



Sant Baba Bhag Singh University, Jalandhar
UNIVERSITY INSTITUTE OF SCIENCES & HUMANITIES

Dated: 21-02-2017

Minutes of BOS Meeting

Minutes of the meeting of 2nd Board of Studies (BoS) of University Institute of Sciences and Humanities (UISH) was held in Conference Room at 9:30 am on 18/02/2017. The members present were:

S. No.	Name	Designation/Institute	Internal/ External Member
1.	Ms Jaswinder Pal Kaur Sandhu	HOD, Dept. of Medical Lab Technology, Govt. Polytechnic College for Girls, Amritsar	External
2.	Dr Saroj Arora	Professor, Dept of Botany and Environmental Sciences, Guru Nanak Dev University, Amritsar	External
3.	Dr Dheeraj Sood	Prof. and Head, SLIET, Longowal	External
4.	Dr. Nectu Sharma	Assistant Professor, Dept of Zoology, Abhilashi University	External
5.	Prof. Nasib Singh	Associate Professor and Head (Retired), Govt. College, Hoshiarpur	External
6.	Prof. S.P.Dhir	Principal (Retired), P.E.S-I, Govt. College of Education, Jalandar	External
7.	Prof. Om Prakash Agrawal	Professor (Retired), School of Studies in Zoology, Jiwaji University, Gwalior (M.P)	External
8.	Dr Arun Pratap Sikarwar	Assistant Professor (Biotechnology), Dayal Bagh Educational Institute, Agra	External
9.	Dr Anupamdeep Sharma	Dean Academic, SBBSU	Chairperson
10.	Dr.Pardeep Kaur	COD, Life Sciences	Internal
11.	Dr Ajmal Rashid Bhat	COD, Chemistry	Internal
12.	Dr Gaurav Sharma	COD, Agriculture	Internal
13.	Dr Rafiq Lone	AP	Internal
14.	Dr Yaqoob M. Dar	AP	Internal
15.	Dr S.M Bhatt	AP	Internal
16.	Dr Chetna Sharma	AP	Internal
17.	Mr Jujhar Singh	AP	Internal

The following items were discussed and decisions taken:

S.No	Points Discussed	Action by
1	Approval for the course scheme for B.Sc Medical B.Sc MLS B.Sc Non-Medical	Concerned CODs
	B.Sc Agriculture M.Sc Chemistry M.Sc Mathematics	
2	Discussion regarding introduction of new courses and approval of course scheme for session 2017 onwards M.Sc Botany M.Sc Biotechnology M.Sc Zoology	Dr.Pardeep Kaur
3	The subject name ' <i>Environmental Science</i> ' taught in 3 rd Semester of B.Sc in all branches is to be revised and credit be increased from 2 to 3. Its code should be EVS101.	Ms Manmeet Kaur
4	Introduction of 'Physical Training' a non-credit course upto four semester in scheme of B.Sc classes.	
5	Course code for 'Computational Skills and Computational Skills Lab' should be CSE218 and CSE220 for B.Sc Medical and Non-Medical	CSE dept.
6	If there is educational tour in the curriculum , it should be mentioned in the scheme.	
7	Code for M.Sc dissertation should be 602	
8	Total credits for dissertation should be 27 and be split in the following ratio: dissertation+research+seminar = 20+5+2	
9	The computer related subjects taught in M.Sc. Chemistry and M.Sc. Mathematics should be assigned new code by Computer Science and Engineering Department	CSE Dept.
10	No abbreviations should be used while naming subjects in the scheme	

The meeting ended with vote of thanks by HOD Natural Sciences.


Chairperson Board of Studies, UISH

CC:
Vice-Chancellor (for kind information)
All concerned



Sant Baba Bhag Singh University

(University Established under Punjab Act No.6 of 2015)
Vill. Khiala, P.O. Padhiana, Dist. Jalandhar, Punjab, INDIA

External Expert Review Performa For Board of Studies

Name of External Expert : JASPAI SINGH AJLA
Discipline : MATHEMATICS
Designation : PROFESSOR
Organization (Name & Address) : NATIONAL INSTITUTE OF
TECHNOLOGY JALANDHAR
Contact No. : 94633-64744
E-Mail ID : ajla.j.s@nit.ac.in
Date of Visit/Meeting : 17-03-2017

Reviewer's Comments :-

Minor change should be made as suggested.

❖ Use extra sheet(s) if required.

Signature

Date: 17/3/17

Coordinator/HOD's/Dean's

Dean Academics



Sant Baba Bhag Singh University

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External Expert Review Performa For Board of Studies

Name of External Expert :..... Dr. H. M. Mittal.....
Discipline :..... Physics.....
Designation :..... Asst. Professor.....
Organization (Name & Address) :..... N.I.T.- Jalandhar.....
Contact No. :..... 9417119665.....
E-Mail ID :..... mittalhm@nitj.ac.in.....
Date of Visit/Meeting :..... 14.2.17.....

Reviewer's Comments :-

Please check the grammatical mistakes in the syllabus if any. Otherwise the contents of the syllabus are very good.

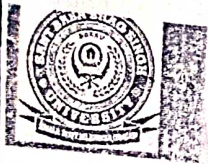
❖ Use extra sheet(s) if required.

