

OFFICE OF DEAN: POST GRADUATE STUDIES

No. PGS/HA/BOF/5649

Dated: March 07, 2022

All PG Faculty Members

(Through e-mail)

The I/2022 meeting of BOF (PGS) will be held on **March 12, 2022 at 3:00 p.m.** in the Conference Hall, College of Agriculture. Kindly make it convenient to attend the meeting. Following shall be the agenda :

Item No.	Description
I/2022:01	: Confirmation of Minutes of I/2021 meeting of Board of Faculty (PGS) held on 24/02/2021 (Minutes have been already circulated and are available on university website under College of PGS)
I/2022:02	: Review of action taken on the decisions of I/2021 meeting of BOF (PGS)
I/2022:03	: Accreditation of faculty members for Post Graduate Research
I/2022:04	: Admission Policy for Academic Year 2022-23 for PG and Ph.D. programmes of the university
I/2022:05	: Admission Policy (2022-2023) for MBA Programmes
I/2022:06	: Revision in credits of Special Problem for Master's degree and start of new course Special Problem for Ph.D. degree
I/2022:07	: Revision in degree nomenclature of M.Sc. Ag. (Soil Science) and Ph.D. (Soil Science)
I/2022:08	: Revision in nomenclature of Department of Clothing and Textiles to Textiles and Apparel Designing as recommended by the V th Dean's Committee of ICAR
I/2022:09	: Revision in degree nomenclature of M.Sc. Home Science (Clothing and Textiles) and Ph.D. (Clothing and Textiles) as recommended by the V th Dean's Committee of ICAR
I/2022:10	: Revision in nomenclature of Department of Home Science Extension as recommended by the V th Dean's Committee of ICAR
I/2022:11	: Revision in nomenclature of Department of Family Resource Management to Department of Family Resource Management & Consumer Science as recommended by the V th Dean's Committee of ICAR
I/2022:12	: Revision in nomenclature of M.Sc. Home Science (Family Resource Management) and Ph.D. (Family Resource Management) as recommended by the V th Dean's Committee of ICAR
I/2022:13	: Revision in degree nomenclature of M.Sc. Home Science (Human Development and Family Studies) as recommended by the V th Dean's Committee of ICAR
I/2022:14	: Adoption of Common Academic Regulations for Post Graduate Programme in the university as per BSMA recommendations (Minutes of the Dean's Committee meeting held on 15/12/2021 have been already circulated)
I/2022:15	: Retaining of the nomenclature 'Minor courses' in Ph.D. as per recommendation of BSMA committee of ICAR
I/2022:16	: Restructuring and revision in Course Programme & Syllabi of M.Sc. and Ph.D. programmes as per BSMA recommendations
I/2022:17	: Revision in the limit on credits to be registered per semester by Master's & Doctoral students
I/2022:18	: Conduct of written comprehensive examination from Major & Minor courses before oral comprehensive examination in Ph.D. programme
I/2022:19	: Election of Secretary, Post Graduate Faculty

The detailed agenda is enclosed.



(Anita Rani)

Secretary, P.G. Faculty

- CC:**
1. All HoDs with the request to kindly circulate among PG Faculty members of the dept.
 2. All Deans of the Colleges
 3. Registrar/Secretary Academic Council
 4. Controller of Examinations
 5. Director Research/ Director Extension/ Director, Communication
 6. I/C University website for uploading
 7. Dean, Agriculture with the request to direct concerned person(s) for arrangement of PA system during the meeting
 8. P.S. to Vice Chancellor for kind information of Hon'ble Vice Chancellor please.

Agenda for P.G. Faculty Meeting (I/2022) to be held on March 12, 2022 at 3:00 P.M. in the Conference Hall, College of Agriculture

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I/2022:12	: Revision in nomenclature of M.Sc. Home Science (Family Resource Management) and Ph.D. (Family Resource Management) as recommended by the V th Dean's Committee of ICAR
I/2022:13	: Revision in degree nomenclature of M.Sc. Home Science (Human Development and Family Studies) as recommended by the V th Dean's Committee of ICAR
I/2022:14	: Adoption of Common Academic Regulations for Post Graduate Programme in the university as per BSMA recommendations (Minutes of the Dean's Committee meeting held on 15/12/2021 have been already circulated)
I/2022:15	: Retaining of the nomenclature 'Minor courses' in Ph.D. as per recommendation of BSMA committee of ICAR
I/2022:16	: Restructuring and revision in Course Programme & Syllabi of M.Sc. and Ph.D. programmes as per BSMA recommendations
I/2022:17	: Revision in the limit on credits to be registered per semester by Master's & Doctoral students
I/2022:18	: Conduct of written comprehensive examination from Major & Minor courses before oral comprehensive examination in Ph.D. programme
I/2022:19	: Election of Secretary, Post Graduate Faculty

Item No. I/2022:01 Confirmation of the minutes of I/2021 meeting held on February 24, 2021

No comment/modification the minutes of I/2021 meeting held on February 24, 2021 has been received, therefore, the minutes as circulated were confirmed.

Item No. I/2022:02 Review of action taken (I/2021 meeting held on February 24, 2021)

Item No. I/2021:3	:	Accreditation of P.G. Faculty members for Post Graduate Research.
		Agenda for accreditation of 01 faculty member for Master's research and 03 faculty members for Ph.D. research as approved by the P.G. Faculty has been approved by Academic Council in its 391 st meeting held on March 05 and 17, 2021 under agenda item no. 2021:391:43. The proposal for accreditation of 05 faculty members/scientists from KVK and other institutions were deferred for resubmission through proper channel. The same has been received and is being dispalyed under Agenda Item No. I/2022:03.
Item No. I/2021:4	:	Admission Policy (2021-2022) for P.G. and Ph.D. programmes of the University
		Approved by Academic Council in its 391 st meeting held on March 05 and 17, 2021 under agenda item no. 2021:391:55.
Item No. I/2020:5(2)	:	Proposal for new course BBC-610 Biophysical and Bioanalytical Chemistry
		Approved by Academic Council in its 391 st meeting held on March 05 and 17, 2021 under agenda item no. 2021:391:41.
Any other item	:	The discrepancy in the regulations pertaining to members of P.G. Faculty. The different regulations are mentioned in the Chapter-VI (Faculties) under Statues section of Act & Statutes of the University and Clause (1) of Chapter-V of Academic Regulations was pointed out by some faculty members. The letter to Registrar for clarification has been sent vide no.: PGS/AO/5210 dated Dec. 23, 2021 and reminder vide no.: PG/HA/5642 dated March 04, 2022. The reply is still awaited.

Item No. I/2022:03 Accreditation of Faculty Members for Post Graduate Research

Proposal from the following faculty members were received for accreditation. These proposals were discussed and examined by the Accreditation Committee in its meeting held on December 20, 2021 at 4:00 P.M.

The minutes of the meeting of Accreditation Committee alongwith brief bio-data of faculty members is annexed. The Accreditation Committee has recommended that the faculty members as mentioned below may be accredited for P.G. research in the programme noted against each.

Sl. No.	Name of Faculty Member	Designation	Department	Accreditation Level
1.	Dr. Sakshi Chauhan	Asstt. Prof.	Mech. Engg.	Ph.D.
2.	Dr. Neeraj Bisht	Asstt. Prof.	Mech. Engg.	Ph.D.
3.	Dr. Jitendra Bhaskar*	Assoc. Prof.	Mech. Engg., HBTU, Kanpur	Ph.D.
4.	Dr. Sunil Kumar	Asstt. Prof.	Civil Engg.	Ph.D.
5.	Dr. Shri Prakash Dwivedi	Asstt. Prof.	Information Technology	Ph.D.
6.	Dr. Pankaj Kumar	Asstt. Prof.	Soil & Water Cons. Engg.	Ph.D.
7.	Dr. Deepak Kumar	Asstt. Prof.	Soil & Water Cons. Engg.	Ph.D.
8.	Dr. Rajeev Ranjan Kumar	Asstt. Prof.	Veterinary Parasitology	Ph.D.
9.	Dr. Sanjeev Kumar #	Principal Scientist & Head	Animal Genetics & Breeding, ICAR-CARI	Ph.D.
10.	Dr. J.P. Purwar,	S.R.O.	Entomology	Ph.D.
11.	Dr. Rajeev Ranjan	Asstt. Prof.	Agrometeorology	Ph.D.
12.	Dr. Deepshikha	J.R.O.	Plant Pathology	Ph.D.
13.	Dr. Shilpi Rawat	Asstt. Prof.	Plant Pathology	Ph.D.
14.	Dr. Arpita Sharma	Asstt. Prof.	Agril. Comm.	Ph.D.
15.	Dr. Shiv Kumar Dubey	Asstt. Prof.	Biochemistry	Ph.D.
16.	Dr. Tandel Riteshkumar Shantilal**	Scientist	Fish Health, DCFR, Bhimtal	Ph.D.
17.	Dr. Vinod Kadam***	Scientist	Textile Manufacture & Textile Chemistry Div., ICAR-CSWRI	Ph.D.
18.	Dr. Ajay Kumar***	Principal Scientist & I/c Head	Textile Manufacture & Textile Chemistry Div., ICAR-CSWRI	Ph.D.

#Already included in the student Advisory Committee as per approval of Hon'ble Vice-Chancellor in anticipation of approval from Accreditation Committee, PG Faculty & Academic Council. As per provisions of MoU signed with ICAR-CARI, Bareilly.

*As per provisions of MoU signed with HBTU, Kanpur.

**As per provisions of MoU signed with DCFR, Bhimtal.

***As per provisions of MoU signed with ICAR-CSWRI, Avikanagar, Rajasthan.

The P.G. Faculty is requested to consider the above proposal for accreditation.

Dean, PGS

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION
(15 copies are required on one page, on one side)

1. Name : **Sakshi Chauhan**
2. Designation : **Assistant professor**
3. Date of birth : **01.02.1990**
4. Department : **Mechanical Engineering Department**
5. Educational Qualification : **PhD**
6. Field of Specialization : **Material Science, Composites, Bio-Mechanics**
7. Experience as Faculty member:
 - (i) Outside the University : -
 - (ii) (a) In the University : **11 January 2016 to till date**
 - (b) On present post : -
8. Publications:
 - (a) No. of Research papers published : **10**
 - (b) No. of articles published :
 - (c) Books/Chapters in books : **Nil**
 - (d) Other publications, if any : **Nil**
9. Details of courses taught:



SL.No.	No. & Title of the course	Credit hrs.
U.G. Level:		
i.	TME-241 Kinematics of Machine	3(2-1-2)
ii.	TME-231 Machine Drawing	2(0-0-4)
iii.	TME-232 Machine Element Design	3(2-0-2)
iv.	TME-140 Theory of Machines	2(2-0-0)
v.	TME-255 Material Science and Engineering	4(3-0-2)

P.G. Level:		
i.	TME-662 Advances in Measurement and Metrology	2(2-1-0)
ii.	TME-651 Advance Material Science	3(3-1-0)
iii.	TME-655 Mechanics of Metal Forming	3 (3-1-0)
iv.	TME-654 Theory of Elasticity and Plasticity	3 (3-1-0)

10. No. of Master's students guided (in case of Ph.D. research) :

Name	ID.NO.	Thesis title	Year of completion
Mr. Nitesh Bisht	52628	Thermal and Mechanical Characterization of functionalized silicon carbide (f-SiC) particle reinforced polyvinyl alcohol based crosslinked composite	2019
Mr. Pradeep Sati	53990	To Study the Effect of the Surface Modification of Graphene Particles on Mechanical and Thermal Properties of PVA-Gr Nano-Composites	2020

Mr. Gaurav Sagar	54136	To Fabricate and Evaluate the Effect of Crosslinking on Graphene Reinforced Poly-vinyl based Particle Nano- Composite	2020
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Signature of staff member


Signature of Head of the Dept
HEAD. MED


Signature of Dean College Concerned
Dean Tech.


Signature of Dean PGS
DEAN, P.G.S.
17/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(15 copies are required on one page, on one side)**

1. Name : Neeraj Bisht
2. Designation : Assistant Professor
3. Date of birth : 30-03-1987
4. Department : Mechanical
5. Educational Qualification : PhD
6. Field of Specialization : Fracture Mechanics, FEM, Composites



7. Experience as Faculty member:
 - (i) Outside the University :
 - (ii) (a) In the University :
 - (b) On present post : 21/11/2015 to present
8. Publications:
 - (a) No. of Research papers published : 11
 - (b) No. of articles published : NIL
 - (c) Books/Chapters in books : NIL
 - (d) Other publications, if any : NIL
9. Details of courses taught:

Sl.No.	No. & Title of the course	Credit hrs.
<u>U.G. Level:</u>		

Sl. No.	Course No.	Title of Course	Credit Hours
1	TME 231	Machine Drawing	2
2.	TME 435	Measurement and Control	4
3	TME 453	Stress Analysis	3
4.	TME 233	Machine Design	2


P. G. Level:

Sl. No.	Course No.	Title of Course	Credit Hours
1	TME 654	Theory of Elasticity and Plasticity	2
2	TME 652	Stress Analysis	3
3	TME 731	Industrial Instrumentation	3


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10. No. of Master's students guided (in case of Ph.D. research) :
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Name	ID.NO.	Thesis title	Year of completion
1. Harshit Kumar Saxena	52632	Effects of crack branching on fracture parameters under biaxial static loading	2020
2. Gulfam Akhtar Ansari	52695	Effects of randomly oriented cracks on the fracture parameters in a rectangular plate under static loading	2021
3. Nisha Rani	54116	Analysis of unsymmetrical cracks emanating from a circular hole placed centrally in a thin plate using FEM	2021


Signature of staff member


Signature of Head of the Deptt.
16/02/21
HEAD. MED


Signature of Dean College Concerned
27/2
Dean Tech.


Signature of Dean PGS
DEAN, P.G.S.
17/02/21

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(03 copies are required on one page, on one side)**

1. Name : JITENDRA BHASKAR
2. Designation : ASSOCIATE PROFESSOR
3. Date of birth : 08/08/1978
4. Department : MECHANICAL ENGG.
5. Educational Qualification : PHD
6. Field of Specialization : CAD/CAM, COMPOSITES
3D PRINTING
7. Experience as Faculty member:
- (i) Outside the University -HBTU : 24/01/2007. To Till date (Associate Prof)
- (ii) (a) In the University : 23/01/2003 to 23/01/2007
- (b) On present post ASSISTANT PROFESSOR to
8. Publications:
- (a) No. of Research papers : 35 Journal
published
- (b) No. of articles published : 35 Int Conf
- (c) Books/Chapters in books : 07
- (d) Other publications, if any : 18 National Conf.
9. Details of courses taught:



Sl.No.	No. & Title of the course	Credit hrs.
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U.G. Level:

i.	Kinematics of Machine, Dynamics of Machine, Machine Design, Machine drawing, CAD, CAM, Machine Drawing, Power Plant Engineering, Non-conventional Energy sources system, Mechanical system design, Thermodynamics, Theory of fluid flow etc.	Each course 03 credits on average
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P.G. Level:

i.	Finite Element Method, Geometric modeling, Computer graphics and Geometric modeling, Simulation modeling and Analysis, Fracture mechanics, Advance mechanics of solid.	Each course 03 credits on average
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10. No. of Master's students guided (in case of Ph.D. research) :

Name	ID.NO.	Thesis title	Year of completion
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1. *Meshfree analysis of elastic bar* published in LAP Lambert Academic Publishing ISBN 978-3-8443-1294-2, Paperback, 92 Seiten by Jeetender Singh Kushwaha.
2. *"Evaluation of Mechanical Properties of Wood Plastic Composite"* by Mr Shamsul Haq in 2010
3. *Failure Analysis of 1st stage Gas Turbine Blade* by Mr Basant Lal in 2010
4. *Modelling of heel pad for shoes* by Mr Kamran Rasheed in Year 2011
5. *Fabrication and Experimentation investigation of Mechanical properties of Bamboo fibre reinforced composite* by Mr Habibur Rahman, Year 2013.
6. *Fabrication and Experimentation investigation of Mechanical properties of Babool particulate composite* by Mr S K Dohare in Year 2013.
7. *Experimental Determination of Mechanical Properties of Recycled Tyre Rubber Particulate Composites* by Mr Vipin Chaurasia Year 2014
8. *Computer Aided Design, Fabrication and Analysis of Scaled Wind Turbine Blade* by Mr Prateek Kumar Gupta in Year 2015.
9. *Dynamic Characterization of Coconut Particulate Composites* by Mr Satyendra Kumar (731/13) in Year 2016
10. *Development and Characterization of Shape Memory Alloy Embedded Self-Healing Polymer composite* by Mr Anurag Kumar Pandey (740/14) in Year 2016
11. *Dynamic Characterization of Shape Memory Alloy Embedded Passive Hybrid Polymer Composite* by Rahul Bajpai (744/14) in year 2016.
12. *Fabrication and characterization of Non-metallic waste material Reinforced polymer composite* by **Pramod Kumar Pandey MANIT Bhopal 2016** – Co-supervisor.
13. *Machining of EN31 Hardened Steel using Minimum Quantity Lubrication to Improve Tool Life* by Mr Jitendra Kumar Verma (708/15) in 2017.
14. *Dynamic Characterization of Glass Fiber Based Hybrid Composite and Its Simulation* by Mr Kushagra Singh (704/15) in year 2017.
15. *Experimental Study on Machining of EN24 using Minimum Quantity Lubrication* by Mr Gaurav Tyagi in Year October 2018 Co-Supervisor J Bhaskar.
16. *Development and Performance Analysis of FDM based 3D Printer* by Mr Apoorv Srivastava (660454002) in Year October 2018.
17. *Numerical & Experimental Study of Vibrational Behaviour of Glass and Carbon fiber reinforced Hybrid Composite* by Mr Kamal Singh in Year October 2018.
18. *Design & Development of Screw Extruder* by Mr Asheesh Kesarwani on December 01, 2018.
19. *Study of Composite Part Fabrication and repair in Aircraft Industry* by Shyam Kishor (6504540025) on November 20, 2018.
20. *Design and Fabrication of Topologically Optimized Structures* by Urvashi verma 2019.
21. *Design of Forward Moving Stair Climbing Wheelchair* by Rishab Kant Dubey 2019 Co-supervisor.
22. *Fabrication & Performance Analysis of Indirect Extruder based 3D Printer* by Vipin Gupta 2019.
23. *Simulation of Extension and Bending Behaviour of Piezoelectric Based Smart Beam* by Vandana Prakash 2019.
24. *Repair of Glass Fiber Composite Radome of Aircraft and Study of Its Mechanical Properties* by Mr Rajendra Kr Maurya 2019 Co-supervisor.
25. *Mechanical Characterization of Resistive Heat Cured CFRP Composites* by Mr Raj Kumar 2019.
26. *Design and analysis of Parabolic Reflector Antenna using Carbon Fiber Reinforced Polymer Composite* by Iqra Absar 2019 Co-supervisor M.Tech Electronics.
27. *Design, development and performance evaluation of ultra violet curing based 3D printer* by Mr Pradeep Kumar Yadav in Year 2020.
28. *Modelling and Analysis of knee joint using Reverse Engineering for Biomedical Applications* by Mr Deepak Kumar in Year 2020.
29. *Design and Performance evaluation of soft gripper for Robotics applications* by Mr Ashutosh Singh in Year 2020
30. *Experimental Investigation of Fused Deposition Modelling Parameters for Improved Printing on Fabrics* by Mr Arpit Singh in Year 2020. Co-supervisor.
31. *Design and Analysis of dental implant* submitted by Amita Maurya (2021).
32. *Dynamic FEM analysis of auxetic structure based cantilever beam* by Abhishek in 2021.
33. *Geometrical modelling of liver for Transplantation* by Twinkle Dewanshi (2021).
34. *Design and Analysis of 3D Printed Soft Actuator* by Pranjul Pal (2021) (Co-supervisor).
35. *Modelling and Analysis of Auxetic structures for sports Equipments* by Ritul Vardhan. (2021)- (Co-supervisor).
36. *Design and Analysis of 3D Printed Orthopedic Cast for Forearm Rehabilitation* by Sushrut Richa 2021- (Co-supervisor).



02/11/2021

Signature of staff member





Signature of Head of the Deptt.

18/11/21
HEAD. MED



.. 23/11/21

Signature of Dean College Concerned



Signature of Dean PGS



DEAN, P.G.S.

17/12/2021

BRIEF BIO-DATA FOR Ph.D. ACCREDITATION
(03 copies are required on one page, on one side)



1. Name : Sunil Kumar
2. Designation : Assistant Professor
3. Date of birth : 02/03/1979
4. Department : Civil Engineering Department
5. Educational Qualification : PhD (Earthquake Engineeringg)
6. Field of Specialization : Structural Engineering
7. Experience as Faculty member:
 - (i) Outside the University : w.e.f. 21.06.2004 to 27.09.2007
 - (ii) (a) In the University : w.e.f. 29.09.2007 to till date
 - (b) On present post : w.e.f. 29.09.2007 to till date
8. Publications:
 - (a) No. of Research papers published : 14
 - (b) No. of articles published : Nil
 - (c) Books/Chapters in books : Nil
 - (d) Other publications, if any : Nil

9. Details of courses taught:

SLNo.	No. & Title of the course	Credit hrs.
U.G. Level:		
i.	TCE-439 Earthquake Engineeirng	3(3-0-0)
ii.	TCE-131 Solid Mechanics	4(3-1-2)
iii.	TCE-333 Design of Steel Structure-I	3(3-1-0)
iv.	TCE-334 Design of Steel Structure-II	3(3-1-0)
v.	TCE-436 Matrix Methods	3(3-0-0)
vi.	TCE-225 Strength of Material	4(3-1-2)
P.G. Level:		
1)	TCE-630 Matrix Methods in Structural Analysis	3(3-1-0)
2)	TCE-602 Theory of Elasticity	3(3-1-0)
3)	TCE-614 Dynamics of Structures	3(3-1-0)

10. No of Master's students guided (in case of Ph.D. research)

SNo	Name of student	ID No.	Thesis title	Year of completion
1.	Mr Ashutosh Kumar Azad	44031	Effect of Truss Configuration on Design of Plane Trusses using tubular section	March 2015
2.	Ms Vidhi Tiwari	44029	Effect of Elevated Temperature on Properties of Self Compacted Concrete With Silica Fume Cooled by Quenching.	June 2014
3.	Mr. Jay Kumar Varshney	45617	Compression of Approximate Methods of Lateral Load Analysis for Buildings	May 2015
4.	Mr. Sunil Singh Rawat	45517	Behaviour of RCC Buildings on Hill Slopes under Seismic Loads	May 2015
5.	Mr. Deepanshu	45516	Comparative Study of Steel Truss Profiles for roofing large Areas	May 2015
6.	Mr. Hariom Chandra	54094	Performance Based Seismic Analysis of Building	February 2021
7.	Mr. Deepak Chauhan	54045	Analysis of RC Multystorey Building with Steel Bracings	February 2021

Signature of staff member

Signature of Dean College Concerned

Signature of Head of the Deptt.
Civil Engineering Deptt.

Signature of Dean PGS

DEAN, P.G.S.

17/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION

(03 copies are required on one page, on one side)

1. Name : Dr. Shri Prakash Dwivedi
2. Designation : Assistant Professor
3. Date of birth : 15/11/1981
4. Department : Information Technology
5. Educational Qualification : M.E.(IISc), Ph.D. (IIT BHU)
6. Field of Specialization : Algorithms, Graph Matching
7. Experience as Faculty member:
 - (i) Outside the University : w.e.f. to
 - (ii) (a) In the University : w.e.f. 29/11/2010 to till date
 - (b) On present post : w.e.f. 29/11/2010 to till date
8. Publications:
 - (a) No. of Research papers published : 12
 - (b) No. of articles published :
 - (c) Books/Chapters in books :
 - (d) Other publications, if any : 05
9. Details of courses taught:



Sl.No.	No. & Title of the course	Credit hrs.
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U.G. Level:

i.	TIT-230 Discrete Structure	3(3-1-0)
ii.	TIT-231 Formal Languages & Automata Theory	3(3-1-0)
iii.	TIT-232 Theory of Computing	3(3-0-0)
iv.	TIT-353 Design and Analysis of Algorithms	4(3-0-2)

P.G. Level:

i.	TIT-512 Cloud Computing	2(2-0-0)
ii.	TIT-614 Advanced Multimedia Technology	3(2-0-1)
iii.	TIT-623 Information Theory	2(2-0-0)
iv.	TIT-624 Advanced Data Mining & Warehousing	3(2-0-1)

10. No. of Master's students guided (in case of Ph.D. research) :

Name	ID.NO.	Thesis title	Year of completion
1. Ms. Poonam Rawat	44224	An Adaptive Approach on Web Search Algorithm	2014
2. Mr. Mohd Rashid	34935	Comparative Analysis of Fast Motion Estimation Algorithms for Video Compression	2015
3. Ms. Ujwal Singh Vohra	42452	Study and Analysis of Multilingual Handwritten Characters Recognition using SVM Classifier	2016

Signature of staff member *[Signature]* 15/11/2021Signature of Head of the Dept. *[Signature]* 22/11/21

Deptt of Information Techno

Signature of Dean College Concerned
[Signature]
 College of Technology
 Pantnagar-263145
 Distt. U.S. Nagar (Uttarakhand)

Signature of Dean PGS
[Signature]
 DEAN, P.G.S.
 15/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(03 copies are required on one page, on one side)**

1. Name : Dr Pankaj Kumar
2. Designation : Assistant Professor
3. Date of birth : 01/05/1985
4. Department : Soil and Water Conservation Engineering
5. Educational Qualification : PhD.
6. Field of Specialization : Soil and Water Conservation Engineering, Watershed Management, Geoinformatics and Hydrological Modelling
7. Experience as Faculty member:
 - (i) Outside the University : w.e.f. to
 - (ii) (a) In the University : w.e.f. 12/01/2006 to till yet
 - (b) On present post : w.e.f. 12/01/2006 to till yet
8. Publications:
 - (a) No. of Research papers published : 22
 - (b) No. of articles published : 03
 - (c) Books/Chapters in books : 03
 - (d) Other publications, if any : -
9. Details of courses taught:



Sl.No.	No. & Title of the course	Credit hrs.
U.G. Level:		
i.	Watershed Hydrology (TSW222)	3(2-0-2)
ii.	Introductory Soil and Water Conservation Engineering (TSW350)	2(2-0-2)
iii.	Watershed Planning and Management (TSW-415)	3(2-0-2)
iv.	Natural Resource Conservation (TSW444)	3(3-0-0)
P.G. Level:		
i.	Watershed Hydrology (TSW531)	3(2-0-3)
ii.	Water Quality and Environment (TSW561)	
iii.	Advanced Computing Techniques in Hydrology (TSW667)	3(2-0-3)
iv.	Modelling Soil Erosion Processes (TSW721)	3(2-0-3)

10. No. of Master's students guided (in case of Ph.D. research) : 03*

Name	ID.NO.	Thesis title	Year of completion
1. Suman Markuna	54097	Application of machine Learning Techniques for Daily and Weekly Rainfall Prediction	2020
2. Mallika Joshi	54115	Morphometric Parameters based Prioritization of Nayar Watershed using Fuzzy Analytic Hierarchy Process	2020
3. Abhinav K. Singh	55628	Application of Machine Learning Techniques for Rainfall-Runoff Modelling of Gola Watershed	2021*

*Thesis submitted

Signature of staff member

Signature of Head of the Deptt.

Signature of Dean College

Concerned College of Technology

Pantnagar-263145

Dist. U.S. Nagar(Uttarakhand)

Signature of Dean PGS

DEAN, P.G.S.

17/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(10 copies are required on one page, on one side)**

1. Name : Dr. DEEPAK KUMAR
2. Designation : ASSISTANT PROFESSOR
3. Date of birth : 02 AUGUST 1981
4. Department : SOIL & WATER CONSERVATION ENGG.
5. Educational Qualification : PhD
6. Field of Specialization : WATER RESOURCES ENGINEERING
7. Experience as Faculty member:
 - (i) Outside the University : NIL
 - (ii) (a) In the University : NIL
 - (b) On present post w.e.f. 02 DECEMBER 2015 to till date
8. Publications:
 - (a) No. of Research papers published : 14
 - (b) No. of articles published : 1
 - (c) Books/Chapters in books : 2
 - (d) Other publications, if any :
9. Details of courses taught:



Sl.No.	No. & Title of the course	Credit hrs.
--------	---------------------------	-------------

U.G. Level:

i.	TSW109: Introduction to Environmental Engineering and Disaster Management	3
ii.	TCE 240/TSW124: Fluid Mechanics and Open Channel Hydraulics	3
iii.	TSW 350: Introductory Soil & Water Conservation Engineering	2
iv.	TSW 410: System Engineering	3

P.G. Level:

i.	TSW561: Water Quality and Environment	3
ii.	TSW621: Open Channel Flow	3
iii.	TSW 661 Advanced computing in Hydrology	3

10. No. of Master's students guided (in case of Ph.D. research) :

Name	ID.NO.	Thesis title	Year of completion
1. Vaibhav Deoli	52798	Spatio-temporal Water spread Mapping of Various Lakes in Nainital District of Uttarakhand using GIS and Satellite Data	2019
2. Shekhar Singh	52783	Investigation of Rainfall Variability in Southern Part of Uttarakhand using Entropy Theory and Soft computing Techniques.	2019
3. Divyanshu Bhatt	54107	Comparative Study of Activated Carbon Derived from Agricultural Biomass for remediation of Chromium contaminated Groundwater	2021
4. Kumar Yuvraj	54188	Flood Mapping of Eastern Middle Gangetic Plain of Bihar using Remote Sensing and GIS Approach	2021

Signature of staff member

Signature of Dean College

Concerned

DEAN

College of Technology

Pantnagar-263145

Distt. U.S. Nagar(Uttarakhand)

Signature of Head of the Deptt.

Signature of Dean PGS

DEAN, P.G.S.

17/12/2021

BRIEF BIO-DATA FOR PH.D. ACCREDITATION

1. Name : Dr. Rajeev Ranjan Kumar
2. Designation : Assistant Professor
3. Date of Birth : January 15, 1975
4. Department : Veterinary Parasitology, CVASc., Pantnagar
5. Educational Qualification : Ph.D. (Veterinary Parasitology)
6. Field of Specialization : Diagnosis and control of parasitic diseases.
7. Experience as faculty member:
 - i. Outside the University : Nil
 - ii. (a). In the University : May 18, 2006
 - (b). On the present post : May 18, 2006 to continued.
8. Publications
 - (a). No. of research papers published : 79
 - (b). No. of articles published : 53
 - (c). Books/Chapters : 19 Book chapters
 - (d). Other publications, if any
 - o Review Article : 02
 - o Lead articles in proceeding of seminars/Conference Book : 10
 - o Abstracts : 70
 - o Leaflet : 03
 - o Extension Chart : 05



9. Details of courses taught

a. Undergraduate level

Sl. No.	Course No.	Title of Course	Credit Hours
1.	VPA-211	Gen. Vety. Parasitology & Helminthology	(3+1=4)
2.	VPA-211	Entomology & Acarology	(1+1=2)
3.	VPA-222	Vety. Protozoology	(2+1=3)
4.	VLD-411	Vety. Clinical Biochemistry & Laboratory Diagnosis	(0+1=1)
5.	VCP-411	Vety. Clinical Practice-I	(0+5=5)
6.	VCP-421	Vety. Clinical Practice-I	(0+5=5)
7.	VCP-511	Vety. Clinical Practice	(0+5=5)

b. Post Graduate Level:

Sl. No.	Course No.	Title of Course	Credit Hours
1.	VPA-600	Masters Seminar	1+0=1
2.	VPA-603	Entomology & Acarology	(2+1=3)
3.	VPA-604	Veterinary Protozoology	(2+1=3)
4.	VPA-605	Parasitological Techniques	(0+2=2)
5.	VPA-607	Trends in Control of Livestock and Poultry Parasites	(1+1=2)
6.	VPA-609	Parasitic Zoonoses	(0+2=2)
7.	VPA-610	Parasites of Zoo and Wild Animals	(2+1=3)
8.	VPA-612	Veterinary Helminthology-I	(2+1=3)
9.	VPA-613	Veterinary Helminthology-II	(2+1=3)
10.	VPA-701	Applications of Remote Sensing and Geographic Information System in Parasitology	(1+2=3)
11.	VPA-709	Emerging and Re-emerging Parasitic Diseases	(2+0=2)

10. No. of Master's students guided

S. No.	Name of Student	ID. No.	Thesis Title	Year of completion
1.	Dr. Sushmita Sastya	48044	Studies on evaluation of efficacy of herbal plants against gastrointestinal nematodosis in goats.	2016
2.	Dr. Ankit Nagar	41691	Studies on prevalence of bovine tropical theileriosis & assessment of its economic impact	2018
3.	Dr. Aakanksha Harit	54429	Molecular detection of bovine tropical theileriosis in northern India	2021

Signature of Staff Member

Signature of Dean College Concerned
Dean, V.A.Sc.

Signature of Head of the department

Parasitology
Signature of Dean, PGS
DEAN, P.G.S.
18/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION

(03 copies are required on one page, on one side)

1. Name : Dr. Sanjeev Kumar
2. Designation : ARS, Principal Scientist, Head, AG&B
3. Date of birth : 13-01-1962
4. Department : Avian Genetics and Breeding
5. Educational Qualification : M.V.Sc, Ph.D.
6. Field of Specialization : Animal Genetics & Breeding, Animal Biotechnology
7. Experience as Faculty member:
 - (i) Outside the University : --
 - (ii) (a) In the University : 9th October 1990 to till date
 - (b) On present post : Working as Principal Scientist w.e.f. 09-10-2007
8. Publications:
 - (a) No. of Research papers published : 145
 - (b) No. of articles published : 45
 - (c) Books/Chapters in books : 51
 - (d) Other publications, if any : Research abstracts - 210; Technical Bulletins/Popular articles - 34; Gene Bank Accession - 09



9. Details of courses taught:

SLNo.	No. & Title of the course	Credit hrs.
U.G. Level:		
i.	NIL	
P.G. Level:		
i.	AGB 701 Genome Analysis	T-1
ii.	AGB 703 Gene Expression and Regulation	T-1
iii.	AGB 507 Molecular Genetics	T-1
iv.	AGB 508 Molecular Genetics	P-1
v.	AGB 715 Research Techniques in Animal Genetics & Breeding	T-1

10. No. of Master's students guided (Ph.D. research) : 26 (Major guide/Co-guide)
49 (Member, Advisory Committee)

Name (Ph.D. scholar)	ID.NO.	Thesis title	Year of completion
1. Dr. Amiya Ranjan Sahu	P-1866	Polymorphism of egg-production associated microsatellite loci, nucleotide variability and expression analysis of candidate genes and their association with layer economic traits in Rhode Island Red chicken	2019
2. Dr. Jowel Debnath	P-1427	Microsatellite Profiling and their association with layer economic traits in Rhode Island Red chicken	2016
3. Dr. Ramji Yadav	P-1663	Microsatellite, immunocompetence and candidate gene expression profiling of Rhode Island Red chicken and association of microsatellite alleles and immunocompetence traits with layer economics trait	2016

Signature of staff member

Signature of Dean College Concerned
Dean, V.A.S.Signature of Head of the Dept. (LPM)
R.K. SharmaSignature of Dean PGS
DEAN, P.G.S.
18/12/2021

BRIEF BIO-DATA FOR Ph.D. RESEARCH ACCREDITATION

1. Name : Dr. J. P. Purwar
2. Designation : Senior Research Officer
3. Date of birth : 01.07.1978
4. Department : ENTOMOLOGY
5. Educational Qualification : PhD with NET
6. Field of Specialization : Agricultural Entomology
7. Experience as Faculty member:
 - (i) Outside the University : -
 - (ii) (a) In the University : 22.05.2006
 - (b) On present post : 22.05.2018
8. Publications:
 - a. No. of Research papers published : 39
 - b. No. of articles published : 16
 - c. Books/Chapters in books : 01
 - d. Other publications, if any (Conf proceeding) : 05
9. Details of courses taught:



SN	Course No.	Title of Course	Credit Hours
UG level			
1	APE 312	Insect Ecology and Economic Entomology	2(1-0-3*2)
2	ARE 390	RAWE	20
3	APE 321	Management of Food Pests	2 (1-0-3)
4	APE 315	Fundamentals of Entomology	4(3-0-2*2)
5	APE 320	Insect Pest of crops and stored grain and their Management	3(2-0-2*2)
6	BBB102	Introductory Biology (Zoology)	2 (1-0-3)
7	ARE 399	RAWE & AIA	20
PG Level			
1	APE 508	Toxicology of Insecticides	3(2-0-3)
2	APE 505	Insect Ecology	2 (1-0-2)
3	APE 614	Agriculture Zoology	2 (1-0-1)
4	APE 600	Seminar M.Sc	1(1-0-0)
5	APE 788	Doctoral Seminar I	1(1-0-0)
6	APE 789	Doctoral Seminar II	1(1-0-0)
7	APE 430	Pests of field crops & stored grains	3 (2-0-1)

10. No. of Master's students guided (in case of Ph.D research) : 03

DETAILS OF STUDENTS GUIDED AT MASTER'S LEVEL

S N	Name	ID.No	Thesis Title	Year of Completion
1.	Arti Bisht	45997	Screening of germplasms, population dynamics and management of major insect pests infesting greengram	2020
2.	Kuldeep Dudpuri	46075	Compatibility of entomopathogens with biorationals and chemical insecticides against major insect pests in green gram	2020
3.	Adarsha K.	55466	Combined effect of entomopathogens with biorationals and chemical insecticides against some major insect pests of pulses	2021

Jay Prakash
24/09/21
Signature of staff member

[Signature]
Signature of Head of the Deptt.
Entomology

[Signature]
Signature of Dean College Concerned
College of Agriculture

[Signature]
Signature of Dean PGS
DEAN, P.G.S.
17/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(03 copies are required on one page, on one side)**

1. Name : Dr. Rajeev Ranjan
2. Designation : Assistant Professor
3. Date of birth : 05.01.1985
4. Department : Agrometeorology
5. Educational Qualification : Ph.D.
6. Field of Specialization : Remote Sensing, GIS and Crop Simulation Modeling
7. Experience as Faculty member:
 - (i) Outside the University : 30.08.2014 to 28.02.2015, 27.03.2015 to 07.08.2015, 19.08.2015 to 21.11.2015
 - (ii) (a) In the University : 23.11.2015 to Till date
 - (b) On present post : 23.11.2015 to Till date
8. Publications:
 - (a) No. of Research papers published : 29
 - (b) No. of articles published : 16
 - (c) Books/Chapters in books : 09
 - (d) Other publications, if any : 07

**9. Details of courses taught****U.G. Level:**

SL No.	No. & Title of the course	Credit hrs
i.	Principles of Agrometeorology (AAM 303)	2(1-0-1)
ii.	Soil Survey, Remote Sensing and Wasteland Development (APS 345)	3(2-0-1)
iii.	Meteorology and Geography (AEN 101)	2(1-0-1)
iv.	Introductory Agrometeorology and Remote Sensing (AAM 305)	3(2-0-2)
v.	Agri-Informatics (AAM/BPM 205)	2(1-0-2)
vi.	Geoinformatics, Nano-technology and Precision Farming (AAM/APA 310)	2(1-0-2)
vii.	System simulation and Agro-advisory (AAM 410)	3(2-0-2)
viii.	Introductory Agro-meteorology & Climate Change (AAM 306)	2(1-1-2)

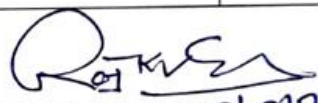
P.G. Level:

1.	Principles of remote sensing & its application in agriculture (AGM 508)	3(2-0-1)
2.	Evapotranspiration (AAM 632)	2(1-0-1)
3.	Crop Weather Models (AAM 630)	3 (2-0-1)
4.	Principles of Remote Sensing (AAM 500)	3(2-0-1)
5.	Computer Applications in Agrometeorology (AAM 655)	3(2-0-1)

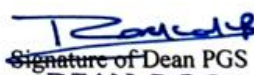
10. No. of Master's students guided (in case of Ph.D. research) : 03

Name	ID.NO.	Thesis title	Year of completion
1. Ms. Ankita Negi	52537	Crop management using CROPGRO simulation model in Tarai region of Uttarakhand	2019
2. Mr. Indra Singh Dhama	46018	Optimization of agri-resources for wheat (<i>Triticum aestivum</i> L.) crop under Tarai environment using CERES-Wheat model	2020
3. Ms. Smriti Rana	46093	Performance of CROPGRO model for simulating yield of Mungbean (<i>Vigna radiata</i>) under Tarai region of Uttarakhand	2021


Signature of staff member
Assistant Professor
Deptt. of Agrometeorology
College of Agriculture
G.B.P.U.A. & T., Pantnagar, U.S. Nagar


Signature of Head of the Deptt.
Head
Agrometeorology


Signature of Dean College Concerned
Dean
College of Agriculture


Signature of Dean PGS
DEAN, P.G.S.
17/10/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION

(03 copies are required on one page, on one side)

1. Name : Dr. Deepshikha
2. Designation : Junior Research Officer
3. Date of birth : 20-04-1979
4. Department : Plant Pathology
5. Educational Qualification : Ph.D.
6. Field of Specialization : Wheat Pathology
7. Experience as Faculty member:
 - (i) Outside the University : -
 - (ii) (a) In the University : w.e.f. 20-06-2006 to continuing
 - (b) On present post : w.e.f. 20-06-2006 to continuing
8. Publications:
 - (a) No. of Research papers published : 30
 - (b) No. of articles published : 28
 - (c) Books/Chapters in books : 04
 - (d) Proceedings : 04
 - (e) Abstracts Published : 24
 - (f) Germplasm Registered with ICAR-NBPGR : 06



9. Details of courses taught: U.G. Level:

Sl.No.	No. & Title of the course	Credit hrs.
APW-101	Work Programme	1
APP-312	Introductory Plant Pathology	3
APP-314	Crop Dis. & their Management	3
APP-330	Diseases of Fruits and Vegetable	3
APP-329	Diseases of Field and Horticultural Crops and their Management-II	3
APP 312	Fundamentals of Plant Pathology	4
APP-328	Diseases of Field and Horticultural Crops and their Management-I	3
APP/APE-332	Principles of Integrated Pest and Disease Management	3

P.G. Level:

APP-410	Disease of Field Crops	3
APP-430	Diseases of Horticulture Crops	3
APP-602	Diseases of Ornamental and Medicinal Plant	2
APP-507	Diseases of Field and Medicinal Crop	3
HPI-101	Principles of Plant Protection	3
HPI-201	Disease Management in Vegetables, Spices and Tubers crops	2
HPI-202	Pest and disease management of Ornamentals, Medicinal and Aromatics plants.	3
APP-509	Diseases of Vegetables and Spice crops	3

10. No. of Master's students guided (in case of Ph.D. research):

Name	ID.NO	Thesis title	Year of completion
Premabati Devi	44113	Screening of wheat germplasm against stripe and leaf rust and confirmation of resistant genes with molecular markers	2014
Chandani Latwal	45509	Screening of wheat germplasm against Spot Blotch (<i>Bipolaris sorokiniana</i>) disease and confirmation of resistance with molecular markers	2016
Waghmare Minal Bhujangrao	55476	Screening and Characterization of Exotic Germplasms of Bread Wheat against Leaf and Stripe Rust Diseases under Epiphytotic Conditions	2021

Signature of staff member

Signature of Dean College Concerned
Dean
College of Agriculture

Signature of Head of the Department
College of Agriculture
G.B. Pant University of Agric. & Tech.
Pantnagar 263 145 (Uttarakhand)

Signature of Dean PGS
DEAN, P.G.S.
17/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(03 copies are required on one page, on one side)**

1. Name : Shilpi Rawat
2. Designation : Assistant Professor
3. Date of birth : 19.04.1982
4. Department : Plant Pathology
5. Educational Qualification : Ph.D., NET
6. Field of Specialization : Nematology and Medicinal Mushroom
7. Experience as Faculty member:
 - (i) Outside the University : w.e.f. - to -
 - (ii) (a) In the University : w.e.f. 23.09.2010 to 22.11.2015
 - (b) On present post : w.e.f. 23.11.2015 to till date
8. Publications:
 - (a) No. of Research papers published : 10
 - (b) No. of articles published : 12
 - (c) Books/Chapters in books : 01
 - (d) Other publications, if any : Proceeding chapter -02
9. Details of courses taught:

Sl.No.	No. & Title of the course	Credit hrs.
U.G. Level		
i.	Work programme (APP 101)	1
ii.	Principles of Fundamentals of Plant Pathology (APP 311)	4
iii.	Crop disease and their management (APP 314)	2
iv.	Principles of Integrated pest and diseases management (APP/APE 322)	2
v.	Diseases of Field and horticulture crops and their management -I (APP 328)	3
vi.	Diseases of fruits and vegetable crops (APP 330)	2
vii.	Diseases of Field and horticulture crops and their management -II (APP 329)	3
P.G. Level		
i.	Introductory Plant Pathology APP 412	3
ii.	Principles of plant disease management APP 606	3
iii.	Phytonematology APP-630	2
iv.	Ecology of soil borne plant pathogens APP 712	3

10. No. of Master's students guided (in case of Ph.D. research)

Name	ID.NO.	Thesis title	Year of completion
Manoj Kumar Prajapati	52517	Studies on the anthracnose and fruit rot of Chilli caused by <i>Colletotrium capsici</i> (syd.)Butler and Bisby	July, 2019
Manisha Dev	53921	Status and Distribution of Plant Parasitic Nematodes associated with medicinal Plants	September, 2021
Prashant Patil	55446	Studies on Nematicidal effect of Ammonium bicarbonate and Lime against <i>Meloidogyne incognita</i> (kofoed and White, 1919) Chitwood, 1949 on Tomato (<i>Lycopersicon esculentum</i> Mill.)	September 2021

Shilpi
Signature of Staff Member

[Signature]
Signature of Dean College Concerned
Dean
College of Agriculture
06/10/2021

[Signature]
Signature of Head of the Deptt.
Professor & Head
Department of Plant Pathology
College of Agriculture
S.B. Pant University of Agric. & Tech.
Lam nagar 263 145 (Uttarakhand)

[Signature]
Signature of Dean PGS
DEAN, P.G.S.
06/10/2021

BRIEF BIO-DATA FOR PILD. ACCREDITATION
(03 copies are required on one page, on one side)

1. Name : Dr. Arpita Sharma
2. Designation : Assistant Professor
3. Date of Birth : 27.03.1985
4. Department : Agricultural Communication
5. Educational Qualification : Ph.D
6. Field of Specialization : Community Radio, ICTs, Gender issues
7. Experience as Faculty member : w.e.f. to
 - i. Outside University : 29 June, 2015 to 24 Nov 2015
 - ii. (a) In the university : 26 Nov 2015 to till date
 - (b) On present post : 26 Nov to till date
8. Publications:
 - (a) No. of Research Papers published : 16
 - (b) No. of articles published : 16
 - (c) Books/Chapters in books : 6
 - (d) Other publication, if any : 4 Abstract
9. Details of courses taught:



Sl.No.	Course No.	Title of the course	Credit Hours
a. Under Graduate Level			
1	AAC-304	Extension Methodologies for Transfer of Technology	2(1-0-1x3)
2	AAC-305	Entrepreneurship Development	1(1-1-0)
3	AAC-303	Dimensions of Agriculture Extension	2(1-0-1)
4	AAC-307	Communication Skill for Agricultural Development	(2-0-2)
5	AAC-306	Fundamental of Agriculture Extension	3(2+1)
6	AAC-666	Management Techniques in Extension and Communication	(2+1)
7	AAC-308	Entrepreneurship Development in Agriculture	2(1+1)
8	AAC-395	Behavioral Skills for Management	2
b. Post Graduate Level:			
Sl. No.	Course No.	Title of Course	Credit Hours
1	AAC-640	Publication, Editing and Production	3(1-0-2)
2	AAC-601	Special Problem	2(2)
3	AAC-602	Foundation of Human Behavior	3(2-0-1)
4	AAC-666	Management Techniques	2+1
5	AAC-706	Instructional Technology	3(2-0-1)

10. No. of Master Students guided: 3

Name	ID No.	Thesis Title	Year of completion
Mr. Ramesh Chandra Nautiyal	53981	Developing Participatory Newsletter for Potato Growers: A study in Tarai Region of Uttarakhand.	December 2020
Abhishek Pathak	46289	Perceived Utility of Agricultural Information Published in Amar Ujala by farmers readers of Kumaon Division of Uttarakhand	December 2020
Ms. Sakshi Bhatt	48637	Development of Multimedia Whatsapp Module for Dairy Farmers: A study in Garhwal Division of Uttarakhand	Rough Bound Submission on 8 October 2021. Viva awaited.

