

Address : UNIREG
Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE



Estd. 1916

VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Minor Additions to the Practical Syllabus in **Botany (U.G) Course.**

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Botany (U.G)** at its meeting held on 15.12.2012 has resolved to make **Minor Additions to the Practical Syllabus.**

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The Minor Additions to the Existing Practical Syllabus in Botany (U.G) Course is annexed herewith.

Dr S. Sampath
REGISTRAR. 3/6/13
[Signature]

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Botany, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Principals of the Affiliated Colleges running B.Sc. course.
5. The Director, College Development Council, UOM, Mysore
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

AC2.Eng.25-4.R

Annexure-I

EXISTING	MODIFIED
<p>I SEMESTER. PRACTICAL -I</p> <p>Practical VI: <i>Spirulina, Scytonema</i></p> <p>Practical IX: <i>Caulerpa</i></p> <p>II SEMESTER. PRACTICAL-II</p> <p>Practical VI: Downy mildew of sorghum, Grain smut of sorghum, wheat rust, coffee rust</p> <p>V SEMESTER. PRACTICAL -VI</p> <p>Practical No. 7. Photographs and Charts- from Evolution, Molecular biology and Cell Biology 1. DNA replication 2. Lac operon 3. Khorana H.G. 4. Miller's experiment 5. Genetic disorder- Sickle cell anaemia 6. Lamarck 7. Darwin. 8. Weismann</p> <p><u>SCHEME OF PRACTICAL EXAMINATION</u> <u>VI SEMESTER—PRACTICAL VIII</u> Time: 3 Hrs Max. marks: 40 1. A- Prepare synthetic seeds 4 marks (Procedure-2 marks, conducting -2marks) 2. B- Perform Emasculation and bagging experiment 6 marks Demonstration- 2 marks, Procedure & diagram- 2 marks, Significance- 2marks 3. C- Mount the given microbe (<i>Rhizobium/Anabaena</i>) 3 Marks (Mounting- 1.5 marks, Importance of the organism-1.5 marks) 4. Solve the genetic problems D, E and F 5X3= 15 marks (D- Monohybrid cross, E- Dihybrid cross, F- Interaction of factor/two point test crosses) 5. Comment on G, H, I and J. 3x4=12 marks G & H- Biotechnology products, I & J Photographs from Genetic Engineering, (Identification 1 mark, Critical notes – 2 marks)</p>	<p><u>I SEMESTER. PRACTICAL -I</u></p> <p>Practical VI: <i>Spirulina, Scytonema/Oscillatoria</i></p> <p>Practical IX: Diatoms, <i>Caulerpa</i></p> <p><u>II SEMESTER. PRACTICAL-II</u></p> <p>Practical VI: Downy mildew of sorghum, Grain smut of sorghum, wheat rust, coffee rust and Blast of Rice</p> <p><u>V SEMESTER. PRACTICAL -VI</u></p> <p>Practical VI No. 7. Photographs and Charts- from Cell Biology, Molecular biology and Evolution 1. Cell organelles 2. Electron microscope 3. Phase contrast microscope 4. DNA replication . 5. Lac operon 6. H.G. Khorana 7. Genetic disorder- Sickle cell anaemia 8. Miller's experiment 9. Lamarck 10. Darwin. 11. Weismann</p> <p><u>SCHEME OF PRACTICAL EXAMINATION</u> <u>VI SEMESTER—PRACTICAL VIII</u> Time: 3 Hrs Max. marks: 40 1. A- Prepare synthetic seeds/perform inoculation of explant. 4 marks (Procedure-2 marks, conducting - 2marks) 2. B- Perform Emasculation and bagging experiment 4 marks Demonstration- 2 marks, Procedure 1 mark, Significance- 1mark 3. C- Mount the given microbe (<i>Rhizobium/Anabaena</i>) 3 Marks (Mounting- 1.5 marks, Importance of the organism-1.5 marks) 4. Solve the genetic problems D, E and F 4X3= 12 marks (D- Monohybrid cross, E- Dihybrid cross, F- Interaction of factor/two point test crosses) 5. Comment on G, H, I and J. 3x4=12 marks G - Biotechnology product, H- Tissue culture photo, I- tissue culture equipment/photograph, J Photographs from Genetic Engineering. (Identification 1 mark, Critical notes – 2 marks) 6. Perform pollen germination experiment of K 5 Marks (Requirements -1 mark, Preparation-2 marks, Procedure and significance -2 marks)</p>

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No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Changes in the Syllabus of Practical Examination B.Sc in
Biotechnology course from the Academic Year 2013-14.

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on
21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Biotechnology (UG)** at its meeting held on 30.11.2012 has resolved that in the syllabus of practical BT 6.3 instead of "visit to National Bioinformatics Centre" the board has unanimously approved to "**Submission of report on Bioinformatics**"

The duration of two practical examinations viz. BT 5.3 and BT 6.3 will be of 3 hours duration each.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

Dr S. Sampath
REGISTRAR. 3/6/2013

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Biotechnology, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Principals of the Affiliated Colleges running B.Sc. course.
5. The Director, College Development Council, UOM, Mysore
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

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No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Changes in the title of Soft Core paper from "Molecular Biodiversity" to "Molecular Biodiversity and Bioprospecting" from the Academic Year 2013-14.

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Biotechnology (PG)** at its meeting held on 28.11.2012 has resolved to Change the title of Soft Core paper from "Molecular Biodiversity" to "Molecular Biodiversity and Bioprospecting" with minor modifications.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

for S. Sampath
REGISTRAR. 3/6/2013

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Biotechnology, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM., Mysore.
8. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
9. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
10. The Schedule File.



VISHWAVIDYANILAYA KARYA SODHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Changes in the Syllabus **Bio-Chemistry (U.G)** course from the
Ccademic Year 2013-14.

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on
21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Bio-Chemistry (U.G)** at its meeting held on 27-11-2012 has resolved that (a) in the second semester under chapter 9 stereochemistry part may be reshuffled in the following way. Stereoisomerisms types, Optical isomerisms, Cospar optical activity, Asymmetric carbon atoms, Molecular dyssymetry, Chirality, Optical isomerism of visceraldehyde, lactic acid and tartaric acid, Fischer projection formula, DL system, RS system, Recemization and resolution. In addition the following may be added to the same chapter 9.-The Geometrical isomerism, Cis-Trans

(b) In V semester B.Sc under enzymology, the following subtopics are to be included --
Enzyme : Competitive and Non-competitive Inhibitions with examples. LB plot may also be included. E&Z systems with examples.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

Jay S. Srinivas
REGISTRAR. 3/6(Lux)

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Biochemistry, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Principals of the Affiliated Colleges running B.Sc. course.
5. The Director, College Development Council, UOM, Mysore
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
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No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Changes in the syllabus of Bio-Chemistry (P.G) from the academic Year 2013-14.