Harish Mehta
Signature

Date....14/2/2017

Coordinator/HOD's/Dean's

Dean Academics



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External Expert Review Performa For Board of Studies

Name of External Expert : Dr. Muralidhar Aski
Discipline : Plant Breeding (Agriculture)
Designation : Scientist
Organization (Name & Address) : IARI, New Delhi - 110012
Contact No. : 9013212790
E-Mail ID : murali2416@gmail.com
Date of Visit/Meeting : 11/02/2017

Reviewer's Comments :- Syllabus is in accordance with IAR guide lines as of now. But later on as council (CCAR) modification/changes the syllabus & updates the syllabus such updates must be incorporated timely.

❖ Use extra sheet(s) if required.

Signature

Date 11/02/2017

Coordinator/HOD's/Dean's
11/2/17

Dean Academics



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External Expert Review Performa For Board of Studies

Name of External Expert Jaswinder Pal Kaur Sandhu
Discipline N.A.D.
Designation DEPT of Medical Lab Technology
Organization (Name & Address)
Contact No. 9814581931
E-Mail ID casun.jaswinder@yahoo.com
Date of Visit/Meeting
Subject
Subject Code

Reviewer's Comments :-

- Add a subject of "General Skills & Entrepreneurship Development" in 5th sem for making students aware to run their own labs.
- Expt. No. 2 (MLS-102) of fundamentals of Biology is not relevant to this subject. It should be added to parasitology.
- Remove the Practicals of MLS315

❖ Use extra sheet(s) if required.

Signature

Date.....

HOD

Govt. Polytechnic College for Girls

Amritsar

Coordinator/HOD's/Dean's

Dean Academics

PJLaur
22.03.17



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External Expert Review Performa For Board of Studies

Name of External Expert : Nazir Ahmad Malla
Discipline : Botany
Designation : Assistant Professor
Organization (Name & Address) : Govt. Degree College Bijbehara, Anantnag.
Contact No. : 9697968660
E-Mail ID : nazir.malla@gmail.com
Date of Visit/Meeting :
Subject : Botany
Subject Code : BO

Reviewer's Comments :-

Comments attached

❖ Use extra sheet(s) if required.

[Signature]
Signature

Date.....

Coordinator/HOD's/Dean's

P. Kaur
22.03.17

[Signature]
Dean Academics

P.T.O

Review comments for syllabus (BOTANY) of B.Sc. (Medical):

The syllabus of Botany for B.Sc. Medical is upto date in content to make the students well prepared for the competitive world. I have few suggestions for making this syllabus more appropriate and easy for readers and these suggestions need to be discussed before approval of the syllabus.

1. Semester first Course BOT 101, must start with cell, cellular organelle organization rather than microbes
2. Description about angiosperms missing in paper 1, it must be incorporated after gymnosperms
3. Paper 102 must include protein before going on enzymes
4. Proteins and enzymes part should have been incorporated or sequenced in unit II of Bot -102, right after translocation in phloem and photosynthesis placed in unit II should be shifted to unit IV just before plant growth development.
5. In Bot-201 Ecological aspects need to be introduced to students through plants and environment , making them aware about atmosphere, water, soil, and concept of climate change rather than directly introducing ecology
6. In Bot 201 population ecology and vegetation types of India must be included after ecosystem
7. Angiosperms should be removed and moved to semester 1 after gymnosperms
8. Bot 202 should include inflorescence under unit flower
9. Root system should be after shoot system followed by leaf and then diversity of plant forms
10. In Bot 301 techniques portion should be shifted to semester VI

Dr NazirAhmad Malla
Assistant Professor
Department of Botany
Govt Degree College, Bijbehara
University of Kashmir

PKaul
22.03.17



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External Expert Review Performa For Board of Studies

Name of External Expert : DR. AJAY KUMAR GAUTAM
Discipline : BOTANY
Designation : Associate Professor
Organization (Name & Address) : Faculty of Science, School of Agriculture
Abhilashi University Mandi, H.P. India.
Contact No. : 09459923654
E-Mail ID : a2gautam2006@gmail.com
Date of Visit/Meeting :
Subject : BOTANY
Subject Code : BOTANY

Reviewer's Comments :-

List attached.

❖ Use extra sheet(s) if required.

Ajant
Signature

Date: 14/02/2017

Coordinator/HOD's/Dean's

DL
Dean Academics

P. Kaur
22.03.17

P.T.O

Re: Comments for Reviewed Syllabus

Ajay Gautam <a2gautam2006@gmail.com>
To: Rafiq Lone <rafiqlone@gmail.com>

Fri, Feb 17, 2017 at 10:18 PM

Dear Sir/Mam,

With reference to your mail, I have reviewed the syllabus of Botany and find it well prepared and suitable for students of B.Sc. Medical. Few points need to be discuss before approval of the syllabus and complete list of review comments is attached with this email as word doc.
Thanks.

Ajay K. Gautam

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Regards

Dr. Ajay Kumar Gautam
Assoc. Professor,
Faculty of Science,
School of Agriculture
Abhilashi University, Mandi
Himachal Pradesh-175045
India
+91-9459923654

2 attachments

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 External Review report.docx
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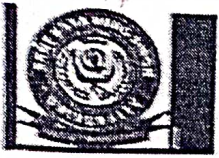
P. Kane
22.03.17

Review comments for syllabus (BOTANY) of B.Sc. (Medical):

The syllabus of Botany for B.Sc. Medical is suitable and well prepared. Few points need to be discuss before approval of the syllabus.

