in one set of brackets, they should be in alphabetical order, separated by a semi-colon:
(Durie, 2003; McShane & Travaglione, 2007; Ministry of Education, 1996).
- To cite more than one work by the same author(s), list the surname of the author(s) and then each different year of publication, separated by a comma:
(Ministry of Education, 1996, 1999).

B. The Reference List

Type of Reference	Format	Examples
Journal Article (1 author)	<p>Lastname, A. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage.doi</p> <p>Attention: The issue number is not compulsory. If the journal article has an article number instead of a page range, include the word "Article" and then the article number instead of the page range. Journal articles (but also other types of references, such as books) can have a doi or url at the end, but that is not compulsory.</p>	Paivio, A. (1975). Perceptual comparisons through the mind's eye. <i>Memory & Cognition</i> , 3(1), 635-647.
		Jerrentrup, A. (2018). Teaching medicine with the help of "Dr. House." <i>PLoS ONE</i> , 13(3), Article e0193972.
		Andreff, W. (2000). The evolving European model of professional sports finance. <i>Journal of Sports Economics</i> , 1, 257-276. https://doi.org/10.1177/152700250000100304
Journal Article (2-7 authors)	<p>Lastname, A., & Lastname, B. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage. doi</p>	Becker, L. J., & Seligman, C. (1981). Welcome to the energy crisis. <i>Journal of Social Issues</i> , 37(2), 1-7.
		Cheryan, S., & Meltzoff, A. N. (2015). Cultural stereotypes as gatekeepers. <i>Frontiers in Psychology</i> , 6, Article e0214466. https://doi.org/10.3389/fpsyg.2015.00049
		Frischlich, L., Hahn, L., & Rieger, D. (2021). The promises and pitfalls of inspirational media: What do we know, and where do we go from here? <i>Media and Communication</i> , 9(2), 162-166. https://doi.org/10.17645/mac.v9i2.4271
Journal Article (more than 7 authors)	<p>Lastname, M., Lastname, N., Lastname, O., Lastname, P., Lastname, Q., Lastname, R., Lastname, M., ... Lastname, Z. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage. Doi</p>	Gonzalez, W. L., Hughes, W., Carter, D., Campbell, C., Baker, A. B., Flores, T., Gray, W. E., . . . Lee, L. H. (2018). National character does not reflect mean personality trait levels in 49 cultures. <i>Science</i> , 3(10), 96-100.

Type of Reference	Format	Examples
Book	Lastname, A. (year). Title of the book in sentence case (edition, Volume). Publisher. doi Attention: The edition, volume, and DOI are not compulsory.	Strunk, W., Becker, E., & White, E. B. (1979). The guide to everything and then some more stuff (3rd ed.) Macmillan.
		Lippe, T. L. (Ed.). (2016). Student affairs for academic administrators. Stylus Publishing; ACPA Books.
		Kearney, D. J., & Simpson, T. L. (2020). Concise guides on trauma care. Mindfulness-based interventions for trauma and its consequences. American Psychological Association. https://doi.org/10.1037/0000154-000 .
Book Chapter	Last name, A. (year). Title of the chapter in sentence case. In B. Last name, C. Last name & D. Last name (Eds.), Title of the book in sentence case (Volume, pp. first page-last page). Publisher. doi	Bergquist, J. M. (1992). German Americans. In J. D. Buenker & L. A. Ratner (Eds.), Multiculturalism in the United States: A comparative guide to acculturation and ethnicity (Vol. 3, pp. 53-76). Greenwood.
		Baker, F. M., & Lightfoot, O. B. (1993). Psychiatric care of ethnic elders. In A. C. Gaw (Ed.), Culture, ethnicity, and mental illness (pp. 517-552). American Psychiatric Press.
		Scott, D. (2005). Colonial governmentality. In J. X. Inda (Ed.), Anthropologies of modernity (pp. 21-49). Retrieved from http://www3.interscience.wiley.com/cgi-bin/bookhome/117909832
Newspaper Article / Newsletter (in paper)	Last name, A. (year, month day). Title of the article in sentence case. Title of the Newspaper/Newsletter in Title Case, Firstpage-Lastpage.	Schwartz, J. (1993, September 30). Obesity affects economic, social status. The Washington Post, 1-4.
Newspaper Article / Newsletter (online)	Last name, A. (year, month day). Title of the article in sentence case. Title of the Newspaper/Newsletter in Title Case. www.website.com	Carey, B. (2019, March 22). Can we get better at forgetting? The New York Times. https://www.nytimes.com/2019/03/22/health/memory-forgetting-psychology.html
Website	Last name, A. (year). Title of the website article in sentence case. Name of the Website in Title Case. www.website.com	Cain, K. (2012). The negative effects of Facebook on communication. Social Media Today. http://socialmediatoday.com

Type of Reference	Format	Examples
Website (in institute)	Institute Name (year). Title of the website article in sentence case. Name of the Website in Title Case. www.website.com Date	PSTU (2012). Annual performance agreement 2022-23. http://pstu.ac.bd 21st June 2022
Published Thesis or Dissertation	Last name, A. A. (year). Title of thesis in sentence case [Doctoral or Master's thesis or dissertation, Name of the Institution]. Repository. www.website.com	Kelly, C. B. D. (2018). The art of coffee roasting [Doctoral thesis, The University of Waikato]. The University of Waikato Research Commons. https://hdl.handle.net/10289/11614 .
Unpublished Thesis or Dissertation	Last name, A. A. (year). Title of thesis in sentence case [Unpublished doctoral or Master's thesis or dissertation]. University.	Imber, A. (2003). Applicant reactions to graduate recruitment and selection [Unpublished doctoral dissertation]. Curtin University.
Conference paper, keynote address, poster presentation, etc. (unpublished)	Last name, A. (Year, Month Day-Day). Title of paper in sentence case [Type of material]. Name of Conference, City, Country.	Whipple, S. (2018, March 6-9). Control beliefs as a moderator of stress on anxiety [Paper presentation]. Southeastern Psychological Association 64th Annual Meeting, Charleston, SC, United States.
Conference paper in Proceedings (published as a book)	Last name, A. B. (Year). Title of paper. In A. Last name (Ed.; if applicable), Proceedings book title in sentence case (pp. first page-last page). Publisher.	Cismas, S. C. (2010). Educating academic writing skills in engineering. In P. Dondon & O. Martin (Eds.), Latest trends on engineering education (pp. 225-247). WSEAS Press.
Comment on Facebook Post	Author of the comment, A. (Year). First sentence of the comment [Facebook comment on the Month Day, Year, post by Author of the Post]. www.website.com	Wangail, T. (2017). Since Kashmir mass uprising, all Wimax connections were suspended almost for more than three months [Facebook comment on the January 23, 2017, post by N Rigzin]. https://www.facebook.com/groups/904515826309195/permalink/1291073837653390/?comment_id=1293505600743547
Brochure	Author. (Year). Title of document [Brochure]. Publisher.	Ministry of the Environment. (2007). Conserving water in Ontario [Brochure]. Ministry of the Environment.

Notes: This report is prepared based on APA style of citation and reference.

APA style requires a hanging indent, which means that the first line of each reference entry is aligned flush with the left margin and each subsequent line has a hanging indent of 1.27 cm or 0.5 inch.

- 15. Appendices:** Any material which increases the main text volume, but is important to justify the results of a thesis should be appended. The material, which is either too detailed or not that central, should be included in the appendix. Examples include immense tables of data, program listings, detailed maps etc.
- 16. Page layout and paper:** The text and wherever possible, all the material of the thesis, including illustrations should be produced on A4-size using white paper of weight 80g/m² and printed in black ink. All margins should be 1.0 inches wide, except the left margin which should be 1.5 inches wide to allow for binding.
- 17. Typing and fonts:** The Times New Roman font should be used for the thesis text, headings and figure captions. A 12 pt font should be used for the main text. A 10 pt font should be used for the footnote. Although a slight larger 14 pt font may be used for headings and sub-headings, respectively. A 16 pt font may be used for title. Headings may be in a bold font. All submitted theses copies should be identical to one another.
- 18. Paragraph formatting:** One-and-a-half line spacing should be used throughout the text with the following exceptions; which should be single-line spacing: (i) the table of contents; (ii) tables; (iii) footnotes and endnotes; (iv) long quotations of more than 40 words; (v) computer program in listings/codes. A 6 pt extra space should be provided after each paragraph and each reference using paragraph formatting features of word processor.
- 19. Numbering:** The chapter headings begin at level 1 and numbered sequentially as 1, 2, 3 etc. The level 2 headings (sub-headings) should be numbered as 1.1, 1.2, 1.3 etc. while level 3 headings should be numbered as 1.1.1, 1.1.2, 1.1.3 etc. If more than one appendix is included, these should be numbered separately as Appendix 1, Appendix 2 etc. Figure should be numbered as Figure 1, Figure 2 etc. without distinguishing between different kinds of figure. Tables within the text should be numbered consecutively in a single sequence Table 1, Table 2.
- 20. Pagination:** The title page, approval pages, dedication, acknowledgements, abstract and contents pages etc. should be numbered with Roman numerals in lower case as i, iii, iv, etc. without showing number on the first page. The rest of the thesis should be numbered in a single sequence in Arabic numbers as 1, 2, 3, 4, 5 etc. starting again with 1 on the first page of the main text (Introduction). Illustration, charts, tables, diagrams etc., placed within the text of the thesis should be paginated as if they are pages of text. Page number should be in the bottom of the page in the centre, midway between the bottom edge of the paper and the last line of text on the page.
- 21. Submission of non-paper media:** One soft copy through e-mail along with the hard copy of the dissertation should be submitted to the Chairman of the relevant department and Central Library of PSTU. Where appropriate to the academic work being conducted, this additional soft copy may be useful. Electronic media must be unalterable and that soft copy submissions should normally be treated as supplementary to the paper dissertation.



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**HUMAN RESOURCE INFORMATION SYSTEMS AND
ITS IMPORTANCE IN BUSINESS COMPETITIVENESS**

..... Internship Report

Department of
Patuakhali Science and Technology University
Patuakhali

March / September Year

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**HUMAN RESOURCE INFORMATION SYSTEMS AND
ITS IMPORTANCE IN BUSINESS COMPETITIVENESS**

A Report

Submitted to
Patuakhali Science and Technology University, Patuakhali
In Partial Fulfillment of the Requirements
for the Degree of Master of
in

.....

Roll/ID No.:

Registration No.:

Department of
Patuakhali Science and Technology University
Patuakhali

March / September Year



(Specimen page showing the layout of an approval page for soft-binding of Internship Report)

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A Report

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Patuakhali Science and Technology University, Patuakhali
In Partial Fulfillment of the Requirements
for the Degree of Master of
in

.....

Approved as to style and contents by

Signature
(Name)
Supervisor

Signature
(Name)
Co-Supervisor

Signature
(Name)
Chairman, Defense Committee
and
Chairman, Department of

March / September Year



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**HUMAN RESOURCE INFORMATION SYSTEMS AND
ITS IMPORTANCE IN BUSINESS COMPETITIVENESS**

..... Internship Report
Full name of the student

Department of
Patuakhali Science and Technology University
Patuakhali

June / December Year

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in

.....

By
Student's Name
Roll/ID No.:
Registration No.:

Department of
Patuakhali Science and Technology University
Patuakhali

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Approved as to style and contents by

Signature
(Name)
Supervisor

Signature
(Name)
Co-Supervisor

Signature
(Name)
Chairman, Defense Committee
and
Chairman, Department of

June / December Year



DECLARATION

I declare that, the report hereby submitted by me for the Master degree at the Patuakhali Science and Technology University is my own independent work and has not previously been submitted by me at another university/faculty for any degree.

Signature and Date

.....
(Full name of the student)

Certified by

Signature and Date
.....
(Full name of the Supervisor)

N.B.: *The name and signature of the candidate will appear in all hard binding copies of the report. Declaration page should not be given in soft binding copies.*

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*This is not allowed to write in the soft binding copies of the report.

Rules for Master of Laws (LLM) Degree

1. Degrees offered

- 1.1 The degree of Master of Laws (LLM) degree will be offered by the Patuakhali Science and Technology University, Dumki, Patuakhali to a candidate subject to the fulfillment of the requirements prescribed hereunder. The admitted candidate shall have to abide by the rules and regulations that are currently in force and that will be promulgated by the University authority from time to time.
- 1.2 The LLM degree will be offered in the following subject of specialization: a) law and b) Land Administration.

The institution's language of instruction and assessment are both in English.

2. Admission Requirement

- 2.1 Candidates for admission into LLM Study program must possess a Bachelor of Laws degree from this University or an equivalent degree from other Public University.
- 2.2 Candidates having passed Bachelor degree in Course-Credit system must have secured a minimum CGPA of 2.25 out of 4.00.
- 2.3 Candidates having passed a Bachelor degree in annual course system must have secured a minimum of 50% of total marks.
- 2.4 Those who are in-service with relevant field must have secured a minimum of 45% of total marks or second class or grade point 2.25 out of 4.00.
- 2.5 The eligibility of a candidate having degree from other public university shall be assessed by an eligibility committee consisting of the proposed supervisor, the concerned chairman of the department and the Dean, Postgraduate Studies. The Dean, PGS will act as the convener of the committee.
- 2.6 An in-service candidate, if selected for admission must obtain necessary clearance and study leave or deputation for the stipulated period from his/her employer to be eligible for admission.
- 2.7 Candidate shall apply for admission in prescribed form of the university.
- 2.8 Each Student shall fill in five prescribed enrolment cards for each semester to have a coded roll number to carry through all semesters in order to maintain records in the office of the Dean, Postgraduate Studies, the Controller of examination, the Chairman of the department, the Registrar and the Students himself/herself.
- 2.9 Admission of students into LLM study program shall be approved by the Dean; Postgraduate studies on recommendation of the respective academic committee on the basis of academic performance and satisfactory conduct at the Bachelor degree study/in a service.
- 2.10 The number of students to be admitted in any particular semester will be decided by the respective academic committee on the basis of availability of teaching and research facilities in the department.
- 2.11 Candidates for admission into LLM degree program shall get them admitted in the months of July and January in a year and shall pay the necessary fees including examination fees as per University Rules.

- 2.12 A foreign student seeking admission to the MBA course shall submit application through the respective government agencies to the chairman of the concerned department with letters of recommendation from two referees for admission. The admission shall be processed as per above mentioned criteria. A student who completed his/her Bachelor degree from this university will be eligible for admission without the letters of recommendation.
- 2.13 A candidate having degree from any other University, if selected for admission, must submit migration certificate from his/her University to be eligible for admission.

3. Duration of Study

- 3.1 An academic year shall consist of two semesters of six month each extending from July to December and from January to June. There shall be 18 working weeks in each semester covering instructions, assignments and examinations/assessment.
- 3.2 The duration of the study for the degree of LLM shall be two consecutive semesters. However, two additional consecutive semesters may be allowed to a student, if the supervisor and the chairman of the relevant department recommend such extension and the recommendation is approved by the Postgraduate Studies.
- 3.3 If a student fails to obtain an LLM degree in four consecutive semesters, his/her admission shall stand cancelled automatically.

4. Course-Credit Requirements

- 4.1 Sixteen lectures/contact hours of one-hour duration for a theoretical course and of two hour duration for a practical course in a semester shall be considered as one credit-hour.
- 4.2 The number of credits for course work required for each candidate shall be specified by the relevant academic committee. Minimum total credit requirements shall be 32. Out of this at least 27 credits shall be for course work, 03 credits for the research monograph (evaluation) and 02 credits for viva-voce. A student shall be required to complete all courses.
- 5.8 The Supervisor shall recommend a research program for a student to the Dean, Postgraduate Studies for approval by the middle of the first semester. Any subsequent change in the program shall have to be recommended by the supervisor and be approved by the Dean, Postgraduate Studies.
- 5.9 A particular course shall be taught by one or two teachers and evaluated accordingly as decided by the relevant Academic Committee.
- 5.10 A student shall have to enroll himself/herself in each semester on payments of necessary fees as per university rules.

5. Examination Procedure

- 5.1 There shall be at least two classroom examinations and one final examination for each course in a semester. The classroom examinations shall carry 30 percent and the final examination covering the entire course shall carry 50 percent of the total marks carried by a particular course. The remaining 20 percent of the marks shall be assigned to report writing homework or any other assignments given by the course teacher(s).

- 5.2 The duration of final examination shall be of 3 hours for 3 or 4 credit courses and it shall be of 2 hours for 1 or 2 credit courses. Regardless of differences in credits and exam duration, all courses will be evaluated conveniently on 100 marks in total (covering class tests, assignment and final examination).
- 5.3 In order to qualify for final examination, a student must have attended at least 75 percent of the classes for the courses included to the program of courses recommended for him/her. Student must have to submit the examination entry forms to the controller of examinations through the relevant chairman of department and Dean, Postgraduate Studies.
- 5.3.1 Fulfillment of the residential requirement of each student shall be ensured by the relevant Academic Committee.
- 5.4 All examinations shall be conducted and evaluated by the course teacher(s). The final examinations shall commence at least 30 days before the end of the semester and shall be completed within fifteen Working days. The course teacher(s) shall also evaluate the home assignments, report writing etc. and shall submit the marks to the chairman of the department and with a copy to the controller of examinations soon after evaluation under intimation to the Dean, Postgraduate Studies for further necessary action. The Chairman of the relevant department shall preserve all such records for a period of three years.
- 5.5 The Dean, PGS shall prepare and circulate the schedule for final examinations of the courses offered by different teachers in particular semester with consultation of the relevant chairman of the department at least 4 weeks before the commencement of the examinations.
- 5.6 The chairman of department along with course teacher(s) shall tabulate the results of the semester final examinations and send it to the controller of examinations for publication. The results of examinations shall be published at least a week before the end of the semester.
- 5.6.1 If a student has not sat for the classroom examination(s) for reasons satisfactory enough to the course teacher(s), the course teacher(s) may give him/her another change for such examination(s) during the semester but it must be held before the semester final examination.
- 5.6.2 If a student fails to appear at the semester final examination or obtained 'F' grade, marks obtained in the class room examination and the assignment will be forfeited.
- 5.7 Numerical marks given on all component examinations/evaluations (for a course, research monograph, viva-voce, etc.) shall be finally pooled and converted to letter grade and grade point (4 point scale) as follows:

Marks obtained	Latter Grade	Grade Point
80% and above	A+	4.00
75% to 79%	A	3.75
70% to 74%	A	3.50
65% to 69%	B+	3.25
60% to 64%	B	3.00
55% to 59%	B-	2.75
50% to 54%	C+	2.50
45% to 49%	C	2.25
40% to 45%	D	2.00
Less 40%	F	0.00

Percentage of numerical marks shall be calculated in round figures. A fraction of 0.5 or above shall be considered as next higher number.

4.7 The grade D shall be regarded as the minimum passing grade. A student shall be considered to have earned the requisite credit specified for each course or research monograph or viva-voce if he/she secures D or a higher grade in it.

5.7.1 If a student obtains an F grade (Fail) in a particular course, research monograph and viva-voce, the Dean, Postgraduate Studies may allow him/her to repeat the relevant course, research monograph and viva-voce on recommendation of the supervisor and chairman of the department, provided the whole process is completed within study period as stipulated in articles 3.2 and 3.3. A student may be allowed to carry and repeat no more than two courses in a semester but a maximum of four courses during his/her entire study program to clear F grade(s).

5.7.2 If a student gets F grade in three or more courses in a semester, the concerned semester shall be deemed crashed and the student shall have to re-enroll to fulfill the course-credit requirement in available semester(s) subject to clauses 3.2 and 3.3.

5.8 The semester results and overall final results for different courses, research monograph and viva-voce shall be presented in letter grades (clues 5.8) with Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA or Cumulative GPA) as applicable, respectively. The maximum attainable GPA or CGPA shall be 4. GPA or CGPA shall be calculated up to three decimal places.

5.9 The calculation of GPA and CGPA (for semester results and final results) shall be done as follows:

$$GPA = \frac{\sum (G_i \times C_i)}{\sum C_i}$$

$$CGPA = \frac{\sum (GPA_i \times TC_i)}{\sum TC_i}$$

Where, \sum = Sum of

G_i = Grade Point obtained in individual courses

C_i = Credit of respective course

GPA_i = Grade point Average obtained in individual semesters,

TC_i = Total credits of respective semesters.

5.10 Boycotting of an examination, adoption of unfair means and breach of discipline in an examination.

5.10.1 The followings shall be considered as examination offences:

- i) Copying from incriminating documents or from others script,
- ii) Possession of incriminating documents,
- iii) Communicating with other(s),
- iv) Smuggling in/out of answer script,
- v) Using abusive language or holding out threat to Invigilator/Chief Invigilator,
- vi) Creating obstruction or disturbances inside examination hall,
- vii) Assault or attempt to assault an Invigilator/Chief Invigilator,
- viii) Possession of arms or other lethal weapons inside the examination hall,
- ix) Using cell-phone inside examination hall, and
- x) Any other offences not mentioned specifically above but consider by the chief invigilator as breach of discipline in the examination.