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Bio-Chemistry (P.G)** at its meeting held on 28-12-2012 has Resolved approve the syllabus in Open Elective course entitled "**Pathobiology of Human Diseases**".

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of the Syllabus Bio-Chemistry (P.G) Course is annexed herewith.

S. Sampath
31/6/2013
REGISTRAR.

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Bio-Chemistry, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
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Syllabus for Open Elective paper
Pathobiology of Human Diseases
Q.P. Code 80454

Concept of Health and Diseases. Communicable and Non-communicable disease, Metabolic disease, deficiency disorders. -- 4 hrs.

Communicable disease:

1. Tuberculosis : – Causative agent, Mode of Transmission, Treatment, Reemergence of TB, BDR-TB.
 2. Malaria: - Pathogenesis, Diagnosis, Treatment.
 3. Bacterial and fungal infections – Some common infections and their causative agents. Antibiotics, drug resistance MRSA.
 4. Viral Infections: - Mode of Transmission – RNA viruses, DNA viruses, retroviruses. Some common viral infections – Influenza, Mumps, Measles, Herpes, Polio and HIV.
- 10 hrs.

Non Communicable Diseases:

1. Diabetes: Etiology, Classification, diagnosis treatment strategies, diabetic complications, Role of diet and lifestyle in the development and control of diabetes: Fructose and its role, exercise, obesity link to diabetes, role of fat. --6 hrs.
2. Cardiovascular diseases: Types, etiology, risk factors. Global burden of CVD, Causative mechanisms, Role of lipoproteins, Role of Cholesterol, Atherosclerosis, management treatment, diet and CVD. --6hrs.
3. Cancer: Etiology, Stages of cancer, diagnosis, treatment strategies, metastasis. Mechanism of tumour initiation, progression. Diet and cancer. --6hrs
4. Inflammation – Mechanism, mediators, consequences, Diabetes, CVD and cancer as inflammatory diseases.
 Asthma – Role of PAF-AH
 Treatment of Inflammation. --6hrs.
5. Metabolic Diseases – Obesity – Problem of obesity, Measures of obesity, BMI, causes and consequences, Treatment strategies. --6hrs.
6. Endemic diseases: KFD, Dengue, Chikengunya. --4hrs.

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Dated: 01-06-2013.

NOTIFICATION

Sub: Implementation of the CBCS scheme of continuous evaluation at the PG Syllabus, scheme of examination, from the Academic Year 2013-14.

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Bio-Chemistry (P.G)** at its meeting held on 28-12-2012 has resolved that in second semester M.Sc. Biochemistry, due to inability of the students to take plant biochemistry and bioenergetics soft core paper, a portion of the syllabus which is essential in metabolism will be shifted back to metabolism namely mitochondrial transport chain into carbohydrate and lipid metabolism, photosynthesis and nitrogen metabolism into protein and nucleic acid metabolism.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013. and 27-03-2013. respectively approved the above proposals and the same is hereby notified.

Dr. S. Sampath
26/6/2013
REGISTRAR.

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Bio-Chemistry, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
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NOTIFICATION

Sub: Modifications to Practical Examination of M.Sc. Tech. from the Academic Year 2013-14.

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Computer Science (PG)** at its meeting held on 20-12-2012 has resolved to modify existing mode of conduction of Practical Examinations and final evaluation of Mini, Minor and Major Project evaluation in M.Sc.Tech.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of Modifications to Practical Examination of M.Sc. Tech. is annexed herewith.

S. Sampath
REGISTRAR. 21/6/2013

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Computer Science, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
8. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
9. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
10. The Schedule File.

AC2.Eng.25-4.R

M.Sc Tech
Annexure-I

Existing	Modified
<p>A – 4: Evaluation of a candidate in a subject:</p> <p>The teacher who offers a subject shall be wholly responsible in assessing a candidate in that subject. The evaluation of the candidate shall be based on continuous assessment. The modalities should normally be defined by the teacher himself / herself. The broader structure for evaluation is as follows. Each subject must be evaluated for the following components.</p> <p>Component 1: 20% (by the end of 6th week of a semester)</p> <p>Component 2: 20% (by the end of 10th week of a semester)</p> <p>Component 3: 20% (by the end of 14th week of a semester)</p> <p>Component 4: 40% (Semester – end examination)</p> <p>Components 1, 2, 3 shall be made up of tests, seminars, discussions, presentations made by the candidate, assignments and such similar performance evaluating activities. Component 4 will be at the end of the semester and is based on one written examination, or a combination of written examination and a viva voce examination or a combination of written examination and practical examination or a practical examination only, as decided by the teacher who offers the subject. The method followed by a teacher to evaluate his students shall be uniform to all the candidates and the testing mode shall be kept informed to the candidates by the teacher atleast 15 days in advance.</p> <p>If P is the percentage of marks scored by the candidate in the subject, which is the sum of all the marks from the four components mentioned above, then the Grade Point (GP) earned by the candidate is as given below. (Note: V is the credit value, Reference A – 2)</p>	<p>A – 4: Evaluation of a candidate in a subject:</p> <p>The teacher who offers a subject shall be wholly responsible in assessing a candidate in that subject. The evaluation of the candidate shall be based on continuous assessment. The modalities should normally be defined by the teacher himself / herself. The broader structure for evaluation is as follows. Each subject must be evaluated for the following components.</p> <p>Component 1: 20% (by the end of 6th week of a semester)</p> <p>Component 2: 20% (by the end of 10th week of a semester)</p> <p>Component 3: 20% (by the end of 14th week of a semester)</p> <p>Component 4: 40% (Semester – end examination)</p> <p>Components 1, 2, 3 shall be made up of tests, seminars, discussions, presentations made by the candidate, assignments and such similar performance evaluating activities. Component 4 will be at the end of the semester and is based on one written examination, or a combination of written examination and a viva voce examination or a combination of written examination and practical examination or a practical examination only, as decided by the teacher who offers the subject. Whenever C₄ is based on practical viva-voce examination, it shall be conducted jointly by two examiners-concerned teacher and an external examiner. However the BoE can also permit two internal examiners in case of not availability of an external examiner. The method followed by a teacher to evaluate his students shall be uniform to all the candidates and the testing mode shall be kept informed to the candidates by the teacher atleast 15 days in advance.</p> <p>If P is the percentage of marks scored by the candidate in the subject, which is the sum of all the marks from the four components mentioned above, then the Grade Point (GP) earned by the candidate is as given below. (Note: V is the credit value, Reference A – 2)</p>
<p>A – 6: Mini, Minor and Major Project works:</p>	

A 6.1: Mini Project

A candidate shall register for a mini project in the beginning of the 4th semester and has to work for the mini project along with 5 other subjects. This is a compulsory part of the course with a credit pattern 3:3 with a credit value of 4. The candidate has to work under a guide and the guide shall wholly be responsible to evaluate the report submitted by the candidate at the end of the 4th semester. Components of evaluation are as follows:

Component 1: Periodic progress and Progress reports(20%)

Component 2: Seminar / discussion (20%)

Component 3: Draft report / result of work (20%)

Component 4: Final viva voce and report evaluation (40%)

A – 6: Mini, Minor and Major Project works:

A 6.1: Mini Project

A candidate shall register for a mini project in the beginning of the 4th semester and has to work for the mini project along with 5 other subjects. This is a compulsory part of the course with a credit pattern 3:3 with a credit value of 4. The candidate has to work under a guide and the guide shall wholly be responsible to evaluate the report submitted by the candidate at the end of the 4th semester. Components of evaluation are as follows:

Component 1: Periodic progress and Progress reports(20%)

Component 2: Seminar / discussion (20%)

Component 3: Draft report / result of work (20%)

Component 4: Final viva voce and report evaluation (40%)

Component-4 is evaluated by a panel of two examiners consisting Guide/internal and an examiner chosen by the BoE

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Dated: 01-06-2013.

No.AC.2(S)/507/12-13

NOTIFICATION

Sub: Restructuring of CBCS Pattern in M.Sc. (Food Technology)

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Food Science & Food Technology (PG)** at its meeting held on 17-12-2012 has recommended semester-wise distribution of course structure to be introduced for M.Sc. (Food Technology) from the academic year 2013-14 onwards.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of CBCS Pattern in M.Sc. (Food Technology) is annexed herewith.

S. S. Srinivas
REGISTRAR. 31/6/2013

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Food Science & Food Tech. CFTRI, Mysore.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Director, CFTRI, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
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AC2.Eng.25-4.R

CSIR-Central Food Technological Research Institute, Mysore
M.Sc. (Food Technology) - Scheme of Study

Choice Based Credit System (CBCS)
and
Continuous Assessment Grading Pattern (CAGP)

Semester-wise Distribution of the Course Structure
from the batch of 2013-15 onwards

SEMESTER – I

Course code	Type of the paper	Title of the paper	Credit pattern [L:T:P]	Credit value
FT 001	Hard Core	Chemistry of Foods - CHF	3:0:3	06
FT 002	Hard Core	Basic & Food Microbiology - BFM	2:1:3	06
FT 003	Hard Core	Principles of General Engineering - PGE	3:0:1	04
FT 004a*	Soft Core	Applied Mathematics & Statistics - AMS	4:0:0	04
FT 004b*	Soft Core	Innovations in Engineering - ING	4:0:0	04
*To choose only one Soft Core - FT 004a or FT 004b				
				Total credits of I Semester: 20

HC = 3; SC = 1; OE = 0

SEMESTER – II

Course code	Type of the paper	Title of the paper	Credit pattern [L:T:P]	Credit value
FT 005	Hard Core	Principles of Food Processing - PFP	3:0:3	06
FT 006	Hard Core	Biochemistry - BCH	2:1:1	04
FT 007	Hard Core	Food Engineering 1 – FEG1	3:0:1	04
FT 008a*	Soft Core	Basics of Nutrition - BNT	2:0:2	04
FT 008b*	Soft Core	Food Biotechnology - FBT	2:0:2	04
FT 009	Open Elective	Infestation Control & Pesticides - ICP	1:0:1	02
*To choose only one Soft Core - FT 008a or FT 008b				
				Total credits of II Semester: 20

HC = 3; SC = 1; OE = 1

M.Sc. (Food Technology) - Scheme of Study

SEMESTER – III

Course code	Type of the paper	Title of the paper	Credit pattern [L:T:P]	Credit value
FT 010	Hard Core	Industrial Microbiology & Biochemical Engineering - IMB	3:0:3	06
FT 011	Hard Core	Food Engineering 2 – FEG2	2:0:1	03
FT 012	Hard Core	Minor Project [Dissertation] - MNP	3:1:0	04
FT 013a*	Soft Core	Meat, Fish & Poultry Technology - MFP	2:0:2	04
FT 013b*	Soft Core	Bioinformatics & Biostatistics - BFS	2:0:2	04
FT 014	Open Elective	Packaging Technology - PKT	2:0:1	03
*To choose only one Soft Core - FT 013a or FT 013b				
Total credits of III Semester: 20				

HC = 3; SC = 1; OE = 1

SEMESTER – IV

Course code	Type of the paper	Title of the paper	Credit pattern [L:T:P]	Credit value
FT 015	Hard Core	Technology of Foods – TFDa/TFDb/TFDc a) Grains, Legumes & oilseeds b) Fruits & Vegetables c) Plantation Products & Flavours	3:0:3	06
FT 016	Hard Core	Major Project [Investigation] - MJP	2:1:3	06
FT 017a*	Soft Core	Advances in Food Science - AFS	2:1:1	04
FT 017b*	Soft Core	Molecular Biology and Genetic Manipulations - MBG	2:1:1	04
FT 018	Open Elective	Operations Research and Food Plant & Management - ORM	3:1:0	04
*To choose only one Soft Core - FT 017a or FT 017b				
Total credits of IV Semester: 20				

HC = 2; SC = 1; OE = 1

Total Course Credits of all the **FOUR** Semesters: **80**

Requisite credits for degree in M.Sc. (Food Tech.): **76**


(M.C. VARARADAJ)

Chairman, BoS in Food Science & Food Technology

Address : UNIREG
Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

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Estd. 1916

VISHWAVIDYANILAYA KARYA SODHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Minor changes in the existing course of CBCS in Genetics.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.

2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Genetics (PG)** at its meeting held on 05-12-2012 has resolved to modify the syllabus by removing the animal experimentation and demonstrations through dissection. Instead it was resolved to introduce computer aided animations and video clipping wherever necessary from the academic year 2013-14.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

J. S. Sampath
REGISTRAR. 31/6/2013
J. S.

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS in Genetics, DOS in Zoology, MGM.
3. The Chairman, DOS in Zoology, MGM.
4. The Coordinator, M.Sc. Genetics, DOS in Zoology, MGM.
5. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
6. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
7. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

AC2.Eng.25-4.R

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Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

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No.AC.2(S)/507/12-13

VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

Dated: 01-06-2013.

NOTIFICATION

Sub: Inclusion of a new paper to CBCS pattern in Human Development.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.

2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Human Development (PG)** at its meeting held on 10-12-2012 has recommended to include a new paper on "**Life Skill Education**" as soft core from the academic year 2013-14.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

J. S. Sampans
REGISTRAR. *26/6/13*

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS in Human Development, DOS in Food Science & Nutrition, MGM.
3. The Chairman, DOS in Food Science & Nutrition, MGM
4. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
5. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
6. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
8. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
9. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
10. The Schedule File.

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Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

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VISHWAVIDYANILAYA KARYA SODHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Changes in the Duration of Practical Classes and Practical Examination of B.Sc. in Microbiology from the academic year 2013-14.