Arpita Sharma
Signature of Staff member

Signature of Dean College Concerned

[Signature]
Dean
College of Agriculture
14/10/2021

[Signature]
Signature of Head of Department
Dept. of Agricultural Communication
Signature of P.G.S. Pantnagar-263145
Distt. U.S.Nagar Uttarakhand

[Signature]
DEAN, P.G.S.
14/10/2021

BRIEF BIO-DATA FOR PH.D. ACCREDITATION

1. Name : Shiv Kumar Dubey
2. Designation : Assistant professor
3. Date of Birth : 25/11/1978
4. Department : Biochemistry
5. Educational Qualification : Ph.D.
6. Field of Specialization : Biochemistry
7. Experience as Faculty member:
 - w.e.f. 27/11/2015 to Till date
 - Outside University :
 - (a) In the University : w.e.f. 27/11/2015 to Till date
 - (b) On present post : w.e.f. 27/11/2015 to Till date
8. Publication:
 - a. No. of Research papers published: 18
 - b. No. of articles published: Nil
 - c. Books/Chapters in books: 2
 - d. Other publications, if any: Nil

Passport size photo



9. Details of courses taught: In GBPUAT

Sl. No.	Course No.	Title of Course	Credit Hours
U.G. Level			
	BBC 261	Elementary Plant Biochemistry	3(2-0-3)
	BBC 360	Elementary Biochemistry	4(3-0-1)
	BBC 361	Fundamentals of Biochemistry	4(3-0-1)
P.G. Level			
	BBC 500	Chemistry of Biomolecules	3+0
	BBC 501	General Biochemistry	3+0
	BBC 505	Basic Techniques in Biochemistry	1(0+1)
	BBC 510	Biochemical techniques	3(1+2)
	BBC 620	Food and Nutritional Biochemistry	2+0
	BBC 640	Intermediary Metabolism-I	2+0
	BBC 641	Intermediary Metabolism-II	2+0
	BBC 651	Animal Biochemistry	3+0
	BBC 710	Advanced Techniques in Biochemistry	2(0+2)
	BBC 765	Current Topics in Biochemistry	1+0

10. No. of Master's students guided (in case of Ph.D. research) :

Sl. No.	Name	ID. No.	Thesis Title	Year of completion
1	Kanchan Gairola	52681	Phytochemical analysis and evaluation of biological activities of <i>Acmella uliginosa</i> (Sw.) Cass. Growing in Kumaun region of Uttarakhand	2019
2	Shriya Gururani	53977	Evaluation of compositional variation and biological activities of essential oil of Turmeric rhizome growing in different regions of Uttarakhand	2020
3	Ananya Bahuguna	55333	Phytochemical analysis and evaluation of biological activities of <i>Anaphalis busua</i> (Buch. -Ham.) DC. Collected from Kumaon region of Uttarakhand	2021
4	Vaishali Garia	55532	Phytochemical analysis and evaluation of biological activities of <i>Artemisia nilagirica</i> (C.B. Clarke) Pamp. growing in Kumaon region of Uttarakhand	2021

Signature of staff member

Signature of Dean College Concerned
Dean, CBSH

Signature of Head of the Deptt.

Signature of Dean PGS
DEAN, P.G.S.



Annexure 1

BRIEF BIODATA FOR PHD ACCREDITATION

Name: Dr. TANDEL RITESHKUMAR SHANTILAL

1. Designation: SCIENTIST, SENIOR SCALE
2. Date of birth: 01.07.1986
3. Department: FISH HEALTH
4. Educational Qualification: Ph.D, M.F.Sc, B.F.Sc
5. Field of specialization: Fish health
6. Experience as Scientist:
 - i. ICAR Directorate of Coldwater Fisheries Research: 8 year
 - ii. In the University: Navsari Agricultural University : 1 year
 - iii. On present post: 8 year
7. Publications:
 - a) No of research papers published: 18
 - b) No of articles published: 16
 - c) Books/ Chapters in books: 10
 - d) Other publications if any: sequence : 54
8. No of Masters Students guided as Co Chairperson/ Co Advisor: 5



Sr No	Student Name	Student Thesis Title	Chair/co chair	Degree completed Date
1	Ms Richa Upadhyay	Antimicrobial and immune-stimulatory potential of natural compounds against oomycetes and fungal pathogens	Chair	02-07-2021
2	Ms Babita	Efficacy study of antioomycetes agents against saprolegnia sp isolated from snow trout	Chair	10-07-2019
3	Ms Ankita	Effect of <i>myrica esculenta</i> on the immune response of early life stages of <i>oncorhynchus mykiss</i> challenged with <i>aeromonas hydrophila</i>	Co chair	10-07-2019
4	Ms Neha Kabadwal	Efficacy of antioomycetes agents against saprolegnia sp isolated from rainbow trout	Chair	01-07-2018
5	Ms Kirti Pande	Evaluation of antibacterial activity of commonly available phytochemicals against fish pathogens	Co chair	17-09-2021

Signature of Scientist

Signature of PME

Approval has been taken from competent authority through e-office.

Signature of competent authority of DCFR

Recommended and forwarded for revalidation as per rules


Ardhesh
15/12/21
(Ardhesh Kumar)
Head
Department of Aquaculture
College of Fisheries

Ramankumar
15/12/21
Dean
College of Fisheries


Nandhy
श्री. एम. ई. नंदी
PME Cell
भा.क.अनु.प.- श्री. ज.वा.अनु.विश्वविद्यालय
ICAR - Directorate of Coldwater Fisheries Research
भीमताल, जिला - नैनीताल, (उत्तराखण्ड)
Bhimtal, Distt.- Nainital (Uttarakhand)

T. Baskar
DEAN, P.G.S.
17/12/2021


BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(03 copies are required on one page, on one side)**

1.	Name	:	Dr. Vinod Kadam	
2.	Designation	:	Scientist	
3.	Date of birth	:	05.09.1981	
4.	Department	:	Textile Manufacture and Textile Chemistry Division	
5.	Educational Qualification	:	ICAR-Central Sheep and Wool Research Institute, Avikanagar (Rajasthan)	
6.	Field of Specialization	:	Textiles	
7.	Experience as Faculty member:		14 years	
	(i) Outside the University	:	w.e.f. to	
	(ii) (a) In the University	:	w.e.f. to	
	(b) On present post	:	w.e.f.	
8.	Publications:			
	Patents		04	
	(a) No. of Research papers published	:	44	
	(b) No. of articles published	:	06	
	(c) Books/Chapters in books	:	07	
	(d) Other publications, if any	:	12	
9.	Details of courses taught:			
Sl.No.	No. & Title of the course			Credit hrs.
U.G. Level:				
i.				
ii.				
P.G. Level:				
i.				
ii.				
10.	No. of Master's students guided (in case of Ph.D. research)			:
Name	ID.NO.	Thesis title	Year of completion	
Sushama Rani	2016HS11D	Development of Anti-felting Wool Fabric	2021	
Neenu Poonia	2018HS14D	Development of biocomposites using rice straw and wool waste	2021	
Iti Dubey	2017/HSC/047	Super-cooling behavior of micro-encapsulated phase change materials in textiles.	Ongoing	

SIGNATURE OF APPLICANT


 16.12.2021

Signature of Head of the Dept.


 17.12.2021

Head

Clothing and Textiles
College of Home Science


Signature of Dean, College concerned

Dean H.Sc.

Signature of Dean, PGS.

DEAN, P.G.S.
20/12/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION**(03 copies are required on one page, on one side)**

1.	Name	:	Dr. Ajay Kumar	 <p>Scanned photograph of the candidate</p>
2.	Designation	:	Principal Scientist & I/c Head	
3.	Date of birth	:	20 th June 1973	
4.	Department	:	Textile Manufacture and Textile Chemistry Division	
5.	Educational Qualification	:	ICAR-Central Sheep and Wool Research Institute, Avikanagar (Rajasthan)	
6.	Field of Specialization	:	Wool and Specialty hair processing and their product development	
7.	Experience as Faculty member:		Teaching (1years 2months and research (20 years)	
	(i) Outside the University	:	w.e.f.	to
	(ii) (a) In the University	:	w.e.f.	to
	(b) On present post	:	w.e.f.	to
8.	Publications:			
	Patents		<p>6. System and device for measuring the compression properties of textiles., Isthiaque, S M, Sen K., Kumar Ajay, Das, D., Indian Patent application No. 201611014157, Date of filling: April 22, 2016.</p> <p>7. METHOD FOR LUSTRE EVALUATION OF TEXTILE FIBRE. Ajay Kumar, D.B. Shakyawar, Rajiv Kumar, Amer Singh Meena, Nehru Lal Meena, Ashish Chopra, Arun Kumar, Mahendra Uttam, Prasant Vishnoi, Ravi Sonkar and Raghvendar Singh; Indian Patent application No. 202111010071 , Date of filling : March 10, 2021.</p> <p>8. Coarse wool fabric reinforced high strength composite and its preparation process Vinod Kadam, Dinesh Babu Shakyawar, Nachimuthu Shanmugam, Seiko Jose, and Ajay Kumar, Indian Patent application no. Application Number- 202011049589; Date of filling: 13.11.2020.</p> <p>9. Quilt comforter and manufacturing method for same, Dinesh Babu Shakyawar, Nachimuthu Shanmugam, Ajay Kumar, Vinod Kadam, Seiko Jose, Arun Kumar, and A Sahoo, Indian Patent application no. -202111011700;</p>	

		Date of filling: 19.03.2021. 10. Sound transmission loss testing apparatus Vinod Kadam, Deepak Bhati, Sushma Rani, N L Meena, Ajay Kumar and N Shanmugam Patent application no. 202111023060; Date of filling: 24.05.2021	
(a) No. of Research papers published	:	41 nos. (International -14 nos. ; National -27 nos.)	
(b) No. of articles published	:	2 nos. (Rajasthan patrika (Tonk), 11 July, 2018 and The Hindu, 4 February, 2018)	
(c) Books/Chapters in books	:	4 nos. (1 nos. in International Publishing house and 3 nos. in National Publishing house)	
(d) Other publications, if any	:	79 nos.	
9. Details of courses taught:		1. Yarn manufacture 2. Fabric manufacture	
Sl.No.	No. & Title of the course	Credit hrs.	
U.G. Level:			
i.			
ii.			
iii.			
iv.			
P.G. Level:			
i.			
ii.			
iii.			
iv.			
10.	No. of Master's students guided (in case of Ph.D. research)	:	
Name	ID.NO.	Thesis title	Year of completion
Arvind Kumar Yadav	8404461091 89	A Study on Comfort properties of Kevlar and Kevlar Based Union Fabrics (M. Tech. – UPTTI Kanpur)	2015
Amit Jha	1304461503	Study on performance properties of handloom Carpet (M.Tech.-UPTTI Kanpur)	2018
Ravi Sonkar	1804461507	Development of luster Scale of Textile Fibres by using Gloss Meter (M. Tech. – UPTTI Kanpur)	2020
Miss Sadhna	-	Low-cost Alternative for Printing of handloom Carpets (Ph.D- Banasthali Vidhyapith, Banasthali , Tonk Rajasthan	2019

SIGNATURE OF APPLICANT

Ajay Kumar
16/12/2021

Asahan
17/12/2021
Signature of Head and Textiles
Clothing and Home Science
College of Home Department

Signature of Dean, College concerned

Dean H.Sc.

Rajesh
17/12/2021
Signature of Dean, P.O.S.S

Minutes of the Accreditation Committee Meeting held on December 20, 2021 at 4:00 P.M. in the Committee Room of Directorate, Placement & Counselling

The following attended the meeting.

1. Dr. R.S. Chauhan, Dean, Fisheries
2. Dr. N.S. Jadon, Dean, V.A.Sc.
3. Dr. Alka Goel, Dean, Home Science
4. Dr. Salil K. Tewari, Acting Dean, Agriculture
5. Dr. A.K. Swami, Acting Dean, Technology
6. Dr. A.K. Gaur, Acting Dean, CBSE
7. Dr. Akhilesh Kumar, Head, SWCE
8. Dr. Avdhesh Kumar, Head, Aquaculture
9. Dr. R.K. Singh, Head, Agrometeorology
10. Dr. R.K. Sharma, Head, LPM
11. Dr. R.P. Srivastava, Head, Entomology
12. Dr. S. Jahan, Head, Clothing & Textiles
13. Dr. H.L. Mandoria, Head, Information Technology
14. Dr. Vandana A. Kumar, Head, Biochemistry
15. Dr. Stuti Vatsya, Head, Veterinary Parasitology
16. Dr. Pradeep Kumar, Head, Plant Pathology
17. Dr. V.K. Gupta, Acting Head, Mechanical Engineering
18. Dr. S.S. Gupta, Acting Head, Civil Engineering
19. Dr. M.A. Ansari, Acting Head, Agril. Comm.
20. Dr. K.P. Raverkar, Dean, PGS / Convenor

The committee examined the applications of the following faculty members for their accreditation for PG research and recommended the following to guide Ph.D. research as mentioned against their names.

Sl. No.	Name of Faculty Member	Designation	Department	Applied for Accreditation
1.	Dr. Sakshi Chauhan	Asstt. Prof.	Mech. Engg.	Ph.D.
2.	Dr. Neeraj Bisht	Asstt. Prof.	Mech. Engg.	Ph.D.
3.*	Dr. Jitendra Bhaskar	Assoc. Prof.	Mech. Engg., HBTU, Kanpur	Ph.D.
4.	Dr. Sunil Kumar	Asstt. Prof.	Civil Engg.	Ph.D.
5.	Dr. Shri Prakash Dwivedi	Asstt. Prof.	Information Technology	Ph.D.
6.#	Dr. Pankaj Kumar	Asstt. Prof.	Soil & Water Cons. Engg.	Ph.D.
7.	Dr. Deepak Kumar	Asstt. Prof.	Soil & Water Cons. Engg.	Ph.D.
8.	Dr. Rajeev Ranjan Kumar	Asstt. Prof.	Veterinary Parasitology	Ph.D.
9.**	Dr. Sanjeev Kumar	Principal Scientist & Head	Animal Genetics & Breeding, ICAR-CARI	Ph.D.
10.	Dr. J.P. Purwar	S.R.O.	Entomology	Ph.D.
11.	Dr. Rajeev Ranjan	Asstt. Prof.	Agrometeorology	Ph.D.

Sl. No.	Name of Faculty Member	Designation	Department	Applied for Accreditation
12.	Dr. Deepshikha	J.R.O.	Plant Pathology	Ph.D.
13.	Dr. Shilpi Rawat	Asstt. Prof.	Plant Pathology	Ph.D.
14.	Dr. Arpita Sharma	Asstt. Prof.	Agril. Comm.	Ph.D.
15.	Dr. Shiv Kumar Dubey	Asstt. Prof.	Biochemistry	Ph.D.
16.	Dr. Tandel Riteshkumar Shantilal	Scientist	Fish Health, DCFR, Bhimtal	Ph.D.
17.***	Dr. Vinod Kadam	Scientist	Textile Manufacture & Textile Chemistry Div., ICAR-CSWRI	Ph.D.
18.***	Dr. Ajay Kumar	Principal Scientist & I/c Head	Textile Manufacture & Textile Chemistry Div., ICAR-CSWRI	Ph.D.

*As per provisions of MoU signed with HBTU, Kanpur.

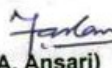
**Already included in the student Advisory Committee as per approval of Hon'ble Vice-Chancellor in anticipation of approval from Accreditation Committee, PG Faculty & Academic Council. As per provisions of MoU signed with ICAR-CARI, Bareilly.


***As per provisions of MoU signed with ICAR-CSWRI, Avikanagar, Rajasthan.

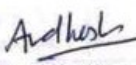
#Approved by Accreditation Committee with the condition that Dr. Pankaj Kumar will submit proof of successful conduct of viva-voce examination of his advisee Mr. Abhinav Kumar Singh (M.Tech. student) on or before the ensuing meeting of P.G. Faculty.

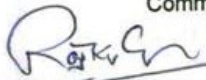

(V.K. Gupta)
Acting Head, Mech. Engg.

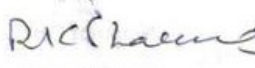

(S.S. Gupta)
Acting Head, Civil Engg.

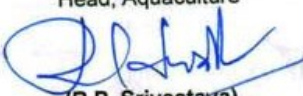

(M.A. Ansari)
Acting Head, Agril. Communication



(Akhilesh Kumar)
Head, SWCE

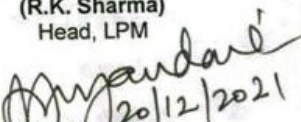

(Avdhesh Kumar)
Head, Aquaculture

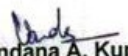

(R.K. Singh)
Head, Agrometeorology

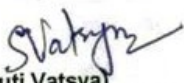

(R.K. Sharma)
Head, LPM

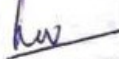

(R.P. Srivastava)
Head, Entomology



(S. Jahan)
Head, Clothing & Textiles

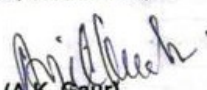

(H.L. Mandoria)
Head, Information Technology
20/12/2021


(Vandana A. Kumar)
Head, Biochemistry



(Stuti Vatsya)
Head, Veterinary Parasitology

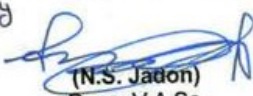

(Pradeep Kumar)
Head, Plant Pathology

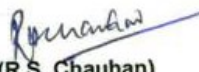

(A.K. Swami)
Actg. Dean, Technology



(A.K. Gaur)
Acting Dean, CBSE


(Salil K. Tewari)
Acting Dean, Agriculture


(Alka Goel)
Dean, Home Science


(N.S. Jadon)
Dean, V.A.Sc.


(R.S. Chauhan)
Dean, Fisheries


(K.P. Raverkar)
Dean, PGS/Convenor
20/12/2021

The bio-data of 04 faculty members/scientists working at IIRS, Dehradun were deferred by P.G. Faculty in its I/2021 meeting for resubmission through proper channel. Now being placed before P.G. Faculty for consideration and approval.

Office of D. E. S.
Despatch No. 1658
Dated 23/02/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION
(15 copies are required on one page, on one side)

1. Name: Dr. N. R. Patel
2. Designation: Scientist - SG
3. Date of birth: 01.06.1966
4. Department: Agriculture & Soils
5. Educational Qualification: Ph.D. Agrometeorology
6. Field of Specialization: Agro-meteorology, climate change and Agriculture Remote Sensing
7. Experience as Faculty member:
 - (i) Outside the University: w.e.f. 29.08.1966
 - (ii) (a) In the University: w.e.f. 01.06.2016
 - (b) On present post:
8. Publications:
 - (a) No. of Research papers published: 55 (International); 40 (National); 40 (Conf.)
 - (b) No. of articles published: 2
 - (c) Books/Chapters in books: 15



9 Courses Taught

a. Post Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Agri. Informatics (AI)	4+2	Master Degree
2	Satellite agrometeorology (SA)	4+2	Master Degree

b. Under Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Nil	-	-

10 STUDENTS GUIDED AT MASTER'S LEVEL

S. No.	Thesis Title (M. Tech. in Agriculture & Soils)	Name of Student	Year
1.	Development of Yield Forecasting Techniques in Cotton for Regional Level using Multi-Sensor Satellite data and Crop Modelling Approaches	Mr. Prasad N. R.	2019
2.	Agricultural Drought Vulnerability Assessment Using Geospatial Techniques at Block Level in Marathawada Region, Maharashtra	Mr. Sanaula K. Huddar	2018
3.	Monitoring Phenology and Yield Estimation of Sugarcane Using Landsat and IRS Resourcesat Satellite Data	Dr. Sandeep Pande	2017
4.	Pest risk mapping and forecasting model of brown plant hopper using weather station and remote sensing derived parameters	Ms. Varsha Rana	2016
5.	Crop specific drought monitoring and yield loss assessment by integrating geospatial, climate and crop modelling techniques	Mr. Sivaranjan Raja	2015
6.	Geospatial Assessment of Shift in Agroclimatic Suitability of Food Grains and Plantation Crops in Himachal Pradesh under Changing Climate	Ms. Jyoti Singh	2015
7.	Downscaling of climate scenario and its impact on productivity of Major food grains (wheat & Maize) in Himachal Pradesh	Mr. A. Ponraj	2014
8.	Detection of Crop Water Stress and its Impact on Productivity of Cropland Ecosystem	Ms. Nitika Dangwal	2014
9.	Simulating impact of climate change on productivity, carbon sequestration and erosion processes in agricultural landscape	Mr. Akarsh	2012
10.	Regional crop yield forecast by integrated use of climate & crop model with aid from remote sensing & GIS techniques	Ms. Kirthiga Murgesan	2012
11.	Feasibility of using high resolution remote sensing for biophysical characterization of agroforestry systems	Mr. Pradeep Bisen	2011
12.	Geospatial approach of monitoring and characterization of Rainfed agroecosystem in Eastern Rajasthan	Mr. Manish Sarkar	2010
13.	Assessment of tea bush health and yield using Geospatial Techniques	Rishiraj Dutta	2006
14.	Analyzing the effect of severity and duration of agricultural drought on crop performance using Terra/MODIS satellite and meteorological data	Mr B. R. Parida	2006
15.	Crop parameter retrieval and Yield estimation in wheat using Satellite Data	AJ Mohammed	2005

11. STUDENT GUIDED AT PH.D. LEVEL

S. No.	Thesis Title (Ph. D. Thesis)	Name of Student	Year
2.	AN APPRAISAL OF DROUGHT DYNAMICS IN BUNDELKHAND REGION (INDIA) USING GEO-SPATIAL TECHNIQUES (SHUATS, ALLAHABAD, INDIA)	Mr. Arbab Kundu	2018

Signature of staff member

Signature of Head of the Dept.

Acting Dean
College of Agriculture



DEAN, P.G.S.
22/02/2021

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION
(15 copies are required on one page, on one side)

1. Name : Dr. Suresh Kumar
2. Designation : Scientist - SG & Group Head
3. Date of birth : 14.11.1966
4. Department : Agriculture & Soils
5. Educational Qualification : Ph.D. Soil Science
6. Field of Specialization : Soil Science / Watershed Management
7. Experience as Faculty member:
(i) Outside the University :
(ii) (a) In the University : w.e.f. 05.03.1993
(b) On present post : w.e.f. 01.01.2015
8. Publications:
(a) No. of Research papers published : 23 (International); 30 (National); 46 (Conf.)
(b) No. of articles published : 5
(c) Books/Chapters in books : 07



9 Courses Taught

a. Post Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Land Use & Soil Resource Assessment (LSA)	4+2	Master Degree
2	Environmental Soil Science (ESS)	4+2	Master Degree

b. Under Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Nil	-	-

10 STUDENTS GUIDED AT MASTER'S LEVEL

S. No.	Thesis Title (M. Tech. in Agriculture & Soils)	Name of Student	Year
1.	Modelling Surface Runoff and Soil Erosion at Watershed Scale	Anu D. Raj	2019
2.	Predicting Climate Change Sensitivity on Surface Runoff and Soil Erosion in a Watershed using SWAT model	Ms. Sooryamol K. R	2019
3.	Geospatial Modelling of Hydrological Processes Governing Soil Erosion and Soil Quality in a Watershed of Mid Himalaya	Shashikumar B N	2019
4.	Simulating Impact Of Climate Change On Productivity, Carbon Sequestration And Erosion Process In An Agricultural Landscape	Akarsh	2016
5.	Digital Soil Mapping and Soil Health Assessment using Remote Sensing And GIS	Arya Raj R	2016
6.	Simulating Climate Change impact on Soil erosion & soil Carbon sequestration	Surya Gupta	2015
7.	Developing a Framework for Soil Quality Assessment in a Watershed of Mountainous Ecosystem using Geo-spatial Approach	Ms. Suman Roy	2014
8.	Surface runoff, Soil erosion and Water Quality estimation using APEX model integrated with GIS -A case study in Himalayan Watershed	Ravinder Pal Singh	2012
9.	Spectral Characterization And Mapping Of Soil Carbon Content Using Hyperspectral Satellite Data And Field Spectroscopy	Sudheer Kumar Tiwari	2011
10.	Impact of Forest Degradation on Carbon Density in Soil and Vegetation of Shorea robusta (Sal) Forests in the part of Siwalik hills of Dehradun, India, using Geospatial Techniques	Santosh Pal Singh	2010
11.	GIS-based approach for nutrient loss and prediction of soil erosion by water	Ms. Veena Choudhary	2010
12.	Geospatial Approach For Characterization and Monitoring Of Rainfed Agroecosystem (A Case Study In Western India)	Manish Kumar Sarkar	2010
13.	Characterizing runoff generation mechanism for modelling runoff and soil erosion, in small watershed of Himalayan region	Amarinder Singh	2009
14.	Geo-spatial Approach in Soil & climatic Data Analysis for Agro-climatic Suitability assessment of major crops in rainfed Agro-ecosystem (A case study of Parts of Madhya Pradesh)	Ms. Aditi Sarkar	2008
15.	Soil Erosion Risk Modeling and Current Erosion Damage Assessment Using Remote Sensing And GIS Techniques - A case study in Himalayan watershed	Ms. Kalpana Bhaware	2006

Signature of staff member

Signature of Dean of Agriculture Concerned

Signature of Head of the Deptt.

Signature of Dean PGS

Office of D. E. S.

Despatch No. 1661

Dated 22/12/21

Acting Dean
College of Agriculture

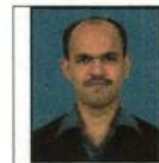


Signature of Director Research

Signature of Dean, P.G.S.

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION
(15 copies are required on one page, on one side)

1. Name : Dr. BHASKAR RAMCHANDRA NIKAM
2. Designation : Scientist/Engineer 'SF'
3. Date of birth : 02.03.1981
4. Department : Water Resources Department
5. Educational Qualification : Ph.D. Water Resources Development & Management
6. Field of Specialization : Water Resources
7. Experience as Faculty member:
(i) Outside the University :
(ii) (a) In the University : w.e.f. 28.07.2008
(b) On present post : w.e.f. 01.07.2019
8. Publications:
(a) No. of Research papers published : 37 (J), 81 (C)
(b) No. of articles published : 13
(c) Books/Chapters in books : 04



9 Courses Taught

a. Post Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Water Resources Assessment	4+2	Master Degree
2	Watershed Analysis and Planning	4+2	Master Degree
3	Water Resources Development	4+2	Master Degree
4	Water Resources Management	4+2	Master Degree
5	Irrigation and Drainage Systems Management	3	Master Degree
6	Application of Remote Sensing and GIS in Irrigation Management	2	Master Degree

b. Under Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Nil	-	-

10 STUDENTS GUIDED AT MASTER'S LEVEL

Name of student	Course programme	Year of admission	ID No.
Anudeep	M. Tech. (Water Resources)	2011-13	
Suman Padhee	M. Tech. (Water Resources)	2011-13	
Tarul Sharma	M. Tech. (Water Resources)	2011-13	
Rajtantra Lilhare	M. Tech. (Water Resources)	2011-13	
Kedar Ghag	M. Tech. (Soil and Water Engineering)	2011-13	
Saumya Rajan	M. Tech. (Water Resources)	2012-14	
Surendra Mohan	M. Sc. (Geo-Hazards/NHRDM)	2012-14	
Vikrant Nikam	M. Tech. (Water Resources)	2013-15	
Sakshi Shridhonkar	M. Tech. (Water Resources)	2013-15	
Vinit Lambe	M. Tech. (Water Resources)	2013-15	
Ashish Bhandari	M. Tech. (Civil Engineering)	2015-17	
Nitin Bela	M. Tech. (Civil Engineering)	2015-17	
Soumya Behra	M. Tech. (Water Engineering and Technology)	2015-17	
Aswathi	M. Tech. (Water Resources)	2016-18	
Adrija Roy	M. Tech. (Water Resources)	2016-18	
Vamsi Krishna	M. Tech. (Civil Engineering)	2016-18	
Debvrat Varshne	M.Sc.(Geoinformatics)	2017-19	
Vishal Sharma	M. Tech. (Water Resources)	2017-19	
Md Zakir Hossain	M. Tech (Water Resources)	2018-19	
Nishu Bhardwaj	M. Tech (Remote Sensing)	2019-20	
Gautami Kushwaha	M. Tech. (Urban and Regional Studies)	2019-20	
Arunav Nanda	M. Tech. (Water Resources)	2019-20	
Manaruchi Mohapatra	M. Tech (Water Resources)	2019-20	

Signature of staff member

Signature of Head of the Deptt.

Signature of Dean College Concerned

01/11/2021

Signature of Dean P.G.S.

DEAN, P.G.S.

Office of D. E. S.
Despatch No. 1660
Dated 22/02/2021



Director
Research

Acting Dean
College of Agriculture

BRIEF BIO-DATA FOR MASTER'S/PH.D. ACCREDITATION
(15 copies are required on one page, on one side)

1. Name : Dr. Dipanwita Haldar
2. Designation : Scientist/Engineer 'SF'
3. Date of birth : 13.09.1979
4. Department : Agriculture and Soils Department
5. Educational Qualification : Ph.D. Agricultural Physics
6. Field of Specialization : Vegetation monitoring using Remote sensing techniques
7. Experience as Faculty member:
(i) Outside the University :
(ii) (a) In the University : w.e.f. 25.05.2006
(b) On present post : w.e.f. 01.01.2019
8. Publications:
(a) No. of Research papers published : 40 (Journals), 20 (Conference)
(b) No. of articles published : 7
(c) Books/Chapters in books :



9 Courses Taught

a. Post Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Land use and Soil Resource Assessment (LSA)	4+2	Master Degree
2	Agri Informatics (AI)	4+2	Master Degree
3	Environmental Soil Science(ESS)	4+2	Master Degree

b. Under Graduate Level:

S.No.	Course Title & Code	Credit Hours	Programme
1	Nil	-	-

10 STUDENTS GUIDED AT MASTER'S LEVEL

S. No.	Thesis Title (M. Tech. in Agriculture & Soils)	Name of Student	Year
1.	Orchard Assessment using time series Multisensor data.	Souravi Saha	pursuing
2.	Development of Yield Modelling Techniques for Rabi Pulses using Multi-Temporal Satellite Data	Uday Jayant	pursuing
3.	Biophysical parameters retrieval for Pearl Millet using Semi-Empirical Model	Balaji Arun R.	2020
4.	Assessment of crop bio-physical parameter response of maize using SAR polarimetry	Suriya Elango	2020
	Rabi crops monitoring using Sentinel-1 Synthetic Aperture Radar (SAR)	Jaya Kola	2020
5.	Monitoring Important Phenological Stages of Rice with Multi Season Rice Crop Profile in Mekong Delta Using Indian Scatsat-1 Data	Ashutosh Panda	2019
6.	Pearl millet discrimination and biophysical parameters retrieval using SAR Polarimetry	Shanmugapriya S.	2019
7.	Rice Crop Inventory Using Temporal Sentinel SAR Data	Md. Abdullah Aziz	2019
	Characterization of Orchards and Crops Using SAR Data	Hemant Sahu	2018
8.	Evaluation of Multi -Temporal C-band Polarimetric SAR data for an Agricultural Area (co-guide in Ph.D.)	Bindi Shastri	2017
9.	Rabi Crops Discrimination Using Time Series Radarsat-2 Polarimetric Data	Puja Rana	2013

Signature of staff member

Signature of Head of the Deptt.

Signature of Dean College Concerned

Signature of Dean P.G.S.

Office of D. E. S.
Despatch No. 1659
Dated 22/02/2021



Acting Dean
College of Agriculture

Minutes of the Accreditation Committee Meeting held on February 22, 2021 at 4:00 P.M. in the Committee Room of Directorate, Placement & Counselling

The following attended the meeting.

- | | |
|---|---|
| 1. Dr. K.P. Raverkar, Dean, PGS / Convenor | 8. Dr. Manoj Kumar, Head, MSCS |
| 2. Dr. N.S. Jadon, Dean, V.A.Sc. | 9. Dr. R.K. Sharma, Head, LPM |
| 3. Dr. R.S. Jadoun, Dean, CABM | 10. Dr. R.C. Srivastava, Head, Physics |
| 4. Dr. Salil Tewari, Acting Dean, Agriculture | 11. Dr. R.P. Srivastava, Acting Head, Entomology |
| 5. Dr. L. Varshney, Acting Dean, Technology | 12. Dr. Anuradha Dutta, Jt. Dir., Extension Education |
| 6. Dr. A.K. Gaur, Acting Dean, CSH | 13. Dr. Ranjan K. Srivastava, Joint Coordinator, PGS |
| 7. Dr. R.K. Singh, Head, Agrometeorology | |

The committee examined the applications of the following faculty members for their accreditation for PG research and recommended the following to guide Master's/Ph.D. research as mentioned against their names.


Sl. No.	Name of Faculty Member	Designation	Department	Applied for Accreditation
1.	Dr. R.P. Singh	Professor *	Agril. Comm./ KVK, Dehradun	Ph.D.
2.	Dr. Renu Pandey	Asstt. Professor	Entomology	Ph.D.
3.	Dr. Bhawna Pandey	Asstt. Professor	Physics	Ph.D.
4.	Dr. Monika Sodhi	Principal Scientist**	NBAGR, Karnal	Ph.D.
5.	Mr. Ravindra Kumar Rajput	Asstt. Professor	MSCS	Master's
6.	Dr. N.R. Patel	Scientist – SG***	Agriculture & Soils, IIRS, Dehradun	Ph.D.
7.	Dr. Suresh Kumar	Scientist – SG & Group Head***	Agriculture & Soils, IIRS, Dehradun	Ph.D.
8.	Dr. Bhaskar Ramchandra Nikam	Scientist/ Engineer 'SF'***	Water Resources Department, IIRS, Dehradun	Ph.D.
9.	Dr. Dipanwita Halder	Scientist/ Engineer 'SF'***	Agriculture & Soils, IIRS, Dehradun	Ph.D.

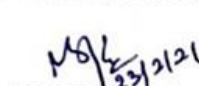
*In accordance to directions of Hon'ble Vice-Chancellor in UMC meeting held on January 22, 2019 pertaining to accreditation of faculty members/scientist working at KVK's/outside research stations

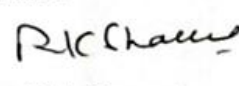
**As per provisions of MoU signed with NBAGR, Karnal. Accreditation for the duration of MoU.


***As per provisions of MoU signed with IIRS, Dehradun. Accreditation for the duration of MoU.


(R.P. Srivastava)
Acting Head, Entomology



(R.K. Singh)
Head, Agrometeorology

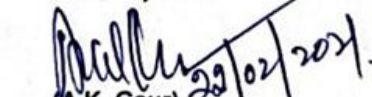

(Manoj Kumar)
Head, MSCS

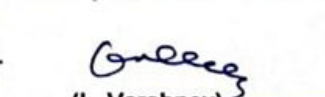

(R.K. Sharma)
Head, LPM

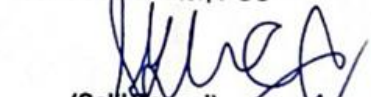

(R.C. Srivastava)
Head, Physics

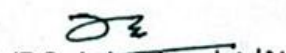

(Anuradha Dutta)
Jt. Director, Extension Education



(Ranjan K. Srivastava)
Joint Coordinator, PGS

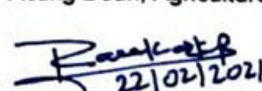

(A.K. Gaur)
Acting Dean, CSH


(L. Varshney)
Acting Dean, Technology


(Salil Tewari)
Acting Dean, Agriculture


(R.S. Jadoun)
Dean, CABM


(N.S. Jadon)
Dean, V.A.Sc.


(K.P. Raverkar)
Dean, PGS/Convenor

Item No. I/2021:04 Admission Policy for Academic Year 2022-23 for PG and Ph.D. programmes of the university

A. Ph.D. Programmes

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
AGRICULTURAL MAJORS							
1.	Agricultural Economics	03	01	No change	No change	M.Sc. Ag. Agril. Economics/Rural Banking & Agril. Eco. /M.Sc. (Agribusiness Economics) or M.Sc. Dairy Economics/ Livestock Economics/ Forest Economics/ Veterinary Economics/ Fisheries Economics/ Animal Husbandry Economics.	No change
*2.	Agronomy	05	Nil	05	05	M.Sc. Ag. Agronomy.	No change
3.	Agrometeorology	03	01	No change	No change	M.Sc. Ag./M.Sc. in Agrometeorology/ Agricultural Physics.	No change
4.	Agricultural Extension & Communication	04	01	No change	No change	Masters' degree in the area of Development Communication/ Agricultural Extension/ Extension Education/Agricultural Extension & Communication/ Home Science Extension Education/ Dairy Extension /Veterinary Extension/ Fisheries Extension.	No change
5.	Entomology	04	01	05	01	M.Sc. Ag. Entomology or M.Sc. Zoology with specialization in Entomology.	No change
6.	Genetics & Plant Breeding	06	02	No change	No change	M.Sc. Ag./M.Sc. in Genetics & Plant Breeding/ Plant Breeding/ Genetics/ Agril. Botany.	No change
7.	Horticulture (Fruit Science)	04	01	No change	No change	M.Sc.Ag. in Horticulture/Horticulture (Floriculture & Landscaping)/ M.Sc. Horticulture/M.Sc. Pomology/ M.Sc. Fruit Science	M. Sc. Ag./M.Sc. in Horticulture/ Horticulture (Fruit Science) /Horticulture (Floriculture & Landscping) /M.Sc. Pomology

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
8.	Horticulture (Floriculture and Landscaping)	03	01	No change	No change	M.Sc. Ag. in Horticulture/ Horticulture (Floriculture & Landscaping)/ Floriculture/ Floriculture & Landscape Architecture.	M. Sc. Ag./ M.Sc. in Horticulture/ Horticulture (Floriculture & Landscaping)/ Horticulture (Fruit Science) / M.Sc. Floriculture/ Floriculture & Landscape Architecture.
*9.	Plant Pathology	04	Nil	No change	No change	M.Sc.Ag. in Plant Pathology/Mycology/ M.Sc. in Plant Protection.	M.Sc.Ag. in Plant Pathology/Mycology & Plant Pathology /Plant Protection with specialization in Plant Pathology
10.	Soil Science	04	01	No change	No change	M.Sc. Ag. in Soil Science/Agri. Chemistry/ Agri. Physics/ Soil Science and Agricultural Chemistry/Agricultural Physics (Soil Physics and Soil and Water Conservation).	No change
11.	Horticulture (Vegetable Science)	04	01	No change	No change	M.Sc. Ag. in Vegetable Science/ Olericulture or Horticulture/ Horticulture with specialization in Vegetable Science.	M.Sc. Ag. in Horticulture (Vegetable Science)/Olericulture/Horticulture with specialization in Vegetable Science
ENGINEERING MAJORS							
1.	Electrical Engineering	03	01	No change	No change	Bachelor's degree in Electrical Engg./Electrical & Electronics Engineering from a recognized University/ Institute and Masters' degree in the field of Electrical Engineering from a recognized University/ Institute.	Bachelor's degree in Electrical Engg./Electrical & Electronics Engineering from a recognized University/ Institute and Masters' degree in the related field of Electrical Engineering from a recognized University/ Institute.
2.	Electronics & Communication Engineering	03	01	05	-	Bachelor's Degree in Electronics & Communication Engg./Communication Engg./ Telecommunication Engg./ Electronics Engineering from a recognized University / Institute and Masters' Degree in related field of Electronics & Communication Engineering from a recognized University/Institute.	No change

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
3.	Farm Machinery & Power Engineering	04	01	No change	No change	Master's Degree in Farm Machinery & Power Engineering/Agricultural Engineering/Mechanical Engineering/Renewable energy from a recognized University.	No change
4.	Civil Engineering	04	01	04		Bachelor's degree in Civil Engineering and Master's degree in Civil Engineering with one of the following specialization from recognized University/Institute- Structural Engg./Computer aided design in Structural Engg./ Earthquake Engg./Hydraulic Engg./ Water Resources Engg./ Geotechnical Engg./ Soil Mechanics and Foundation Engg./ Transportation Engg./ Environmental Engg./ Hydrology/ Irrigation Water Management/ Hydropower Engg.	No change
5.	Irrigation & Drainage Engineering	04	01	No change	No change	Master's Degree in Agricultural Engg. with specialization in Irrigation & Drainage Engineering/ Soil & Water Conservation Engineering/ Soil & Water Engineering/Land and Water Resources Engineering/ Water Resources Engineering/ Masters' degree in Civil Engineering from a recognized University/Institute.	No change

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
6.	Mechanical Engineering	05	01	07	03	Master's Degree in Mechanical Engineering with specialization in Thermal Engineering/Thermal Power Engg./Energy Engg./Automobile Engg./Production Engg./Manufacturing Engg. and Management/ Design and Production Engg./ Machine Design Engineering/ Machine Design and Analysis/ CAD, CAM and Robotics/ Computer Aided Design and Manufacturing/ Design/Product Design and Development/Materials Engg./ Material Science and Engg./ Mechatronics and Automation from a recognized University/Institute.	No change
7.	Process & Food Engineering	04	01	No change	No change	Master's Degree in Agricultural Engineering/ Chemical Engg./ Agricultural Processing/ Agril. Processing and Structures/Agril. Structures and Process Engg./Food Process Engineering/ Post Harvest Engg./Food and Bioprocess Engg./Food Engineering / Process and Agril. Structures/ Process & Food Engg./ Biochemical Engg. / Dairy Engg./ Food Engg. / Food Biotech Engg. / Renewable Energy Engg. from a recognized University.	No change
8.	Production Engineering	03	01	No change	No change	Master's Degree in Production Engg./ CAM/CAM & Robotics/CAD/ Mechanical Engg./ Manufacturing Engineering and Management/ Industrial System Engineering/ Industrial & Production Engineering from a recognized University.	No change

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
9.	Soil & Water Conservation Engineering	04	01	No change	No change	Master's Degree in Agricultural Engineering with specialization in Soil & Water Conservation Engineering/ Soil & Water Engineering/ Irrigation & Drainage Engineering / Land and Water Resource Engineering or Masters' Degree in Civil Engineering/ Water Resources/Hydrology/ Water Science and Technology from a recognized University/Institute.	No change
10.	Information Technology	02	Nil	No change	No change	ME/M. Tech. degree in Information Technology/Computer Engg./ Computer Science & Engg./ Computer Science/Information Communication Technology from a recognized University.	No change
FISHERIES SCIENCE MAJORS							
1.	Aquaculture	-	-	03	01	<i>Was kept in abeyance</i>	M.F.Sc. Aquaculture/ Inland/Marine Aquaculture/ Aquatic Environment Management.
HOME SCIENCE MAJORS							
1.	Human Nutrition (Food Science and Nutrition - new nomenclature)	01	Nil	No change	No change	M.Sc. Home Science (Foods & Nutrition)/Food Science & Tech./ Nutrition & Dietetics/ Food Science & Nutrition.	No change

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
2.	Clothing & Textiles (Textiles and Apparel Designing - new nomenclature)	04	01	No change	No change	B.Sc. Home Science alongwith M.Sc. Home Science (Clothing & Textiles)/ M.Sc. Clothing & Textiles/ Textiles & Clothing/ Textile and Apparel Designing/Fabric and Apparel Science/ Textiles Sciences and Apparel Design/Apparel and Textiles Sciences/M.Sc. Textiles and Fashion Apparel/M.Sc. Biotextiles/M.Sc. Textile and Fashion Technology .	B.Sc. Home Science alongwith M.Sc. Home Science (Clothing & Textiles)/ Clothing & Textiles/ Textiles & Clothing/ Textile and Apparel Designing/Fabric and Apparel Science/ Textiles Sciences and Apparel Design/Apparel and Textiles Sciences/Textiles and Fashion Apparel/ Biotextiles/Textile and Fashion Technology, B.Sc. (Hons) Community Science alongwith M.Sc. Community Science (Apparel & Textile Science).
3.	Family Resource Management (Family Resource Management and Consumer Science - new nomenclature)	04	01	No change	No change	M.Sc. Family Resource Management/ Resource Management & Consumer Science/Human Ecology in Consumer Science/Family and Community Sciences/Resource Management and Design Application/ Resource Management and Ergonomics/ Resource Management and Interior Design/Family & Community Resource Management/Community Science	No change
SCIENCE MAJORS							
1.	Agricultural Statistics/ Statistics	02	Nil	01	01	M.Sc. Statistics/Agricultural Statistics/ M.Sc. Applied Statistics.	No change
2.	Agricultural Chemicals	04	01	03	01	M.Sc. Ag. / M.Sc. in Agricultural Chemicals/ Chemistry.	M.Sc. Ag. / M.Sc. in Agricultural Chemicals.
3.	Biochemistry	03	01	01	-	M.Sc. Ag./M.Sc. in Biochemistry/ Microbiology/ Molecular Biology & Biotech./ Chemistry/Agri. Chemicals/ Foods & Nutrition/ Biophysics/ Biotechnology.	M.Sc. Ag./M.Sc. in Biochemistry/ Microbiology/ Molecular Biology & Biotech./Biophysics/ Biotechnology.
4.	Botany	01	Nil	02	No change	Master degree in Botany/Plant Sciences/ Plant Physiology/ Environmental Sciences.	No change

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
5.	Chemistry	04	01	No change	No change	M.Sc. Chemistry from a recognized University.	No change
6.	Environmental Science	02	Nil	No change	No change	M.Sc. Ag./ M.Sc. in Environmental Science/ Environmental Biology/ Agroforestry/ Agricultural Physics/ Agriculture with specialization in Environmental Science.	No change
7.	Food Technology	03	01	No change	No change	M.Sc. Food Technology/Food Science & Technology / Food Science/Masters' degree in Post Harvest Technology/ M.Tech. Food Science & Technology.	No change
8.	Mathematics	03	01	No change	No change	M.Sc. in Mathematics /Applied Mathematics	No change
9.	Microbiology	03	01	02	Nil	M.Sc. Ag. in Microbiology/M.Sc. Microbiology/ M.Sc. Environmental Microbiology/Biochemistry / Food Technology/ Biotechnology/ Environmental Science / Foods & Nutrition/ Molecular Biology and Biotechnology.	No change
10.	Molecular Biology & Biotechnology	04	01	05	—	M.Sc. Ag. / M.Sc. / M.V.Sc. in Biochemistry / Microbiology / Biotechnology /Molecular Biology & Biotechnology/ Animal Biotechnology / Genetic Engineering/M. Tech. Biotechnology/M.Sc. Ag. Genetics & Plant Breeding.	M.Sc. Ag. / M.Sc. in Biochemistry / Microbiology / Biotechnology /Molecular Biology & Biotechnology/ Genetic Engineering/M. Tech. Biotechnology /M.Sc. Ag. Genetics & Plant Breeding.
11.	Physics	03	01	No change	No change	Master's Degree in Physics/Applied Physics/Astro Physics/Bio-Physics/ Material Science / Electronics/ Computer Science.	No change

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
12.	Plant Physiology	02	Nil	03	01	M.Sc./M.Sc. Ag. in Plant Physiology /Crop Physiology/ Agronomy/ Horticulture/ Botany/ Biochemistry /Microbiology/ Bio-Sciences/ Plant Sciences/ Environmental Science/ Biophysics.	M.Sc./M.Sc. Ag. in Plant Physiology /Crop Physiology/ Agronomy/ Horticulture/ Botany/ Bio-Sciences/ Plant Sciences/ Environmental Science.
VETERINARY SCIENCE MAJORS							
1.	Veterinary Public Health & Epidemiology	03	01	No change	No change	M.V.Sc. in Veterinary Public Health & Epidemiology.	No change
2.	Veterinary Gynaecology & Obstetrics	03	01	No change	No change	M.V.Sc. Gynaecology & Obstetrics/ Animal Reproduction.	No change
3.	Livestock Production & Management	04	01	No change	No change	M.V.Sc. in LPM.	No change
4.	Veterinary Medicine	03	01	No change	No change	M.V.Sc. in Veterinary Medicine/ Veterinary Clinical Medicine/Veterinary Preventive Medicine.	No change
5.	Veterinary Microbiology & Immunology	03	01	No change	No change	M.V.Sc. in Veterinary Microbiology & Immunology/ Veterinary Microbiology/ Veterinary Bacteriology/Veterinary Virology/ Veterinary Immunology.	No change
6.	Veterinary Pathology	03	01	No change	02	M.V.Sc. Pathology.	No change
7.	Veterinary Pharmacology & Toxicology	03	01	No change	No change	M.V.Sc. Vety. Pharmacology/Vety. Pharmacology & Toxicology.	No change
8.	Veterinary Physiology	03	01	No change	No change	M.V.Sc. Veterinary or Animal Physiology	No change
9.	Poultry Science	03	01	No change	No change	M.V.Sc. in Poultry Science/ Poultry Husbandry/LPM.	No change
10.	Vety. Surgery &	03	01	No	No	M.V.Sc. Surgery/Surgery &	M.V.Sc. (Veterinary Surgery &

S. No.	Major	Existing No. of Seats		Proposed No. of Seats		Minimum Eligibility Qualifications	
		UA Domicile	Other States	UA Domicile	Other States	Existing	Proposed
	Radiology			change	change	Radiology.	Radiology).
11.	Veterinary Biochemistry	02	Nil	No change	No change	M.V.Sc. in Veterinary Biochemistry.	No change
12.	Animal Genetics & Breeding	03	01	No change	No change	M.V.Sc. in Animal Genetics & Breeding.	No change
13.	Animal Nutrition	03	01	No change	No change	M.V.Sc. in Animal Nutrition.	No change
14.	Veterinary Anatomy	03	01	No change	No change	M.V.Sc. in Veterinary Anatomy.	No change
15.	Veterinary Parasitology	03	01	No change	No change	M.V.Sc. in Veterinary Parasitology	No change
16.	Livestock Products Technology	03	01	No change	No change	M.V.Sc. in Livestock Products Technology/Animal Products Technology.	No change
MANAGEMENT MAJOR							
**1.	Management	01	Nil	02	Nil	Masters' Degree or equivalent in Business Administration/ Management.	No change

*Admission to **Ph.D. programmes in Agronomy and Plant Pathology** for Other State candidates shall be made through ICAR entrance examination only. Candidate need not apply for Pantnagar entrance examination for Other State seats in the mentioned disciplines of **Agronomy and Plant Pathology**.

