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ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ BIM/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's degree programme in **Bioinformatics** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ BIM/2022-23 Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's degree programme in **Bioinformatics** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Bioinformatics

Course Code	Course Title	Credit Hours
I. Major Courses 20 Credits		
BIM 501*#	Introduction to Bioinformatics & Computational Biology	3(2+1)
BIM 502*#	Statistical Genomics	3(2+1)
BIM 503	Genome Assembly and Annotation	3(2+1)
BIM 504*#	Biomolecular Modelling and Simulation	3(2+1)
BIM 505	Transcriptomics and Metagenomics	3(2+1)
BIM 506*#	Biological Data Management	3(2+1)
BIM 507	Biological network modelling and analysis	3(2+1)
BIM 508 #	Computer programming in bioinformatics	3(2+1)
BIM 509	Machine Learning Techniques in bioinformatics	3(2+1)
BIM 510	Advanced Bioinformatics	3(2+1)
	Total	30(20+10)
*BSMA approved core courses #Core courses received from Department 20(10+10)		

II. Supporting courses: 8 credits		
BCM501	Basic Biochemistry	4(3+1)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
	Total	Total 8(6+2)
III. Minor courses – 8 credits		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem)		
BIM 580: 2(0+2)		
VI. Seminar – 2 credits		
BIM 581: 1(0+1) – II year (I sem)		
BIM 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits		
BIM 591: 13 credits - II year (I sem)		
BIM 592: 14 credits - II year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's degree programme in **Bioinformatics** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order

(Signature)
Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕುವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKV, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ FPT/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's degree programme in **Food Processing Technology** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ FPT/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKV.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's degree programme in **Food Processing Technology** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M. Tech. in Food Processing Technology

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
FPT 501*#	Emerging Technologies in Food Processing	3 (2+1)
FPT 502*#	Emerging Technologies in Food Packaging	3 (2+1)
FPT 503*#	Industrial Manufacturing of Food and Beverages	3 (2+1)
FPT 504	Food Material and Product Properties	3 (2+1)
FPT 505	Cocoa and Chocolate Processing Technologies	3 (2+1)
FPT 506#	Spices, Herbs and Condiments	2 (2+0)
FPT 507	Meat, Poultry, Fish and Egg Processing	3 (2+1)
FPT 508#	Nutraceuticals and Specialty Foods	3 (2+1)
FPT 509	Frozen and Concentrated Foods	2 (1+1)
FPT 510#	Aseptic Processing and Packaging	3 (2+1)
FPT 511#	Traditional Foods	3 (2+1)
FPT 512	Technologies of Convenience Foods	3 (2+1)
FPT 513	Food Powder and Premixes	3 (2+1)
FPT 514	Food Ingredients and Additives	3 (2+1)
FPT 515	Flavour Chemistry and Technology	3 (2+1)
FPT 516	Bioprocessing and Separation Technology	3 (2+1)
FPT 517	Enzymes in Food Processing	3 (2+1)
FPT 518	Food Process Automation and Modelling	2 (2+0)
FPT 519	Zero Waste Processing	2 (2+0)
FPT 520	Special Problem / Summer Internship	2 (0+2)
	Total	55 (37+18)

*BSMA approved core courses 9(6+3)		
#Core courses received from Department 20 (14+6)		
II. Supporting Courses: 8 credits		
BCM 501	Basic Biochemistry	4 (3+1)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
	Total	8(6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) FPT 580: 2(0+2)		
VI. Seminar – 2 credits FPT 581: 1(0+1) – II year (I sem) FPT 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits FPT 591: 13 credits - II year (I sem) FPT592: 14 credits - II year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's degree programme in **Food Processing Technology** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



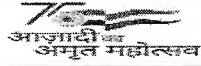
By Order
[Signature]
Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

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UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ SWE/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's degree programme in **Soil and Water Conservation Engineering** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ SWE/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's degree programme in **Soil and Water Conservation Engineering** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M. Tech. in Soil and Water Conservation Engineering

Course Code	Course Title	Credit Hours
I. Major courses: 20 Credits		
SWC 501*#	Advanced Soil and Water Conservation Engineering	3(2+1)
SWC 502*#	Applied Watershed Hydrology	3(2+1)
SWC 503*#	Soil and Water Conservation Structures	3(2+1)
SWC 504	Stochastic Hydrology	3(2+1)
SWC 505*#	Watershed Management and Modeling	3(2+1)
SWC 506#	Flow Through Porous Media	2(2+0)
SWC 507	Remote Sensing and GIS for Land and Water Resource Management	3(2+1)
SWC 508	Climate Change and Water Resources	3(3+0)
SWC 509	Numerical Methods in Hydrology	2(2+0)
SWC 510	Dryland Water Management Technologies	2(2+0)
SWC 511	Design of Drip and Sprinkler Irrigation Systems	3(2+1)
SWC 512#	Ground water Engineering	3(2+1)
SWC 513	Minor Irrigation	3(2+1)
SWC 514#	Water Resources Systems Engineering	3(2+1)
Total		39(29+10)
* BSMA approved core courses 12 (8+4) # Core courses received from Department 20(14+6) Note: As per BSMA, the SWC 511, SWC 512, SWC 513 and SWC 514 courses are originally belong to Irrigation and Drainage Engineering as IDE 505, IDE 506, IDE 510 and IDE 513. Hence, these courses code have been given with SWC.		

II. Supporting courses: 6 credits		
AST 501	Mathematics for Applied Sciences	2(2+0)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
	Total	6(5+1)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) SWC 580: 2(0+2)		
VI. Seminar – 2 credits SWC 581: 1(0+1) – II year (I sem) SWC 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits SWC 591: 13 credits –II year (I sem) SWC 592: 14 credits - II year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's degree programme in **Soil and Water Conservation Engineering** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order

[Signature]
Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

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UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ PFE/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's degree programme in **Processing and Food Engineering** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ PFE/2022-23

Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's degree programme in **Processing and Food Engineering** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M. Tech. in Processing and Food Engineering

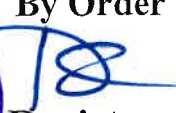
Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
PFE 501*#	Transport Phenomena in Food Processing	3 (2+1)
PFE 502*#	Unit Operations in Food Process Engineering	3 (2+1)
PFE 503*#	Field Crops Process Engineering	3 (2+1)
PFE 504*#	Horticultural Crops Process Engineering	3 (2+1)
PFE 505#	Storage Engineering and Handling of Agricultural Produce	3 (2+1)
PFE 506	Food Package Engineering	2 (1+1)
PFE 507	Instrumentation and Sensors in Food Processing	3 (2+1)
PFE 508#	Application of Engineering Properties in Food Processing	3 (2+1)
PFE 509	Food Quality and Safety	3 (2+1)
PFE 510	Food Processing Technologies	3 (2+1)
PFE 511#	Food Processing Equipment and Plant Design	2 (1+1)
PFE 512	Seed Process Engineering	2 (1+1)
PFE 513	Agri-Project Planning and Management	3 (2+1)
PFE 514	Farm Structures and Environmental Control	3 (2+1)
PFE 515	Dairy Product Processing	3 (2+1)
PFE516	Processing of Meat, Poultry and Fish	3 (2+1)
PFE 517	Design of Aqua cultural Structures	3 (2+1)

PFE 518	Thermal Environmental Engineering for Agricultural Processing	3 (2+1)
	Total	51 (33+18)
*BSMA approved core courses 12 (8+4)		
#Core courses received from Department 20 (13+7)		
II. Supporting courses : 6 credits		
AST 501	Mathematics for Applied Sciences	2 (2+0)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
	Total	6 (5+1)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits – II year (I sem)		
PFE 580: 2(0+2)		
VI. Seminar – 2 credits		
PFE 581: 1(0+1) – II year (I sem)		
PFE 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits		
PFE 591: 13 credits - II year (I sem)		
PFE 592: 14 credits - II year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's degree programmes in **Processing and Food Engineering** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order

Registrar



To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

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UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ SSC/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Soil Science** at UASB as per BSMA recommendation

Ref:1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ SSC/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Soil Science** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Soil Science

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
SSC 501*#	Soil Physics	3(2+1)
SSC 502*#	Soil Fertility and Fertilizer Use	3(2+1)
SSC 503*#	Soil Chemistry	3(2+1)
SSC 504*#	Soil Mineralogy, Genesis and Classification	3(2+1)
SSC 505	Soil Erosion and Conservation	3(2+1)
SSC 506#	Soil Biology and Biochemistry	3(2+1)
SSC 507	Radioisotopes in Soil and Plant Studies	2(1+1)
SSC 508	Soil, Water and Air Pollution	3(2+1)
SSC 509#	Remote Sensing and GIS Technique for Soil and Crop Studies	3(2+1)
SSC 510#	Analytical Technique and Instrumental Methods in Soil and Plant Analysis	2(0+2)
SSC 511	Management of Problematic Soils and Water	2(1+1)
SSC 512	Land Degradation and Restoration	1(1+0)
SSC 513	Soil Survey and Land Use Planning	2(2+0)
SSC 514	Introduction to Nanotechnology	3(2+1)
	Total	36(23+13)

*BSMA approved core courses 12(8+4)		
#Core courses received from Department 20(12+8)		
II. Supporting courses: 8 credits		
BCM 501	Basic Biochemistry	4 (3+1)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
	Total	8(6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem)		
SSC 580: 2(0+2)		
VI. Seminar – 2 credits		
SSC 581: 1(0+1) – II year (I sem)		
SSC 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits		
SSC 591: 13 credits - II year (I sem)		
SSC 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Soil Science