5.10.2 For any offence mentioned in 5.10.1 the concerned course examination of the examinee who committed the offence shall be cancelled by the chief invigilator subject to report to the examination discipline committee through the controller of examinations. The result of the said course shall be finalized with F grade.

5.10.3 Depending on the gravity of the offence, the chief invigilator may refer the case(s) to the examination discipline committee for further disciplinary action. Disciplinary action shall be taken by the examination discipline committee and that shall be reported to the regent board. The decision of the examination discipline committee shall stand final. The committee shall comprise as follows:

i)	Vice-Chancellor	Chairman
ii-iii)	Two deans to be nominated by the Vice-Chancellor	Member
iv)	One non-salaried member of the regent board to be nominated by the Vice-Chancellor	Member
v)	Student's Affairs Advisor	Member
vi)	Proctor	Member
vii)	Registrar	Member
viii)	Controller of Examinations	Secretary

Nominated members shall hold office for a term of two years. Four members shall form quorum in meeting.

5.10.4 Student who either individually or jointly boycott the examination unlawfully shall be marked absent by the chief invigilator or the matter shall be referred to the examination discipline committee for further disciplinary action.

5.10.5 The chief invigilator shall submit the report on the offence committed by the examinee(s) to the controller of examinations in the prescribed form under sealed cover packet. The controller of examinations shall place the cases of unfair means along with relevant documents before the examination discipline committee.

- 5.10.6 Before taking any disciplinary action by the examination discipline committee, a notice shall be served upon the examinee found guilty of examination offences to show cause. The examinee shall be given a time not less than 72 hours for replying the notice.
- 5.10.7 The examinee who is identified in copying from incriminating documents or from others scrip or found creating disturbances inside the examination hall or found possessing incriminating documents may be debarred from appearing at examinations in the current semester.
- 5.10.8 The examinee who uses abusive languages or holds threat in the examination hall to the chief invigilator or invigilator(s) or other persons engaged in the examination shall be debarred from appearing at examinations for not more than three semesters.
- 5.10.9 The examinee who assaults or attempts to assault the chief invigilator or invigilators(s) any other person(s) engaged in the examination shall be liable to a maximum punishment of debarment from subsequent examinations of the university and expulsion for good from the university.
- 5.10.10 Any examinee found guilty of disclosing his/her identity or deliberately making symbolic marks in his/her answer script, the answer script shall be cancelled by script examiner and the matter be reported to the controller of examinations.
- 5.10.11 The script of the examinee who has committed an examination offence other than that defined in 5.13.10 shall not be sent to the examiner for the evaluation.
- 5.10.12 A student expelled for adopting unfair means, shall not get additional semester beyond the time limit defined in the "Rules for of Master of Law (LLM) Degree".
- 510.13 Any other cases not covered by the above rules shall be dealt by the examination discipline committee in such a manner as it deems fit.

6. Viva-voce Examination Procedure

- 6.1 There shall be a viva-voce examination consisting of 4 (four) members for each semester of which the chairman of the concerned department shall be the chairman.
- 6.2 The Postgraduate Studies shall select three members (of which one of the member from outside of the university) from a five member panel proposed by the relevant academic committee.
- 6.3 The viva-voce examination shall be held at the end of the semester final examination in presence of a minimum of three members of the viva-voce examination board.
- 6.4 If one or more members of the viva-voce examination board express their inability to be present during the viva-voce examination due to some unavoidable reasons replacement may be made by the chairman of the department from the panel under intimation to the Dean, Postgraduate Studies.

7. Research Monograph Requirements

- 7.1 A candidate for LLM degree shall undertake a piece of research work for research monograph under the supervision of a teacher of public university or under a researcher of any government/autonomous recognized research institute/organization. A teacher or a researcher must have prior approval from the Dean, Postgraduate Studies to act as a supervisor.
- 7.2 A student may begin his/her research work from the first semester and shall complete the research work and research monograph writing and submit the same at least 30 days before the end of the last semester of the students approved study period (as defined in Clauses 3.2 and 3.3).

8. Research Monograph Evaluation

- 8.1 Research monograph shall be prepared by the student and shall be submitted to the relevant chairman of the department after having been signed by the supervisor.
- 8.2 Each research monograph shall be individually evaluated on 100 marks by two examiners (of which one of the member from outside of the university) to be selected by the Postgraduate Studies from a four-member panel suggested by the relevant academic committee.
- 8.3 The examiners shall send the marks to the chairman of the department. The average of the marks given by the two research monograph examiners shall be considered as the marks obtained, and the letter grade and grade point (GP) will be awarded, accordingly by the chairman of the department and send it to the controller of the examinations.
- 8.4 The supervisor shall not be the research monograph examiner of the students(s) under their guidance.
- 8.5 If a research monograph examiner is absent or unavailable for some unavoidable reasons, or declines to act as an examiner, the concerned chairman of the department may recommend for appointment of the next person in the proposed panel of examiners; or in case of non-availability of any person in the panel, the academic committee may propose a new panel of examiners.
- 8.6 In case of more than 20% variations in marks given by two research monograph examiners a third examiner from the panel of examiner shall examine the research monograph and the average of two nearest marks shall be taken as final.

9. Publication of Results

- 9.1 The chairman of department along with course teacher(s) shall tabulate and finalize the result, and send those to the controller of examinations for publication.
- 9.2 The results of the candidates shall be published by the controller of examinations by order of the Vice-Chancellor subject to the approval of the regent board.

Rules for the Degree of Doctor of Philosophy

1. Degree offered

The degree of Doctor of Philosophy, herein after referred to as PhD, is offered from the following departments of the Patuakhali Science and Technology University (PSTU). The departments are a) Agricultural Botany, b) Agricultural Chemistry, c) Agricultural Extension and Rural Development, d) Agronomy, e) Biotechnology, f) Entomology, g) Genetics and Plant Breeding, h) Horticulture, i) Plant Pathology, j) Soil Science, k) Biochemistry and Food Analysis, l) Economics and Sociology, m) Accounting and Information Systems, n) Finance and Banking, o) Management Studies, p) Marketing, q) Aquaculture and r) Electrical and Electronics Engineering. In addition, PhD degree may also be offered from other departments after approval of the university.

2. Admission

2.1 Eligibility

A candidate seeking PhD admission to any of the departments, should fulfill any of the following eligibility criteria.

- a) An applicant seeking PhD admission shall possess at least a second class (45% marks in conventional yearly system)/CGPA 2.50 out of 4.00 both in Bachelor and Master degree with thesis/ internship report (with one extra publication as first author) from this university or an relevant equivalent degree from any other public university recognized by the Postgraduate Studies (PGS). The applicant should also have at least three years of experience in the relevant field (teaching/ research/ extension/ administration/ development/ industry/ Equivalent) as a first class job and one publications as a first author in recognized scientific journal (Institutional/ Society/ Thomson and Reuters/ Clarivate Analytics/ equivalent).
- b) An applicant having first class (60% marks in conventional yearly system)/ CGPA 3.50 out of 4.00 both in Bachelor and Master degree with thesis/ internship report (with one extra publication as first author) from any public university, one year of experience in the relevant field (teaching/ research/ extension/ administration/ development/ industry/ equivalent) as a first class job and one publications as a first author in recognized scientific journal (Institutional/ Society/ Thomson and Reuters/ Clarivate Analytics/ equivalent) will be eligible for admission into PhD degree.
- c) An applicant having first class (with 60% marks in conventional yearly system)/ CGPA 3.50 out of 4.00 both in Bachelor and Master degree with thesis/ internship report (with one extra publication as first author) from any public university and three publications as a first author in recognized scientific journal (Institutional/ Society/ Thomson and Reuters/ Clarivate Analytics/ equivalent) will be eligible for admission into PhD degree without any experience .
- d) An applicant having first class (60% marks in conventional yearly)/ CGPA 3.50 out of 4.00 with distinction/ CGPA 4.00 out of 4.00 in both or one of the Bachelor and Master degree with thesis/ internship report (with one extra publication as first author) from any public university will be eligible for admission into PhD degree without any experience and publication.

The maximum age limit for PhD admission is 50 years on the date of application submission. The criteria of age limit and degree from public university may be relaxed for internal inservice candidates.

If a student fails to complete the degree within the specified time (maximum ten semester), his/her admission shall be automatically stand cancelled and further he will not get any opportunity for admission/readmission in this university.

2.2 Procedure for application

A prospective PhD candidate should contact a potential supervisor of the respective department of PSTU and develop a research program. The prospective PhD candidate will then apply to the Dean, PGS through the chairman of the department in the prescribed form obtainable from PSTU website or office of the Dean PGS. Candidates, employed in any organizations, must submit their application through the proper channel.

2.3 Time schedule

The PhD program at PSTU is designed for three academic years (six semesters). The admission to PhD program will be twice a year (January and July). However, the time of admission may be changed under special circumstances (e.g. requirement of the funding authority). In that case, the enrollment of the candidate will be adjusted accordingly.

2.4 Admission committee

The eligibility for PhD admission of a candidate shall be evaluated by the admission committee with a formal interview (presentation). The assessment will be made on academic qualification, job experience, publications, research proposal, proficiency in English language and performance of the candidate in the interview.

The admission committee shall consist of:

i)	Dean, Postgraduate Studies	Chairman
ii)	Proposed Supervisor	Member
iii)	Chairman of the Relevant Academic Committee	Member
iv)	One Expert (to be nominated by the Vice-Chancellor)	Member

The chairman of academic committee of a department will propose a panel of three experts to the Dean, PGS. The Dean, PGS will notify the students and respective members of the committee after getting necessary approval from the Vice-chancellor.

2.5 Foreign students

A foreign student seeking PhD admission shall apply to the Dean, PGS with a certificate of English language proficiency, a research proposal, a proof of the support of potential supervisor, letter of recommendation from two referees and a filled in application form. The Dean, PGS will process the application as per the section 2.4. However, the foreign and Bangladeshi applicants residing abroad may be allowed to appear at an online interview.

2.6 Enrollment

An applicant for PhD Course will be admitted upon recommendation of the admission committee and approval by the PGS and subsequently payment of prescribed fees within the deadline of notification.

3. Program of studies

3.1 Supervisory committee

A student admitted to the PhD course shall conduct a research work under the guidance of the supervisory committee. The supervisor of the PhD student shall propose a supervisory committee to the Dean, PGS through the Chairman of the department within the middle of the first semester. The Supervisory Committee will consist of three members:

- i) Supervisor - Chairman
- ii) Co-Supervisor (2) - Member (within or outside of the department)

The Co-Supervisors shall be chosen from the enlisted PhD supervisors of PSTU. The supervisory committee shall review the progress of course and research work of the student in each academic semester and submitted to the relevant chairman of the department. The chairman of the department shall take necessary action for tabulation of the results of the semester and send it to the controller of examinations for publication.

3.2 Residential requirement

A PhD student must study (full time) as a residential student for a minimum period of two years (four semesters). The in-service PhD candidate must get leave/deputation for at least a period of two years from the respective employer to study as a residential student.

3.3 Proposal submission and progress evaluation

A PhD student should submit his/her dissertation proposal within one year of admission (two semesters). The proposal of a PhD student needs to be finalized with a seminar, organized by the respective department, and with consultation with supervisory committee. The Dean, PGS will notify the acceptance of the submitted proposal within three months from the date of reception. The research progress at the end of year-II of a PhD student will be evaluated by the supervisory committee in a seminar organized by the respective department. The supervisory committee will send the evaluation report to the Chairman of the relevant department.

4. Course-credit requirements

4.1 Sixteen lectures/study hours, (each of one-hour duration) shall be considered as one credit-hour for a theoretical course.

4.2 A minimum total number of credits required for obtaining a PhD degree shall be 74 shown in the item number I to VII in Table 1. A student may achieve additional credits by presenting his/her research in conferences, publishing research articles, and registration of technologies/patent/variety/trademark. A student needs to enroll for at least 12 credits in each of the six semesters. The PhD student must achieve the compulsory credits (for courses, research, seminar and publication) before the submission of final dissertation.

Table 1. The distribution of credits for PhD degree is as follows:

Sl. No.	Item	Credit	Assessment
i)	Compulsory courses (2 or 3 courses, each of 2 or 3 credits decided by the relevant academic committee)	06	Grading
ii)	Elective courses (2 or 3 courses, each of 2 or 3 credits decided by the relevant academic committee)	06	Grading
iii)	Research	30	Satisfactory
iv)	Seminar (One for proposal presentation seminar within 2 nd semester and another for the evaluation of research progress within 4 th semester)	12 (06+06)	Satisfactory
v.	Two article publication from his dissertation work as a first author in national or international journal (as like as Society/ Institutional/ Scopus index/ Equivalent)	06 (03+03)	Acceptance letter
vi.	Dissertation Evaluation	08	Satisfactory
vii.	Viva-voce examination	06	Satisfactory
Total=		74	
viii.	Additional research		
	a) Presentation of research work in national conference	03	Conference proceeding
	b) Presentation of research work in international conference	05	Conference proceeding
	c) One research article, accepted/published in a Web of Science indexed journal	06	Acceptance letter
	d) Technology/patent/ variety/ trademark	10	Registration document

The curricula of the PhD courses should be developed by the relevant academic bodies of the university. A PhD student shall have to take 2/3 compulsory courses and 2/3 elective courses within the first two semesters of his/her PhD study. If any student becomes unsuccessful in any course(s) in a semester, s/he must pass that course(s) within the fifth semester. If a student gets F grade in two or more courses in a semester, the concerned semester shall be considered as unsuccessful and the student shall have to re-enroll to fulfill the course-credit requirement in available semester(s). However, if a student fails to appear at the semester final examination, the marks obtained in the classroom examination and the assignments will not be accounted for preparing the grade. In addition to these courses, a PhD student may have to take one or more courses according to the suggestions of the supervisory committee.

4.3. The PhD courses will be offered by the respective department according to the decision of the academic committee.

4.4. The assessment of the courses will be similar to the Master degree program of the university. Specifically, two class tests, assignment and final examination will carry 40 (20 + 20), 20 and 40 percent marks, respectively. Assignments must be presented before the course teacher(s) using standard presentable form. The duration of the final examination will be 2 hours for a 2 credit course and 3 hours for a 3 credit course.

Regardless of differences in credit and duration of examination, all courses will be evaluated conveniently on 100 marks in total (covering class tests, assignments and final examination).

A student must submit the examination entry form to the Controller of Examination through the Chairman of the Department and Dean of the PGS.

- 4.5.** Numerical marks given on all components of examinations/evaluations (for courses) shall be finally pooled and converted to letter grade and grade point is a 4-point scale as follows:

Marks obtained	Latter Grade	Grade Point
80% and above	A+	4.00
75% to 79%	A	3.75
70% to 74%	A	3.50
65% to 69%	B+	3.25
60% to 64%	B	3.00
55% to 59%	B-	2.75
50% to 54%	C+	2.50
45% to 49%	C	2.25
40% to 45%	D	2.00
Less 40%	F	0.00

Percentage of numerical marks shall be calculated in round figure. A fraction of 0.5 or above shall be considered as the next higher number.

5. PhD dissertation examination

5.1 Submission of application for dissertation examination

A PhD student shall submit the application for dissertation examination to the Controller of Examinations through Chairman of the relevant Department and the Dean, Postgraduate studies and shall pay the required fees before submission of the dissertation.

5.2 Submission of dissertation

A candidate shall submit the dissertation for the award of the degree of Doctor of Philosophy in sixth semester. The candidate shall prepare a dissertation and submit four hard copies in simple bound form and one soft copy (preferable in pdf format) to the Chairman of the relevant department. The Chairman of the department will send the dissertation to the chairman, Examination Committee (discussed in the next section) for further necessary action.

Any candidate failing to submit dissertation within the specified time for reasons satisfactory to the supervisory committee and the Dean, Postgraduate Studies, may be allowed two more semesters for submission of the dissertation. But if a candidate fails to submit the dissertation within the total period of eight semesters, the enrollment shall automatically stand cancelled.

If, however, a candidate fails to submit the dissertation for reasons beyond his/her control, the candidate may apply for readmission with recommendation of the supervisory committee and the Postgraduate Studies may consider the case for re-admission. In such case, the candidate shall submit the dissertation within two semesters from the date of cancellation of admission with the privilege of carrying over the past research work, provided that other academic requirements for the PhD degree course are fulfilled by the candidate. If the candidate fails to submit the dissertation within that period, the admission of the candidate shall stand cancelled automatically and no further re-admission will be allowed.

5.3 Examination committee

An examination committee needs to be formed within fifth semesters for each of the PhD students for sending the dissertation to examiners and evaluation of the examiner's report. This committee will also be responsible for conducting the viva-voce examination. The academic committee of the department will nominate the chairman of the examination committee ordinarily from the professors of the department who are recognized by PGS to act as a PhD supervisor. If necessary the chairman of the examination committee may be nominated from outside of the department or of university.

The committee shall comprise of:

i)	Chairman examination committee (to be nominated by the relevant academic committee)	Chairman
ii)	Supervisor of the candidate	Member
iii)	Chairman of the relevant academic committee	Member
iv)	One of the dissertation examiners (to be nominated by the examination committee)	Member
v)	One member to be nominated by the Dean, Postgraduate Studies	Member

The Controller of Examinations will issue appointment letters to the members of the examination committee after obtaining approval of the Vice-chancellor through the Dean, Postgraduate Studies.

5.4 Appointment of dissertation examiners

The appointment of dissertation examiners of a PhD student shall be made within fifth semesters from the date of admission. The relevant academic committee shall propose a panel of 6 (six) examiners (with telephone, fax, email and postal address) to the Dean, PGS. Out of the six examiners, at least two shall be included from foreign Universities/ Institutes. The panel must not include any members of the supervisory committee of the student. After getting the panel of examiners from the chairman of academic committee, the Dean, PGS will get the necessary approval from the Vice-chancellor. The Vice-Chancellor shall accord approval of the three examiners, including one from foreign university/ institute. Having received the approval of the dissertation examiners panel from the Vice-chancellor, the Dean, Postgraduate studies, will send it to the Controller of Examinations. The Controller of Examinations will contact with the examiners for getting their consent for PhD dissertation evaluation. If any examiner fails to respond within two weeks after receiving

the invitation from the Controller of Examinations to examine a PhD dissertation, s/he will send an invitation to the next member of the panel. The controller of examination will then send the final list of the examiners to the Chairman of the Examination Committee with the intimation to the Dean PGS.

5.5 Examination of dissertation

The Chairman of the respective department will send the dissertations (both hard and soft copies) to the chairman of the examination committee. The chairman of the examination committee will first check similarity index of the dissertation (following the guidelines discussed in the next section) and then, send a soft copy or hard copy of dissertation along with the examination form and other necessary documents to each of the examiners. The examiners will send the examination report to the chairman examination committee within one month of reception of the dissertation.

5.6 Plagiarism check

Before sending the dissertation for evaluation, it is necessary to check plagiarism. A dissertation will only be sent for evaluation if the similarity index is below 30% (thirty percent) except self-citation. If a dissertation carries more than 30% similarity, it will send back to the student through the Chairman of the department. The examination committee will send a report of similarity analysis to the Dean, PGS.

5.7 Viva-voce examination

The examination committee shall examine the reports of the dissertation examiners. If any correction and/or modification of any part of the dissertation based on the examiners report is necessary, the committee will instruct the candidate to make the correction or modification accordingly. The committee shall ensure incorporation of necessary corrections and modifications and submission of the dissertation to the chairman of the examination committee in triplicate within the period specified by the examination committee before holding the viva-voce examination.

If the reports of at least two of the examiners are found satisfactory, the chairman of the examination committee shall fix a date for viva-voce examination of the candidate under intimation to the Dean, Postgraduate Studies, and the controller of Examinations. On satisfactory completion of the viva-voce examination, the examination committee with consent from majority of the members shall recommend the candidate to the Postgraduate Studies for award of the PhD degree with all the relevant papers and a corrected copy (art paper binding) of the dissertation.

5.8 Re-submission of dissertation

If the report of at least one of the Dissertation examiner is satisfactory, the candidate shall be given a chance to re-submit the dissertation within six months (one semester) from the date of notification by the examination committee. Thereafter, the procedure as stated under section 5.4 to 5.7 shall be followed.

5.9 Second viva-voce examination

If the performance of a candidate in the first viva-voce examination is unsatisfactory, the candidate may be allowed to appear at the second viva-voce examination within a period of one month from the date of first viva-voce examination.