****Self –Financing**

#Students will have to read some remedial Courses.

The candidate possessing above qualifications and fulfilling the conditions laid down hereunder shall have to qualify the written test and secure a place in the merit list so as to be eligible for admission:

- At Master's level, the candidate should have secured an OGPA not less than 6.500/10.000 or 4.000/5.000 or Ist Division in case of the Universities where these grading scales are not applicable. At Bachelor's level the candidate must possess an Overall Grade Point Average of not less than 6.000/10.000 or 3.000/5.000 or 55% marks in aggregate in case of the Institutions/Universities where these grading scales are not applicable.
- Besides a candidate must also possess the eligibility qualifications prescribed for Masters programmes of the University in the relevant discipline.
- A relaxation of 5% marks, or an equivalent relaxation of grade at Master's level only, will be allowed to those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled categories of candidates.

Note: The students having M.Sc. Statistics/M.Sc. Applied Statistics will be awarded Ph.D. with major in Statistics and those having M.Sc. Agricultural Statistics will be awarded Ph.D. with major in Agricultural Statistics.

B. Masters' Programmes

S. No.	Major	No. of Seats		Minimum Eligibility Qualifications	
		Existing	Proposed	Existing	Proposed
AGRICULTURE MAJORS					
1.	Agricultural Economics	08	No change	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Fisheries/ Forestry/ Horticulture/ Home Sc./ Agril. Marketing / Agricultural Marketing and Cooperation/ Community Science.	No change
2.	Agrometeorology	03	No change	{B.Sc. or B.Sc. (Hons.)} in Agriculture / Forestry/ Horticulture or B.Sc. with Physics as one of the major subject.	No change
3.	Agronomy	10	No change	B.Sc. Ag./ B.Sc. (Hons.) Ag.	No change
4.	Agricultural Extension & Communication	08	No change	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Forestry/ Horticulture/ Home Science/ Fisheries/ Food Sc. & Technology/Dairy Sc./ Sericulture/ B.V.Sc. & A.H./B.V.Sc./ Community Science.	No change
5.	Entomology	08	08	B.Sc. or B.Sc. (Hons.) in Agriculture/ Forestry/ Horticulture/Sericulture.	No change
6.	Genetics & Plant Breeding	12	No change	B.Sc. or B.Sc. (Hons.) in Agriculture/ Forestry/ Horticulture.	No change
7.	Horticulture (Fruit Science)	08	No change	{B.Sc. or B.Sc. (Hons.)} in Agriculture / Horticulture/Forestry.	No change
8.	Horticulture (Floriculture and Landscaping)	04	No change	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Horticulture/Forestry.	No change
9.	Plant Pathology	06		{B.Sc. or B.Sc. (Hons.)} in Agriculture / Forestry/ Horticulture.	Admission Policy not received.
10.	Soil Science	08	No change	B.Sc. or B.Sc. (Hons.) in Agriculture/ Horticulture/ Forestry.	No change
11.	Horticulture (Vegetable Science)	06	No change	B.Sc. or B.Sc. (Hons.) in Agriculture/ Forestry/ Horticulture.	B.Sc. Agriculture/B.Sc. Agriculture (Hons.)/ B.Sc. Horticulture/ B.Sc. Horticulture (Hons.)
ENGINEERING MAJORS					
1.	Agril. Engineering (Farm Machinery & Power Engg.)	10	No change	Bachelor's Degree in Agricultural Engineering from a recognized University/Institute.	No change

S. No.	Major	No. of Seats		Minimum Eligibility Qualifications	
		Existing	Proposed	Existing	Proposed
2.	Agricultural Engineering (Food & Bio Process Engg.)	04	Nil	Bachelor's Degree in Agricultural Engg. /Chemical Engg./Bio-Chemical Engg./B.Tech. (Biotechnology)/B.Tech. Food Tech./ B.Tech. Dairy Tech./ B.Tech. Food Sc./B.Tech. Food Engg. from a recognized University/Institute.	Reason :- i. The course program is not accredited by ICAR since it was not listed in V Dean's Committee Report as well as not recommended in VI Dean's Committee listed course program. ii. This course program is also not accredited by the AICTE iii. In the department, currently, there is no expert faculty in the area of Food and Bioprocess Engineering iv. There were 1-2 students intake in last four academic years which makes it unjustified to offer 1-2 courses per semester for such number of students. Moreover, it creates an unnecessary burden over the existing inexperienced (in Food and Bioprocess Engineering) faculties. v. In the current "Restructured and Revised Syllabi of Post-graduate Programmes" for Dairy Science and Technology, Agricultural Engineering and Technology, and Food Science Technology, ICAR has not recommended this course program in Agricultural Engineering program.
3.	Agril. Engineering (Irrigation & Drainage Engineering)	12	No change	Bachelor's Degree in Agricultural Engineering / Civil Engineering from a recognized University/ Institute.	No change
4.	Agricultural Engineering (Process & Food Engineering)	08	No change	Bachelor's Degree in Agricultural Engineering / Chemical Engg./ B.Tech. Food Sc./B.Tech. Food Tech./ B.Tech. Dairy Technology /B.Tech. Food Engg. from a recognized University/ Institute.	No change
5.	Agril. Engineering (Soil & Water Conservation Engg.)	10	No change	Bachelor's Degree in Agricultural Engineering /Civil Engineering from a recognized University /Institute.	No change

S. No.	Major	No. of Seats		Minimum Eligibility Qualifications	
		Existing	Proposed	Existing	Proposed
6.#	Computer Engineering	10	No change	B.Tech./B.E. degree in Computer Engineering/Computer Science & Engineering/Computer Science/Information Technology/Information Communication Technology from a recognized University/Institute.	No change
7.#	Design & Production Engineering	10	No change	Bachelor's Degree in Mechanical Engg./Mechanical & Automation / Production Engg./ Industrial & Production Engg. from a recognized University/Institute.	No change
8.#	Electrical Energy System	12	No change	Bachelor's Degree in Electrical Engineering/ Electrical and Electronics Engineering from a recognized University/Institute.	No change
9#	Electronics & Communication Engineering	08	18 (30% seats for other state)	Bachelor's Degree in Electronics & Communication Engineering/ Electronics Engineering/Communication Engineering/ Tele Communication Engineering from a recognized University/ Institute.	No change
10.#	Hydraulic Engineering	04	No change	Bachelor's Degree in Civil Engg. from a recognized University/ Institute.	No change
11.#	Information Technology	06	No change	B.E./B.Tech. degree in Information Technology/Computer Engineering/ Computer Science & Engineering/Computer Science/ Information Communication Technology from a recognized University/ Institute.	No change
12.#	Manufacturing Engineering and Management	06	No change	B.Tech./B.E./B.Sc. (Engg.) Degree in Mechanical Engg./ Production Engg./ Industrial Engg./ Mechanical/Production and Tool Engg./ Production Technology and Manufacturing Engg./ Mechatronics/ Manufacturing Process and Automation/ Production and Industrial Engg./ Industrial and Production Engg./ Manufacturing Technology/ Mechanical and Production Engg./ Automation Engg. from a recognized University/Institute.	No change
13.#	Soil Mechanics & Foundation Engineering	04	No change	Bachelor's Degree in Civil Engineering from a recognized University/ Institute.	No change

S. No.	Major	No. of Seats		Minimum Eligibility Qualifications	
		Existing	Proposed	Existing	Proposed
14.#	Structural Engineering	04	No change	Bachelor's Degree in Civil Engineering from a recognized University/Institute.	No change
15.#	Thermal Engineering	10	No change	Bachelor's Degree in Mechanical Engineering/ Automobile Engineering from a recognized University/Institute.	No change
FISHERIES SCIENCE MAJORS					
1.	Aquaculture	04	No change	Bachelor's Degree in Fisheries Science	No change
2.	Aquatic Environment Management	04	No change	Bachelor's Degree in Fisheries Science	No change
3.	Fish Processing Technology	04	No change	Bachelor's Degree in Fisheries Science	No change
HOME SCIENCE MAJORS					
1.	Clothing & Textiles (Textiles and Apparel Designing- new nomenclature)	06	No change	B.Sc. Home Science/ B.Sc. (Hons.) Community Science/ Home Economics/ Family & Community Sciences alongwith Intermediate Science.	No change
2.	Family Resource Management (Family Resource Management and Consumer Science)	04	No change	B.Sc. Home Science/Home Economics /Family & Community Science/ B.Sc. (Hons.) Community Science with Intermediate Science.	No change
3.	Foods & Nutrition (Food Science and Nutrition)	04	No change	B.Sc. Home Science with Intermediate Science /B.Sc. Food Tech./ B.Sc. (Hons.) Community Science/B.Sc. Home Economics.	No change
4.	Human Development & Family Studies	04	–	B.Sc. Home Science/ B.Sc. (Hons.) Community Sciences/B.Sc. Home Economics/ Family & Community Sciences alongwith Intermediate Science.	DEFERRING OF ADMISSION/ To be Kept in abeyance
SCIENCE MAJORS					
1.	M.Sc. Ag. Agricultural Chemicals	04	No change	B.Sc. with Chemistry as one of the major subjects/B.Sc. Agriculture / Horticulture/ Forestry.	No change
2*.	Agricultural Statistics/ Statistics	04	No change	B.Sc. Ag./B.Sc. (Hons.) Ag. (with Mathematics at Intermediate Level)/ B.Sc. with Maths/ Statistics as one of the major subjects.	No change

S. No.	Major	No. of Seats		Minimum Eligibility Qualifications	
		Existing	Proposed	Existing	Proposed
3.	Biochemistry	08	05	B.Sc. in Biochemistry/Biotechnology/ Microbiology/ Agriculture/ Home Science/ Fisheries/Veterinary Science/ Forestry /Food Tech./ B.Sc. with Chemistry as one of the major subjects/ B.Sc. Horticulture.	B.Sc. in Biochemistry/Biotechnology/ Microbiology/ Agriculture/ Home Science/ Community Science / Fisheries/ Veterinary Science/ Forestry /Food Tech./ B.Sc. with Chemistry as one of the major subjects/ B.Sc. Horticulture.
4.	Botany	04	No change	B.Sc. with Botany as one of the major subjects.	No change
5.	Chemistry	10	No change	B.Sc. with Chemistry as one of the major subjects.	No change
6.	Environmental Science	03	No change	B.Sc. with Environmental Science/ Environmental Biology as one of the major subjects/ B.Sc. in ZBC/ Agriculture/ Fisheries/ Home Science/Forestry/ Horticulture.	B.Sc. with Environmental Science/ Environmental Biology as one of the major subjects/ B.Sc. in ZBC/ Agriculture/ Fisheries/ Home Science/ Community Science /Forestry/ Horticulture.
7.	Food Technology	04	No change	B.Sc. Food Technology/ Food Science and Technology/ Dairy Technology/ Agriculture/Fisheries/Home Science / Horticulture/ B.Tech. (Food Technology/Food Science & Technology/ Dairy Technology/ Agril. Engg.)/ B.E. (Agril.) or B.Sc. (Hons.) in Agriculture/ Fisheries/Home Science / Horticulture/Community Science.	No change
8.	Mathematics	04	No change	B.Sc. with Mathematics as one of the major subjects.	No change
9.	Microbiology	04	03	B.Sc. in Microbiology/ Biochemistry/ Agriculture/ Fisheries/ Forestry /Home Science/Biotechnology/Biology (Zoology and Botany with any other subject)/B.Sc. Horticulture/B.Tech. (Biotechnology).	B.Sc. in Microbiology/ Biochemistry/ Agriculture/ Fisheries/ Forestry /Home Science/ Community Science / Biotechnology /Biology (Zoology and Botany with any other subject)/B.Sc. Horticulture/B.Tech. (Biotechnology).
10.***	M.Sc. Ag. (Biotechnology)	20	30	Bachelor's Degree in Science/ Agriculture/Horticulture/ Forestry/ Veterinary Science/Fisheries Science/Biotechnology/ Agriculture Biotechnology.	Bachelor's Degree in Agriculture/ Forestry/ Agriculture Biotechnology/ B. Tech./ Biotechnology from any Agriculture University.
11.	Plant Physiology	03	04	B.Sc. in Agriculture/ Zoology, Botany and Chemistry / Horticulture/ Microbiology with Chemistry /B.Sc. Forestry.	B.Sc. in Agriculture/ Horticulture/ B.Sc. Forestry

S. No.	Major	No. of Seats		Minimum Eligibility Qualifications	
		Existing	Proposed	Existing	Proposed
12.	Physics	12	No change	B.Sc. with Physics as one of the major subjects.	No change
13.**	Molecular Biology & Biotechnology (M.Sc.) (yet to be approved)	—	20	New programme - Agenda not received	Bachelor's Degree in Agriculture/ Forestry/ Agriculture Biotechnology/B. Tech./ Biotechnology from any Agriculture University.
VETERINARY SCIENCE MAJORS					
1.	Veterinary Anatomy	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
2.	Veterinary Gynaecology & Obstetrics	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
3.	Veterinary Public Health & Epidemiology	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
4.	Vety. Surgery & Radiology	08	03	B.V.Sc. & A.H./B.V.Sc.	No change
5.	Veterinary Biochemistry	03	No change	B.V.Sc. & A.H./B.V.Sc.	No change
6.	Veterinary Medicine	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
7.	Veterinary Microbiology & Immunology	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
8.	Veterinary Parasitology	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
9.	Veterinary Pathology	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change (not mentioned in Admission Policy submitted for Ph.D. programme)
10.	Veterinary Pharmacology & Toxicology	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
11.	Veterinary Physiology	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
12.	Veterinary and Animal Husbandry Extension	02	No change	B.V.Sc. & A.H./B.V.Sc.	No change
13.	Livestock Products Technology	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
14.	Livestock Production & Management	05	No change	B.V.Sc. & A.H./B.V.Sc.	No change
15.	Poultry Science	05	No change	B.V.Sc. & A.H./B.V.Sc.	No change
16.	Animal Nutrition	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change

S. No.	Major	No. of Seats		Minimum Eligibility Qualifications	
		Existing	Proposed	Existing	Proposed
17.	Animal Genetics & Breeding	04	No change	B.V.Sc. & A.H./B.V.Sc.	No change
18.	Animal Biotechnology	02	No change	B.V.Sc. & A.H./B.V.Sc.	No change
MANAGEMENT PROGRAMMES					
****1.	MBA (Agribusiness)	32	32	Bachelor's and/or Master's degree in Agriculture, Agricultural Chemicals, Agricultural Engineering, Dairy Science/ Technology, Fisheries, Food Science/ Technology, Forestry, Horticulture, Veterinary Science, Home Science or B.Tech. (Biotechnology).	Bachelor's and/or Master's degree in Agriculture, Agricultural Chemicals, Agricultural Engineering, Dairy Science/ Technology, Fisheries, Food Science/ Technology, Forestry, Horticulture, Veterinary Science, Home Science/ Community Science or B.Tech. (Biotechnology).
****2.	MBA	08	08	Bachelor's degree in any branch of Engineering/Technology from AICTE approved Institutions/ UGC approved Universities.	Bachelor's degree in any branch of Engineering/Technology from AICTE approved Institutions/ UGC approved Universities.
M.C.A. PROGRAMME					
****1.	MCA	24	No change	BCA/B.Sc. with Mathematics from a recognized University/B.Sc. (Information Technology)/ B.Sc. Computer Science.	No change

Candidates for Master's programme should refer para 22 for subject group code of Entrance Examination.

******Self-Financing; #30 percent of sanctioned seats are allotted to Other State candidates.**

The candidate possessing above qualifications and fulfilling the conditions laid down hereunder shall have to qualify the written test and secure a place in the merit list so as to be eligible for admission:

(a) The candidate should have secured an OGPA of not less than 6.000/10.000 or 3.000/5.000 or 55% marks in aggregate in case of the Institutions/Universities where these scales are not applicable in the Bachelor's degree.

Note : (1) In Agriculture programmes the number of candidates admitted from pure Sciences stream shall be limited to 25%. However, in case sufficient numbers of qualified candidates are not available, this limitation of 25% shall be relaxed by the Admissions Committee. But, the minimum duration for the said candidates would be six semesters.

(2) The minimum degree duration will be six semester for the candidates seeking admission in Agriculture & Home Science Majors who have studied only 3-year degree programme instead of 4- years.

*The students admitted in the programme of Agricultural Statistics/Statistics with qualifications B.Sc.(Ag.)/B.Sc. (Hons.) Ag. will be awarded M.Sc. (Agril. Statistics) degree and those admitted with B.Sc. degree (with Mathematics/Statistics as one of the major subjects) will be awarded M.Sc. (Statistics) degree.

** Yet to be approved

*** Admissions to DBT supported Master's programme (M.Sc. Agricultural Biotechnology) shall be made through online counseling from the list of qualified candidates received from DBT Regional Centre for Biotechnology, Faridabad, which is responsible for conducting Graduate Aptitude Test-Biotechnology (GAT-B) -2022 for admission to the above said programmes throughout the country.

Item No. I/2022:05 Admission Policy (2022-2023) for MBA Programmes

Note : 1. The application form has already been uploaded on University Admission Portal.

2. All the process of admission shall be carried out by Controller of Examination in the online mode.

1. Eligibility Qualifications

M. B. A.

Bachelor's degree in any branch of Engineering/Technology from AICTE approved Institutions/UGC approved Universities.

M.B.A. (Agribusiness)

Bachelor's and/or Master's degree in Agriculture, Agricultural Chemicals, Agricultural Engineering, Dairy Science/ Technology, Fisheries, Food Science/ Technology, Forestry, Home-Science/ Community Science, Horticulture, Veterinary Science or B. Tech (Biotechnology).

2. Selection Procedure

The candidate will have to appear either in common Admission Test (CAT) or Common Management Admission Test (CMAT) conducted by respective agencies. CABM will use CAT/CMAT score for short listing the candidates for its two year full time MBA programs. These short listed candidates will have to appear for further screening on the basis of Group Discussion and Personal Interview at CABM, Pantnagar on specified date(s). The candidates willing to take admission in MBA (Agribusiness) or MBA programme of college will have to apply separately to CABM, Pantnagar through online portal of Admission: <http://gbpuat.in>.

(Group Discussion and Personal Interview will be considered as per decision of Admission Committee keeping in view the situation of COVID-19 at that time in the country/state.)

3. Number of Seats

The regular intake capacity for the MBA (Agribusiness) is 32 and MBA program is 8 i.e. a total of 40 seats out of which 50% seats are for the candidates from States other than Uttarakhand and 50% seats are for candidates of Uttarakhand State in which seats for OBC, SC and ST are reserved as per the reservation policy of the Uttarakhand Government, implemented by GBPUAT, Pantnagar. The seat matrix is given below:

A - MBA (Agribusiness)

Category	Percentage (reservation)	Available Seats		
		Uttarakhand	Other State	Total
OBC	14%	2		2
SC	19%	3		3
ST	4%	1		1
Gen	Remaining (63%)	10	16	26
Sub total	100%	16	16	32
EWS	10% over and above	1.6	-	2
Grand Total		18	16	34

B – MBA

Category	Percentage (reservation)	Available Seats		
		Uttarakhand	Other State	Total

OBC	14%	1		1
SC	19%	1		1
ST	4%	0		0
Gen	Remaining (63%)	2	4	6
Sub total	100%	4	4	8
EWS	10% over and above	0.4	-	-
Grand Total		4	4	8

For the Other-State category, not more than 2 seats will be given to any single state. However, this condition may be waived off by Admission Committee if qualified candidates are not available in a particular state.

In case, the seats in MBA (Agribusiness) program remain vacant, they will be transferred to MBA program and vice-versa. In case, the seats of Other-States remain vacant, they will be filled from the candidates of Uttarakhand State and vice-versa.

In case, candidates of reserved categories are not available, the seats shall be converted to General Category.

4. Sponsored Candidates: Sponsored students under the following categories will be admitted over and above the present sanctioned strength of 40 seats on the following basis:

- a) **Foreign students:** Two seats in each Masters program i.e. a total of four seats shall be available to foreign nationals (candidates) provided that they fulfill the eligibility qualifications on payment of fee as per University rule.
- b) **Candidates sponsored by GBPUAT, Pantnagar:** Two seats in each Masters program i.e. a total of four seats shall be available for candidates sponsored by GBPUAT, Pantnagar.
- c) **Uttarakhand Government Officers:** Two seats in each Masters program i.e. a total of four seats will be reserved for Uttarakhand Government officers in addition to the regular seats. The Uttarakhand Government officers will neither be required to take CAT/CMAT examination nor will be required to appear in Group Discussion and Personal Interview. The program fee for these government officers will be double of the program fee meant for the regular candidates.

Eligibility Qualifications for sponsored candidates: The sponsored candidates besides meeting the eligibility qualifications should have secured an OGPA of not less than 6.000/10.000 or 3.000/5.000 or 55% marks in aggregate in Bachelor's degree. In case of all categories of sponsored candidates, if the seats of MBA (Agribusiness) program remain vacant, the same will be transferred to MBA program and vice-versa.

5. Reservation

Seats for OBC, SC and ST candidates are reserved as per the reservation policy of the State Government of Uttarakhand, implemented by the University. Candidates claiming reservation shall be required to submit appropriate certificate as per Annexure-I, at the time of Group Discussion/ Personal Interview, failing which they shall be treated in general category only. Any subsequent claim for reservation shall not be entertained. For getting reservation under OBC category the certificate should not be issued earlier than March 2020.

6. Candidates from States other than Uttarakhand

A candidate falling in either of the following categories will be considered in 'Other State' category:

- a. A candidate who is a permanent resident outside Uttarakhand since birth, or
- b. A candidate whose permanent address is outside the Uttarakhand State, unless he submits domicile certificate of Uttarakhand at the time of Group Discussion/ Personal Interview, or
- c. A candidate who has completed his qualifying examination from outside the Uttarakhand State unless he submits domicile certificate from Uttarakhand at the time of Group Discussion/ Personal Interview.

Note: The candidates who have completed their qualifying degree from G. B. Pant University of Agriculture and Technology will be treated as domicile of Uttarakhand for admission to MBA (Agribusiness)/MBA program as per G. O. No. 350/XIII – I/ 30 (2)/ 2001 dated 06/07/08 and 218/ Krishi evam Jalagam/ 2004 dated 28.02.2004, and as per resolution adopted by the Academic Council in its 338th meeting.

7. Duration

The normal duration of MBA (Agribusiness) and MBA program is two academic years or four semesters. The minimum and maximum duration of the program is four and six semesters respectively.

8. Sale and Submission of Application Forms

The candidate can access the application form on website at URL: www.gbpuat.auams.in and the price of form Rs. 1500.00 would have to be paid online as per instructions provided at website. There is no other mode/ provision of making form available.

Important dates concerning application form

Start of Online Form Availability: January 01, 2022 (Saturday)

Last Date for filling form: February 28, 2022 (Monday)

Last Date with Late Fee (After February 28, 2022) : March 31, 2022 (Thursday)

9. Medical Examination

All candidates called for Group discussion/Personal Interview will be required to produce medical and physical fitness certificate from the Chief Medical Officer or equivalent.

10. Verification of Documents

At the time of Group Discussion, candidates will be required to produce all Certificates/mark sheets right from Class X till their eligibility qualifications along with a character certificate from the Head of the Institution (Registrar/ Dean/ Principal/ Director of the University/College/ Institute) last attended.

11. Mode of Admission

The candidates will be selected for admission on the basis of their performance in CAT/CMAT, Group discussion and Personal Interview. The weightage of these three components will be:

Component	Weightage
Entrance Test Score (CAT/ CMAT)	60%
Group Discussion	30%
Personal Interview	10%

The equivalence between CAT and CMAT score will be established as per recommendation by they recommended by the Committee constituted by the Academic Council in its 379th meeting and approved by Academic Council in 385th meeting.

Qualifying marks in entrance test, Group discussion and personal interview will be decided by the Admission Committee.

12. Fee Structure and Payment Schedule

The candidates are required to pay the fee of the MBA programme within the limits specified in the following paragraph. **Admission/Counseling Fee:** All candidates called for Group discussion and Personal Interview (whether finally admitted or not) will be required to deposit a non-refundable fee of Rs. 3,000 as Counseling fee. This is a necessary pre-requisite for attending the Group Discussion and Interview.

- I) Program and University Fee:** All those candidates admitted to MBA (Agribusiness)/MBA program of CABM will have to pay two kinds of fees separately: (1) the Program fee and (2) the University Fee. The fee details are as follows:

- a) **The Program Fee:** The Program fee for both MBA (Agribusiness)/MBA program has to be paid through DD in favour of 'Dean, College of Agribusiness Management' payable at Panthnagar. A student can also pay this Program fee through RTGS/NEFT based internet transfer and send photocopy of the fee transfer receipt to CABM. (Revolving Fund CABM, Punjab National Bank, Panthnagar, IFSC Code: PUNB0444600, Account No: 4446001100000145)

The details of this Program fee is as follows:

Before Registration in First Semester* 2022-2023	:	Rs. 3,25,000/=
1 st day of Registration in First Semester 2023-2024	:	Rs. 3,25,000/=

The programme fee for the sponsored candidates will be double of the amount charged for regular/normal candidate.

*By a date fixed by the Admission Committee but before the registration in first semester.

- b) **The University Fee:** The University fee has to be paid at the time of registration through DD in favour of the Comptroller, GBPUAT, Panthnagar. The details of the present University fee is as follows:

First day of Registration in I Semester	2022-2023	:	Rs. 20442.00 **
First day of Registration in II Semester	2022-2023	:	Rs. 20442.00 **
First day of Registration in I Semester	2023-2024	:	Rs. 20442.00 **
First day of Registration in II Semester	2023-2024	:	Rs. 20442.00 **

In addition to the fee above, students have to pay food advance of Rs 20000/- each semester.

** Subject to the revision by the University.

NOTE:

1. The program fee shall be paid as soon as the admission is confirmed as per the Admission Offer letter issued.
2. The program fee shall be per annum irrespective of number of semesters completed by the student in an academic year.
3. Only Caution Money is refundable.
4. Only Food advance is adjustable.
5. Food bills on actual are to be paid every month.

The P.G. Faculty is requested to consider the above proposal.

Dean, CABM

Item No. I/2022:06 Revision in credits of Special Problem for Master's degree and start of new course Special Problem for Ph.D. degree

Department of Soil Science, College of Agriculture
G.B. Pant university of Agriculture and Technology, Pantnagar

CA/SS..527.....

Dated 21/11/21.

Dean PGS

Through: Dean Ag.

As desired vide your office letter No. CA/SS/387 dated 21.09.2021 (copy enclosed), the proposal for revising existing course APS 601 Special problem and introduction of new course APS 701 Special problem (for Ph.D. Students) for M. Sc. Ag. Soil Science and Ph. D. Soil Science degree programme, is given hereunder:


1. Revision of Existing Course APS 601 Special Problem

Existing course		Proposed course		Justification
Course No.	APS 601	Course No.	No change	The course APS 601, Special Problem is offered as 2 (0+2) Cr hrs to fulfill minimum requirement or to carry out some assigned research work to M.Sc.Ag. and Ph.D. Soil Sci. degree programme. The students can take it once either during M.Sc.Ag. or Ph.D. Soil Sci. degree programme with 2 credits only. It would be more appropriate if this course is offered separately with separate course number for both degree programme. It is, therefore, proposed to offer this course to only M.Sc.Ag. (Soil science) students as 1 (0+1) Or 2 (0+2) credits hrs.
Course name	Special Problem	Course name	No change	
Crdt Hrs	2(0+2)	Crdt Hrs	1(0+1) or 2 (0+2)	
Degree programme	M Sc Ag Soil Sci. and Ph. D. Soil Sci.	Degree programme	M. Sc. Ag. Soil Sci.	

2. Proposal of new course APS 701 Special problem

Currently course APS 601 Special problem is offered in both M.Sc.Ag. and Ph.D. Soil Sci. degree programme as 2 (0+2) Credit hrs, due to which student can offer it only once either during M.Sc.Ag. or Ph.D. Soil Sci. degree programme to fulfill minimum requirement or to carry out some assigned research work. Since, APS 601 has been proposed to modify for MSc.Ag degree programme as 1 or 2 cr hrs course, it is, proposed to introduce another course APS 701 special problem for Ph.D. Soil Sci. degree programme of 1 (0+1) or 2 (0+2) credits hrs.

Submitted for your kind consideration and approval.



Head, Soil Science


Forwarded

Encl. as above



M.A.


DEAN, P.G.S.
22/11/2021


Dean
College of Agriculture
21/11/2021

The P.G. Faculty is requested to consider the above proposal.

Head, Soil Science

Item No. I/2022:07 Revision in degree nomenclature of M.Sc. Ag. (Soil Science) and Ph.D. (Soil Science)

Department of Soil Science, College of Agriculture

No. CA/SS/ 839



Dated 25-2-2022

Dean PGS

Through: Dean Agriculture

The present nomenclature of Master's and Ph.D. degree programme of the department is Soil Science. However, as per the recommendation of V Dean's committee of ICAR, the nomenclature should be M.Sc.Ag. (Soil Science and Agricultural Chemistry) and Ph.D. (Soil Science and Agricultural Chemistry) (copy enclosed). Therefore, present nomenclature of both the degree offered by the department should be changed as below:

Sl. No.	Existing nomenclature	Proposed nomenclature
1.	M.Sc.Ag. (Soil Science)	M.Sc.Ag. (Soil Science and Agricultural Chemistry)
2.	Ph.D. (Soil Science)	Ph.D. (Soil Science and Agricultural Chemistry)

Other SAUs, IARI, New Delhi, RLBCAU, IASBHU also have the proposed nomenclature of Master's and Ph.D. degree programmes. This will facilitate the recognition of the degree at national level without any hassle.

Encl: as above


(RAMESH CHANDRA)

Head, Soil Science

Dr. RAMESH CHANDRA


Prof. & Head

Soil Science, College of Agriculture



H.A. PGT Secretary
Put up an agenda before
Mr. Faculty

Forwarded


Dean
College of Agriculture
25/02/2022


DEAN, PGS
26/02/22

IV Dean's committee Recommendation (ICAR)

AGRICULTURE

Defining UG & PG degree for general market needs & for specialized jobs and uniformity in UG & PG degree nomenclature

- i) UG Degree: B.Sc. (Hons) Agriculture
- ii) PG Degree: M.Sc. and Ph.D

Recommendations on the uniform nomenclature of PG degree in Agriculture

Agriculture subjects	Horticulture	Food Science
M. Sc. Ag. (Agricultural Economics)	M. Sc. Ag. Horticulture (Fruit Science)	M. Sc. (Food Science & Technology)
M. Sc. Ag. (Agricultural Extension & Communication)	M. Sc. Ag. Horticulture (Vegetable Science)	
M.Sc. Ag. (Agrometeorology)	M. Sc. Ag. Horticulture (Floriculture & Landscaping)	
M. Sc. Ag. (Agronomy)		
M. Sc. Ag. (Entomology)		
M. Sc. Ag. (Genetics & Plant Breeding)		
M. Sc. Ag. (Seed Science & Technology)		
M. Sc. Ag. (Nematology)		
M. Sc. Ag. (Plant Pathology)		
M.Sc. Ag. (Soil Science and Agriculture Chemistry)		

Ph.D. with suffix: (Agronomy, Agricultural Economics, Agricultural Extension & Communication, Entomology, Genetics and Plant Breeding, Horticulture (Fruit Science), Horticulture (Vegetable Science), Horticulture (Floriculture and Landscaping), Soil Science and Agriculture Chemistry, Agro-meteorology and Environmental Sciences, Plant Pathology)

The P.G. Faculty is requested to consider the above proposal.

Dean, PGS

Item No. I/2022:8 Revision in nomenclature of Department of Clothing and Textiles to Textiles and Apparel Designing as recommended by the Vth Dean's Committee of ICAR

The agenda is in reference to recommendation of V Dean's Committee of ICAR for restructuring of PG courses in Agricultural Universities. The committee had highlighted need for uniformity in nomenclature of the department in College of Community Science (earlier Home Science).

Following is the change proposed in the name of department as recommended by V Dean's Committee of ICAR.

Name of the Department	
EXISTING	PROPOSED
Department of Clothing and Textiles	Department of Textiles and Apparel Designing

The above proposal was discussed in the departmental meeting and the change in name of the department proposed to be effective from forthcoming academic year 2022-23.

The P.G. Faculty is requested to consider the above proposal.

Head, Clothing & Textiles

Item No. I/2022:09 Revision in degree nomenclature of M.Sc. Home Science (Clothing and Textiles) and Ph.D. (Clothing and Textiles) as recommended by the Vth Dean's Committee of ICAR

This agenda is in reference to recommendation of V Deans Committee of ICAR for restructuring of PG courses in Agricultural Universities. The committee had highlighted need for defining of PG degree for general market needs and for specialized job as well as to ensure uniformity in PG degree nomenclature in the discipline of community science (Home Science)

Following is the change proposed in the PG degrees of department as recommended by Vth deans committee of ICAR

Name of the PG degrees of the department	
EXISTING	PROPOSED
M.Sc. (Home Science) Clothing and Textiles	M.Sc. Community Science (Textiles and Apparel Designing)
Ph.D. (Clothing and Textiles)	Ph.D. Community Science (Textiles and Apparel Designing)

The above proposal was discussed in the departmental meeting, revised and change in name of the PG degrees proposed to be effective from forthcoming academic year 2022-23.

The P.G. Faculty is requested to consider the above proposal.

Head, Clothing & Textiles

Item No. I/2022:10 Revision in nomenclature of Department of Home Science Extension as recommended by the Vth Dean's Committee of ICAR

This agenda is in reference to recommendation of Vth Dean's Committee of ICAR for restructuring of PG courses in Agricultural Universities. The Committee had highlighted need for uniformity in nomenclature of the departments in College of Community Science (Home Science).

Following is the change proposed in the name of department as recommended by Vth Dean's Committee of ICAR:

Name of the Department	
EXISTING	PROPOSED
Department of Home Science Extension	Department of Extension Education & Communication Management

The above proposal was discussed in departmental meeting and the change in name of the department proposed to be effective from forthcoming academic year 2022-23.

The P.G. Faculty is requested to consider the above proposal.

Head, Home Science Extension

Item No. I/2022:11 Revision in nomenclature of Department of Family Resource Management to Department of Family Resource Management & Consumer Science as recommended by the Vth Dean's Committee of ICAR

This agenda is in reference to recommendation of Vth Dean's Committee of ICAR for restructuring of PG courses in Agricultural Universities. The committee has highlighted need for defining PG degree for general market needs and for specialized jobs as well as to ensure uniformity in PG degree nomenclature in disciplines of Community Science (Earlier Home Science).

Following is the change proposed in the name of department as recommended by Vth Dean's Committee of ICAR:

Name of the Department	
Existing	Proposed
Department of Family Resource Management	Department of Family Resource Management & Consumer Science

The above proposal was discussed in Departmental meeting and the change in name of the department proposed to be effective from forthcoming academic year 2022-2023.

The P.G. Faculty is requested to consider the above proposal.

Head, Family Resource Management

Item No. I/2022:12 Revision in nomenclature of M.Sc. Home Science (Family Resource Management) and Ph.D. (Family Resource Management) as recommended by the Vth Dean's Committee of ICAR

This agenda is in reference to recommendation of Vth Dean's Committee of ICAR for restructuring of PG courses in Agricultural Universities. The committee had highlighted need for defining of PG degree for general market needs & for specialized jobs as well as to ensure uniformity in PG degree nomenclature in discipline of Community Science (Home Science).

Following is the change proposed in the PG degrees of Department as recommended by Vth Dean's Committee of ICAR:

Name of the PG degrees of the department	
EXISTING	PROPOSED
M.Sc. Home Science (Family Resource Management)	M.Sc. Community Science (Family Resource Management & Consumer Science)
Ph.D. (Family Resource Management)	Ph.D. Community Science (Family Resource Management & Consumer Science)

The above proposal was discussed in the departmental meeting, revised and change in name of the PG degrees proposed to be effective from forthcoming academic year 2022-23.

The P.G. Faculty is requested to consider the above proposal.

Head, Family Resource Management

Item No. I/2022:13 Revision in degree nomenclature of M.Sc. Home Science (Human Development and Family Studies) as recommended by the Vth Dean's Committee of ICAR

This agenda is in reference to recommendation of V Dean's Committee of ICAR-BSMA for restructuring of PG courses in Agricultural Universities. The committee had highlighted need for defining PG degree for general market needs and for specialized jobs as well as to ensure uniformity in PG degree nomenclature in disciplines of Community Science (Earlier Home Science).

Following is the change proposed in the name of department as recommended by V Dean's Committee of ICAR:

Name of the Department	
EXISTING	PROPOSED
M.Sc. (Home Science) Human Development & Family Studies	M.Sc. Community Science (Human Development & Family Studies)

The above proposal was discussed in departmental meeting and the change in name of the PG degree programme proposed to be effective from forthcoming academic year 2022-23.

The P.G. Faculty is requested to consider the above proposal.

Head, Human Development & Family Studies

Item No. I/2022:14 Adoption of Common Academic Regulations for Post Graduate Programme in the university as per BSMA recommendations (Minutes of the Dean's Committee meeting held on 15/12/2021 have been already circulated)

Minutes of the meeting of the Deans Committee for adoption of the Common Academic Regulations & Restructured and Revised Syllabi of Post-Graduate Programmes held on December 15, 2021 at 3.00 PM in the Office of the Dean, Post Graduate Studies

The following attended the meeting:

1. Dr. R.S. Chavan, Dean College of Fisheries
2. Dr. Alka Goyal, Dean College of Home Science
3. Dr. Sandeep Arora, Dean CBSH
4. Dr. R.S. Jadoun, Dean CABM
5. Dr. A. H. Ahmed, Actng. Dean CV&ASc.
6. Dr. Salil Tewari, Actng. Dean College of Agriculture
7. Dr. A. K. Swami, Actng. Dean, College of Technology
8. Dr. K. P. Raverkar, Dean, Post Graduate Studies

At the outset Dean, PGS welcomed all to the meeting and explained the agenda for the meeting. He briefed about the Common Academic Regulations; and Restructured and Revised Syllabi of Post-Graduate Programmes received from DDG (Education), ICAR for adoption in the university which has been framed and recommended by National Core Group and different 19 Broad Subject Matter Area Committees formed by the ICAR. Further the Common Academic Regulations for Post-Graduate Programmes were discussed at length. The copy of the same is attached herewith for ready reference. The pointwise salient outcomes of discussion were as below:

1. Academic Year and Registration

The committee found that the norms for Academic year and registration presently being followed in the University are in line and thus can be adopted in toto. The gist in this regard is as below:

- Academic year shall be normally from July-June
- Shall be divided in two academic terms i.e., Semesters
- Academic calendar shall be developed by the Registrar of the University
- Orientation programme shall be organized by the Dean PGS
- Every enrolled student shall be required to register at the beginning of each semester till the completion of his/her degree programme

2. Credit requirements

2.1 Framework of the courses

The comparison between the existing framework of the courses at university and the recommended revised framework of the courses is as below:

Nomenclature		Master's		Ph.D.	
Existing	Revised	Existing	Revised	Existing	Revised
Core courses including seminar	Major courses Seminar	11-19	20 01	9-15	12 02
Minor courses	Minor courses	9-11*	08	10-12	06
Basic supporting courses	Supporting courses	3-10	06	04	05
Optional courses		2-17		2-11	
----	Common courses	--	05	--	--
Thesis Research	Thesis Research	20	30	45	75
Total		50	70	75	100

The committee opined that the framework of the courses recommended by the ICAR shall be implemented in the university with minor change in nomenclature. The committee recommended the nomenclature 'Optional Courses' in place of 'Minor Courses' which would provide an opportunity for choosing relevant and needed courses at Master's and Ph.D. level for their research problem. The recommended framework by the Dean's committee of the courses is as below:

Nomenclature	Master's	Ph.D.
i. Course work	(Cr. Hrs.)	(Cr. Hrs.)
Major courses	20	12
Seminar	01	02
Optional courses	08	06
Supporting courses	06	05
Common courses	05	--
ii. Thesis Research	30	75
Total	70	100

2.2 Common Courses

The ICAR has recommended following courses (one credit each) for all the students at Master's level

- Library and Information Services
- Technical Writing and Communications Skills
- Intellectual Property and its Management in Agriculture
- Basic Concepts in Laboratory Techniques
- Agricultural Research, Research Ethics and Rural Development Programmes

After thorough discussion the committee recommended the following:

- Library and Information Services:** Shall be offered by University Library. The University Library may also develop the contents for offering the same in future in an online mode.
- Technical Writing and Communications Skills:** Shall be offered by CBSH. The concerned department may also develop the contents for offering the same in future in an online mode.
- Intellectual Property and its management in Agriculture:** It should be renamed as Intellectual Property and its Management. The IPR Cell in the Department of Genetics and Plant Breeding, College of Agriculture may offer the course. With time IPR cell shall develop the contents for offering it in online mode
- Basic Concepts in Laboratory Techniques:** Going through the contents of the course the committee felt that minor modifications may be made in the contents by adding certain topics such as handling of firefighting equipment, basics in electrical procedures etc. and/ or deleting unrelated topic. The Dean Technology expressed that the content of the course doesn't fit in the context of College of Technology and thus the similar course having related contents to the disciplines of technology shall be developed.
- Agricultural Research, Research Ethics and Rural Development Programmes:** It should be renamed as 'Research, Research Ethics and Rural Development Programmes' to suit to all colleges including College of Technology. The course could be offered as cross referred by the Department of Social Sciences, CBSH and Department of Agricultural Communication, College of Agriculture.

As per the recommendations of ICAR some of these courses are already available in the form of e-courses/ MOOCs, the committee felt that students may be allowed

to register these courses/ similar courses on these aspects, if available online on SWAYAM or any other platform.

2.3. Supporting courses

Various supporting courses as per the recommendation of ICAR shall be offered to the students as the practice is being followed in the University. The contents of supporting courses could be modified to suit the individual discipline with approval of the Academic Council.