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
SSC 601#	Recent Trends in Soil Physics	2(2+0)
SSC 602#	Modern Concept in Soil Fertility	2(2+0)
SSC 603*#	Physical Chemistry of Soil	2(2+0)
SSC 604*#	Soil Genesis and Micro Morphology	2(2+0)
SSC 605#	Bio-Chemistry of Soil Organic Matter	2(2+0)
SSC 606#	Soil Resource Management	3(3+0)
SSC 607	Modeling of Soil Plant System	2(2+0)
SSC 608	Clay Mineralogy	3(2+1)
SSC 609	Recent Trends in Soil Microbial Biodiversity	3(2+1)
	Total	21(19+2)
*BSMA approved core courses 4(4+0)		
#Core courses received from Department 13(13+0)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses - nil		
V. Qualifying – 03 credits- II year (II sem)		
SSC 680: 3(0+3)		
VI. Seminars: 02 credits		
SSC 681: 1(0+1) – II year (I sem)		
SSC 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship		
SSC 683: 1(0+1) – III year (I sem)		
SSC 684: 1(0+1) – III year (II sem)		
VIII. Research: 72 credits		
SSC 691: 18 credits - II year (I sem)		
SSC 692: 18 credits - II year (II sem)		
SSC 693: 18 credits - III year (I sem)		
SSC 694: 18 credits - III year (II sem)		



The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Soil Science** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order

Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

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UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKV, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ SER/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Sericulture** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ SER/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKV.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Sericulture** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Sericulture

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
SER 501*#	Mulberry Production Technology	2(1+1)
SER 502*#	Genetics and Breeding of Mulberry	2(1+1)
SER 503	Nutrition of Host Plants of Silkworms	2(1+1)
SER 504	Mulberry Pests and Diseases	3(2+1)
SER 505	Biotechnology of Mulberry	2(1+1)
SER 506*#	Systematics and Morphology of Sericigenous insects	2(1+1)
SER 507#	Anatomy and Physiology of Sericigenous insects	2(1+1)
SER 508	Silkworm Biochemistry and Nutrition	2(1+1)
SER 509*#	Silkworm Egg Production Technology	2(1+1)
SER 510*#	Silkworm Rearing Technology	2(1+1)
SER 511*#	Genetics and Breeding of Silkworms	2(1+1)
SER 512*#	Diseases and Pests of Silkworms	2(1+1)
SER 513	Biotechnology of Silkworm	2(1+1)
SER 514*#	Silk Technology	2(1+1)
SER 515*#	Vanya Sericulture	2(1+1)
SER 516	Sericulture By-product utilization and Value addition	2(1+1)
	Total	33(17+16)
* BSMA approved core courses 18(9+9)		

# Core courses received from Department 20(10+10)		
II. Supporting courses: 8 credits		
BCM 501	Basic Biochemistry	4 (3+1)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
	Total	8 (6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) SER 580: 2(0+2)		
VI. Seminar – 2 credits SER 581: 1(0+1) – II year (I sem) SER 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits SER 591: 13 credits - II year (I sem) SER 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Sericulture

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
SER 601*#	Advances in Genetics and Breeding of Mulberry	2(1+1)
SER 602*#	Physiology and Nutrition of Mulberry	2(1+1)
SER 603	Physiology and Nutrition of Silkworm	2(1+1)
SER 604*#	Physiological and Biochemical Genetics of Silkworm	2(1+1)
SER 605*#	Silkworm Pathology	2(1+1)
SER 606*#	Integrated Pest Management in Sericulture	2(1+1)
SER 607#	Sericulture Biotechnology	2(1+1)
SER 608	Vanya Silk Technology	2(1+1)
SER 609	Seri-Business Management	2(1+1)
SER 610	Post Silk Reeling Technology	2(2+0)
	Total	20(11+9)
*BSMA approved core courses 10(5+5)		
#Core courses received from Department 12(6+6)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses - Nil		
V. Qualifying – 03 credits- II year (II sem) SER 680: 3(0+3)		
VI. Seminars: 02 credits SER 681: 1(0+1) – II year (I sem) SER 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship SER 683: 1(0+1) – III year (I sem) SER 684: 1(0+1) – III year (II sem)		

VIII. Research: 72 credits

SER 691: 18 credits - II year (I sem)

SER 692: 18 credits - II year (II sem)

SER 693: 18 credits - III year (I sem)

SER 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Sericulture** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order

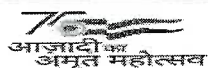

Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕುವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ SST/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Seed Science and Technology** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ SST/2022-23

Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Seed Science and Technology** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Seed Science and Technology

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
SST 501*#	Seed Developmental Biology	2 (1+1)
SST 502#	Seed Dormancy and Germination	2 (1+1)
SST 503*#	Seed Production Principles and Techniques in Field Crops	3 (2+1)
SST 504*#	Seed Production Principles and Techniques in Vegetable Crops	3 (2+1)
SST 505	Seed Production Techniques in Fruits, Flowers, Spices, Plantation and Medicinal Crops	3 (2+1)
SST 506	Seed production Techniques in Forage, Pasture and Green Manure Crops	2 (1+1)
SST 507*#	Seed Legislation and Certification	3 (2+1)
SST 508*#	Post-Harvest Handling and Storage of Seeds	3 (2+1)
SST 509*#	Seed Quality Testing and Enhancement	2 (1+1)
SST 510	Seed Technology of Tree Species	2 (1+1)
SST 511	Seed Industry and Marketing Management	2 (1+1)
SST 512#	Seed Health Testing and Management	2 (1+1)

SST 515	Germplasm Collection, Exchange and Quarantine	2 (1+1)
	Total	31(19+12)
*BSMA approved core courses 16(10+6)		
#Core courses received from Department 20(12+8)		
II. Supporting Courses: 8credits		
BCM 501	Basic Biochemistry	4 (3+1)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
	Total	8 (6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) SST 580: 2(0+2)		
VI. Seminar – 2 credits SST 581: 1(0+1) – II year (I sem) SST 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits SST 591: 13 credits - II year (I sem) SST 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Seed Science and Technology

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
SST 601*#	Hybrid Seed Production Technology	3(2+1)
SST 602	Organic Seed Production	2(1+1)
SST 603	Physiology and Biochemistry of Seeds	2(1+1)
SST 604*#	Genetic Purity and DUS Testing	3(2+1)
SST 605	Seed Vigour and Crop Productivity	2(1+1)
SST 606*#	Advances in Seed Science	2(2+0)
SST 607#	Advances in Seed Quality Enhancement	2 (1+1)
SST 608	Germplasm Conservation Techniques	2 (1+1)
SST 609	Seed Ecology	2 (1+1)
SST 610#	Seed Planning, Trade and Marketing	2 (1+1)
	Total	22 (13+9)
*BSMA approved core courses 8(6+2)		
#Core courses received from Department 12(8+4)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses – Nil		
V. Qualifying – 03 credits- II year (II sem) SST 680: 3(0+3)		
VI. Seminars: 02 credits SST 681: 1(0+1) – II year (I sem) SST 682: 1(0+1) – II year (II sem)		



VII. Teaching Assistantship SST 683: 1(0+1) – III year (I sem) SST 684: 1(0+1) – III year (II sem)
VIII. Research: 72 credits SST 691: 18 credits - II year (I sem) SST 692: 18 credits - II year (II sem) SST 693: 18 credits - III year (I sem) SST 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Seed Science and Technology** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order

Registrar

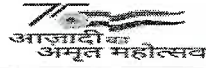


To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕ್ಯವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ PAT/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Plant Pathology** at UASB as per BSMA recommendation

Ref:1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ PAT/2022-23

Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Plant Pathology** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Plant Pathology

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
PAT 501* #	Mycology	3 (2+1)
PAT 502*#	Plant Virology	3 (2+1)
PAT 503*#	Plant Bacteriology	3 (2+1)
PAT 504*#	Plant Nematology	3 (2+1)
PAT 505*	Principles of Plant Pathology	3 (2+1)
PAT 506*#	Techniques in Detection and Diagnosis of Plant Diseases	2 (0+2)
PAT 507	Principles of Plant Disease Management	3 (2+1)
PAT 508	Epidemiology and Forecasting of Plant Diseases	1 (1+0)
PAT 509	Disease Resistance in Plants	2 (2+0)
PAT 510	Ecology of Soil-Borne Plant Pathogens	2 (1+1)
PAT 511#	Chemicals and Botanicals in Plant Diseases Management	3 (2+1)
PAT 512	Detection and Management of Seed Borne Pathogens	3 (2+1)
PAT 513	Biological Control of Plant Diseases	2 (1+1)
PAT 514	Integrated Diseases Management	3 (2+1)
PAT 515*#	Diseases of Field and Medicinal crops	3 (2+1)

PAT 516	Diseases of Fruit, Plantation and Ornamental crops	3 (2+1)
PAT 517	Diseases of Vegetable and Spices crops	3 (2+1)
PAT 518	Post-Harvest Diseases	3 (2+1)
PAT 519	Plant Quarantine and Regulatory Measures	1 (1+0)
	Total	49 (32+17)
*BSMA approved core courses 20(12+8)		
#Core courses received from Department 20 (12+8)		
II. Supporting courses: 8 credits		
BCM 501	Basic Biochemistry	4 (3+1)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
	Total	8 (6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) PAT 580: 2(0+2)		
VI. Seminar – 2 credits PAT 581: 1 (0+1) – II year (I sem) PAT 582: 1 (0+1) – II year (II sem)		
VII. Research – 27 credits PAT 591: 13 credits - II year (I sem) PAT 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Plant Pathology