5.10 Award of the degree

After considering the report of the examination committee, the Dean, PGS shall forward the recommendations to the Academic Council. After approval of the Academic Council, the chairman of examination committee will send a certificate to the registrar that a copy of the final hard bond dissertation (with an electronic copy) has been sent to the concerned department and PSTU library. On approval, the member secretary of academic council will send the recommendation to the Board of Regent for final approval and the awarding of the PhD degree.

6. Anything not covered by these rules may be referred to the Academic Council through the Postgraduate studies for decision.

Credit distribution in different semesters

Sl. No.	Semester Number	Credit Hour Distribution	Total Credit
01	1 st	Course- 06 credit hour, and Research- 06 credit hour	12 credit hour
02	2 nd	Course- 06 credit hour, and Proposal presentation seminar- 06 credit hour	12 credit hour
03	3 rd	Research- 12 credit hour	12 credit hour
04	4 th	Research- 06 credit hour, and Research progress presentation seminar- 06 credit hour	12 credit hour
05	5 th	Research- 06 credit hour Article publication-06	12 credit hour
06	6 th	Dissertation evaluation- 08 credit hour, and Viva voice examination -06 credit hour	14 credit hour
Total			74 credit hour
07	Any semester	Additional credits for presentation of research in conferences, publishing research articles, and registration of technologies/ patent/ variety/ trademark	Based on achievement

Proforma for Application for Admission into PhD Degree Program

1.	Name of the candidate	:	
2.	Date of birth	:	
3.	Present address	:	
4.	Permanent address	:	
5.	Nationality	:	
6.	Academic qualification with division/class year of passing and name of institution	:	
7.	a) Job experience(s)	:	
	b) List of publications (with reprint)	:	
8.	Department in which admission is sought	:	
9.	a) Proposed Title of Research for PhD	:	
	b) Title of Master Thesis	:	
10.	Department/Institute where research to be performed	:	
11.	Name of proposed supervisor with address	:	
12.	Scientific background of the research project	:	
	a) Significance of overall problem	:	
	b) Review of literature and an account related work already done or in progress in other institute/ country or elsewhere	:	
13.	Scientific scope of research	:	
	a) Research objectives	:	
	b) Tentative technical program/methodology	:	
	c) Research work-plan (year-wise)	:	
14.	References	:	
15.	Source of fund for conducting research (Attach documentary evidence)	:	
16.	Assurance of study leave by the employer (in case of in-service candidate)	:	

Name and Signature of the candidate :

Name and Signature of the proposed Supervisor :

Name and Signature of the Chairman of the Department :

NB: Necessary documents (Pay slip, assurance of study leave, fellowship/scholarship letter, list of publication with reprint, attested copies of three passport size lab print photo, attested copies of all certificates, mark sheets/transcripts, testimonial, national ID card etc.) should be attached.

Proforma for Submission of PhD Dissertation Proposal

1.	a) Name of the student	:	
	b) Department	:	
	c) Date of enrolment	:	
2.	Title of PhD dissertation	:	
3.	Significance of the proposed PhD dissertations work	:	
4.	Objectives of the PhD dissertation work	:	
5.	Review of literature related to the PhD dissertation work	:	
6.	Methodology to the followed	:	
7.	Work plan	:	
8.	References	:	
9.	Research facilities required	:	
10.	Source(s) of fund	:	
11.	Signature of the student	:	
12.	Signature of the supervisor and other members of the Supervisory Committee with name and designation	:	
13.	Countersign by the relevant Chairman of the Department	:	
14.	Approval signature by the Dean, Postgraduate Studies	:	

N.B.: A cover page and a list of contents are to be included at the beginning of the dissertation proposal.

Instructions for Preparation of PhD Dissertation

(Parts of a PhD dissertation, in the order they should appear)

The best way of writing PhD dissertation is to prepare an extended outline. Supervisor should carefully review the outline and check whether there are any unnecessary materials that are not directly related to the problem statement. It is expected that the PhD dissertation is done with a defined research question that has been solved through well designed research work and the results have been presented systematically. Writing the thesis requires complete organization of the arguments and results. Choose section titles and wordings to clearly give the idea about the findings of the study. This guideline address the major issues related to the structure and style of PhD dissertation.

The fundamental element of PhD dissertation generally comprises the following:

- 1. Title Page:** Title page must give the following in the order indicated.
- 2. Approval sheet:** This part should be followed as per proforma shown.
- 3. Table of contents:** This should list in sequence, with page number, all major subdivision of the dissertation such as chapters, the references, appendices etc.
- 4. Declaration:** I declare that, except where otherwise stated, this dissertation is based on entirely my own work and has not been submitted in any form to any other university for any degree.
This declaration must be signed by the candidate with date of submission of hard copy of the dissertation. This dissertation is an independent compilation and attachment to your dissertation. Work without this dissertation will not be accepted. The name and signature of the candidate will appear in all hard binding copies of the dissertation. Declaration page should not be given in soft binding copies. Candidates are strongly advised to check the regulations for specific requirements for the degree of Doctor of Philosophy.
- 5. Acknowledgements:** Any help received from any person or institution, in the provision of facilities, should be formally acknowledged. The full name and position of all persons acknowledged are essential.
- 6. Biographical sketch:** Not more than 1 page; to be included in the final binding.
- 7. Abstract:** Should briefly summarize the objectives, methods, results and conclusion of the dissertation. This should be composed in 1 page (A4) in the font size not less than 10 with single spacing between lines, and having no paragraph.
- 8. Introduction:** It should describe the reasons for and objectives of the research work and should highlighted on the topic studied including in evidence for its importance, brief description of the work, and conclude with clear objectives of the study. Brief background information is necessary to make the records oriented with some of the materials needed to follow the dissertation.

A PhD student must have the capability of conducting independent research. It requires the development of an original research question, a proposal for the methodology to answer it, and a plan for reaching appropriate conclusions.

9. Review of literature: A separate section for this topic is necessary to cover the amount of published literature, which is related to the topics studied. It is essential to cite those that are most important for the work done. The majority of the references should be current, with the exception of historical, original work. Most sources should be primary ones, representing the relevant work done in the field to date. They should be clearly relevant to the specific area of study. Sources whose theories or opinions conflict with the study should also be included. All information is to be appropriately cited as plagiarism (it is defined as presenting someone else's work as one's own) is illegal. Critically evaluate the articles and make some independent assessment of their importance to the set objectives/research questions that have been done for the dissertation.

10. Materials and Methods: This chapter should clearly describe the setting and management of the study with clear information on the materials used, treatments, design of experiment, collection of data and analysis of data.

11. Results: This should be presented clearly using tables, figures, photographs etc. in standard format and style (having appropriate captions). Presentation of the same results in different forms of illustrations should be avoided. Correct interpretation of the statistical results is necessary. The findings of the study should be critically judged in relation to the present knowledge. Suggestions for alternative approaches may be given. Repetitions and superfluous statements should be avoided.

12. Discussion: Discussion chapter should be presented separately. Every statement must be supported by a reference to published scientific literature or by original work. It does not repeat the details of critical thinking and analysis found in published sources, it uses the results as fact and refers the reader to the source for further details. A dissertation must be corrected and defensible in logic applied to scientific findings or results. This should provide clear interpretation of results in the context of what has been done.

13. Summary: This section will be carefully read by the examiners and others. The list of contributions of new knowledge needs to be incorporated. The future research direction should be included so that researchers picking up this idea in future.

14. Conclusion: The contents of the dissertation should be summarized properly, and appropriate conclusion and recommendation should be made. The part should be brief, to the point and accurately described, and should be based on the set objectives and findings of the study. Specific suggestions can also be made. There will be no table, figure or citation of references in this part.

15. References: It should be arranged in alphabetical order, and only the references cited in the text should be listed. All the references listed must be completed, accurate and in a standard format as per manual. Uniformity throughout the list is essential.

A. Citing References in the Text

Type of citation	Narrative citation in text	Parenthetical citation in text
One author	Walker (2007)	(Walker, 2007)
Two authors	Walker and Allen (2004)	(Walker & Allen, 2004)
Three and more authors	Wasserstein et al. (2005)	(Wasserstein et al., 2005)
Groups	National Institute of Mental Health (NIMH, 2003)	(National Institute of Mental Health [NIMH], 2003)
Reference with single page number/chapter, etc	Hedetoft (2013)	(Hedetoft, 2013)
Reference with page range	Haan (2005, pp. 36-37)	(Haan, 2005, pp. 36-37)
Same author, two works from different years	Todres (2011, 2012)	(Todres, 2011, 2012)
Same author, two works from same year	Derryberry and Reed (2005a, 2005b)	(Derryberry & Reed, 2005a, 2005b)

Important Notes:

1. Each reference cited in text must appear in the reference list and vice-versa.
2. When citing two or more works together, arrange the in-text citations alphabetically in the same order in which they appear in the reference list:
Recent research in developmental psychology has explored this issue (Bergstrom et al., 2006; Clément, 2010; Harris & Corriveau, 2011; Harris & Koenig, 2006; Heyman, 2008; Heyman & Legare, in press; Koenig & Harris, 2005).
3. If you want to include several different citations in one set of brackets, they should be in alphabetical order, separated by a semi-colon:
(Durie, 2003; McShane & Travaglione, 2007; Ministry of Education, 1996).
4. To cite more than one work by the same author(s), list the surname of the author(s) and then each different year of publication, separated by a comma:
(Ministry of Education, 1996, 1999).

B. The Reference List

Type of Reference	Format	Examples
Journal Article (1 author)	<p>Lastname, A. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage.doi</p> <p>Attention: The issue number is not compulsory. If the journal article has an article number instead of a page range, include the word "Article" and then the article number instead of the page range. Journal articles (but also other types of references, such as books) can have a doi or url at the end, but that is not compulsory.</p>	Paivio, A. (1975). Perceptual comparisons through the mind's eye. <i>Memory & Cognition</i> , 3(1), 635-647.
		Jerrentrup, A. (2018). Teaching medicine with the help of "Dr. House." <i>PLoS ONE</i> , 13(3), Article e0193972.
		Andreff, W. (2000). The evolving European model of professional sports finance. <i>Journal of Sports Economics</i> , 1, 257-276. https://doi.org/10.1177/152700250000100304
Journal Article (2-7 authors)	<p>Lastname, A., & Lastname, B. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage. doi</p>	Becker, L. J., & Seligman, C. (1981). Welcome to the energy crisis. <i>Journal of Social Issues</i> , 37(2), 1-7.
		Cheryan, S., & Meltzoff, A. N. (2015). Cultural stereotypes as gatekeepers. <i>Frontiers in Psychology</i> , 6, Article e0214466. https://doi.org/10.3389/fpsyg.2015.00049
		Frischlich, L., Hahn, L., & Rieger, D. (2021). The promises and pitfalls of inspirational media: What do we know, and where do we go from here? <i>Media and Communication</i> , 9(2), 162-166. https://doi.org/10.17645/mac.v9i2.4271
Journal Article (more than 7 authors)	<p>Lastname, M., Lastname, N., Lastname, O., Lastname, P., Lastname, Q., Lastname, R., Lastname, M., ... Lastname, Z. (year). Title of the article in sentence case. Journal in Title Case, Volume(Issue), Firstpage-Lastpage. Doi</p>	Gonzalez, W. L., Hughes, W., Carter, D., Campbell, C., Baker, A. B., Flores, T., Gray, W. E., . . . Lee, L. H. (2018). National character does not reflect mean personality trait levels in 49 cultures. <i>Science</i> , 3(10), 96-100.

Type of Reference	Format	Examples
Book	Lastname, A. (year). Title of the book in sentence case (edition, Volume). Publisher. doi Attention: The edition, volume, and DOI are not compulsory.	Strunk, W., Becker, E., & White, E. B. (1979). The guide to everything and then some more stuff (3rd ed.) Macmillan. Lippe, T. L. (Ed.). (2016). Student affairs for academic administrators. Stylus Publishing; ACPA Books. Kearney, D. J., & Simpson, T. L. (2020). Concise guides on trauma care. Mindfulness-based interventions for trauma and its consequences. American Psychological Association. https://doi.org/10.1037/0000154-000 .
Book Chapter	Last name, A. (year). Title of the chapter in sentence case. In B. Last name, C. Last name & D. Last name (Eds.), Title of the book in sentence case (Volume, pp. first page-last page). Publisher. doi	Bergquist, J. M. (1992). German Americans. In J. D. Buenker & L. A. Ratner (Eds.), Multiculturalism in the United States: A comparative guide to acculturation and ethnicity (Vol. 3, pp. 53-76). Greenwood. Baker, F. M., & Lightfoot, O. B. (1993). Psychiatric care of ethnic elders. In A. C. Gaw (Ed.), Culture, ethnicity, and mental illness (pp. 517-552). American Psychiatric Press. Scott, D. (2005). Colonial governmentality. In J. X. Inda (Ed.), Anthropologies of modernity (pp. 21-49). Retrieved from http://www3.interscience.wiley.com/cgi-bin/bookhome/117909832
Newspaper Article / Newsletter (in paper)	Last name, A. (year, month day). Title of the article in sentence case. Title of the Newspaper/Newsletter in Title Case, Firstpage-Lastpage.	Schwartz, J. (1993, September 30). Obesity affects economic, social status. The Washington Post, 1-4.
Newspaper Article / Newsletter (online)	Last name, A. (year, month day). Title of the article in sentence case. Title of the Newspaper/Newsletter in Title Case. www.website.com	Carey, B. (2019, March 22). Can we get better at forgetting? The New York Times. https://www.nytimes.com/2019/03/22/health/memory-forgetting-psychology.html
Website (in person)	Last name, A. (year). Title of the website article in sentence case. Name of the Website in Title Case. www.website.com	Cain, K. (2012). The negative effects of Facebook on communication. Social Media Today. http://socialmediatoday.com

Type of Reference	Format	Examples
Website (in institute)	Institute Name (year). Title of the website article in sentence case. Name of the Website in Title Case. www.website.com Date	PSTU (2012). Annual performance agreement 2022-23. http://pstu.ac.bd 21st June 2022
Published Thesis or Dissertation	Last name, A. A. (year). Title of thesis in sentence case [Doctoral or Master's thesis or dissertation, Name of the Institution]. Repository. www.website.com	Kelly, C. B. D. (2018). The art of coffee roasting [Doctoral thesis, The University of Waikato]. The University of Waikato Research Commons. https://hdl.handle.net/10289/11614 .
Unpublished Thesis or Dissertation	Last name, A. A. (year). Title of thesis in sentence case [Unpublished doctoral or Master's thesis or dissertation]. University.	Imber, A. (2003). Applicant reactions to graduate recruitment and selection [Unpublished doctoral dissertation]. Curtin University.
Conference paper, keynote address, poster presentation, etc. (unpublished)	Last name, A. (Year, Month Day-Day). Title of paper in sentence case [Type of material]. Name of Conference, City, Country.	Whipple, S. (2018, March 6-9). Control beliefs as a moderator of stress on anxiety [Paper presentation]. Southeastern Psychological Association 64th Annual Meeting, Charleston, SC, United States.
Conference paper in Proceedings (published as a book)	Last name, A. B. (Year). Title of paper. In A. Last name (Ed.; if applicable), Proceedings book title in sentence case (pp. first page-last page). Publisher.	Cismas, S. C. (2010). Educating academic writing skills in engineering. In P. Dondon & O. Martin (Eds.), Latest trends on engineering education (pp. 225-247). WSEAS Press.
Comment on Facebook Post	Author of the comment, A. (Year). First sentence of the comment [Facebook comment on the Month Day, Year, post by Author of the Post]. www.website.com	Wangail, T. (2017). Since Kashmir mass uprising, all Wimax connections were suspended almost for more than three months [Facebook comment on the January 23, 2017, post by N Rigzin]. https://www.facebook.com/groups/904515826309195/permalink/1291073837653390/?comment_id=1293505600743547
Brochure	Author. (Year). Title of document [Brochure]. Publisher.	Ministry of the Environment. (2007). Conserving water in Ontario [Brochure]. Ministry of the Environment.

Notes: This report is prepared based on APA style of citation and reference.

APA style requires a hanging indent, which means that the first line of each reference entry is aligned flush with the left margin and each subsequent line has a hanging indent of 1.27 cm or 0.5 inch.

- 16. Appendices:** Usually contain the supporting materials, e.g., analysis of variance tables, copies of questionnaires used in the study, weather data etc. However, in each case the author must assure himself/herself that inclusion of the appendix is necessary. All appendices must be referred in the text.
- 17. Page layout and paper:** The text and wherever possible, all the material of the thesis, including illustrations should be produced on A4-size using white paper of weight 80g/m² and printed in black ink. All margins should be 1 inch wide, except the left margin of odd pages and right margin of even pages (if necessary) which should be 1.5 inches wide to allow for binding.
- 18. Typing and fonts:** The Times New Roman font should be used for the thesis text, headings and figure captions. A 12 pt font should be used for the main text, although a slight larger 14 pt and 16 pt font may be used for headings and titles page, respectively. Headings may be in a bold font. The submitted theses copies should be identical to one another.
- 19. Paragraph formatting:** One-and-a-half line spacing should be used throughout the text with the following exceptions, which should be single-line spacing: (i) the table of contents; (ii) tables; (iii) footnotes and endnotes; (iv) long quotations of more than 40 words; (v) computer program in listings/codes. A 6 pt extra space should be provided after each paragraph and each reference using paragraph formatting features of word processor.
- 20. Numbering:** The chapter headings begin at level 1 and numbered sequentially as 1, 2, 3 etc. The level 2 headings (sub-headings) should be numbered as 1.1, 1.2, 1.3 etc. while level 3 headings should be numbered as 1.1.1, 1.1.2, 1.1.3 etc. If more than one appendix is included, these should be numbered separately as Appendix 1, Appendix 2 etc. Figure should be numbered as Figure 1, Figure 2 etc. without distinguishing between different kinds of figure. Tables within the text should be numbered consecutively in a single sequence Table 1, Table 2.
- 21. Pagination:** All pages should be numbered, including introductory pages, appendices etc. A single sequence of Arabic numbers should be used. This is to facilitate photocopying and binding, so page may remain in the correct order. If necessary, Roman numerals may be used to number sequential sub-sets of the whole dissertation. The final hard-bound copies will bear a blocked title in gold in a top position on the front hard black colored cover with name of degree, author's full name, and name of the department and university, month and year of submission of dissertation. The spine will bear the author's name, name of the degree, and year of submission, reading from bottom to top.

The title page, approval pages, dedication, acknowledgements, abstract and contents pages etc. should be numbered with Roman numerical in lower case as i, ii, iii, iv etc. without showing number on the first page. The rest of the thesis should be numbered in a single sequence in Arabic numbers as 1, 2, 3, 4, 5 etc. starting again with 1 on the first page of the main text (Introduction). Illustration, charts, tables, diagrams etc., placed within the text of the thesis should be paginated as if they are pages of text.



Page number should be in the bottom of the page in the centre, midway between bottom edge of the paper and the last line of text on the page.

- 22. Submission of the non-paper media:** One soft copy through e-mail along with the hard copy of the dissertation should be submitted to office of the Chairman of the relevant department, Dean, Postgraduate Studies and Central Library of PSTU. Where appropriate to the academic work being conducted, this additional soft copy may be useful. Electronic media must be unalterable and that soft copy submissions should normally be treated as supplementary to the paper dissertation.

[PhD Dissertation cover page (Soft-binding for examination)]

**PHOSPHORUS SORPTION, DESORPTION, FRACTIONS
AND SUPPLYING CAPACITY OF TIDAL FLOODPLAIN
SOILS OF BANGLADESH**

PhD
Dissertation

Department of

Patuakhali Science and Technology University
Dumki, Patuakhali-8602, Bangladesh

May / November Year

N.B.: *The copies of dissertation for examination should have soft-binding. Sky blue art paper should be used for the cover, and the above text as suggested for the title page should also be printed on the cover.*



[Specimen page showing the layout of an inner title page of PhD Dissertation
(Soft-binding for examination)]

**PHOSPHORUS SORPTION, DESORPTION, FRACTIONS
AND SUPPLYING CAPACITY OF TIDAL FLOODPLAIN
SOILS OF BANGLADESH**

A Dissertation
Submitted in accordance with the requirements of the
Patuakhali Science and Technology University,
Patuakhali for the degree of

DOCTOR OF PHILOSOPHY

By

Roll/ID No.

Registration No.

Department of
Patuakhali Science and Technology University
Dumki, Patuakhali-8602, Bangladesh

May / November Year



[Specimen page showing the layout of an approval sheet of PhD Dissertation
(Soft-binding for examination)]

**PHOSPHORUS SORPTION, DESORPTION, FRACTIONS
AND SUPPLYING CAPACITY OF TIDAL FLOODPLAIN
SOILS OF BANGLADESH**

A Dissertation
Submitted in accordance with the requirements of the
Patuakhali Science and Technology University,
Patuakhali for the degree of

DOCTOR OF PHILOSOPHY

By

Roll/ID No.

Registration No.