1. Botany I (BOT 101): There should be a course title as in all other courses. According to me the topic combinations in this paper are not appropriate e.g. Microbes (Virus) and Algae in Unit I are not compatible. So, it can be merged with Fungi. Similarly, in Unit II at-least two type specimens (Genera) should be included. Simultaneously, algae can be resolved with Bryophytes. This number can be enhanced in practical also.
2. **BOTANY-I LAB (BOT 103)**: Course objectives are not covering detailed explanation about the subject as given in detailed syllabus. Here mentioned only about lower plants and microbes are not included.
3. **BOTANY-V (BOT 301)**: Cell and Molecular Biology is itself a very lengthy course. I think Addition of instrumentation (**Techniques in Biology**) in unit I has made it lengthier. So, it can be excluded from the unit I. Although it can be added elsewhere in any applied biology course like BOT 302.
4. Course prerequisite is present in some courses, while it is missing in some other courses.
5. **BOTANY-III LAB** is repeated twice a time. At page number 59 it should be **BOTANY-V LAB**.
6. **BOT 302 (Plant Biotechnology and Economic Botany)**: as per paper title the first two units should be from Biotechnology whereas, last two from Economic Botany. The sequence can be simply changed as Unit I & II to Unit III & IV and Unit III & IV to Unit I & II.

PJLaur
22.03.17



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External Expert Review Performa For Board of Studies

Name of External Expert : Dr. NEETU SHARMA
Discipline : ZOOLOGY
Designation : ASSISTANT PROFESSOR
Organization (Name & Address) : ABHILASHI UNIVERSITY, CHAIL CHOWK
MANDI (H.P.)
Contact No. : +91 9679 116680
E-Mail ID : dr.neetu.sharma2012@gmail.com
Date of Visit/Meeting :
Subject : ZOOLOGY
Subject Code :

Reviewer's Comments :-

❖ Use extra sheet(s) if required.

Signature
(Dr. Neetu Sharma)
Date.....

Coordinator/HOD's/Dean's

Dean Academics

P. Kaur
22.03.17

1-7-0

Fwd: Review of Syllabus

Neetu Sharma <dr.nmsharma2012@gmail.com>
To: Rafiq Lone <rafiqlone@gmail.com>

Fri, Feb 17, 2017 at 9:16 PM

Dear Sir ,
The comments on syllabus alongwith the filled in form are submitted as attachment to this mail .
Thanks!
Dr. Neetu Sharma
[Quoted text hidden]

2 attachments

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Comments on Syllabus Design.docx
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P. Kaur
22-03-17

First I would like to thank all the members of SBBS University for providing me the opportunity to make suggestions for the syllabi of B.Sc. (Zoology). I would like to say that the syllabus has been prepared with sufficient zeal, but I feel there must be some modifications in its design and content to construct it more informative.

Comments:-

1. Design/Arrangement of Syllabus does not seem to be proper and may be rearranged like;
 - In **Semester 1st**, phylum Echinodermata should be with Section A instead of Section B.
 - No. 1 practical should be as "study of museum specimens belonging to different phyla (available in respective museums), without mentioning names of animals.
 - Exercise regarding dissection of animals (Pheretima, Prawn, Pila) to expose their different systems should be added.
 - In **semester 2nd** Unit 7 and 8 should be added with Section A.
 - Syllabus of Section B should be reduced; it is beyond limitations of B.Sc. Student.
 - Practical no. 2 should be modified as **study of frog and chick embryology**.
 - Experiment no. 4 and 5 should be removed, instead experiment regarding **dissection of animals (Scoliodon, Anabus, Frog, rat) to expose their different systems should be added.**
 - In **Semester 3rd** unit 1 should be rearranged at unit no. 5. Digestion should be Unit I.
 - Syllabus for Section A is lengthy some topics should be deleted like, Ultra structure of Muscle, counter-current mechanism, structure of heart, homeostasis.
 - Topic regarding Respiratory pigments should be added.
2. The recent advancements in the subject may be added in designing the syllabus
3. **Semester 5th and 6th should be totally changed. In them there is reputation of previous year syllabus. These semesters should be framed keeping in consideration the topics like, IMMUNOLOGY, BIOSTATISTICS, ECOLOGY, WILDLIFE OF INDIA AND APPLIED ZOOLOGY.**
4. **These topics will impart the practical knowledge to the aspirants of Zoology and will help in enhancing the interest .**



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External Expert Review Performa For Board of Studies

Name of External Expert: Prof. Saroj Arora

Discipline: Life Sciences

Designation: Professor

Organization (Name & Address): Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar-143005 (Punjab)

Contact No.: 9417285485

E-Mail ID: sarojarora.gndu@gmail.com

Date of Visit/Meeting:

Subject: Botany and Zoology

Subject Code: BOT 101, BOT 102, BOT 201, BOT 202, BOT 301, BOT 302, ZOO 101, ZOO 102, ZOO 201, ZOO 202, ZOO 301, ZOO 302

Reviewer's Comments :-
The syllabus of both Botany and Zoology for the degree of Bachelor in Medical includes most of the important topics. Some of the required topics can also be added in both the subjects.
For the subject of Botany:
Semester I- Extranuclear genome.
Semester II- Chromosome organization and cell envelope.
Semester III- Characteristics of seed plants, evolution of seed habit, Distinguishing features of angiosperms and gymnosperms, major contribution of cytology, phytochemistry, Evolution and diversity of gymnosperms, Gymnosperms including fossil and living gymnosperms, Geological time scale and fossilization, Origin and evolution of angiosperms and some examples of primitive angiosperms.
Semester IV- Soil profile, biota, population ecology, responses of plants to water, temperature, light and salinity, community ecology, biogeographical regions of India, vegetation types of India, Landscape ecology, utilization of plants, fibre yielding plants, vegetable oils, medicinal plants, beverages and rubber.
Semester V- Plant breeding.
Semester VI- Genetic engineering.
For the subject of Zoology:
Semester I- Ecology, ecosystem, ecological factors, nutrients, ecological adaptations, population, biotic community, natural resources and environmental issues.
Semester II- Medical Zoology.
Semester III- Aquaculture (Fisheries)
Semester IV- Urochordata, Cephalochordata, Cyclostomata, Pisces, Amphibia, Reptilia, Aves and Mammals.

P. Kaur
22.03.17

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Semester V- Topics related to Developmental Biology, development upto three germinal layers, fate maps of chick and frog embryos, foetal membrane, mammalian placenta, modifications of mendelian ratios, multiple alleles, multiple factors, recombination, extranuclear inheritance, population genetics and applied genetics.

Semester VI- Economic entomology.

❖ Use extra sheet(s) if required.

Signature

Date... 17/2/17

Coordinator/HOD's/Dean's

Dean Academics

P. Kaur
22.03.17



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(University Established under Punjab Act No.6 of 2015)
Vill. Khiala, P.O. Padhiana, Dist. Jalandhar, Punjab, INDIA

External Expert Review Performa For Board of Studies

Name of External Expert : Dr. Arun Pratap Sikarwar
Discipline : Neurobiology, Molecular Biology, Biochemistry
Designation : Assistant Professor
Organization (Name & Address) : Dayalbagh Educational Institute (DEI, Deemed University), Agra - 282005 (India)
Contact No. : +91- 8171818009
E-Mail ID : arunlovy@gmail.com
Date of Visit/Meeting :
Subject :
Subject Code :

Reviewer's Comments :-

- (1) Contents and quality of curriculum is comprehensive, appropriate and satisfactory. The syllabus is up to the mark and contemporary.
- (2) There is virtually no redundancy in the topics incorporated in the syllabus.
- (3) Credit score of the contents (Theory + practical) is satisfactory.
- (4) Minor corrections may be incorporated as per suggested, if any.

❖ Use extra sheet(s) if required.

Signature

(Dr. Arun Pratap Sikarwar)
Date.....

15.02.2017

Coordinator/HOD's/Dean's

Dean Academics

AKaul
22-03-17

On Tue, Feb 14, 2017 at 9:16 PM, Dr. Pritpal Singh <registrar@sggswu.edu.in> wrote:
Dear Dr. Pervaz,

Thanks for the mail. Please find attached my comments regarding the review of M.Sc. Chemistry and B.Sc. (Medical/Non-medical) Chemistry syllabi for your consideration. The delay in sending my comments is regretted.

Regards

Dr. Prit Pal Singh

Registrar

Sri Guru Granth Sahib World University

Fatehgarh Sahib - 140406

08427000415

Suggestions for M.Sc. Syllabus

1. The subjects Group Theory, Symmetry and Ligand Field Theory (CHM-501) and Bonding and Reaction Mechanism in Inorganic Compounds (CHM-508) should be swapped as it is not advisable to offer the paper CHM-501 in the first semester.
2. In Paper CHM-501, the nomenclature of Unit II may be Electronic Absorption Spectroscopy of Transition Metal Complexes.
3. In Organic Reaction Mechanism-I (CHM-503):
 - (a) The Unit I may be renamed as Bonding and Aromatic Character of Organic Compounds instead of Nature of Bonding in Organic Reactions.
 - (b) In Unit -I (Stereochemistry), Geometrical isomerism, Conformational isomerism, D, L (Absolute configurations) and R, S (Relative Configurations) should be included.
 - (c) In Unit II, methods of determining reaction mechanism and isotope effect should be included.
 - (d) In Unit III, Aliphatic Electrophilic Substitution should be included
4. In paper Spectroscopic Techniques for Organic Compounds (CHM-507):
 - (a) In Unit I (Nuclear Magnetic Resonance), Advanced NMR techniques like DEFT, COSY, and NOESY should be included.
 - (b) In Unit III, Ultraviolet and Visible Spectroscopy, Woodward Fischer rules should be included.
5. In Organometallic Chemistry and Metal Clusters (CHM- 502), the syllabus of Unit I is very extensive and should be pruned.
6. In Organic Reaction Mechanism-II (CHM-504), the syllabus of Unit IV is very extensive and should be pruned.
7. In Organic Synthesis and Heterocyclic Chemistry (CHM-517), in Unit I, 5-member heterocycles with one hetero atom should be included. If possible, heterocycles with two heteroatoms should be included after rearranging units 3 and 4 in some other paper.
8. In Surface Chemistry and Electrochemistry (CHM-519), Unit II (Polymers) does not match with the paper nomenclature and should be shifted to some other paper.
9. The paper Natural Products and Plants as Source of Drugs (CHM-518) can be renamed as Chemistry of Natural Products. In Unit II (Steroids and Alkaloids), topic of structure elucidation of compounds listed should be included.