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
PAT 601#	Advances in Mycology	3(2+1)
PAT 602#	Advances in Virology	3(2+1)
PAT 603#	Advances in Plant Pathogenic Prokaryotes	3(2+1)
PAT 604*#	Molecular Basis of Host-pathogen Interaction	3(2+1)
PAT 605	Principles and Procedures of Certification	1(1+0)
PAT 606	Plant Biosecurity and Biosafety	2(2+0)
PAT 607	Advances in plant nematology	3(2+1)
PAT 608	Seed Pathology	2(1+1)
	Total	20 (12+8)
*BSMA approved core courses 3(2+1)		
#Core courses received from Department 12(8+4)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses – Nil		
V. Qualifying – 03 credits- II year (II sem) PAT 680: 3(0+3)		
VI. Seminars: 02 credits PAT 681: 1(0+1) – II year (I sem) PAT 682: 1(0+1) – II year (II sem)		



VII. Teaching Assistantship

PAT 683: 1(0+1) – III year (I sem)

PAT 684: 1(0+1) – III year (II sem)

VIII. Research: 72 credits

PAT 691: 18 credits - II year (I sem)

PAT 692: 18 credits - II year (II sem)

PAT 693: 18 credits - III year (I sem)

PAT 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Plant Pathology** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order**Registrar**

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website : www.uasbangalore.edu.in
Email : registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ MBB/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Molecular Biology and Biotechnology** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ MBB/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Molecular Biology and Biotechnology** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Molecular Biology and Biotechnology

Course Code	Course Title	Credit Hours
I Major Courses: 20 credits		
MBB501#	Principles of Biotechnology	3(2+1)
MBB502#*	Fundamentals of Molecular Biology	3(3+0)
MBB503#*	Molecular Cell Biology	3(3+0)
MBB504#*	Techniques in Molecular Biology I	3(1+2)
MBB505#*	Omics and Systems Biology	3(2+1)
MBB506	Plant Genetic Engineering	3(3+0)
MBB507#	Techniques in Molecular Biology II	3(1+2)
MBB508	Introduction to Bioinformatics	3(2+1)
MBB509	Plant Tissue Culture	3(2+1)
MBB510	Microbial and Industrial Biotechnology	3(2+1)
MBB511	Molecular Plant Breeding	3(2+1)
MBB512	IPR, Bio-safety and Bioethics	2(2+0)
MBB513	Immunology and Molecular Diagnostics	3(3+0)
MBB514	Nano Biotechnology	3(2+1)
MBB515	Environmental Biotechnology	3(3+0)
MBB516	Bio-entrepreneurship	1(1+0)
MBB517	Stress Biology and Genomics	2(2+0)

MBB518#	Gene Regulation	2(2+0)
Total		52 (40+12)
*BSMA approved core courses 12 (9+3)		
#Core courses received from Department 20(12+8)		
II	Supporting Courses: 8 credits	
AST 502	Statistical Methods for Applied Sciences	4(3+1)
BCM501	Basic Biochemistry	4(3+1)
Total		8(6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem)		
MBB580 (0+2) II year (I sem)		
VI. Seminar – 2 credits		
MBB581 (0+1) II year (I sem)		
MBB582 (0+1) II year (II sem)		
VII. Research – 27 credits		
MBB 591: 13 credits - II year (I sem)		
MBB 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Molecular Biology and Biotechnology

Course Code	Course Title	Credit Hours
I. Major Core courses : 12 Credits		
MBB 601*#	Plant Molecular Biology	3(3+0)
MBB 602*#	Plant Genome Engineering	3(3+0)
MBB 603	Plant Omics and Molecular Breeding	3(3+0)
MBB 604#	Commercial Plant Tissue Culture	2(2+0)
MBB 605#	Plant Microbe interaction	2(2+0)
MBB 606#	RNA Biology	1(1+0)
MBB 607#	Plant Hormones and Signaling	2(2+0)
MBB 608	Computational and Statistical tools in Biotechnology	3(2+1)
MBB 609	Advances in Biofuel Biotechnology	2 (1+1)
Total		21 (19+2)
*BSMA approved core courses 6(6+0)		
#Core courses received from Department 13(6+7)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses – nil		
V. Qualifying – 03 credits- II nd year (II sem)		
MBB 680: 3(0+3)		
VI. Seminars: 02 credits		
MBB 681: 1(0+1) – II year (I sem)		
MBB 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship		
MBB 683: 1(0+1) – III year (I sem)		
MBB 684: 1(0+1) – III year (II sem)		



VIII. Research: 72 credits

MBB 691: 18 credits - II year (I sem)
MBB 692: 18 credits - II year (II sem)
MBB 693: 18 credits - III year (I sem)
MBB 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Molecular Biology and Biotechnology** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order

Registrar



To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKV, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ BCM/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Biochemistry** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ BCM/2022-23 Date: 29.09.2022 of the Dean (PGS), UAS, GKV.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Biochemistry** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Biochemistry

Course Code	Course Title	Credit Hours
I. Major Core courses: 20 credits		
BCM 501*#	Basic Biochemistry	4 (3+1)
BCM 502*#	Intermediary Metabolism	3 (3+0)
BCM 503*#	Enzymology	3 (2+1)
BCM 504#	Molecular Biology	3 (2+1)
BCM 505*#	Techniques in Biochemistry	4 (2+2)
BCM 506#	Immuno Chemistry	3 (2+1)
BCM 507	Plant Biochemistry	3 (2+1)
BCM 508	Animal Biochemistry	3 (3+0)
BCM 509	Nutritional Biochemistry	3 (2+1)
BCM 510	Nitrogen and Sulphur Metabolism	3 (2+1)
BCM 511	Biochemistry on Xenobiotics	2 (2+0)
	Total	34 (25+9)
*BSMA approved core courses 14(10+4)		
#Core courses received from Department 20 (14+6)		
II. Supporting courses: 6 credits		
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
MBB 512	IPR, Biosafety and Bioethics	2 (2+0)
	Total	6 (5+1)

III. Minor courses – 8 credits (of which one course may be selected from the department)
IV. Common courses – 5 credits
V. Qualifying –2 credits - II year (I sem) BCM 580: 2(0+2)
VI. Seminar – 2 credits BCM 581: 1(0+1) – II year (I sem) BCM 582: 1(0+1) – II year (II sem)
VII. Research – 27 credits BCM 591: 13 credits - II year (I sem) BCM 592: 14 credits - II year (II sem)

Doctoral Degree Programme: Ph.D. in Biochemistry

Course Code	Course Title	Credit Hours
I. Major Core courses: 12 credits		
BCM 601**	Advanced Enzymology	3(2+1)
BCM 602#	Advanced Molecular Biology	3(3+0)
BCM 603#	Biochemistry of Biotic and Abiotic Stress	3(3+0)
BCM 604	Frontier Topics in Biochemistry	2(2+0)
BCM 605	Concepts and Application of Omics in Biological Science	3(3+0)
BCM 606	Bio-membranes	2(2+0)
BCM 607**	Application of Techniques in Biochemistry	3(1+2)
BCM 608	Nutritional Biochemistry of Nutri-Cereals	2(2+0)
	Total	21(18+3)
*BSMA approved core courses 6(3+3)		
#Core courses received from Department 12(6+6)		
II. Supporting courses: 5 credits MBB 602 Plant Genome Engineering 3(3+0) MBB 607 Plant Hormones and Signaling 2(2+0)		
III. Minor courses: 06 credits		
IV. Common courses – nil		
V. Qualifying – 03 credits- II year (II sem) BCM 680: 3(0+3)		
VI. Seminars: 02 credits BCM 681: 1(0+1) – II year (I sem) BCM 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship BCM 683: 1(0+1) – III year (I sem) BCM 684: 1(0+1) – III year (II sem)		
VIII. Research: 72 credits BCM 691: 18 credits - II year (I sem) BCM 692: 18 credits - II year (II sem) BCM 693: 18 credits - III year (I sem) BCM 694: 18 credits - III year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Biochemistry** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order

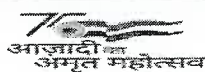
Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKV, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ HRT/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Horticulture** (stand-alone programme) at UASB.

