

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

(Established by H.P.State Legislative vide Act No. 14 of 2002) Waknaghat, P.O. Dumehar Bani, Kandaghat, Distt. Solan – 173234 (H.P.) INDIA Website :www.juit.ac.in Phone No. (91) 01792-257999 (30 Lines)

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SUMMARY SHEET

Criteria	Criterion 1 – Curricular Aspects
Key Indicator	1.2. Academic Flexibility
Metric	1.2.1. Percentage of new courses introduced of the total number of courses across all Programmes offered during the last five years
Description	Excerpts from Academic Council minutes and BoS







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MINUTES OF THE ACADEMIC COUNCIL MEETING - 02 DEC 2017

Academic Council meeting was held on 02 December 2017 at 10.30 am in the Board Room, JUIT Waknaghat. The following were present:

Chairman

Prof. Vinod Kumar, Vice Chancellor, JUIT Waknaghat

Head Of Other Institutions of the Trust

Prof. S.C. Saxena, Vice Chancellor, JIIT Noida

Industry Professional

Sh. Vinod Sharma

Prof. Samir Dev Gupta

HoDs

Prof. S.V. Bhooshan

Dept. of ECE

Prof. S.P. Ghrera

Dept of CSE

Prof. Ashok Kumar Gupta

Dept of CE

Dr. Sudhir Kumar

Dept of BT/BI

Prof. Karanjeet Singh

Dept of Maths

Prof. P.B. Barman

Dept of PMS

Dr. Anupriya Kaur

Dept of HSS

Professors

Prof. Sunil Kumar Khah

Dept of PMS & COE

Non-Member Secretary

Maj Gen Rakesh Bassi, SM (Retd) Registrar and Dean of Students

Leave of Absence

Leave of absence was granted to the following members by the Chairman Academic Council:

- 1. Sh. Sunil Sharma
- 2. Prof. Manoj Kumar Arora
- Prof. Padam Kumar 3.
- 4. Prof. Veeresh S. Gali

The Chairman welcomed all the members who were present for the meeting. Chairman welcomed Maj Gen Rakesh Bassi (Retd) Registrar and Dean of Students who has taken over as the new Non Member Secretary wef 01 August 2017. He further appreciated and thanked the contribution made by Brig KK Marwah (Retd), predecessor of current Non Member Secretary of the Academic Council for his contributions. The meeting thereafter deliberated on agenda items as had been approved by the Chairman.

Minutes of the Academic Council Meeting held on 02 Dec 2017

Item No. 1 Confirmation of Minutes of Last Meeting of the Academic Council held on 19 December 2016

Confirmed

Item No. 2 Action Taken Report

Prof. S.C. Saxena appreciated and put on record the excellent work done by the Vice Chancellor, JUIT and his team for timely action taken on decisions arrived at the last Academic Council Meeting held on 19 December 2016.

Item No. 3 Academic Documents Authentication and Inclusion

The proposal was accepted with following suggestions by Prof. S.C. Saxena:-

- a) The final transcript of a student should include the year of admission and the year of passing of degree as is being done in JIIT Noida.
- b) Degrees in a year should be awarded to the eligible candidates if they fulfill the requirements for the award of degree up to 30 September of the current academic year and all other candidates degree should be awarded in the next academic year.

The Item was approved.

Item No. 4 Revision in Eligibility Conditions for Faculty Promotion

It was deliberated that faculty contribution in their respective Departmental activities with due recommendations of the HoD to find adequate weightage for promotion. This will be over and above to the existing minimum eligibility criteria specified for career progression.

The Item was approved.

Item No. 5 Admission in Different Programs of the University during Academic Session 2018-19 for Approval of the Academic Council

Prof. S.C. Saxena stated that increase in the number of seats for B Tech CSE from 180 to 240 and also in B Tech (IT) from 30 to 60 as proposed in the agenda item was a step in the right direction keeping the national trend of students aspiring to join the IT Sector into account. Total number of seats approved were 570, which also includes reduction in number of seats in the Department of ECE from 120 to 90. Other braches viz. BT, BI & CE to maintain the number of seats as it exists.

The Item was approved.

Item No. 6 Provision of Lateral Entry in 3rd Semester for filling the vacant seats in the respective departments for the B.Tech programs in BI, BT, CE, CSE, ECE & IT in the Academic Session 2018-19

The Chairman explained the proposal of Lateral Entry for the existing B.Tech program. It was proposed primarily to ensure that a class strength be

Minutes of the Academic Council Meeting held on 02 Dec 2017

maintained at approved strength for all the four years. Keeping in mind the existing financial liability, it would also compensate for loss of revenue, which otherwise would continue to be the same up to the 4th year completion of the batch for all vacant seats.