Approved as to style and contents by

Signature
(Name)

Supervisor

Signature
(Name)
Co-Supervisor

Signature
(Name)
Co-Supervisor

Signature
(Name)

Chairman, Examination Committee

Department of
Patuakhali Science and Technology University
Dumki, Patuakhali-8602, Bangladesh

May / November Year



[Specimen page of PhD Dissertation Cover Page (Hard-binding)]

**PHOSPHORUS SORPTION, DESORPTION, FRACTIONS
AND SUPPLYING CAPACITY OF TIDAL FLOODPLAIN
SOILS OF BANGLADESH**

PhD
Dissertation

Student's full name

Department of

Patuakhali Science and Technology University
Dumki, Patuakhali-8602, Bangladesh

June / December Year

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**PHOSPHORUS SORPTION, DESORPTION, FRACTIONS
AND SUPPLYING CAPACITY OF TIDAL FLOODPLAIN
SOILS OF BANGLADESH**

A Dissertation

Submitted in accordance with the requirements of the
Patuakhali Science and Technology University,
Patuakhali for the degree of

DOCTOR OF PHILOSOPHY

By
Student's full name

Roll/ID No.

Registration No.

Approved as to style and contents by

Department of
Patuakhali Science and Technology University
Dumki, Patuakhali-8602, Bangladesh

June / December Year



[Specimen page showing the layout of an approval sheet for hard-binding PhD Dissertation]

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Approved as to style and contents by

Signature
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Supervisor

Signature
(Name)

Co-Supervisor

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(Name)

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(Name)

Chairman, Examination Committee

Department of

Patuakhali Science and Technology University

Dumki, Patuakhali-8602, Bangladesh

June / December Year



DECLARATION

I declare that, except where otherwise stated, this dissertation is based on entirely my own work and has not been submitted in any form to any other university for any degree.

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.....
(Full name of the student)

Certified by

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.....
(Full name of the Supervisor)

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PHOSPHORUS SORPTION, DESORPTION, FRACTIONS AND SUPPLYING CAPACITY OF TIDAL FLOODPLAIN SOILS OF BANGLADESH

MF Hoque

ABSTRACT

Sound phosphorus fertilizer management, in relation to minimum environmental impact and maximum efficiency, insists on adequate understanding of phosphorus-soil interactions. The present investigation involves characterization of tidal floodplain soils for maximum P sorption capacity, energy of adsorption, buffering capacity of P and P saturation. It evaluated several P extraction methods and uncovered distribution of inorganic and organic fractions of P in tidal floodplain soil. A pot experiment was conducted for the depletion of P fractions by exhaustive plant uptake and transformation of native and applied P. Maximum P adsorption capacity of the tested coastal soils ranged from 1250 - 1834 $\mu\text{g g}^{-1}$. Energy of adsorption varied from 0.223 to 1.00 $\mu\text{g ml}^{-1}$, P buffering capacity ranged from 139 to 243 and P saturation ranged from 0.27 to 1.59 $\mu\text{mol g}^{-1}$. Acid (HCl 0.5M) although extracted the highest amount of both native and applied P, showed the poorest relationship with relative dry matter and P uptake by rice. Olsen extractant showed the best correlation between soil test P and dry matter yield but it explained only about 70% of the variability. The critical level for Olsen P was found 5 mg kg⁻¹ for the coastal soils of Bangladesh. Tidal floodplain soils, on an average of 12 samples, contained 887 mg kg⁻¹ of total P of which only 0.01% remained in solution form, 1.84% in NaHCO₃ extractable, 4.24% in NaOH extracted inorganic P fraction, 46.65% in NaOH extracted organic P fraction, 28.19% in acid pool and 18.97% in residual pool. The tested soils showed a large variability in the distribution in native P in different pools. The application of P mainly increased NaHCO₃ extractable P and 0.10 N NaOH extractable inorganic P pools. Continuous rice cultivation without P application, in controlled net house condition, decreased the concentration of labile P (solution P and NaHCO₃ P), moderately labile P (NaOH Pi and acid) and stable P (organic and residual P) but with the addition of P increased the labile and moderately labile P. Exhaustive rice cropping in pots was done with no application of P (P₀) and with 50 mg kg⁻¹ P application (P₅₀) for four crops. The pot experiment facilitated the estimation of labile and stable P pools in coastal soils based on plant P uptake. Estimated labile P ranged from 5 mg kg⁻¹ in Barisal clay soil collected from Dumki, Patuakhali to 55 mg kg⁻¹ in Sara silty clay soils collected from Gournadi, Barisal. Estimated stable P pool varied from 77 mg kg⁻¹ in Jhalokathi clay collected from Dumki, Patuakhali to 848 mg kg⁻¹ in Barisal clay collected from Barisal. About 3% of the stable P in coastal soils was transferred to labile pool, but depending upon soils 23 to 62% of the labile P was absorbed by the growing rice plants. The estimated labile P showed about 93% variability in relative dry matter and 82% variability in P uptake in P₀ pots. Estimated stable P pool exhibited about 90% variability in relative dry matter yield and P uptake by rice plant in P₀ conditions. The labile P and stable P estimated through plant based approach explained the variability of relative dry matter yield of rice and P uptake better than the soil test approach. Critical level of labile P and stable P was found 37.5 and 600 mg pot⁻¹, respectively, for the coastal soils of Bangladesh. The labile P and stable P as indicator for differentiating soils into sufficient and deficient level of P need calibration through field studies.

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*These are not allowed to write in the soft copies of the dissertation.

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A. Dissertation Identification

1. Title of the dissertation:
2. Name of the Department:
3. Roll No. of the candidate: Year:
4. Registration No. of the candidate: Year:

B. Specific comments (please give tick mark, where applicable and give your comments on separate sheets)

1. Title of the dissertation
 - a) Whether the Title of the dissertation is appropriate: Yes No
 - If not, please make comment -

2. **Abstract** (1 page with no paragraph)
 - a) Whether the Abstract of the dissertation is acceptable: Yes No
 - If not, please indicate the reasons(s) -

3. **Introduction**
 - a) Whether the Introduction is well-written with indication of major problem(s) and setting of clear objective(s) using appropriate literature support, and is in an acceptable form: Yes No
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4. **Review of Literature**
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6. **Results**
 - a) Whether the data were analyzed properly, and statistical analyses have been presented where necessary: Yes No
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d) Whether the findings and results of statistical analyses have been discussed and interpreted clearly using appropriate references:

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7. Discussion

a) Whether the research question has been discussed with expected outcome using appropriate references:

Yes No

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a) Whether the contents of the dissertation have been summarized properly and appropriate conclusions and recommendations have been made:

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a) Whether they are written in short, with the statement of inferences that have been made out of this work :

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a) Whether the appendices included are judicious, and in acceptable form:

Yes No

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C. General comments

1. Whether the dissertation is based on candidate's original research:

Yes No

- If there is any doubt, please indicate with clear evidence -



2. Whether the findings of the study is likely to make distinct contribution to be the knowledge of the subject:

Yes No

• If not, please indicate the reason -

3. Whether the overall standard of presentation, in respect of language, format and style is acceptable:

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E. Recommendation (please give tick mark against only one statement)

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- b. Department :
- c. Date of birth :
- d. Number of publications :
- e. Permanent address :

2. Dissertation and information on Dissertation examination:

- a. Title of the Dissertation :
- b. Supervisory Committee :
 - (i)..... - Supervisor
 - (ii)..... - Co-supervisor
 - (iii)..... - Co-supervisor

c. Academic schedules:

Admission semester	Dissertation submission semester	Viva-voce examination semester	Report submission semester by the examination committee

d. Earning (at least 74) credits of course(s), research, seminars, publications and dissertation in different semesters for PhD program:

e. Abstract of the dissertation:

3. Name and recommendations of three dissertation examiners:

- i. :
- ii. :
- iii. :

4. Name of the examination committee:

- i. Chairman
- ii. Member
(Supervisor)
- iii. Member
(Chairman, Relevant Academic Committee)
- iv. Member
(One of the dissertation examiners)
- v. Member
(Dean, Postgraduate Studies nominee)



5. Report of the PhD examination committee

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Roll/ID No. :
Reg. No. :
Name of the Department :
Title of the Dissertation :

(Please tick (?) in the right box):

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(ii) Acceptance with corrections/modifications/improvements for the award of the PhD Degree [1] [2] [3] [None]

b) Modified/corrected/improved by candidate : [Yes] [No]

c) Viva-voce : [Satisfactory] [Unsatisfactory]

d) Achievement of the research work (Shortly) :

.....
.....

6. Decision of the PhD Examination Committee:

The candidate incorporated all corrections and modifications suggested by dissertation examiner(s) before viva-voce examination. The examination committee unanimously recommends to Postgraduate Studies, Patuakhali Science and Technology University, that (candidate's name)..... be awarded the degree of Doctor of Philosophy by the Patuakhali Science and Technology University, Patuakhali.

.....
Chairman of the examination committee
Department of.....
Patuakhali Science and Technology University, Dumki, Patuakhali.
Phone:

Criteria for Recognition of Supervisors for MS MBA LLM and PhD Degree Students

(a) For MS Students

- (i) PhD or equivalent degree, or MS or equivalent degree with five years of teaching and/or research experience and at least two research publications published in any recognized journal.
- (ii) An individual supervisor should not take more than three students in one session. This rule, however, may be relaxed up to five in special permission.

(b) For MBA Students

- (i) PhD or equivalent degree, or MBA/MS/MSc or equivalent degree with three years of teaching and/or research experience and at least two research publications published in any recognized journal.
- (ii) An individual supervisor should not take more than three students in one session. This rule, however, may be relaxed up to five in special permission.

(c) For LLM Degree Students

- (i) PhD or Equivalent Degree, or MPhil/LLM/equivalent degree with three years teaching and/or research experience and at least two research publications published in any recognized journal.
- (ii) An individual supervisor should not take more than three students in one session. This rule, however, may be relaxed up to five in special permission.

(d) For PhD Students except BA Faculty

- (i) Doctor of Philosophy or equivalent degree with ten years of teaching and/or research experience and at least ten research publications published in recognized journals.
- (ii) In case of a person having no PhD or equivalent degree, twenty years of experience in teaching and/or research with minimum of 15 research publications-published in recognized journals.
- (iii) A proposed supervisor having PhD degree should have supervised at least five Master students before being recognized as a PhD supervisor.
- (iv) A proposed supervisor who has not obtained a PhD or equivalent degree should have supervised at least ten Master students before being recognized as a PhD supervisor.
- (v) An individual supervisor should not be supervised more than five students at a time. In this case, after one student completes the degree; another student can take admission.

(e) For PhD Students of BA Faculty

- (i) Doctor of Philosophy or equivalent degree with ten years of teaching and/or research experience and at least ten research publications with minimum five research publications as first author published in recognized journals.
- (ii) A proposed supervisor having PhD degree should have supervised at least ten MBA students before being recognized as a PhD supervisor.
- (iii) In case of a person having no PhD or equivalent degree, twenty years of experience in teaching and/or research and at least 15 research publications with minimum five research publications as first author published in recognized journals.
- (iv) A proposed supervisor who has not obtained a PhD or equivalent degree should have supervised at least fifteen MBA students before being recognized as a PhD supervisor.
- (v) An individual supervisor should not be supervised more than five students at a time. In this case, after one student completes the degree; another student can take admission.

Course Contents for Doctor of Philosophy Program in Different Departments

01. Course Contents of PhD in Agricultural Botany

Name of the subject	:	Agricultural Botany
Name of the department	:	Agricultural Botany
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGB	7101	Advanced Plant Physiology	03	Compulsory
AGB	7102	Global Climate Change and Crop Response	03	Elective
AGB	7103	Signal Perception and Regulation of Physiology	03	Elective
AGB	7104	Plant Nutrition	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGB	7201	Project Planning and Research Methodology	03	Compulsory
AGB	7202	Plant Biotechnology and Molecular Biology	03	Elective
AGB	7203	Hormonal Regulations of Plant Growth and Development	03	Elective
AGB	7204	Agro-ecology and Ecosystem Management	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGB	7301	Research work	30	Compulsory
AGB	7302	Seminar	12	Compulsory
AGB	7303	Article publication in society/institutional/ Scopus index/equivalent journal	06	Compulsory
AGB	7304	National conference	03	Optional
AGB	7305	International conference	05	Optional
AGB	7306	Article publication in web of science index journal	06	Optional
AGB	7307	Technology/patent/variety/trademark	10	Optional
AGB	7308	Dissertation Evaluation	08	Compulsory
AGB	7309	Viva voce examination	06	Compulsory

02. Course Contents of PhD in Agricultural Chemistry

Name of the subject	:	Agricultural Chemistry
Name of the department	:	Agricultural Chemistry
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ACM	7101	Advanced Agro-analytical Chemistry	03	Compulsory
ACM	7102	Chemistry and Technology of Fertilizer and Pesticides	03	Elective
ACM	7103	Environmental Chemistry and Technology	03	Elective
ACM	7104	Applied Water Science	03	Elective
ACM	7105	Nuclear Chemistry and Food Safety	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ACM	7201	Chemistry and Processing of Agro-products	03	Compulsory
ACM	7202	Research Methodology and Data Processing	03	Elective
ACM	7203	Waste Management and Energy Production	03	Elective
ACM	7204	Advanced Phyto-ecological Chemistry	03	Elective
ACM	7205	Plant Nutrition and Health	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGB	7301	Research Work	30	Compulsory
AGB	7302	Seminar	12	Compulsory
AGB	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
AGB	7304	National Conference	03	Optional
AGB	7305	International Conference	05	Optional
AGB	7306	Article publication in web of science index journal	06	Optional
AGB	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
AGB	7308	Dissertation Evaluation	08	Compulsory
AGB	7309	Viva-voce examination	06	Compulsory

03. Course Contents of PhD in Entomology

Name of the subject	:	Entomology
Name of the department	:	Entomology
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENT	7101	Advanced Insect Physiology	03	Compulsory
ENT	7102	Insect Ecology and Behavior	03	Elective
ENT	7103	Insect Systematics and Evolution	03	Elective
ENT	7104	Insect Pathology and Immunology	03	Elective
ENT	7105	Commercial Entomology	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENT	7201	Entomological Research Methodology	03	Compulsory
ENT	7202	Advanced Integrated Pest Management	03	Elective
ENT	7203	Advanced Insecticides Toxicology	03	Elective
ENT	7204	Insect Molecular Biology	03	Elective
ENT	7205	Medical and Veterinary Entomology	03	Elective
ENT	7206	Host Plant Resistance to Insects	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENT	7301	Research Work	30	Compulsory
ENT	7302	Seminar	12	Compulsory
ENT	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
ENT	7304	National Conference	03	Optional
ENT	7305	International Conference	05	Optional
ENT	7306	Article publication in web of science index journal	06	Optional
ENT	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
ENT	7308	Dissertation Evaluation	08	Compulsory
ENT	7309	Viva-voce examination	06	Compulsory

04. Course Contents of PhD in Genetics and Plant Breeding

Name of the subject	:	Genetics and Plant Breeding
Name of the department	:	Genetics and Plant Breeding
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GPB	7101	Molecular Genetics and Cytogenetics	03	Compulsory
GPB	7102	Scientific Writing and Communication	03	Elective
GPB	7103	Plant Biotechnology and Genetic Engineering	03	Elective
GPB	7104	Applied Hybrid Breeding	03	Elective
GPB	7105	Analytical Genomics and Bioinformatics	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GPB	7201	Applied Plant Breeding	03	Compulsory
GPB	7202	Applied Biometrical Genetics	03	Elective
GPB	7203	Applied Stress Breeding	03	Elective
GPB	7204	Industrial Plant Breeding	03	Elective
GPB	7205	Multivariate Statistics	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GPB	7301	Research Work	30	Compulsory
GPB	7302	Seminar	12	Compulsory
GPB	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
GPB	7304	National Conference	03	Optional
GPB	7305	International Conference	05	Optional
GPB	7306	Article publication in web of science index journal	06	Optional
GPB	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
GPB	7308	Dissertation Evaluation	08	Compulsory
GPB	7309	Viva-voce examination	06	Compulsory

05. Course Contents of PhD in Horticulture

Name of the subject	:	Horticulture
Name of the department	:	Horticulture
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRT	7101	Advances in Fruit Crops	03	Compulsory
HRT	7102	Advances in Spice, Medicinal and Plantation Crops	03	Elective
HRT	7103	Horticultural Seed Technology	03	Elective
HRT	7104	Horticultural Biotechnology	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRT	7201	Advances in Vegetable Crops	03	Compulsory
HRT	7202	Horticultural Research Methodology	03	Elective
HRT	7203	Floriculture and Landscaping	03	Elective
HRT	7204	Processing of Horticultural Crops	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRT	7301	Research Work	30	Compulsory
HRT	7302	Seminar	12	Compulsory
HRT	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
HRT	7304	National Conference	03	Optional
HRT	7305	International Conference	05	Optional
HRT	7306	Article publication in web of science index journal	06	Optional
HRT	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
HRT	7308	Dissertation Evaluation	08	Compulsory
HRT	7309	Viva-voce examination	06	Compulsory

06. Course Contents of PhD in Soil Science

Name of the subject	: Soil Science
Name of the department	: Soil Science
Total compulsory course	: 06 Credit hours
Total elective course	: 06 Credit hours
Total research work	: 62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
SSC	7101	Soil Environment, Biochemical Processes and Plant Growth	03	Compulsory
SSC	7102	Soil Degradation and Management of Degraded Soil	03	Elective
SSC	7103	Soil Survey and Classification	03	Elective
SSC	7104	Soil and Clay Mineralogy	03	Elective
SSC	7105	Nano Fertilizer Technology	03	Elective
SSC	7106	Green house gases, Pesticide and Environment	03	Elective
SSC	7107	Fundamentals of Geographic Information Systems (GIS)	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
SSC	7201	Research Methodology and Scientific Report Writing	03	Compulsory
SSC	7202	Quantitative analysis of Soil, Plant, Water and Fertilizers	03	Elective
SSC	7203	Advanced Microbial Biotechnology	03	Elective
SSC	7204	Soil-water and Nutrient Transport	03	Elective
SSC	7205	Biofertilizers for Sustainable Agriculture	03	Elective
SSC	7206	Modeling in Soil Plant System	03	Elective
SSC	7207	Radio Tracer Techniques in Soils and Fertilizers	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
SSC	7301	Research Work	30	Compulsory
SSC	7302	Seminar	12	Compulsory
SSC	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
SSC	7304	National Conference	03	Optional
SSC	7305	International Conference	05	Optional
SSC	7306	Article publication in web of science index journal	06	Optional
SSC	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
SSC	7308	Dissertation Evaluation	08	Compulsory
SSC	7309	Viva-voce examination	06	Compulsory

07. Course Contents of PhD in Economics and Sociology

Name of the subject	:	Economics and Sociology
Name of the department	:	Economics and Sociology
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ECO	7101	Advanced Microeconomics	03	Compulsory
ECO	7102	Research methodology and Research ethics	03	Elective
ECO	7103	Applied Econometrics	03	Elective
ECO	7104	Development economics	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ECO	7201	Advanced Macro Economics	03	Compulsory
ECO	7202	Production Economics and Farm Management	03	Elective
ECO	7203	Environmental and resource Economics	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ECO	7301	Research Work	30	Compulsory
ECO	7302	Seminar	12	Compulsory
ECO	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
ECO	7304	National Conference	03	Optional
ECO	7305	International Conference	05	Optional
ECO	7306	Article publication in web of science index journal	06	Optional
ECO	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
ECO	7308	Dissertation Evaluation	08	Compulsory
ECO	7309	Viva-voce examination	06	Compulsory

08. Course Contents of PhD in Marketing

Name of the subject	:	Marketing
Name of the department	:	Marketing
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MKT	7101	Research Ethics and Scientific Writing	03	Compulsory
MKT	7102	Agricultural Economics	03	Elective
MKT	7103	Consumer Behavior Analysis	03	Elective
MKT	7104	Global Trade Analysis	03	Elective
MKT	7105	Value Chain Analysis	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MKT	7201	Marketing Research	03	Compulsory
MKT	7202	Applied Econometrics	03	Elective
MKT	7203	Aquaculture Economics	03	Elective
MKT	7204	Marketing Analytics	03	Elective
MKT	7205	Marketing Metrics and Strategy	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MKT	7301	Research Work	30	Compulsory
MKT	7302	Seminar	12	Compulsory
MKT	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
MKT	7304	National Conference	03	Optional
MKT	7305	International Conference	05	Optional
MKT	7306	Article publication in web of science index journal	06	Optional
MKT	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
MKT	7308	Dissertation Evaluation	08	Compulsory
MKT	7309	Viva-voce examination	06	Compulsory