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ HRT/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKV.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) has not mentioned about the M.Sc. (Agri.) and Ph.D. in **Horticulture**. However, UASB has decided to continue as stand-alone programmes. The Syllabus for Master's and Doctoral degree programmes in **Horticulture** (stand-alone) have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Horticulture

Course No.	Title	Credit Hours
I. Major courses: 20 credits		
HRT 501#	Major Tropical and Subtropical Fruits	3(2+1)
HRT 502#	Commercial Vegetable Crops	3(2+1)
HRT 503#	Production Technology of Major Commercial Flowers	3(2+1)
HRT504#	Major Spices and Plantation Crops	3(2+1)
HRT505#	Post-harvest Technology of Horticulture Produce	3(2+1)
HRT 506#	Protected Cultivation of Horticulture Crops	2(1+1)
HRT 507#	Growth and Development of Horticulture Crops	3(2+1)
HRT 508	Principles and Practices of Dryland Horticulture	2(1+1)
HRT 509	Organic Horticulture	2(1+1)
HRT 510	Plant Tissue-culture and its Application in Commercial Production of Horticulture Crops	2(1+1)
HRT 511	Propagation and Nursery Management of Fruit Crops	3(2+1)

HRT 512	Minor Tropical and Subtropical Fruits	2(1+1)
HRT 513	Breeding of Fruit Crops	3(2+1)
HRT 514	Canopy Management in Fruit Crops	2(1+1)
HRT 515	Minor Vegetable Crops	2(1+1)
HRT 516	Breeding of Vegetables Crops	3(2+1)
HRT 517	Seed Production Technology of Vegetable Crops**	2(1+1)
HRT 518	Production Technology of Medicinal and Aromatic Crops	3(2+1)
HRT 519	Landscaping and Ornamental Gardening	3(2+1)
HRT 520	Production Technology of Minor Commercial Flowers	2(1+1)
HRT 521	Breeding of Flower Crops and Ornamental Plants	3(2+1)
HRT 522	Fundamentals of Processing of Fruits and Vegetables	2(1+1)
	Total	56 (34+22)
#Core courses received from Department 20(13+7)		
**If required to be registered as minor course at SST 504		
II. Supporting courses: 8 credits		
BCM501	Basic Biochemistry	4(3+1)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
	Total	8 (6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) HRT 580: 2(0+2)		
VI. Seminar – 2 credits HRT 581: 1(0+1) – II year (I sem) HRT 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits HRT 591: 13 credits - II year (I sem) HRT 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Horticulture

Course No.	Title	Credits
I. Major courses: 12 credits		
HRT 601#	Advances in Production Technology of Fruits	3(2+1)
HRT 602#	Advances in Production Technology of Vegetable crops	3(2+1)
HRT 603#	Advances in Production Technology of Commercial flowers	3(2+1)
HRT 604#	Advances in Production Technology of Plantation, Spices, Medicinal and Aromatic Crops	3(2+1)
HRT 605	Advances in Post-Harvest Technology of Horticulture Crops	3(2+1)
HRT 606	Advances in Breeding of Fruit Crops	2(1+1)
HRT 607	Advances in Breeding of Vegetable Crops	2(1+1)
HRT 608	Advances in Plant Propagation of Fruit Crops	2(1+1)



HRT 609	Advances in Nutrient Management of Fruit Crops	2(1+1)
HRT 610	Advances in Landscape Gardening	2(1+1)
HRT 611	Biotechnology of Fruit and Plantation Crops	2(1+1)
HRT 612	Biotechnology of Vegetable and Flower Crops	2(1+1)
	Total	29(17+12)
#Core courses received from Department 12 (8+4)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses - Nil		
V. Qualifying – 03 credits- II year (II sem) HRT 680: 3(0+3)		
VI. Seminars: 02 credits HRT 681: 1(0+1) – II year (I sem) HRT 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship HRT 683: 1(0+1) – III year (I sem) HRT 684: 1(0+1) – III year (II sem)		
VIII. Research: 72 credits HRT691: 18 credits - II year (I sem) HRT 692: 18 credits - II year (II sem) HRT693: 18 credits - III year (I sem) HRT694: 18 credits - III year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabuses is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Horticulture** (stand-alone programmes) at UASB from academic year 2022-23 and onwards.

By Order



Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149 Telefax: 91- 080-23330984		Website : www.uasbangalore.edu.in Email : registrar@uasbangalore.edu.in
 <p>ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE Office of the Registrar, GKVK, Bengaluru-560065</p>		
No.R/AR/SA/AC-194/Part-B/Item-11/ GPB/2022-23		Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Genetics and Plant Breeding** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ GPB/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Genetics and Plant Breeding** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Genetics and Plant Breeding

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
GPB 501*#	Principles of Genetics	3 (2+1)
GPB 502*#	Principles of Plant Breeding	3 (2+1)
GPB503*#	Fundamentals of Quantitative Genetics	3 (2+1)
GPB 504	Varietal Development and Maintenance Breeding	2 (1+1)
GPB 505#	Principles of Cytogenetics	3 (2+1)
GPB 506*#	Molecular Breeding and Bioinformatics	3 (2+1)
GPB 507	Breeding for Quality and Special Traits	3 (2+1)
GPB 508#	Mutagenesis and Mutation breeding	3 (2+1)
GPB 509#	Hybrid Breeding	3 (2+1)
GPB 510	Seed Production and Certification**	2 (1+1)
GPB 511	Crop Breeding, I (<i>Kharif</i> Crops)	3 (2+1)
GPB 512	Crop Breeding II (<i>Rabi</i> Crops)	3 (2+1)
GPB 513	Breeding Vegetable Crops	3 (2+1)



GPB 514	Breeding Fruit Crops	3 (2+1)
GPB 515	Breeding Ornamental Crops	3 (2+1)
GPB 516	Breeding for Stress Resistance and Climate Change	3 (2+1)
GPB 517	Germplasm Characterization and Evaluation	2 (1+1)
GPB 518	Genetic Enhancement in PGR utilization	2 (1+1)
	Total	50 (32+18)

*BSMA approved core courses 12(8+4)

#Core courses received from Department 21 (14+7)

**To be offered by the Department of Seed Science & Technology, CoA, GKV and by the SST faculty (if available) at out-stations.

II. Supporting courses: 8 credits		
BCM 501	Basic Biochemistry	4(3+1)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
	Total	8 (6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem)		
GPB 580: 2(0+2)		
VI. Seminar – 2 credits		
GPB 581: 1(0+1) – II year (I sem)		
GPB 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits		
GPB 591: 13 credits - II year (I sem)		
GPB 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Genetics and Plant Breeding

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
GPB 601*#	Advances in Plant Breeding Systems	3 (3+0)
GPB 602#	Advances in Biometrical Genetics	3 (2+1)
GPB 603#	Molecular Cytogenetics for Crop Improvement	2 (2+0)
GPB 604	Plant Genetic Resources, Conservation and Utilization	2 (2+0)
GPB 605*#	Genomics in Plant Breeding	3 (3+0)
GPB 606	Population Genetics	2 (2+0)
GPB 607	Crop Evolution	3 (3+0)
GPB608	Breeding Designer Crops	2 (1+1)
GPB 609*#	IPR and Regulatory Mechanisms	1 (1+0)
	Total	21 (19+2)
*BSMA approved core courses 7 (7+0)		
#Core courses received from Department 12(11+1)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses - nil		
V. Qualifying – 03 credits- II year (II sem)		
GPB 680: 3(0+3)		

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VI. Seminars: 02 credits GPB 681: 1(0+1) – II year (I sem) GPB 682: 1(0+1) – II year (II sem)
VII. Teaching Assistantship GPB 683: 1(0+1) – III year (I sem) GPB 684: 1(0+1) – III year (II sem)
VIII. Research: 72 credits GPB 691: 18 credits - II year (I sem) GPB 692: 18 credits - II year (II sem) GPB 693: 18 credits - III year (I sem) GPB 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Genetics and Plant Breeding** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order

Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕುಪ್ಪೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ FSN/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Food Science and Nutrition** (stand-alone programme) at UASB.

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ FSN/2022-23

Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) has not mentioned about the M.Sc. (Agri.) and Ph.D. in **Food Science and Nutrition**. However, UASB has decided to continue as stand-alone programmes. The Syllabus for Master's and Doctoral degree programmes in **Food Science and Nutrition**(stand-alone) have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Food Science and Nutrition

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
FSN 501#	Principles of Food Science	2(1+1)
FSN 502#	Principles of Nutrition	3(3+0)
FSN 503	Food Analysis	3(1+2)
FSN 504#	Principles of Community Nutrition	2(1+1)
FSN 505	Food Processing Technology	2(2+0)
FSN 506	Clinical Nutrition	2(1+1)
FSN 507#	Nutrition during Life cycle	2(2+0)
FSN 508#	Nutrition and Physical Fitness	2(1+1)
FSN 509#	Principles of Diet Therapy	3(2+1)
FSN 510#	Food Toxicology	2(2+0)
FSN 511#	Principles of Human Physiology	2(1+1)
FSN 512	Food Service Management	2(1+1)
FSN 513#	Food Product Development	2(1+1)
FSN 514	Nutrition and Immunity	1(1+0)
FSN 515	Functional Foods	1(0+1)
Total		31(20+11)

#Core courses received from Department 20 (14+6)

II. Supporting courses: 8 credits		
BCM501	Basic Biochemistry	4 (3+1)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
		8 (6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) FSN 580: 2(0+2)		
VI. Seminar – 2 credits FSN 581: 1(0+1) – II year (I sem) FSN 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits FSN 591: 13 credits - II year (I sem) FSN 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Food Science and Nutrition

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
FSN 601	Macro Nutrient Metabolism	3(3+0)
FSN 602#	Metabolism of Vitamins and Hormones	2(2+0)
FSN 603#	Minerals in Human Nutrition	2(1+1)
FSN 604#	Advances in Food Science and Technology	2(1+1)
FSN 605#	Advances in Energy Metabolism	2(2+0)
FSN 606#	Nutrition and Agricultural Interface	2(2+0)
FSN 607	Nutrition in Emergencies	1(1+0)
FSN 608#	Application of Biotechnology in food and nutrition	2(2+0)
FSN 609	Global Nutritional Problems	2(2+0)
FSN 610#	Maternal and Child Nutrition	2(1+1)
	Total	20 (17+3)
#Core courses received from Department-12 (9+3)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses – nil		
V. Qualifying – 03 credits- II year (II sem) FSN 680: 3(0+3)		
VI. Seminars: 02 credits FSN 681: 1(0+1) – II year (I sem) FSN 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship FSN 683: 1(0+1) – III year (I sem) FSN 684: 1(0+1) – III year (II sem)		



VIII. Research: 72 credits

- FSN 691: 18 credits - II year (I sem)
- FSN 692: 18 credits - II year (II sem)
- FSN 693: 18 credits - III year (I sem)
- FSN 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabuses is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Food Science and Nutrition** (stand-alone programmes) at UASB from academic year 2022-23 and onwards.