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Microbiology (UG)** at its meeting held on 07-12-2012 has recommended to re-schedule the duration of Practical Classes and Practical Examination of B.Sc. in Microbiology as follows:

1. The duration of practical classes and practical examination of B.Sc., Microbiology for

I to VI semester shall be rescheduled.

I to IV Semester – Practical examination duration

Existing - 2 hrs, **Amended - 3 hrs**

V to VI Semester – Practical classes duration

Existing - 2 hrs /paper- **Amended - 3 hrs / paper**

2. B.Sc. Microbiology VI Semester – Paper VII

Food and Industrial Microbiology

Theory – No change

Practicals – Minor changes recommended

Existing

Expt. No. 8 B

Preparation of banana juice by pectinase

Amended

Expt. No. 8 B

Cultivation of oyster mushroom by bag method

Scheme of examination

Existing

Expt. Q. No. 4

Critical notes

Banana juice

Amended

Expt. Q No. 4

Critical notes

Cultivation of oyster mushroom

..... 2

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Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
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CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

-2-

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013. and 27-03-2013. respectively approved the above proposals and the same is hereby notified.

For S. Sampath
3/6/2013
REGISTRAR.

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Microbiology, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Principals of the Affiliated Colleges running B.Sc. course.
5. The Director, College Development Council, UOM, Mysore
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

AC2.Eng.25-4.R

Address : UNBEO
Telephone No : 2419677/2419367
Fax : 0821-2419369/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

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Estd. 1916

VISHWAV,DIYANILAYA KARYA SODHA
CHAWFORD HALL, POST BOX NO. 406
MYSORE-576 006

Dated: 01-06-2013.

No.AC.2(S)/507/12-13

NOTIFICATION

Sub: Introduction of Elective Paper "Basic Astrophysics" in Physics.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on
21-02-2013.

2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Physics (PG)** at its meeting held on 27-11-2012 has recommended to introduce One more elective paper entitled "**Basic Astrophysics**" from the academic year 2013-14.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of the syllabus of "Basic Astrophysics" Elective Paper is annexed herewith.

Dr S Sampath
3/6/2013
REGISTRAR.
[Signature]

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Physics, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM., Mysore.
8. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
9. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
10. The Schedule File.

AC2.Eng 25-4.R

Elective paper: Basic Astrophysics

A. Observational, Techniques And Instruments

equatorial and alt-azimuth coordinate systems ,right ascension and declination coordinates, solar and sidereal time scales, the ecliptic coordinates, stellar constellations, universal time and local sidereal time, effects of aberration and atmospheric refraction on stellar coordinates, precession and nutation effects, components and characteristics of telescopes, refracting and reflecting telescope, telescope mounting, photographic plates, photometers, UVB photometry system, CCD and its applications.

B. Stellar physics

Properties of stars-mass, radius, luminosity, surface temperature, proper motion and radial motion of stars, stellar structure equations , boundary coordinates, estimation of central pressure and temperature, linear stellar model, the virial theorem and its applications, stellar distances, the parsec, stellar luminosities, apparent and absolute magnitudes, stellar spectra, spectral classification of stars, HR diagram, interstellar medium, star formation stages, energy generation in stars, end stages of stars white dwarfs, neutron stars and black holes.

C. Galaxies and Universe.

The milky way galaxy-its structure and composition, differential rotation, globular cluster and their distribution, types of galaxies, classification of galaxies, rotational; curves of galaxies, dark matter, active galaxies, quasars, Cepheid variables, distances to galaxies, red shifts, and radial velocities, the cosmological principle, Hubble's law, cosmic background radiation, nucleo- synthesis in early universe, cosmological models, structure formation in early universe, CONBE, WMAP and plank mission

References

1. K.D.Abyankar, Stars and Galaxies, university press (2002).
2. B.Basu, An Introduction to Astrophysics, PHI, 2nd Edition (2010).
3. F.H.shu, The physics universe, An introduction to astronomy, university science books, (1992)
4. M.Zeilil, Astronomy-the evolving universe, john vally, 9th Edition (2002)
5. B W Carrol and D A Ostile, Introduction to modern astrophysics, Addison Wesley, 2nd Edition (2007).
6. C R Kitchen, Astrophysical techniques, Taylor and Francis Group, 4th Edition (2003)

Address : UNIREG
Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

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VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Minor Modifications in the syllabus of Child Psychology (V Semester)

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Psychology (UG)** at its meeting held on 04-12-2012 has recommended the following modifications in the syllabus of paper -2 *Child Psychology* (V sem) to be implemented from the academic year 2013-14.

Existing Syllabus

SEMESTER V

PAPER -2. CHILD PSYCHOLOGY

1. Introduction: Child psychology-Meaning and Scope. Nature of development. Methods-Longitudinal, Cross sectional, Biographical and History
2. Stages of Child development: Pre natal, Infancy, Babyhood, Childhood (early and late) and Puberty-Characteristics, Significance and sub stages. Viewpoints of Freud (Psycho-social stages), Erickson (Psychosocial development)..
3. Areas of child development-Biological Process, Physical, sensory, perceptual, cognitive, social, emotional, moral, and self development. Role of heredity and environment on child development
4. Hazards-Pre natal, perinatal (Birth), infancy, babyhood, Childhood (early and late) and puberty. Physical and psychological hazards
5. Problems of children and child guidance. Attention Deficit Hyperactivity disorders, Enuresis, autistic disorders. Stuttering, learning disorders, mental retardation and tic disorders.

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VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
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-2-

Modified Syllabus

SEMESTER V

PAPER -2. CHILD PSYCHOLOGY

1. Introduction: Child psychology-Meaning and Scope. Significant facts about development. Methods-Longitudinal, Cross sectional, Biographical ; merits and demerits. Role of heredity and environment on child development
2. Stages of Child development-I: Pre natal, Infancy, and Babyhood. Characteristics, Significance and sub stages. Hazards during development.
3. Stages of Child development-II: Childhood (early and late) and Puberty- Characteristics, Significance and sub stages. Viewpoints of Freud (Psycho-social stages), Erickson (Psychosocial development). Hazards during development.
4. Areas of child development-I : Biological Processes, Physical, sensory, perceptual, and cognitive development
5. Areas of child development-II: Social, emotional, moral, and self development

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

for J. Sampath
REGISTRAR. 3/6/13

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Psychology, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Principals of the Affiliated Colleges running B.Sc. course.
5. The Director, College Development Council, UOM, Mysore
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

Address : UNIREG
Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

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VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Modifications of CBCS course structure and Syllabus in Psychology.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on
21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Psychology (PG)** at its meeting held on 03-12-2012 has recommended a few modifications with respect to the credit pattern and syllabus of some courses from the academic year 2013-14.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of Modified CBCS course structure and Syllabus is annexed herewith.