09. Course Contents of PhD in Biochemistry and Food Analysis

Name of the subject	:	Biochemistry and Food Analysis
Name of the department	:	Biochemistry and Food Analysis
Total compulsory course	:	06 Credit hours
Total elective course	:	06 Credit hours
Total research work	:	62 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BCM	7101	Advanced Chemistry of Biomolecules	03	Compulsory
BCM	7102	Advanced Molecular Biology	03	Elective
BCM	7103	Advanced Biostatistics	03	Elective
BCM	7104	Advanced Human Nutrition	03	Elective
BCM	7105	Advanced Enzymology	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BCM	7201	Advanced Metabolism and its Regulation	03	Compulsory
BCM	7202	Advanced Biochemical Techniques	03	Elective
BCM	7203	Bioenergetics and Membrane Biology	03	Elective
BCM	7204	Advanced Clinical Biochemistry	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BCM	7301	Research Work	30	Compulsory
BCM	7302	Seminar	12	Compulsory
BCM	7303	Article publication in society/ institutional/ Scopus index/equivalent journal	06	Compulsory
BCM	7304	National Conference	03	Optional
BCM	7305	International Conference	05	Optional
BCM	7306	Article publication in web of science index journal	06	Optional
BCM	7307	Technology/ Patent/ Variety/ Trademark	10	Optional
BCM	7308	Dissertation Evaluation	08	Compulsory
BCM	7309	Viva-voce examination	06	Compulsory

Course Contents for Master Program in Different Departments

01. Course Contents of MS in Agricultural Botany

Name of the subject	:	Agricultural Botany
Name of the department	:	Agricultural Botany
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGB	6101	Plant Morphology and Phylogeny	02	Compulsory
AGB	6102	Plant Physiology	02	Compulsory
AGB	6103	Plant Ecology	02	Compulsory
AGB	6104	Environmental Pollution and Agriculture	02	Compulsory
AGB	6105	Economic Botany	02	Elective
AGB	6106	Developmental Plant Physiology	02	Elective
AGB	6107	Plant Tissue Culture	02	Elective
AGB	6108	Plant Nutrition	02	Elective
AGB	6109	Crop Physiology	02	Elective
AGB	6110	Plant Biodiversity and Conservation	02	Elective
AGB	6111	Research Methodology	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGB	6201	Plant Anatomy	02	Compulsory
AGB	6202	Plant Metabolism	02	Compulsory
AGB	6203	Agroclimatology	02	Compulsory
AGB	6204	Stress Physiology	02	Compulsory
AGB	6205	Plant Embryology	02	Elective
AGB	6206	Development Plant Anatomy	02	Elective
AGB	6207	Crop Ecology	02	Elective
AGB	6208	Crop Biotechnology	02	Elective
AGB	6209	Phytochemical Ecology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGB	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
AGB	6302	Thesis Evaluation	05	Compulsory
AGB	6303	Thesis Defense	03	Compulsory

02. Course Contents of MS in Agricultural Chemistry

Name of the subject	:	Agricultural Chemistry
Name of the department	:	Agricultural Chemistry
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ACM	6101	Food Preservation and Processing Chemistry	02	Compulsory
ACM	6102	Pesticide Chemistry	02	Compulsory
ACM	6103	Chemistry & Technology of Agricultural Crops	02	Compulsory
ACM	6104	Environmental Chemistry	02	Compulsory
ACM	6105	Chemistry of Manures and Bio-fertilizer	02	Elective
ACM	6106	Research Methodology	02	Elective
ACM	6107	Nuclear Chemistry	02	Elective
ACM	6108	Phyto Ecological Chemistry	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ACM	6201	Fertilizer Chemistry and Technology	02	Compulsory
ACM	6202	Instrumental Methods of Analysis	02	Compulsory
ACM	6203	Analysis of Agro Products	02	Compulsory
ACM	6204	Water Science	02	Compulsory
ACM	6205	Waste Management and Clean Technology	02	Elective
ACM	6206	Mineral Nutrition and Plant Growth	02	Elective
ACM	6207	Chemistry of Plant Products	02	Elective
ACM	6208	Soil and Colloid Chemistry	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ACM	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
ACM	6302	Thesis Evaluation	05	Compulsory
ACM	6303	Thesis Defense	03	Compulsory

03. Course Contents of MS in Agricultural Extension and Rural Development

Name of the subject : Agricultural Extension and Rural Development
 Name of the department : Agricultural Extension and Rural Development
 Total compulsory course : 16 Credit hours
 Total elective course : 08 Credit hours
 Total research work : 16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ARD	6101	Extension Program Development	02	Compulsory
ARD	6102	Extension and Development Social Psychology	02	Compulsory
ARD	6103	Communication and Information Technology	02	Compulsory
ARD	6104	Social and Educational Research Methodology	02	Compulsory
ARD	6105	Gender and Target Groups Development	02	Elective
ARD	6106	Extension Administration and Management	02	Elective
ARD	6107	Environmental Studies and Disaster Management	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ARD	6201	Rural Development Studies	02	Compulsory
ARD	6202	Technology Transfer	02	Compulsory
ARD	6203	Training Management	02	Compulsory
ARD	6204	Extension and Development Project Management	02	Compulsory
ARD	6205	Farming System Research and Sustainable Agriculture	02	Elective
ARD	6206	Group Dynamics and Leadership in Extension	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ARD	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
ARD	6302	Thesis Evaluation	05	Compulsory
ARD	6303	Thesis Defense	03	Compulsory

04. Course Contents of MS in Agroforestry

Name of the subject	:	Agroforestry
Name of the department	:	Agroforestry
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGF	6101	Agroforestry Systems and Practices	02	Compulsory
AGF	6102	Agroforest Botany	02	Compulsory
AGF	6103	Component Interaction in Agroforestry	02	Compulsory
AGF	6104	Agroforestry Research Methodology	02	Compulsory
AGF	6105	Silvicultural Practices in Agroforestry	02	Elective
AGF	6106	Medicinal Plants and Non-wood Products	02	Elective
AGF	6107	Soil Productivity and Conservation in Agroforestry	02	Elective
AGF	6108	Pest Management in Agroforestry	02	Elective
AGF	6109	Tree Physiology	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGF	6201	Agroforestry Management Technology	02	Compulsory
AGF	6202	Social Forestry and Rural Development	02	Compulsory
AGF	6203	Forest Ecology	02	Compulsory
AGF	6204	Water Conservation and Watershed Management	02	Compulsory
AGF	6205	Homestead Agroforestry and Management	02	Elective
AGF	6206	Mangrove Ecosystem and Management	02	Elective
AGF	6207	Wood Quality and Wood Technology	02	Elective
AGF	6208	Environmental Protection in Agroforestry	02	Elective
AGF	6209	Land-use Planning in Agroforestry	02	Elective
AGF	6210	Climate Change, Agroforestry and Food Security	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGF	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
AGF	6302	Thesis Evaluation	05	Compulsory
AGF	6303	Thesis Defense	03	Compulsory

05. Course Contents of MS in Agronomy

Name of the subject	:	Agronomy
Name of the department	:	Agronomy
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGR	6101	Soil Fertility Management and Crop Production	02	Compulsory
AGR	6102	Stress Agronomy	02	Compulsory
AGR	6103	Water Management and Crop Production	02	Compulsory
AGR	6104	Agronomic Research	02	Compulsory
AGR	6105	Farming System	02	Elective
AGR	6106	Forage and Pasture Crop Production	02	Elective
AGR	6107	Coastal and Hill Agriculture	02	Elective
AGR	6108	Microclimate	02	Elective
AGR	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGR	6201	Advanced Production Technology of Major Crops	02	Compulsory
AGR	6202	Physiological Aspects of Grain Yield of Crops	02	Compulsory
AGR	6203	Advanced Seed Science and Technology	02	Compulsory
AGR	6204	Weed Management	02	Compulsory
AGR	6205	Weeds and Weeds Ecology	02	Elective
AGR	6206	Cropping System	02	Elective
AGR	6207	Advanced Production Technology of Minor Crops	02	Elective
AGR	6208	Crop Land Agroforestry	02	Elective
AGR	6209	Environmental Agronomy	02	Elective
AGR	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AGR	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
AGR	6302	Thesis Evaluation	05	Compulsory
AGR	6303	Thesis Defense	03	Compulsory

06. Course Contents of MS in Biotechnology

Name of the subject	:	Biotechnology
Name of the department	:	Biotechnology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BTH	6101	Molecular Cell Biology	02	Compulsory
BTH	6102	Molecular Genetics	02	Compulsory
BTH	6103	Gene Expression and Regulation	02	Compulsory
BTH	6104	Recombinant DNA Technology	02	Compulsory
BTH	6105	Enzymology and Enzyme Technology	02	Elective
BTH	6106	Immunology and Immunotechnology	02	Elective
BTH	6107	Animal Biotechnology	02	Elective
BTH	6108	Industrial Plant Biotechnology	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BTH	6201	Applied Biotechnology	02	Compulsory
BTH	6202	Molecular Markers and Diagnostics	02	Compulsory
BTH	6203	Molecular Techniques	02	Compulsory
BTH	6204	Biometry and Bioinformatics	02	Compulsory
BTH	6205	Animal Tissue Culture	02	Elective
BTH	6206	Biopharming and Bioengineering	02	Elective
BTH	6207	Environmental Biotechnology and Biosafety	02	Elective
BTH	6208	Plant Cell, Tissue and Organ Culture	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BTH	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
BTH	6302	Thesis Evaluation	05	Compulsory
BTH	6303	Thesis Defense	03	Compulsory

07. Course Contents of MS in Entomology

Name of the subject : Entomology
 Name of the department : Entomology
 Total compulsory course : 16 Credit hours
 Total elective course : 08 Credit hours
 Total research work : 16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENT	6101	Insect Taxonomy	02	Compulsory
ENT	6102	Insect Ecology	02	Compulsory
ENT	6103	Pesticide Management	02	Compulsory
ENT	6104	Insect Pest Management	02	Compulsory
ENT	6105	Economic Entomology of Minor crops	02	Elective
ENT	6106	Forest Entomology	02	Elective
ENT	6107	Insect Nutrition and Biochemistry	02	Elective
ENT	6108	Insect Pathology	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENT	6201	Insect Physiology	02	Compulsory
ENT	6202	Insect Morphology	02	Compulsory
ENT	6203	Entomological Technique	02	Compulsory
ENT	6204	Experimental Design	02	Compulsory
ENT	6205	Stored Products Pests	02	Elective
ENT	6206	Industrial Entomology	02	Elective
ENT	6207	Insecticide Toxicology	02	Elective
ENT	6208	Medical Entomology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENT	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
ENT	6302	Thesis Evaluation	05	Compulsory
ENT	6303	Thesis Defense	03	Compulsory

08. Course Contents of MS in Genetics and Plant Breeding

Name of the subject	:	Genetics and Plant Breeding
Name of the department	:	Genetics and Plant Breeding
Total compulsory course	:	18 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GPB	6101	Cytology and Embryology	02	Compulsory
GPB	6102	Principles of Genetics	02	Compulsory
GPB	6103	Molecular Genetics	02	Compulsory
GPB	6104	Biotechnology and Genetic Engineering	02	Compulsory
GPB	6105	Data Analysis and Experimental Design	02	Elective
GPB	6106	Plant Genetic Resources and Crop Evolution	02	Elective
GPB	6107	Hybrid Breeding	02	Elective
GPB	6108	Molecular Plant Breeding	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GPB	6201	Advanced Cytogenetics	02	Compulsory
GPB	6202	Principles of Plant Breeding	02	Compulsory
GPB	6203	Advanced Plant Breeding	02	Compulsory
GPB	6204	Biometrical and Population Genetics	02	Compulsory
GPB	6205	Seed Science and Technology	02	Elective
GPB	6206	Stress Breeding	02	Elective
GPB	6207	Distant Hybridization and Chromosome Manipulation	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GPB	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
GPB	6302	Thesis Evaluation	05	Compulsory
GPB	6303	Thesis Defense	03	Compulsory

09. Course Contents of MS in Horticulture

Name of the subject	:	Horticulture
Name of the department	:	Horticulture
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRT	6101	Spices, Medicinal Plants and Plantation Crops Management	02	Compulsory
HRT	6102	Postharvest Technology of Horticultural Crops	02	Compulsory
HRT	6103	Advanced Seed Technology of Horticultural Crops	02	Compulsory
HRT	6104	Plant Growth Regulators in Horticulture	02	Compulsory
HRT	6105	Physiology of Horticultural Crop Yield	02	Elective
HRT	6106	Homestead Horticulture	02	Elective
HRT	6107	Horticulture and Human Nutrition	02	Elective
HRT	6108	Organic Farming of Horticultural Crops	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRT	6201	Advanced Fruit Production	02	Compulsory
HRT	6202	Advanced Vegetable Production	02	Compulsory
HRT	6203	Advanced Research Methodology	02	Compulsory
HRT	6204	Ornamental and Landscape Horticulture	02	Compulsory
HRT	6205	Horticultural Plant Biotechnology	02	Elective
HRT	6206	Advanced Nursery Management	02	Elective
HRT	6207	Minor Fruits of Bangladesh	02	Elective
HRT	6208	Processing of Horticultural Crops	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRT	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
HRT	6302	Thesis Evaluation	05	Compulsory
HRT	6303	Thesis Defense	03	Compulsory

10. Course Contents of MS in Plant Pathology

Name of the subject	:	Plant Pathology
Name of the department	:	Plant Pathology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PLP	6101	Pathogenesis	02	Compulsory
PLP	6102	Methods in Plant Pathology	02	Compulsory
PLP	6103	Plant Disease Management	02	Compulsory
PLP	6104	Epidemiology of Plant Diseases	02	Compulsory
PLP	6105	Plant Pathogenic Prokaryotes	02	Elective
PLP	6106	Plant Nematology	02	Elective
PLP	6107	Spread of Plant Pathogens	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PLP	6201	Plant Diseases Diagnosis	02	Compulsory
PLP	6202	Genetics of Plant Pathogen & Plant Diseases	02	Compulsory
PLP	6203	Seed Pathology	02	Compulsory
PLP	6204	Pathological Research Methodology	02	Compulsory
PLP	6205	Plant Virology	02	Elective
PLP	6206	Mycology	02	Elective
PLP	6207	Soil Born Diseases	02	Elective
PLP	6208	Post Harvest Pathology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PLP	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
PLP	6302	Thesis Evaluation	05	Compulsory
PLP	6303	Thesis Defense	03	Compulsory

11. Course Contents of MS in Soil Science

Name of the subject	:	Soil Science
Name of the department	:	Soil Science
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
SSC	6101	Advanced Plant Nutrition	02	Compulsory
SSC	6102	Advanced Biofertilizer Technology	02	Compulsory
SSC	6103	Advanced Soil Survey and Classification	02	Compulsory
SSC	6104	Soil, Plant and Water Analysis	02	Compulsory
SSC	6105	Soil Pollution and Remediation	02	Elective
SSC	6106	Soils of Bangladesh	02	Elective
SSC	6107	Soil Ecology and Biodiversity	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
SSC	6201	Advanced Soil Physics	02	Compulsory
SSC	6202	Advanced Soil Chemistry	02	Compulsory
SSC	6203	Advanced Soil Microbiology	02	Compulsory
SSC	6204	Soils Fertility and Management	02	Compulsory
SSC	6205	Design of Agricultural Experiments	02	Elective
SSC	6206	Clay Mineralogy	02	Elective
SSC	6207	Soil Degradation and Soil Conservation	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
SSC	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
SSC	6302	Thesis Evaluation	05	Compulsory
SSC	6303	Thesis Defense	03	Compulsory

12. Course Contents of MS in Computer Science and Information Technology

Name of the subject	:	Computer Science and Information Technology
Name of the department	:	Computer Science and Information Technology
Total compulsory course	:	18 Credit hours
Total elective course	:	09 Credit hours
Total research work	:	18 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CIT	6101	Computer Arithmetic	03	Compulsory
CIT	6102	Advanced Algorithms Analysis	03	Compulsory
CIT	6103	Symbolic Machine Learning	03	Compulsory
CIT	6104	Advanced Algorithmic Graph Theory	03	Elective
CIT	6105	Information Security and Cryptography	03	Elective
CIT	6106	Bio-informatics Algorithms	03	Elective
CIT	6107	Advanced Digital Image Processing	03	Elective
CIT	6108	Cloud Computing	03	Elective
CIT	6109	Natural Language Processing	03	Elective
CIT	6110	Advanced Computer Communication and Networks	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CIT	6201	Research Methodology for Computer Science	03	Compulsory
CIT	6202	Software Testing & Quality Assurance	03	Compulsory
CIT	6203	Parallel and Distributed Computing	03	Compulsory
CIT	6204	Data Mining Techniques	03	Elective
CIT	6205	Wireless Sensor Networks and IoT	03	Elective
CIT	6206	Human Computer Interaction	03	Elective
CIT	6207	Combinatorial Optimization	03	Elective
CIT	6208	Neural Networks and Fuzzy Systems	03	Elective
CIT	6209	Big-data Analytics and Warehousing	03	Elective
CIT	6210	Digital Forensics and Cyber Policies	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CIT	6301	Research Work (Satisfactory/Unsatisfactory)	10	Compulsory
CIT	6302	Thesis Evaluation	05	Compulsory
CIT	6303	Thesis Defense	03	Compulsory

13. Course Contents of MS in Computer and Communication Engineering

Name of the subject	:	Computer and Communication Engineering
Name of the department	:	Computer and Communication Engineering
Total compulsory course	:	18 Credit hours
Total elective course	:	09 Credit hours
Total research work	:	18 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CCE	6101	Advanced Computer Network	03	Compulsory
CCE	6102	Advanced Machine Learning	03	Compulsory
CCE	6103	Advanced Database System	03	Compulsory
CCE	6104	Industry Revolution 4.0 and Internet of Things	03	Elective
CCE	6105	Advanced Network Security and Cryptography	03	Elective
CCE	6106	Microwave Communication Theory and Techniques	03	Elective
CCE	6107	Operating Systems for Networked Environments	03	Elective
CCE	6108	Security Auditing and Penetration Testing	03	Elective
CCE	6109	Software Define Networking	03	Elective
CCE	6110	Web Technologies and Services	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CCE	6201	Research Methodology for Computer and Communication Engineering	03	Compulsory
CCE	6202	Advanced Algorithms Analysis	03	Compulsory
CCE	6203	Cybercrime, Digital Forensics, and Cyber Security Management	03	Compulsory
CCE	6204	Wireless Sensor Networks	03	Elective
CCE	6205	Software Testing and Quality Assurance	03	Elective
CCE	6206	Big-data Analytics and Warehousing	03	Elective
CCE	6207	Next Generation Mobile Communication System	03	Elective
CCE	6208	Satellite Communication	03	Elective
CCE	6209	Virtualization and Cloud Computing	03	Elective
CCE	6210	Network Design and Performance Evaluation	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CCE	6301	Research Work (Satisfactory/Unsatisfactory)	10	Compulsory
CCE	6302	Thesis Evaluation	05	Compulsory
CCE	6303	Thesis Defense	03	Compulsory

14. Course Contents of MS in Electrical and Electronics Engineering

Name of the subject	:	Electrical and Electronics Engineering
Name of the department	:	Electrical and Electronics Engineering
Total compulsory course	:	15 Credit hours
Total elective course	:	09 Credit hours
Total research work	:	18 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
EEE	6101	Research Methodology in EEE	03	Compulsory
EEE	6102	Engineering Analysis	03	Compulsory
EEE	6103	Semiconductor Characterization Technique	03	Compulsory
EEE	6104	Artificial Neural System	03	Elective
EEE	6105	Advanced Digital Signal Processing	03	Elective
EEE	6106	Nonlinear System Analysis	03	Elective
EEE	6107	Power Semiconductor Circuits	03	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
EEE	6201	Electric and Magnetic Properties of Materials	03	Compulsory
EEE	6202	Non-linear Control System	03	Compulsory
EEE	6203	Microwave Theory and Technique	03	Elective
EEE	6204	VLSI Techniques and Device Modeling	03	Elective
EEE	6205	Electronics of Solids	03	Elective
EEE	6206	Antennas and Propagations	03	Elective
EEE	6207	Modern Power System Modeling	03	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
EEE	6301	Research Work (Satisfactory/Unsatisfactory)	10	Compulsory
EEE	6302	Thesis Evaluation	05	Compulsory
EEE	6303	Thesis Defense	03	Compulsory