3. Residential requirements

The minimum and maximum duration of residential requirement for Master's and Ph.D. Programmes shall be as per the ICAR recommendations as given below:

P.G. Degree Programme	Duration of Residential Requirement	
	Minimum	Maximum
Master's Degree	2 Academic years (4 Semesters)	5 Academic years (10 Semesters) In place of 08 Semesters*
Ph.D.	3 Academic years (6 Semesters)	7 Academic years (14 Semesters) In place of 12 Semesters*

* As per the current Academic Regulation of the University.

4. Evaluation of course work and comprehensive examination

- For Master's multiple tests of evaluation shall continue as it is also recommended by ICAR.
- In case of Ph.D. the committee opined that, considering that the Ph.D. degree is research oriented, the recommendation of ICAR of having only the semester final examination (50 marks) is acceptable. However, for 50 marks the instructor shall evaluate the students on the basis of minimum three parameters as below:

Quizzes/ Midterm	10-20
Assignment(s)	10-20
Presentations	10-20
Group Discussion	10-20

- For Ph.D. students ICAR has recommended the comprehensive examination based on oral examination by an external expert covering both the research problem and theoretical background. The committee resolved that as informed by the Dean PGS about the provisions made that only Pre-comprehensive and Comprehensive examinations based on oral examination shall be held.

5. Advisory System

The majority of the provisions recommended by ICAR under Advisory committee are as per the AR of the University. The committee recommended to adopt the same with modifications as below:

- At any given time, a PG teacher shall not be a Chairperson, Advisory Committee, (including Master's and Ph.D. programmes) for more than SIX students (ICAR has recommended FIVE students). The remaining part of the clause of academic regulations of the university shall remain.
- The proposed faculty member from partnering institution can be allowed to act as Co-chairman/ Member of SAC as already approved by Academic Council

6. Evaluation of research work

The recommendation of the ICAR regarding evaluation of research work shall be adopted in toto.

7. Learning through online courses

The provision of integrating available online courses with the traditional system of education shall be made. This would provide opportunities to the students to improve their employability by imbibing the additional skills and competitive edge.

- In this regard each Faculty shall identify available online courses. Also available online courses on various platforms equivalent to the abovementioned common courses for Master's students shall also be identified.
- The interested students may provide the details of the online courses to the Dean of respective colleges for consideration to be added in the list
- A Postgraduate student may take up to a maximum of 20% credits in a semester through online learning resources.
- The conversion formula for calculation of GPA for marks/ Grade provided by the host institute shall be developed by the office of the Registrar.

8. Internship during Masters programme

An optional internship/ in-plant training (IDEA: Internship for Development of Entrepreneurship in Agriculture) in lieu of thesis/ research work has been recommended by ICAR. However, after in-depth discussion the committee resolved that this may not be effective at the moment as the student opting for IDEA at the moment may become interested at later stage in higher studies. Thus, committee recommended to defer the IDEA for time being.

9. Teaching Assistantship

The ICAR has asked to encourage the Teaching Assistantship to the doctoral students to provide the required experience on how to conduct courses, practical classes, evaluation and other related academic matters. The recommended guidelines by ICAR for Teaching Assistantship are as below:

- Shall be offered only to those doctoral students who have successfully finished their course work.
- Any consideration for award of Teaching Assistantship must have the consent of the supervisor concerned
- Shall be awarded on semester-to-semester basis on the recommendation of a screening/ selection committee to be constituted by the Vice- Chancellor
- Each Ph.D. student may be allowed to take a maximum of 16 classes in a month to UG/ Masters students
- No additional remuneration to the students who are awarded ICAR JRF/SRF
- At the end of each term: TA shall be given a certificate by the concerned Head of the Department countersigned by the School Dean, specifying the nature and load of assignment completed.

The committee opinioned that this shall be implemented as the University offers the fellowship to the meritorious Ph.D. students in each discipline. Similarly, if possible, provisions shall be made for increasing the remuneration of fellowship.

10. Registration of project personnel (SRF/RA) for PhD

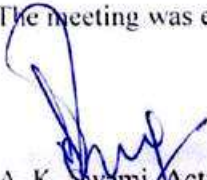
The committee debated on the issue of registering the project personnel (SRF/RA) for Ph.D. After considering the pros and cons of the same the committee recommended that the person interested in doing Ph.D. shall come through the admission procedures of the university laid down from time to time.

11. Compliance with the National Education Policy-2020

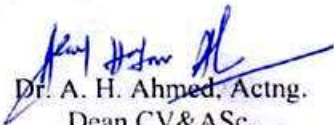
As per the recommendation of the ICAR, while implementing the course structure and contents recommended by the BSMA Committees, the HEI shall comply with the provisions of NEP-2020 especially mentioned in the document of 'Common Academic Regulations for PG and Ph.D. Programmes'.

12. Dean PGS informed to the house that the 'Restructured and Revised Syllabi of PG Programmes' has been received from ICAR, which is also available on the ICAR website, has to be implemented w.e.f. the ensuing Academic Year i.e., 2022-23. The same will be sent to the respective HODs and Dean of the college for its consideration and finalization in the light of the guidelines of the ICAR and Common Academic Regulations.


The meeting was ended with the thanks to the Chair.



Dr. A. K. Swami, Actng.
Dean, College of Technology



Dr. A. H. Ahmed, Actng.
Dean CV&ASc.



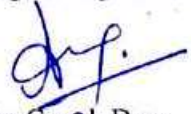
Dr. Salil Tewari, Actng.
Dean College of Agriculture



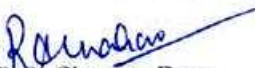
Dr. R.S. Jadoun, Dean
CABM




Dr. Sandeep Arora, Dean
CBSh



Dr. Alka Goyal, Dean
College of Home Science



Dr. R.S. Chavan, Dean
College of Fisheries



Dr. K. P. Raverkar, Dean,
Post Graduate Studies

The P.G. Faculty is requested to consider the above proposal.

Dean, PGS

Item No. I/2022:15 Retaining of the nomenclature 'Minor courses' in Ph.D. as per recommendation of BSMA committee of ICAR

OFFICE OF THE DEAN: COLLEGE OF AGRICULTURE

CA/PA/ 1161
February 8, 2022

Dean, Post Graduate Studies

Subject: Agenda for PG faculty meeting



Kindly find enclosed herewith the following two agenda items for consideration and approval of the PG faculty in its forthcoming meeting.

Agenda 01: Retaining of the nomenclature 'Minor courses' in Ph.D. as per recommendation of BSMA committee of ICAR

The Board of faculty of Agriculture in its meeting held on January 29, 2022 unanimously resolved that the uniqueness and strengths of Pantnagar Education system which is for the benefit of the students, must be retained and protected. The house was of the strong opinion that '**Minor**' package instead of '**Optional**' package must be retained. In the students' degree and transcript also the major and minor are mentioned that adds value to the degree. This is also in accordance with the education system well accepted everywhere and also matches with the ICAR proposed structure of course work.

Secretary, P.G. Faculty
H.P.

Ranjan K. Srivastava
DEAN, P.G.S
08/02/22

Shivendra Kashyap
(Shivendra Kashyap)
Dean

CC: Dr Ranjan K Srivastava, Professor Horticulture and Secretary BOFA

Item No. I/2022:16 Restructuring and revision in Course Programme & Syllabi of M.Sc. and Ph.D. programmes as per BSMA recommendations

College of Agriculture

M.Sc. programme

- 1 Department of Agril. Economics**
- 2 Department of Agril. Extension and Communication**
- 3 Department of Agrometeorology**
- 4 Department of Agronomy**
- 5 Department of Entomology**
- 6 Department of Food Science & Technology**
- 7 Department of Genetics & Plant Breeding**
- 8 1. Department of Horti. (Fruit Science), 2. Department of Horti. (Floriculture & Landscaping)**
- 9 Department of Plant Pathology**
- 10 Soil Science**
- 11 Department of Vegetable Science**

Ph.D. programme

- 1 Department of Agril. Economics**
- 2 Department of Agril. Extension and Communication**
- 3 Department of Agrometeorology**
- 4 Department of Agronomy**
- 5 Department of Entomology**
- 6 Department of Food Science & Technology**
- 7 Department of Genetics & Plant Breeding**
- 8 1. Department of Horti. (Fruit Science), 2. Department of Horti. (Floriculture & Landscaping)**
- 9 Department of Plant Pathology**
- 10 Soil Science**
- 11 Department of Vegetable Science**

College of Agriculture
TENTATIVE COURSE PROGRAMME
Ph.D. (Agricultural Economics)

Note: To fulfill the minor credit requirement one additional course be opted from the optional courses of the department

Course	Course title	Credit Hours
Major courses: 13 credits		
AEC-601	Advanced Micro Economic Analysis	2(2+2+0)
AEC-602	Advanced Macro Economic Analysis	2(2+2+0)
AEC-603	Advanced Econometrics	3(2+0+1)
AEC-604	Advanced Production Economics	3(2+0+1)
AEC-605	Operations Research for Agricultural Decisions	3(2+0+1)
Optional courses: 06 credits		
AEC-606	Advanced Agricultural Marketing and Price Analysis	3(2+0+1)
AEC-607	Quantitative Development Policy Analysis	2(1+0+1)
AEC-608	Natural Resource Management	3(2+0+1)
AEC-609	Environmental Economics	3(2+0+1)
Supporting courses: 06 credits		
BHS-652	Research Methodology-I	1(1-0-0)
BPS-653	Research Methodology-II	3(2-0-1)
Common	Research and Publication Ethics	2(2+0)
Minor Courses: 06 credits (To be opted from other department in which minor is done)		
AEC-660	Doctoral Seminar-I	1(1+0)
AEC-661	Doctoral Seminar-II	1(1+0)
AEC-690	Ph.D. Thesis Research	75
	Total	108
Minor compulsory courses of the department: 5 credits		
AEC-501	Micro Economic Theory and Applications	3 (3+2+0)
AEC-504	Agricultural Production Economics	2 (1+1+1)

Department of Agricultural Communication**Course Programme****Ph. D. – Agricultural Extension and Communication****Major Courses: 20 credits**

Course Code	Course Title	Credit Hours
CORE COURSES (Major)		
AAC-601	Advances in Agriculture Extension	3 (2+1)
AAC-602	Advanced Research Methodologies for Social & Behavioural Sciences	3 (2+1)
AAC-603	Entrepreneurship Development & Management in Agriculture	3 (2+1)
AAC-604	Educational Technology & Instructional Design	3 (2+1)
OPTIONAL COURSES		
AAC605	Extension Advisory Services for Climate Smart Agriculture	3 (2+1)
AAC606	Livelihood Development	2 (1+1)
AAC607	Facilitation for People Centric Development	3 (2+1)
AAC691	Doctoral Seminar-I	1
AAC692	Doctoral Seminar-II	1
SUPPORTING COURSES		
STAT- xxx	Statistical Methods for Applied Social Sciences	3(2+1)
STAT/COMP - xxx	Computer Applications for Agriculture Extension Research	2(1+1)
TOTAL		25
AAC690	Thesis Research	75
GRAND TOTAL		100

MINOR COURSES (For Any Stream)

AAC-501	Trends in Extension Education	2 (2+0)
AAC-506	ICTs for Agriculture Extension	3 (2+1)

Department of Agricultural Communication
M. Sc. – Agricultural Extension and Communication

Major Courses: 20 credits

Course Code	Course Title	Credit Hours
CORE COURSES (Major)		
AAC-501	Trends in Extension Education	2 (2+0)
AAC-502	Fundamentals of Human Behaviour	3 (2+1)
AAC-503	Media Production and Management	3 (2+1)
AAC-504	Research Methodology in Extension	3 (2+1)
AAC-505	Capacity Development	3 (2+1)
AAC-506	ICTs for Agriculture Extension	3 (2+1)
ACC-507	Evaluation and Impact Assessment	3 (2+1)
AAC - 590	Master's Seminar	1
OPTIONAL COURSES		
AAC-508	Organisational Behaviour & Development	3(2+1)
AAC-509	Generation and Adoption of Innovations	3(2+1)
AAC-510	Gender Mainstreaming	3(2+1)
SUPPORTING COURSES		
STAT	Statistical Methods for Applied Social Sciences	3(2+1)
STAT/COMP	Computer Applications for Agriculture Extension Research	3(2+1)
TOTAL		21+09+6 = 35

COURSE PROGRAMME

DEPARTMENT OF AGROMETEOROLOGY

Ph.D. (Agrometeorology)

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (12 Credits)		
AGM 601*	Climate Change and Sustainable Development	2+1
AGM 602/BBE722	Meteorology of Air Pollution	2+2
AGM 605	Analytical Tools and Methods for Agro-meteorology	1+1
AGM606	Research and publication ethics	2+0
AGM607	Environmental Physics for Agricultural Meteorology	3+0
AGM 608*	Computer Programs and Software for Agrometeorological Data Management	1+1
SUPPORTING COURSES (06 Credits)		
BHS 652	Research Methodology-I	1 (1-0-0)
BHS 653	Research Methodology-II	3 (2-0-1)
	Research and Publication Ethics	2 (1-0-1)
MINOR COURSES (06 Credits)		
APS 603	Physical Chemistry of Soil	2+0
APS 604	Soil Genesis and Micromorphology	2+0
APA 602	Recent trends in crop growth and productivity	2+1
APA 605	Integrated Farming Systems for Sustainable Agriculture	2+0
APA 606	Soil Conservation and Watershed Management	2+1
AGM 691	Doctoral seminar	1 (1-0-0)
AGM 692	Doctoral seminar	1 (1-0-0)
AGM 699	Doctoral Research	75
	Total	101
MINOR COURSES FOR OTHER DISCIPLINE		
AGM 501	Fundamentals of Meteorology	2+1
AGM 505	Crop Micrometeorology	2+1
AGM506	Evapotranspiration and Soil Water Balance	2+1
AGM507	Crop Weather Models	1+2
AGM510	RS and GIS Applications in Agricultural Meteorology	2+1

*Core courses/compulsory courses

COURSE PROGRAMME

DEPARTMENT OF AGROMETEOROLOGY

M.Sc. Agrometeorology

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (20 Credits)		
AGM 501*	Fundamentals of Meteorology	2+1
AGM 502*	Fundamentals of Agricultural Meteorology	2+1
AGM 504*/BPP534	Agro-meteorological Measurements and Instrumentation	2+1
AGM 505	Crop Micrometeorology	2+1
AGM506	Evapotranspiration and Soil Water Balance	2+1
AGM507	Crop Weather Models	1+2
AGM510	RS and GIS Applications in Agricultural Meteorology	2+1
OPTIONAL Courses (08 Credits)		
AGM 508	Applied Agricultural Climatology	2+1
AGM 509	Weather Forecasting	2+1
AGM512	Weather and Climate Risk Management	2+0
APS 502	Soil Fertility and Fertilizer Use	2+1
APS 504	Soil Physics	2+1
SUPPORTING COURSES (06 Credits)		
BPS502/BPS 661	Statistical Methods for Applied Sciences	3+1
BPS 511/BPS 572	Statistical Designs	2+1
BPS 522/ BPS 681	Data Analysis Using Statistical Packages	2+1
MCA501/ BPM 502	Computer Fundamentals and Programming	2+1
COMMON COURSES (05 Credits)		
	Library and Information Services	(0-0-1)
	Technical Writing and Communications Skills	(0-0-1)
	Intellectual Property and its Management in Agriculture	(0-0-1)
	Basic Concepts in Laboratory Techniques	(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	(0-0-1)
AGM591	Seminar	1(1-0-0)
AGM599	Master's Thesis Research	30
	Total	70

*Core courses/compulsory courses

List of Post Graduate Courses of the Department of Agrometeorology

Course No.	Course Title	Credit Hours
M.Sc. Agrometeorology		
AGM 501*	Fundamentals of Meteorology	2+1
AGM 502*	Fundamentals of Agricultural Meteorology	2+1
AGM 503	Crop Weather Relationships	2+0
AGM 504*	Agro-meteorological Measurements and Instrumentation	2+1
AGM 505	Crop Micrometeorology	2+1
AGM506	Evapotranspiration and Soil Water Balance	2+1
AGM507	Crop Weather Models	1+2
AGM 508	Applied Agricultural Climatology	2+1
AGM 509	Weather Forecasting	2+1
AGM510	RS and GIS Applications in Agricultural Meteorology	2+1
AGM511	Strategic Use of Climatic Information	2+1
AGM512	Weather and Climate Risk Management	2+0
AGM 513	Aerobiometeorology	2+1
AGM 591	Master's Seminar	1(1-0-0)
AGM599	Master's Thesis Research	30
Ph.D. Agrometeorology		
AGM 601*	Climate Change and Sustainable Development	2+1
AGM 602	Meteorology of Air Pollution	2+2
AGM603	Livestock and Fisheries Meteorology	2+2
AGM604	Hydrometeorology	2+1
AGM 605	Analytical Tools and Methods for Agro-meteorology	1+1
AGM606	Research and Publication Ethics	2+0
AGM607	Environmental Physics for Agricultural Meteorology	3+0
AGM 608*	Computer Programs and Software for Agrometeorological Data Management	1+1
AGM691	Doctoral Seminar-I	1 (1-0-0)
AGM692	Doctoral Seminar-II	1 (1-0-0)
AGM699	Doctoral Research	75

Restructured and Revised Syllabi of Doctorate Programme proposed by the Department of Agronomy *vis-à-vis* the programme Restructured and Revised Ph D programme received from DDG (Education), ICAR, New Delhi.

Course Title with Credits Load (Ph D in Agronomy)

As received from DDG (Education) ICAR			Proposed by Deptt. of Agronomy, Pantnagar			Rationale
Course Code	Course Title	Credits Hours	Course Code	Course Title	Credits Hours	
Agron 601*	Current Trends in Agronomy	3+0	APA 601*	NO CHANGE		
Agron 602	Recent Trends in Crop Growth and Productivity	2+1	APA 602	No Change	2+1	Some deletions are proposed owing to parts of the theory units and parts of the practical exercises covered at PG level. Additionally, some advanced topics and relevant practical exercises are proposed as detailed in the course contents attached in the form of Annexure IV .
Agron 603	Irrigation management	2+1	APA 603	NO CHANGE		
Agron 604	Recent Trends in Weed Management	2+0	APA 604	NO CHANGE		
Agron 605	Integrated Farming Systems for Sustainable Agriculture	2+0	APA 605	NO CHANGE		
Agron 606	Soil Conservation and Watershed Management	2+1	APA 606	NO CHANGE		
Agron 607	Stress Crop Production	2+1	APA 607	NO CHANGE		
Agron 608*	Research and Publication Ethics	2+0	APA 608*	NO CHANGE		
	New Course Proposal		APA 609	Mineral Nutrition of crop plants	2+1	A doctoral degree in Agronomy must provide a sound knowledge of nutrient dynamics in

						plants. This course, therefore, shall feature as a core course for all the doctoral degree aspirants in the discipline of Agronomy. <i>(Course contents attached in form of Annexure V)</i>
Agron 691	Doctoral Seminar	1+0	APA 691			NO CHANGE
Agron 692	Doctoral Seminar	1+0	APA 692			NO CHANGE
Agron 699	Doctoral Research	75	APA 699			NO CHANGE

** Compulsory core course*

Minor courses : 06 credit hours

Supporting courses : 05 credit hours

Common courses : Nil

Minor courses to be offered to the doctoral students opting for minor in Agronomy

Course code	Course title	Credits hours
APA 601	Current Trends in Agronomy	3+0
APA 602	Recent Trends in Crop Growth and Productivity	2+1

COLLEGE OF AGRICULTURE
Revised Course Programme
Department of Agronomy

Restructured and Revised Syllabi of Post-graduate Programme proposed by the Department of Agronomy *vis-à-vis* the programme Restructured and Revised PG programme received from DDG (Education), ICAR, New Delhi.

Course Title with Credits Load (M. Sc. Ag. in Agronomy)

As received from DDG (Education) ICAR			Proposed by Deptt. of Agronomy, Pantnagar			Justification
Course Code	Course Title	Credits Hours	Course Code	Course Title	Credits Hours	
Agron 501*	Modern Concepts in Crop Production	3+0	APA 501*	NO CHANGE		
Agron 502*	Principles and Practices of Soil Fertility and Nutrient Management	2+1	APA 502*	No Change	2+2	Analyses of major and minor nutrients in soil and plants do not get completed in just 3 hours of a lab class in a week. Two practical classes in a week shall enable the students to complete a proper analysis of a particular nutrient.
Agron 503*	Principles and Practices of Weed Management	2+1	APA 503*	NO CHANGE		
Agron 504*	Principles and Practices of Water Management	2+1	APA 504*	NO CHANGE		
Agron 505	Conservation Agriculture	1+1	APA 505	NO CHANGE		
Agron 506	Agronomy of major Cereals and Pulses	2+0	APA 506	Agronomy of <i>Kharif</i> Crops	3+1	Having all the cereals/pulses or oilseeds/Fiber/Sugar crops in one course would deprive the students of getting practical classes and knowledge of the crops which are not grown during that semester. Therefore, reframing the courses according to crop season justifies the rationale. For course contents, please see

						Annexure- I.
Agron 507	Agronomy of Oilseed, Fiber and Sugar Crops	2+1	APA 507	Agronomy of <i>Rabi</i> Crops	3+1	For course contents, please see Annexure- II.
Agron 508	Agronomy of Medicinal, Aromatic and Underutilized Crops	2+1	APA 508	NO CHANGE		
Agron 509	Agronomy of Fodder and Forage Crops	2+1	Contents of this course are distributed in the two proposed courses, Agron 506 and Agron 507 in <i>Kharif</i> and <i>Rabi</i> seasons, respectively. The course Agronomy of Fodder and Forage Crops may please be dropped , therefore.			
-----	New Course	-----	APA 509	Applied Statistics for agronomic experimentation	0+1	The course shall enable the students in deciding an appropriate experimental design as per the treatments and its layout and interpretation. (Course contents attached in form of Annexure III)
Agron 510	Agrostology and Agro-forestry	2+1	APA 510	NO CHANGE		
Agron 511	Cropping System and Sustainable Agriculture	2+0	APA 511	NO CHANGE		
Agron 512	Dryland Farming and Watershed Management	2+1	APA 512	The course may be dropped as the same course is taught at UG level.		
Agron 513	Principles and Practices of Organic Farming	2+1	APA 513	NO CHANGE		
Agron 550	Master’s Seminar	1+0	APA 550	NO CHANGE		
Agron 560	Master’s Research	30	APA 560	NO CHANGE		

* **Compulsory core course**

Optional/Minor courses: 08 credit hours

Supporting courses : 06 credit hours

Common courses : 05 credit hours

COURSE PROGRAMME
DEPARTMENT OF ENTOMOLOGY

Ph.D. (Name of degree): **Ph.D. in Plant Protection-Entomology**

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (12 Credits)		
APE-602	Insect Physiology and Nutrition	3(2-0-1)
APE-601	Insect Phylogeny and Systematics	3(1-0-2)
APE-605	Bio-inputs for Pest Management	3(2-0-1)
APE-606	Insect Toxicology and Residues	3(2-0-1)
SUPPORTING COURSES (06 Credits)		
BHS-652	Research Methodology- I	1(1-0-0)
BHS-653	Research Methodology- II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
OPTIONAL COURSES (03 Credits)		
APE 603*	Insect Ecology and Diversity	3(2-0-1)
APE 604	Insect Behaviour	2(1-0-1)
APE 607	Plant Resistance to Insects	2(1-0-1)
APE 609	Molecular Entomology	2(1-0-1)
MINOR COURSES (06 Credits)		
	Will be taken from any department (other than major department) of the university related to the research problem	
APE788	Doctoral Seminar I	1(1-0-0)
APE789	Doctoral Seminar II	1(1-0-0)
APE790	Ph.D. Thesis Research	75
	Total	101 credits
Minor courses for other departments (06 Credits)		
APE 506**	Toxicology of Insecticides	3(2-0-1)
APE 508**	Concepts of Integrated Pest Management	2 (2-0-0)
APE504	Insect Ecology	3(2-0-1)
APE505	Biological Control of Insect Pests and Weeds	3(2-0-1)

*Compulsory optional course, ** Compulsory minor courses for other departments

COURSE PROGRAMME
DEPARTMENT OF ENTOMOLOGY
M.Sc. (Name of degree): **M.Sc. (Ag) in Plant Protection – Entomology**

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (20 Credits)		
APE 501	Insect Morphology	3(2-0-1)
APE502	Insect Anatomy and Physiology	3(2-0-1)
APE503	Insect Taxonomy	3(1-0-2)
APE504	Insect Ecology	3(2-0-1)
APE505	Biological Control of Insect Pests and Weeds	3(2-0-1)
APE 506	Toxicology of Insecticides	3(2-0-1)
APE 508	Concepts of Integrated Pest Management	2 (2-0-0)
OPTIONAL / MINOR COURSES (08 Credits)		
APE 509*	Pests of Field Crops	3(2-0-1)
APE 510*	Pests of Horticultural and Plantation Crops	3(2-0-1)
APE 511*	Post Harvest Entomology	2(1-0-1)
APE 515	Techniques in Plant Protection	1 (0-0-1)
APE 507	Host Plant Resistance	2 (1+1)
APE 516	Apiculture	3 (2+1)
APE 517	Sericulture	3 (2+1)
APE 519	Molecular Approaches in Entomology	3 (2+1)
APE 520	Plant Quarantine, Biosafety and Biosecurity	2 (2+0)
APE524**	Commercial Entomology	2(1+1)
SUPPORTING COURSES (06 Credits)		
STAT 501	Mathematics for Applied Sciences	2(2+0)
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
STAT 511	Experimental Designs	3(2+1)
STAT 522	Data Analysis Using Statistical Packages	3(2+1)
STAT 512	Basic Sampling Techniques	3(2+1)
STAT 521	Applied Regression Analysis	3(2+1)
MCA 501	Computers Fundamentals and Programming	3(2+1)
MCA 502	Computer Organization and Architecture	2(2+0)
MCA 511	Introduction to Communication Technologies, Computer Networking and Internet	2(1+1)
MCA 512	Information Technology in Agriculture	2(1+1)
BIOCHEM 501	Basic Biochemistry	4(3+1)
BIOCHEM 505	Techniques in Biochemistry	4(2+2)
	Total (Minimum required credits)	06
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
APE600	Seminar	1(1-0-0)
APE690	Master's Thesis Research	30
	Total	70

*Compulsory optional course ** New proposed course

List of Post Graduate Courses of the Department of Entomology

Course No.	Course Title	Credit Hours
APE 501	Insect Morphology	3(2-0-1)
APE502	Insect Anatomy and Physiology	3(2-0-1)
APE503	Insect Taxonomy	3(1-0-2)
APE504	Insect Ecology	3(2-0-1)
APE505	Biological Control of Insect Pests and Weeds	3(2-0-1)
APE 506	Toxicology of Insecticides	3(2-0-1)
APE 508	Concepts of Integrated Pest Management	2 (2-0-0)
APE 509	Pests of Field Crops	3(2-0-1)
APE 510	Pests of Horticultural and Plantation Crops	3(2-0-1)
APE 511	Post Harvest Entomology	2(1-0-1)
APE 515	Techniques in Plant Protection	1 (0-0-1)
APE 507	Host Plant Resistance	2 (1-0-1)
APE 516	Apiculture	3 (2-0-1)
APE 517	Sericulture	3 (2-0-1)
APE 519	Molecular Approaches in Entomology	3 (2-0-1)
APE 520	Plant Quarantine, Biosafety and Biosecurity	2 (2-0-0)
APE524	Commercial Entomology	2(1-0-1)
APE 602	Insect Physiology and Nutrition	3(2-0-1)
APE 601	Insect Phylogeny and Systematics	3(1-0-2)
APE 605	Bio-inputs for Pest Management	3(2-0-1)
APE 606	Insect Toxicology and Residues	3(2-0-1)
APE 603	Insect Ecology and Diversity	3(2-0-1)
APE 604	Insect Behaviour	2(1-0-1)
APE 607	Plant Resistance to Insects	2(1-0-1)
APE 609	Molecular Entomology	2(1-0-1)
APE600	Seminar	1(1-0-0)
APE788	Doctoral Seminar I	1(1-0-0)
APE789	Doctoral Seminar II	1(1-0-0)
APE690	Master's Thesis Research	30
APE790	Ph.D. Thesis Research	75

DEPARTMENT OF FOOD SCIENCE & TECHNOLOGY
PROPOSED COURSE PROGRAMME
Ph.D. (Food Technology)

Sl. No.	Course No.	Name of the Course	Credit Hrs
A.		CORE COURSES	
1.	AFS-686	Product Design & Development	2
2.	AFS-712	Modern Techniques in Food Processing	2
3.	AFS-722	Advanced Food Chemistry	2
4.	AFS-733	Advances in Food Microbiology	2
5.	AFS-781	Advanced Food Analysis	2
6.	AFS-741	Current Topics in Food Science & Technology	2
7.	AFS-788	Doctoral Seminar I	1
8.	AFS-789	Doctoral Seminar II	1
		Subtotal	12 + 2 = 14
B		MINOR COURSES	
		From other Departments	6 Credits
C		SUPPORTING COURSES	
	BHS 652	Research Methodology-I	1(1-0-0)
	BHS 653	Research Methodology-II	3(2-0-1)
	ATS 611	Research and Publication Ethics	2(1-0-1)
			6 Credits
D.	AFS-790	Ph. D. Thesis Research	75 Credits
		Grand Total	101

DEPARTMENT OF FOOD SCIENCE & TECHNOLOGY
PROPOSED COURSE PROGRAMME
M.Sc. (Food Technology)

S No.	Course No.	Course Title	Credits
A		CORE COURSES	
1	AFS 511	Principles of Food Processing	3(2-0-1x3)
2	AFS 526	Food Chemistry and Nutrition	3(3-0-0x3)
3	AFS 531	Food Microbiology	4(2-0-2x3)
4	AFS 541	Technology of Milk and Milk Products	3(2-0-1x3)
5	AFS 561	Technology of Cereals, Pulses and Oilseeds	3(2-0-1x3)
6	AFS 571	Technology of Fruits and Vegetables	3(2-0-1x3)
7	AFS 582	Food Analysis and Quality Management	3(2-0-1x3)
			22 Credits
8	AFS 600	M.Sc. Seminar	1(0-0-1x3)
		Total Major	23
B		MINOR / OPTIONAL COURSES	
		Minor from other Departments / Optional from remaining courses of the Department / other Departments	8 Credits
C		SUPPORTING COURSES	
1	STAT 501	Mathematics for Applied Sciences	2(2-0-0)
2	STAT 502	Statistical Methods for Applied Sciences	4(3-0-1)
		Total	6 Credits
D		COMMON COURSES	
1		Library and Information Services	1(0-0-1)
2		Technical Writing and Communications Skills	1(0-0-1)
3		Intellectual Property and its Management in Agriculture	1(1-0-0)
4		Basic Concepts in Laboratory Techniques	1(0-0-1)
5		Agricultural Research, Research Ethics and Rural Development Programmes	1(1-0-0)
		Total	5 Credits
E		THESIS RESEARCH	
1	AFS 690	Master's Thesis Research	30
		Grand Total	72

Department of Food Science and Technology

A. Package of Minor Courses for Students of Other Departments

AFS-511*	Principles of Food Processing	3(2-0-1x3)
AFS-526*	Food Chemistry & Nutrition	3(3-0-0)

B. Other PG / Ph.D. Courses offered by the Department

AFS-531	Food Microbiology	4(2-0-2x3)
AFS-541	Tech of Milk & Milk Products	3(2-0-1x3)
AFS-561	Tech of Cereals, Pulses & Oilseeds	3(2-0-1x3)
AFS-571	Tech of Fruits & Vegetables	3(2-0-1x3)
AFS-580	Food Plant Sanitation*	3(2-0-1x3)
AFS-582	Food Analysis & Quality Management	3(1-0-2x3)
AFS-600	Master's Seminar	1(0-0-1x3)
AFS 623	Additives, Ingredients and Enzyme Technology	3(2-0-1x3)
AFS -685	Beverage and Snack food Technology	3(2-0-1x3)
AFS-686	Product Design & Development	2(2-0-0)
AFS-690	Master's Thesis Research	Variable
AFS-712	Modern Techniques in Food Processing	2(2-0-0)
AFS-722	Advanced Food Chemistry	2(2-0-0)
AFS-733	Advances in Food Microbiology	2(1-0-1x3)
AFS-741	Current Topics in Food Sci & Technology	2(2-0-0)
AFS-781	Advanced Food Analysis	2(0-0-2x3)
AFS-788	Doctoral Seminar-I	1(0-0-1x3)
AFS-789	Doctoral Seminar-I	1(0-0-1x3)
AFS-790	Ph. D. Thesis Research	

COURSE PROGRAMME
DEPARTMENT OF GENETICS AND PLANT BREEDING
Ph.D. (Name of degree) in Genetics & Plant Breeding

Course No.	Course Title	Credit Hours
Major Course (12 Credits)		
AGP -601	*Advances in Plant Breeding Systems	3(3+0)
AGP -602	Advances in Biometrical Genetics	3(2+1)
AGP -603	Molecular Cytogenetics for Crop Improvement	2(2+0)
AGP -605	*Genomics in Plant Breeding	3(3+0)
AGP -609	*IPR and Regulatory Mechanism (e-course)	1(1+0)
Minor Courses (06 Credits)		
	Will be taken from any department (other than major department) of the university related to the research problem	
AGP -788	Doctoral Seminar I	1(1-0-0)
AGP -789	Doctoral Seminar II	1(1-0-0)
AGP -790	Ph. D. Thesis Research	75
Supporting Courses (06 Credits)		
BHS-652	Research Methodology -I	1(1-0-0)
BHS-653	Research Methodology-II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
	Total	101 Credits
Courses for Minor in Genetics & Plant Breeding		
AGP -601	*Advances in Plant Breeding Systems	3(3+0)
AGP -506	*Molecular Breeding and Bioinformatics	3(2+1)
Pre-requisites for above courses		
AGP -501	Principles of Genetics	3(2+1)
AGP -502	Principles of Plant Breeding	3(2+1)

*Core courses/ compulsory courses

COURSE PROGRAMME
DEPARTMENT OF Genetics and Plant Breeding
M.Sc. (Name of degree) Genetics & Plant Breeding

Course No.	Course Title	Credit Hours
Major Course (20 Credits)		
AGP -501	Principles of Genetics	3(2+1)
AGP -502	Principles of Plant Breeding	3(2+1)
AGP -503	Fundamentals of Quantitative Genetics	3(2+1)
AGP -506	Molecular Breeding and Bioinformatics	3(2+1)
AGP -505	Principles of Cytogenetics	3(2+1)
AGP -511	Crop Breeding –I	3(2+1)
AGP -512	Crop Breeding -II	3(2+1)
Optional / Minor Courses (08 Credits) will be taken from any department of the university related to the research problem		
AGP 504	Varietal Development & Maintenance Breeding	2(1+1)
AGP 507	Breeding for Quality & Special Traits	3(2+1)
AGP 509	Hybrid Breeding	3(2+1)
AGP 510	Seed Production and Certification	2(1+1)
AGP 516	Breeding for stress Resistance & Climate Change	3(2+1)
Supporting Courses (06 Credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
BIOC 501	Basic Biochemistry	4(2+2)
Common Courses (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communication Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
AGP -600	Seminar	1(0-0-1)
AGP -690	Master's Thesis Research	30
Total		70

*Core courses/ compulsory courses

List of Post Graduate Courses of the Department of G&PB

Course No.	Course Title	Credit Hours
AGP -501	Principles of Genetics	3(2+1)
AGP -502	Principles of Plant Breeding	3(2+1)
AGP -503	Fundamentals of Quantitative Genetics	3(2+1)
AGP -506	Molecular Breeding and Bioinformatics	3(2+1)
AGP -505	Principles of Cytogenetics	3(2+1)
AGP -511	Crop Breeding –I	3(2+1)
AGP -512	Crop Breeding -II	3(2+1)
AGP -591	Seminar	1
AGP 504	Varietal Development & Maintenance Breeding	2(1+1)
AGP 507	Breeding for Quality & Special Traits	3(2+1)
AGP 509	Hybrid Breeding	3(2+1)
AGP 510	Seed Production and Certification	2(1+1)
AGP 516	Breeding for stress Resistance & Climate Change	3(2+1)
AGP 599	Thesis Research	30
AGP -601	*Advances in Plant Breeding Systems	3(3+0)
AGP -602	Advances in Biometrical Genetics	3(2+1)
AGP -603	Molecular Cytogenetics for Crop Improv.	2(2+0)
AGP -605	*Genomics in Plant Breeding	3(3+0)
AGP -609	*IPR and Regulatory Mechanism (e-course)	1(1+0)
AGP -691	Seminar I	1
AGP -692	Seminar II	1
AGP -501	*Principles of Genetics	3(2+1)
AGP -502	* Principles of Plant Breeding	3(2+1)

DEPARTMENT OF HORTICULTURE
Ph.D. Horticulture (Fruit Science)

Course No.	Course Title	Credit Hours
MAJOR COURSES (12 Credits)		
APH 601	Innovative Approaches in Fruit Breeding*	3(3-0-0)
APH 602	Modern Trends in Fruit Production*	3(3-0-0)
APH 603	Recent Development in Growth Regulation of Horticultural Crops	3(3-0-0)
APH 607	Biodiversity and Conservation of Fruit Crops	3(2-0-1)
SUPPORTING COURSES (06 Credits)		
BHS-652	Research Methodology-I	1(1-0-0)
BHS-653	Research Methodology-II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
MINOR COURSES (06 Credits)		
	Will be taken from any department (other than major department) of the university related to the research problem	
APH 788	Doctoral Seminar I	1(1-0-0)
APH 789	Doctoral Seminar II	1(1-0-0)
APH 790	Ph.D. Thesis Research	75
	Total	101 Credits

***Core courses / compulsory courses**

Compulsory Courses for Ph D Minor:

Horticulture (Fruit Science):

APH 501	Tropical Fruit Production	3(2-0-1)
APH 502	Sub-tropical and Temperate Fruit Production	3(2-0-1)

DEPARTMENT OF HORTICULTURE
Ph.D. Horticulture (Floriculture & Landscaping)

Course No.	Course Title	Credit Hours
MAJOR COURSES (12 Credits)		
APH 603	Recent Development in Growth Regulation of Horticultural Crops	3(3-0-0)
APH 635	Advances in Landscaping*	3(2-0-1)
APH 637	Modern Approaches in Breeding of Floricultural crops	3(2-0-1)
APH 638	Current Trends in Production Technology of Floricultural Crops	3(2-0-1)
SUPPORTING COURSES (06 Credits)		
BHS-652	Research Methodology-I	1(1-0-0)
BHS-653	Research Methodology-II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
MINOR COURSES (06 Credits)		
	Will be taken from any department (other than major department) of the university related to the research problem	
APH 788	Doctoral Seminar I	1(1-0-0)
APH 789	Doctoral Seminar II	1(1-0-0)
APH 790	Ph.D. Thesis Research	75
	Total	101 Credits

***Core courses / compulsory courses**

Compulsory Courses for Ph D Minor:

Horticulture (Floriculture and Landscaping):

APH 523	Commercial Production of Cut Flowers	3(2-0-1)
APH 524	Commercial Production of Loose Flowers	3(2-0-1)

Course Programme
DEPARTMENT OF HORTICULTURE
M.Sc. Horticulture (Fruit Science)

Course No.	Course Title	Credit Hours
MAJOR COURSES (21 Credits)		
APH 501	Tropical Fruit Production*	3(2-0-1)
APH 502	Sub-tropical and Temperate Fruit Production*	3(2-0-1)
APH 503	Propagation and Nursery Management of Horticultural Crops*	3(2-0-1)
APH 504	Breeding of Fruit Crops*	3(2-0-1)
APH 508	Nutrition of Fruit Crops	3(2-0-1)
APH 518	Minor Fruit Production	3(2-0-1)
APH 520	Post Harvest Management of Horticultural Crops	3(2-0-1)
OPTIONAL/MINOR COURSES (08 Credits)		
	Will be taken from any department of the university related to the research problem	
SUPPORTING COURSES (06 Credits)		
	Experimental Design	3(2-0-1)
COMMON COMPULSORY COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its Management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
APH 600	Seminar	1(1-0-0)
APH 690	Master's Thesis Research	30
	Total	71

*Core courses / compulsory courses

DEPARTMENT OF HORTICULTURE
M.Sc. Horticulture (Floriculture & Landscaping)

Course No.	Course Title	Credit Hours
MAJOR COURSES (20 Credits)		
APH 503	Propagation and Nursery Management of Horticultural Crops*	3(2-0-1)
APH 522	Breeding of Ornamental Plants*	3(2-0-1)
APH 523	Commercial Production of Cut Flowers*	3(2-0-1)
APH 524	Commercial Production of Loose Flowers*	3(2-0-1)
APH 525	Ornamental Gardening and Landscaping*	3(2-0-1)
APH 526	Indoor Plants and Interiorscaping	2(1-0-1)
APH 520	Post Harvest Management of Horticultural Crops	3(2-0-1)
OPTIONAL/MINOR COURSES (08 Credits)		
	Will be taken from any department of the university related to the research problem	
SOPPORTING COURSES (06 Credits)		
	Experimental Design	3(2-0-1)
COMMON COMPULSORY COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its Management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
APH 600	Seminar	1(1-0-0)
APH 690	Master's Thesis Research	30
	Total	70

***Core courses / compulsory courses**

DEPARTMENT OF HORTICULTURE COLLEGE OF AGRICULTURE

List of Post Graduate Courses:

Course No.	Course Title	Credit Hours
APH 501	Tropical Fruit Production	3(2-0-1)
APH 502	Sub-tropical and Temperate Fruit Production	3(2-0-1)
APH 503	Propagation and Nursery Management of Horticultural Crops	3(2-0-1)
APH 504	Breeding of Fruit Crops	3(2-0-1)
APH 506	Canopy Management in Fruit Crops	2(1-0-1)
APH 508	Nutrition of Fruit Crops	3(2-0-1)
APH 518	Minor Fruit production	3(2-0-1)
APH542	Growth and Development of Horticultural Crops	3(2-0-1)
APH543	Organic Fruit Culture	3(2-0-1)
APH520	Post Harvest Management of Horticultural Crops	3(2-0-1)
APH 522	Breeding of Ornamental Plants	3(2-0-1)
APH 523	Commercial Production of Cut Flowers	3(2-0-1)
APH 524	Commercial Production of Loose Flowers	3(2-0-1)
APH 525	Ornamental Gardening and Landscaping	3(2-0-1)
APH 526	Indoor Plants and Interiorscaping	2(1-0-1)
APH 529	Value addition in Floriculture	3(2-0-1)
APH 541	Systemic Horticulture	3 (2-0-1)
APH555	Protected Cultivation of Flower Crops	3(2-0-1)
APH557	Turf Grass Management	3(2-0-1)
APH558	Seed Production in Flower Crops	3(2-0-1)
APH600	Master's Seminar	1(1-0-0)
APH 601	Innovative approaches in Fruit Breeding	3(3-0-0)
APH 602	Modern Trends in Fruit Production	3(3-0-0)
APH 603	Recent Developments in Growth Regulation of Horticultural Crops	3(3-0-0)

APH 607	Biodiversity and Conservation of Fruit Crops	3(2-0-1)
APH649	Arid and Dry Land Fruit Production	2(2+0+0)
APH643	Abiotic Stress Management in Fruit Crops	3(2-0-1)
APH645	Smart Fruit Production	2(2+0+0)
APH 632	Postharvest Biology of Floriculture Crops	3(2-0-1)
APH 635	Advances in Landscaping	3(2-0-1)
APH 637	Modern Approaches in Breeding of Floriculture Crops	3(2-0-1)
APH 638	Current Trends in Production Technology of Floriculture crops	3(2-0-1)
APH 639	Specialty Flowers, Fillers and Cut Greens	2(1-0-1)
APH643	Vertical Gardening	3(1-0-2)
APH645	Recent Developments in Protected Cultivation of Floricultural Crops	3(2-0-1)
APH690	Master's Thesis Research	30
APH788	Doctoral Seminar I	1(1-0-0)
APH789	Doctoral Seminar II	1(1-0-0)
APH790	Ph.D. Thesis Research	75

DEPARTMENT OF PLANT PATHOLOGY
COURSE PROGRAMME
Ph.D. Plant Pathology

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (12 Credits)		
APP 607	Plant Biosecurity and Biosafety	2(2-0-0)
APP 704	Molecular Basis of Host-pathogen Interaction	3(2-0-1)
APP 718	Epidemiology and Forecasting of Plant Diseases	3(2-0-1)
APP 712	Ecology of Soil borne Plant Pathogens	2(1-0-1)
APP 713	Disease Resistance in Plants	2(2-0-0)
Total		12
SUPPORTING COURSES (06 Credits)		
BHS 652	Research Methodology-I	1(1-0-0)
BHS 653	Research Methodology-II	3(2-0-1)
ATS 611	Research and Publication Ethics	2(1-0-1)
Total		06
MINOR COURSES (06 Credits)		
	Will be taken from any department (other than major department) for the university related to the research problem	
Total		06
APP 788	Doctoral Seminar I	1
APP 789	Doctoral Seminar II	1
APP 790	Ph.D. thesis Research	75
Total		101

DEPARTMENT OF PLANT PATHOLOGY
COURSE PROGRAMME
M.Sc. (Ag.) Plant Pathology

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (20 Credits)		
APP 501	Mycology	3(2-0-1)
APP 502	Plant Virology	3(2-0-1)
APP 503	Plant Pathogenic Prokaryotes (Plant Bacteriology)	3(2-0-1)
APP 504	Plant Nematology	3(2-0-1)
APP 505	Principles of Plant Pathology	3(2-0-1)
APP 506	Techniques in Detection and Diagnosis of Plant Diseases	2(0-0-2)
APP 511	Chemicals and Botanicals in Plant Disease Management	3(2-0-1)
Total		20
OPTIONAL (08 Credits only)		
APP 507	Principles of Plant Disease Management	3(2-0-1)
APP 512	Detection and Management of Seed Borne Pathogens	3(2-0-1)
APP 513	Biological control of Plant Diseases	2(1-0-1)
APP 514	Integrated Disease Management	3(2-0-1)
APP 515	Diseases of Field and Medicinal Crops	3(2-0-1)
APP 516	Diseases of Fruits, Plantation and Ornamental Crops	3(2-0-1)
APP 517	Diseases of Vegetables and Spices Crops	3(2-0-1)
APP 518	Post Harvest Diseases	3(2-0-1)
APP 519	Plant Quarantine and Regulatory Measures	1(1-0-0)
APP 520	Mushroom Production Technology	3(2-0-1)
Total		08
SUPPORTING COURSES (06 Credits)		
STAT 501	Mathematics for Applied Sciences	2(2-0-0)
STAT 502	Statistical Methods for Applied Sciences	4(3-0-1)
Total		06
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(1-0-0)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(1-0-0)
Total		05
APP 591	Master's Seminar	1
APP 521	Master's Thesis Research	30
Total		70