S. Sampath
REGISTRAR. 31/6/2013
[Signature]

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Psychology, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
7. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
8. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
9. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
10. The Schedule File.

AC2.Eng.25-4.R

RESOLUTIONS

(B.O.S. IN PSYCHOLOGY (PG) HELD ON 3rd DEC. 2012 AT 11.00 A.M IN THE DEPARTMENT OF STUDIES IN PSYCHOLOGY, MAASAGANGOTRI, MYSORE-6.)

I. The recommendations on the Course structure/syllabus modification/credit pattern:

A. M.Sc.

1. The following modifications in the credit pattern were recommended:

Sl. No. Semester & course title	Pattern Existing	Pattern
Recommended		
i. I Sem: Childhood Psychopathology	2-1-1 (L-T-P)	3-1-0 (L-T-P)
ii. III Sem: Psychotherapy	3-0-0(L-T-P)	2-1-0(L-T-P)
iii. III Sem: Research Preparation*	2-1-0(L-T-P)	0-3-0(L-T-P)

**The Board also recommended that for Research Preparation course only external examiner will evaluate the review report submitted by the students for C3 examination as done for field reports/dissertations. This may be applied from immediate effect (including the current batch of III semester).*

2. The board recommended the following modifications in the syllabus of paper *Discovering Personality* (M.sc. III sem):

Existing syllabus:

Credit Pattern: 3 (L) +1 (T) + 0 (P)

Unit-1: Defining Personality

What, How and Why Growth and Development, Psychopathology and Behavior Change.

Unit-2: The Dynamic Personality

The Trait-Type and Factor Analytic Approach

Unit-3: Perceiving People and Events

Group Behavior, Interpersonal Attraction, Intimate Relationships, Pro-Social Behavior (Helping others).

Books:

Personality: Lawrence A Pervin, 4th Ed. (1984) Pub. John Wiley and Sons, Inc.

Theories of Personality: Calvin S Hall, Gardner Lindzey, John B. Campbell 4th Ed. (1998) Pub. John Wiley and Sons, Inc.

Social Psychology: Stephen L Franzoi 2nd Ed. (2002) Mc Graw Hill

Psychology- In Context: Stephen M Kosslyn 3rd Ed. Robin and Rosenberg (2008), Pearson Education.

Modified syllabus

**DISCOVERING PERSONALITY
(Open Elective)**

Credit Pattern: 3 (L) +1 (T) + 0 (P)

Unit 1: Introduction: Meaning, Assessment, Determinants, and growth and development of Personality.

Unit 2: Theories of personality: Freud, Adler, Jung.

Unit 3: Theories of Personality: Cattell, Maslow and Big five factor.

Unit 4: Perceiving People and Events:

- a) *Pro-social Behaviour (helping others)*; Responding to an emergency, the helpers and those who receive help.
- b) *Group behavior*: What they are and how they function; How groups affect individual performance.
- c) *Interpersonal attraction*; Beginning of attraction, Proximity and emotions. Intimate relationships, factors influencing on intimate relationship.

Reference:

1. Understanding Psychology: Robert S. Feldman, 6th edition, TMH publishing company limited.
2. Theories of Personality: Calvin S Hall, Gardner Lindzey, John B. Campbell.
3. Social Psychology: Robert A. Baron, Donn Byrne, Tenth edition, Prentice-Hall of India.

B. PG Diploma in Counseling and Health Psychology.

The BOS, after examining the existing structure and syllabus of PG Diploma in Counseling and Health Psychology course (started from year 2011-12), felt that the course in the present form has many limitations in terms of the training skills and the contents. The Board recommended that the entire course be restructured by the **Department Council** keeping in view the multidisciplinary nature of the course before admitting new batch of students.

C. M.Phil. in Learning Disability

No recommendations.

XXXXXX

Address : UNIREG
Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in



VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Change of Teaching hours in **B.Sc. Sericulture Programme.**

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Sericulture (UG)** at its meeting held on 26-11-2012 has recommended the duration of theory hours for I to VI Semesters was amended from 4hrs/week to **3hrs/week** as per Regulations. The teaching hours of practical was amended to **3 hours for V and VI semester in B.Sc. Sericulture Programme from the academic year 2013-14.**

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

for S. Sampath
REGISTRAR. *3/6/2013*

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Sericulture, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Principals of the Affiliated Colleges running B.Sc. course.
5. The Director, College Development Council, UOM, Mysore
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

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Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

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Estd. 1916

VISHWAVIDYANILAYA KARYA SODHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005
Dated: 01-06-2013.

No.AC.2(S)/507/12-13

NOTIFICATION

Sub: Credit pattern in the Open Elective Paper of M.Sc. Course.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.

2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Statistics (Combined)** at its meeting held on 28-11-2012 has recommended the pattern of credits in the **Open Elective paper:** Introduction to Statistics and R should have been LTP-220 instead of LTP-202 as **Practicals was not part of Open Elective papers from the academic year 2013-14.**

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposal and the same is hereby notified.

S. Sampath
3/6/2013
REGISTRAR.

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Statistics, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Director, College Development Council, UOM, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
9. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
10. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
11. The Schedule File.

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VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Inclusion of one more Open Elective paper in **M.Sc.Applied Zoology**.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on
21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Applied Zoology (PG)** at its meeting held on 21-12-2012 has resolved to **include one more Open Elective – Basics of Zoology (L-3 + P-0 + T-1)** in III Semester from the academic year 2013-14 and onwards.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of the syllabus of Open Elective paper in M.Sc. Applied Zoology is annexed herewith.

For S. Sampath
REGISTRAR. 3/6/2013

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS in Applied Zoology, DOS in Zoology, MGM.
3. The Chairman, DOS in Zoology, MGM.
4. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM., Mysore.
9. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
10. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
11. The Schedule File.

MSc. APPLIED ZOOLOGY
MSc IIIrd SEMESTER
AZ3.6 (Open elective 2.2)
BASIC OF ZOOLOGY (L3+P0+T1) 48Hrs.

UNIT I

12 Hrs

- a. Structure of an animal cell
- b. Structure and functions of Plasma membrane, Mitochondria, Endoplasmic reticulum.
- c. Structure and functions of Golgi complex, Ribosomes, Lysosome, Nucleus.
- d. Morphology and types of chromosomes.

UNIT II

12 Hrs

- a. Principles of animal classification. Binomial nomenclature.
- b. General characters and classification of Protozoa up to classes with suitable examples.
- c. General characters and classification of Porifera up to classes with suitable examples.
- d. General characters and classification of Coelenterata up to classes with suitable examples.

UNIT III

12 Hrs

- a. General characters and classification of Platyhelminthes up to classes with suitable examples
- b. General characters and classification of Aschelminthes up to classes with suitable examples
- c. General characters and classification of Annelida up to classes with suitable examples.
- d. General characters and classification of Arthropoda up to classes with suitable examples.