By Order

Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ FES/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programme in **Forestry and Environmental Science** (stand-alone programme) at UASB.

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ FES/2022-23

Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) has not mentioned about the M.Sc. (Agri.) and Ph.D. in Forestry and Environmental Science. However, UASB has decided to continue as stand-alone programmes. The Syllabus for Master's and Doctoral degree programmes in **Forestry and Environmental Science** (stand-alone) have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Forestry and Environmental Science

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
FES 501#	Silviculture	2 (2+0)
FES 502	Forest Policy and Law	2 (2+0)
FES 503	Ecology and Environment	2 (1+1)
FES 504#	Solid Waste Management	2 (1+1)
FES 505#	Principles of Environmental Impact Assessment	2 (1+1)
FES 506#	Environment Policy, Law and International Conventions	2 (2+0)
FES 507#	Biodiversity and Conservation	2 (1+1)
FES 508#	Environmental Pollution	2 (1+1)
FES 509	Remote sensing and GIS Application in Biodiversity Conservation	3 (2+1)
FES 510#	Global Climate change and environment	2 (2+0)
FES 511#	Forest Management	2 (2+0)
FES 512	Natural Resource and Environmental Economics	2 (1+1)

FES 513#	Management of Degraded Ecosystems	2 (1+1)
FES 514	Forest Biometry	2 (1+1)
FES 515	Floral Biology and Ecology	2 (1+1)
FES 516	Environmental Analytical Techniques	2 (1+1)
FES 517	Plantation Forestry	2 (1+1)
FES 518	Environmental Biotechnology	2 (2+0)
FES 519#	Environmental Engineering	2 (1+1)
FES 520	Agroforestry Systems	2 (1+1)
FES 521	Forest Protection	2 (1+1)
FES 522	Ecotourism - Concept and Modern Approaches	2 (1+1)
FES 523	Biofuel Production Technologies	2 (1+1)
	Total	47 (30+17)
#Core courses received from Department 20 (14+6)		
II. Supporting courses : 8credits		
BCM 501	Basic Biochemistry	4 (3+1)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
	Total	8 (6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) FES 580: 2(0+2)		
VI. Seminar – 2 credits FES 581: 1(0+1) – II year (I sem) FES 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits FES 591: 13 credits - II year (I sem) FES 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Forestry and Environmental Science

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
FES 601	Bioremediation	2 (1+1)
FES 602	Advances in Forest Genetics Resources & Tree Breeding	2 (1+1)
FES 603	Industrial Wastes - Impacts on Agro-Ecosystem	2 (1+1)
FES 604#	Advances In Agro-Forestry Systems and Management	2 (2+0)
FES 605#	Green Technologies and Environmental Protection	2 (1+1)
FES 606	Advances in Forest regeneration	2 (1+1)
FES 607#	Advances in Silviculture	2 (2+0)
FES 608	Kinetics of Waste Water Treatment	2 (1+1)
FES 609#	Climate Change: Consequences and Mitigation Strategies	2 (1+1)
FES 610#	Recycling of Wastes: Soil and Microbial Processes	2 (1+1)
FES 611	Advances in Tropical Ecology	2 (1+1)
FES 612	Forest Ecosystem Services & Livelihood Benefits	2 (1+1)
FES 613	New Tools In Conservation & Field Ecology	2 (1+1)
FES 614	Ethno-Biology and Tribal welfare	2 (1+1)



FES 615#	Advanced Wild Life Management	2 (1+1)
	Total	30 (17+13)
#Core courses received from Department 12(8+4)		
II.	Supporting courses: 5 credits	
III.	Minor courses: 06 credits	
IV.	Common courses – nil	
V.	Qualifying – 03 credits- II year (II sem) FES 680: 3(0+3)	
VI.	Seminars: 02 credits FES 681: 1(0+1) – II year (I sem) FES 682: 1(0+1) – II year (II sem)	
VII.	Teaching Assistantship FES 683: 1(0+1) – III year (I sem) FES 684: 1(0+1) – III year (II sem)	
VIII.	Research: 72 credits FES 691: 18 credits - II year (I sem) FES 692: 18 credits - II year (II sem) FES 693: 18 credits - III year (I sem) FES 694: 18 credits - III year (II sem)	

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabuses is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Forestry and Environmental Science** (stand-alone programmes) at UASB from academic year 2022-23 and onwards.

By Order



Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalo



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ PPH/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Plant Physiology** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ PPH/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Plant Physiology** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Plant Physiology

Course Code	Course Title	Credit Hours
I. Major Courses		
PPH 501*#	Principles of Plant Physiology-I: Plant Water Relations and Mineral Nutrition	3 (2+1)
PPH 502*#	Principles of Plant Physiology-II: Metabolic Processes and Growth Regulation	3 (2+1)
PPH 503*#	Plant Developmental Biology: Physiological and Molecular Basis	3 (2+1)
PPH 504#	Physiological and Molecular Responses of Plants to Abiotic Stresses	3 (2+1)
PPH 505	Hormonal Regulation of Plant Growth and Development	3 (2+1)
PPH 506	Physiological and Molecular Mechanisms of Mineral Nutrient Acquisition and their Functions	3 (2+1)
PPH 507#	Photosynthetic Processes, Crop Growth and Productivity and Concepts of Crop Modelling	3 (2+1)
PPH 508#	Physiology of Field Crops	2 (2+0)
PPH 509	Physiology of Horticulture Crops	2 (2+0)
PPH 510*#	Seed Physiology	3 (2+1)
PPH 511	Phenotyping Physiological Processes	2 (2+0)
PPH 512	Crop Growth Regulation and Management	2 (2+0)
Total		32 (24+8)

*BSMA approved core courses 12(8+4)
#Core courses received from Department 20(14+6)

- II. Supporting courses :8 credits**
 BCM 501 Basic Biochemistry 4 (3+1)
 AST 502 Statistical Methods for Applied Sciences 4 (3+1)
Total 8 (6+2)
- III. Minor courses – 8 credits (of which one course may be selected from the department)**
- IV. Common courses – 5 credits**
- V. Qualifying –2 credits - II year (I sem)**
 PPH 580: 2(0+2)
- VI. Seminar – 2 credits**
 PPH 581: 1(0+1) – II year (I sem)
 PPH 582: 1(0+1) – II year (II sem)
- VII. Research – 27 credits**
 PPH 591: 13 credits - II year (I sem)
 PPH 592: 14 credits - II year (II sem)

Doctoral Degree Programme: Ph.D. in Plant Physiology

Course Code	Course Title	Credit Hours
I. Major Courses		
PPH 601*#	Functional Genomics and Genes Associated with a Few Physiological Processes	2 (2+0)
PPH 602*#	Signal Perceptions and Transduction and Regulation of Physiological Processes	2 (2+0)
PPH 603*#	Molecular Approaches for Improving Physiological Mechanisms Through Trait Introgression	3 (2+1)
PPH 604	Plant Phenomics – Next Generation Phenomics Platforms	2 (2+0)
PPH 605#	Experimental Techniques to Characterize Plant Processes for Crop Improvement	2 (0+2)
PPH 606	Global Climate Change and Crop Response	2 (2+0)
PPH 607*#	Physiological and Molecular Aspects of Source-sink Capacity for Enhancing Yield	3 (3+0)
PPH 608	Seed and Fruit Growth and their Quality Improvement	2 (2+0)
PPH 609	Plant-microbe Interactions	3 (2+1)
PPH 610	Weed Biology and Physiology of Herbicide Action	2 (2+0)
Total		23(19+4)

*BSMA approved core courses 10(9+1)
#Core courses received from Department 12(9+3)

- II. Supporting courses: 5 credits**
- III. Minor courses: 06 credits**
- IV. Common courses – nil**
- V. Qualifying – 03 credits- II year (II sem)**
 PPH 680: 3(0+3)
- VI. Seminars: 02 credits**
 PPH 681: 1(0+1) – II year (I sem)
 PPH 682: 1(0+1) – II year (II sem)

VII. Teaching Assistantship

PPH 683: 1(0+1) – III year (I sem)

PPH 684: 1(0+1) – III year (II sem)

VIII. Research: 72 credits

PPH 691: 18 credits - II year (I sem)

PPH 692: 18 credits - II year (II sem)

PPH 693: 18 credits - III year (I sem)

PPH 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Plant Physiology** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order



Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕುವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ API/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's degree programme in **Apiculture** (stand-alone programme) at UASB.

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ API/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) has not mentioned about the M.Sc.(Agri.) in Apiculture. However, UASBhas decided to continue as stand-alone programme. The Syllabus for Master's degree programme in **Apiculture** (stand-alone)have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) inApiculture

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
API 501 #	Bee Morphology and Anatomy	2(1+1)
API 502#	Biology of Honey bees	2(1+1)
API 503 #	Bee Physiology	2(1+1)
API 504#	Bee Ecology and Behaviour	2(1+1)
API 505#	Bee Toxicology	2(1+1)
API 506#	Beekeeping and its management	2(1+1)
API 507 #	Honey and Beeproducts	2(1+1)
API 508 #	Bee Pollination and Crop Production	2(1+1)
API 509 #	Bee Pests and Diseases	2(1+1)
API 510 #	Non- <i>Apis</i> Pollinators	2(1+1)
API 511	History, Development & Techniques of beekeeping	3(2+1)
API512	Classification and Systematics of Bees	4(3+1)
API513	Genetics and Breeding of honey bees	3(2+1)
Total		30(17+13)

#Core courses received from Department: 20 (10+10)		
II. Minor courses – 8 credits (of which one course may be selected from the department)		
III. Supporting courses : 8 credits		
BCM 501	Basic Biochemistry	4(3+1)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
	Total	8(6+2)
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) API 580: 2(0+2)		
VI. Seminar – 2 credits API 581: 1(0+1) – II year (I sem) API 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits API 591: 13 credits - II year (I sem) API 592: 14 credits - II year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabuses is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's degree programme in **Apiculture** (stand-alone programme) at UASB from academic year 2022-23 and onwards.