During the discussion for eligibility criteria for lateral entry, Prof. S.K. Khah suggested that for Diploma holders who have completed diploma after 10th class, be permitted to submit Class 10th original mark sheet whilst for B.Tech Lateral Entries, 10+2 original marks sheet for verification would be mandatory, as proposed. The point was agreed to.

The Item was approved along with above suggestion.

Item No. 7 Fee Structure for Ph.D. Scholars on Submission of Thesis

As recommended was approved.

Item No. 8 Modification in Guidelines for Payment of Fellowships to Full Time Ph.D. Scholars

As recommended was approved.

Item No. 9 Revision of B.Tech Course Curricula

After discussions, Prof. S.C. Saxena stated that for engineering students, in most of the IITs and other premier Institutes range of total credits is between 150 to 160 and additional 20 credits ex-MOOCS. The trend in higher education is to focus on making the students as self learners with teachers acting as facilitators. Towards this end, the contact hours of student with teacher are to be reduced. Student should be encouraged to be more innovative and creative. The teachers should be approachable for students to come up to them and interact with them, thus ensuring that a teacher instead of being a controller is a facilitator. Prof. S.C. Saxena also highlighted the need for innovative approaches to be encouraged and to avoid casting the students in a defined mould only.

As regards CSE, he stressed on the need for enhancing the programming skills of students. He stated that as per the statistics of placements, it is quite evident that students with higher programming skills are getting better placement packages. Therefore, there is a need to motivate students to opt for programming skills and weightage of such subjects should be increased.

As a concept for B.Tech, he mentioned that the basic core structure of each department should be fixed and the department should then decide what is required to be taught. This should be commensurate and in consonance with the current trend in vogue. As regards 1st year students, the UGC guidelines state that they should be exposed to three programmes during Orientation. These programs should include physical activities, creative arts. local visits etc. The details of these programs are available on the UGC/AICTE websites.



As regards weightage of various programs as 176 credits course listed in the Table in Item No. 9 of the Agenda, Prof SC Saxena suggested the range of credits be amended and the revise B Tech course structure with 165 Credits should be as per **Appendix-A** attached.

The Revised Structure was approved.

Item No. 10 B. Tech Structure for Admission of 2017-18

Discussion took place for Department of Humanities & Social Sciences based on point projected by HOD, HSS regarding electives. Prof. S.C. Saxena suggested introduction of certain value added courses which are non credit, but must be made compulsory. These could be value added course on subjects like Ethics and Foreign Languages such as German, French etc. Further as per the recommendations of Regulatory bodies during their expert committee visits to the University, it was recommended to include CBCS system in existing B Tech Structure. Therefore, B Tech Structure for admission in 2017 – 18 has been revised to include CBCS system as given in **Appendices B to F** attached.

The Item was approved.

Item No. 11 Modification/New Course/New Electives for B. Tech 2017-18

As recommended was approved.

Item No. 12 Introduction to MOOCS Courses

As recommended was approved.

Item No. 13 Introduction of New M.Sc. Programs and Revision in McTech Structures

As per UGC guidelines and NAAC Team visit, there is a need to introduce post graduate programs in disciplines in which PhD are being conducted. Accordingly Departments have proposed some new programs at post graduate level. Further, Departments have also proposed modifications in the exisiting M.Tech Program structures.

The Dept. of PMS has proposed a new two- year program, M Sc. in Physics from July 2018 with 75 credits. The program will focus on the basics and application of physical sciences, specially Nanotechnology, Materials Science, Electronics etc. The program stresses on interdisciplinary fields like modeling, simulation and extensive laboratory and Project work. The courses will prepare students for research and career in an industrial or national research laboratory environment. The course designed provides a platform for the research in cutting edge technology and it covers all the aspects of national examination of repute like GATE, NET.

The Dept. of Mathematics has proposed to start a new two-year M.Sc.



Program in Mathematics from July 2018 (75 credits). This program blends relevant mathematics covering theoretical, computational and practical aspects. The core mathematics courses are aimed at building a strong foundation in the subject. In addition to the usual course work it also involves pursuing one-year project work during the second year. The program allows opting courses from a variety of electives together with the compulsory ones. The performance of students in each semester shall be continuously assessed through regular quizzes, class tests etc. besides usual three university examinations in a semester.