UNIT IV

12 Hrs

- a. General characters and classification of Mollusca up to classes with suitable examples
- b. General characters and classification of Echinodermata up to classes with suitable examples
- c. General characters and classification of Chordata up to Subphyla with suitable examples
- d. General characters and classification of Vertebrata up to classes with suitable examples.

Address : UNIREG
Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE



Estd. 1916

VISHWAVIDYANILAYA KARYA SODHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Modification of **Practicals Syllabus in Zoology** from the academic year 2013-14.

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Zoology (UG)** at its meeting held on 28-11-2012 has resolved to modify the practical II, III, V and VI by removing the dissections and instead observations of slides/animations were introduced.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of the modified syllabus is annexed herewith.

for S. Sampath
REGISTRAR. 3/6/2013

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Zoology, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Principals of the Affiliated Colleges running B.Sc. course.
5. The Director, College Development Council, UOM, Mysore
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

AC2.Eng.25-4.R

BOS (UG) MEETING HELD ON 28-11-2012

MINOR CHANGES IN THE EXISTING SEMESTER SYLLABUS

PRACTICAL – II

Existing	Revised
<p>Scheme of Practical Examination Time : 3 Hours Marks : 20</p>	<p>Scheme of Practical Examination Time : 3 Hours Marks : 20</p>
<p>1. Identify the given insect A upto orders preparing the key 03</p> <p>2. Indentify the given insect B and comment on its role as a pest / vector 03</p> <p>3. Identify with reasons, the specimen C and slide D 3x2=6</p> <p>4. Dissect the display the digestive system/ nervous system of cockroach 03</p> <p>5. Mount the mouth parts of cockroach/female mosquito / Housefly / Honey bee on a clean slide 03</p>	<p>1. Identify the given insect A up to orders by preparing the key / role of the given insect as a pest / vector 03</p> <p>2. Indentify with reasons, the specimens B,C & D 3x3=09</p> <p>3. Identification of spot E (larval forms) 04</p> <p>4. Identification of spot F (sections / shell) 04</p>

SCHEME OF VALUATION

1. Identification-1, preparation of key - 02	1. Identification-1, preparation of key / role as a per vector - 02
2. Identification-1, role as a pest / vector - 02	2. Identification & classification (up to class)- 1 labeled diagram-1, reasons-1
3. Identification and classification (upto class)-1, labeled diagram-1, reasons-1	3. Identification -1, labeled diagram-1, reasons-2
4. Dissection - 5	4. Identification -1, labeled diagram-1, reasons-2
5. Mounting - 3	

PRACTICAL SYLLABUS

7,8 – mounting of mouth parts of insects : cockroach / female mosquito Cockroach : dissection of digestive system and nervous system.	7,8 – Permanent slides – mouth parts of insects : cockroach, mosquito, honey bee and housefly
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PRACTICAL – III

Existing	Revised
<p align="center">Scheme of Practical Examination Time : 3 Hours Marks : 20</p> <p>1. Mount and identify the given scale of the edible fish (cycloid / ctenoid) 03</p> <p>3. Permanent slide preparation of placoid, cycloid & ctenoid scales</p>	<p align="center">Scheme of Practical Examination Time : 3 Hours Marks : 20</p> <p>Identify the given fish scale (placoid / cycloid / ctenoid) 03</p> <p>(Permanent slides of placoid, cycloid and ctenoid scales)</p> <p>Identification-1, labeled diagram-1, reasons-1.</p>

SCHEME OF VALUATION

1. Mounting-2, identification-1 03	Identification-1, labeled diagram-1, reasons-1.
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PRACTICAL – V

Existing	Revised
<p>Practical V Syllabus : 12 & 13 : Isolation of DNA from animal / plant tissues (mulberry leaf/coconut endosperm)</p> <p>14. Estimation of RNA by orcinol method</p>	<p>12 & 13 : Isolation of DNA from animals / plant tissue – demonstration</p> <p>14. Estimation of RNA by orcinol method - demonstration</p>

SCHEME OF PRACTICAL EXAMINATION

<p>Time : 3 Hours Marks : 40</p> <p>1. Make a temporary squash preparation of the given material and demonstrate a stage of cell division. Write the procedure and comment on the stage, with a diagram (onion root tip / grasshopper testis) 08</p> <p>2. Isolate the DNA/estimate the RNA from the given sample and write the procedure -10</p> <p>3. Prepare the karyotype of the given metaphase plate of paddy Rat / Grasshopper / Drosophila 04</p> <p>4. Measure the cell and nuclear diameter of the given material in the slide and report 06</p> <p>5. Identify with reasons the slides A to D (from mitosis, meiosis and salivary gland chromosome) 4x3=12</p>	<p>Time : 3 Hours Marks : 40</p> <p>1. Make a temporary squash preparation of the given material and demonstrate a stage of cell division. Write the procedure and comment on the stage, with a diagram (onion root tip) / Grasshopper testis slides. -10</p> <p>2. Prepare the karyotype of the given metaphase plate of Paddy Rat / Grasshopper / Drosophila-06</p> <p>3. Measure the cell / nuclear diameter of the given material in the slide and report -08</p> <p>4. Identify with reasons the slides A to D (from mitosis, meiosis and salivary gland chromosome) 4x3=16</p>
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SCHEME OF VALUATION

1. Procedure-2, preparation-4, report – 2	1. Procedure-3, preparation-4, report with diagram -3
2. Procedure-4, preparation-6	2. Karyotype arrangement-3, definition-1, significance-2
3. Karyotype arrangement-3, neatness-1	3. Procedure-4, diagram-2, report-2
4. Procedure-4, report-2	4. Identification-1, diagram-1, reasons-1
5. Identification-1, diagram-1, reasons-1	

PRACTICAL – VI

Existing	Revised
Practical VI syllabus 5. Study of development in Hens egg window technique	Study of development in Hen's egg – window technique – demonstration

SCHEME OF EXAMINATION

1. Demonstrate the development of chick by window technique and write the procedure 06	Comment on the development of chick by window technique and write the procedure 06
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SCHEME OF VALUATION

Procedure – 2, Preparation – 4	Procedure-3, labeled diagram-1, comment-2
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UNIVERSITY OF MYSORE



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VISHWAVIDYANILAYA KARYA SOUDHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Modification in the Existing **CBCS Syllabus in Zoology.**

Ref: 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.

2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

Considering the directives from the UGC vide letter No. DO-F1-1/2009 (CPP-II) Dt.09-11-2012, the Board of Studies in **Zoology (PG)** at its meeting held on 03-12-2012 has resolved to modify the syllabus by removing the animal experimentation and demonstrations through dissection. Instead it was resolved to introduce computer aided animations and video clipping wherever necessary from the academic year 2013-14.

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of modified syllabus is annexed herewith.