List of Post Graduate Courses of the Department of Plant Pathology

Course No.	Title of the Course	Credit Hours
APP 501	Mycology	3(2-0-1)
APP 502	Plant Virology	3(2-0-1)
APP 503	Plant Pathogenic Prokaryotes (Plant Bacteriology)	3(2-0-1)
APP 504	Plant Nematology	3(2-0-1)
APP 505	Principles of Plant Pathology	3(2-0-1)
APP 506	Techniques in Detection and Diagnosis of Plant Diseases	2(0-0-2)
APP 507	Principles of Plant Disease Management	3(2-0-1)
APP 511	Chemicals and Botanicals in Plant Disease Management	3(2-0-1)
APP 512	Detection and Management of Seed Borne Pathogens	3(2-0-1)
APP 513	Biological control of Plant Diseases	2(1-0-1)
APP 514	Integrated Disease Management	3(2-0-1)
APP 515	Diseases of Field and Medicinal Crops	3(2-0-1)
APP 516	Diseases of Fruits, Plantation and Ornamental Crops	3(2-0-1)
APP 517	Diseases of Vegetables and Spices Crops	3(2-0-1)
APP 518	Post Harvest Diseases	3(2-0-1)
APP 519	Plant Quarantine and Regulatory Measures	1(1-0-0)
APP 520	Mushroom Production Technology	3(2-0-1)
APP 591	Master's Seminar	1
APP 521	Master's Thesis Research	30
APP 704	Molecular Basis of Host-pathogen Interaction	3(2-0-1)
APP 607	Plant Biosecurity and Biosafety	2(2-0-0)
APP 718	Epidemiology and Forecasting of Plant Diseases	3(2-0-1)
APP 712	Ecology of Soil borne Plant Pathogens	2(1-0-1)
APP 713	Disease Resistance in Plants	2(2-0-0)
APP 788	Doctoral Seminar I	1
APP 789	Doctoral Seminar II	1
APP 790	Ph.D. thesis Research	75

Compulsory courses for minor package for other departments

APP 505	Principles of Plant Pathology	3(2-0-1)
APP 507	Principles of Plant Disease Management	3(2-0-1)

Department of Soil Science

1.Name of degree Programme :

Existing

Revised

- | | |
|---|---|
| 1. M.Sc.Ag. (Soil Science)
2. Ph.D. (Soil Science) | 1. M.Sc.Ag (Soil Science and Agricultural Chemistry)
2. Ph.D.(Soil Science & Agricultural Chemistry) |
|---|---|

3. LIST OF COURSEPROGRAMME FOR M. Sc.Ag. (Soil Science & Agricultural Chemistry)

Major courses			
1.	APS-500	Soil Physics	3 (2+1)
2.	APS-515	Analytical techniques and Instrumental methods in Soil and Plant analysis	2 (0+2)
3.	APS-516	Soil Fertility and Fertilizer use	4 (3+1)
4.	APS-517	Soil Chemistry	3 (2+1)
5.	APS-518	Soil Biology and Biochemistry	3 (2+1)
6.	APS-519	Soil Mineralogy, Genesis, Classification and Survey	3 (2+1)
7.	APS-520	Soil Fertility Evaluation and Fertilizer Recommendations	2 (1+1)
8.	APS-600	Master's Seminar	1 (0+1)
Total			20 +1
Optional courses(Any 8 credit from following or from other department courses above 500 series)			
1.	APS 601	Special Problem	1(0+1) or 2(0+2)
2.	APS -620	Land degradation and restoration	1 (1+0)
3.	ASP-505	Soil Erosion and Conservation	3 (2+1)
4.	APS -615	Fertilizer technology	1(1+0)
5.	APS-610	Management of problematic soils and waters	3 (2+1)
6.	APS-625	Soil and water pollution	2(1+1)
7.	APS-630	Biofertilizer production technology	2 (1+1)
8.			
Total			8
Basic supporting courses			
1.	BPS-661	Experimental Statistics	4(3+1)
2.	BPC-641	Physical Chemistry	3 (2+1)
Total			7
Common Courses			
1.		Library and Information Services	1(1+0)
2.		Technical Writing and Communications Skills	1(1+0)
3.		Intellectual Property and its Management in Agriculture	1(1+0)
4.		Basics Concepts in Laboratory Techniques	1(1+0)
5.		Agricultural Research, Research Ethics and Rural Development Programmes	1(1+0)
Total			5
Sub Total			41
Thesis Research			
1.	APS-690	Thesis research	30
Grand Total			71

3. LIST OF COURSE PROGRAMME FOR Ph.D. (SOIL SCIENCE & AGRICULTURAL CHEMISTRY)

Major Core courses			
1.	APS - 735	Physical Chemistry of Soil	2 (2+0)
2.	APS - 740	Soil Genesis and Micromorphology	2(2+0)
3.	APS - 715	Mineralogy of Soil	2 (2+0)
4.	APS-710	Advances inSoil Physics	2 (2+0)
5.	APS-725	Soil, Plant Microbe Relationships	2 (2+0)
6.	APS-730	Biochemistry of Soil Organic Matter	2 (2+0)
7.	APS-788	Doctoral Seminar I	1
8.	APS-789	Doctoral Seminar II	1
Total			12 +2
*MinorCourses (6 cr.hrs.from other departmentalincluding compulsory minor package courses)			
1.	Total		6
Basic supporting courses			
1.	BPS-652	Research Methodology I	1 (1+0)
2.	BPS-653	Research methodology II	3 (2+1)
3.	BPS-	Research, Research Ethics and Rural Development Programme	2 (1+0)
Total			6
Sub Total			26
Thesis Research			
1.	APS-790	Thesis research	75
Sub Total			26
Grand Total	101		

*Minor package of Soil Science

1. APS 515 Analytical techniques and Instrumental methods in Soil and Plant analysis 2 (0+2)

2. APS 516 Soil Fertility and Fertilizer use 4 (3+1)

Total 6

3. LIST OF COURSE PROGRAMME FOR Ph.D. (SOIL SCIENCE & AGRICULTURAL CHEMISTRY)

Major Core courses			
1.	APS - 735	Physical Chemistry of Soil	2 (2+0)
2.	APS - 740	Soil Genesis and Micromorphology	2(2+0)
3.	APS - 715	Mineralogy of Soil	2 (2+0)
4.	APS-710	Advances inSoil Physics	2 (2+0)
5.	APS-725	Soil, Plant Microbe Relationships	2 (2+0)
6.	APS-730	Biochemistry of Soil Organic Matter	2 (2+0)
7.	APS-788	Doctoral Seminar I	1
8.	APS-789	Doctoral Seminar II	1
Total			12 +2
*MinorCourses (6 cr.hrs.from other departmentalincluding compulsory minor package courses)			
1.	Total		6
Basic supporting courses			
1.	BPS-652	Research Methodology I	1 (1+0)
2.	BPS-653	Research methodology II	3 (2+1)
3.	BPS-	Research, Research Ethics and Rural Development Programme	2 (1+0)
Total			6
Sub Total			26
Thesis Research			
1.	APS-790	Thesis research	75
Sub Total			26
Grand Total		101	

***Minor package of Soil Science**

1.	APS 515	Analytical techniques and Instrumental methods in Soil and Plant analysis	2 (0+2)
2.	APS 516	Soil Fertility and Fertilizer use	4 (3+1)
Total	6		

COURSE PROGRAMME**DEPARTMENT OF VEGETABLE SCIENCE****Ph.D. Horticulture (Vegetable Science)**

Course No.	Course Title	Credit Hours
MAJOR COURSES (12 Credits)		
VSC 601*	Recent Trends in Vegetable Production	3+0
VSC 602*	Advances in Breeding of Vegetable Crops	3+0
VSC 603	Abiotic Stress Management in Vegetable Crops	2+1
VSC 604	Seed Certification, Processing and Storage of Vegetable Crops	2+1
VSC 605	Breeding for Special Traits in Vegetable Crops	2+0
VSC 606	Biodiversity and Conservation of Vegetable Crops	2+1
VSC 607	Biotechnological Approaches in Vegetable Crops	2+1
VSC 608	Advanced Laboratory Techniques for Vegetable Crops	1+2
SUPPORTING COURSES (06 Credits)		
BHS-652	Research Methodology-I	1(1-0-0)
BHS-653	Research Methodology-II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
MINOR COURSES FOR OTHER DEPARTMENTS (06 Credits)		
VSC 503	Growth and Development of Vegetable Crops	2+1
VSC 504	Principles of Vegetable Breeding	3+0
788	Doctoral Seminar-I	1(1-0-0)
789	Doctoral Seminar-II	1(1-0-0)
790	Ph.D. Thesis Research	75
	Total	101 Credits

*Compulsory among major courses

DEPARTMENT OF VEGETABLE SCIENCE

M.Sc. Agriculture Horticulture (Vegetable Science)

COURSE PROGRAMME

Course No.	Course Title	Credit Hours
MAJOR COURSES (20 Credits)		
VSC 501*	Production of Cool Season Vegetable Crops	2+1
VSC 502*	Production of Warm Season Vegetable Crops	2+1
VSC 503*	Growth and Development of Vegetable Crops	2+1
VSC 504*	Principles of Vegetable Breeding	3+0
VSC 505	Breeding of Self Pollinated Vegetable Crops	2+1
VSC 506	Breeding of Cross Pollinated Vegetable Crops	2+1
VSC 507	Protected Cultivation of Vegetable Crops	1+1
VSC 508	Seed Production of Vegetable Crops	2+1
VSC 509	Production of Underutilized Vegetable Crops	2+1
VSC 510	Systematics of Vegetable Crops	1+1
VSC 511	Organic Vegetable Production	1+1
VSC 512	Production of Spice Crops	2+1
VSC 513	Processing of Vegetable	1+1
VSC 514	Postharvest Management of Vegetable Crops	2+1
MINOR COURSES (08 Credits)		
Vegetable Breeding		
	Courses form the department of Genetic and Plant Breeding/Biotechnology	
Vegetable Production		
	Courses form the department of Agronomy/Soil Science	
SUPPORTING COURSES (06 Credits)		
BPS-661	Experimental Statistics	3+1
	Courses from Dept. of Plant Pathology/ Soil Science/related to research	2
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its Managements in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agriculture Research, Research Ethics and Rural Development Programmes	1(0-0-1)
600	Seminar	1(1-0-0)
690	Master's Thesis Research	30
	Total	70 Credits

* Compulsory among major courses

College of Basic Science & Humanities

Ph.D. Programme

- 1. Department of Biochemistry**
- 2. Department of Botany**
- 3. Department of Chemistry**
- 4. Department of Agricultural Chemicals**
- 5. Environmental Science**
- 6. Mathematics**
- 7. Microbiology**
- 8. Molecular Biology & Genetics Engineering**
- 9. Physics**
- 10. Plant Physiology**

M.Sc. Programme

- 1. Department of Biochemistry**
- 2. Department of Botany**
- 3. Department of Chemistry**
- 4. Department of Agricultural Chemicals**
- 5. Environmental Science**
- 6. Mathematics**
- 7. Microbiology**
- 8. Molecular Biology & Genetics Engineering**
- 9. Physics**
- 10. Plant Physiology**

Ph.D. Biochemistry

Sl.No.	Course number	Course title	Credit
Major Courses (12 Credits)			
1	BBC-711	Application of Techniques in Biochemistry	3(1-0-2)
2	BBC-730	Advanced Enzymology	3(2-0-1)
3	BBC-740	Advanced Biochemistry & Molecular Biology	3(3-0-0)
4	BBC-751	Biomembranes	2(2-0-0)
5	BBC-766	Frontier topics in Biochemistry	2(2-0-0)
		TOTAL	13
Supporting Courses (06 Credits)			
1	BHS-652	Research Methodology I	1(1-0-0)
2	BPS-653	Research Methodology II	3(2-0-1)
3	TBD	Research and Publication Ethics	2 (1-0-1)
		TOTAL	06
Optional / Minor courses (06 Credits)			
From any department (Other than major department) of the university related to the research problem			
		TOTAL	06
1	BBC-788	Doctoral Seminar-I	1 (1-0-0)
2	BBC-789	Doctoral Seminar-II	1(1-0-0)
3	BBC-790	Ph.D. Thesis Research	75
		TOTAL	102 Credits

***Core courses /compulsory courses**

M. Sc. (Ag.) / M. Sc. Biochemistry

Sl. No	Course number	Course title	Credit
Major Courses (20 Credits)			
1	BBC-501	Basic Biochemistry	3(3-0-0)
2	BBC-512	Techniques in Biochemistry-I	2(2-0-0)
3	BBC-513	Techniques in Biochemistry-II	2(0-0-2)
4	BBC-530	Enzymology	3(2-0-1)
5	BBC-640	Intermediary Metabolism I	2(2-0-0)
6	BBC-641	Intermediary Metabolism II	2(2-0-0)
7	BBC-645	Plant Biochemistry	3(3-0-0)
8	BBC-651	Animal Biochemistry	3(3-0-0)
		TOTAL	20
Optional / Minor courses (8 Credits)			
1	Will be taken from any department of the university related to the research problem		
		TOTAL	08
Supporting Courses (06 Credits)			
1	BMB-520	Fundamentals of Molecular Biology	3(3-0-0)
2	BBM-501	Principles Microbiology	3(3-0-0)
		TOTAL	06
Common courses (05 Credits)			
1	TBD	Library and information services	1 (0-0-1)
2	TBD	Technical Writing and communication skills	1(0-0-1)
3	TBD	Intellection property and its management in agriculture	1(0-0-1)
4	TBD	Basic concept in laboratory techniques	1(0-0-1)
5	TBD	Agriculture research, Research Ethics and Rural Development Programmes	1(0-0-1)
6	BBC-600	Seminar	1(0-0-1)
7	BBC-690	Master's Thesis Research	30
		TOTAL	70

***Core courses /compulsory courses**

List of Post Graduate Courses of the Department Biochemistry

Code	Course title	Credits
BBC-500	Chemistry of Biomolecules	3(3-0-0)
BBC-501 *	Basic Biochemistry	3(3-0-0)
BBC-505 ^	Basic Techniques in Biochemistry	1(0-0-1)
BBC-512*	Techniques in Biochemistry-I	2(2-0-0)
BBC-513*	Techniques in Biochemistry-II	2(0-0-2)
BBC-530 *	Enzymology	3(2-0-1)
BBC-600	Master Seminar	1(1-0-0)
BBC-601	Special problem	1-2
BBC-610	Biophysical and Bioanalytical Chemistry	2(2-0-0)
BBC-621	Nutritional Biochemistry	3(2-0-1)
BBC-640 *	Intermediary Metabolism I	2(2-0-0)
BBC-641 *	Intermediary Metabolism II	2(2-0-0)
BBC-645*	Plant biochemistry	3(3-0-0)
BBC-651*	Animal biochemistry	3(3-0-0)
BBC-655	Carbon and Nitrogen Metabolism	2(2-0-0)
BBC-656	Nitrogen and Sulfur Metabolism	2(2-0-0)
BBC-657	Biochemistry on Xenobiotics	2(2-0-0)
BBC- 661	Concepts in Biochemical Diagnosis	3(2-0-1)
BBC-690	Master Thesis/Research	30
BBC-711 **	Application of techniques in Biochemistry	3(1-0-2)
BBC-730 **	Advanced Enzymology	3(2-0-1)
BBC-740 **	Advanced Biochemistry & Molecular Biology	3(3-0-0)
BBC-750	Biochemistry and Molecular Probes	2(2-0-0)
BBC-751**	Biomembranes	2(2-0-0)
BBC-756	Biochemistry of Biotic and Abiotic Stresses	3(3-0-0)
BBC-761	Concepts and application of Omics in Biological Science	3(3-0-0)
BBC-766 **	Frontier Topics in Biochemistry	2(2-0-0)
BBC-788	Doctoral Seminar-I	1(1-0-0)
BBC-789	Doctoral Seminar-II	1(1-0-0)
BBC-790	Ph.D. Thesis/Research	75

* Compulsory for Master's programme

** Compulsory for Doctoral programme

^ Open for PG students for other disciplines

Ph.D. Botany

Course No.	Course Title	Credit Hours
MAJOR COURSES * (12 Credits)		
BBB 651	Plant Taxonomy	3(2-0-1)
BBB 705	Plants in Extreme Habitats	2(2-0-0)
BBB 710	Rhizosphere Biology	2(2-0-0)
BBB 720	Economic Botany	3(3-0-0)
BBB/BBE 613	Biodiversity: Concepts and Management Practices	2(2-0-0)
SUPPORTING COURSES (06 Credits)		
BHS 652	Research Methodology - I	1(1-0-0)
BHS 653	Research Methodology - II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
OPTIONAL/ MINOR COURSES (06 Credits)		
Will be taken from any department (other than major department) of the university related to the research problem		
BBB 788	Doctoral Seminar I	1(1-0-0)
BBB 789	Doctoral Seminar II	1(1-0-0)
BBB 790	Ph.D. Thesis Research	75
	Total Credits	101

*Core courses / compulsory courses

M. Sc. Botany

Course No.	Title of the Course	Credit Hours
MAJOR COURSES* (20 Credits)		
BBB 500	Plant Diversity I	3(2-0-1)
BBB 501	Plant Diversity II	3(2-0-1)
BBB 525	Angiosperm Diversity & Resource Utilization	3(2-0-1)
BBB 535	Plant Ecology	2(2-0-0)
BBB 510	Plant Morphology & Anatomy	2(1-0-1)
BBB 545	Biology of Plant Reproduction	2(1-0-1)
BBB 599	Mycology	3(2-0-1)
BBB 615**	Economic Botany of Cryptogams	2(2-0-0)
OPTIONAL/ MINOR COURSES (08 Credits)		
Will be taken from any department of the university related to the research problem		
SUPPORTING COURSES (06 Credits)		
BBC 501	General Biochemistry (or equivalent)	3(3-0-0)
BPY 602***	Principles of Plant Physiology-II: Metabolic Processes and Growth Regulation	3(2-0-1)
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communication Skills	1(0-0-1)
	Intellectual Property and its Management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
BBB 600	Master's Seminar	1(1-0-0)
BBB 690	Master's Thesis Research	30
	Total Credits	70

*Core courses / compulsory courses

** New course being proposed

*** New course as proposed by the Department of Plant Physiology

M.Sc. Chemistry

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (20 Credits)		
BPC534	Preparation and identification of Organic Compounds	2(0-0-2)
BPC625	Quantitative inorganic Analysis	2(1-0-1)
BPC638	Organic Synthesis	3(1-0-2)
BPC654	Green Chemistry and Application	2(1-0-1)
BPC661	Medicinal Chemistry	3(3-0-0)
BPC632	Heterocyclic Chemistry	3(3-0-0)
BPC660	Chemistry of Polymers	3(2-0-1)
BPC532	Chemistry of Dyes and Pigments	3(2-0-1)
BPC642	Electro Chemistry	2(2-0-0)
BPC643	Biophysical Chemistry	2(1-0-1)
BPC616	Use of Radioisotopes in Research	2(1-0-1)
BPC615	Radio Chemistry	2(1-0-1)
BPC624	Coordination Chemistry	2(2-0-0)
	Sub-total	20
2- BASIC SUPPORTING COURSES (06 Credits)		
BBC501	General Biochemistry	3(3-0-0)
BPS561	Statistical methods	3(2-0-1)
	Sub Total	06
3- OPTIONAL/ MINOR COURSES (06 credits)		
BPC534	Preparation and identification of Organic Compounds	2(0-0-2)
BPC625	Quantitative inorganic Analysis	2(1-0-1)
BPC638	Organic Synthesis	3(1-0-2)
BPC654	Green Chemistry and Application	2(1-0-1)
BPC661	Medicinal Chemistry	3(3-0-0)
BPC632	Heterocyclic Chemistry	3(3-0-0)
BPC660	Chemistry of Polymers	3(2-0-1)
BPC532	Chemistry of Dyes and Pigments	3(2-0-1)
BPC642	Electro Chemistry	2(2-0-0)
BPC643	Biophysical Chemistry	2(1-0-1)
BPC616	Use of Radioisotopes in Research	2(1-0-1)
BPC615	Radio Chemistry	2(1-0-1)
BPC624	Coordination Chemistry	2(2-0-0)
4. SEMINAR		
	Sub Total	02
5 - THESIS/RESEARCH (75 credits)		
	Total	101

List of Post Graduate Courses of the Department

Course No.	Course Title	Credit Hours
BBB 500	Plant Diversity I	3(2-0-1)
BBB 501	Plant Diversity II	3(2-0-1)
BBB 510	Plant Morphology & Anatomy	2(1-0-1)
BBB 525	Angiosperm Diversity & Resource Utilization	3(2-0-1)
BBB 530	Fundamentals of Ecology	3(2-0-1)
BBB 535	Plant Ecology	2(2-0-0)
BBB 545	Biology of Plant Reproduction	2(1-0-1)
BBB 599	Mycology	3(2-0-1)
BBB 600	Master's Seminar	01
BBB 601	Special Problem	2
BBB/BBE 613	Biodiversity: Concepts and Management Practices	2(2-0-0)
BBB 615*	Economic Botany of Cryptogams*	2(2-0-0)
BBB 625	Mycology -I	3(2-0-1)
BBB 626	Mycology-II	3(2-0-1)
BBB 651	Plant Taxonomy	3(2-0-1)
BBB 690	Master's Thesis Research	30
BBB 705	Plants in Extreme Habitats	2(2-0-0)
BBB 710	Rhizosphere Biology	2(2-0-0)
BBB 720	Economic Botany	3(3-0-0)
BBB 721	Ethnobotany	2(2-0-0)
BBB 730	Recent Advances in Biosystematics	2(2-0-0)
BBB 750	Plant Molecular Taxonomy	2(2-0-0)
BBB 788	Doctoral Seminar I	01
BBB 789	Doctoral Seminar II	01
BBB 790	Thesis Research	75

* New course being proposed

Ph.D. Agricultural Chemicals

MAJOR COURSES (13 CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BPC701	Chemistry of Biopesticides	3(2-0-1)
BPC707	Agrochemical Formulation Technology	4(2-0-2)
BPC730	Advanced Organic Chemistry for Agrochemicals	3(2-0-1)
BPC710	Pesticide Metabolism, persistence and Decontamination	3(2-0-1)
SUPPORTING COURSES 06 (05CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BHS652	Research Methodology-I	1(1-0-0)
BPS653	Research Methodology-II	3(2-0-1)
BHS	Research and Publication Ethics	1(1-0-0) *

*= Decided in faculty meeting

MINOR/ OPTIONAL COURSE (06CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BPC602	Environmental Chemistry	3(2-0-1)
BPC651	Analytical Chemistry	3(1-0-2)
BPC654	Green Chemistry and Application	2(1-0-1)
BPC711	Spectroscopic and Separation Methods	3(3-0-0)
BPC743	Special Topic in Agrochemicals	1(1-0-0)
APP611	Chemicals in Plant Disease Management	3(2-0-1)
APA606	Advances in Weed Management	2(2-0-0)
APS615	Fertilizer Technology	1(1-0-0)
BPS661	Experimental Statistics	4(3-0-1)
APE707	Advanced Insecticide Toxicology	3(2-0-1)
	Will be taken from other department of University as per advisor recommendation or related to research problem	(06credits)
BPC788	Doctoral Seminar-I	1
BPC789	Doctoral Seminar-II	1
BPC790	Ph.D. Thesis Research	75

Ph.D. Chemistry

MAJOR COURSES (12 CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BPC711	Spectroscopic and Separation Methods	3(3-0-0)
BPC721	Special Topics in Inorganic Chemistry	2(2-0-0)
BPC732	Chemistry of Bioactive Natural Products	2(2-0-0)
BPC741	Selected Topics in Physical Chemistry	3(3-0-0)
BPC731	Advance Organic Chemistry	2(2-0-0)

SUPPORTING COURSES 06 (05CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BHS652	Research Methodology-I	1(1-0-0)
BPS653	Research Methodology-II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)

*= Decided in faculty meeting

MINOR/ OPTIONAL COURSE (06CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BPC602	Environmental Chemistry	3(2-0-1)
BBC501	General Biochemistry	3(2-0-1)
BBC505	Basic Techniques in Biochemistry	1(0-0-1)
BBC510	Biochemical Techniques	3(1-0-2)
BBC620	Food and Nutritional Biochemistry	2(2-0-0)
BBC655	Carbon and Nitrogen Metabolism	2(2-0-0)
BBE612	Ecosystem Analysis	3(2-0-1)
BBE621	Environmental Pollution	2(2-0-0)
BBE613	Biodiversity Concept and Management practices	2(2-0-0)
BBE631	Resource and Energy Conservation	2(1-0-1)
BBE611	Environmental Physiology	2(2-0-1)
BPS661	Experimental Statistics	4(3-0-1)
	Will be taken from other department of University as per advisor recommendation or related to research problem	(06credits)

BPC788	Doctoral Seminar-I	1
BPC789	Doctoral Seminar-II	1

BPC790	Ph.D. Thesis Research	75
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M.Sc.(Ag)Agricultural Chemicals

MAJOR COURSES (21 CREDITS)		
COURSE No.	TITLE OF THE COURSE	Credit Hours
BPC500	BasicChemistry	4(3-0-1)
BPC520	AgrochemicalRegulation,QualityControlandManagement	2(2-0-0)
BPC606	AgrochemicalsforInsects,MitesandTermitesManagement	3(2-0-1)
BPC607	AgrochemicalsforDiseaseManagement	3(2-0-1)
BPC608	AgrochemicalsforWeedsandCropsManagement	3(2-0-1)
BPC630	NaturalProductChemistry	3(2-0-1)
BPC645	PesticideResidueChemistry	3(2-0-1)
OPTIONAL COURSES/MINOR COURSE (08CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BPC505	IntroductiontoAgrochemicals	2(2-0-0)
BPC510	ChemicalLaboratoryTechniques	3(1-0-2)
BPC614	ChromatographicandSpectroscopicTechniques	3(2-0-1)
APS516	Soil fertility and fertilizer use	4(3-0-1)
APP611	Chemicals and Botanicals in plant disease management	3(2-0-1)
APE508	Toxicology of Insecticides	3(2-0-1)
APA503	Principle and practices of weed management	3(2-0-1)
SUPPORTING COURSES (06CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BBC501	Basic Biochemistry	3(3-0-0)
BPS561	Statistical methods	3(2-0-1)
COMMON COURSES (05CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
TBD*	Library and Information Services	1(0-0-1)
BHS500	Technical Writing and Communications Skills	1(0-0-1)
TBD*	Intellectual Property and its Management in Agriculture	1(1-0-0)
BPC/BBB/506	Basic Concepts in Laboratory Techniques	1(0-0-1)
BHS/AAC501	Agricultural Research, Research Ethics and Rural Development Programme	1(1-0-0)

TBD* = To be decided by University

BPC600	Master's Seminar	1
BPC690	Master's THESISResearch	30

MAJOR COURSES (20 CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BPC531	Organic Chemistry	3(3-0-0)
BPC623	Advanced Inorganic Chemistry	3(3-0-0)
BPC631	Mechanism of Organic Reactions	2(2-0-0)
BPC639	Spectroscopic Methods of Analysis	3(2-0-1)
BPC641	Physical Chemistry	3(2-0-1)
BPC644	Advance Physical Chemistry	3(3-0-0)
BPC651	Analytical Chemistry	3(1-0-2)
OPTIONAL COURSES/MINOR COURSE (08CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BPC534	Preparation and identification of Organic Compounds	2(0-0-2)
BPC625	Quantitative inorganic Analysis	2(1-0-1)
BPC638	Organic Synthesis	3(1-0-2)
BPC654	Green Chemistry and Application	2(1-0-1)
BPC661	Medicinal Chemistry	3(3-0-0)
BPC632	Heterocyclic Chemistry	3(3-0-0)
BPC660	Chemistry of Polymers	3(2-0-1)
BPC532	Chemistry of Dyes and Pigments	3(2-0-1)
BPC642	Electro Chemistry	2(2-0-0)
BPC643	Biophysical Chemistry	2(1-0-1)
BPC616	Use of Radioisotopes in Research	2(1-0-1)
BPC615	Radio Chemistry	2(1-0-1)
BPC624	Coordination Chemistry	2(2-0-0)
SUPPORTING COURSES (06CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
BBC501	General Biochemistry	3(3-0-0)
BPS561	Statistical methods	3(2-0-1)
COMMON COURSES (05CREDITS)		
COURSE No.	TITLE OF THE COURSE	CREDIT HOURS
TBD*	Library and Information Services	1(0-0-1)
BHS500	Technical Writing and Communications Skills	1(0-0-1)
TBD*	Intellectual Property and its Management in Agriculture	1(1-0-0)
BPC506	Basic Concepts in Laboratory Techniques	1(0-0-1)
BHS/AAC	Agricultural Research, Research Ethics and Rural Development Programme	1(1-0-0)

TBD* = To be decided by University

BPC600	Master's Seminar	1
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BPC690	Master's Thesis Research	30
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List of New and Modified courses of Chemistry Department

EXISTING COURSES				PROPOSED BY DEPARTMENT AS PERBSMA/ICAR RECOMMENDATION			MODIFIED/NEW
Course Code	Course Title	Credit	Hours	Course Code	Course Title	Credit	Hours
BPC-500	General Chemistry		4(3-0-1)	BPC-500	Basic Chemistry		4(3-0-1)
	New Course			BPC-506	Basic Concepts in Laboratory Techniques		1(0-0-1)
	New Course			BPC-510	Chemical Laboratory Techniques		3(1-0-2)
	New Course			BPC-520	Agrochemical Regulation, Quality Control and Management		2(2-0-0)
BPC-606	Synthetic Agrochemical for Insect and Mites Management		3(2-0-1)	BPC-606	Agrochemicals for Insects, Mites and Termites Management		3(2-0-1)
BPC-607	Synthetic Agrochemical for Fungi and Nematode Management		3(2-0-1)	BPC-607	Agrochemicals for Disease Management		3(2-0-1)
BPC-608	Synthetic Agrochemical for Weed Management		3(2-0-1)	BPC-608	Agrochemicals for Weeds and Crops Management		3(2-0-1)
BPC-614	Spectroscopic and Chromatographic Techniques		3(2-0-1)	BPC-614	Chromatographic and Spectroscopic Techniques		3(2-0-1)
BPC-623	Advance Inorganic Chemistry		2(2-0-0)	BPC-623	Advance Inorganic Chemistry		3(3-0-0)
	New Course			BPC-630	Natural Product Chemistry		3(2-0-1)
	New Course			BPC-645	Pesticide Residue Chemistry		3(2-0-1)
BPC-701	Advances in Agrochemicals		3(2-0-1)	BPC-701	Chemistry of Biopesticides		3(2-0-1)
	New Course			BPC-707	Agrochemical Formulation Technology		4(2-0-2)
	New Course			BPC-710	Pesticide Metabolism, persistence and Decontamination		3(2-0-1)
	New Course			BPC-730	Advanced Organic Chemistry for Agrochemicals		3(2-0-1)
BPC-741	Selected Topics in Physical Chemistry		2(2-0-0)	BPC-741	Selected Topics in Physical Chemistry		3(3-0-0)

List of Post Graduate Courses of the Chemistry Department

Course No.	Course Title	Credit Hours
BPC-500	Basic Chemistry	4(3-0-1)
BPC-501	Agricultural Chemicals-I	3(2-0-1)
BPC-502	Agricultural Chemicals-II	3(2-0-1)
BPC-503	Methods of Pesticides Analysis for Quality Control	2(1-0-1)
BPC-504	Formulation Chemistry	2(1-0-1)
BPC-505	Introduction to Agrochemicals	2(2-0-0)
BPC-506	Basic Concepts in Laboratory Techniques	1(0-0-1)
BPC-510	Chemical Laboratory Techniques	3(1-0-2)
BPC-512	Radioisotopes Techniques in Mechanical Engineering	1(0-0-1)
BPC-520	Agrochemical Regulation, Quality Control and Management	2(2-0-0)
BPC-531	Organic Chemistry	3(3-0-0)
BPC-532	Chemistry of Dyes and Pigments	3(2-0-1)
BPC-533	Chemistry of Fibers	3(2-0-1)
BPC-534	Preparation and Identification of Organic Compounds	2(0-0-2)
BPC-600	Master's Seminar	1
BPC-601	Special Problem	1-2
BPC-602/ BBE-602	Environmental Chemistry	3(2-0-1)
BPC-606	Agrochemicals for Insects, Mites and Termites Management	3(2-0-1)
BPC-607	Agrochemicals for Disease Management	3(2-0-1)
BPC-608	Agrochemicals for Weeds and Crops Management	3(2-0-1)
BPC-611	Chromatographic Methods of Analysis	2(1-0-1)
BPC-612	Optical Methods of Analysis	2(1-0-1)
BPC-613	Electro Analytical Methods of Analysis	1(0-0-1)
BPC-614	Chromatographic and Spectroscopic Techniques	3(2-0-1)
BPC-615	Radio Chemistry	2(1-0-1)
BPC-616	Use of Radioisotopes in Research	2(1-0-1)
BPC-621	Inorganic Chemistry-I	3(2-0-1)
BPC-622	Inorganic Chemistry-II	2(2-0-0)
BPC-623	Advanced Inorganic Chemistry	3(3-0-0)
BPC-624	Coordination Chemistry	2(2-0-0)
BPC-625	Quantitative Inorganic Analysis	2(1-0-1)
BPC-630	Natural Product Chemistry	3(2-0-1)
BPC-631	Mechanism of Organic Reactions	2(2-0-0)
BPC-632	Heterocyclic Chemistry	3(3-0-0)
BPC-633	Chemistry of Terpenoids and Steroids	2(2-0-0)
BPC-634	Chemistry of Carbohydrate	4(3-0-1)

BPC-635	Vitamins and Hormones	2(2-0-0)
BPC-636	Advance Organic Synthesis	2(0-0-2)
BPC-637	Quantitative Organic Analysis	2(0-0-2)
BPC-638	Organic Synthesis	3(1-0-2)
BPC-639	Spectroscopic Methods of Analysis	3(2-0-1)
BPC-641	Physical Chemistry	3(2-0-1)
BPC-642	Electro Chemistry	2(2-0-0)
BPC-643	Biophysical Chemistry	2(1-0-1)
BPC-644	Advance Physical Chemistry	3(3-0-0)
BPC-645	PesticideResidueChemistry	3(2-0-1)
BPC-651	Analytical Chemistry	3(1-0-2)
BPC-653	Green Chemistry	2(2-0-0)
BPC-654	Green Chemistry and Application	2(1-0-1)
BPC-660	Chemistry of Polymers	3(2-0-1)
BPC-661	Medicinal Chemistry	3(3-0-0)
BPC-690	Master's Thesis Research	30
BPC-701	Chemistry of Biopesticides	3(2-0-1)
BPC-702	Research Techniques in Agrochemicals	2(0-0-2)
BPC-703	Recent Advances in Pesticides Formulations	2(2-0-0)
BPC-707	Agrochemical Formulation Technology	4(2-0-2)
BPC-710	Pesticide Metabolism, persistence and Decontamination	3(2-0-1)
BPC-711	Spectroscopic and Separation Methods	3(3-0-0)
BPC-721	Special Topics in Inorganic Chemistry	2(2-0-0)
BPC-730	Advanced Organic Chemistry for Agrochemicals	3(2-0-1)
BPC-731	Advance Organic Chemistry	2(2-0-0)
BPC-732	Chemistry of Bioactive Natural Products	2(2-0-0)
BPC-741	Selected Topics in Physical Chemistry	3(3-0-0)
BPC-743	Special Topics in Agrochemicals	1(1-0-0)
BPC-788	Doctoral Seminar-I	1
BPC-789	Doctoral Seminar-II	1
BPC-790	Ph.D. Thesis Research	75

1. Environmental Sciences

COURSE PROGRAMME Department of : Environmental Sciences Name of Degree : Ph.D.

1- MAJOR COURSES (12 Credits)		Credits
i. BBE- 644	Experimentation in Environmental Science	3(0-0-3)
ii. BBB/BBE -613	Biodiversity Concept and Management Practices	2 (2-0-0)
iii.BBE -722	Air and Water Pollution	2(2-0-0)
iv. BBE -732	Environmental Waste Utilization	2(2-0-0)
v. BBE -742	Environmental Impact Assessment and Management	3(2-0-1)
Sub Total		12
2- BASIC SUPPORTING COURSES (06 Credits)		06
i. BHS-652	Research Methodology (I)	1(1-0-0)
ii. BPS-653	Research Methodology (II)	3(2-0-1)
iii. BPY -705	Research & Publication Ethics	2(2-0-0)
Sub Total		06
3- OPTIONAL/ MINOR COURSES (06 credits)		
* will be taken from any department (other than major department) of the university related to the research problem		06
SEMINAR		
i. BBE-788	Doctoral Seminar I	1(1-0-0)
ii. BBE-789	Doctoral Seminar II	1(1-0-0)
Sub Total		02
5 - THESIS/RESEARCH (75 credits)		
i. BBE -790	Ph.D. Thesis/Research	75
Total		101

COURSE PROGRAMME**Department of : Environmental Sciences****Name of Degree : M.Sc.**

1-MAJOR COURSES		Credits
i. BBE 500	Physical Environment	2(2-0-0)
ii. BBE 612	Ecosystem Analysis	3(2-0-1)
iii. BBE 621	Environmental Pollution	3(3-0-0)
iv. BBE 631	Resource and Energy Conservation	3(2-0-1)
v. BBE 642	Environmental Monitoring	3(2-0-1)
vi. BBE- 645	Biodegradation & Waste Treatment Design	3(3-0-0)
vii. BPC 602	Environmental Chemistry	3(2-0-1)
Sub Total		20
2- OPTIONAL COURSES		08
3- SUPPORTING COURSES		06
i. BPS 561	Statistical Methods	3(3-0-0)
ii. AAM 650	Remote Sensing Applications in Agriculture	3(2-0-1)
Sub Total		06
4- COMMON COURSES		
1. Library and Information Services		
2. Technical Writing and Communications Skills		
3. Intellectual Property and its Management		
4. Basic Concepts in Laboratory Techniques		
5. Research, Research Ethics and Rural Development Programmes.		
Sub Total		05
5- SEMINAR		
i. BBE 600	Master Seminar	1(1-0-0)
ii. BBE 690	Master's Thesis/Research	30
Total		70

LIST OF POST GRADUATE COURSES OF THE DEPARTMENT		
Course No.	Title of Course	Credits
BBE-500	Physical Environment	2(2-0-0)
BBE- 513	Social Environment and Human Ecology	2(2-0-0)
BBE- 611	Environmental Physiology	2(1-0-1)
BBE- 612	Ecosystem Analysis	3(2-0-1)
BBB/BBE- 613	Biodiversity: Concepts and Management Practices	2(2-0-0)
BBE- 621	Environmental Pollution	3(3-0-0)
BBE- 631	Resource and Energy Conservation	3(2-0-1)
BBE-642	Environmental Monitoring	3(2-0-1)
BBE-722	Air and Water Pollution	2(2-0-0)
BBE-732	Environmental Waste Utilization	2(2-0-0)
BBE-742	Environmental Impact Assessment and Management	3(2-0-1)

COURSE PROGRAMME

DEPATMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Ph.D. Mathematics

Course No.	Course Title	Credit Hours
MAJOR COURSES		
BPM713	Boundary Value Problems	3
BPM731	Advanced Analysis	3
BPM732	Integral Transforms and Z-Transforms	3
BPM737	Special Functions	3
	Sub-Total	12
SUPPORTING COURSES		
BHS652	Research Methodology-I	1
BPS653	Research Methodology-II	3
	Research and Publication Ethics	2
	Sub-Total	6
OPTIONAL/MINOR COURSES		
	Will be taken from any department other than major department of the university related to the research problem (6 Credits)	
	Sub-Total	6
BPM788	Doctoral Seminar-I	1
BPM789	Doctoral Seminar-II	1
BPM790	Ph.D. Thesis Research	75
	Total	101

COURSE PROGRAMME

DEPATMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Ph.D. Statistics/ Agricultural Statistics

Course No.	Course Title	Credit Hours
MAJOR COURSES		
BPS702	Simulation Techniques	3
BPS711	Advanced Statistical Methods	3
BPS719	Survival Analysis and Bayesian Inference	3
BPS720*	Data Science Concepts for Statistical Research	3
	Sub-Total	12
SUPPORTING COURSES		
BHS652	Research Methodology-I	1
BPS653	Research Methodology-II	3
	Research and Publication Ethics	2
	Sub-Total	6
OPTIONAL/MINOR COURSES		
	Will be taken from any department other than major department) of the university related to the research problem (6 Credits)	
	Sub-Total	6
BPS788	Doctoral Seminar-I	1
BPS789	Doctoral Seminar-II	1
BPS790	Ph.D. Thesis Research	75
	Total	101

* New course introduced

COURSE PROGRAMME

DEPATMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Ph.D. Statistics/ Agricultural Statistics

Course No.	Course Title	Credit Hours
MAJOR COURSES		
BPS702	Simulation Techniques	3
BPS711	Advanced Statistical Methods	3
BPS719	Survival Analysis and Bayesian Inference	3
BPS720*	Data Science Concepts for Statistical Research	3
	Sub-Total	12
SUPPORTING COURSES		
BHS652	Research Methodology-I	1
BPS653	Research Methodology-II	3
	Research and Publication Ethics	2
	Sub-Total	6
OPTIONAL/MINOR COURSES		
	Will be taken from any department other than major department) of the university related to the research problem (6 Credits)	
	Sub-Total	6
BPS788	Doctoral Seminar-I	1
BPS789	Doctoral Seminar-II	1
BPS790	Ph.D. Thesis Research	75
	Total	101

* New course introduced

COURSE PROGRAMME

DEPATMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

M.Sc. Agricultural Statistics

Course No.	Course Title	Credit Hours
MAJOR COURSES		
BPS561	Statistical Methods	3
BPS663	Linear Models	2
BPS571	Probability Theory and Distributions	2
BPS572	Design of Experiment I	4
BPS574	Sampling Techniques I	3
BPS576	Estimation and Statistical Hypotheses Testing	4
BPS577	Multivariate Analysis and Official Statistics	3
	Sub-Total	21
OPTIONAL/MINOR COURSES		
	Will be taken from any department of the university related to the research problem (8 Credits)	
	Sub-Total	8
SUPPORTING COURSES		
BPM501	Linear Algebra and Advanced Calculus	3
BPS669	Operations Research	3
	Sub-Total	6
COMMON COURSES		
	5 Cr. Hrs. courses from Annexure -II	5
	Sub-Total	5
DEFICIENCY COURSES		
BPS404	Applied Statistics and Regression Analysis	3
	Sub-Total	3
BPS600	Seminar	1
BPS690	Master's Thesis Research	30
	Total	74

COURSE PROGRAMME

DEPATMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

M.Sc. Mathematics

Course No.	Title of the Course	Credit Hours
MAJOR COURSES		
BPM511	Mechanics and Variational Principles	3
BPM531	Real Analysis	3
BPM532	Differential Geometry and Tensors	3
BPM533	Topology	3
BPM534	Complex Analysis	3
BPM536	Abstract Algebra	3
BPM635	Functional Analysis	3
	Sub-Total	21
OPTIONAL/ MINOR COURSES		
	Will be taken from any department of the university related to the research problem (8 Credits)	
	Sub-Total	8
SUPPORTING COURSES		
BPS669	Operations Research	3
TCE540	Fluid Mechanics	3
	Sub-Total	6
COMMON COURSES		
	5 Credits courses from Annexure -II	5
	Sub-Total	5
BPM600	Seminar	1
BPM690	Master's Thesis Research	30
	Total	71

COURSE PROGRAMME

DEPATMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

M.Sc. Statistics

Course No.	Course Title	Credit Hours
MAJOR COURSES		
BPS561	Statistical Methods	3
BPS663	Linear Models	2
BPS571	Probability Theory and Distributions	2
BPS572	Design of Experiment I	4
BPS574	Sampling Techniques I	3
BPS576	Estimation and Statistical Hypotheses Testing	4
BPS577	Multivariate Analysis and Official Statistics	3
	Sub-Total	21
OPTIONAL/MINOR COURSES		
	Will be taken from any department of the university related to the research problem (8 Credits)	
	Sub-Total	8
SUPPORTING COURSES		
BPM535	Differential Equations	3
BPS669	Operations Research	3
	Sub-Total	6
COMMON COURSES		
	5 Cr. Hrs. courses from Annexure –II	5
	Sub-Total	5
BPS600	Seminar	1
BPS690	Master's Thesis Research	30
	Total	71

Mathematics:

Course Code	Course Title	Cr. Hrs.
BPM501	Linear Algebra & Advanced Calculus	3(3-2-0)
BPM511	Mechanics and Variational Principles	3(3-2-0)
BPM531	Real Analysis	3(3-2-0)
BPM532	Differential Geometry & Tensors	3(3-2-0)
BPM533	Topology	3(3-2-0)
BPM534	Complex Analysis	3(3-2-0)
BPM535	Differential Equations	3(3-2-0)
BPM536	Abstract Algebra	3(3-2-0)
BPM601	Special Problem	1-2
BPM602	Special Functions & Integral Equations	2(2-2-0)
BPM604	Difference, Differential Equations & Topology	3(3-2-0)
BPM607	Transformations & Calculus of Variations	2(2-1-0)
BPM635	Functional Analysis	3(3-2-0)
BPM711	Mathematical Modeling	3(3-2-0)
BPM713	Boundary Value Problems	3(3-2-0)
BPM731	Advanced Analysis	3(3-2-0)
BPM732	Integral Transforms and Z Transforms	3(3-2-0)
BPM737	Special Functions	3(3-2-0)

Statistics:

Course Code	Course Title	Cr. Hrs.
BPS561	Statistical Methods	3(2-0-1)
BPS571	Probability Theory and Distributions	3(2-0-1)
BPS576	Estimation & Statistical Hypotheses Testing	4(3-1-1)
BPS577	Multivariate Analysis and Official Statistics	3(2-0-1)
BPS661	Experimental Statistics	4(3-0-1)
BPS662	Advanced Experimental Design	3(2-0-1)
BPS663	Linear Model	2(2-1-0)
BPS669	Operations Research	3(3-1-0)
BPS671	Theory of Sampling	3(2-0-1)
BPS672	Mathematical Statistical	3(3-1-0)
BPS681	Data Analysis and Forecasting	3(3-1-0)

BPS702	Simulation Techniques	3(2-0-1)
BPS711	Advanced Statistical Methods	3(2-0-1)
BPS719	Survival Analysis and Bayesian Inference	3(2-0-1)
BPS720	Data Science Concepts in Statistical Research	3(2-0-1)

Computer Science:

Course Code	Course Title	Cr. Hrs.
BPM502	Introduction to Computer & Programming	2
BPM503	Discrete Mathematical Structures	3
BPM551	Foundation of Theoretical Computer Science	3
BPM605	Use of Computer Software	2
BPM621	Numerical Techniques for Computers	3
BPM622	Numerical Solution of Partial Differential Equations	3
BPM623	Computer Network	2
BPM641	Object Oriented Programming	3
BPM642	Structured Programming Languages	3

Annexure –II

Common courses:

Course Code	Course Title	Cr. Hrs.
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its Management	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)

Proposed Course Programme
Degree Programme: Ph.D. Microbiology

Sl No.	Course No	Name of the Course	Remarks	Credit Hours
Major Courses (12 Credits)				
1.	BBM 650 ^{*#}	Improvement in Fermentation Technology	New Course adopted as per BSMA	2(2-0-0)
2.	BBM 710	Research Techniques in Microbiology	Existing Course	2(0-0-2)
3.	BBM 722 [*]	Recent Development in Soil Microbiology	New course as per BSMA	2(2-0-0)
4.	BBM 725	Microbial Diversity & Taxonomy	Existing Course	2(2-0-0)
5.	BBM 730	Microbial Physiology & Regulation	New course as per BSMA	2(2-0-0)
6.	BBM 750 ^{*#}	Plant-Microbe Interactions	New Course as per BSMA	2(2-0-0)
Sub Total 12				
Supporting Courses (06 Credits)				
1.	BHS 652	Research Methodology I		1(1-0-0)
2.	BHS 653	Research Methodology II		3(2-0-1)
3.		Research and Publication Ethics		2(1-0-1)
Sub Total 06				
Optional / Minor Courses 06 Credits				
Seminar (02 Credits)				
1.	BBM 788	Doctoral Seminar I		1(1-0-0)
2.	BBM 789	Doctoral Seminar II		1(1-0-0)
Sub Total 02				
Doctoral Research				
1.	BBM 790	Ph. D. Thesis Research		75
Total 101 Credits				

*Core Courses

[#]The laboratory parts of the coursesBBM650 (Improvement in Fermentation Technology) and BBM 750 (Plant-Microbe Interactions) will be covered in the laboratory course BBM 710 (Research Techniques in Microbiology).