By Order

Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ AGR/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Agronomy** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ AGR/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Agronomy** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) inAgronomy

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
AGR 501*#	Modern Concepts in Crop Production	3(3+0)
AGR 502*#	Principles and Practices of Soil Fertility and Nutrient Management	3(2+1)
AGR 503*#	Principles and Practices of Weed Management	3(2+1)
AGR 504*#	Principles and Practices of WaterManagement	3(2+1)
AGR 505	Conservation Agriculture	2(1+1)
AGR 506#	Agronomy of Major Cereals andPulses	2(1+1)
AGR 507#	Agronomy of Oilseed, Fibre and Sugar Crops	3(2+1)
AGR 508	Agronomy of Medicinal, Aromatic &Underutilized Crops	3(2+1)
AGR 509	Agronomy of Fodder and Forage Crops	3(2+1)
AGR 510	Agrostology and Agro- Forestry	3(2+1)
AGR 511	Cropping System and Sustainable Agriculture	2(2+0)
AGR 512#	Dryland Farming and Watershed Management	3(2+1)
AGR 513	Principles and Practices of Organic Farming	3(2+1)
AGR 514	Research Techniques in Agronomy	2(1+1)
Total		38 (26+12)

*BSMA approved core courses - 12(9+3)		
#Core courses received from Department - 20(14+6)		
II. Supporting courses :8credits		
AST 502	Statistical Methods for Applied Sciences	4(3+1)
BCM 501	Basic Biochemistry	4(3+1)
	Total	8(6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem)		
AGR 580: 2(0+2)		
VI. Seminar – 2 credits		
AGR 581: 1(0+1) – II year (I sem)		
AGR 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits		
AGR 591: 13 credits - II year (I sem)		
AGR 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Agronomy

Course Code	Course Title	Credit Hours
I. Major courses: 13 credits		
AGR 601*#	Current Trends in Agronomy	3(3+0)
AGR 602#	Recent Trends in Crop Growth and Productivity	3(2+1)
AGR 603#	Irrigation Management	3(2+1)
AGR 604	Recent Trends in Weed Management	2(2+0)
AGR 605#	Integrated Farming Systems and Sustainable Agriculture	2(2+0)
AGR 606	Soil Conservation and Watershed Management	3(2+1)
AGR 607	Stress Crop Production	3(2+1)
AGR 608*#	Research and Publication Ethics	2(2+0)
	Total	21 (17+4)
*BSMA approved core courses 5(5+0)		
#Core courses received from Department 13(11+2)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses – nil		
V. Qualifying – 03 credits-II year (II sem)		
AGR 680: 3(0+3)		
VI. Seminars: 02 credits		
AGR 681: 1(0+1) – II year (I sem)		
AGR 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship		
AGR 683: 1(0+1) – III year (I sem)		
AGR 684: 1(0+1) – III year (II sem)		

VIII. Research: 72 credits

- AGR 691: 18 credits – Iyear (I sem)
- AGR 692: 18 credits - II year (II sem)
- AGR 693: 18 credits - III year (I sem)
- AGR 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Agronomy** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order




Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ AST/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's degree programme in **Agricultural Statistics** at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ AST/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's degree programme in **Agricultural Statistics** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Agricultural Statistics

Course Code	Course Title	Credit Hours
I. Major courses		
AST 522	Data Analysis using Statistical Packages	3(2+1)
AST 552*#	Probability Theory	2(1+1)
AST 553*#	Statistical Methods	3(2+1)
AST 554	Actuarial Statistics	2(1+1)
AST 555	Bioinformatics	2(1+1)
AST 556	Econometrics	2(1+1)
AST 562*#	Statistical Inference	3(2+1)
AST 563*#	Design of Experiments	3(2+1)
AST 564*#	Sampling Techniques	3(2+1)
AST 565 *	Statistical Genetics	3(2+1)
AST 566	Statistical Quality Control	2(2+0)
AST 567	Optimization Techniques	2(1+1)
AST 571*#	Multivariate Analysis	3(2+1)
AST 572*#	Regression Analysis	3(2+1)
AST 573*#	Statistical Computing	2(1+1)
AST 575	Demography	2(2+0)
AST 576	Statistical Methods for Life Sciences	2(1+1)
AST 577	Statistical Ecology	2(2+0)
AST 578	Non Parametric Methods	2(1+1)
Total		46(30+16)

* BSMA Approved courses 25 Credits (16+9)		
# Core courses received from Department 22(14+8)		
II. Supporting courses for other than Agricultural statistics students		
AST 501	Mathematics for Applied Sciences	2 (2+0)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
AST 511	Experimental Designs	3 (2+1)
AST 512	Basic Sampling Techniques	3 (2+1)
AST 521	Applied Regression Analysis	3 (2+1)
AST 522	Data Analysis using Statistical Packages	3 (2+1)
MCA 501	Computer Fundamentals & Programming	3 (2+1)
MCA 502	Computer Organization and Architecture	2 (2+0)
MCA 511	Introduction To Communication Technologies, Computer Networking And Internet Applications	2 (1+1)
MCA 512	Information Technology in Agriculture	2 (2+0)
Supporting courses for Agricultural statistics students		
AST 551	Mathematics - I	3 (2+1)
AST 561	Mathematics - II	2 (1+1)
AST 574	Time Series Analysis	2 (1+1)
	Total	7(4+3)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem)		
AST 580: 2(0+2)		
VI. Seminar – 2 credits		
AST 581: 1(0+1) – II year (I sem)		
AST 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits		
AST 591: 13 credits - II year (I sem)		
AST 592: 14 credits - II year (II sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's degree programme in **Agricultural Statistics** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order


Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website : www.uasbangalore.edu.in
Email : registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ MIC/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Microbiology** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ MIC/2022-23

Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Microbiology** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Microbiology

Course code	Course Title	Credit hrs.
I. Major courses		
MIC 501	Techniques in Microbiology	2 (0+2)
MIC 502*#	Principles of Microbiology	4 (3+1)
MIC 503*#	Microbial Physiology and Metabolism	4 (3+1)
MIC 504#	Microbial Genetics	3 (2+1)
MIC 505*#	Soil Microbiology	3 (2+1)
MIC 506	Microbial Biotechnology	3 (2+1)
MIC 507*#	Food Microbiology	3 (2+1)
MIC 508	Bacteriophages	2 (1+1)
MIC 509	Environmental Microbiology	3 (2+1)
MIC 510	Industrial Microbiology	3 (2+1)
MIC 511#	Bio fertilizer Technology	3 (2+1)
MIC 512	Cyanobacteria and Algal Biotechnology	2 (2+0)
Total		35 (23+12)
*BSMA approved core courses 14(10+4)		
# Core courses received from Department 20(14+6)		
II. Supporting courses: 8 credits		
BCM 501	Basic Biochemistry	4(3+1)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
Total		8(6+2)

III.	Minor courses – 8 credits (of which one course may be selected from the department)
IV.	Common courses – 5 credits
V.	Qualifying –2 credits - II year (I sem) MIC 580: 2(0+2)
VI.	Seminar – 2 credits MIC 581: 1(0+1) – II year (I sem) MIC 582: 1(0+1) – II year (II sem)
VII.	Research – 27 credits MIC 591: 13 credits - II year (I sem) MIC 592: 14 credits - II year (II sem)

Doctoral Degree Programme: Ph.D. in Microbiology

Course code	Course Title	Credits
I. Major courses: 12 credits		
MIC601*#	Improvement in Fermentation Technology	3 (2+1)
MIC 602#	Microbial Physiology and Regulation	2 (2+0)
MIC 603*#	Advances in Soil Microbiology	2 (2+0)
MIC 604#	Advances in Environmental Microbiology	2 (2+0)
MIC 605*#	Plant-Microbe Interactions	3 (2+1)
MIC 606	Microorganisms in Biofuels and Bioenergy Production	3 (2+1)
MIC 607	Microbial Management of Organic Wastes and Xenobiotics	2 (1+1)
MIC 608	Antibiotics in Agriculture and Allied Fields	3 (2+1)
Total		20 (15+5)
*BSMA approved core courses 8 (6+2)		
# Core courses received from Department 12(10+2)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses – nil		
V.	Qualifying – 03 credits- II year (II sem) MIC 680: 3(0+3)	
VI.	Seminars: 02 credits MIC 681: 1(0+1) – II year (I sem) MIC 682: 1(0+1) – II year (II sem)	
VII.	Teaching Assistantship MIC 683: 1(0+1) – III year (I sem) MIC 684: 1(0+1) – III year (II sem)	
VIII.	Research: 72 credits MIC 691: 18 credits - II year (I sem) MIC 692: 18 credits - II year (II sem) MIC 693: 18 credits - III year (I sem) MIC 694: 18 credits - III year (II sem)	



The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Microbiology** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order


Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕುವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ AMC /2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's degree programme in **Agricultural Marketing and Co-operation** (stand-alone programme) at UASB.