Jar *S. Sampath*
REGISTRAR. *3/6/2013*

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS/DOS in Zoology, MGM.
3. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
4. The Director, College Development Council, UOM, Mysore.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
7. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
9. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
10. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
1. The Schedule File.

BOS (PG) MEETING HELD ON 03-12-2012
 MODIFICATION PROPOSED IN THE EXISTING ZOOLOGY CBCS SYLLABUS
I SEMESTER:

**HARD CORE : ANIMAL PHYSIOLOGY
 PRACTICAL**

Existing	Revised
4x16 = 64	4x16 = 64 Hrs
Hrs	
1. Estimation of blood glucose content.	* Estimation of blood glucose content.
2. Estimation of glycogen in normal and starved rats. - 2	* Estimation of glycogen in liver (collected from slaughter house) - 2
3. Determination of Blood cholesterol content.	* Determination of Blood cholesterol content.
4. Determination of Iodine number of fats to evaluate the biological value.	* Determination of Iodine number of fats to evaluate the biological value.
5. Total count of RBC and WBC's - 2	* Total count of RBC and WBC's - 2
6. Differential count of WBC.	* Differential count of WBC.
7. Determination of serum phosphatases activity. X2	* Determination of serum phosphatases activity. - 2
8. Estimation of blood urea content. - 2	* Estimation of blood urea content. - 2
9. Determination of acetylcholine esterase activity in the brain of rat. - 2	* Determination of acetylcholine esterase activity in the brain of rat. - 2
10. Response of RBC to different saline concentrations.	* Response of RBC to different saline concentrations.
	* Estimation of serum LDH activity
	* All estimations with Clinical Samples

**I SEM: HARD CORE : GENETICS AND CYTOGENETICS
PRACTICAL –**

Existing	Revised
4X8 =32 Hrs.	4X8 =32 Hrs.
1) Study of stages of meiosis and meiotic chromosomes of grass hopper by Heidenhain's iron hematoxylin stain and calculation of chiasma frequency (2x4) 2) Study of morphology of <i>Drosophila melanogaster</i> 3) Study of mutants of <i>Drosophila melanogaster</i> 4) Preparation of polytene chromosomes of <i>Drosophila melanogaster</i> (2x4) 5) Preparation of genital plate of <i>D.melanogaster</i> 6) Study of Barr body using buccal smear	1) Study of stages of meiosis and meiotic chromosomes of grass hopper by observation of permanent slides and calculation of chiasma frequency (2x4) 2) Study of morphology of <i>Drosophila melanogaster</i> 3) Study of mutants of <i>Drosophila melanogaster</i> 4) Preparation of polytene chromosomes of <i>Drosophila melanogaster</i> (2x4) 5) Preparation of genital plate of <i>D.melanogaster</i> 6) Study of Barr body using buccal smear of volunteers

**II SEMESTER
HARD CORE : CHORDATA
PRACTICAL**

Existing	Revised
II. Dissection of laboratory bred rats 4x5=20 a) Circulatory systems-arterial and venous 4x2=8 b) Nervous system 4x2=8 c) Demonstration of Reproductive system, Digestive system, Sense organs and Urinary system 4x1=4	II. Study of nervous system, circulatory system, reproductive system, digestive system sense organs and urinary system in Rat by employing computer aided animation / charts. 4x5=20

**II SEMESTER
HARD CORE : REPRODUCTIVE BIOLOGY
PRACTICAL –**

Existing	Revised
4x16=64 Hrs	
1. Study of ; estrous cycle in rat using vaginal smear	1. Study of ; estrous cycle in rat using vaginal smear, by observation of slides. 4x2=8
2. Staining of vaginal smear 4x2=4	2. Staining of vaginal smear in laboratory rat 4x2=8
3. Induction of pseudopregnancy in rat 4x2=4	3. Induction of pseudopregnancy in albino rat 4x2=8
4. Induction of decuduoma in rat 4x2=4	4. Demonstration of surgical technique 4x4=8 by video clipping
5. Surgical techniques in rat	5. Counting of spermatozoa and study of sperm abnormalities in semen samples collected from volunteers / clinical samples 4x2=8
a. Orchidectomy 4x2=8	
b. Ovariectomy 4x2=8	
6. Study of Counting of spermatozoa and study of sperm abnormalities 4x2=8	6. Study of different contraceptive devices 4x2=8
7. Study of different contraceptive devices 4x2=8	7. Observation of permanent Histology slides 4x4=16
* Laboratory bred rats are used for the practicals.	a) Comparative morphological of ovary
	b) Comparative morphology of testis
	c) Comparative study of male and female accessory organs.

**III SEMESTER
HARD CORE : APPLIED ZOOLOGY
PRACTICAL –**

Existing	Revised
1. Study of Vectors of diseases: a) <i>Anopheles</i> b) <i>Culex</i> c) <i>Aedes</i> species (Larva and Adult) 2x4=8	1. Study of Vectors of diseases: a) <i>Anopheles</i> b) <i>Culex</i> c) <i>Aedes</i> species (Larva and Adult) 2x4=8
2. Study of mouth parts of <i>Anopheles</i> , <i>Culex</i> , <i>Aedes</i> . 2x4=8	2. Study of mouth parts of <i>Anopheles</i> , <i>Culex</i> , <i>Aedes</i> -Slides 2x4=8
3. Study of Adult Mosquito bioassay of insecticide susceptibility- Demonstration 1x4=4	3. Study of Adult Mosquito bioassay of insecticide susceptibility- Demonstration 1x4=4
4. Study of larval bioassay of insecticide susceptibility WHO method 1x4=4	4. Study of larval bioassay of insecticide susceptibility WHO method 1x4=4
5. Slides and specimens parasites and vectors. 1x4=4	5. Slides and specimens parasites and vectors. 1x4=4
6. Study of mouth parts, pollen basket and sting apparatus of honey bee. 1x4=4	6. Study of mouth parts, pollen basket and sting apparatus of honey bee. 1x4=4
7. Agricultural pests and useful insects 2x4=8	7. Agricultural pests and useful insects- slides and preserved specimens 2x4=8
8. Commercially important inland and marine fishes. 1x4=4	8. Commercially important inland and marine fishes bottle specimens 1x4=4
9. Fixing and presentation of insect by plastination technique. 1x4=4	9. Demonstration of plastination technique with plant materials. 1x4=4
Total 48 Hrs	Total 48 Hrs

Address : UNIREG
Telephone No. : 2419677/2419361
Fax : 0821-2419363/2419301

e-mail : registrar@uni-mysore.ac.in
www.uni-mysore.ac.in

UNIVERSITY OF MYSORE



Estd. 1916

VISHWAVIDYANILAYA KARYA SODHA
CRAWFORD HALL, POST BOX NO. 406
MYSORE-570 005

No.AC.2(S)/507/12-13

Dated: 01-06-2013.