DEPARTMENT OF MICROBIOLOGY
COLLEGE OF BASIC SCIENCES & HUMANITIES

Proposed Course Programme

M.Sc. / M.Sc. (Ag) Microbiology

Sl No.	Course No	Name of the Course	Remarks	Credit Hrs
Major Courses (20 Credits)				
1.	BBM 501 [#]	Principles of Microbiology	New course adopted as such from BSMA guidelines	3(3-0-0)
2.	BBM 506 [#]	Microbial Physiology & Metabolism	Existing course (modified as per BSMA guidelines)	3(3-0-0)
3.	BBM 507	Microbial Biotechnology	Existing course	3(3-0-0)
4.	BBM 510	Microbiological Techniques	Existing course	2(0-0-2)
5.	BBM 605*	Soil Microbiology	New course adopted as such from BSMA guidelines	3(2-0-1)
6.	BBM 620*	Food Microbiology	New course adopted as such from BSMA guidelines	3(2-0-1)
7..	BBM 645	Microbial Genetics	Existing course	3(2-0-1)
		Sub Total	20	
Optional / Minor Courses (08 Credits)				
Supporting Courses (06 Credit)				
1.	BBC 501	Basic Biochemistry		3(3-0-0)
2.	BBC 505	Basic Techniques in Biochemistry		1(0-0-1)
3.	BPC 614	Chromatographic and Spectroscopic Techniques		3(2-0-1)
		Sub Total	07	
Common Courses (05 Credits)				
1.		Library and Information Services		1(0-0-1)
2.		Technical Writing and Communication Skills		1(0-0-1)
3.		Intellectual Property and its Management		1(0-0-1)
4.		Basic Concepts in Laboratory Techniques		1(0-0-1)
5.		Research, research Ethics and Rural Development Programmes		1(0-0-1)
Seminar (01 Credit)				
1.	BBM 600	Seminar		1(1-0-0)
Master's Research (30 Credits)				
1.	BBM 690	Master's Thesis Research		30
		Total	71	

*Core Courses

[#]Laboratory parts of the courses BBM501 (Principles of Microbiology) and BBM 506 (Microbial Physiology & Metabolism) are being covered in the laboratory course BBM 510 (Microbiological Techniques).

List of Post Graduate Courses of the Department

1.	BBM 501*	Principles of Microbiology	3(3-0-0)
2.	BBM 506	Microbial Physiology & Metabolism	3(3-0-0)
3.	BBM 507	Microbial Biotechnology	3(3-0-0)
4.	BBM 510	Microbiological Techniques	2(0-0-2)
5.	BBM 600	Master's Seminar	1(1-0-0)
6.	BBM 601	Special Problem	1(0-0-1) or 2(0-0-2)
7.	BBM 605	Soil Microbiology	3(2-0-1)
8.	BBM 610	Application of Microbial Methods	2(0-0-2)
9.	BBM 620	Food Microbiology	3(2-0-1)
10.	BBM 640	Industrial Microbiology	2(2-0-0)
11.	BBM 645	Microbial Genetics	3(2-0-1)
12.	BBM 650	Improvement in Fermentation Technology	2(2-0-0)
13.	BBM 651	Yeast	2 (1-0-1)
14.	BBM 690	Master's Thesis Research	30
15.	BBM 710	Research Techniques in Microbiology	2(0-0-2)
16.	BBM 722	Recent Development in Soil Microbiology	2(2-0-0)
17.	BBM 725	Microbial Diversity & Taxonomy	2(2-0-0)
18.	BBM 730	Microbial Physiology & Regulation	2(2-0-0)
19.	BBM 731	Advances in Microbial Technology	1 (1-0-0)
20.	BBM 740	Microbial Enzyme Technology	2(2-0-0)
21.	BBM 750	Plant-Microbe Interactions	2(2-0-0)
22.	BBM 788	Doctoral Seminar I	1(1-0-0)
23.	BBM 789	Doctoral Seminar II	1(1-0-0)
24.	BBM 790	Ph.D. Thesis Research	75

2. *Equivalent to the existing PG Course BBM 500- General Microbiology.

COURSE PROGRAMME
DEPARTMENT OF MOLECULAR BIOLOGY & GENETIC ENGINEERING

Ph.D. Molecular Biology & Biotechnology

Course No.	Course Title	Credit Hours
Major Courses	(12 Credits)	
*BMB 711	Plant Molecular Biology	3 (3-0-0)
*BMB 721	Plant Genome Engineering	3 (3-0-0)
*BMB 751	Commercial Plant Tissue Culture	2 (2-0-0)
*BMB 731	Plant Omics and Molecular Breeding	3 (3-0-0)
*BMB 781	RNA Biology	1 (1-0-0)
Supporting Courses	(06 Credits)	
*BHS- 652	Research Methodology I	1 (1-0-0)
*BHS 653	Research Methodology II	3 (3-0-0)
	Research and Publication Ethics	2 (1-0-1)
Optional/Minor Courses	(06 Credits)	
	06 Credits from either of department or from Allied departments / Biochemistry, Genetics and Plant Breeding, Plant Pathology, Microbiology, Plant Physiology, Entomology, Bioinformatics, Plant Genetic Resources and Allied Subjects Total: 06	
*BMB-788	Doctoral Seminar I	1(1-0-0)
*BMB-789	Doctoral Seminar II	1(1-0-0)
*BMB-790	Ph.D. Thesis Research	75
	Total	101

***Core Courses /Compulsory Courses**

COURSE PROGRAMME

M.Sc. Agriculture Biotechnology

Course No.	Course Title	Credit Hours
Major Courses	(20 Credits)	
*BMB 520	Fundamentals of Molecular Biology	3 (3-0-0)
*BMB 530	Molecular Cell Biology	3 (3-0-0)
*BMB-561	Immunology and Molecular Diagnostics	3 (3-0-0)
*BMB 546	Techniques in Molecular Biology I	3 (0-0-3)
*BMB571	Omics and System Biology	3(2-0-1)
*BMB 611	Plant Genetic Engineering	3 (3-0-0)
*BMB576	IPR Biosafety Bioethics	2 (2-0-0)
Optional/Minor Courses	(08 Credits)	
	08 Credits from either of department or from Allied departments / Biochemistry, Genetics and Plant Breeding, Plant Pathology, Microbiology, Plant Physiology, Entomology, Bioinformatics, Plant Genetic Resources and Allied Subjects /Biochemistry, Genetics and Plant Breeding, Microbiology, Plant Physiology, Entomology, Bioinformatics, Plant Genetic Resources and Allied Subjects	
	Total: 08	
Supporting Courses	(06 Credits)	
*BBC-	Any basic course of Biochemistry of Master's series	3(3-0-0)
*BBM-	Any basic course of Microbiology of Master's series	3(3-0-0)
Common Courses	(05 Credits)	
*	Library and Information Services	1(0-0-1)
*	Technical Writing and Communications Skills	1(0-0-1)
*	Intellectual Property and its Management in Agriculture	1(0-0-1)
*	Basic Concepts in Laboratory Techniques	1(0-0-1)
*	Agricultural Research. Research Ethics and Rural Development Programmes	1(0-0-1)
*BMB-600	Seminar	1(1-0-0)
*BMB-690	Master's Thesis Research	30
	Total	70

***Core Courses /Compulsory Courses**

COURSE PROGRAMME

M.Sc. Molecular Biology & Biotechnology (Proposed)

Course No.	Course Title	Credit Hours
Major Courses	(20 Credits)	
*BMB 520	Fundamentals of Molecular Biology	3 (3-0-0)
*BMB 530	Molecular Cell Biology	3 (3-0-0)
*BMB-560	Immunology and Molecular Diagnostics	3 (3-0-0)
*BMB 546	Techniques in Molecular Biology I	3 (0-0-3)
*BMB571	Omics and System Biology	3(2-0-1)
*BMB 611	Plant Genetic Engineering	3 (3-0-0)
*BMB576	IPR Biosafety Bioethics	2 (2-0-0)
Optional/Minor Courses	(08 Credits)	
	08 Credits from either of department or from Allied departments / Biochemistry, Genetics and Plant Breeding, Plant Pathology, Microbiology, Plant Physiology, Entomology, Bioinformatics, Plant Genetic Resources and Allied Subjects /Biochemistry, Genetics and Plant Breeding, Microbiology, Plant Physiology, Entomology, Bioinformatics, Plant Genetic Resources and Allied Subjects	
	Total: 08	
Supporting Courses	(06 Credits)	
*BBC-	Any basic course of Biochemistry of Master's series	3(3-0-0)
*BBM-	Any basic course of Microbiology of Master's series	3(3-0-0)
Common Courses	(05 Credits)	
*	Library and Information Services	1(0-0-1)
*	Technical Writing and Communications Skills	1(0-0-1)
*	Intellectual Property and its Management in Agriculture	1(0-0-1)
*	Basic Concepts in Laboratory Techniques	1(0-0-1)
*	Agricultural Research. Research Ethics and Rural Development Programmes	1(0-0-1)
*BMB-600	Seminar	1(1-0-0)
*BMB-690	Master's Thesis Research	30
	Total	70

*Core Courses /Compulsory Courses

List of Post Graduate Courses of the Department

Course No.	Course Title	Credit Hours
BMB-510	Principles of Biotechnology	2(2-0-0)
*BMB511	Principles of Biotechnology I	3(3-0-0)
BMB-520	Fundamentals of Molecular Biology	3(3-0-0)
BMB-530	Molecular Cell Biology	3(3-0-0)
BMB-535	Techniques in Cell Biology	2(0-0-2)
*BMB- 546	Techniques in Molecular Biology I	3 (0-0-3)
*BMB-551	Stress Biology and Genomics	2 (2-0-0)
BMB-560	Immunology & Molecular Diagnostics	2(2-0-0)
*BMB-561	Immunology & Molecular Diagnostics I	3(3-0-0)
BMB-570	Introduction to Bioinformatics	3(2-0-1)
*BMB-571	Omics and System Biology	3(2-0-1)
*BMB-576	IPR Biosafety Bioethics	2 (2-0-0)
*BMB-577	Bio-entrepreneurship	1 (1-0-0)
BMB-600	Master's Seminar	1(1-0-0)
*BMB-611	Plant Genetic Engineering	3 (3-0-0)
BMB-640	Nanobiotechnology	2 (2-0-0)
*BMB-641	Nanobiotechnology I	3 (2-0-1)
*BMB-645	Stress Biology and Genomics	2 (2-0-0)
BMB-690	Master's Thesis/ Research	30
*BMB-711	Plant Molecular Biology	3 (3-0-0)
*BMB-721	Plant Genome Engineering	3 (3-0-0)
*BMB-731	Plant Omics and Molecular Breeding	3 (3-0-0)
*BMB-751	Commercial Plant Tissue Culture	2 (2-0-0)
*BMB-752	Plant Hormones and Signaling	2 (2-0-0)
*BMB-754	Plant Microbial Interaction	2 (2-0-0)
*BMB-781	RNA Biology	1 (1-0-0)
BMB-788	Doctoral Seminar I	1(1-0-0)
BMB-789	Doctoral Seminar II	1(1-0-0)
BMB-790	Ph.D. Thesis Research	75

***As per Uniform Course ICAR (BMSA) Suggested Guidelines with effect from AY 2022-23 for Master's and Doctoral Programme in Molecular Biology and Biotechnology.**

Department of Physics

Course Program for Ph.D. Physics

S.No.	Course No	Name	Credits
Major Courses: 12 credit			
1	BPP-711	Advanced Classical Mechanics	02(2-0-0)
2	BPP-720	Advanced Quantum Mechanics	02(2-0-0)
3	BPP-730	Solid State Electronics	02(2-0-0)
4	BPP-750	Advanced Statistical Mechanics	02(2-0-0)
5	BPP-751	Advanced Solid State Physics	02(2-0-0)
6	BPP-760	Advanced Nuclear Physics	02(2-0-0)
Total Credits			12
Optional Courses/Minor: 06 credit			
Course from any other department as advised by the advisory committee of student			
Supporting Courses: 06 credit			
1	BHS-652	Research Methodology I	01(1-0-0)
2	BPS-653	Research Methodology II	03(2-0-1)
3		Research and Publication Ethics	02(1-0-1)
			06
1	BPP-788	Doctoral Seminar I	01
2	BPP-789	Doctoral Seminar II	01
1	BPP-790	Ph.D. Thesis Research	75
Total Credits			101

Other Courses of the Department (Annexure-I):

S.No.	Course No.	Course Name	Credits
1.	BPP- 401	Physics for Agro-meteorologists	03(2-0-1)
2.	BPP-432	Introduction to Modern Physics	03(2-1-1)
3.	BPP-510	Mathematical Methods of Physics	02(2-1-0)
4.	BPP-511	Classical Mechanics and Relativity	02(2-1-0)
5.	BPP-512	Electromagnetism	02(2-1-0)
6.	BPP-520	Quantum Mechanics	02(2-1-0)
7.	BPP-521	Quantum Mechanics II	02(2-1-0)
8.	BPP-525	Spectroscopy	02(2-1-0)
9.	BPP-530	Electronics	02(1-1-1)
10.	BPP-534	Agro Meteorological Instrumentation	03(2-0-1)
11.	BPP-550	Statistical Thermodynamics	02(2-1-0)
12.	BPP-551	Statistical Mechanics	02(2-1-0)
13.	BPP-552	Solid State Physics	02(2-1-0)
14.	BPP-553	Solid State Physics II	02(2-1-0)
15.	BPP-560	Nuclear Physics	02(2-1-0)
16.	BPP-570	Experimental Physics	03(0-0-3)
17.	BPP-600	Master's Seminar	01
18.	BPP-601	Special Problem	1-2
19.	BPP-604	Solar Energy Physics	02(2-0-0)
20.	BPP-620	Introduction to Quantum Mechanics	02(2-1-0)
21.	BPP-625	Advanced Spectroscopy	02(2-0-0)
22.	BPP-630	Introduction to Linear and Digital Integrated Circuits I	03(2-0-1)
23.	BPP631	Introduction to Linear and Digital Integrated Circuits II	03(2-0-1)
24.	BPP640	Biophysics I	03(2-0-1)

25.	BPP641	Biophysics II	03(2-0-1)
26.	BPP650	Advanced Kinetic Theory of Gases	02(2-1-0)
27.	BPP651	Thermodynamics of Irreversible Process	02(2-1-0)
28.	BPP-652	Elements of Statistical Mechanics	02(2-1-0)
29.	BPP-653	Solid State Physics and Material Science	02(2-1-0)
30.	BPP655	Physics of Nanomaterials New Course Proposed	03(3-1-0)
31.	BPP-661	Nuclear Techniques in Agriculture and Biology	02(2-0-0)
32.	BPP-690	Master's Thesis Research	30
33.	BPP-711	Advanced Classical Mechanics	02(2-0-0)
34.	BPP-720	Advanced Quantum Mechanics	02(2-0-0)
35.	BPP-721	Quantum Field Theory and Many Body Techniques	02(2-0-0)
36.	BPP-730	Solid State Electronics	02(2-0-0)
37.	BPP-750	Advanced Statistical Mechanics	02(2-0-0)
38.	BPP-751	Advanced Solid State Physics	02(2-0-0)
39.	BPP-752	Non Linear Optics and Solid State Spectroscopy	02(2-0-0)
40.	BPP-753	Low temperature Physics	02(2-0-0)
41.	BPP-760	Advanced Nuclear Physics	02(2-0-0)
42.	BPP-788	Doctoral Seminar I	1
43.	BPP-789	Doctoral Seminar II	1
44.	BPP-790	Ph.D. Thesis Research	75

3. Plant Physiology

COURSE PROGRAMME

Ph.D. PLANT PHYSIOLOGY

Course No.	Course Title	Credit Hours
MAJOR COURSES (13 Credits)		
BPY-712	Signal Perceptions , Transduction and Regulation of Physiological Processes	2(2-0-0)
BPY-714	Plant Phenomics-Next Generation Phenomics Platform	2(2-0-0)
BPY-715	Experimental Techniques to Characterize Plant Processes for Crop Improvement	2(0-0-2)
BPY-716	Global Climate Change and Crop Response	2(2-0-0)
BPY-717	Physiological and Molecular Aspects of Source-sink Capacity for Enhancing Yield	3(3-0-0)
BPY -720	Weed Biology and Physiology of Herbicide Action	2(2-0-0)
SUPPORTING COURSES (06 Credits)		
BHS-652	Research Methodology-I	1(1-0-0)
BHS-653	Research Methodology-II	3 (2-0-1)
	Research and Publications Ethics	2 (1-0-1)
OPTIONAL/MINOR COURSES (06 Credits)		
	Will be taken from any department (other than major department) of the university related to the research problem	
BPY-788	Doctoral Seminar I	1 (1-0-0)
BPY-789	Doctoral Seminar II	1 (1-0-0)
BPY-790	Ph.D. Thesis Research	75
Total		102Credits

List of Post Graduate Courses of the Department
As per Uniform Course ICAR (BMSA) Suggested Guidelines with effect from AY 2022-23 for
Master's and Doctoral Programme in Plant Physiology

Course Code	Course Title	Credit Hours
BPY-614	Principles of Plant Physiology-I: Plant Water Relations and Mineral Nutrition	3(2-0-1)
BPY-615	Principles of Plant Physiology-II: Metabolic Processes and Growth Regulation	3(2-0-1)
BPY-616	Plant Developmental Biology: Physiological and Molecular Basis	3(2-0-1)
BPY-617	Physiological and Molecular Responses of Plants to Abiotic Stresses	3(2-0-1)
BPY-618	Hormonal Regulation of Plant Growth and Development	3(2-0-1)
BPY-619	Physiological and Molecular Mechanisms of Mineral Nutrient Acquisition and their Functions	3(2-0-1)
BPY-620	Photosynthetic Processes, Crop Growth and Productivity and Concepts of Crop Modelling	3(2-0-1)
BPY-621	Seed Physiology	3(2-0-1)
BPY-600	Master's Seminar	1(1-0-0)
BPY-690	Master's Research	30
BPY-712	Signal Perceptions and Transduction and Regulation of Physiological Processes	2(2-0-0)
BPY-714	Plant Phenomics-Next Generation Phenomics Platform	2(2-0-0)
BPY-715	Experimental Techniques to Characterize Plant Processes for Crop Improvement	2(0-0-2)
BPY-716	Global Climate Change and Crop Response	2(2-0-0)
BPY-717	Physiological and Molecular Aspects of Source-sink Capacity for Enhancing Yield	3(3-0-0)
BPY-720	Weed Biology and Physiology of Herbicide Action	2(2-0-0)
BPY-788	Doctoral Seminar I	1(1-0-0)
BPY-789	Doctoral Seminar II	1(1-0-0)
BPY-790	Doctoral Research	75

College of Fisheries Science

Ph.D. Programme

- 1. Aquaculture**
- 2. Fish Harvest and Processing Technology**
- 3. Fisheries Resource Management**

M.F.Sc. Programme

- 1. Aquaculture**
- 2. Fish Harvest and Processing Technology**
- 4. Aquatic Environment Management**
- 5. Fisheries Resource Management**

Course Programme

Course Title with Credit Load, Ph.D. in Aquaculture

Sl. No.	Course Code	Course Title	Credit Hours
A Major Courses			12 Credits
1	FAC 712	Hi-tech Aquaculture Production Systems	3= 2+0+1
2	FAC 722	Seed Production and Hatchery Management	3= 2+0+1
3	FAC 723	Aquaculture Ecosystem Management and Climate Change	3= 2+0+1
4	FAC 732	Fish and Shellfish Physiology and Endocrinology	3= 2+0+1
B Minor /Optional Courses			6 Credits
5	FAC 508	Feed Management in Aquaculture	2= 1+0+1
6	FAC 509	Applied Biotechnology in Aquaculture	2= 1+0+1
7	FAC 510	Automation in Aquaculture Systems	2= 1+0+1
8	FAC 511	Aquaculture Medicine	2= 1+0+1
9	FAC 601	Special Problem	2= 1+0+1
C Basic Supporting courses			5 Credits
10	BHS 652	Research Methodology I	1= 1+0+0
11	BHS 653	Research Methodology II	3= 2+0+1
12		Research and Publication Ethics	2= 1+0+1
Total Course Work Credits			23 Credits
D Doctoral Seminar			2 Credits
13	FAC 788	Doctoral Seminar I	1= 0+0+1
14	FAC 789	Doctoral Seminar II	1= 0+0+1
E Doctoral Thesis Research			75 Credits
15	FAC 790	Ph.D. Thesis Research (Semester II)	05= 0+0+5
	FAC 790	Ph.D. Thesis Research (Semester III)	15= 0+0+15
	FAC 790	Ph.D. Thesis Research (Semester IV)	05= 0+0+15
	FAC 790	Ph.D. Thesis Research (Semester V)	20= 0+0+20
	FAC 790	Ph.D. Thesis Research (Semester VI)	20= 0+0+20
Total Ph.D. Program Credit Hours			100 Credits

Course Programme

Course Title with Credit Load, M.F.Sc. in Aquaculture

Sl. No.	Course Code	Course Title	Credit Hours
A Major Courses			20 Credits
1	FAC 501	Freshwater Aquaculture Production Systems	3= 2+0+1
2	FAC 502	Coastal Aquaculture and Mariculture Farming Systems	3= 2+0+1
3	FAC 503	Hatchery Technology for Finfishes and Shellfishes	3= 2+0+1
4	FAC 504	Aquaculture Policy and Planning	2= 1+0+1
5	FAC 505	Fish Nutrition and Feed Technology	3= 2+0+1
6	FAC 506	Soil and Water Quality Management in Aquaculture	3= 2+0+1
7	FAC 507	Therapeutics and Health Management in Aquaculture	3= 2+0+1
B Minor /Optional Courses			8 Credits
8	FAC 508	Larval Nutrition and Live Feed Production	2= 1+0+1
9	FAC 510	Open Water aquaculture	2= 1+0+1
10	FAC 511	Commercial Ornamental Fish Breeding and Culture	2= 1+0+1
11	FAC 512	Computer Application in Aquaculture Data Processing	1= 0+0+1
12	FAC 513	Inland Saline Aquaculture	2= 1+0+1
13	FAC 514	Multilevel Integrated Aquaculture Systems	2= 1+0+1
14	FAC 515	Coldwater Aquaculture and Recreational Fisheries	2= 1+0+1
15	FAC 516	Recirculating Aquaculture Systems	2= 1+0+1
C Basic Supporting courses			6 Credits
16	TID 502	Aquaculture Engineering	2= 1+0+1
17	BPS 561	Statistical Methods	3= 2+0+1
18	FAC 601	Special Problems	1= 0+0+1
D Common Courses			5 Credits
19		Library and Information Services	1= 0+0+1
20		Technical Writing and Communication Skills	1= 0+0+1
21		Intellectual Property and its management in Agriculture	1= 1+0+0
22		Basic concepts in Laboratory Techniques	1= 0+0+1
23		Agricultural Research, Research ethics and Rural Development Programmes	1= 1+0+0
Total Course Work Credits			39 Credits
E Masters' seminar			1 Credits
24	FAC 600	Masters' Seminar	1= 0+0+1
F Masters' Thesis Research			30 Credits
25	FAC 690	Masters' Research (Semester III)	15= 0+0+15
	FAC 690	Masters' Research (Semester IV)	15= 0+0+15
Total M.F.Sc. Program Credit Hours			70 Credits

List of Post graduate courses of the department of Aquaculture (Ph.D.)

Sl. No.	Course Code	Course Title	Credit Hours
1	FAC 501	Freshwater Aquaculture Production Systems	2+0+1
2	FAC 502	Coastal Aquaculture and Mariculture Farming Systems	2+0+1
3	FAC 503	Hatchery Technology for Finfishes and Shellfishes	2+0+1
4	FAC 504	Aquaculture Policy and Planning	1+0+1
5	FAC 505	Fish Nutrition and Feed Technology	2+0+1
6	FAC 506	Soil and Water Quality Management in Aquaculture	2+0+1
7	FAC 507	Therapeutics and Health Management in Aquaculture	2+0+1
8	FAC 508	Larval Nutrition and Live Feed Production	1+0+1
9	FAC 510	Open Water aquaculture	1+0+1
10	FAC 511	Commercial Ornamental Fish Breeding and Culture	1+0+1
11	FAC 512	Computer Application in Aquaculture Data Processing	0+0+1
12	FAC 513	Inland Saline Aquaculture	1+0+1
13	FAC 514	Multilevel Integrated Aquaculture Systems	1+0+1
14	FAC 515	Coldwater Aquaculture and Recreational Fisheries	1+0+1
15	FAC 516	Recirculating Aquaculture and Recreational Fisheries	1+0+1
16	FAC 601	Special Problems	0+0+1
17	FAC 600	Masters' Seminar	0+0+1
18	FAC 690	Masters' Research	30
19	FAC 712	Hi-tech Aquaculture Production Systems	2+0+1
20	FAC 722	Seed Production and Hatchery Management	2+0+1
21	FAC 723	Aquaculture Ecosystem Management and Climate Change	2+0+1
22	FAC 732	Fish and Shellfish Physiology and Endocrinology	2+0+1
23	FAC 508	Feed Management in Aquaculture	1+0+1
24	FAC 509	Applied Biotechnology in Aquaculture	1+0+1
25	FAC 510	Automation in Aquaculture Systems	1+0+1
26	FAC 511	Aquaculture Medicine	1+0+1
27	FAC 788	Doctoral Seminar I	0+0+1
28	FAC 789	Doctoral Seminar II	0+0+1
29	FAC 790	Ph.D. Thesis Research	75

2. Fish harvest & Processing Technology

COURSE PROGRAMME

DEPARTMENT OF FISH HARVEST AND PROCESSING TECHNOLOGY
MASTER OF FISHERIES SCIENCE IN FISH PROCESSING TECHNOLOGY
M.F.Sc. (FPT)

Course No.	Title of the Course	Credit Hours
MAJOR COURSES (20 Credits)		
FPT 514	Low Temperature Preservation of Fish and Shell Fish	3(2-0-1x3)
FPT 515	Thermal Processing of Fish and Fishery Products	3(2-0-1x3)
FPT 518	Quality Assurance, Management and Certification	3(2-0-1x3)
FPT 519	Value Added Fishery Products	3(2-0-1x3)
FPT 524	Applied Fisheries Microbiology	3(2-0-1x3)
FPT 525	Applied Fisheries Biochemistry	3(2-0-1x3)
FPT 528	Trade Regulations, Certification and Documentation in Export of Fish and Fishery Products	2(1-0-1x3)
OPTIONAL/ MINOR COURSES (08 Credits)		
FPT 511	Handling, Storage and Transport of Fresh Fish	2(1-0-1x3)
FPT 513	Fish By-Products and Utilization of Fishery Wastes	2(1-0-1x3)
FPT 516	Additives in Fish Processing	2(1-0-1x3)
FPT 523	Design, Maintenance of Fish Processing Plants & Instrumentation	2(1-0-1x3)
FPT 527	Packaging of Fish and Fishery Products	2(1-0-1x3)
FPT 529	Molecular Techniques in Seafood Quality Analysis	2(1-0-1x3)
FPT 616	Microorganisms of Public Health Significance	2(1-0-1x3)
FPT 530	Multivariate Analysis in Food Processing & Product Development	2(1-0-1x3)
FPT 601	Special Problem	1(0-0-1x3)
SUPPORTING COURSES (06 Credits)		
BBM 500	General Microbiology	3(3-0-0)
BBC 501	General Biochemistry	3(3-0-0)
COMMON COURSES (05 Credits)		
	Library and Information Services	1(1-0-0)
	Technical Writing and Communication Skills	1(1-0-0)
	Intellectual Property and its management in Agriculture	1(1-0-0)
	Basic concepts in laboratory Techniques	1(1-0-0)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(1-0-0)
FPT 600	Master's Seminar	1(1-0-0)
FPT 690	Master's Thesis Research	30

List of Post Graduate Courses of the Department

Course No.	Title of the Course	Credit Hours
FPT 511	Handling, Storage and Transport of Fresh Fish	2(1-0-1x3)
FPT 513	Fish By-Products and Utilization of Fishery Wastes	2(1-0-1x3)
FPT 514	Low Temperature Preservation of Fish and Shell Fish	3(2-0-1x3)
FPT 515	Thermal Processing of Fish and Fishery Products	3(2-0-1x3)
FPT 516	Additives in Fish Processing	2(1-0-1x3)
FPT 518	Quality Assurance, Management and Certification	3(2-0-1x3)
FPT 519	Value Added Fishery Products	3(2-0-1x3)
FPT 523	Design, Maintenance of Fish Processing Plants & Instrumentation	2(1-0-1x3)
FPT 524	Applied Fisheries Microbiology	3(2-0-1x3)
FPT 525	Applied Fisheries Biochemistry	3(2-0-1x3)
FPT 527	Packaging of Fish and Fishery Products	2(1-0-1x3)
FPT 528	Trade Regulations, Certification and Documentation in Export of Fish and Fishery Products	2(1-0-1x3)
FPT 529	Molecular Techniques in Seafood Quality Analysis	2(1-0-1x3)
FPT 530	Multivariate Analysis in Food Processing & Product Development	2(1-0-1x3)
FPT 601	Special Problem	1(0-0-1x3)
FPT 616	Microorganisms of Public Health Significance	2(1-0-1x3)

3. Fisheries Resource Management

ANNEXURE

COURSE PROGRAMME

DEPARTMENT OF FRM FISHERIES RESOURCE MANAGEMENT

Name of degree: Ph.D

Course No	Course Title	Credit Hours
MAJOR COURSES		12 Credits
FRM 601	Fisheries Resource Conservation and Restoration Biology	2+1
FRM 602	Assessments of Aquatic Biodiversity and Ecosystem	2+1
FRM 603	Functional Physiology of Fishes	2+1
FRM 604	GIS Use in Fisheries Resources	2+1
2 Doctoral Research75 Credits (From the subjects closely related to a student's major subject)		
FRM 605	Fisheries Legislations, Governance and Treaties	2+1
FRM 606	Software Applications in Fish Stock Assessment	2+1
FRM 607	Coral Reef Management	2+1
SUPPORING COURSES		06 Credits
BHS 652	Research Methodology-I	1(1-0-0)
BHS 653	Research Methodology-II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
OPTIONAL/MINOR COURSES		06 Credits
	Will be taken from any department (other than major department) of the university related to the research problem	
FRM 691	Doctoral Seminars-I	0+1
FRM 692	Doctoral Seminar-II	0+1
Doctoral Research		75Credits
FRM 699	Doctoral Research (II semester)	0+15
FRM 699	Doctoral Research (III semester)	0+15
FRM 699	Doctoral Research (IV semester)	0+15
FRM 699	Doctoral Research (V semester)	0+15
FRM 699	Doctoral Research (VI semester)	0+15
788	Doctoral Seminar-I	1(1-0-0)
789	Doctoral Seminar-II	1(1-0-0)
790	Ph.D. Thesis Research	75
	Total	101 Credits

COURSE PROGRAMME**DEPARTMENT OF FISHERIES RESOURCE MANAGEMENT****Name of degree: M.F.Sc**

Course No	Course Title	Credit Hours
MAJOR COURSES		20 Credits
FRM 501	Sustainable Fisheries Management	2+1
FRM 502	Fish Biodiversity and Conservation Biology	2+1
FRM 503	Climate Change and Fisheries Resource	2+1
FRM 504	Fish Stock Assessment	2+1
FRM 505	Tropho dynamics in Aquatic Systems	2+1
FRM 506	Reproductive Biology of Finfish and Shellfish	2+1
FRM 507	Developmental Biology of Finfish and Shellfish	2+1
OPTIONAL/MINOR COURSES		08 Credits
	Will be taken from any department of the university related to the research problem	
FRM 508	Modern Techniques in Fisheries Biology	2+1
FRM 509	Bio Systematic of Aquatic Fauna	1+2
FRM 510	Inland Fisheries Resources Management	2+1
FRM 511	Marine Fisheries Resources Management	2+1
FRM 512	Advanced Fish Anatomy and Physiology	2+1
FRM 513	Fish Histology and Histochemistry	1+1
FRM 514	Field techniques in Fisheries Resource Management	0+2
SUPPORTING COURSES		06 Credits
COMMON COURSES		05 Credits
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
600	Seminar	1(1-0-0)
690	Master's Thesis Research	30
	Total	101 Credits
FRM 599	Masters' Research (Semester III)	0+15
FRM 599	Masters' Research (Semester IV)	0+15
	Total M.F.Sc Program Credit Hours	70 Credits

List Post Graduate Courses of the Department Fisheries Resource Management

Course No.	Course Title	Credit Hours
Name of degree: Ph.D		
FRM 601	Fisheries Resource Conservation and Restoration Biology	2+1
FRM 602	Assessments of Aquatic Biodiversity and Ecosystem	2+1
FRM 603	Functional Physiology of Fishes	2+1
FRM 604	GIS Use in Fisheries Resources	2+1
FRM 605	Fisheries Legislations, Governance and Treaties	2+1
FRM 606	Software Applications in Fish Stock Assessment	2+1
FRM 607	Coral Reef Management	2+1
Name of degree: M.F.Sc.		
FRM 501	Sustainable Fisheries Management	2+1
FRM 502	Fish Biodiversity and Conservation Biology	2+1
FRM 503	Climate Change and Fisheries Resource	2+1
FRM 504	Fish Stock Assessment	2+1
FRM 505	Tropho dynamics in Aquatic Systems	2+1
FRM 506	Reproductive Biology of Finfish and Shellfish	2+1
FRM 507	Developmental Biology of Finfish and Shellfish	2+1
OPTIONAL/MINOR COURSES		
FRM 508	Modern Techniques in Fisheries Biology	2+1
FRM 509	Bio Systematic of Aquatic Fauna	1+2
FRM 510	Inland Fisheries Resources Management	2+1
FRM 511	Marine Fisheries Resources Management	2+1
FRM 512	Advanced Fish Anatomy and Physiology	2+1
FRM 513	Fish Histology and Histochemistry	1+1
FRM 514	Field techniques in Fisheries Resource Management	0+2

4. Aquatic Environment Management

COURSE PROGRAMME

Department of Aquatic Environment Management

Name of PG degree programme: M.F.Sc. (Aquatic Environment Management)

Course No.	Course Title	Credit hours
*Major Courses		20 Credits
FEM- 555	Advanced Aquatic Environment and Biodiversity	3 (2-0-1)
FEM- 556	Inland Aquatic Resource Management	3 (2-0-1)
FEM- 560	Chemical Interactions in Aquatic Environment	3 (2-0-1)
FEM- 561	Analytical Techniques in Environmental Sciences	2 (1-0-1)
FEM- 562	Climate Change: Impact and Management	1 (1-0-0)
FEM- 571	Aquatic Pollution and Management	3 (2-0-1)
FEM- 615	Fisheries Oceanography	2(1-0-1)
FEM- 632	Coastal Ecology and Management	3 (2-0-1)
Optional/ Minor Courses		08 Credits
	Will be taken from any department of the University related to research problem	
Supporting Courses		06 Credits
BPS- 561	Statistical Methods	3 (2-0-1)
FAC-506	Soil and Water Quality Management in Aquaculture	3 (2-0-1)
Common Courses		05 Credits
	Library and Information Services	1(0-0-1)
	Technical Writing and Communication Skills	1(0-0-1)
	Intellectual Property and its Management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
Master's Seminar		01 Credit
FEM- 600	Master's Seminar	1 (1-0-0)
Master's Thesis Research		30 Credit
		Total 70

* Core courses/ compulsory courses

List of Post Graduate Courses of the Department (Aquatic Environment Management)

Course Number	Course Title	Credit Hours
Major Courses		(20 Credits)
FEM- 555	Advanced Aquatic Environment and Biodiversity	3 (2-0-1)
FEM- 556	Inland Aquatic Resource Management	3 (2-0-1)
FEM- 560	Chemical Interactions in Aquatic Environment	3 (2-0-1)
FEM- 561	Analytical Techniques in Environmental Sciences	2 (1-0-1)
FEM- 562	Climate Change: Impact and Management	1 (1-0-0)
FEM- 571	Aquatic Pollution and Management	3 (2-0-1)
FEM- 615	Fisheries Oceanography	2(1-0-1)
FEM- 632	Coastal Ecology and Management	3 (2-0-1)
Minor Courses		(8 Credits)
FEM- 636	Plankton Ecology and Trophic Dynamics	2 (1-0-1)
FEM- 641	Aquatic Microbiology	2 (1-0-1)
FEM- 642	Utilization and Management of Aquatic Algal Resources	2 (1-0-1)
FEM- 643	Restoration Ecology	2 (1-0-1)
FEM- 646	Eco- toxicology	2 (1-0-1)
FEM- 651	Environmental Biotechnology	2 (1-0-1)

COLLEGE OF HOME SCIENCE

M.Sc. programme

- (1) Department of Textiles and Apparel Designing**
- (2) Department of Resource Management & Consumer Science**
- (3) Department of Food Science & Nutrition**
- (4) Department of Human Development & Family Studies**

Ph.D. programme

- (1) Department of Textiles and Apparel Designing**
- (2) Department of Resource Management & Consumer Science**
- (3) Department of Food Science & Nutrition**

COURSE PROGRAMME
DEPARTMENT OF TEXTILES AND APPAREL DESIGNING
Ph.D. Community Science (Textiles&Apparel Designing)

Course No	Course Title	Credit Hours
MAJOR COURSES (12 Credits)		
*HTA 601	Textile Ecology	2(2-0-0)
*HTA 602	Technical Textiles	3(2-0-1)
HTA 603	Technological Developments in Textiles and Apparel	2(2-0-0)
HTA 604	Colour Application in Textiles	2(1-0-1)
*HTA 605	Functional Clothing	3(2-0-1)
HTA 606	Textile Conservation	2(1-0-1)
HTA 607	Operational Management in Textiles and Apparel	3(3-0-0)
HTA 608	Technology of Nonwovens	2(2-0-0)
HTA 609	Special Project	2(0-0-2)
SUPPORTING COURSES (06 Credits)		
BHS 652	Research Methodology-I	1(1-0-0)
BHS 653	Research Methodology-II	3(2-0-1)
	Research and Publication Ethics	2(1-0-1)
OPTIONAL/MINOR COURSES (06 Credits)		
	Will be taken from any department (other than major department) of the university according to the research problem (as per existing provisions in the university)	
HTA 788	Doctoral Seminar I	1(1-0-0)
HTA 789	Doctoral Seminar II	1(1-0-0)
HTA 790	Ph.D. Thesis Research	75
	Total	101 credits

*Core courses / compulsory courses

COURSE PROGRAMME
DEPARTMENT OF TEXTILES AND APPAREL DESIGNING
M.Sc. Community Science (Textiles & Apparel Designing)

Course No	Title of the Course	Credit Hours
MAJORCOURSES (20 Credits)		
*HTA 501	Textile Chemistry	3(2-0-1)
*HTA 502	Textile and Apparel Quality Analysis	3(2-0-1)
*HTA 503	Pattern Making and Draping	3(1-0-2)
*HTA 504	Woven Textile Design	3(2-0-+1)
HTA 505	Wet Processing of Textiles	3(2-0-1)
HTA 506	Computer Aided Textile and Apparel Designing	3(0-0-3)
HTA 507	Textile and Apparel Industrial Management	3(3-0-0)
HTA 508	Historic Textiles and Costumes	2(1-0-1)
HTA 509	Textile Auxiliaries	3(2-0-1)
HTA 510	Socio Psychological Aspects of Clothing	2(2-0-0)
HTA 511	Sustainability in Textile and Apparel Industry	2(2-0-0)
HTA 512	Textile and Apparel Product Development	2(1-0-1)
HTA 513	Laboratory Techniques in Textile Research	2(0-0-2)
HTA 514	Special Project	1(0-0-1)
OPTIONAL/MINOR COURSES (08 Credits)		
	Will be taken from any department (other than major department) of the university according to the research problem (as per existing provisions in the university)	
SUPPORTING COURSES (06 Credits)		
HEE 581	Research Methodology in Community Science	3(2-0-1)
	Statistical Methods and Application	3(2-0-1)
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
HTA 600	Master's Seminar	1(1-0-0)
HTA 690	Master's Thesis Research	30
Total		70

*Core courses / compulsory courses

List of the Post Graduate Courses of the Department

S. No.	Course No	Title of the Course	Credit Hours
1.	*HTA 501	Textile Chemistry	3(2-0-1)
2.	*HTA 502	Textile and Apparel Quality Analysis	3(2-0-1)
3.	*HTA 503	Pattern Making and Draping	3(1-0-2)
4.	*HTA 504	Woven Textile Design	3(2-0-1)
5.	HTA 505	Wet Processing of Textiles	3(2-0-1)
6.	HTA 506	Computer Aided Textile and Apparel Designing	3(0-0-3)
7.	HTA 507	Textile and Apparel Industrial Management	3(3-0-0)
8.	HTA 508	Historic Textiles and Costumes	2(1-0-1)
9.	HTA 509	Textile Auxiliaries	3(2-0-1)
10.	HTA 510	Socio Psychological Aspects of Clothing	2(2-0-0)
11.	HTA 511	Sustainability in Textile and Apparel Industry	2(2-0-0)
12.	HTA 512	Textile and Apparel Product Development	2(1-0-1)
13.	HTA 513	Laboratory Techniques in Textile Research	2(0-0-2)
14.	HTA 514	Special Project	1(0-0-1)
15.	HTA 600	Master'sSeminar	1(1-0-0)
16.	HTA 690	Master's Thesis Research	30
17.	**HTA 601	Textile Ecology	2(2-0-0)
18.	** HTA 602	Technical Textiles	3(2-0-1)
19.	HTA 603	Technological Developments in Textiles and Apparel	2(2-0-0)
20.	HTA 604	Colour Application in Textiles	2(1-0-1)
21.	** HTA 605	Functional Clothing	3(2-0-1)
22.	HTA 606	Textile Conservation	2(1-0-1)
23.	HTA 607	Operational Management in Textiles and Apparel	3(3-0-0)
24.	HTA 608	Technology of Nonwovens	2(2-0-0)
25.	HTA 609	Special Project	2(0-0-2)
26.	HTA 788	Doctoral Seminar I	1(1-0-0)
27.	HTA 789	Doctoral Seminar II	1(1-0-0)
28.	HTA 790	Ph.D. ThesisResearch	75

***Core courses / compulsory courses in M.Sc. program**

****Core courses / compulsory courses in Ph.D. program**

COURSE PROGRAMME
DEPARTMENT OF RESOURCE MANAGEMENT & CONSUMER SCIENCE
P.hD . Home Science (Resource Management and Consumer Science.)

Course No	Course Title	Credit Hours
MAJOR COURSES		
HRM 701*	Trends in Resource Management	3 (3-0-0)
HRM 765	Globalization and Consumer Economics	3(2-0-1)
HRM 703	Family Dynamics and Women Power	3(2-0-1)
HRM 731	Environmental Issues and Challenges	2(2-0-0)
HRM 705*	Occupational Biomechanics	3(2-0-1)
HRM 706	Space Designing and Managerial Dimensions for Special needs	3(1+2)
HRM 707	Physical Ergonomics	3 (1-0-2)
HRM 708	Special Project	2(0-0-2)
SUPPORTING COURSES (06 Credits)		
BHS 652	Research Methodology - I	1 (1-0-0)
BHS 653	Research Methodology - II	3 (2-0-1)
	Research and Publication Ethics	2 (1-0-1)
OPTIONAL / MINOR COURSES (06 Credits)		
	Will be taken from any department (Other than major department) of the university according to the research problem (as per existing provisions in the university)	
HRM 788	Doctoral Seminar I (Major Field)	1 (0-0-1)
HRM 789	Doctoral Seminar II (Minor Field)	1 (0-0-1)
HRM 790	P.hD.Thesis / Research	75
	Total	101 Credits

***Core courses/compulsory courses**

COURSE PROGRAMME
DEPARTMENT OF RESOURCE MANAGEMENT & CONSUMER SCIENCE
M. Sc. Home Science (Resource Management and Consumer Science.)