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ AMC /2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) has not mentioned about the M.Sc. (Agri.) in **Agricultural Marketing and Co-operation**. However, UASB has decided to continue as stand-alone programme. The Syllabus for Master's degree programme in **Agricultural Marketing and Co-operation** (stand-alone) have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Agricultural Marketing and Co-operation

Course No.	Course Title	Credit Hours
I. Major Courses: 20 credits		
AMC 501#	Marketing Management and Strategy	2 (2+0)
AMC 502	Techniques in Market Research	2 (1+1)
AMC 503#	Agricultural Marketing and Price Analysis	2 (1+1)
AMC 504#	Agricultural Trade Policy	2 (1+1)
AMC 505#	Agricultural Finance and Project Management	3 (2+1)
AMC 506#	Agricultural Business Management	2 (1+1)
AMC 507	Econometrics	3 (2+1)
AMC 508#	Management of Cooperatives	2 (2+0)
AMC 509	International Business	2 (2+0)
AMC 510#	Agricultural and Food Marketing	3 (2+1)
AMC 511#	Grading and Quality Control in Agricultural and Food Industry	2 (1+1)
AMC 512	Optimization Techniques	2 (1+1)
AMC 513#	Commodity Futures Trading	2 (2+0)
AMC 514	Rural Marketing	2 (2+0)
Total		31(22+9)

# Core courses received from department 20 (14+6)		
II. Supporting courses: 6 credits		
AST 501	Mathematics for Applied Sciences	2 (2+0)
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
	Total	6 (5+1)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I Sem) AMC 580: 2(0+2)		
VI. Seminar – 2 credits AMC 581: 1(0+1) – II year (I Sem) AMC582: 1(0+1) – II year (II Sem)		
VII. Research – 27 credits AMC591: 13 credits - II year (I Sem) AMC592: 14 credits - II year (II Sem)		

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabuses is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's degree programme in **Agricultural Marketing and Co-operation** (stand-alone programme) at UASB from academic year 2022-23 and onwards.

By Order

Registrar



To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKVK, Bengaluru-560065

No.R/PS/AC-194/Part-B/Item-11/ ABM/2022-23

Date: 29.09.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Agri-Business Management** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ ABM/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore
dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Agri-Business Management** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme:

Master of Business Administration (MBA) in Agri-Business Management (ABM)

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
ABM 501*#	Principles of Management and Organisational Behaviour	3 (3+0)
ABM 502*#	Managerial Accounting and Control	3 (2+1)
ABM 503*#	Applied Agribusiness Economics	2 (1+1)
ABM 504*#	Human Resource Management for Agricultural Organizations	2 (2+0)
ABM 505*#	Production and Operations Management	2 (1+1)
ABM 506*#	Agricultural and Food Marketing Management- I	2 (1+1)
ABM 507*#	Agricultural and Food Marketing Management- II	2 (2+0)
ABM 508*#	Agri Supply Chain Management	2 (1+1)
ABM 509*#	International Trade in Agricultural Products	2 (2+0)
ABM 510	Food Technology and Processing Management	3 (3+0)
ABM 511	Rural Marketing	3 (3+0)
ABM 512	Fertiliser Technology and Management	3 (3+0)

ABM 513	Management of Agro-Chemical Industry	3 (3+0)
ABM 514	Seed Production Technology Management	3 (3+0)
ABM 515	Technology Management for Livestock Products	3 (3+0)
ABM 516	Fruit Production & Post Harvest Management	3 (3+0)
ABM 517	Farm Power & Machinery Management	2 (2+0)
ABM 518	Food Retail Management	2 (2+0)
ABM 519	Management of Agricultural Input Marketing	2 (2+0)
ABM 520	Feed Business Management	2 (2+0)
ABM 521	Management of Veterinary Hospitals	2 (2+0)
ABM 522	Poultry and Hatchery Management	2 (2+0)
ABM 523	Management of Floriculture and Landscaping	2 (2+0)
ABM 524	Risk Management in Agri Business	2 (2+0)
ABM 525	Management of Agri-Business Co-Operatives	2 (2+0)
ABM 526	Business Analytics for Agriculture	2 (1+1)
ABM 527	Dairy Business Management	1 (1+0)
ABM 528	Agri Extension Management	1 (1+0)
ABM 529	Renewable Energy Sources Management	1 (1+0)
ABM 530	Quality Management for Agri Business	1 (0+1)
ABM 531	Advertising and Brand Management	1 (1+0)
ABM 532	Agri Infrastructure and Warehousing Management	1 (1+0)
ABM 533	Contract Farming	1 (1+0)
ABM 534	Human Resource Competence and Capacity Building Systems	1 (1+0)
ABM 535	Agri Commodity Markets and Futures Trading	1 (0+1)
	Total	70 (62+8)

*BSMA approved core courses 20(20+0)

#Core courses received from Department 20(20+0)

II. Supporting Courses - 6 Credits

AST 502	Statistical Methods for Applied Sciences	4 (3+1)
AST 501	Mathematics for Applied Sciences	2 (2+0)
	Total	6 (5+1)

III. Minor courses – 8 credits (of which one course may be selected from the Department)

IV. Common courses – 5 credits

V. Qualifying –2 credits - II year (I sem)

ABM 580: 2(0+2)

VI. Seminar – 2 credits

ABM 581: 1(0+1) – II year (I sem)

ABM 582: 1(0+1) – II year (II sem)

VII. Research / IDEA - 27 credits

ABM 683: 1(0+1) – III year (I sem)

ABM 684: 1(0+1) – III year (II sem)

VIII. Research: 72 credits

ABM 691: 18 credits - II year (I sem)

ABM 692: 18 credits - II year (II sem)

ABM 693: 18 credits - III year (I sem)

ABM 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master of Business Administration (MBA) in Agri-Business Management (ABM) and Doctoral degree programmes in **Agri-Business Management** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.

By Order



[Signature]
Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149 Telefax: 91- 080-23330984		Website :www.uasbangalore.edu.in Email : registrar@uasbangalore.edu.in
 ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕ್ಯವಿಕೆ, ಬೆಂಗಳೂರು UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE Office of the Registrar, GKVK, Bengaluru-560065		

No.R/AR/SA/AC-194/Part-B/Item-11/ AEE/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programme in **Agricultural Extension Education** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ AEE/2022-23
Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.

3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022

4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programme in **Agricultural Extension Education** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Agricultural Extension Education

Course Code	Course Title	Credit Hours
I. Major courses – 20 credits		
AEE501*#	Extension Landscape	2 (2+0)
AEE 502*#	Applied Behaviour Change	3 (2+1)
AEE 503*#	Organisational Behaviour and Development	3 (2+1)
AEE 504*#	Research Methodology in Agriculture Extension	3 (2+1)
AEE 505*#	Capacity Development	3 (2+1)
AEE 506*#	ICTs for Agricultural Extension and Advisory Services	3 (2+1)
AEE 507*#	Evaluation and Impact Assessment	3 (2+1)
AEE 508	Management of Extension Organizations	3 (2+1)
AEE 509	Enabling Agricultural innovation	2 (1+1)
AEE 510	Gender Mainstreaming	3 (2+1)
AEE 511	Diffusion and Adoption of Innovations	2 (1+1)
	Total	30 (20+10)
*BSMA approved core courses 20(14+6)		
#Core courses received from Department 20(14+6)		
II. Supporting courses: 7 credits		
AST 502	Statistical Methods for Applied Sciences	4 (3+1)
AST 512	Basic Sampling Techniques	3 (2+1)
	Total	7 (5+2)

III. Minor courses – 8 credits (of which one course may be selected from the department)
IV. Common courses – 5 credits
V. Qualifying –2 credits - II year (I sem) AEE 580: 2(0+2)
VI. Seminar – 2 credits AEE 581: 1(0+1) – II year (I sem) AEE 582: 1(0+1) – II year (II sem)
VII. Research – 27 credits AEE 591: 13 credits - II year (I sem) AEE 592: 14 credits - II year (II sem)

Doctoral Degree Programme: Ph.D. in Agricultural Extension Education

Course Code	Title of Course	Credit Hours
I. Major Courses: 12 credits		
AEE 601*#	Policy Engagement and Extension	3(2+1)
AEE 602*#	Methodologies for Social and Behavioural Sciences	3(2+1)
AEE 603*#	Technology Commercialization and Incubation	3(2+1)
AEE 604*#	Educational Technology and Instructional Design	3(2+1)
AEE 605	Risk Management and Climate Change Adaptation	3(2+1)
AEE 606	Livelihood Development	2(1+1)
AEE 607	Facilitation for People Centric Development	3(2+1)
	Total	20(13+7)
*BSMA approved core courses 12(8+4)		
#Core courses received from Department 12(8+4)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses –Nil		
V. Qualifying – 03 credits- II year (II sem) AEE 680: 3(0+3)		
VI. Seminars: 02 credits AEE 681: 1(0+1) – II year (I sem) AEE 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship AEE 683: 1(0+1) – III year (I sem) AEE 684: 1(0+1) – III year (II sem)		
VIII. Research: 72 credits AEE 691: 18 credits - II year (I sem) AEE 692: 18 credits - II year (II sem) AEE 693: 18 credits - III year (I sem) AEE 694: 18 credits - III year (II sem)		



The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Agricultural Extension Education** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order

Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore

Phone: 91- 080-23330984/149
Telefax: 91- 080-23330984



Website :www.uasbangalore.edu.in
Email :registrar@uasbangalore.edu.in



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು

ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕುವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE

Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ AEC /2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programme in Agricultural Economics at UASB as per BSMA recommendation

- Ref:** 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022
2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ AEC /2022-23 Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programme in **Agricultural Economics** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Agricultural Economics

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
AEC 501*#	Micro Economic Theory and Applications	3 (3+0)
AEC 502*#	Agricultural Production Economics	2 (1+1)
AEC 503*#	Agricultural Marketing and Price Analysis	3 (2+1)
AEC 504*#	Macro Economics and Policy	2 (2+0)
AEC 505*#	Econometrics	3 (2+1)
AEC 506	Agricultural Development and Policy Analysis	2 (2+0)
AEC 507*#	Agricultural Finance and Project Management	3 (2+1)
AEC 508*	Linear Programming	2 (1+1)
AEC 509*#	Research Methodology for Social Sciences	2 (1+1)
AEC 510	Indian Economy: History and Contemporary Issues	2 (2+0)
AEC 511#	International Economics	2 (1+1)
AEC 512	Institutional Economics	1 (1+0)
AEC 513	Natural Resource and Environmental Economics	2 (1+1)
AEC 514	Commodity Future Trading	2 (2+0)
AEC 515	Development Economics	2 (2+0)
AEC 516	Rural Marketing	2 (2+0)
AEC 517	Evolution of Economic Thought	1 (1+0)
Total		36 (28+8)

18

*BSMA approved core courses 20 (14+6)		
# Core courses received from Department 20 (14+6)		
II. Supporting courses: 6 credits		
AST 501	Mathematics For Applied Sciences	2 (2+0)
AST 502	Statistical Methods For Applied Sciences	4 (3+1)
	Total	6 (5+1)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem) AEC 580: 2(0+2)		
VI. Seminar – 2 credits AEC 581: 1(0+1) – II year (I sem) AEC 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits AEC 591: 13 credits - II year (I sem) AEC 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Agricultural Economics

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
AEC 601*#	Advanced Micro Economic Analysis	2 (1+1)
AEC 602*#	Advanced Macro Economic Analysis	2 (2+0)
AEC 603*#	Advanced Econometrics	3 (2+1)
AEC 604*#	Advanced Production Economics	3 (2+1)
AEC 605	Operations Research	3 (2+1)
AEC 606#	Advanced Agricultural Marketing and Price Analysis	3 (2+1)
AEC 607	Quantitative Development Policy Analysis	2 (1+1)
AEC 608	Natural Resource Management	3 (2+1)
AEC 609	Environmental Economics	3 (2+1)
		24 (16+8)
*BSMA approved core courses 10(7+3)		
# Core courses received from Department 13(9+4)		
II. Supporting courses: 5 credits		
III. Minor courses: 06 credits		
IV. Common courses - nil		
V. Qualifying – 03 credits- II year (II sem) AEC 680: 3(0+3)		
VI. Seminars: 02 credits AEC 681: 1(0+1) – II year (I sem) AEC 682: 1(0+1) – II year (II sem)		
VII. Teaching Assistantship AEC 683: 1(0+1) – III year (I sem) AEC 684: 1(0+1) – III year (II sem)		
VIII. Research: 72 credits AEC 691: 18 credits - II year (I sem) AEC 692: 18 credits - II year (II sem) AEC 693: 18 credits - III year (I sem) AEC 694: 18 credits - III year (II sem)		



The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in Agricultural Economics at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order


Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore



ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು
ಕುಲಸಚಿವರ ಕಛೇರಿ, ನಾಯಕ್ ಭವನ, ಗಾಕೃವಿಕೆ, ಬೆಂಗಳೂರು

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE
Office of the Registrar, GKVK, Bengaluru-560065

No.R/AR/SA/AC-194/Part-B/Item-11/ ENT/2022-23

Date: 10.10.2022

NOTIFICATION

Sub: Syllabus of Master's and Doctoral degree programmes in **Entomology** at UASB as per BSMA recommendation

Ref: 1. Minutes of the 194th Meeting of Academic Council (Item No.11) held on.02.08.2022

2. Draft Notification No.R/PS/AC-194/Part-B/Item-11/ ENT/2022-23 Date: 29.09.2022 of the Dean (PGS), UAS, GKVK.
3. Recommendation of the Director of Education, UAS, Bangalore dated:03.10.2022
4. Approval of the Vice-Chancellor, UAS, Bangalore, dated: 03.10.2022

Preamble:

As per the communication in the letter No. Edn. 7/6/2017-EQR dated: 30.03.2021 from Deputy Director General (Agricultural Education), ICAR New Delhi on Broad Subject Matter Area (BSMA) the following Syllabus for Master's and Doctoral degree programmes in **Entomology** have been proposed for consideration from academic year 2022-23 onwards.

Master's degree programme: M.Sc. (Agri.) in Entomology

Course Code	Course Title	Credit Hours
I. Major courses: 20 credits		
ENT 501*#	Insect Morphology	3 (2+1)
ENT 502*#	Insect Anatomy and Physiology	3 (2+1)
ENT 503 *#	Insect Taxonomy	3 (2+1)
ENT 504*#	Insect ecology	3 (2+1)
ENT 505	Biological Control of Insect Pests and Weeds	3 (2+1)
ENT 506*#	Toxicology of Insecticides	3 (2+1)
ENT 507	Host Plant Resistance	2 (1+1)
ENT 508*#	Concepts of Integrated Pest Management	2 (2+0)
ENT 509	Pests of Field Crops	3 (2+1)
ENT 510*#	Pests of Horticultural and Plantation Crops	3 (2+1)
ENT 511	Post-Harvest Entomology	2 (1+1)
ENT 512	Insect Vectors of Plant Pathogens	2 (1+1)
ENT 513	Principles of Acarology	2 (1+1)
ENT 514	Vertebrate Pest Management	2 (1+1)
ENT 515	Techniques in Plant Protection	1 (0+1)
ENT 516	Apiculture **	3 (2+1)
ENT 517	Sericulture**	3 (2+1)
ENT 518	Lac Culture	3 (2+1)
ENT 519	Molecular Approaches in Entomology	3 (2+1)
ENT 520	Plant Quarantine, Biosafety and Biosecurity	2 (2+0)
ENT 521	Edible and Therapeutic Insects	2 (1+1)

ENT 522	Medical and Veterinary Entomology	2 (1+1)
ENT 523	Forest Entomology	2 (1+1)
	Total	57 (36+21)
*BSMA approved core courses 20 (14+6) # Core courses received from Department 20 (14+6) ** To be offered by the respective Departments at CoA, GKVK and by the respective faculty (if available) at out-stations.		
II. Supporting courses: 8 credits		
BCM 501	Basic Biochemistry	4(3+1)
AST 502	Statistical Methods for Applied Sciences	4(3+1)
	Total	8(6+2)
III. Minor courses – 8 credits (of which one course may be selected from the department)		
IV. Common courses – 5 credits		
V. Qualifying –2 credits - II year (I sem)		
ENT 580: 2(0+2)		
VI. Seminar – 2 credits		
ENT 581: 1(0+1) – II year (I sem)		
ENT 582: 1(0+1) – II year (II sem)		
VII. Research – 27 credits		
ENT 591: 13 credits - II year (I sem)		
ENT 592: 14 credits - II year (II sem)		

Doctoral Degree Programme: Ph.D. in Entomology

Course Code	Course Title	Credit Hours
I. Major courses: 12 credits		
ENT 601*#	Insect Phylogeny and Systematics	3 (2+1)
ENT 602*#	Insect Physiology and Nutrition	3 (2+1)
ENT 603	Insect Ecology and Diversity	3 (2+1)
ENT 604	Insect Behaviour	2 (1+1)
ENT 605*#	Bio Inputs for Pest Management	3 (2+1)
ENT 606*#	Insect Toxicology and Residues	3 (2+1)
ENT 607	Plant Resistance to Insects	2 (1+1)
ENT 608	Acarology	2 (1+1)
ENT 609	Molecular Entomology	2 (1+1)
ENT 610	Integrated Pest management	2 (2+0)
	Total	25(16+9)
*BSMA approved core courses 12(8+4) #Core courses from the Department 12(8+4)		

II. Supporting courses: 5 credits
III. Minor courses: 06 credits
IV. Common courses – nil
V. Qualifying – 03 credits- II year (II sem) ENT 680: 3(0+3)
VI. Seminars: 02 credits ENT 681: 1(0+1) – II year (I sem) ENT 682: 1(0+1) – II year (II sem)
VII. Teaching Assistantship ENT 683: 1(0+1) – III year (I sem) ENT 684: 1(0+1) – III year (II sem)
VIII. Research: 72 credits ENT 691: 18 credits - II year (I sem) ENT 692: 18 credits - II year (II sem) ENT 693: 18 credits - III year (I sem) ENT 694: 18 credits - III year (II sem)

The above syllabuses were approved by 20th Board of Studies (PGS), subsequently placed before the 194th Academic Council held on 2nd August, 2022 and approved. The detail of the syllabus is enclosed in Annexure. Hence, the Notification

NOTIFICATION

The Academic Council in its 194th meeting held on 02.08.2022 (Part B: Item No. 11) approved the Syllabus of Master's and Doctoral degree programmes in **Entomology** at UASB as per BSMA recommendation from academic year 2022-23 and onwards.



By Order


Registrar

To,

The Chairman and Members of the Academic Council

Cc to: The Asst. Registrar/Asst. Comptroller, Dean (PGS) Office, UAS, Bangalore