NOTIFICATION

Sub: Modification of Syllabus in **Ph.D Programme in Molecular Biology.**

- Ref:** 1. Proceedings of Faculty of Science & Technology Meeting held on 21-02-2013.
2. Proceedings of the Meeting of Academic Council held on 27-03-2013.

The Board of Studies in **Molecular Biology Ph.D Programme** at its meeting held on 19-02-2013 has resolved to modify the syllabus in advanced Research Methodology. Further, the Board recommended the reference books for the batch of students admitted during the academic year 2013-14 for the **Ph.D Programme in Molecular Biology.**

The Faculty of Science and Technology and the Academic Council at their meetings held on 21-02-2013 and 27-03-2013 respectively approved the above proposals and the same is hereby notified.

The copy of modified syllabus and reference book of Ph.D Programme in Molecular Biology is annexed herewith.

Jr S. Sampath
REGISTRAR. 27/6/2013

To

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Chairperson, BOS in Molecular Biology, DOS in Bio-Chemistry, MGM.
3. The Chairman, DOS in Bio-Chemistry, MGM.
4. The Dean, Faculty of Science & Technology, DOS in Zoology, MGM.
5. Sri Narasimha Murthy, Statistician, E.B. UOM, Mysore.
6. The Director, College Development Council, UOM, Mysore.
7. The Deputy/Assistant Registrar (Evaluation), University of Mysore, Mysore.
8. The Supdt. AC.1 & AC.2, A.B., Academic Section, UOM., Mysore.
9. The P.A. to the Vice-Chancellor/Registrar/Registrar(Evaluation), UOM., Mysore.
10. The Case Worker, AC.7, Academic Section, University of Mysore, Mysore.
11. The Section Guard File(Supdt.AC.2), A.B., A.C., UOM.
12. The Schedule File.

AC2.Eng.25-4.R

ANNEXURE I - A

Molecular Biology Ph.D. Course Work

Advanced Research Methodology

48hrs

Introduction: Characteristics of Research in Biological Sciences - Types, Process of Research - Research plan and its components - Methods of Research (Survey, observation, case study, experimental, historical and comparative methods) - Difficulties in biological research. Identification and formation of research problem (Hypothesis). Elements in research methodology: Research design (completely randomized design - CRD, Research by Design - RBD, Limit States Design - LSD). 4hrs

Research Proposal and experimental design: Key elements- Objectives, introduction, design or rationale of work, guidelines for design of experiments, material and methods, designing biological experiments, compilation and documentation of data, characteristics of a good experimental design, basic principles of experimental design. 5hrs

Good laboratory practices, ethical (including animal ethics), legal, social, scientific and intellectual property right issues in biological science. 2hrs

Major research institutes: Related to life sciences in India. Brief information about government research agencies such as DBT, DST, ICMR, CSIR, UGC, DRDO, DAE and ICAR etc. 1hr

Statistical applications: Probability, Binomial, Poisson and Normal distributions (areas method only) including problems. Definitions and applications of Chi-square test, 't' and 'f' test. Analysis of variance with linear models. Analysis of variance for one-way and two way classified data, multivariate analysis. 8hrs

Research Report: Recording research data: field note book, hand written laboratory note book; Writing and presentation: format of research paper and style of writing the report, Authorship issues: multiple authors and corresponding authors; Procedure of reference citation; Significance of writing research papers and review articles; Major scientific publishers; Impact factor and citation index; Effective presentation of research findings. Writing research abstract, need and characteristics of abstract. Reviewing the research article. 6 hrs

Plagiarism: Definition, consequences, forms of plagiarism and related issues. 1hr

Biosafety measures: In biological laboratories, biohazards and infectious biological agents, Radioisotope handling and disposal. 3 hrs

Regulatory guidelines: For biological research involving living modified organisms and their products – Institutional Bio-safety Committee (IBSC), Review Committee on Genetic Manipulation (RCGM), Genetic Engineering Appraisal Committee (GEAC), Monitoring cum Evaluation Committee (MEC), recombinant DNA advisory committee (RDAC), Recombinant Drug Advisory Committee (RDAC). State Biotechnology Coordination Committee (SBCC), District Level Committee (DLC). 4hrs

Computer applications in biological science : Scientific database: Science Direct and Pubmed. Introduction to graphic software, manuscript preparation, project report preparation and scientific evaluation of published article. Ethical considerations when altering digital images. 4hrs

Bioinformatics: analysis of molecular biology data using novel bioinformatics tools, Computational methods for Life Sciences.

Bioinformatics : Gene therapy , pathway, regulatory networks, drug discovery , management of chemical libraries , Microarrays , genes in metabolic pathways , microarrays in drug toxicity testing and metabolic pathways. Mining proteomics, new approaches in proteomics. 6hrs

Exercises: Project proposal preparation and defending, review of paper, write and publish review article. 4 hrs

ANNEXURE I – B

REFERNCES

Research methodology Introduction:

- Yogesh, K.S. 2006. Fundamental of Research Methodology and Statistics, New Age International Publishers, New Delhi. 314 pp.

Kotahri, C.B. 2004. Research Methodology: Methods and Techniques, New Age International Publishers, New Delhi, 401 pp.

Biosafety Regulatory guidelines:

- <http://dbtbiosafety.nic.in/> - committees
- Guidelines and handbook of IBSCs. Prepared by department of biotechnology, in association with biotech consortium India, Ltd. New Delhi. 2nd revised edition may 2011.
- WHO – Biosafety Guidelines.

Biostatistics:

- John h. McDonald, 2009, Handbook of biological statistics, sparky house publishing, 313 pp.
- Hogg, R.V., Craig, A., Mckean, J.W. 2004. Introduction to Mathematical Statistics, Prentice-Hall, U.K.

Bioinformatics:

- Primrose, S.B. and Twyman, R.M. 2003. Principles of Genome Analysis and Genomics: 3rd edition, Blackwell Publishing Company, Oxford, UK.
- Liebler, D.C. 2002. Introduction to Proteomics – Tools for the New Biology, 1st Edition, Humana Press Inc., New Jersey, USA.
- Orengo, C.A., Jones, D.T. and Thornton, J.M. 2003. Bioinformatics – Genes, Proteins and Computers, 1st Edition, BIOS Scientific Publishers Limited, Oxford, UK.
- Mount, D.W. 2001. Bioinformatics – Sequence and Genome Analysis, 1st Edition, Cold Spring Harbor Laboratory Press, New York, USA.
- West Head, D.R., Parish, J.H. and Twyman, R.M. 2003. Instant Notes Series – Bioinformatics, 1st Edition, Viva Books Private Limited, New Delhi, India.
- Ignacimuthu, S. 2005. Basic Bioinformatics, 1st Edition, Narosa Publishing House, New Delhi, India.
- Lesk, A.M. 2002. Introduction to Bioinformatics, 1st Edition, Oxford University Press, Oxford, UK.