15. Course Contents of MS in Anatomy

Name of the subject	:	Anatomy
Name of the department	:	Anatomy and Histology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VAH	6101	Ruminant Anatomy	02	Compulsory
VAH	6102	Avian Anatomy	02	Compulsory
VAH	6103	Cell Biology and Veterinary Histology	02	Compulsory
VAH	6104	Developmental Anatomy	02	Compulsory
VAH	6105	Canine and Feline Anatomy	02	Elective
VAH	6106	Histology of Urogenital Systems	02	Elective
VAH	6107	Anatomy of Immune System	02	Elective
VAH	6108	Comparative Anatomy of Locomotive and Urogenital Systems	02	Elective
VAH	6109	Comparative Anatomy of Digestive and Respiratory Systems	02	Elective
VAH	6301	Research Works (Satisfactory/ Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VAH	6201	Neuro and Endocrine Anatomy	02	Compulsory
VAH	6202	Histochemistry	02	Compulsory
VAH	6203	Molecular Biology	02	Compulsory
VAH	6204	Evolutionary Anatomy	02	Compulsory
VAH	6205	Comparative Anatomy of Blood Vascular and Lymphatic Systems	02	Elective
VAH	6206	Anatomy of Laboratory and Zoo Animal	02	Elective
VAH	6207	Histology of Digestive and Respiratory Systems	02	Elective
VAH	6208	Equine Anatomy	02	Elective
VAH	6209	Comparative Anatomy of Sense Organs	02	Elective
VAH	6301	Research Works (Satisfactory/ Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VAH	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
VAH	6302	Thesis Evaluation	05	Compulsory
VAH	6303	Thesis Defense	03	Compulsory

16. Course Contents of MS in Livestock Products Technology

Name of the subject	:	Livestock Products Technology
Name of the department	:	Animal Products and By-products Technology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
APT	6101	Abattoir and Processing Plant Practices	02	Compulsory
APT	6102	Dairy By-products Technology	02	Compulsory
APT	6103	Poultry Meat Processing Technology	02	Compulsory
APT	6104	Research Methodology	02	Compulsory
APT	6105	Slaughterhouse By-products Technology	02	Elective
APT	6106	Automation in Livestock Products Industry	02	Elective
APT	6107	Egg By-products Technology	02	Elective
APT	6108	Livestock Food Products and Food Security	02	Elective
APT	6109	Animal Food Plant Waste Management	02	Elective
DSC	6106	Functional Food and Dairy Product Development	02	Elective
PSC	6107	Marketing of Poultry and Poultry Products	02	Elective
APT	6301	Research work	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
APT	6201	Meat and Meat Products Technology	02	Compulsory
APT	6202	Dairy Process Control	02	Compulsory
APT	6203	Egg Products Technology	02	Compulsory
APT	6204	Quality and Safety of Livestock Products	02	Compulsory
APT	6205	Laws and Standards of Livestock Products	02	Elective
APT	6206	Livestock Products Biotechnology	02	Elective
APT	6207	Livestock Products Biochemistry	02	Elective
APT	6208	Livestock Products Microbiology	02	Elective
APT	6209	Organic Livestock Products	02	Elective
ASC	6206	Livestock Entrepreneurship Development	02	Elective
DSC	6206	Dairy Plant Management	02	Elective
APT	6301	Research work	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
APT	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
APT	6302	Thesis Evaluation	05	Compulsory
APT	6303	Thesis Defense	03	Compulsory

17. Course Contents of MS in Physiology

Name of the subject	:	Physiology
Name of the department	:	Physiology and Pharmacology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PHY	6101	Digestive Physiology	02	Compulsory
PHY	6102	Physiology of Excretion and Electrolyte Balance	02	Compulsory
PHY	6103	Physiology of Reproduction	02	Compulsory
PHY	6104	Nutritional Physiology	02	Compulsory
PHY	6105	Physiology of Integration	02	Elective
PHY	6106	Immuno Physiology	02	Elective
PHY	6107	Ethology	02	Elective
PHY	6108	Electrophysiology	02	Elective
PHY	6109	Environmental Physiology	02	Elective
PHY	6110	Bioconjugation in Life Science	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PHY	6201	Cell Physiology	02	Compulsory
PHY	6202	Ruminant Physiology	02	Compulsory
PHY	6203	Endocrine Physiology	02	Compulsory
PHY	6204	Avian Physiology	02	Compulsory
PHY	6205	Physiology of Metabolism	02	Elective
PHY	6206	Cardiovascular Physiology	02	Elective
PHY	6207	Wild Life Physiology	02	Elective
PHY	6208	Radiobiology	02	Elective
PHY	6209	Techniques in Physiology	02	Elective
PHY	6210	Physiological Chemistry	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PHY	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
PHY	6302	Thesis Evaluation	05	Compulsory
PHY	6303	Thesis Defense	03	Compulsory

18. Course Contents of MS in Pharmacology

Name of the subject	:	Pharmacology
Name of the department	:	Physiology and Pharmacology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PHA	6101	Systemic Pharmacology	02	Compulsory
PHA	6102	Endocrine and Nutritional Pharmacology	02	Compulsory
PHA	6103	Toxicology of Pesticides and Other Toxic Agents	02	Compulsory
PHA	6104	Applied Toxicology	02	Compulsory
PHA	6105	Autonomic and Neuro- Pharmacology	02	Elective
PHA	6106	Chemotherapy of Parasitic Diseases	02	Elective
PHA	6107	Chemotherapy of Neoplastic Diseases	02	Elective
PHA	6108	Toxicology of Drugs and Chemical Residues	02	Elective
PHA	6109	Teratology	02	Elective
PHA	6110	Pharmacy	02	Elective
PHA	6111	Experimental Pharmacology	02	Elective
PHA	6112	Techniques in Toxicology	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PHA	6201	General Pharmacology	02	Compulsory
PHA	6202	Chemotherapy	02	Compulsory
PHA	6203	General Toxicology	02	Compulsory
PHA	6204	Phyto-Toxicology	02	Compulsory
PHA	6205	Techniques in Pharmacology	02	Elective
PHA	6206	Pharmaceutical Chemistry	02	Elective
PHA	6207	Pharmacology of Autacoids and Locally Acting Drugs	02	Elective
PHA	6208	Immunopharmacology	02	Elective
PHA	6209	Neonatal Pharmacology	02	Elective
PHA	6210	Environmental Toxicology	02	Elective
PHA	6211	Systemic Toxicology	02	Elective
PHA	6212	Food Toxicology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PHA	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
PHA	6302	Thesis Evaluation	05	Compulsory
PHA	6303	Thesis Defense	03	Compulsory

19. Course Contents of MS in Animal Science

Name of the subject	:	Animal Science
Name of the department	:	General Animal Science and Animal Nutrition
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ASC	6101	Beef Cattle Production	02	Compulsory
ASC	6102	Horse Production	02	Compulsory
ASC	6103	Meat Science and Technology	02	Compulsory
ASC	6104	Wildlife Conservation and Environment	02	Compulsory
ASC	6105	Zoo and Safari Park Management	02	Elective
ASC	6106	Pet Animal Production	02	Elective
ASC	6107	Livestock Waste Management	02	Elective
ANT	6102	Feed Processing and Evaluation	02	Elective
ANT	6103	Advanced Techniques in Nutrition Studies	02	Elective
PSC	6104	Advances in Specialized Fowl Production	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ASC	6201	Goat and Sheep Production	02	Compulsory
ASC	6202	Buffalo Production	02	Compulsory
ASC	6203	Integrated Livestock Farming	02	Compulsory
ASC	6204	Laboratory Animal Production	02	Compulsory
ASC	6205	Animal Behaviour and Welfare	02	Elective
ASC	6206	Livestock Entrepreneurship Development	02	Elective
ASC	6207	Livestock Production and Climate Change	02	Elective
ANT	6201	Applied Farm Animal Nutrition	02	Elective
ANT	6202	Zoo and Laboratory Animal Nutrition	02	Elective
PSC	6202	Poultry Nutrition and Nutritional Biotechnology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ASC	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
ASC	6302	Thesis Evaluation	05	Compulsory
ASC	6303	Thesis Defense	03	Compulsory

20. Course Contents of MS in Animal Science

Name of the subject	:	Animal Nutrition
Name of the department	:	General Animal Science and Animal Nutrition
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ANT	6101	Advanced Poultry Nutrition and Feeding	02	Compulsory
ANT	6102	Feed Processing and Evaluation	02	Compulsory
ANT	6103	Advanced Techniques in Nutrition Studies	02	Compulsory
ANT	6104	Nutrition and Reproduction	02	Compulsory
ANT	6105	Fodder Production and Pasture Management	02	Elective
ANT	6106	Non-Ruminant Nutrition and Feeding	02	Elective
ASC	6101	Beef Cattle Production	02	Elective
ASC	6102	Horse Production	02	Elective
PSC	6103	Avian Reproductive Biology	02	Elective
PSC	6105	Family Poultry Production	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ANT	6201	Applied Farm Animal Nutrition	02	Compulsory
ANT	6202	Zoo and Laboratory Animal Nutrition	02	Compulsory
ANT	6203	Advanced Livestock Feeding	02	Compulsory
ANT	6204	Animal Feed Manufacturing Industry	02	Compulsory
ANT	6205	Specialized Fowl Nutrition and Feeding	02	Elective
ANT	6206	Grassland Technology	02	Elective
ASC	6201	Goat and Sheep Production	02	Elective
ASC	6203	Integrated Livestock Farming	02	Elective
PSC	6201	Advances in Hatchery Management	02	Elective
PSC	6203	Layer Operation and Management	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ANT	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
ANT	6302	Thesis Evaluation	05	Compulsory
ANT	6303	Thesis Defense	03	Compulsory

21. Course Contents of MS in Animal Genetics, Breeding and Reproduction

Name of the subject	:	Animal Genetics, Breeding and Reproduction
Name of the department	:	Genetics and Animal Breeding
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ABG	6101	Population and Quantitative Genetics	02	Compulsory
ABG	6102	Poultry Breeding	02	Compulsory
ABG	6203	Advances in Semen Technology and Artificial Insemination	02	Compulsory
ABG	6104	Molecular Genetics and Genetic Engineering	02	Compulsory
ABG	6105	Advanced Biometrics in Animal Breeding	02	Elective
ABG	6106	Advanced Animal Biotechnology	02	Elective
ABG	6107	Applied Genomics and Bioinformatics	02	Elective
ABG	6108	Developmental and Regulatory Biology	02	Elective
ANT	6104	Nutrition and Reproduction	02	Elective
DSC	6101	Dairy Cattle Production	02	Elective
ASC	6101	Beef Cattle Production	02	Elective
ABG	6301	Research work	02	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ABG	6201	Animal Genetics	02	Compulsory
ABG	6202	Animal Breeding	02	Compulsory
ABG	6203	Animal Reproduction	02	Compulsory
ABG	6204	Computer Usage in Animal Genetics, Breeding and Reproduction	02	Compulsory
ABG	6205	Fertility and Reproductive Management	02	Elective
ABG	6206	Poultry Reproduction and Biotechnology	02	Elective
ABG	6207	Gene expression, Regulation and Cell Signaling	02	Elective
ABG	6208	Molecular cell and system Biology	02	Elective
ABG	6209	Designing Animal Breeding Program	02	Elective
ABG	6210	Stem Cells and Reprogramming	02	Elective
ASC	6201	Goat and Sheep Production	02	Elective
BSC	6204	Applied Biostatistics	02	Elective
ABG	6301	Research work	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ABG	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
ABG	6302	Thesis Evaluation	05	Compulsory
ABG	6303	Thesis Defense	03	Compulsory

22. Course Contents of MS in Medicine

Name of the subject	:	Medicine
Name of the department	:	Medicine, Surgery and Obstetrics
Total compulsory course	:	18 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VMM	6101	General Bovine Medicine	02	Compulsory
VMM	6102	General Avian Medicine	02	Compulsory
VMM	6103	Caprine and Ovine Medicine	02	Compulsory
VMM	6104	Veterinary Epidemiology and Preventive Medicine	02	Compulsory
VMM	6105	Veterinary Diagnostic Medicine	02	Compulsory
VMM	6106	Equine and Porcine Medicine	02	Elective
VMM	6107	Veterinary Clinical Immunology	02	Elective
VMM	6108	Laboratory Animal Medicine	02	Elective
VMM	6109	Veterinary Forensic Medicine and Animal Welfare	02	Elective
VMM	6110	Zoonotic Diseases and Community Medicine	02	Elective
VMM	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VMM	6201	Special Bovine Medicine	02	Compulsory
VMM	6202	Special Avian Medicine	02	Compulsory
VMM	6203	Canine and Feline Medicine	02	Compulsory
VMM	6204	Veterinary Clinical Practice	02	Compulsory
VMM	6205	Veterinary Paediatrics	02	Elective
VMM	6206	Veterinary Clinical Equipments and Therapeutics	02	Elective
VMM	6207	Zoo and Wild Animal Medicine	02	Elective
VMM	6208	Dairy Animal Health	02	Elective
VMM	6209	Veterinary Dermatology	02	Elective
VMM	6210	Veterinary Comparative Medicine	02	Elective
VMM	6211	Seminar	02	Elective
VMM	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VMM	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
VMM	6302	Thesis Evaluation	05	Compulsory
VMM	6303	Thesis Defense	03	Compulsory

23. Course Contents of MS in Surgery

Name of the subject	:	Surgery
Name of the department	:	Medicine, Surgery and Obstetrics
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VSS	6101	General Surgical Sciences	02	Compulsory
VSS	6102	Anaesthetic Practices and Small Animal Surgery	02	Compulsory
VSS	6103	Anaesthesiology	02	Compulsory
VSS	6104	Small Animal Surgery	02	Compulsory
VSS	6105	Experimental Surgery	02	Elective
VSS	6106	Ophthalmic Surgery	02	Elective
VSS	6107	Operation Theatre & Intensive Care Techniques	02	Elective
VSS	6108	Urology	02	Elective
VSS	6109	Orthopaedic Surgery	02	Elective
VSS	6110	Transplantation Techniques	02	Elective
VSS	6111	Gastrointestinal Surgery	02	Elective
VSS	6112	Seminar	02	Elective
VSS	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VSS	6201	Radiology and Diagnostic Imaging	02	Compulsory
VSS	6202	Clinical Surgery	02	Compulsory
VSS	6203	Large Animal Surgery	02	Compulsory
VSS	6204	Clinical Practice of Fluid Therapy and Blood Transfusion	02	Compulsory
VSS	6205	Zoo and Laboratory Animal Anaesthesia	02	Elective
VSS	6206	Clinical Management of Lameness in Animals	02	Elective
VSS	6207	Cardiovascular Surgery	02	Elective
VSS	6208	Lameness in Animals	02	Elective
VSS	6209	Neurosurgery	02	Elective
VSS	6210	Soundness and Shoeing	02	Elective
VSS	6211	Seminar	02	Elective
VSS	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VSS	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
VSS	6302	Thesis Evaluation	05	Compulsory
VSS	6303	Thesis Defense	03	Compulsory

24. Course Contents of MS in Theriogenology

Name of the subject	:	Theriogenology
Name of the department	:	Medicine, Surgery and Obstetrics
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VST	6101	General Gynaecology	02	Compulsory
VST	6102	Reproductive Health Management of Farm Animals	02	Compulsory
VST	6103	Reproductive Hormones	02	Compulsory
VST	6104	Advance in Gynaecology & Obstetrics	02	Compulsory
VST	6105	Udder Health Management	02	Elective
VST	6106	Clinical Practices of Udder Health Management	02	Elective
VST	6107	Reproductive Health Management of Pet, Zoo and Wild Animals	02	Elective
VST	6108	Clinical Gynaecology and Obstetrics	02	Elective
VST	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VST	6201	Obstetrics	02	Compulsory
VST	6202	Reproductive Biotechnology	02	Compulsory
VST	6203	Andrology and Artificial Insemination	02	Compulsory
VST	6204	Health Management of Pregnant Dam and Neonates	02	Compulsory
VST	6205	Reproductive Immunology	02	Elective
VST	6206	Techniques in Reproductive Biotechnology	02	Elective
VST	6207	Reproductive Disorder	02	Elective
VST	6208	Reproductive Surgery	02	Elective
VST	6209	Advance in Andrology and Artificial Insemination	02	Elective
VST	6210	Techniques in Andrology and Artificial Insemination	02	Elective
VST	6211	Seminar	02	Elective
VST	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VST	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
VST	6302	Thesis Evaluation	05	Compulsory
VST	6303	Thesis Defense	03	Compulsory

25. Course Contents of MS in Microbiology

Name of the subject	:	Microbiology
Name of the department	:	Microbiology and Public Health
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MIC	6101	General Bacteriology	02	Compulsory
MIC	6102	Systemic Bacteriology	02	Compulsory
MIC	6103	Fungi, Mycoplasma, Chlamydia and Rickettsia	02	Compulsory
MIC	6104	Microbiological Methods	02	Compulsory
MIC	6105	Microbial Toxins	02	Elective
MIC	6106	Avian Microbes	02	Elective
MIC	6107	Microbial Genetics	02	Elective
MIC	6108	Applied Biostatistics	02	Elective
VPH	6101	Veterinary Public Health	02	Elective
VPH	6102	Zoonoses	02	Elective
VPH	6103	Environmental Microbiology	02	Elective
VPH	6104	Environmental Hygiene and Sanitation	02	Elective
VPH	6105	Industrial Microbiology	02	Elective
VPH	6106	Food Microbiology	02	Elective
VPH	6107	Food Microbiology Lab	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MIC	6201	General Virology	02	Compulsory
MIC	6202	Systemic Virology	02	Compulsory
MIC	6203	Immunology and Serology	02	Compulsory
MIC	6204	Molecular Microbiology	02	Compulsory
MIC	6205	Vaccinology	02	Elective
MIC	6206	Vaccinology Lab	02	Elective
MIC	6207	Microbial Biotechnology	02	Elective
MIC	6208	Microbial Biotechnology Lab	02	Elective
MIC	6209	Microbiology of Reproductive System	02	Elective
MIC	6210	Microbiology of Reproductive System Lab	02	Elective
MIC	6211	Avian Health and Hygiene	02	Elective
VPH	6201	Food Hygiene	01	Elective
VPH	6202	Food Hygiene Lab	02	Elective
VPH	6203	Epidemiology	02	Elective
VPH	6204	Meat and Milk Inspection	02	Elective
VPH	6205	Food Borne Infection and Intoxication	01	Elective
VPH	6210	Sanitary Microbiology	02	Elective
VPH	6211	Food Laws and Regulation	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MIC	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
MIC	6302	Thesis Evaluation	05	Compulsory
MIC	6303	Thesis Defense	03	Compulsory

26. Course Contents of MS in Veterinary Public Health and Food Hygiene

Name of the subject	:	Veterinary Public Health and Food Hygiene
Name of the department	:	Microbiology and Public Health
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPH	6101	Veterinary Public Health	02	Compulsory
VPH	6102	Zoonoses	02	Compulsory
VPH	6103	Environmental Microbiology	02	Compulsory
VPH	6104	Environmental Hygiene and Sanitation	02	Compulsory
VPH	6105	Industrial Microbiology	02	Elective
VPH	6106	Food Microbiology	02	Elective
VPH	6107	Food Microbiology Lab	02	Elective
VPH	6108	Animal Products and Hurdle Technology	02	Elective
VPH	6109	Animal Products and Hurdle Technology Lab	02	Elective
MIC	6101	General Bacteriology	02	Elective
MIC	6102	Systemic Bacteriology	02	Elective
MIC	6103	Fungi, Mycoplasma, Chlamydia and Rickettsia	02	Elective
MIC	6105	Microbial Toxins	02	Elective
MIC	6108	Applied Biostatistics	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPH	6201	Food Hygiene	02	Compulsory
VPH	6202	Food Hygiene Lab	01	Compulsory
VPH	6203	Epidemiology	02	Compulsory
VPH	6204	Meat and Milk Inspection	02	Compulsory
VPH	6205	Food Borne Infection and Intoxication	01	Compulsory
VPH	6206	Food Plant Sanitation, Inspection and Quality Control	02	Elective
VPH	6207	Food Plant Sanitation, Inspection and Quality Control Lab	01	Elective
VPH	6208	Abattoir Hygiene and Management	02	Elective
VPH	6209	Abattoir Hygiene and Management Lab	01	Elective
VPH	6210	Sanitary Microbiology	02	Elective
VPH	6211	Food Laws and Regulation	02	Elective
MIC	6201	General Virology	02	Elective
MIC	6202	Systemic Virology	02	Elective
MIC	6203	Immunology and Serology	02	Elective
MIC	6204	Molecular Microbiology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MIC	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
MIC	6302	Thesis Evaluation	05	Compulsory
MIC	6303	Thesis Defense	03	Compulsory