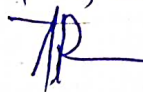
Suggestions for B.Sc. (Medical/Non-medical) Syllabus

Instead of one paper in Chemistry in each semester, separate papers on Physical, Organic and Inorganic Chemistry in each semester should be incorporated for better coverage of topics in syllabi and examinations.

Dr. Ajmal R. Khan

Coordinator

Dep. of Chemistry,

 22-03-017

Observations on the proposed program of Agricultural Engineering at Sant Baba Bhag Singh University, Jalandhar

The Agricultural Engineering profession is more than 50 years old in India. Indian Council of Agricultural Research (ICAR) oversees education in Agriculture as well as Agricultural Engineering, in all the Indian Agricultural Universities for uniformity and quality of education. ICAR regularly reviews the curriculum and lays guidelines for the program of Agricultural Engineering to meet the latest challenges of the profession of Agricultural Engineering including the industry and other employment providers. The colleges are required to adopt these guidelines with minor changes necessary as per regional requirements. It is, therefore, advisable to align the program at SBBS University with the ICAR guidelines.

Following observations are made with reference to Table 1 (enclosed) which gives a comparative statement of the credit hours distribution w.r.t. ICAR guidelines:

- (i) **Total Credit Hours:** As proposed in the curriculum, the number of credit hours are higher than the ICAR guidelines (208.5 credit hours as compared to 182 credit hours prescribed by ICAR).
- (ii) **Basic Sciences and Humanities:** As proposed in the curriculum, the number of credit hours are higher (by nearly 10 credits) than the ICAR guidelines.
- (iii) **Basic Engineering:** As proposed in the curriculum, the number of credit hours of Basic Engineering are quite higher than the ICAR guidelines (a difference of nearly 39 credit hours), although the number of courses is quite similar.
- (iv) **Agricultural Sciences:** As proposed in the curriculum, the credit hours of Agricultural Sciences are quite similar but the practical content is lesser.
- (v) **Agricultural Engineering:** As proposed in the curriculum, the number of credit hours are deficient by 17 credit hours. The deficient credit hours are with respect to the laboratory content.

In addition the number of courses in Farm Machinery & Power Engineering, and Soil & Water Engineering are deficient (only 2 each in comparison to 5 and 8 respectively as prescribed by ICAR).

The following topics appear to be totally missing:

1. Renewable energy
2. Business management
3. AutoCAD applications
4. Web designing
5. Soil and Water Conservation
6. Drainage Engineering
7. Engg properties of Agril. Produce

Following topics need to be examined in detail as to whether these are covered adequately:

1. Ground water, well, pumps
2. Sprinkler and micro irrigation
3. Design of structures
4. Theory of machines
5. Heat and Mass transfer
6. Plant protection
7. Horticultural crops
8. Tractor systems and controls

If these are not included adequately, these topics may be included in the prescribed courses.

College of Agricultural Engineering and Technology, Punjab Agricultural University has aligned its Agricultural Engineering program with the ICAR guidelines. A comparison of this program with the ICAR is given in Table 2. This may be used as a guidance to workout exact variations after going through the details of all the courses. It is suggested that a committee may be constituted to study the course contents minutely based on this comparison.

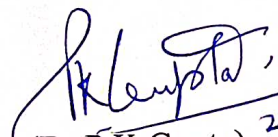

(Dr P K Gupta) 21/2/2017
Dean, CAET, PAU (Retd)

Table 1: Comparison of credit hour distribution in the proposed Agricultural Engineering program at SBBS University with respect to ICAR guidelines

Sr. No.	Discipline	V th Deans Committee		SBBS University		Variation wrt ICAR guidelines	
		Credit Hours	No. of courses	Credit Hours	No. of courses	Credit Hours	No. of courses
1.	Basic Sciences and Humanities	23(15+8)		(26+5.5) + 6 NC		+14.5	
	(a) Communication skills	2(1+1)	1	7(6+1)+(3+0) NC	3	+8	+2
	(b) Engg Chemistry	3(2+1)	1	4(3+1)		+1	-
	(c) Engg Physics	3(2+1)	1	4(3+1)	1	+1	-
	(d) Engg Mathematics	9(6+3)	3	14.5(12+2.5)	1	+5.5	-
	(e) Environmental Science	3(2+1)	1	2(2+0)	3	-1	-
	(f) Human & Professional values	-	-	3(3+0) NC	1	+3	+1
	(g) Entrepreneurship & Business Mgt	3(2+1)	1	-	-	-3	-1
2.	Basic Engineering	44(25+19)		83(59+24)		+39.0	
	(a) Civil Engg	14(8+6)	6	20.5(15+5.5)	5	+6.5	-1
	(b) Mechanical Engg	19(11+8)	8	35.5(23+12.5)	9	+16.5	+1
	(c) Electrical & Electronics	6(4+2)	2	14(10+4)	4	+8	+2
	(d) Computer Science Engg	5(2+3)	2	5(3+2)	1	-	-1
	(e) Open Electives	-	-	8(8+0)	2	+8	+8
3.	Agricultural Sciences	8(5+3)	3	7(6+1)	2	-1	-1
4.	Agricultural Engineering	65(40+25)		48(40+8)		-17	
	(a) Farm Mach. & Power	14(8+6)	5	8(6+2)	2	-6	-3
	(b) Soil & Water Engg	20(12+8)	8	7(6+1)	2	-13	-6
	(c) Process. & Food Engg	13(8+5)	5	15(12+3)	4	+2	-1
	(d) Renewable Energy Engg.	9(6+3)	3	-	-	-9	-3
	(e) Professional Elective	9(6+3)	3	18(16+2)	4	+9	+1