Course No	Title of the Course	Credit Hours
MAJOR COURSES (20 Credits)		
HRM 501*	Resource Management: Principles and Practices	3(3-0-0)
HRM 502*	Interior Space Planning	3 (1-0-2)
HRM 503	Colour and Lighting in Interiors	3(2-0-1)
HRM 504*	Consumer Economics	3(2-0-1)
HRM 505	Consumer Issues and Legislations	2(2-0-0)
HRM 506	Product Design	3 (1-0-2)
HRM 507*	Human Factors and Ergonomics	3(2-0-1)
HRM 508	Work and Work Station Design	3(1-0-2)
HRM 509	Ergonomic Research Techniques	3(1-0-2)
HRM 510*	Environmental Resource Management	2(1-0-1)
HRM 511	Special Project	2(0-0-2)
OPTIONAL/MINOR COURSES (08 Credits)		
	Will be taken from any department (other than major department) of the university according to the research problem (as per existing provisions in the university)	
SUPPORTING COURSES (06 Credits)		
HEE 581	Research Methodology in Community Science	3(2-0-1)
	Statistical methods and application	3(2-0-1)
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
HRM 600	M.Sc. Seminar	1(1-0-0)
HRM 690	M.Sc. Thesis/Research	30
Total		70

***Core courses/compulsory courses**

List of the Post Graduate Courses of the Department

S.No.	Course No	Title of the Course	Credit Hours
1.	HRM501*	Resource Management: Principles and Practices	3 (3-0-0)
2.	HRM 502*	Interior Space Planning	3 (1-0-2)
3.	HRM 503	Colour and Lighting in Interiors	3(2-0-1)
4.	HRM 504*	Consumer Economics	3(2-0-1)
5.	HRM 505	Consumer Issues and Legislations	2(2-0-0)
6.	HRM 506	Product Design	3(1-0-2)
7.	HRM 507*	Human Factors and Ergonomics	3(2-0-1)
8.	HRM 508	Work and Work Station Design	3(1-0-2)
9.	HRM 509	Ergonomic Research Techniques	3(1-0-2)
10.	HRM 510*	Environmental Resource Management	2(1-0-1)
11.	HRM 511	Special Project	2(0-0-2)
12.	HRM 600	M.Sc. Seminar	1(0-0-1)
13.	HRM 690	M.Sc. Thesis / Research	30
14.	HRM 701**	Trends in Resource Management	3(3-0-0)
16.	HRM 703	Family Dynamics and Women Economics	3(2-0-1)
18.	HRM 705**	Occupational Biomechanics	3(2-0-1)
19.	HRM 706	Space Designing and Managerial Dimensions for Special needs	3(1+2)
20.	HRM 707	Physical Ergonomics	3(1-0-2)
21.	HRM 708	Special Project	2(0-0-2)
17.	HRM 731	Environmental Issues and Challenges	2(2-0-0)
15.	HRM 765	Globalization and Consumer Economics	3(2-0-1)
22.	HRM 788	Doctoral Seminar I (Major Field)	1(0-0-1)
23.	HRM 789	Doctoral Seminar II (Minor Field)	1(0-0-1)
24.	HRM 790	Ph.D. Thesis / Research	75

***Core courses / compulsory courses in M.Sc. program**

****Core courses / compulsory courses in Ph.D. program**

COURSE PROGRAMME
DEPARTMENT OF HUMAN DEVELOPMENT & FAMILY STUDIES
M.Sc. Community Science (Human Development and Family Studies)

Course No	Title of the Course	Credit Hours
MAJORCOURSES (20 Credits)		
*HHD 501	Theories of Human Development	3 (3-0-0)
*HHD 502	Dynamics of Human Development	3 (3-0-0)
*HHD 503	Methods and Techniques of Assessment in Human Development	3 (2-0-1)
*HHD 504	Innovative Programmes in Early Childhood Development and Education	3 (2-0-1)
HHD 505	Gender issues in Human Development and Relationship	3 (2-0-1)
HHD 506	Adult Development	2 (2-0-0)
HHD 507	Management of Differently Abled	3 (2-0-1)
HHD 508	Adolescent Development and Challenges	3 (2-0-1)
HHD 509	Guidance and Counselling	3 (2-0-1)
HHD 510	Interventions for Differently Abled Children	2(1-0-1)
HHD 511	Family Ecology	2 (2-0-0)
HHD 512	Family and Cultural Diversities	2(2-0-0)
HHD 513	Family Therapy	3 (2-0-1)
OPTIONAL/MINOR COURSES (08 Credits)		
	Will be taken from any department (other than major department) of the university according to the research problem (as per existing provisions in the university)	
SUPPORTING COURSES (06 Credits)		
HEE 581	Research Methodology in Community Science	3(2-0-1)
	Statistical methods and application	3(2-0-1)
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
HHD 600	Master's Seminar	1(1-0-0)
HHD 690	Master's Thesis Research	30
Total		70

*Core courses / compulsory courses

List of the Post Graduate Courses of the Department

S. No.	Course No	Title of the Course	Credit Hours
1.	*HHD 501	Theories of Human Development	3 (3-0-0)
2.	*HHD 502	Dynamics of Human Development	3 (3-0-0)
3.	*HHD 503	Methods and Techniques of Assessment in Human Development	3 (2-0-1)
4.	*HHD 504	Innovative Programmes in Early Childhood Development and Education	3 (2-0-1)
5.	HHD 505	Gender issues in Human Development and Relationship	3 (2-0-1)
6.	HHD 506	Adult Development	2 (2-0-0)
7.	HHD 507	Management of Differently Abled	3 (2-0-1)
8.	HHD 508	Adolescent Development and Challenges	3 (2-0-1)
9.	HHD 509	Guidance and Counselling	3 (2-0-1)
10.	HHD 510	Interventions for Differently Abled Children	2(1-0-1)
11.	HHD 511	Family Ecology	2 (2-0-0)
12.	HHD 512	Family and Cultural Diversities	2(2-0-0)
13.	HHD 513	Family Therapy	3 (2-0-1)
14.	HHD 600	Master's Seminar	1(1-0-0)
15.	HHD 690	Master's Thesis Research	30

***Core courses / compulsory courses in M.Sc. program**

Course Programme

DEPARTMENT OF FOODS & NUTRITION Ph.D. Community Science (Food Science and Nutrition)

Course No	Course Title	Credit Hours
MAJOR COURSES		
HFN 601	Macronutrient Metabolism	3(3-0-0)
HFN 602	Micronutrient Metabolism	2(2-0-0)
HFN 604	Global Nutritional Problems and Policy Planning	2(2-0-0)
HFN 607	Hormones and Enzymes	2(2-0-0)
HFN 608	Energy Metabolism	2(2-0-0)
	Nutritional Epidemiology	2(1-0-1)
SUPPORTING COURSES (06 Credits)		
BHS 652	Research Methodology - I	1 (1-0-0)
BHS 653	Research Methodology - II	3 (2-0-1)
	Research and Publication Ethics	2 (1-0-1)
OPTIONAL / MINOR COURSES (06 Credits)		
	<p>Will be taken from any department (other than major department) of the university according to the research problem (as per existing provisions in the university)</p> <p>The following departments were shortlisted for this purpose</p> <ul style="list-style-type: none"> Department of Food Science and Technology Department of Biochemistry Department of Microbiology Department of Post Harvest Technology Department of Public Health Department of Human Development and Family Studies Department of Family Resource Management Department of Animal Nutrition Department of Livestock Production Technology Department of Agricultural Economics 	
HFN 788	Doctoral Seminar-I	1(1-0-0)
HFN 789	Doctoral Seminar –II	1(1-0-0)
HFN 790	Ph.D. Thesis / Research	75
	Total	101 Credits

COURSE PROGRAMME
DEPARTMENT OF FOODS & NUTRITION
M.Sc. Community Science (Food Science and Nutrition)

Course No	Title of the Course	Credit Hours
MAJORCOURSES (20 Credits)		
HFN 501	Macro and Micro Nutrients in Human Nutrition	3(3-0-0)
HFN 502	Public Health and Nutrition	3(2-0-1)
HFN 503	Techniques in Food Analysis	3(1-0-2)
HFN 504	Diet Therapy	3(2-0-1)
HFN 505	Nutrition and Physical Fitness	3(2-0-1)
HFN 506	Developments in Nutrition and Immunity	2(2-0-0)
HFN510	Nutritional Challenges in Life Cycle	3(3-0-0)
OPTIONAL/MINOR COURSES (08 Credits)		
	Will be taken from any department (other than major department) of the university according to the research problem (as per existing provisions in the university) The following departments were shortlisted for this purpose Department of Food Science and Technology Department of Biochemistry Department of Microbiology Department of Post Harvest Technology Department of Public Health Department of Human Development and Family Studies Department of Family Resource Management Department of Animal Nutrition Department of Livestock Production Technology Department of Agricultural Economics	
SUPPORTING COURSES (06 Credits)		
HEE 581	Research Methodology in Community Science	3(2-0-1)
	Statistical methods and application	3(2-0-1)
COMMON COURSES (05 Credits)		
	Library and Information Services	1(0-0-1)
	Technical Writing and Communications Skills	1(0-0-1)
	Intellectual Property and its management in Agriculture	1(0-0-1)
	Basic Concepts in Laboratory Techniques	1(0-0-1)
	Agricultural Research, Research Ethics and Rural Development Programmes	1(0-0-1)
HFN 591	Master's Seminar	1(1-0-0)
HFN 599	Master's Thesis Research	30
Total		70

***Core courses / compulsory courses**

List of Post Graduate Courses of the Department

S. No.	Course No.	Course Title	Credit Hours
1.		Nutritional Epidemiology	2(1-0-1)
2.	HFN 501	Macro and Micro Nutrients in Human Nutrition	3(3-0-0)
3.	HFN 502	Public Health and Nutrition	3(2-0-1)
4.	HFN 503	Techniques in Food Analysis	3(1-0-2)
5.	HFN 504	Diet Therapy	3(2-0-1)
6.	HFN 505	Nutrition and Physical Fitness	3(2-0-1)
7.	HFN 506	Developments in Nutrition and Immunity	2(2-0-0)
8.	HFN510	Nutritional Challenges in Life Cycle	3(3-0-0)
9.	HFN 591	Master's Seminar	1(1-0-0)
10.	HFN 599	Master's Thesis Research	30
11.	HFN 601	Macronutrient Metabolism	3(3-0-0)
12.	HFN 602	Micronutrient Metabolism	2(2-0-0)
13.	HFN 604	Global Nutritional Problems and Policy Planning	2(2-0-0)
14.	HFN 607	Hormones and Enzymes	2(2-0-0)
15.	HFN 608	Energy Metabolism	2(2-0-0)
16.	HFN 691	Doctoral Seminar I (Major Field)	1(1-0-0)
17.	HFN692	Doctoral Seminar II (Optional Field)	1(1-0-0)
18.	HFN 790	Ph.D. Thesis / Research	75

College of Veterinary and Animal Science

M.V.Sc. Programme

- 1. Animal Genetics & Breeding**
- 2. Animal Nutrition**
- 3. Livestock Production Management**
- 4. Poultry Science**
- 5. Livestock Products Technology**
- 6. Veterinary Anatomy**
- 7. Animal Husbandry and Extension Education**
- 8. Veterinary Gynaecology**
- 9. Veterinary Medicine**
- 10. Veterinary Microbiology**
- 11. Veterinary Pathology**
- 12. Veterinary Parasitology**
- 13. Veterinary Pharmacology & Toxicology**
- 14. Veterinary Physiology & Biochemistry**
- 15. Veterinary Public Health & Epidemiology**
- 16. Veterinary Surgery & Radiology**

Ph.D. Programme

- 1. Animal Genetics & Breeding**
- 2. Animal Nutrition**
- 3. Livestock Production Management**
- 4. Poultry Science**
- 5. Livestock Products Technology**
- 6. Veterinary Anatomy**
- 7. Animal Husbandry and Extension Education**
- 8. Veterinary Gynaecology**
- 9. Veterinary Medicine**
- 10. Veterinary Microbiology**
- 11. Veterinary Pathology**
- 12. Veterinary Parasitology**
- 13. Veterinary Pharmacology & Toxicology**
- 14. Veterinary Physiology & Biochemistry**
- 15. Veterinary Public Health & Epidemiology**
- 16. Veterinary Surgery & Radiology**

No Ph.D.

Animal Genetics and Breeding

Ph.D. (Animal Genetics and Breeding)		
Major Courses (12 Credits)		
Course Code	Course Title	Credit Hours
AGB 701	Molecular Genetics II*	2 (2+0)
AGB 702	Trends in Animal Breeding*	2 (2+0)
AGB 703	Biometrical Genetics II*	3 (2+1)
AGB 704	Advances in Selection Methodology*	3 (2+1)
*Core Courses		
02 Credit Hours will be chosen from the list of Post Graduate Courses of Animal Genetics and Breeding, 700 Series		02
		12
Seminar (02 Credit)		
AGB 788	Doctoral Seminar I	1 (1+0)
AGB 789	Doctoral Seminar II	1 (1+0)
		02
Supporting Courses (06 Credits)		
BHS 652	Research Methodology I	1 (1+0)
BPS 653	Research Methodology II	3 (2+1)
RPE 700	Research and Publication Ethics	2 (1+1)
		06
Minor Courses (06 Credits)		
	Will be taken from any department (other than the major department) of the university related to the research problem.	06
Thesis Research (75 Credits)		
AGB 790	PhD Thesis Research	75
		Total
		101

Minor Courses (For Other Departments)		
Master's Degree (08 Credits)		
Course Code	Course Title	Credit Hours
AGB 603	Population and Quantitative Genetics	3 (2+1)
AGB 604	Selection Method and Breeding System	3 (2+1)
02 Credit Hours will be chosen from the list of Post Graduate Courses of Animal Genetics and Breeding, 600 Series		02

Minor Courses (For Other Departments)

Ph.D. Degree (06 Credits)

Course Code	Course Title	Credit Hours
AGB 702	Trends in Animal Breeding	2 (2+0)
(Prerequisite : AGB 603; Population and Quantitative Genetics) (2+1)		

AGB 704 Advances in Selection Methodology 3 (2+1)

(Prerequisite : AGB 604; Selection Method and Breeding System) (2+1)

01 Credit Hour will be chosen from the list of Post Graduate Courses of Animal Genetics and Breeding, 700 Series*Core courses 01

College of Vety.

DEPARTMENT OF ANIMAL GENETICS AND BREEDING

M.V.Sc. (Animal Genetics and Breeding)		
Major Courses (20 Credits)		
Course Code	Course Title	Credit Hours
AGB 601	Animal Cytogenetics and Immunogenetics I*	3 (2+1)
AGB 602	Molecular Genetics I*	3 (2+1)
AGB 603	Population and Quantitative Genetics*	3 (2+1)
AGB 604	Selection Method and Breeding System*	3 (2+1)
AGB 605	Biometrical Genetics I*	3 (2+1)
AGB 610	Laboratory Animal and Rabbit Breeding*	2 (2+0)
*Core Courses		
03 Credit Hours will be chosen from the list of Post Graduate Courses of Animal Genetics and Breeding, 600 Series		03
Seminar (01 Credit)		20
AGB 600	Master's Seminar	1 (1+0)
Supporting Courses (07 Credits)		
STAT 502	Statistical Methods for Applied Sciences	4 (3+1)
MBB 504	Techniques in Molecular Biology I	3 (0+3)
		07
Common Courses (05 Credits)		
	Library and Information Services	1 (0+1)
	Technical Writing and Communication Skills	1 (0+1)
	Intellectual Property and its Management in Agriculture	1 (0+1)
	Basic Concepts in Laboratory Techniques	1 (0+1)
	Agriculture Research, Research Ethics and Rural Development Programme	1 (0+1)
		05
Optional / Minor Courses (08 Credits)		
	From the subject closely related to a student's major subject	08
Thesis Research (30 Credits)		
AGB 690	Master's Thesis Research	30
Total		71

List of postgraduate courses of the Department of Animal Genetics and Breeding

Course Code	Course Title	Credit Hours
AGB 600	Master's Seminar	1+0
AGB 601	Animal Cytogenetics and Immunogenetics I*	2+1
AGB 602	Molecular Genetics I*	2+1
AGB 603	Population and Quantitative Genetics*	2+1
AGB 604	Selection Method and Breeding System*	2+1
AGB 605	Biometrical Genetics I*	2+1
AGB 606	Conservation of Animal Genetics Resources	2+0
AGB 607	Cattle and Buffalo Breeding	2+1
AGB 608	Sheep and Goat Breeding	2+0
AGB 609	Poultry Breeding	2+1
AGB 610	Laboratory Animal and Rabbit Breeding*	2+0
AGB 611	Swine Breeding	1+0
AGB 612	Pet Animal Breeding (Dogs and Cats)	1+0
AGB 613	Wild Animal Genetics and Breeding	1+0
AGB 614	Equine Breeding	1+0
AGB 615	Camel Breeding	1+0
AGB 616	Yak and Mithun Breeding	1+0
AGB 617	Statistical Methods in Animal Breeding	2+1
AGB 680	Special Problem for Master's programme	0+1
AGB 690	Master's Thesis Research	30
AGB 701	Molecular Genetics II*	2+0
AGB 702	Trends in Animal Breeding*	2+0
AGB 703	Biometrical Genetics II*	2+1
AGB 704	Advances in Selection Methodology*	2+1
AGB 705	Bioinformatics in Animal Breeding	1+1
AGB 706	Animal Cytogenetics and Immunogenetics II	2+0
AGB 707	Statistical Software in Animal Breeding	1+1
AGB 780	Special Problem for PhD programme	0+1
AGB 788	Doctoral Seminar I	1+0
AGB 789	Doctoral Seminar II	1+0
AGB 790	PhD Thesis Research	75

Ph.D. Animal Nutrition (for both M. V. Sc. and M. Sc. Ag. degree in Animal Nutrition)**Major Courses (12 credits)**

Course Code	Course Title	Credit Hours
ANN 701	Modern Concepts in Feeding of Ruminants*	2(2+0)
ANN 702	Forages in Animal Nutrition*	1(1+0)
ANN 703	Recent Concepts in Feeding of Non-Ruminants*	1(1+0)
ANN 704	Advances in Rumen Metabolism*	2(1+1)
ANN 705	Advances in Mineral and Vitamin Nutrition*	2(2+0)
ANN 706	Advanced Clinical Nutrition*	2(1+1)
ANN 708	Advances in Feed Technology	1(1+0)
ANN 709	Toxicants and Anti-Metabolites in Animal Nutrition	1(1+0)
*Core courses		
		12

Seminar (2 credits)

ANN-788	Doctoral Seminar-I	1(1+0)
ANN-789	Doctoral Seminar-II	1(1+0)
		02

Supporting Courses (6 credits)

BHS 652	Research Methodology I	1(1+0)
BPS 653	Research Methodology II	3(2+1)
RPE 700	Research and Publication Ethics	2 (1+1)
		06

Optional /Minor Courses (6 credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem.		
Thesis Research (75 credits)		
ANN 790	Ph.D. Thesis Research	75
	Total	101
Compulsory courses for Minor for other disciplines (Ph. D. Programme)		
ANN 701	Modern Concepts in Feeding of Ruminants	2(2+0)
ANN 703	Recent Concepts in Feeding of Non-Ruminants	1(1+0)

DEPARTMENT OF ANIMAL NUTRITION

M.V.Sc./ M.Sc. Ag. Animal Nutrition

Major Courses (20 credits)

Course Code	Course Title	Credit Hours
ANN 601	Nutritional Biochemistry*	1(1+0)
ANN 602	Energy and Protein Nutrition*	2(2+0)
ANN 603	Minerals and Vitamin Nutrition and Feed Additives*	3(2+1)
ANN 604	Feed and Fodder Technology*	2(1+1)
ANN 605	Ruminant Nutrition*	3(2+1)
ANN 606	Non-Ruminant Nutrition*	3(2+1)
ANN 607	Research Methodology in Animal Nutrition*	2(0+2)
ANN 608	Companion Animal Nutrition	1(1+0)
ANN 609	Nutrition of Laboratory, Wild and Zoo Animals	3(2+1)
*Core courses		20

Seminar (1 credit)

ANN 600	Master's Seminar	1(1+0)
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Supporting Courses (6 credits)

STAT 511	Experimental Designs	3(2+1)
VBC 605	Clinical Biochemistry	3(2+1)
		06

Optional /Minor Courses (8 credits)

Will be taken from any department (other than the major department) of the university related to the research problem

		08
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Common Courses (5 credits)

Library and Information Services	1 (0+1)
Technical Writing and Communication Skills	1 (0+1))
Intellectual Property and its Management in Agriculture	1 (0+1)
Basic Concepts in Laboratory Techniques	1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme	1 (0+1)
	05

Thesis Research (30 credits)

ANN 690	Master's Thesis Research	30
	Total	70

Compulsory courses for Minor for other disciplines (Master's Programme)

ANN 602	Energy and Protein Nutrition	2(2+0)
ANN 603	Minerals and Vitamin Nutrition and Feed Additives	3(2+1)

List of Post Graduate Courses of the Department of Animal Nutrition

Couse No.	Course title	Credit hrs.
ANN 600	Master's Seminar	1
ANN 601	Nutritional Biochemistry*	1(1+0)
ANN 602	Energy and Protein Nutrition*	2(2+0)
ANN 603	Minerals and Vitamin Nutrition and Feed Additives*	3(2+1)
ANN 604	Feed and Fodder Technology*	2(1+1)
ANN 605	Ruminant Nutrition*	3(2+1)
ANN 606	Non-Ruminant Nutrition*	3(2+1)
ANN 607	Research Methodology in Animal Nutrition*	2(0+2)
ANN 608	Companion Animal Nutrition	1(1+0)
ANN 609	Nutrition of Laboratory, Wild and Zoo Animals	3(2+1)
ANN 610	Non-Conventional Feed Resources	2(1+1)
ANN 611	Introductory Clinical Nutrition	1(1+0)
ANN 612	Rumen Biotechnology	1(1+0)
ANN 680	Special Problem for Master's programme	1(0+1)
ANN 690	Master's Thesis Research	30
ANN 701	Modern Concepts in Feeding of Ruminants*	2(2+0)
ANN 702	Forages in Animal Nutrition*	1(1+0)
ANN 703	Recent Concepts in Feeding of Non-Ruminants*	1(1+0)
ANN 704	Advances in Rumen Metabolism*	2(1+1)
ANN 705	Advances in Mineral and Vitamin Nutrition*	2(2+0)
ANN 706	Advanced Clinical Nutrition*	2(1+1)
ANN 707	Advanced Techniques in Nutritional Research	2(1+1)
ANN 708	Advances in Feed Technology	1(1+0)
ANN 709	Toxicants and Anti-Metabolites in Animal Nutrition	1(1+0)
ANN 710	Nutrigenomics in Animal Nutrition	1(1+0)
ANN 711	Equine Nutrition	1(1+0)
ANN 780	Special Problem for PhD programme	1(0+1)
ANN 788	Doctoral Seminar-I	1(1+0)
ANN 789	Doctoral Seminar-II	1(1+0)
ANN 790	Ph.D. Thesis Research	75
*Core courses		

Ph. D. (Livestock Production and Management)

Major Courses (12 credits)

Course Code	Course Title	Credit Hours
LPM 701	Recent Developments in Large Ruminants Production Management*	3(2+1)
LPM 702	Recent Developments in Small Ruminants Production Management*	3(2+1)
LPM 703	Recent Developments in Swine Production Management*	2(1+1)
LPM 704	Livestock and Environment*	1(1+0)
LPM 705	Organic Livestock Production*	1(1+0)
*Core courses		
2 credit hours to be chosen from list of postgraduate courses of Livestock Production and Management of 700 series		02
		12
Seminar (02 credits)		
LPM 788	Doctoral Seminar I	1(1+0)
LPM 789	Doctoral Seminar II	1(1+0)
		02
Supporting courses (06 credits)		
BHS 652	Research Methodology-I	1(1+0)
BPS 653	Research Methodology-II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/minor courses (06 credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis research (75credits)		
LPM 790	PhD Thesis Research	75
Total		101

Ph.D. (Poultry Science)**Major Courses (12 credits)**

Course Code	Course Title	Credit Hours
PSC 701	Applied Poultry Nutrition*	3(2+1)
PSC 702	Recent Trends in Commercial Poultry Production*	3(2+1)
*core courses		
06 credit hours to be chosen from list of postgraduate courses of Poultry Science 700 series		06
		12
Seminar (02 credits)		
PSC 788	Doctoral Seminar I	1(1+0)
PSC 789	Doctoral Seminar II	1(1+0)
		02
Supporting courses (06 credits)		
BHS 652	Research Methodology-I	1(1+0)
BPS 653	Research Methodology-II	3(2+1)
RPE 700	Research and Publication Ethics	2 (1+1)
		06
Optional/minor courses (06 credits)		
Will be taken from any department (other than the major department) of the university related to the research problem		06
Thesis research (75 credits)		
PSC 790	PhD Thesis Research	75
	Total	101

M.V. Sc. (Poultry Science)

Major Courses (20 credits)		
Course Code	Course Title	Credit Hours
PSC 601	Poultry Breeding and Genetics*	3(2+1)
PSC 602	Poultry Nutrition and Feeding *	3(2+1)
PSC 603	Commercial Layer and Broiler Management*	3(2+1)
PSC 604	Breeder Stock and Hatchery Management*	3(2+1)
PSC 607	Poultry Products Technology*	3(2+1)
PSC 609/ VPY 614	Physiology of Poultry Production*	2(1+1)
*Core courses		
3 credit hours to be chosen from list of postgraduate courses of Poultry Science 600 series		03
		20
Seminar (01 credit)		
PSC 600	Master's Seminar	1(1+0)
Supporting courses (07 credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
LPM 602	Sheep and Goat Production Management	3(2+1)
		07
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor courses (08 credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis research (30 credits)		
PSC 690	Master's Thesis Research	30
	Total	71

List of postgraduate courses of Poultry Science

Course No	Course Title	Credit Hours
PSC 600	Master's Seminar	1+0=1
PSC 601	Poultry Breeding and Genetics*	2+1=3
PSC 602	Poultry Nutrition and Feeding*	2+1=3
PSC 603	Commercial Layer and Broiler Management*	2+1=3
PSC 604	Breeder Stock and Hatchery Management*	2+1=3
PSC 605/VMD618	Poultry Health and Biosecurity	2+1=3
PSC 606	Management of Other Avian Species	3+1=4
PSC 607	Poultry Products Technology*	2+1=3
PSC 608	Poultry Economics Project Formulation and Marketing	2+1=3
PSC 609/VPY614	Physiology of Poultry Production*	1+1=2
PSC 610	Commercial Poultry Nutrition	1+1=2
PSC 611	Poultry Welfare and Waste Management	2+0=2
PSC 680	Special Problem for Master's programme	0+1=1
PSC 690	Master's Thesis Research	30
PSC 701	Applied Poultry Nutrition*	2+1=3
PSC 702	Recent Trends in Commercial Poultry Production*	2+1=3
PSC 703	Developments in Poultry Processing and Products Technology	2+1=3
PSC 704/VMD719	Emerging Diseases of Poultry and Health Management	2+1=3
PSC 705	Applied Poultry Breeding	1+1=2
PSC 706	Poultry Economics, Marketing and Integration	2+1=3
PSC 707	Diversified Poultry Production	2+1=3
PSC 780	Special Problem for PhD programme	0+1=1
PSC 788	Doctoral Seminar-I	1+0=1
PSC 789	Doctoral Seminar-II	1+0=1
PSC 790	Ph.D. Thesis Research	75

*Core Courses

List of postgraduate courses of Department of Livestock Production and Management

Course No	Course Title	Credit Hours
LPM 600	Master's Seminar	1+0=1
LPM 601	Cattle and Buffalo Production Management*	2+1=3
LPM 602	Sheep and Goat Production and Management*	2+1=3
LPM 603	Swine Production Management*	1+1=2
LPM 604	Climatology and Livestock Production*	1+1=2
LPM 605	Behaviour and Welfare of Farm Animals*	1+1=2
LPM 606	Equine Production Management*	1+1=2
LPM 607	Companion Animal Production Management*	1+1=2
LPM 608	Farm Hygiene and Waste Management	1+1=2
LPM 609	Integrated Livestock Farming Systems	1+1=2
LPM 610	Management and Conservation of Wild and Zoo Animals	1+1=2
LPM 611	Laboratory Animal Production Management	1+1=2
LPM 612	Livestock Business Management	1+1=2
LPM 613	Livestock Farm Machinery Management	0+2=2
LPM 614	Poultry Farm and Hatchery Management	1+1=2
LPM 615	Mule Production and Management	1+1=2
LPM680	Special Problem for Master's programme	0+1=1
LPM 690	Master's Thesis Research	30
LPM 701	Recent Developments in Large Ruminants Production Management*	2+1=3
LPM 702	Recent Developments in Small Ruminants Production Management*	2+1=3
LPM 703	Recent Developments in Swine Production Management*	1+1=2
LPM 704	Livestock and Environment*	1+0=1
LPM 705	Organic Livestock Production*	1+0=1
LPM 706	Recent Developments in Welfare of Farm Animals	1+0=1
LPM 707	Entrepreneurship in Livestock Production	1+1=1
LPM 708	Precision Livestock Farming	1+1=1
LPM 709	Recent Developments in Poultry Production Management	2+1=3
LPM-780	Special Problem for PhD programme	0+1=1
LPM 788	Doctoral Seminar-I	1+0=1
LPM 789	Doctoral Seminar-II	1+0=1
LPM 790	PhD Thesis Research	75
*Core Courses		

DEPARTMENT OF LIVESTOCK PRODUCTION MANAGEMENT

M.V. Sc. (Livestock Production and Management)

Major Courses (20 credits)

Course Code	Course Title	Credit Hours
LPM 601	Cattle and Buffalo Production Management*	3(2+1)
LPM 602	Sheep and Goat Production Management*	3(2+1)
LPM 603	Swine Production Management*	2 (1+1)
LPM 604	Climatology and Livestock Production*	2(1+1)
LPM 605	Behaviour and Welfare of Farm Animals*	2(1+1)
LPM 606	Equine Production Management*	2(1+1)
LPM 607	Companion Animal Production Management*	2(1+1)
*Core courses		04
4 credit hours to be chosen from list of postgraduate courses of Livestock Production and Management 600 series		
		20
Seminar (01 credit)		
LPM 600	Master's Seminar	1(1+0)
Supporting courses (07 credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
PSC 603	Commercial Layer and Broiler Management	3(2+1)
		07
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1)
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor courses (08 credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem.		
Thesis research (30 credits)		
LPM 690	Master's Thesis Research	30
	Total	71

List of postgraduate courses of Poultry Science

Course No	Course Title	Credit Hours
PSC 600	Master's Seminar	1+0=1
PSC 601	Poultry Breeding and Genetics*	2+1=3
PSC 602	Poultry Nutrition and Feeding*	2+1=3
PSC 603	Commercial Layer and Broiler Management*	2+1=3
PSC 604	Breeder Stock and Hatchery Management*	2+1=3
PSC 605/VMD618	Poultry Health and Biosecurity	2+1=3
PSC 606	Management of Other Avian Species	3+1=4
PSC 607	Poultry Products Technology*	2+1=3
PSC 608	Poultry Economics Project Formulation and Marketing	2+1=3
PSC 609/VPY614	Physiology of Poultry Production*	1+1=2
PSC 610	Commercial Poultry Nutrition	1+1=2
PSC 611	Poultry Welfare and Waste Management	2+0=2
PSC 680	Special Problem for Master's programme	0+1=1
PSC 690	Master's Thesis Research	30
PSC 701	Applied Poultry Nutrition*	2+1=3
PSC 702	Recent Trends in Commercial Poultry Production*	2+1=3
PSC 703	Developments in Poultry Processing and Products Technology	2+1=3
PSC 704/VMD719	Emerging Diseases of Poultry and Health Management	2+1=3
PSC 705	Applied Poultry Breeding	1+1=2
PSC 706	Poultry Economics, Marketing and Integration	2+1=3
PSC 707	Diversified Poultry Production	2+1=3
PSC 780	Special Problem for PhD programme	0+1=1
PSC 788	Doctoral Seminar-I	1+0=1
PSC 789	Doctoral Seminar-II	1+0=1
PSC 790	Ph.D. Thesis Research	75

*Core Courses

Ph.D (Livestock Products Technology)

Major Courses (12 Credits)		
Course Code	Course Title	Credit Hours
LPT 701	Modern Abattoir Practices and Animal By-Products Technology*	2(1+1)
LPT 702	Advances in Meat Production and Fresh Meat Technology*	2(1+1)
LPT 703	Developments in Processed Meat Technology*	2(1+1)
LPT 704	Current Trends in Processing of Milk And Milk Products*	2(1+1)
* core courses		
4 credit hours to be chosen from list of postgraduate courses of Livestock Products Technology 700 series		4
		12
Seminar (02 Credit)		
LPT 788	Doctoral Seminar I	1(1+0)
LPT 789	Doctoral Seminar II	1(1+0)
		02
Supporting Courses (06 credits)		
BHS652	Research Methodology I	1(1+0)
BPS 653	Research Methodology II	3(2+1)
RPE 700	Research and Publication Ethics	2 (1+1)
		06
Optional/ Minor Courses (06 Credits)		
Will be taken from any department (other than the major department) of the university related to the research problem		06
Thesis Research (75 Credits)		
LPT 790	PhD Thesis Research	75
Total		101
COMPULSORY COURSES FOR MINOR FOR OTHER DISCIPLINES		
LPT 601	Abattoir Practices and Meat Plant Operations	3(2+1)
LPT 610	Market Milk Processing and Dairy Plant Practices	2(1+1)

DEPARTMENT OF LIVESTOCK PRODUCTS TECHNOLOGY
M.V.Sc. (Livestock Products Technology)
Major Courses (20 Credits)

Course Code	Course Title	Credit Hours
LPT 601	Abattoir Practices and Meat Plant Operations*	3(2+1)
LPT 602	Fresh Meat Technology*	2(1+1)
LPT 603	Processing and Preservation of Meat*	3(2+1)
LPT 604	Processing of Milk and Milk Products*	2(1+1)
LPT 605	Packaging and Marketing of Livestock Products*	2(1+1)
LPT 606	Microbiology and Quality Control of Livestock Products*	2(1+1)
LPT 607	Slaughterhouse By-products Technology*	2(1+1)
*Core courses		4
4 credit hours to be chosen from list of postgraduate courses of Livestock Products Technology 600 series		20
Seminar (01 Credit)		
LPT 600	Master's Seminar	1(1+0)
Supporting Courses (08 Credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
Biochem 505	Techniques in Biochemistry	4(2+2)
		08
Common Courses (05 Credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1)
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/ Minor Courses (08 Credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (30 Credits)		
LPT 690	Master's Thesis Research	30
	Total	72

List of Postgraduate Courses of Department of Livestock Products Technology

Course Code	Course Title	Credit Hours
LPT 600	Master's Seminar	1(1+0)
LPT 601	Abattoir Practices and Meat Plant Operations*	3(2+1)
LPT 602	Fresh Meat Technology*	2(1+1)
LPT 603	Processing and Preservation of Meat*	3(2+1)
LPT 604	Processing of Milk and Milk Products*	2(1+1)
LPT 605	Packaging and Marketing of Livestock Products*	2(1+1)
LPT 606	Microbiology and Quality Control of Livestock Products*	2(1+1)
LPT 607	Slaughterhouse By-products Technology*	2(1+1)
LPT 608	In-Plant Training	2(0+2)
LPT 609	Egg and Egg Products Technology	2(1+1)
LPT 610	Market Milk Processing and Dairy Plant Practices	2(1+1)
LPT 611	Processing and Marketing of Wool	2(1+1)
LPT 612	Biotechnology of Foods of Animal Origin	2(1+1)
LPT 613	Fish and Fish Products Technology	2(1+1)
LPT 680	Special Problem for Master's programme	1(0+1)
LPT 690	Master's Thesis Research	30
LPT 701	Modern Abattoir Practices and Animal By-Products Technology*	2(1+1)
LPT 702	Advances in Meat Production and Fresh Meat Technology*	2(1+1)
LPT 703	Developments in Processed Meat Technology*	2(1+1)
LPT 704	Current Trends in Processing of Milk And Milk Products*	2(1+1)
LPT 705	Biotechnological Techniques and Quality Control of Livestock Products	2(1+1)
LPT 706	Ethnic and Organic Meat and Milk Products	2(1+1)
LPT 707	Industrial and Entrepreneurial Training	2(0+2)
LPT 708	Current Trends in Disposal and Utilization of Waste From Meat and Dairy Industry	2(1+1)
LPT 709	Advances in Egg and Egg Products Technology	2(1+1)
LPT 780	Special Problem for PhD programme	1(0+1)
LPT 788	Doctoral Seminar I	1(1+0)
LPT 789	Doctoral Seminar II	1(1+0)
LPT 790	PhD Thesis Research	75

*Core courses

Ph.D (Veterinary Anatomy)**Major Courses (12 credits)**

Course	Course Title	Credit Hours
VAN701	Myology, angiology, neurology and aesthesiology of equine, canine and porcine*	3 (2+1)
VAN704	Neuroanatomy *	3 (2+1)
VAN705	Comparative endocrine anatomy*	2 (1+1)
VAN709	Functional Veterinary Anatomy*	1 (1+0)
*core courses 3 credit hours to be chosen from list of postgraduate courses of Veterinary Anatomy 700 Series.		03
		12
Seminar (02 credit)		
VAN 788	Doctoral Seminar I	1 (1+0)
VAN 789	Doctoral Seminar II	1 (1+0)
		02
Supporting courses (06 credits)		
BHS 652	Research Methodology-I	1 (1+0)
BPS 653	Research Methodology-II	3 (2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/ minor courses (06 credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis research (75 credits)		
VAN 790	PhD Thesis research	75
Total		101
Compulsory courses for other disciplines (Master's Programme)		
VAN 602	Comparative splanchnology	4 (2+2)
VAN 606	General histology and ultrastructure	2 (1+1)
Courses for minor for other disciplines (Ph.D Programme)		
VAN 701	Myology, angiology, neurology and aesthesiology of equine, canine and porcine	3 (2+1)
VAN 704	Neuroanatomy	3 (2+1)

DEPARTMENT OF VETERINARY ANATOMY

M.V.Sc. (Veterinary Anatomy)

Major Courses (20 credits)

Course	Course Title	Credit Hours
VAN 603	Myology, Angiology, Neurology and Aesthesiology of Ox*	4 (2+2)
VAN 604	Gross, histological and histochemical techniques*	4 (1+3)
VAN 607	Systemic Histology and Ultra Structure*	4 (3+1)
VAN 608	Developmental Anatomy*	3 (2+1)
*core courses 5 credit hours to be chosen from list of postgraduate courses of Veterinary Anatomy 600 series		05
		20
Seminar (01 credit)		
VAN 600	Master's Seminar	1 (1+0)
Supporting courses (06 credits)		
STAT 502	Statistical Methods for Applied sciences	4 (3+1)
VPY 610	Instrumentation and Research Techniques in Veterinary Physiology	2 (1+1)
		06
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
Optional/ minor courses (08 credits)		
Will be taken from any department (other than the major department) of the university related to the research problem		08
Thesis research (30 credits)		
VAN 690	Master's Thesis Research	30
	Total	75

List of Post Graduate Courses of the Department of Veterinary Anatomy

Course Code	Course Title	Credit Hours
VAN 600	Master's seminar	1(1+0)
VAN 601	Comparative osteology and arthrology	3(1+2)
VAN 602	Comparative splanchnology	4(2+2)
VAN 603	Myology, angiology, neurology and aesthesiology of Ox*	4(2+2)
VAN 604	Gross, histological and histochemical techniques*	4(1+3)
VAN 605	Clinical anatomy	1(0+1)
VAN 606	General histology and ultrastructure	2(1+1)
VAN 607	Systemic histology and ultrastructure*	4(3+1)
VAN 608	Developmental anatomy*	3(2+1)
VAN 609	Wild life and forensic anatomy	1(1+0)
VAN 680	Special Problem for Master's programme	1(0+1)
VAN 690	Master's Thesis research	30
VAN 701	Myology, angiology, neurology and aesthesiology of equine, canine and porcine*	3(2+1)
VAN 702	Principles and applications of biomechanics	1(1+0)
VAN 703	Avian anatomy	2(1+1)
VAN 704	Neuroanatomy*	3(2+1)
VAN 705	Comparative endocrine anatomy*	2(1+1)
VAN 706	Theory and applications of electronmicroscopy	2(1+1)
VAN 707	Histoenzymology and immunocytochemistry	3(2+1)
VAN 708	Applied embryology and teratology	2(1+1)
VAN 709	Functional veterinary anatomy*	1(1+0)
VAN 710	Gross anatomy of laboratory animals	2(1+1)
VAN 711	Cross sectional anatomy of ox	1(0+1)
VAN 712	Animal alternatives in veterinary anatomy	2(1+1)
VAN 780	Special problem for PhD programme	2(0+2)
VAN 788	Doctoral seminar- I	1(1+0)
VAN 789	Doctoral seminar- II	1(1+0)
VAN 790	Ph.D Thesis research	75
*Core courses		

DEPARTMENT OF VETERINARY & ANIMAL HUSBANDRY EXTENSION EDUCATION

M.V.Sc. (Veterinary Extension Education)

Major Courses (20 credits)

Course Code	Course Title	Credit Hours
VAE 601	Development Perspectives of Extension Education*	3(2+1)
VAE 602	Communication for Livestock Development*	2(1+1)
VAE 603	Diffusion and Adoption of Innovations*	3(2+1)
VAE 604	Programme Planning and Evaluation*	2(1+1)
VAE 605	Research Methodology*	3(2+1)
VAE 608	Human Resource Management in Animal Husbandry Sector*	2(1+1)
* Core courses 5 credit hours to be chosen from the list of Post Graduate courses of the department		05
		20
Seminar (01 credit)		
VAE 600	Master's Seminar	1(1+0)
Supporting Courses (07 credits)		
STAT 502	Statistical Methods for Applied Sciences	4 (3+1)
STAT 522	Data Analysis Using Statistical Packages	3 (2+1)
		07

Common Courses (05 credits)

Library and Information Services	1 (0+1)
Technical Writing and Communication Skills	1 (0+1))
Intellectual Property and its Management in Agriculture	1 (0+1)
Basic Concepts in Laboratory Techniques	1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme	1 (0+1)

Optional/minor courses (08 credits) Will be taken from any department (other than the major department) of the university related to the research problem		08
Thesis Research (30 credits)		
VAE 690	Master's Thesis Research	30
		71
Compulsory courses for minor for other disciplines (8 credits)		
VAE 601	Development Perspectives of Extension Education	3(2+1)
VAE 602	Communication for Livestock Development	2(1+1)
3 credit hrs to be chosen from list of post graduate courses of 600 series		3

List of Post Graduate Courses of Department of Veterinary & Animal Husbandry Extension Education

Course Code	Course Title	Credit Hours
VAE 600	Master's Seminar	1(1+0)
VAE 601	Development Perspectives of Extension Education*	3(2+1)
VAE 602	Communication for Livestock Development*	2(1+1)
VAE 603	Diffusion and Adoption of Innovation*	3(2+1)
VAE 604	Programme Planning and Evaluation*	1(1+0)
VAE 605	Research Methodology*	3(2+1)
VAE 606	Social Psychology and Group Dynamics	2(1+1)
VAE 607	Livestock Entrepreneurship	3(1+2)
VAE 608	Human Resource Management in Animal Husbandry Sector*	2(1+1)
VAE 609	Gender Empowerment and Livestock Development	1(1+0)
VAE 610	Farm Journalism	1(1+1)
VAE 611	Animal Husbandry Development Programmes	1(1+0)
VAE 612	Information and Communication Technology in Livestock Development	2(1+1)
VAE 613	Training for Development	2 (1+1)
VAE 614	Educational Technology	3 (2+1)
VAE 615	Managing Extension Organizations	3 (2+1)
VAE 680	Special Problem for Master's programme	1(0+1)
VAE 690	Master's Thesis Research	30
* Core courses		

Ph.D. (Veterinary Gynaecology and Obstetrics)**Major Courses (12 Credits)**

Course Code	Course Title	Credit Hours
VGO 701	Advances in Gynaecology and Infertility Management*	3(2+1)
VGO 703	Advances in Andrology and Male Infertility*	3(2+1)
VGO 706	Doctoral Clinical Practice-I*	3(0+3)
VGO 707	Doctoral Clinical Practice-II*	3(0+3)
* Core Courses		12
Seminar (02 Credits)		
VGO 788	Doctoral Seminar I	1(1+0)
VGO 789	Doctoral Seminar II	1(1+0)
		02
Supporting Course (06 Credits)		
BHS 652	Research Methodology- I	1(1+0)
BPS 653	Research Methodology- II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/minor Course (06 Credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (75 Credits)		
VGO 790	PhD Thesis Research	75
		Total 101
Compulsory courses for minor for other disciplines (Master's Programme)		
VGO 601	General Gynaecology*	3(2+1)
VGO 603	Veterinary Obstetrics*	3(2+1)
Course for minor for other disciplines (Ph.D. Programme)		
VGO 701	Advances in Gynaecology and Infertility Management*	3(2+1)
VGO 703	Advances in Andrology and Male Infertility*	3(2+1)
* Pre-requisite VGO 601 and VGO 603.		

DEPARTMENT OF VETERINARY GYNAECOLOGY AND OBSTETRICS

M.V.Sc (Veterinary Gynaecology and Obstetrics)

Major Courses (21 Credits)

Course Code	Course Title	Credit Hours
VGO 601	General Gynaecology*	3(2+1)
VGO 602	Female Infertility in Farm Animals*	3(2+1)
VGO 603	Veterinary Obstetrics*	3(2+1)
VGO 604	Andrology and Male Infertility*	3(2+1)
VGO 606	Basics of Reproductive Biotechnology*	3(2+1)
VGO 607	Master's Clinical Practice-I*	3(0+3)
VGO 608	Master's Clinical Practice-II*	3(0+3)
* Core Courses		21
Seminar (01 Credit)		
VGO 600	Master's Seminar	1(1+0)
Supporting Course (06 Credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
VMD 615	Animal Disease Investigation and Biosecurity	2(1+1)
Common Course (05 Credits)		06
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1)
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor course (08 Credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (30 Credits)		
VGO 690	Master's Thesis Research	30
	Total	71

List of postgraduate courses of Department of Veterinary Gynaecology and Obstetrics

Course Code	Course Title	Credit Hours
VGO 600	Master's Seminar	1(1+0)
VGO 601	General Gynaecology*	3(2+1)
VGO 602	Female Infertility in Farm Animals*	3(2+1)
VGO 603	Veterinary Obstetrics*	3(2+1)
VGO 604	Andrology and Male Infertility*	3(2+1)
VGO 605	Semen Preservation and Artificial Insemination	3(2+1)
VGO 606	Basics of Reproductive Biotechnology*	3(2+1)
VGO 607	Master's Clinical Practice-I*	3(0+3)
VGO 608	Master's Clinical Practice-II*	3(0+3)
VGO 609	Canine and Feline Reproduction	3(2+1)
VGO 610	Caprine and Ovine Reproduction	3(2+1)
VGO 611	Equine Reproduction	3(2+1)
VGO 612	Camel Reproduction	3(2+1)
VGO 613	Elephant Reproduction	3(2+1)
VGO 614	Wild and Zoo Animal Reproduction	3(2+1)
VGO 615	Porcine Reproduction	3(2+1)
VGO 616	Ultrasonography In Animal Reproduction	3(1+2)
VGO 680	Special Problem for Master's programme	1(0+1)
VGO 690	Master's Thesis Research	30
VGO 701	Advances in Gynaecology and Infertility Management*	3(2+1)
VGO 702	Advances in Veterinary Obstetrics	2(1+1)
VGO 703	Advances in Andrology and Male Infertility*	3(2+1)
VGO 704	Reproductive Biotechnology	2(1+1)
VGO 705	Semenology	2(1+1)
VGO 706	Doctoral Clinical Practice-I*	3(0+3)
VGO 707	Doctoral Clinical Practice-II*	3(0+3)
VGO 780	Special Problem for PhD programme	2(0+2)
VGO 788	Doctoral Seminar-I	1(1+0)
VGO 789	Doctoral Seminar-II	1(1+0)
VGO 790	PhD Thesis Research	75
*Core courses		

Ph.D. (Veterinary Medicine)
Major Courses (12 Credits)

Course Code	Course Title	Credit Hours
VMD 716	Doctoral Clinical Practice-I *	2 (0+2)
VMD 717	Doctoral Clinical Practice-II *	2 (0+2)
VMD 718	Doctoral Clinical Practice-III *	2 (0+2)
* Core Courses 6 credit hours to be chosen from list of postgraduate courses of Veterinary Medicine 700 series		06
		12
Seminar (02 Credits)		
VMD 788	Doctoral Seminar I	1 (1+0)
VMD 789	Doctoral Seminar II	1 (1+0)
		02
Supporting course (06 Credits)		
BHS 652	Research Methodology-I	1 (1+0)
BPS 653	Research Methodology-II	3 (2+1)
RPE 700	Research and Publication Ethics	2 (1+1)
		06
Optional/minor course (06 Credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (75 Credits)		
VMD 790	PhD Thesis Research	75
Total		101
Compulsory course for minor for other disciplines (Master's Programme)		
VMD 601	Ruminant Medicine-internal	3 (3+0)
VMD 602	Ruminant Medicine-infectious	3 (3+0)
Course for minor for other disciplines (PhD Programme)		
VMD 701	Farm Animal Gastroenterology*	2 (2+0)
VMD 702	Farm Animal Cardiopulmonary and Urinary System Diseases*	2 (2+0)
VMD 712	Metabolic and Nutritional Deficiency Diseases*	2 (2+0)
* Pre-requisite Courses- VMD 601 and VMD 602.		