The Dept. of BT/BI has proposed to start a new two-year M.Sc. Program in Biotechnology & Bioinformatics from July 2018 (86 credits).

The Dept of CSE proposed to introduce a two year M Tech in Computer Science Engineering (Information Security) in addition to the ongoing M.Tech in CSE program.

After discussions it was agreed that the 86 Credits new M.Sc. Course proposed by the Department of BT & BI should be modified to 75 Credits as proposed by the Department of Physics & Materials Science and Dept. of Maths for new M.Sc. programs since these were as per the norms.

It was also deliberated that the introduction of new M.Sc. Programs should be effected only after approval from the Chairman, Governing Council.

The Item was approved by the Academic Council.

Item No. 14 Inclusion of Award of a Degree with Honours

Approved wef the 2014 – 18 batch onwards.

Item No. 15 For Fast Learners, Provision for registering for extra credits during 3rd year in order to have lesser academic load in the 4th year to take up coaching for GRE, CAT, MAT & GATE exams.

As recommended was approved.

Item No. 16 Evaluation System for Supplementary Examination from 2017 Odd Semester onwards

As recommended was approved.

Item No. 17 Minutes of the Meeting of BOS of Various Departments for Approval

As recommended was approved.

Item No. 18 Proposal for Framing Regulations and Ordinances for JUIT

The following amendments were suggested



Minutes of the Academic Council Meeting held on 02 Dec 2017

- a. The agenda item at serial 18 (a) to be amended to read Jaypee University of Information Technology has a booklet comprising (i) Academic System (All Programs) in lieu of Academic System (B Tech).
- b. The agenda item at serial 18 (b) of Agenda mentions Jaypee University of Information Technology has a Rule Book. This was discussed and decision was arrived to rename the document as Service Regulations. Shri Vinod Sharma sought clarification that if the Rule Book was any different from those in other Jaypee Group establishments. Prof SC Saxena explained why the Regulations of Academic Institutions are to be different than Project sites because of the peculiarities involved.
- c. It was approved that the Academic System can have one book called Ordinances and Regulations as at Appendix-G whereas the second book will cover the Service Regulations which have already been approved in the Governing Council Meeting of 23 November 2014.

The Item with above modifications was approved

Item No 19 Reporting Items

No comments

Item No 20 Any Other Item with the Permission of the Chair

- 1. The proposal of HOD PMS for appointing Prof(Dr) Sukumar Basu as Emeritus /Honorary Professor of PMS was discussed and it was decided that the Professor be appointed as Professor Emeritus with well defined terms and conditions.
- The Chairman put forth the need for Inter Department Research Collaboration requirement as pointed out by NAAC also. He proposed for four Centres of Excellence to be established as follows:-
 - (a) Centre of Excellence in Structural Engineering
 - (b) Centre of Excellence in Internet of Things(IOT)
 - (c) Centre of Excellence in Healthcare Technologies and Informatics.
 - (d) Centre of Excellence in Sustainable Technologies for Rural Development (Smart Villages)

Prof Saxena advised that JUIT should concentrate on those disciplines which are more focussed and relevant to HP State as this will improve the image and visibility of JUIT in the region. Shri Vinod Sharma mentioned that he can use his good offices at Shimla to get these projects presented to the HP Govt. so that they find a favorable response from them if they are correctly sensitized on the feasibility of these projects.



Minutes of the Academic Council Meeting held on 02 Dec 2017

The proposals of the Item were approved

There being no other points the meeting concluded at 12.45 pm with a Vote of Thanks by the Chairman to all Academic Council Members.

Bay:

Maj Gen Rakesh Bassi. SM (Retd) Registrar & Non-Member Secretary

Confirmed

Prof Vinod Kümar

Vice Chancellor & Chairman



B Tech Course Structure 2017-18 CSE

		Engineering wef 2017			
		BTech I semester (B	1)		
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - I	3	3	
2	MA	Mathematics-I	4	4	
3	PH	Physics-I	4	4	
4	EC	Electrical Circuit Analysis	4	4	
5	CS	Introduction to Computers and Programming	4	4	
6	PH	Physics Lab-l	2	1	
7	EC	Electrical Circuits Lab	2	1	
8	CS	Computer Programming Lab	4	2	
9		Institutional Orientation	2	0	
		Total	29	23	

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4 year BTech New Approved Curricula for Computer Science Engineering wef 2017-18 batch