5.	Training	40							
	(a) Institutional	20		33			-7		
	(b) Industrial	10		3			-17		
	(c) Project-work	10		22+3			+15		
	(d) Seminar	-	-	3			-7		
6.	Educational Tour	2		2			+2		
7	NCC/NSS/NSO	-		-			-2		
	Grand Total	182		8			+8		
				202.5+14NC					

Table 2: Comparison of credit hour distribution in the Agricultural Engineering program at College of Agricultural Engineering and Technology, PAU, Ludhiana with respect to ICAR guidelines

Sr. No.	Discipline	Vth Deans Committee		COAET, PAU		Variation wrt ICAR guidelines	
		Credit Hours	No. of courses	Credit Hours	No. of courses	Credit Hours	No. of courses
1.	Basic Sciences and Humanities	23(15+8)		25(16+9)		+2.0	+1
	(a) Communication skills	2(1+1)		4(2+2)	2	+2	-
	(b) Engg Chemistry	3(2+1)	1	3(2+1)	1	-	-
	(c) Engg Physics	3(2+1)	1	3(2+1)	1	-	-
	(d) Engg Mathematics	9(6+3)	3	9(6+3)	3	-1	+1
	(e) Environmental Science	3(2+1)	1	2(1+1)	1	+1	-
	(f) Human & Professional values	-	-	1(1+0)	1	-	-
	(g) Entrepreneurship & Business Mgt	3(2+1)	1	3(2+1)	1	-	-
2.	Basic Engineering	44(25+19)		49(29+20)		+5	-
	(a) Civil Engg	14(8+6)	6	16(10+6)	6	+2	-
	(b) Mechanical Engg	19(11+8)	8	22(13+9)	8	+3	-
	(c) Electrical & Electronics	6(4+2)	2	6(4+2)	2	-	-
	(d) Computer Science Engg	5(2+3)	2	5(2+3)	2	-	-
3.	Agricultural Sciences	8(5+3)	3	6(3+3)	3	-2	-
4.	Agricultural Engineering	65(40+25)		64(40+24)		-1	+1
	(a) Farm Mach. & Power	14(8+6)	5	14(8+6)	6	-	-1
	(b) Soil & Water Engg	20(12+8)	8	19(12+7)	7	-1	-
	(c) Process. & Food Engg	13(8+5)	5	13(8+5)	5	-	-
	(d) Renewable Energy Engg.	9(6+3)	3	9(6+3)	3	-	-
	(e) Professional Elective	9(6+3)	3	9(6+3)	3	-	-
5.	Training	40		40			
	(a) Institutional	20		8+12			
	(b) Industrial	10		10			
	(c) Project-work	10		10			

6.	Educational Tour	2	2						
7	NCC/NSS/NSO	-		4 NC			+4		
	Grand Total	182		186 +4 NC					



Sant Baba Bhag Singh University

(University Established under Punjab Act No.6 of 2015)

Vill. Khiala, P.O. Padhiana, Dist. Jalandhar, Punjab, INDIA

External Expert Review Performa For Board of Studies

Name of External Expert

Prof. S. P. Dhur

Discipline

MSc (Hons) Zoology

Designation

Principal, P. U. Chandigarh.

Organization (Name & Address)

P. E. S. I.
Govt. College of Education
Jalandhar.

Contact No.

8558939441

E-Mail ID

Date of Visit/Meeting

28-11-2017

Reviewer's Comments :-

The Syllabus is up to date as per current demand.

❖ Use extra sheet(s) if required.

S. P. Dhur
Signature

Date... 28-11-2017.

Coordinator/HOD's/Dean's

Dean Academics



Sant Baba Bhag Singh University

(University Established under Punjab Act No.6 of 2013)
Vill. Khiala, P.O. Padhiana, Dist. Jalandhar, Punjab, INDIA

External Expert Review Performa For Board of Studies

Name of External Expert : Prof. Om Prakash Agrawal
Discipline : Zoology
Designation : Professor (Retired)
Organization (Name & Address) : School of Studies in Zoology, Jiwaji University,
GWALIOR (M.P.) 474011
Contact No. : 0751-2342325, 09827787803
E-Mail ID : op_agrawal51@rediffmail.com
Date of Visit/Meeting : Consult on telephone

Reviewer's Comments :-

I have carefully gone through the syllabus of M.Sc. in Zoology of Sant Baba Bag Singh University, Jalandhar, Punjab.

It is nicely prepared balanced syllabus.

It incorporates topics of all the branches of subject required for master's degree.

There are some points which need discussion and accordingly amendments in the syllabus are to be made

❖ Use extra sheet(s) if required.

Signature
Date 20.11.17

Coordinator/HOD's/Dean's

Signature
Dean Academics



Sant Baba Bhag Singh University

(University Established under Punjab Act No.6 of 2015)
Vill. Khiala, P.O. Padhiana, Dist. Jalandhar, Punjab, INDIA

External Expert Review Performa For Board of Studies

Name of External Expert :.....Dr. Arun Pratap Sikanwar
Discipline :.....Biotechnology (Dept. Zoology)
Designation :.....Assistant Professor
Organization (Name & Address) :.....Dayalbagh Educational Institute, Agra
Contact No. :.....8171818009
E-Mail ID :.....arunlovy@gmail.com
Date of Visit/Meeting :.....