27. Course Contents of MS in Pathology

Name of the subject	:	Pathology
Name of the department	:	Pathology and Parasitology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPT	6101	Histopathology	02	Compulsory
VPT	6102	Clinical Pathology	02	Compulsory
VPT	6103	Necropsy	02	Compulsory
VPT	6104	Pathology of Bacterial and Viral Diseases	02	Compulsory
VPT	6105	Pathology of Fungal, Rickettsial and Chlamydial Diseases	02	Elective
VPT	6106	Pathology of Parasitic Disease	02	Elective
VPT	6107	Reproductive Pathology	02	Elective
VPT	6108	Laboratory Animal Pathology	02	Elective
VPT	6109	Experimental Pathology	02	Elective
VPT	6110	Pathology of Extraneous Poisoning	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPT	6201	Advanced General Pathology	02	Compulsory
VPT	6202	Pathology of Metabolic Diseases	02	Compulsory
VPT	6203	Immunopathology	02	Compulsory
VPT	6204	Avian Pathology	02	Compulsory
VPT	6205	Oncology	02	Elective
VPT	6206	Molecular Pathology and Biotechnology	02	Elective
VPT	6207	Pathology of Zoonotic Diseases	02	Elective
VPT	6208	Comparative Pathology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPT	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
VPT	6302	Thesis Evaluation	05	Compulsory
VPT	6303	Thesis Defense	03	Compulsory

28. Course Contents of MS in Parasitology

Name of the subject	:	Parasitology
Name of the department	:	Pathology and Parasitology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPR	6101	General Parasitology and Helminthology	02	Compulsory
VPR	6102	Molecular and Biochemical Parasitology	02	Compulsory
VPR	6103	Immuno Parasitology	02	Compulsory
VPR	6104	Malacology	02	Compulsory
VPR	6105	Avian Parasitology	02	Elective
VPR	6106	Parasites of Zoo and Wild Animals	02	Elective
VPR	6107	Clinical Parasitology	02	Elective
VPR	6108	Zoonotic Parasites	02	Elective
VPR	6109	Parasites of Large Animals	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPR	6201	Protozoology	02	Compulsory
VPR	6202	Entomology	02	Compulsory
VPR	6203	Techniques in Helminthology	01	Compulsory
VPR	6204	Techniques in Protozoology and Entomology	01	Compulsory
VPR	6205	Parasitic Ecology and Epidemiology	02	Compulsory
VPR	6206	Parasites of Pet and Laboratory Animals	02	Elective
VPR	6207	Biology of Arthropods Vectors	02	Elective
VPR	6208	Applied Biostatistics	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
VPR	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
VPR	6302	Thesis Evaluation	05	Compulsory
VPR	6303	Thesis Defense	03	Compulsory

29. Course Contents of MS in Poultry Science

Name of the subject	:	Poultry Science
Name of the department	:	Poultry Science
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PSC	6101	Broiler Operation and Management	02	Compulsory
PSC	6102	Poultry Processing and Products Technology	02	Compulsory
PSC	6103	Avian Reproductive Biology	02	Compulsory
PSC	6104	Advances in Specialized Fowl Production	02	Compulsory
PSC	6105	Family Poultry Production	02	Elective
PSC	6106	Project Planning, Monitoring and Evaluation	02	Elective
PSC	6107	Marketing of Poultry and Poultry Products	02	Elective
PSC	6108	Financial Management in Poultry Industry	02	Elective
ABG	6102	Poultry Breeding	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PSC	6201	Advances in Hatchery Management	02	Compulsory
PSC	6202	Poultry Nutrition and Nutritional Biotechnology	02	Compulsory
PSC	6203	Layer Operation and Management	02	Compulsory
PSC	6204	Applied Biostatistics	02	Compulsory
PSC	6205	Poultry Farm Planning, Design and Environment	02	Elective
PSC	6206	Poultry Farm Machinery	02	Elective
PSC	6207	Poultry Behavior and Welfare	02	Elective
MIC	6211	Avian Health and Hygiene	02	Elective
ABG	6201	Genetics	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PSC	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
PSC	6302	Thesis Evaluation	05	Compulsory
PSC	6303	Thesis Defense	03	Compulsory

30. Course Contents of MS in Aquaculture

Name of the subject	:	Aquaculture
Name of the department	:	Aquaculture
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AQC	6101	Advanced Coastal Aquaculture	02	Compulsory
AQC	6102	Integrated Aquaculture	02	Compulsory
AQC	6103	Aquaculture Nutrition	02	Compulsory
AQC	6104	Advanced Fish Pathology	02	Compulsory
AQC	6105	Crustacean Breeding and Culture	02	Elective
AQC	6106	Mangrove Aquaculture	02	Elective
AQC	6107	Fish Immunology	02	Elective
AQC	6108	Geographical Information System in Aquaculture	02	Elective
AQC	6109	Project Design and Management	02	Elective
FBG	6101	Fisheries Breeding and Stock Improvement	02	Elective
FMN	6204	Water Quality and Environmental Impact	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AQC	6201	Advanced Freshwater Aquaculture	02	Compulsory
AQC	6202	Fish Health Management	02	Compulsory
AQC	6203	Aquafarm Operation	02	Compulsory
AQC	6204	Advanced Aquaculture Food Technology	02	Compulsory
AQC	6205	Mariculture	02	Elective
AQC	6206	Culture of Fish Food Organisms	02	Elective
AQC	6207	Advanced Fish Parasitology	02	Elective
AQC	6208	Aquaculture Impact	02	Elective
AQC	6209	Aquaculture Extension	02	Elective
AQC	6210	Biostatistics	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AQC	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
AQC	6302	Thesis Evaluation	05	Compulsory
AQC	6303	Thesis Defense	03	Compulsory

31. Course Contents of MS in Fisheries Biology and Genetics

Name of the subject	:	Fisheries Biology and Genetics
Name of the department	:	Fisheries Biology and Genetics
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FBG	6101	Fish Breeding and Stock Improvement	02	Compulsory
FBG	6102	Endocrinology of Aquatic Animals	02	Compulsory
FBG	6103	Fish Genetic Engineering and Biotechnology	02	Compulsory
FBG	6104	Shellfish Biotechnology	02	Compulsory
FBG	6105	Fish Behavior	02	Elective
FBG	6106	Embryology of Fishes	02	Elective
FBG	6107	Advanced Ichthyology	02	Elective
FBG	6108	Cytogenetics of Aquatic Animals	02	Elective
FBG	6109	Genetics and Reproduction of Ornamental Fishes	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FBG	6201	Biology of Fishes	02	Compulsory
FBG	6202	Advanced Fish Physiology	02	Compulsory
FBG	6203	Fish Population and Conservation Genetics	02	Compulsory
FBG	6204	Molecular Genetics of Fish	02	Compulsory
FBG	6205	Fish Biodiversity and Systematics	02	Elective
FBG	6206	Molecular Ecology of Fishes	02	Elective
FBG	6207	Experimental Design and Genetic Data Analysis	02	Elective
FBG	6208	Biology of Non-piscine Aquatic Vertebrates	02	Elective
FBG	6209	Phylogenetics and Evolution of Fishes	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FBG	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
FBG	6302	Thesis Evaluation	05	Compulsory
FBG	6303	Thesis Defense	03	Compulsory

32. Course Contents of MS in Fisheries Management

Name of the subject	:	Fisheries Management
Name of the department	:	Fisheries Management
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FMN	6101	Advanced Fish Production Dynamics	02	Compulsory
FMN	6102	Aquatic Environmental Pollution and Toxicology	02	Compulsory
FMN	6103	Biology and Management of Aquatic Plants	02	Compulsory
FMN	6104	Wetland Ecosystem and Fisheries Biodiversity	02	Compulsory
FMN	6105	Coastal and Marine Ecology	02	Elective
FMN	6106	Fisheries Resources and Conservation	02	Elective
FMN	6107	Mangrove Exploitation and Management	02	Elective
FMN	6108	Oceanography and Marine Biology	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FMN	6201	Community Based Fisheries Management	02	Compulsory
FMN	6202	Advanced Aquatic Ecology	02	Compulsory
FMN	6203	Inland Fisheries Management	02	Compulsory
FMN	6204	Water Quality and Environmental Impact	02	Compulsory
FMN	6205	Ecology of Fishes	02	Elective
FMN	6206	Riverine Fisheries Management	02	Elective
FMN	6207	Laboratory Techniques for Water Quality and Pollution Analysis	02	Elective
FMN	6208	Aquatic Soil Science	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FMN	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
FMN	6302	Thesis Evaluation	05	Compulsory
FMN	6303	Thesis Defense	03	Compulsory

33. Course Contents of MS in Fisheries Technology

Name of the subject	:	Fisheries Technology
Name of the department	:	Fisheries Technology
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FST	6101	Advanced Fishery Products Technology	02	Compulsory
FST	6102	Quality Control of Fish & Fishery Products	02	Compulsory
FST	6103	Fish Processing Biochemistry	02	Compulsory
FST	6104	Biotechnology in Fish Processing	02	Compulsory
FST	6105	Fish Microbiological Techniques	02	Elective
FST	6106	Fishery By-Products Technology	02	Elective
FST	6107	Project design and Management	02	Elective
AQC	6103	Aquaculture Nutrition	02	Elective
MFO	6102	Marine Finfish & Shellfish Resource Management	02	Elective
FMN	6102	Aquatic Environmental Pollution & Toxicology	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FST	6201	Fish Preservation Technology	02	Compulsory
FST	6202	Fish Processing Technology	02	Compulsory
FST	6203	Advanced Fisheries Microbiology	02	Compulsory
FST	6204	Advanced Fishing Technology	02	Compulsory
FST	6205	Analytical Techniques for Fish Processing	02	Elective
FST	6206	Industrial Fishery Management	02	Elective
FST	6207	Advanced Freshwater Aquaculture	02	Elective
MFO	6207	Fisheries Legislation for Resource Management	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FST	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
FST	6302	Thesis Evaluation	05	Compulsory
FST	6303	Thesis Defense	03	Compulsory

34. Course Contents of MS in Marin Fisheries and Oceanography

Name of the subject	:	Marin Fisheries and Oceanography
Name of the department	:	Marin Fisheries and Oceanography
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MFO	6101	Brackish Water Fisheries Resources and Management	02	Compulsory
MFO	6102	Marine Finfish and Shellfish Resources and Management	02	Compulsory
MFO	6103	Marine Ecosystems, Biodiversity and Conservation	02	Compulsory
MFO	6104	Advanced Coastal Physical Oceanography	02	Compulsory
MFO	6105	Biogeochemistry of Estuaries and Coastal Seas	02	Elective
MFO	6106	Tropical Fish Stock Assessment	02	Elective
MFO	6107	Fisheries Regulations	02	Elective
AQC	6106	Mangrove Aquaculture	02	Elective
FMN	6107	Mangrove Exploitation and Management	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MFO	6201	Coastal Resource Management	02	Compulsory
MFO	6202	Advanced Biological Oceanography	02	Compulsory
MFO	6203	Marine Pollution and Fisheries Management	02	Compulsory
MFO	6204	Remote Sensing and GIS for Fisheries Management	02	Compulsory
MFO	6205	Advanced Geological Oceanography	02	Elective
MFO	6206	Fisheries Project Formulation, Implementation and Evaluation	02	Elective
MFO	6207	Fisheries Legislation for Resource Management	02	Elective
AQC	6205	Mariculture	02	Elective
FMN	6212	Marine Fisheries Management	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MFO	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
MFO	6302	Thesis Evaluation	05	Compulsory
MFO	6303	Thesis Defense	03	Compulsory

35. Course Contents of MS in Disaster Resilience and Engineering

Name of the subject	:	Disaster Resilience and Engineering
Name of the department	:	Disaster Resilience and Engineering
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DRE	6101	Decision and Risk Analysis in Resilience and Engineering	02	Compulsory
DRE	6102	Climate Resilient Infrastructure: Engineering and Management	02	Compulsory
DRE	6103	Disaster in Mining Exploration and Management	02	Compulsory
DRE	6104	Flood Protection and River Engineering	02	Compulsory
DRE	6105	Advanced Statistical Analysis for Disaster Resilience	02	Elective
DRE	6106	Land Slids: Resilience and Engineering	02	Elective
DRE	6107	Retrofitting Engineering and Urban Planning	02	Elective
DRE	6108	Post Disaster Reconstruction and Recovery	02	Elective
DRE	6109	Building Disaster Resilience: Bangladesh and Global Perspectives	02	Elective
DRE	6110	Coastal Sediment and Beach Processes	02	Elective
DRE	6111	Sustainable Water Resource Management	02	Elective
DRE	6112	Frontier of Disaster Resilience and Engineering	02	Elective
DRE	6301	Research Work (Satisfactory/ Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DRE	6201	Green Technology and Resilience Engineering	02	Compulsory
DRE	6202	Earthquake Engineering and Geo-Hazards Studies	02	Compulsory
DRE	6203	Sustainable Transportation Hazard Mitigation Engineering	02	Compulsory
DRE	6204	Applied Hydrology and Water Engineering	02	Compulsory
DRE	6205	Urban Disaster Mitigation Engineering	02	Compulsory
DRE	6206	Community Involvement in Resilience and Engineering	02	Elective
DRE	6207	Case Studies of International Projects on Disaster Resilience	02	Elective
DRE	6208	Advanced Waste Management Engineering	02	Elective
DRE	6209	Special Techniques in Disaster Resilience	02	Elective
DRE	6210	Geotechnical Engineering in Built Environment	02	Elective
DRE	6211	Public Policy and Social System for Disaster Resilience	02	Elective
DRE	6212	Environmental Restoration, Rehabilitation and Mitigation Engineering	02	Elective
DRE	6301	Research Work (Satisfactory/ Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DRE	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
DRE	6302	Thesis Evaluation	05	Compulsory
DRE	6303	Thesis Defense	03	Compulsory

36. Course Contents of MS in Disaster Risk Science and Sustainability

Name of the subject	:	Disaster Risk Science and Sustainability
Name of the department	:	Disaster Risk Management
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DRS	6101	Advanced Disaster Science and Management	02	Compulsory
DRS	6102	Communication for Disaster Risk Reduction and Sustainable Development	02	Compulsory
DRS	6103	Disaster Managers Skills and Diplomatic Crisis Management	02	Compulsory
DRS	6104	Disaster Risk Management Systems Analysis: Methods and Applications	02	Compulsory
DRS	6105	Disaster Risk Reduction Project Planning and Management	02	Elective
DRS	6106	Disaster Management Cycles: Applied Knowledge	02	Elective
DRS	6107	Eco-Based Disaster Risk Reduction	02	Elective
DRS	6108	Human Stress and Resilience Management: Individual and Community Approach	02	Elective
DRS	6109	Industrial and Occupational Safety Analysis	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DRS	6201	Advanced Modeling for Disaster Management and Disaster Management Drivers	02	Compulsory
DRS	6202	Research Methodology in Disaster Risk Science and Sustainability	02	Compulsory
DRS	6203	Scientific Writing Skills for Disaster Science and Sustainability	02	Compulsory
DRS	6204	Special Techniques and Big Data in Disaster Risk Reduction	02	Compulsory
DRS	6205	Advanced Prevention and Preparedness for Disaster Risk Reduction	02	Elective
DRS	6206	Disaster Impact Assessment	02	Elective
DRS	6207	Homeland Security and Terrorism in Risk Science and Sustainability	02	Elective
DRS	6208	Vulnerability to Resilience: Livelihood Centered Approach for Disaster Risk Reduction	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DRS	5301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
DRS	5302	Thesis Evaluation	05	Compulsory
DRS	5303	Thesis Defense	03	Compulsory

37. Course Contents of MS in Emergency Management and Disaster Science

Name of the subject	:	Emergency Management and Disaster Science
Name of the department	:	Emergency Management
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DEM	6101	Psychological, Social and Behavioral Contexts of Emergency Response	02	Compulsory
DEM	6102	Disaster Preparedness and Global Challenges of Disaster Response	02	Compulsory
DEM	6103	International Disaster Relief and Rehabilitation	02	Compulsory
DEM	6104	Emergency Management in Agriculture	02	Compulsory
DEM	6105	Integrated Emergency Management System and Disaster Science	02	Elective
DEM	6106	Public Health and Diseases Investigation and Surveillance Sciences	02	Elective
DEM	6107	Occupational Health and Safety Assessment	02	Elective
DEM	6108	Water Supply and Sanitation in Emergencies	02	Elective
DEM	6109	Incident Command System for Disaster Response	02	Elective
DEM	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DEM	6201	Emergency Management: Theory and Practice	02	Compulsory
DEM	6202	Anthropogenic and Natural Disasters: Management	02	Compulsory
DEM	6203	Research Methodology and Data Analysis in Disaster Management	02	Compulsory
DEM	6204	Disaster Risk Reduction and Resilience	02	Compulsory
DEM	6205	Emergency Planning in Operational Risk and Crisis Management	02	Elective
DEM	6206	Communication for Development in Emergency Response and Management	02	Elective
DEM	6207	Migration and Homeland Security System	02	Elective
DEM	6208	Emergency Remote Sensing and GIS Applications	02	Elective
DEM	6209	Human Geography: Community Recovery and Resilience Perspective	02	Elective
DEM	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
DEM	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
DEM	6302	Thesis Evaluation	05	Compulsory
DEM	6303	Thesis Defense	03	Compulsory

38. Course Contents of MS in Environmental Science

Name of the subject	:	Environmental Science
Name of the department	:	Environmental Science
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENS	6101	Fundamentals of Environmental Science	02	Compulsory
ENS	6102	Advanced Ecology Biodiversity and Wildlife Management	02	Compulsory
ENS	6103	Environmental Impact Assessment and Planning	02	Compulsory
ENS	6104	Research Methodology and Data Analysis	02	Compulsory
ENS	6105	Global Environmental Issues and Policies	02	Elective
ENS	6106	Alternative Energy and Environmental Sustainability	02	Elective
ENS	6107	Environmental Profile of Bangladesh	02	Elective
ENS	6108	Environmental Politics: National and International	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENS	6201	Environmental Pollution and Waste Management System	02	Compulsory
ENS	6202	Integrated Spatial Techniques for Environmental Modeling	02	Compulsory
ENS	6203	Global Climate Change and Sustainable Development	02	Compulsory
ENS	6204	Environmental Microbiology and Eco-toxicology	02	Compulsory
ENS	6205	Ecosystem Based Disaster Management	02	Elective
ENS	6206	Advanced Techniques in Natural Resource Management	02	Elective
ENS	6207	Environmental Management System	02	Elective
ENS	6208	Ecological Economics and Ecosystem Services	02	Elective
ENS	6209	Green Energy and Clean Climate (Blended)	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
ENS	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
ENS	6302	Thesis Evaluation	05	Compulsory
ENS	6303	Thesis Defense	03	Compulsory

39. Course Contents of MS in Geo-Information Science and Earth Observation

Name of the subject	:	Geo-Information Science and Earth Observation
Name of the department	:	Geo-Information Science and Earth Observation
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GEO	6101	Advanced Geographical Information Science	02	Compulsory
GEO	6102	Advanced Remote Sensing and Earth Observation	02	Compulsory
GEO	6103	Unmanned Aerial Vehicles (UAV): Fundamentals and Applications	02	Compulsory
GEO	6104	Research Methodology and Scientific Writing Skills	02	Compulsory
GEO	6105	GIS and RS for Integrated Water Resources and Environmental Management	02	Elective
GEO	6106	GIS and RS Based Assessment of Climate Change Impacts on Agroecological Systems	02	Elective
GEO	6107	RS for Landscape Studies	02	Elective
GEO	6108	GIS and RS for Sustainable Urban and Regional Planning	02	Elective
GEO	6109	GIS and RS for Marine Environmental Management	02	Elective
GEO	6110	GIS and RS for Wetland Ecosystem Management	02	Elective
GEO	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GEO	6201	Advanced Geospatial Techniques and Analysis	02	Compulsory
GEO	6202	Advanced Remote Sensing Data Analysis	02	Compulsory
GEO	6203	Advanced Geo-informatics	02	Compulsory
GEO	6204	Acquisition and Exploration of Geospatial Data	02	Compulsory
GEO	6205	GIS and RS Based Sustainable Natural Resource Management	02	Elective
GEO	6206	GIS and RS for Natural Hazard Assessment	02	Elective
GEO	6207	GIS and RS for Flood Monitoring and Impact Assessment	02	Elective
GEO	6208	Advanced Spatial Programming and Machine Learning	02	Elective
GEO	6209	Spatial Modeling and Analysis	02	Elective
GEO	6210	Spatial Information Engineering	02	Elective
GEO	6211	Spatial Urban Planning and Climate Change (Blended)	02	Elective
GEO	6301	Research Work (Satisfactory/Unsatisfactory)	03	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
GEO	6301	Research Work (Satisfactory/Unsatisfactory)	02	Compulsory
GEO	6302	Thesis Evaluation	05	Compulsory
GEO	6303	Thesis Defense	03	Compulsory