DEPARTMENT OF VETERINARY MEDICINE

M.V.Sc. (Veterinary Medicine)

Major Courses (20 Credits)

Course Code	Course Title	Credit Hours
VMD 601	Ruminant Medicine-internal*	3 (3+0)
VMD 602	Ruminant Medicine-infectious*	3 (3+0)
VMD 604	Canine and Feline Medicine-I*	2 (2+0)
VMD 605	Canine and Feline Medicine-II*	2 (2+0)
VMD 611	Clinical Diagnostic Techniques*	2 (0+2)
VMD 613	Diagnosis of Veterinary Infectious Diseases*	1 (0+1)
VMD 616	Master's Clinical Practice-I*	3 (0+3)
VMD 617	Master's Clinical Practice-II*	3 (0+3)
* Core Courses 1 credit hour to be chosen from list of postgraduate courses of Veterinary Medicine 600 series.		01
		20
Seminar (01 Credits)		
VMD 600	Master's Seminar	1 (1+0)
Supporting courses (06 Credits)		
STAT 502	Statistical Methods for Applied Sciences	4 (3+1)
VPT 610	Pharmacological Techniques	2(1+1)
		06
Common Courses (05 Credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor course (08 Credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (30 Credits)		
VMD 690	Master's Thesis Research	30
Total		70

List of postgraduate courses of the Department of Veterinary Medicine

Course Code	Course Title	Credit Hours
VMD 600	Master's Seminar	1(1+0)
VMD 601	Ruminant Medicine-internal*	3(3+0)
VMD 602	Ruminant Medicine-infectious*	3(3+0)
VMD 603	Equine Medicine	2(2+0)
VMD 604	Canine and Feline Medicine-I*	2(2+0)
VMD 605	Canine and Feline Medicine-II*	2(2+0)
VMD 606	Metabolic and Endocrine Diseases, Nutritional Deficiencies and Diseases of Mammary Gland	2(2+0)
VMD 607	Paediatrics and Geriatrics	2(2+0)
VMD 608	Avian and Swine Medicine	2(2+0)
VMD 609	Zoo, Wild and Laboratory Animal Medicine	1(1+0)
VMD 610	Toxicology and Forensic Medicine	1(1+0)
VMD 611	Clinical Diagnostic Techniques*	2(0+2)
VMD 612	Emergency Medicine	2(0+2)
VMD 613	Diagnosis of Veterinary Infectious Diseases*	1(0+1)
VMD 614	Oncology and Ethno-veterinary Medicine	1(1+0)
VMD 615	Animal Disease Investigation and Biosecurity	2(1+1)
VMD 616	Master's Clinical Practice-I*	3(0+3)
VMD 617	Master's Clinical Practice-II*	3(0+3)
VMD 680	Special Problem for Master's programme	1(0+1)
VMD 690	Master's Thesis Research	30
VMD 701	Farm Animal Gastroenterology	2(2+0)
VMD 702	Farm Animal Cardiopulmonary and Urinary System Diseases	2(2+0)
VMD 703	Farm Animal Neurological and Musculo-skeletal System Diseases	1(1+0)
VMD 704	Farm Animal Neonatology	1(1+0)
VMD 705	Herd Health Management	3(2+1)
VMD 706	Canine and Feline Gastroenterology	2(2+0)
VMD 707	Advances in Neurological and Musculoskeletal System Diseases of Canine and Feline	1(1+0)
VMD 708	Canine and Feline Cardiopulmonary and Urinary System Diseases	1(1+0)
VMD 709	Dermatology and Endocrinology	1(1+0)
VMD 710	Canine and Feline Eye and Ear Diseases	1(1+0)
VMD 711	Veterinary Diagnostics	2(0+2)
VMD 712	Metabolic and Nutritional Deficiency Diseases	2(2+0)
VMD 713	Emergency and Critical Care Medicine	2(1+1)
VMD 714	Emerging and Re-emerging Animal Diseases	2(2+0)
VMD 715	Prevention and Control of Infectious Diseases of Ruminants	2(2+0)
VMD 716	Doctoral Clinical Practice-I*	2(0+2)
VMD 717	Doctoral Clinical Practice-II*	2(0+2)
VMD 718	Doctoral Clinical Practice-III*	2(0+2)
VMD 780	Special Problem for PhD programme	1(0+1)
VMD 788	Doctoral Seminar-I	1(1+0)
VMD 789	Doctoral Seminar-II	1(1+0)
VMD 790	PhD Thesis Research	75
*Core Courses		

Ph.D (Veterinary Microbiology & Immunology)

Major courses (12 credits)

Course code	Course Title	Credit hours
VMC 701	Advances in Veterinary Bacteriology*	(2+1)
VMC 706	Advances in Veterinary Virology*	(2+1)
VMC 711	Advances in Veterinary Immunology*	(2+1)
*Core courses 3 credit hours to be chosen from list of postgraduate courses of Veterinary Microbiology 700 series		3
		12
Seminar (02 credit)		
VMC 788	Doctoral Seminar I	1(1+0)
VMC 789	Doctoral Seminar II	1(1+0)
		02
Supporting courses (06 credits)		
BHS 652	Research Methodology-I	1(1+0)
BPS 653	Research Methodology-II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/minor courses (06 credits) Will be taken from any department (other than the major department) of the university related to the research problem		06
Thesis research (75 credits)		
VMC 790	PhD thesis Research	75
	Total	101
Compulsory courses for minor for other disciplines (Master's programme)		
VMC 603	General Virology	3(2+1)
VMC 601	General Bacteriology	3(2+1)
Courses for minor for other disciplines (PhD Programme)		
VMC 706	Advances in Veterinary Virology*	3(2+1)
VMC 701	Advances in Veterinary Bacteriology*	3(2+1)
*Pre-requisite VMC 601 and VMC 603.		

DEPARTMENT OF VETERINARY MICROBIOLOGY

M.V.Sc (Veterinary Microbiology & Immunology)

Major courses (20 credits)

Course code	Course Title	Credit Hours
VMC 601	General Bacteriology *	3(2+1)
VMC 603	General Virology*	3(2+1)
VMC 605	Principles of Veterinary Immunology*	3(2+1)
VMC 606	Veterinary Mycology*	2(1+1)
*Core courses 9 credit hours to be chosen from list of postgraduate courses of Veterinary Microbiology 600 series.		9
		20
Seminar (01 credit)		
VMC 600	Master's seminar	1(1+0)
Supporting courses (07 credits)		
BIOCHEM 501	Basic Biochemistry	4(3+1)
STAT 511	Experimental designs	3 (2+1)
		07
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor courses (08 credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis research (30 credits)		
VMC 690	Master's Thesis Research	30
	Total	71

List of postgraduate courses of Department of Veterinary Microbiology

Course code	Course Title	Credit Hours
VMC 600	Master's Seminar	1(1+0)
VMC 601	General Bacteriology*	3(2+1)
VMC 602	Systematic Veterinary Bacteriology	3(2+1)
VMC 603	General Virology*	3(2+1)
VMC 604	Systematic Veterinary Virology	3(2+1)
VMC 605	Principles of Veterinary Immunology*	3(2+1)
VMC 606	Veterinary Mycology*	2(1+1)
VMC 607	Vaccinology	2(2+0)
VMC 608	Techniques in Microbiology	2(0+2)
VMC 609	Techniques in Molecular Microbiology	3(1+2)
VMC 610	Molecular Immunology	2(1+1)
VMC 611	Mucosal Immunology	1(1+0)
VMC 612	Introduction to Microbial Bio-informatics	1(1+0)
VMC 680	Special Problem for Master's programm	1(0+1)
VMC 690	Master's Thesis Research	30
VMC 701	Advances in Veterinary Bacteriology*	3(2+1)
VMC 702	Advances in Veterinary Mycology	3(2+1)
VMC 703	Bacterial Genetics	2(2+0)
VMC 704	Microbial Toxins	3(2+1)
VMC 705	Bacterial Pathogenesis	2(2+0)
VMC 706	Advances in Veterinary Virology*	3(2+1)
VMC 707	Molecular Viral Pathogenesis	3(2+1)
VMC 708	Structure Function Relationship of DNA and RNA Viruses	2(2+0)
VMC 709	Oncogenic Viruses	2(2+0)
VMC 710	Slow Viral Infections and Prions	1(1+0)
VMC 711	Advances in Veterinary Immunology*	3(2+1)
VMC 712	Cytokines and Chemokines	2(2+ 0)
VMC 713	Immunoregulation	1(1+0)
VMC 714	Advances in Vaccinology	2(2+0)
VMC 715	Current topics in Infection and Immunity	2(2+0)
VMC 716	Veterinary Microbial Biotechnology	3(2+1)
VMC 780	Special Problem for PhD programme	1(0+1)
VMC 788	Doctoral Seminar-I	1(1+0)
VMC 789	Doctoral Seminar-II	1(1+0)
VMC 790	PhD thesis Research	75
*Core Course		

Ph.D. (Veterinary Pathology)**Major Courses (12 credits)**

Course Code	Course Name	Credit Hours
VPP 701	Molecular and Ultrastructural Basis of Cell Injury*	3 (2+1)
VPP 704	Immunopathology*	3 (2+1)
VPP 708	Research Methodology in Pathology*	1 (1+0)
VPP 709	Necropsy Conference*	1(0+1)
* Core courses 4 Credit hours to be chosen from list of post graduate courses of Veterinary Pathology 700 series		4
		12
Seminar (02 credits)		
VPP 788	Doctoral Seminar- I	1(1+0)
VPP 789	Doctoral Seminar- II	1(1+0)
		02
Supporting Courses (06 credits)		
BHS 652	Research Methodology-I	1(1+0)
BPS 653	Research Methodology-II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional / Minor Courses (06 credits) Will be taken from any department (other than the major department) of the university related to the research problem		06
Thesis Research (75 credits)		
VPP 790	Ph.D. Thesis Research	75
Total		101
Compulsory Courses for minor for other disciplines for master's Programme		
VPP 604	Clinical Pathology	2 (1+1)
VPP 610	Avian pathology	3 (2+1)
Compulsory Courses for minor for other disciplines for Ph.D. Programme		
VPP 701	Molecular and Ultrastructural Basis of Cell Injury*	3 (2+1)
VPP 705	Advances in Diagnostic Pathology*	3 (1+2)
VPP 706	Pathology of Nutritional and Metabolic Disturbances*	3 (2+1)
VPP 707	Pathology of Important and Re-Emerging Diseases of	3 (2+1)
Pets and Livestock*		
*Prerequisite courses- VPP 604 and VPP 610		

DEPARTMENT OF VETERINARY PATHOLOGY

M.V.Sc. (Veterinary Pathology)

Major Courses (20 credits)

Course Code	Course Name	Credit Hours
VPP 601	General Pathology*	3 (2 +1)
VPP 602	Techniques in Pathology*	2 (1+1)
VPP 604	Clinical Pathology *	2 (1+1)
VPP 605	Necropsy Procedures and Interpretations*	2 (1+1)
VPP 606	Necropsy Conference*	1 (0+1)
VPP 607	Systemic Pathology*	3 (2+1)
VPP 608	Pathology of Infectious Diseases of Domestic Animals*	3 (2+1)
VPP 610	Avian Pathology*	3 (2+1)
* Core courses 01 Credit hours to be chosen from list of post graduate courses of Veterinary Pathology 600 series		1
		20
Seminar (01 Credit)		
VPP 600	Master's Seminar	1(1+0)
Supporting Courses (06 credits)		
STAT 502	Statistical Methods for Applied Sciences	4 (3+1)
VMC 608	Techniques in Microbiology	2 (0+2)
		06
Common Courses (05 Credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/Minor Courses (08 credits) Will be taken from any department (other than the major department) of the university related to the research problem		08
Thesis Research (30 credits)		
VPP 690	Master's Thesis Research	30
	Total	70

List of Post Graduate Courses of the Department of Veterinary Pathology

Course No	Course Title	Credit Hours
VPP 600	Master's Seminar	1 (1+0)
VPP 601	General Pathology*	3 (2+1)
VPP 602	Techniques in Pathology*	2 (1+1)
VPP 603	Animal Oncology	2 (1+1)
VPP 604	Clinical Pathology*	2 (1+1)
VPP 605	Necropsy Procedures and Interpretations*	2 (1+1)
VPP 606	Necropsy Conference*	1 (0+1)
VPP 607	Systemic Pathology*	3 (2+1)
VPP 608	Pathology of Infectious Diseases of Domestic Animals*	3 (2+1)
VPP 609	Toxicopathology	3 (2+1)
VPP 610	Avian pathology*	3 (2+1)
VPP 611	Pathology of Wild/Zoo and Aquatic Animal Diseases	3 (2+1)
VPP 612	Pathology of Laboratory Animal Diseases	3 (2+1)
VPP 680	Special Problem for Master's programme	1(0+1)
VPP 690	Master's Thesis Research	30
VPP 701	Molecular and Ultrastructural Basis of Cell Injury*	3 (2+1)
VPP 702	Molecular Basis of Inflammation	2 (1+1)
VPP 703	Molecular Basis of Neoplasia	2 (1+1)
VPP 704	Immunopathology*	3(2+1)
VPP 705	Advances in Diagnostic Pathology	3 (1+2)
VPP 706	Pathology of Nutritional and Metabolic Disturbances	3 (2+1)
VPP 707	Pathology of Important Emerging and Re-emerging Diseases of Pets and Livestock	3 (2+1)
VPP 708	Research Methodology in Pathology*	1 (1+0)
VPP 709	Necropsy Conference I*	1(0+1)
VPP 780	Special Problem for PhD programme	1(0+1)
VPP 788	Doctoral Seminar – I	1(1+0)
VPP 789	Doctoral Seminar – II	1(1+0)
VPP 790	Ph.D. Thesis Research	75
* Core courses		

Ph.D. (Veterinary Parasitology)**Major Course (12 credits)**

Course Code	Course Title	Credits Hours
VPA 705	Immunology of Parasitic Diseases*	3(1+2)
VPA 706	Molecular Diagnostics and Vaccine Development in Parasitology*	3(2+1)
VPA 712	Parasite Epidemiology *	2(2+0)
* core courses 4 credit hours to be chosen from the list of postgraduate courses of Veterinary Parasitology 700 series		04
		12
Seminar (02 credits)		
VPA 788	Doctoral Seminar-I	1(1+0)
VPA 789	Doctoral Seminar-II	1(1+0)
		02
Supporting Courses (06 credits)		
BHS 652	Research Methodology I	1(1+0)
BPS 653	Research Methodology II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/minor courses (06 credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (75 credits)		
VPA 790	PhD Thesis Research	75
Total		101
Courses for minor for other disciplines (Master's Programme)		
VPA 603	Nemathelminthes and Acanthocephala	3(2+1)
VPA 605	Parasitic Protozoa	3(2+1)
VPA 607	Clinical Parasitology	2(1+1)
Courses for minor for other disciplines (Ph.D. Programme)		
VPA 705	Immunology of Parasitic Diseases	3(1+2)
VPA 706	Molecular Diagnostics and Vaccine Development in Parasitology	3(2+1)

DEPARTMENT OF VETERINARY PARASITOLOGY

M. V. Sc. (Veterinary Parasitology)

Major Course (20 credits)

Course Code	Course Title	Credits Hours
VPA 601	Platyhelminthes-I*	2(1+1)
VPA 602	Platyhelminthes-II*	2(1+1)
VPA 603	Nemathelminthes and Acanthocephala*	3(2+1)
VPA 604	Arthropod Parasites*	3(2+1)
VPA 605	Parasitic Protozoa*	3(2+1)
* core courses		
7 credit hours to be chosen from the list of postgraduate courses		7
of Veterinary Parasitology 600 series		
		20
Seminar (01 credit)		
VPA 600	Master's Seminar	1(1+0)
Supporting Courses (06 credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
VPP 602	Techniques in Pathology	2(0+2)
		06
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor courses (08 credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (30 credits)		
VPA 690	Master's Thesis Research	30
	Total	70

List of postgraduate courses of the Department of Veterinary Parasitology

Course No.	Course Title	Credit hrs.
VPA 600	Master's Seminar	1(1+0)
VPA 601	Platyhelminthes-I*	2(1+1)
VPA 602	Platyhelminthes-II*	2(1+1)
VPA 603	Nemathelminthes and Acanthocephala*	3(2+1)
VPA 604	Arthropod Parasites*	3(2+1)
VPA 605	Parasitic Protozoa*	3(2+1)
VPA 606	Diagnostic Parasitology	2(0+2)
VPA 607	Clinical Parasitology	2(1+1)
VPA 608	Management of Parasitic Diseases	2(1+1)
VPA 609	Immunoparasitology	3(2+1)
VPA 610	Parasitic Zoonoses	2(2+0)
VPA 611	Parasites of Wildlife	2(1+1)
VPA 680	Special Problem for Master's programme	1(0+1)
VPA 690	Master's Thesis Research	30
VPA 701	Advances in Helminthology-I	3(2+1)
VPA 702	Advances in Helminthology-II	3(2+1)
VPA 703	Entomology and Acarology	3(2+1)
VPA 704	Advances in Protozoology	3(2+1)
VPA 705	Immunology of Parasitic Diseases*	3(1+2)
VPA 706	Molecular Diagnostics and Vaccine Development in Parasitology*	3(2+1)
VPA 707	Host Parasite Interactions	2(2+0)
VPA708	<i>In-vitro</i> Cultivation of Parasites	3(1+2)
VPA 709	Emerging and Re-Emerging Parasitic Diseases	2(2+0)
VPA 710	Biology and Ecology of Parasites	3(3+0)
VPA 711	Molecular Veterinary Parasitology	2(2+0)
VPA 712	Parasite Epidemiology*	2(2+0)
VPA 780	Special Problem for PhD programme	1(0+1)
VPA 788	Doctoral Seminar-I	1(1+0)
VPA 789	Doctoral Seminar-II	1(1+0)
VPA 790	PhD Thesis Research	75
* Core courses		

Ph.D (Veterinary Pharmacology & Toxicology)

Major Courses (12 credits)

Course Code	Course Title	Credit Hours
VPT 701	Molecular Pharmacology*	3(3+0)
VPT 705	Clinical Pharmacology and Pharmacokinetics*	3(2+1)
VPT 709	Clinical Toxicology*	3(2+1)
*Core courses 3 credit hours to be chosen from list of postgraduate courses of Veterinary Pharmacology and Toxicology 700 series.		03
		12
Seminar (02 credits)		
VPT 788	Doctoral Seminar I	1(1+0)
VPT 789	Doctoral Seminar II	1(1+0)
		02
Supporting courses (06 credits)		
BHS 652	Research Methodology-I	1(1+0)
BPS 653	Research Methodology-II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/minor courses (06 credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis research(75credits)		
VPT 790	PhD Thesis Research	75
Total		101

Minor Courses (For Other Departments)

Master's Degree (08 Credits)

Course Code	Course Title	Credit Hours
VPT 602	Autonomic and Autacoid Pharmacology	3 (2+1)
VPT 607	Advanced Chemotherapy	3 (2+1)
02 Credit Hours will be chosen from the list of Post Graduate Courses of Pharmacology and Toxicology, 600 Series		02

Ph.D. Degree (06 Credits)

Course Code	Course Title	Credit Hours
VPT 705	Clinical Pharmacology and Pharmacokinetics*	3 (2+1)
VPT 709	Clinical Toxicology*	3 (2+1)
*Prerequisite : VPT 602 and VPT 607		

DEPARTMENT OF VETERINARY PHARMACOLOGY & TOXICOLOGY

M.V.Sc. (Veterinary Pharmacology and Toxicology)

Major Courses (20 credits)

Course Code	Course Title	Credit Hours
VPT 601	Concepts of Pharmacology, Drug Design and Development *	2(2+0)
VPT 602	Autonomic and Autacoid Pharmacology*	3(2+1)
VPT 607	Advances in Chemotherapy *	3(2+1)
VPT 608	Toxicology of Xenobiotics*	3(2+1)
VPT 610	Pharmacological Techniques*	2(1+1)
VPT 611	Techniques in Toxicology*	2(1+1)
*Core courses 5 credit hours to be chosen from list of postgraduate courses of Veterinary Pharmacology and Toxicology 600 series.		5
		20
Seminar (01 credit)		
VPT 600	Master's Seminar	1(1+0)
Supporting courses (06 credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
VPY 610	Instrumentation and Research Techniques in Veterinary Physiology	2(0+2)
		06
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor courses (08 credits) Will be taken from any department (other than the major department) of the university related to the research problem		08
Thesis research (30 credits)		
VPT 690	Master's Thesis Research	30
Total		70

List of postgraduate courses of the Department of Veterinary Pharmacology and Toxicology

Course Code	Course Title	Credit Hours
VPT 600	Master's Seminar	1(1+0)
VPT 601	Concepts of Pharmacology, Drug Design and Development*	2(2+0)
VPT 602	Autonomic and Autacoid Pharmacology*	3(2+1)
VPT 603	CNS Pharmacology	3(2+1)
VPT 604	Digestive and Respiratory Pharmacology	3(2+1)
VPT 505	Cardiovascular and Urinary System Pharmacology	2(2+0)
VPT 606	Endocrine and Reproductive Pharmacology	3(2+1)
VPT 607	Advances in Chemotherapy*	3(2+1)
VPT 608	Toxicology of Xenobiotics*	3(2+1)
VPT 609	Toxinology	3(2+1)
VPT 610	Pharmacological Techniques*	2(0+2)
VPT 611	Techniques in Toxicology*	2(0+2)
VPT 612	Ethnopharmacology	2(1+1)
VPT 613	Fundamentals of Pharmacokinetics	2(1+1)
VPT 680	Special Problem for Master's Programme	1(0+1)
VPT 690	Master's Thesis Research	30
VPT 701	Molecular Pharmacology*	3(3+0)
VPT 702	Advances in Autacoid Pharmacology	1(1+0)
VPT 703	Pharmacology of Herbal Drugs	3(2+1)
VPT 704	Biotransformation of Xenobiotics	2(2+0)
VPT 705	Clinical Pharmacology and Pharmacokinetics*	(2+1)
VPT 706	Pharmacogenomics	2(2+0)
VPT 707	Immunopharmacology and Immunotoxicology	2(2+0)
VPT 708	Molecular Toxicology	3(3+0)
VPT 709	Clinical Toxicology*	3(2+1)
VPT 710	Ecotoxicology	3(3+0)
VPT 711	Regulatory Toxicology	3(2+1)
VPT 780	Special Problem for PhD programme	1(0+1)
VPT 788	Doctoral Seminar I	1(1+0)
VPT 789	Doctoral Seminar II	1(1+0)
VPT 790	PhD Thesis Research	75
*Core course		

Ph.D. (Veterinary Physiology)
Major Course (12 credits)

Course Code	Course Title	Credits Hours
VPY 706	Avian Physiology*	3(2+1)
VPY 707	Physiology of Lactation*	3(2+1)
* core courses 6 credit hours to be chosen from the list of postgraduate courses of Veterinary Physiology 700 series		06
		12
Seminar (02 credits)		
VPY 788	Doctoral Seminar-I	1(1+0)
VPY 789	Doctoral Seminar-II	1(1+0)
		02
Supporting Courses (06 credits)		
BHS 652	Research Methodology I	1(1+0)
BPS 653	Research Methodology II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/minor courses (06 credits)		06
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (75 credits)		
VPY 790	PhD Thesis Research	75
Total		100
Compulsory minor courses for other disciplines (Master's Programme)		
VPY 608	Neuromuscular Physiology	2(2+0)
VPY 609	Endocrinology of Domestic Animals	2(2+0)
Compulsory minor courses for other disciplines (Ph.D. Programme)		
VPY 706	Avian Physiology	3 (2+1)

DEPARTMENT OF VETERINARY PHYSIOLOGY & BIOCHEMISTRY

M. V. Sc. (Veterinary Physiology)

Major Course (20 credits)

Course Code	Course Title	Credits Hours
VPY 601	Physiology of Digestion*	3(2+1)
VPY 602	Cardiovascular and Respiratory Physiology*	3(2+1)
VPY 603	Renal Physiology and Body Fluid dynamics*	3(2+1)
VPY 606	Physiology of Animal Reproduction*	3(2+1)
VPY 608	Neuromuscular Physiology*	2(2+0)
VPY 609	Endocrinology of Domestic Animals*	2(2+0)
* core courses 4 credit hours to be chosen from the list of postgraduate courses of Veterinary Physiology 600 series		4
		20
Seminar (01 credit)		
VPY 600	Master's Seminar	1(1+0)
Supporting Courses (06 credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
VBC 601	Biophysical Chemistry	2(2+0)
		06
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor courses (08 credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research(30 credits)		
VPY 690	Master's Thesis Research	30
	Total	70

Ph.D. (Veterinary Biochemistry)
Major Courses (12 Credits)

Course code	Course Title	Credit Hours
VBC 703	Recent trends in Enzymology*	3 (2 + 1)
VBC 705	Recent Trends in Biochemical Techniques and Instrumentation*	
*Core courses 6 credit hours to be chosen from the list of postgraduate courses of Veterinary Biochemistry 700 series		6
		12
Seminar (02 credit)		
VBC 788	Doctoral Seminar-I	1 (1 + 0)
VBC 789	Doctoral Seminar-II	1 (1 + 0)
		02
Supporting courses (06 Credits)		
BHS 652	Research Methodology-I	1 (1 + 0)
BPS 653	Research Methodology-II	3 (2 + 1)
RPE 700	Research and Publication Ethics	2 (1+1)
		06
Optional/Minor courses (06 Credits)		06
Will be taken from any department (other than the major department)		
of the university related to the research problem		
Thesis research (30 credits)		
VBC 790	PhD Thesis Research	75
	Total	101
Compulsory minor courses for other disciplines (Master's Programme)		
VBC 601	Biophysical Chemistry	2 (2 + 0)
VBC 602	Biochemistry of Biomolecules	2 (2 + 0)
Compulsory minor courses for other disciplines (PhD Programme)		
VBC 703	Recent trends in Enzymology	3 (2 + 1)

M.V.Sc. (Veterinary Biochemistry)**Major Courses (20 Credits)**

Course code	Course Title	Credit Hours
VBC 601	Biophysical Chemistry*	2 (2 + 0)
VBC 602	Biochemistry of Biomolecules*	2 (2 + 0)
VBC 603	Enzymology*	3 (2 + 1)
VBC 604	Analytical Techniques and Instrumentation in Biochemistry*	2 (1 + 1)
VBC 605	Clinical Biochemistry of Animals*	3 (2 + 1)
VBC 606	Intermediary Metabolism and Regulation*	3 (3 + 0)
*Core courses 5 credit hours to be chosen from the list of postgraduate courses of Veterinary Biochemistry 600 series		5
		20
Seminar (01 credit)		
VBC 600	Master's Seminar	1 (1 + 0)
Supporting courses (06 Credits)		
STAT 502	Statistical Methods for Applied Sciences	4 (3+1)
VPY 610	Instrumentation and Research Techniques in Veterinary Physiology	2 (0+2)
		06
Common courses (05 Credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1)
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/Minor courses (08 Credits)		
Will be taken from any department (other than the major department) of the university related to the research problem		08
Thesis research (30 credits)		
VBC 690	Master's Thesis Research	30
Total		70

List of postgraduate courses of Department of Veterinary Physiology and Biochemistry

Veterinary Physiology

Course code	Course Title	Credit Hours
VPY 600	Masters Seminar	1(1+0)
VPY 601	Physiology of Digestion*	3(2+1)
VPY 602	Cardiovascular and Respiratory Physiology*	3(2+1)
VPY 603	Renal Physiology and Body Fluid Dynamics*	3(2+1)
VPY 604	Haematology	3(2+1)
VPY 605	Growth and Environmental Physiology	2(2+0)
VPY 606	Physiology of Animal Reproduction*	3(2+1)
VPY 607	Clinical Physiology	2(1+1)
VPY 608	Neuromuscular Physiology*	2(2+0)
VPY 609	Endocrinology of Domestic Animals*	2(2+0)
VPY 610	Instrumentation and Research Techniques in Veterinary Physiology	
		2(0+2)
VPY 611	Physiology of Wild Life	1(1+0)
VPY 680	Special Problem for Master's Programme	1(0+1)
VPY 690	Masters Thesis Research	30
VPY 701	Applied Physiology of Body Fluids and Electrolytes	3(2+1)
VPY 702	Physiology of Animal Behaviour	2(2+0)
VPY 703	Recent trends in Ruminant Digestion	3(2+1)
VPY 704	Recent trends in Neuro-endocrinology	3(2+1)
VPY 705	Myo-physiology and kinesiology	2(2+0)
VPY 706	Avian Physiology*	3(2+1)
VPY 707	Physiology of Lactation*	3(2+1)
VPY 708	Recent trends in Environmental Physiology and Growth	
		3(2+1)
VPY 709	Cellular and Molecular Physiology	2(2+0)
VPY 710	Recent trends in immuno-physiology	3(2+1)
VPY 711	Physiology of Stress	2(2+0)
VPY 712	Recent trends in Reproductive Physiology	3(2+1)
VPY 780	Special Problem for PhD Programme	1(0+1)
VPY 788	Doctoral Seminar-I	1(1+0)
VPY 789	Doctoral Seminar-II	1(1+0)
VPY 790	PhD Thesis Research	75

Veterinary Biochemistry		
Course code	Course Title	Credit Hours
VBC 600	Master's Seminar	1(1+0)
VBC 601	Biophysical Chemistry*	2(2+0)
VBC 602	Biochemistry of Biomolecules*	2(2+0)
VBC 603	Enzymology*	3(2+1)
VBC 604	Analytical Techniques and Instrumentation in Biochemistry*	2(1+1)
VBC 605	Clinical Biochemistry of Animals*	3(2+1)
VBC 606	Intermediary Metabolism and Regulation*	3(3+0)
VBC 607	Molecular Biochemistry	3(2+1)
VBC 608	Nutritional and Industrial Biochemistry	2(2+0)
VBC 609	Endocrinology and Reproductive Biochemistry	2(2+0)
VBC 610	Biochemistry of Ruminants and Wild Animals	2(1+1)
VBC 611	Introduction to Bioinformatics and Computational Biology	2(1+1)
VBC 680	Special Problem for Master's Programme	1(0+1)
VBC 690	Master's Thesis Research	30
VBC 701	Applied Molecular Biochemistry and Systems Biology	3(2+1)

VBC 702	Membrane Biochemistry	2(2+0)
VBC 703	Recent trends in Enzymology*	3(2+1)
VBC 704	Diagnostic Techniques in Clinical Biochemistry	2(0+2)
VBC 705	Recent Trends in Biochemical Techniques and Instrumentation*	3(2+1)
VBC 706	Developmental Biochemistry	2(2+0)
VBC 707	Bioinformatics Tools in Biochemistry	2(1+1)
VBC 708	Environmental and Toxicological Biochemistry	2(2+0)
VBC 709	Biochemistry of Diseases and Disorders	2(2+0)
VBC 710	Immuno-Biochemistry	2(2+0)
VBC 780	Special Problem for PhD Programme	2(0+2)
VBC 788	Doctoral Seminar-I	1(1+0)
VBC 789	Doctoral Seminar-II	1(1+0)
VBC 790	PhD Thesis Research	75

*Core courses

Ph.D. Veterinary Public Health & Epidemiology**Major Course (12 Credits)**

Course No.	Course Title	Credit Hours
VPE 701	Advances in Veterinary Public Health and Epidemiology*	3(2+1)
VPE 702	Emerging, Re-emerging Zoonoses and One Health*	3(2+1)
VPE 703	Advances in Food Safety and Quality Control of foods	
	of animal/aquatic origin*	3(2+1)
*Core Courses 3 Credit hours to be chosen from list of post graduate courses of Veterinary Public Health and Epidemiology 700 series		3
		12
Seminar (02 credits)		
VPE 788	Doctoral Seminar-I	1(0+1)
VPE 789	Doctoral Seminar-II	1(0+1)
		02
Supporting Courses (06 Credits)		
BHS 652	Research Methodology I	1(1+0)
BPS 653	Research Methodology II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/Minor Courses (06 Credits)		
Will be taken from any department (other than the major department) of the university related to the research problem		06
Thesis Research (75 Credits)		
VPE 790	Ph. D. Thesis Research	75
	Total	101

DEPARTMENT OF VETERINARY PUBLIC HEALTH & EPIDEMIOLOGY

M. V. Sc. (Veterinary Public Health & Epidemiology)

Major Courses (20 Credits)

Course No.	Course Title	Credit Hours
VPE601	Concepts in Veterinary Public Health and One Health*	2(2+0)
VPE602	Zoonoses-I*	3(2+1)
VPE603	Zoonoses-II*	3(2+1)
VPE604	Principles of Epidemiology*	3(2+1)
VPE605	Hygiene and Safety of Foods of Animal and Aquatic Origin*	3(2+1)
VPE611	Laboratory Techniques in Veterinary Public Health*	3(0+3)
*Core Courses		2
2 Credit hours to be chosen from list of post graduate courses of Veterinary Public Health and Epidemiology 600 series		
		20
Seminar (01 credit)		
VPE 600	Master's seminar	1(0+1)
Supporting Courses (06 Credits)		
BCT 604	Analytical Techniques and Instrumentation in Biochemistry	2(1+1)
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
		06
Common Courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional / Minor Courses (08 credits)		
Will be taken from any department (other than the major department)		08
of the university related to the research problem		
Thesis Research (30 credits)		
VPE690	Master's Thesis research	30
	Total	70

List of Post Graduate Courses of Department of Veterinary Public Health & Epidemiology

Course No.	Course Title	Credit hours
VPE 600	Master's seminar	1(0+1)
VPE601	Concepts in Veterinary Public Health and One Health*	3(2+0)
VPE602	Zoonoses-I* 3(2+0)	
VPE603	Zoonoses-II* 3(2+0)	
VPE604	Principles of Epidemiology*	3(2+0)
VPE605	Hygiene and Safety of Foods of Animal and Aquatic Origin*	3(2+0)
VPE606	Food-borne Infections and Intoxications	3(2+0)
VPE607	Food Safety Standards, and Regulations	3(2+0)
VPE608	Environmental Hygiene and Safety	3(2+0)
VPE609	Applied Epidemiology	3(2+0)
VPE610	Biosecurity, Bioterrorism and Disaster Management	2(2+0)
VPE611	Laboratory Techniques in Veterinary Public Health*	3(2+0)
VPE 680	Special Problem for Master's Programme	1(0+1)
VPE690	Master's Thesis research	30
VPE 701	Advances in Veterinary Public Health and Epidemiology*	3(2+0)
VPE 702	Emerging, Re-emerging Zoonoses and One Health*	3(2+0)
VPE 703	Advances in Food Safety and Quality Control of foods of animal/aquatic origin*	3(2+0)
VPE 704	Biosecurity and Occupational Health Safety	3(2+0)
VPE 705	Recent Concepts in Epidemiology and Disease Forecasting	3(2+0)
VPE 706	Risk Analysis and Predictive Modelling	3(2+0)
VPE 707	Advances in Environmental Hygiene	3(2+0)
VPE 708	Herd Health Management and Disease Economics	3(2+0)
VPE 709	Epidemiology of Trans-boundary, Non-infectious and	3(2+0)
VPE 710	Ecology and Animal/ Human Health	2(2+0)
VPE 711	Diagnostic Approaches in Epidemiology	3(2+0)
VPE 712	Surveys, Surveillance and Data Management	3(2+0)
VPE 780	Special Problem for PhD Programme	1(0+1)
VPE 788	Doctoral Seminar-I	1(0+1)
VPE 789	Doctoral Seminar-II	1(0+1)
VPE 790	PhD Thesis Research	75
*Core courses		

Ph.D. (Veterinary Surgery & Radiology)**Major Course (12 credits)**

Course Code	Course Title	Credit Hours
VSR 701	Doctoral Clinical Practice-I*	2(0+2)
VSR 702	Doctoral Clinical Practice-II*	2(0+2)
VSR 703	Doctoral Clinical Practice-III*	2(0+2)
VSR 715	Clinical Case Conference*	1(0+1)
* core courses 05 Credit hours to be chosen from the list of PG courses of 700 series of Veterinary Surgery & radiology		05
		12
Seminar (02 credits)		
VSR 788	Doctoral Seminar-I	1(1+0)
VSR 789	Doctoral Seminar-II	1(1+0)
		02
Supporting Courses (06 credits)		
BHS 652	Research Methodology I	1(1+0)
BPS 653	Research Methodology II	3(2+1)
RPE 700	Research and Publication Ethics	2(1+1)
		06
Optional/minor courses (06 credits) Will be taken from any department (other than the major department) of the university related to the research problem		06
Thesis Research (75 credits)		
VSR-790	PhD Thesis Research	75
	Total	10

Courses for minor for other disciplines (Master's Programme)

VSR 606	Soft Tissue Surgery	3(2+1)
VSR 609	Urogenital Surgery	2(1+1)
VSR 610	Ophthalmology	2(1+1)
VSR 614	Experimental Surgical Techniques in Animals	2(1+1)
VSR 615	Radiographic Anatomy	2(1+1)

Courses for minor for other disciplines (Ph.D. Programme)

VSR- 605	Diagnostic Imaging Techniques	3(2+1)
VSR 606	Soft Tissue Surgery	3(2+1)
VSR 614	Experimental Surgical Techniques in Animals	2(1+1)
VSR 615	Radiographic Anatomy	2(1+1)

DEPARTMENT OF VETERINARY SURGERY & RADIOLOGY

M. V. Sc. (Veterinary Surgery & Radiology)

Major Course (20 credits)

Course Code	Course Title	Credit Hours
VSR 601	Master's Clinical Practice-I*	3(0+3)
VSR 602	Master's Clinical Practice-II*	3(0+3)
VSR-603	Principles of Surgery*	3(2+1)
VSR- 604	Anaesthesia and Analgesia*	3(2+1)
VSR- 605	Diagnostic Imaging Techniques*	3(2+1)
VSR 607	Orthopaedic Surgery*	3(2+1)
* core courses		
02 Credit hours to be chosen from the list of PG courses of 600 series of Veterinary Surgery & radiology		02
		20
Seminar (01 Credit)		
VSR 600	Master's Seminar	1(1+0)
Supporting Courses (06 credits)		
STAT 502	Statistical Methods for Applied Sciences	4(3+1)
VMD 615	Animal Disease Investigation and Biosecurity	2(1+1)
		06
Common courses (05 credits)		
Library and Information Services		1 (0+1)
Technical Writing and Communication Skills		1 (0+1))
Intellectual Property and its Management in Agriculture		1 (0+1)
Basic Concepts in Laboratory Techniques		1 (0+1)
Agriculture Research, Research Ethics and Rural Development Programme		1 (0+1)
		05
Optional/minor courses (08 credits)		08
Will be taken from any department (other than the major department) of the university related to the research problem		
Thesis Research (30 credits)		
VSR-690	Master's Thesis Research	30
Total		70

List of Postgraduate Courses in Veterinary Surgery & Radiology

Course Code	Course Title	Credit Hours
VSR 600	Master's Seminar	1(1+0)
VSR-6	Master's Clinical Practice-I*	3(0+3)
VSR-602	Master's Clinical Practice-II*	3(0+3)
VSR-603	Principles of Surgery*	3(2+1)
VSR- 604	Anaesthesia And Analgesia*	3(2+1)
VSR- 605	Diagnostic Imaging Techniques*	3(2+1)
VSR 606	Soft Tissue Surgery	3(2+1)
VSR 607	Orthopaedic Surgery*	3(2+1)
VSR 608	Anaesthesia of Zoo, Wild, Exotic and Laboratory Animals	2(1+1)
VSR 609	Urogenital Surgery	2(1+1)
VSR 610	Ophthalmology	2(1+1)
VSR 611	Dentistry and Oral Surgery	2(1+1)
VSR 612	Camel Surgery	2(1+1)
VSR 613	Elephant Surgery	2(1+1)
VSR 614	Experimental Surgical Techniques in Animals	2(1+1)
VSR 615	Radiographic Anatomy	2(1+1)
VSR 616	Clinical Case Conference	1(0+1)
VSR 617	Special Problem in Radiology	2(0+2)
VSR 618	Special Problem in Anaesthesia	2(0+2)
VSR 619	Special Problem in Surgery	2(0+2)
VSR 690	Master's Thesis Research	30
VSR 701	Doctoral Clinical Practice-I*	2(0+2)
VSR 702	Doctoral Clinical Practice-II*	2(0+2)
VSR 703	Doctoral Clinical Practice-III*	2(0+2)
VSR 704	Cardiovascular Surgery	3(2+1)
VSR 705	Advances in Anaesthesiology	3(2+1)
VSR 706	Advances in Radiology	3(2+1)
VSR 707	Advances in Diagnostic Imaging Techniques	3(2+1)
VSR 708	Advances in Orthopaedics	3(2+1)

VSR 709	Neurosurgery	3(2+1)
VSR 710	Reconstructive and Regenerative Surgery	2(1+1)
VSR 711	Advances in Soft Tissue Surgery	3(2+1)
VSR 712	Advances in Ophthalmology	2(1+1)
VSR 713	Surgical Oncology	2(1+1)
VSR 714	Body Electrolyte and Fluid Therapy	2(1+1)
VSR 715	Clinical Case Conference*	1(0+1)
VSR 716	Special Problem in Diagnostic Imaging	2(0+2)
VSR 717	Special Problem in Anaesthesia	2(0+2)
VSR 718	Special Problem in Surgery	2(0+2)
VSR 788	Doctoral Seminar-I	2(1+0)
VSR 789	Doctoral Seminar-II	2(1+0)
VSR 790	PhD Thesis Research	75
*Core courses		

The P.G. Faculty is requested to consider the above proposal.

Dean, PGS

Item No. I/2022:17 Revision in the limit on credits to be registered per semester (Maximum Credit Load) by Master's & Doctoral students

The agenda to adopt Common Academic Regulations for Post Graduate Programmes in the University and Restructuring & Revision in Course Programme & Syllabi of M.Sc. and Ph.D. programmes as per BSMA recommendations has been placed in this meeting. According to the proposed restructuring and revised course programme, the credit requirements for completion of degree has been increased to 70 and 101 at Master's and Ph.D. level, respectively. The Master's students' have to study 40 credits of course work and 30 credits of Thesis research to obtain their degree in 02 years (minimum requirement), whereas, Ph.D. students have to study 26 credits of coursework and 75 credits of thesis research in 03 years (minimum requirement). In order to facilitate students for timely completion of their coursework and research work of their Master's/Ph.D. degree programme, the following changes are proposed in the Clause 29(a)(ii), 29(a)(v) and 29(b) under Chapter-III of Academic Regulations :

Clause	Existing	Proposed
29(a)(ii)	Full-time Postgraduate students (with Teaching/Research Assistantship): 16 credits in a semester.	Full-time Postgraduate students (with Teaching/Research Assistantship): 18 credits in a semester.
29(a)(v)	In genuine cases an Advisor may also permit a marginal adjustment upto 1 credit over the credit load prescribed in clause (ii) above.	In genuine cases an Advisor may also permit a marginal adjustment upto 2 credit over the credit load prescribed in clause (ii) above.
29(b)	Exceptions : The Dean concerned may permit an increase in the maximum credit load (as specified above) upto the limits detailed below on any of the grounds listed in (c) below. ii.Full-time Postgraduate students : 20 credits	Exceptions : The Dean concerned may permit an increase in the maximum credit load (as specified above) upto the limits detailed below on any of the grounds listed in (c) below. ii.Full-time Postgraduate students : 23 credits

The P.G. Faculty is requested to consider the above proposal.

Dean, PGS

Item No. I/2022:18 Conduct of written comprehensive examination from Major & Minor courses before oral comprehensive examination in Ph.D. programme

OFFICE OF THE DEAN: COLLEGE OF AGRICULTURE

CA/PA/ 1161
February 8, 2022

Dean, Post Graduate Studies

Subject: Agenda for PG faculty meeting



Kindly find enclosed herewith the following two agenda items for consideration and approval of the PG faculty in its forthcoming meeting.

Agenda 2: Conduct of written comprehensive examination from Major & Minor courses before oral comprehensive examination in Ph.D. programme.

This issue was also raised and discussed by faculty in BOFA meeting of January 29, 2022 and house advocated that written comprehensive examination from Major and Minor subjects must be conducted before oral comprehensive examination. The major and minor examinations prepare the student not only for oral comprehensive examination but also for many competitive examination like NET, ARS, provincial services. The provides strong preparedness to the students and is one of the reasons why our students perform better in such examinations and interviews. Retaining the **written comprehensive examination from Major & Minor courses before oral comprehensive examination in Ph.D. programme** will be for the betterment of the students

Secretary, P.G. Faculty
HQA

Ranjan K. Srivastava
DEAN, P.G.S.
08/02/22

Shivendra Kashyap
(Shivendra Kashyap)
Dean

CC: Dr Ranjan K Srivastava, Professor Horticulture and Secretary BOFA

The P.G. Faculty is requested to consider the above proposal.

Dean, Agriculture

Item No. I/2022 : 19 Election of Secretary, Post Graduate Faculty