Reviewer's Comments :-

enclosed

❖ Use extra sheet(s) if required.

Signature

Date.....

Tweto
21/11/17
Coordinator/HOD's/Dean's

Nb
Dean Academics



shweta singh <shweta.bz@gmail.com>

Fwd: BOS Comments, revised

1 message

Dr Sheelendra Bhatt <drsmbhattsbbu@gmail.com>

To: shweta.bz@gmail.com

Tue, Nov 21, 2017 at 3:13 PM

----- Forwarded message -----

From: "Arun P. Sikarwar" <arunsikarwar@dei.ac.in>

Date: Nov 21, 2017 3:11 PM

Subject: BOS Comments, revised

To: "Dr Sheelendra Bhatt" <drsmbhattsbbu@gmail.com>, "Dr S M Bhatt" <drsmbhattach@gmail.com>

Cc:

Dear Sir,

I am indeed thankful to you to invite me for being Member of Board of Studies (BOS). I have gone through the review of your M.Sc. Biotechnology syllabus.

The course curriculum is being formulated maliciously. However, following minor improvements may be incorporated for a window of betterment.

1. There could be reduction in tge syllabus of 2nd sem, 3rd sem and 4th sem.
2. English grammar and some major spelling mistakes should be rectified.
3. Please increase the credit of course from 3 to 4 credit as per UGC norms.

Rest seems good and appropriate in the syllabus.

Good Wishes and Regards

Dr. Arun Pratap Sikarwar

PhD (Mumbai Univ); MSc (BHU); MBA (Symbiosis, Pune)

Postdoctoral: Weill Cornell Medical College; Aarhus University, Denmark; JNCASR/IISc

Assistant Professor

Department of Zoology, Faculty of Science

Dayalbagh Educational Institute (DEI, Deemed University)

Agra, India, PIN-282005

Ph # +91-8171818009



Sant Baba Bhag Singh University

(University Established under Punjab Act No.6 of 2015)
Vill. Khiala, P.O. Padhiana, Dist. Jalandhar, Punjab, INDIA

External Expert Review Performa For Board of Studies

Name of External Expert :..... *Dr. Rajesh Kumar*.....
Discipline :..... *Zoology*.....
Designation :..... *Assistant Professor*.....
Organization (Name & Address) :..... ~~HIMCASTE~~ *Arni University, Indone*
Dist. Kangra (HP).....
Contact No. :..... *9805430493*.....
E-Mail ID :..... *dr.kumar.83@rediffmail.com*.....
Date of Visit/Meeting :.....

Reviewer's Comments :-

En closed

❖ Use extra sheet(s) if required.

Signature

()

Date.....

[Signature]
27/11/17
Coordinator/HOD's/Dean's

[Signature]
Dean Academics

External Expert Review Performa For Board of Studies

Name of External Expert: Dr Rajesh Kumar

Discipline: Zoology

Designation: Assistant Professor and Principal Investigator, HIMCOSTE, Govt of HP, Shimla

Organization: Arni University, Indora, Distt Kangra (HP)

Contact No.: 9805430493

Email ID: drkumar83@rediffmail.com

Comments

1. 3 credits are very less for PG class. It should be either 4 or 5.
2. Tutorial must be there for PG classes. It cannot be kept 0.
3. 04 credits are very high for practicals. 08 contact hours are not possible in a week.
4. Codes must have set pattern i.e. first alphabet (capital) of degree, then first alphabet (small) of subject and then two alphabets (small) of subject, therefore it should be MZoo
5. Seminars should be kept under tutorials and not under theory.
6. Detailed syllabi is almost ok.

Note: Necessary corrections have been made in the course scheme. Credits and Contact Hours have been adjusted accordingly. Rest the final decisions can be taken at the time of final meeting.



Dr Rajesh Kumar

Course Scheme, M. Sc.Zoology (Semester-I-IV)

SEMESTER I

I. Theory Subjects

S.No	Sub Code	Subject Name	Contact Hours (L:T:P)	Credits (L:T:P)	Total Contact Hours	Total Credits Hours
1	ZOO501	Structure & Function of Invertebrates	3:1:0	3:1:0	4	4
2	ZOO503	Structure & Function of Chordates	3:1:0	3:1:0	4	4
3	ZOO505	Cell and Molecular Biology	3:1:0	3:1:0	4	4
4	ZOO507	Tools & Techniques in Biology	3:1:0	3:1:0	4	4
5	MAT515	Biostatistical Methods	3:1:0	3:1:0	4	4
6	ZOO509	Seminars-I/Assignment-I	0:2:0	0:2:0	2	0

II. Practical Subjects

1	ZOO511	Structure and Functions of Animals Practical	0:0:4	0:0:2	4	2
2	ZOO513	Molecular Cell Biology and Tools & Techniques Practical	0:0:4	0:0:2	4	2
Total					29	24