40. Course Contents of MS in Biochemistry and Food Analysis

Name of the subject	:	Biochemistry and Food Analysis
Name of the department	:	Biochemistry and Food Analysis
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BCM	6101	Advanced Chemistry of Carbohydrates, Lipids and Nucleic Acid	02	Compulsory
BCM	6102	Advanced Chemistry of Protein and Enzyme	02	Compulsory
BCM	6103	Principles of Biochemical Techniques	02	Compulsory
BCM	6104	Clinical Biochemistry and Immunochemistry	02	Compulsory
BCM	6105	Comparative Biochemistry -1 (Physiology)	02	Elective
BCM	6106	Biochemistry of Plant Hormones and Biocides	02	Elective
BCM	6107	Biochemistry of Plant Nutrition	02	Elective
BCM	6108	Biochemistry of Stress Tolerance	02	Elective
BCM	6109	Principles of Recombinant DNA Technology	02	Elective
BCM	6110	Molecular Biology of Genes	02	Elective
BCM	6111	Human Nutrition	02	Elective
BCM	6112	Biostatistics and Computer Operating	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BCM	6201	Intermediary Metabolism and its Regulation	02	Compulsory
BCM	6202	Replication of DNA, Protein Biosynthesis and Introduction to Recombinant DNA	02	Compulsory
BCM	6203	Tissue Culture in Biochemical research	02	Compulsory
BCM	6204	Basic Enzymology and Enzyme Technology	02	Compulsory
BCM	6205	Comparative Biochemistry - II (Molecular Biology)	02	Elective
BCM	6206	Bioenergetics and Human Nutrition	02	Elective
BCM	6207	Biochemistry of Fishes	02	Elective
BCM	6208	Special Topics in Biochemistry	02	Elective
BCM	6209	Soil Biochemistry	02	Elective
BCM	6210	Animal Hormones	02	Elective
BCM	6211	Animal Bio-Technology	02	Elective
BCM	6212	Biochemistry of Secondary Metabolism	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
BCM	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
BCM	6302	Thesis Evaluation	05	Compulsory
BCM	6303	Thesis Defense	03	Compulsory

41. Course Contents of MS in Community Health and Hygiene

Name of the subject	:	Community Health and Hygiene
Name of the department	:	Community Health and Hygiene
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CHH	6101	Epidemiology	02	Compulsory
CHH	6102	Communicable and Non-Communicable Diseases Prevention and Control	02	Compulsory
CHH	6103	Community Nutrition	02	Compulsory
CHH	6104	Research Methodology	02	Compulsory
CHH	6105	Health Education and Behavioral Science	02	Elective
CHH	6106	Medical Sociology and Health Anthropology	02	Elective
CHH	6107	Clinical Nutrition and Dietetics	02	Elective
CHH	6108	Occupational and Environmental Health	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CHH	6201	Reproductive and Family Health	02	Compulsory
CHH	6202	Public Health Nutrition (Planning, Policy and Program)	02	Compulsory
CHH	6203	Demography and Population Dynamics	02	Compulsory
CHH	6204	Biostatistics and computing in SPSS	02	Compulsory
CHH	6205	Community Health Promotion	02	Elective
CHH	6206	Health Services Administration and Management	02	Elective
CHH	6207	Advanced Dietetics and Nutritional Disorder	02	Elective
CHH	6208	Nutritional Assessment	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
CHH	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
CHH	6302	Thesis Evaluation	05	Compulsory
CHH	6303	Thesis Defense	03	Compulsory

42. Course Contents of MS in Environmental Sanitation

Name of the subject	:	Environmental Sanitation
Name of the department	:	Environmental Sanitation
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
EHS	6101	Industrial Hygiene and Sanitation	02	Compulsory
EHS	6102	Environment and Health	02	Compulsory
EHS	6103	Environmental Toxicology	02	Compulsory
EHS	6104	Waste Treatment and Management System	02	Compulsory
EHS	6105	Advanced Food Microbiology and Microbial Techniques	02	Elective
EHS	6106	Research Methodology	02	Elective
EHS	6107	Technology of Animal and Plant Food Products	02	Elective
EHS	6108	Principles of Environmental Labeling	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
EHS	6201	Advanced Public Health and Nutrition	02	Compulsory
EHS	6202	Principles of Food Hygiene and Safety	02	Compulsory
EHS	6203	Epidemiology of Communicable and Non-Communicable Diseases	02	Compulsory
EHS	6204	Occupational Hygiene	02	Compulsory
EHS	6205	Quality Control and Food Safety Management	02	Elective
EHS	6206	Advanced Nutrition and Dietetics	02	Elective
EHS	6207	Health Promotion and Occupation	02	Elective
EHS	6208	Advanced Environmental Health	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
EHS	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
EHS	6302	Thesis Evaluation	05	Compulsory
EHS	6303	Thesis Defense	03	Compulsory

43. Course Contents of MS in Food Microbiology

Name of the subject : Food Microbiology
 Name of the department : Food Microbiology
 Total compulsory course : 16 Credit hours
 Total elective course : 08 Credit hours
 Total research work : 16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FMB	6101	Food and Microorganism	02	Compulsory
FMB	6102	Quality Control and Food Safety Management-1	02	Compulsory
FMB	6103	Fermentation Technology and Fermented Food Products	02	Compulsory
FMB	6104	Food Virology and Immunology	02	Compulsory
FMB	6105	Advanced Microbial Genetics and Genetic Engineering	02	Elective
FMB	6106	Research Methodology	02	Elective
EHS	6101	Industrial Hygiene and Sanitation	02	Elective
FTE	6101	Advanced Unit Operations in Process and Food Engineering	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FMB	6201	Quality Control and Food Safety Management-11	02	Compulsory
FMB	6202	Advanced Industrial Microbiology and Biotechnology	02	Compulsory
FMB	6203	Public Health Microbiology	02	Compulsory
FMB	6204	Advanced Molecular and Microbial Techniques	02	Compulsory
FMB	6205	Fungi, Mycoplasma, Chlamydia and Rickettsia	02	Elective
EHS	6104	Waste Treatment and Management System	02	Elective
HND	6102	Advanced Nutrition and Diet Therapy	02	Elective
FTE	6204	Advanced Packaging Technology	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FMB	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
FMB	6302	Thesis Evaluation	05	Compulsory
FMB	6303	Thesis Defense	03	Compulsory

44. Course Contents of MS in Food Technology and Engineering

Name of the subject	:	Food Technology and Engineering
Name of the department	:	Food Technology and Engineering
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FTE	6101	Advanced Unit Operations in Process and Food Engineering	02	Compulsory
FTE	6102	Thermal Processing and Freezing of Food	02	Compulsory
FTE	6103	Food Quality Assurance and Safety	02	Compulsory
FTE	6104	Food Industry Wastes Management	02	Compulsory
FTE	6105	Food Law and Regulation	02	Elective
FTE	6106	Food Additives and Toxicology	02	Elective
FTE	6107	Technology of Fruits and Vegetable and Cereal Products	02	Elective
FTE	6108	Advanced Industrial Microbiology and Biotechnology	02	Elective
FTE	6109	Nutrition and Dietetics	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FTE	6201	Advanced Dairy Engineering	02	Compulsory
FTE	6202	Advanced Food Process Engineering	02	Compulsory
FTE	6203	Food Machineries and Equipment Design	02	Compulsory
FTE	6204	Advanced Packaging Technology	02	Compulsory
FTE	6205	Reaction Kinetics and Reactor Design	02	Elective
FTE	6206	Novel Food Processing Technique	02	Elective
FTE	6207	Technology of Animal Products	02	Elective
FTE	6208	Hygiene and Sanitation	02	Elective
FTE	6209	Advanced Food Fermentation	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FTE	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
FTE	6302	Thesis Evaluation	05	Compulsory
FTE	6303	Thesis Defense	03	Compulsory

45. Course Contents of MS in Human Nutrition and Dietetics

Name of the subject	:	Human Nutrition and Dietetics
Name of the department	:	Human Nutrition and Dietetics
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HND	6101	Advanced Nutrients Biomolecules	02	Compulsory
HND	6102	Advanced Nutrition and Diet Therapy	02	Compulsory
HND	6103	Instrumentation for Food Analysis	02	Compulsory
HND	6104	Nutritional Planning	02	Compulsory
HND	6105	Community Nutrition	02	Elective
HND	6106	Research Methodology	02	Elective
HND	6107	Nutrition Education	02	Elective
HND	6108	Technology of Plants and Animal Products	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HND	6201	Advanced Dietetics and Nutritional Disorder	02	Compulsory
HND	6202	Nutrition in Emergencies	02	Compulsory
HND	6203	Metabolism of Nutrient Biomolecules	02	Compulsory
HND	6204	Nutritional Assessment	02	Compulsory
HND	6205	Development Nutrition	02	Elective
HND	6206	Data Management and Analysis	02	Elective
HND	6207	Clinical Nutrition	02	Elective
HND	6208	Nutritional Problems	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HND	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
HND	6302	Thesis Evaluation	05	Compulsory
HND	6303	Thesis Defense	03	Compulsory

46. Course Contents of MS in Post-Harvest Technology and Marketing

Name of the subject	:	Post-Harvest Technology and Marketing
Name of the department	:	Post-Harvest Technology and Marketing
Total compulsory course	:	16 Credit hours
Total elective course	:	08 Credit hours
Total research work	:	16 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PTM	6101	Principles of Post-Harvest Technology and Marketing	02	Compulsory
PTM	6102	Technology of Sea Food Processing	02	Compulsory
PTM	6103	Beverage Technology	02	Compulsory
PTM	6104	Food Processing and Preservation Technology	02	Compulsory
PTM	6105	Bioenergetics and Human Nutrition	02	Elective
PTM	6106	Research Methodology and Biostatistics	02	Elective
PTM	6107	Quality Control and Assurance of Food	02	Elective
PTM	6108	Instrumental Techniques in Nutrient Analysis	02	Elective

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PTM	6201	Advanced Technology of Animal Food Products	02	Compulsory
PTM	6202	Tissue Culture in Biochemical Research	02	Compulsory
PTM	6203	Baking and Confectionery Technology	02	Compulsory
PTM	6204	Technology of Horticultural Crops	02	Compulsory
PTM	6205	Technology of Oilseeds and Fats	02	Elective
PTM	6206	Food Plant Engineering	02	Elective
PTM	6207	Data Management and Analysis	02	Elective
PTM	6208	Global Food Issues and Food Policy	02	Elective

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
PTM	6301	Research Work (Satisfactory/Unsatisfactory)	08	Compulsory
PTM	6302	Thesis Evaluation	05	Compulsory
PTM	6303	Thesis Defense	03	Compulsory

47. Course Contents of MBA in Accounting and Information System

Name of the subject	:	Accounting and Information System
Name of the department	:	Accounting and Information System
Total compulsory course	:	32 Credit hours
Total elective course	:	00 Credit hours
Total research work	:	06 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AIS	5101	Advanced Management Accounting	03	Compulsory
AIS	5102	Social Accounting	03	Compulsory
AIS	5103	Accounting for Government and Non-profit Organization	03	Compulsory
AIS	5104	Corporate Financial Reporting	03	Compulsory
AIS	5105	Working Capital Management	03	Compulsory
AIS	5106	Oral Comprehensive	01	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AIS	5201	Advance Financial Accounting	03	Compulsory
AIS	5202	Strategic Management	03	Compulsory
AIS	5203	Cost Control and Planning	03	Compulsory
AIS	5204	Advanced Financial Management	03	Compulsory
AIS	5205	Project Management	03	Compulsory
AIS	5206	Oral Comprehensive	01	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
AIS	5301	Internship Report Evaluation	03	Compulsory
AIS	5302	Internship Defense	03	Compulsory

48. Course Contents of MBA in Finance

Name of the subject	:	Finance
Name of the department	:	Finance and Banking
Total compulsory course	:	32 Credit hours
Total elective course	:	00 Credit hours
Total research work	:	06 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FIN	5101	Working Capital Management	03	Compulsory
FIN	5102	Financial Information System and Reporting	03	Compulsory
FIN	5103	Monetary Policy and Micro Finance	03	Compulsory
FIN	5104	Islamic Financial System	03	Compulsory
FIN	5105	Corporate Reconstructing and Governance	03	Compulsory
FIN	5106	Oral Comprehensive	01	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FIN	5201	Project Management	03	Compulsory
FIN	5202	Corporate Finance	03	Compulsory
FIN	5203	Financial Derivates and Engineering	03	Compulsory
FIN	5204	Managerial Economics	03	Compulsory
FIN	5205	Public Finance	03	Compulsory
FIN	5206	Oral Comprehensive	01	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
FIN	5301	Internship Report Evaluation	03	Compulsory
FIN	5302	Internship Defense	03	Compulsory

49. Course Contents of MBA in Human Resources Management

Name of the subject	:	Human Resources Management
Name of the department	:	Management Studies
Total compulsory course	:	32 Credit hours
Total elective course	:	00 Credit hours
Total research work	:	06 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRM	5101	Human Resource Planning and Policy	03	Compulsory
HRM	5102	Compensation Management	03	Compulsory
HRM	5103	Conflict Management and Negotiation	03	Compulsory
HRM	5104	Human Resources Information System	03	Compulsory
HRM	5105	International Human Resource Management	03	Compulsory
HRM	5106	Oral Comprehension	01	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRM	5201	Organizational Behavior and Development	03	Compulsory
HRM	5202	Training and Development	03	Compulsory
HRM	5203	Strategic Human Resources Management	03	Compulsory
HRM	5204	Carrier Planning and Development	03	Compulsory
HRM	5205	Strategic Management	03	Compulsory
HRM	5206	Oral Comprehension	01	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
HRM	5301	Internship Report Evaluation	03	Compulsory
HRM	5302	Internship Defense	03	Compulsory

50. Course Contents of MBA in Marketing

Name of the subject	:	Marketing
Name of the department	:	Marketing
Total compulsory course	:	32 Credit hours
Total elective course	:	00 Credit hours
Total research work	:	06 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MKT	6101	Customer Relationship Management	03	Compulsory
MKT	6102	Strategic Marketing	03	Compulsory
MKT	6103	Marketing for Nonprofit Organization	03	Compulsory
MKT	6104	Service Marketing	03	Compulsory
MKT	6105	E-Marketing	03	Compulsory
MKT	6106	Oral Comprehensive	01	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MKT	6201	Marketing Management	03	Compulsory
MKT	6202	Integrated Marketing Communications	03	Compulsory
MKT	6203	Agricultural Marketing and Farm Management	03	Compulsory
MKT	6204	Pricing Theory and Practice	03	Compulsory
MKT	6205	Advance Marketing Research	03	Compulsory
MKT	6206	Oral Comprehensive	01	Compulsory

C. Research Semester

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
MKT	6301	Internship Report Evaluation	03	Compulsory
MKT	6302	Internship Defense	03	Compulsory

51. Course Contents of LLM in Law

Name of the subject : Law
 Name of the department : Law and Land Administration
 Total compulsory course : 29 Credit hours
 Total elective course : 00 Credit hours
 Total research work : 03 Credit hours

A. Semester: January-June

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
LLM	5101	Humanitarian Law	03	Compulsory
LLM	5102	Law of Human Rights	03	Compulsory
LLM	5103	Intellectual Property Law	03	Compulsory
LLM	5104	Law of the Sea	03	Compulsory
LLM	5105	Private International Law	03	Compulsory
LLM	5106	Viva-Voce	01	Compulsory

B. Semester: July-December

Alphabetic Code	Numeric Code	Course Title	Credit Hour	Compulsory/ Elective
LLM	5201	Cyber Law	03	Compulsory
LLM	5202	International Environmental Law	03	Compulsory
LLM	5203	International Trade Law	03	Compulsory
LLM	5204	Law of Water Resource Management	03	Compulsory
LLM	5205	Research Monograph	03	Compulsory
LLM	5206	Viva-Voce	01	Compulsory

Rules for Roll or ID Number in Master/PhD Degree

প্রতিটি ছাত্রের রোল/আইডি নম্বর নির্ধারণের জন্য দশ সংখ্যার নিউমেরিক কোড [প্রথম সংখ্যা প্রোগ্রাম কোড (5 নন-থিসিস মাস্টার ডিগ্রী যেমন এমবিএ ও এলএলএম প্রোগ্রামের জন্য, 6 থিসিসসহ মাস্টার ডিগ্রী যেমন এমএস ও এমফিল প্রোগ্রামের জন্য এবং 7 পিএইচডি প্রোগ্রামের জন্য), পরবর্তী দুই সংখ্যা (22, 23, 24, ... ইত্যাদি) সাল এর কোড, পরবর্তী সংখ্যা (জানুয়ারী-জুনঃ 1, জুলাই-ডিসেম্বরঃ 2) সেমিস্টার কোড, পরবর্তী দুই সংখ্যা (ব্যাচেলর ডিগ্রীর ক্রম অনুযায়ী AG 01, CSE 02, BA 03, FOF 04, DVM 05, ESDM 06, NFS 07, AH 08 and LLA 09) ফ্যাকাল্টি কোড, পরবর্তী দুই সংখ্যা বিষয় কোড (01, 02, 03, ... ইত্যাদি, যা সংশ্লিষ্ট অনুষদ কর্তৃক নির্ধারিত হয়েছে এবং নিম্নে প্রদত্ত) এবং পরবর্তী দুই সংখ্যা ছাত্র-ছাত্রীর ক্রমিক নম্বর (01, 02, 03, ইত্যাদি)] নির্ধারণ করা হয়েছে। উদাহরণঃ একজন ছাত্র এমএস প্রোগ্রামে জানুয়ারী-জুন' ২০২২ সেমিস্টার কৃষি উদ্ভিদ বিজ্ঞান বিভাগে ভর্তি হয়েছে যার ক্রমিক নং ০১ তার রোল/আইডি নাম্বার হবে 6221010101। উল্লেখ থাকে যে, মাস্টার ডিগ্রী প্রোগ্রামে একটি বিষয়ে সর্বোচ্চ দুইটি ডিগ্রী পরিচালনা করা যাবে যার একটি থিসিসসহ এবং অন্যটি নন-থিসিস ডিগ্রী হবে। ডিন, পিজিএস মহোদয় ভর্তিকৃত ছাত্র-ছাত্রীদের তালিকা প্রকাশের সময় রোল/আইডি নম্বর প্রদান করবেন। মাস্টার ও পিএইচডি ডিগ্রী প্রোগ্রামের নিউমেরিক কোর্স কোড এর ক্ষেত্রেও প্রোগ্রাম কোড হিসেবে ৫ নন-থিসিস মাস্টার ডিগ্রী যেমন এমবিএ ও এলএলএম এর জন্য, ৬ থিসিসসহ মাস্টার ডিগ্রী যেমন এমএস ও এমফিল এর জন্য এবং ৭ পিএইচডি প্রোগ্রামের জন্য প্রযোজ্য হবে যেমন কৃষি উদ্ভিদ বিজ্ঞান বিভাগের মাস্টার ডিগ্রী প্রোগ্রামের জানুয়ারী-জুন সেমিস্টারের প্রথম কোর্সটির কোড হবে AGB 6101। প্রস্তাবিত কোড জুলাই-ডিসেম্বর'২০২২ সেমিস্টার থেকে কার্যকর করা হবে।

- ক. কৃষি (০১) অনুষদভুক্ত বিষয়সমূহের কোডঃ AGB 01, ACM 02, AGE 03, ARD 04, AGF 05, AGR 06, ANS 07, BTH 08, ENT 09, GPB 10, HRT11, PLP 12, SSC 13 and STT 14
- খ. সিএসই (০২) অনুষদভুক্ত বিষয়সমূহের কোডঃ CIT 01, CCE 02, EEE 03, PME 04 and MAT 05
- গ. বিএ (০৩) অনুষদভুক্ত বিষয়সমূহের কোডঃ AIS 01, FIN 02, HRM 03, MKT 04, ECO 05 and ENG 06
- ঘ. ফিশারিজ (০৪) অনুষদভুক্ত বিষয়সমূহের কোডঃ AQC 01, FBG 02, FMN 03, FST 04 and MFO 05
- ঙ. ডিভিএম (০৫) অনুষদভুক্ত বিষয়সমূহের কোডঃ PHY 01, PHA 02, MIC 03, VPH 04, VPT 05, VPR 06, VHA 07, VMM 08, VSS 09 and VST 10
- চ. ইএসডিএম (০৬) অনুষদভুক্ত বিষয়সমূহের কোডঃ DRS 01, ENS 02, DEM 03, DRE 04 and GEO 05
- ছ. এনএফএস (০৭) অনুষদভুক্ত বিষয়সমূহের কোডঃ HND 01, EHS 02, FMB 03, FTE 04, BFA 05, CCH 06 and PTM 07
- জ. এনিম্যাল হাজবেড্রি (০৮) অনুষদভুক্ত বিষয়সমূহের কোডঃ PSC 01, ASC 02, ANT 03, ABG 04, DSC 05, APT 06
- ঝ. ল' এন্ড ল্যান্ড এডমিনিস্ট্রেশন (০৯) অনুষদভুক্ত বিষয়সমূহের কোডঃ LLW 01



Inauguration Sinage of the University