Total Contact hrs: 30

Total Credit Hours: 24

SEMESTER-II

I. Theory Subjects

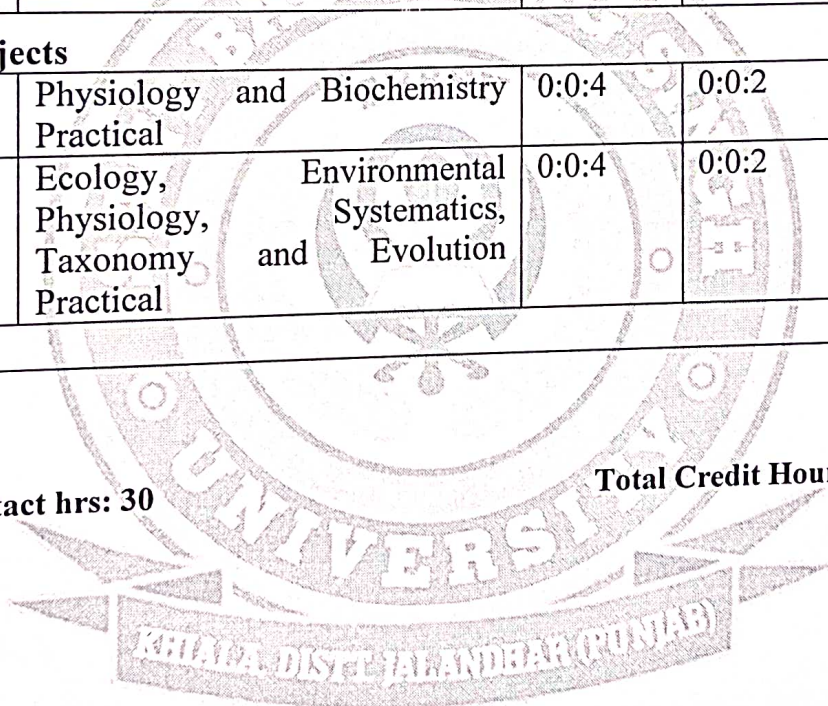
S.No	Sub Code	Subject Name	Contact Hours (L:T:P)	Credits (L:T:P)	Total Contact Hours	Total Credits Hours
1	ZOO502	General & Comparative Animal Physiology	3:1:0	3:1:0	4	4
2	ZOO504	Biosystematics, Taxonomy & Evolution	3:1:0	3:1:0	4	4
3	ZOO506	Biomolecules & Structural Biology	3:1:0	3:1:0	4	4
4	ZOO508	Population Ecology & Environmental Physiology	3:1:0	3:1:0	4	4
5	CSE554	Introductory Concepts of Computer Technology	3:1:0	3:1:0	4	4
6	ZOO510	Seminars-II/Assignment-II	0:2:0	0:2:0	2	0

II. Practical Subjects

1	ZOO512	Physiology and Biochemistry Practical	0:0:4	0:0:2	4	2
2	ZOO514	Ecology, Environmental Physiology, Systematics, Taxonomy and Evolution Practical	0:0:4	0:0:2	4	2
Total					30	24

Total Contact hrs: 30

Total Credit Hours: 24



SEMESTER III

I. Theory Subjects

S.No	Sub Code	Subject Name	Contact Hours (L:T:P)	Credits (L:T:P)	Total Contact Hours	Total Credits Hours
1	ZOO601	Genetics and Cytogenetics	3:1:0	3:1:0	4	4
2	ZOO603	Developmental Biology and Embryology	3:1:0	3:1:0	4	4
3	ZOO605	Elective course (any one of the following) A.General Entomology & Insect Morphology B.Comparative Endocrinology	3:1:0	3:1:0	4	4
4	ZOO607	Elective course (any one of the following) A.Insect Anatomy & Physiology B. Endocrine Physiology	3:1:0	3:1:0	4	4
5	ZOO609	Project work-I	0:4:0	0:4:0	4	4

II. Practical Subjects

1	ZOO611	Genetics, Cytogenetics, Development and Differentiation Practical	0:0:4	0:0:2	4	2
2	ZOO613	A: General Entomology Practical B: Comparative Endocrinology and Endocrine Physiology Practical	0:0:4	0:0:2	4	2
Total					28	24

Total Contact hrs: 28

Total Credit Hours: 24

SEMESTER-IV

I. Theory Subjects

S.No	Sub Code	Subject Name	Contact Hours (L:T:P)	Credits (L:T:P)	Total Contact Hours	Total Credits Hours
1	ZOO602	Animal Behaviour	3:1:0	3:1:0	4	4
2	ZOO604	Introduction to Immunology	3:1:0	3:1:0	4	4
3	ZOO606	Elective course (any one of the following) A. Insect Taxonomy, Ecology & Development B. Male Reproductive Endocrinology	3:1:0	3:1:0	4	4
4	ZOO608	Elective course (any one of the following) A. Applied Entomology B. Female Reproductive Endocrinology	3:1:0	3:1:0	4	4
5	ZOO610	Project Work-II	0:4:0	0:4:0	4	4

II. Practical Subjects

1	ZOO612	Animal Behavior and Vertebrate Immunology Practical	0:0:4	0:0:2	4	2
2	ZOO614	A: Insect Taxonomy, Ecology, Development & Applied Entomology Practical B: Reproductive Endocrinology Practical	0:0:4	0:0:2	4	2
Total					28	24

Total Contact hrs: 28

Total Credit Hours: 24

COURSE SCHEME SUMMARY

Semester	L	T	P	Contact hrs/wk	Credits
1	15	6	8	30	24
2	15	6	8	30	24
3	12	8	8	28	24
4	12	8	8	28	24
Total	54	28	34	98	96

Note: Each student will submit Project report on any topic related to Zoology. Project report will be guided by subject teachers of the University and will be examined by external Examiner.