		BTech II semester (B	2)		
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - II	3	3	
2	MA	Mathematics-II	4	4	
3	PH	Physics-II	4	4	
4	EC	Basic Electronic Devices and Circuits	4	4	
5	CS	Data Structures	4	4	
6	PH	Physics Lab-II	2	1	
7	EC	Basic Electronics Lab	2	1	
8	CS	Data Structures and Computer Programming Lab	4	2	
9	CS	Departmental Orientation	2	0	
		Total	29	23	

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4 year BTech New Approved Curricula for Computer Science Engineering wef 2017-18 batch

		BTech III semester	(B3)		# 30 = 3 p
SN	Sub Code	Subject	Contact	Credits	Remarks
1	PD	Professional Dev - III	3	3	
2	MA	Mathematics-III	4	4	
3	EC	Digital Electronics	4	4	
4	cs	Object Oriented Programming	4	4	
5	CS	Database Systems	4	4	
6	EC	Digital Electronics Lab	2	1	
7	CS	Object Oriented Programming Lab	2	1	
8	CS	Database Systems Lab	2	1	
9	CS	Unix Programming Lab	2	1	
		Total	27	23	

JES

4 year BTech New Approved Curricula for Computer Science Engineering wef 2017-18 batch

		BTech IV semester (E	34)		
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - IV	3	3	
2	MA	Mathematics-IV	4	4	
3	EC	Signals and Systems	4	4	
4	cs	Microprocessors and Controllers	4	4	
5	CS	Fundamentals of Algorithms	4	4	
6	EC	Signals and Systems Lab	2	1	
7	CS	Microprocessors and Controllers Lab	2	1	
8	CS	Algorithms Lab	2	1	
9	IT	Multimedia Development Lab	2	1	
	a de constante de	Environmental Studies	3	3	Establish (Establish)

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Total	30	26	

4 year BTech New Approved Curricula for Computer Science Engineering wef 2017-18 batch

		BTech V semester (B5)			Silver and the unique
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - V	3	3	
2	EC	Communication Systems	4	4	
3	CS	Operating Systems	4	4	
4	CS	Software Engineering	4	4	
5	EC	Communication Systems Lab	2	1	
6	CS	Operating Systems Lab	2	1	
7	CS	Software Engineering Lab	2	1	
8	IT	Web Technology Lab	2	1	
9		DE-I	3	3	
10	CS	Project Part-I	6	3	
			32	25	
		lec l		<u> </u>	I

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4 year BTech New Approved Curricula for Computer Science Engineering wef 2017-18 batch BTech VI semester (B6)

		Blech Visemester (B6)		
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - VI	3	3	
2	CS	Computer Networks	4	4	
3	CS	Computer Organisation and Architecture	4	4	SERVISOR DESCRIPTION SE
4	CS	Computer Networks Lab	2	1	
5	CS	System and Network Programming Lab	4	2	
6	IT	Computer Graphics	4	4	
7	IT	Computer Graphics Lab	2	1	
8	CS	Project Part II	6	3	
9	CS	DE-II	3	3	
		Total	32	25	

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4 year BTech New Approved Curricula for Computer Science Engineering wef 2017-18 batch

		BTech VII semester (B7)			
SN	Sub Code	Subject	Contact	Credits	Remarks
1	PD	Professional Dev - VII	3	3	
2	cs	Software Testing and Debugging	4	4	
3	cs	Software Testing and Debugging Lab	2	1	
4	CS	Theory of Computation	4	4	
5		DE-III	3	3	
6		DE-IV	3	3	
7	CS	Project Part III	14	7	
		Total	33	25	

JES

4 year BTech New Approved Curricula for Computer Science Engineering wef 2007-11 batch

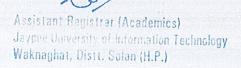
		BTech VIII semeste	r (B8)		diale e
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - VIII	3	3 :	
2	CS	Compiler Design	4	4)	
3	CS	Compiler Design Lab	2	1	SVISANCS VILLAGE
5		DE-V	3	3 ′	
6		DE-VI	3	3 ′	
7	CS	Project Part IV	17	7 /	
3	PH	Material Science	4	4 /	
		Total	36	25	
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		List of Electives	
		(To be updated from time	
		to time)	
1	MA	Algebraic Number Theory	
2	ВТ	Bio-informatics	
3	IT	Computer Games	
4	İΤ	Cryptography and Network	
		Security	
5	CS	Design of Algorithms	
6	CS	Embedded Systems	
7	IT	Human Aspects for	
		Information Technology	
8	CS	Image Processing	
9	IT	Information Retrieval and	
		Data Mining	
10	MA	Integral Transforms	
11	EC	Mobile Communications	
12	IT	Network Management	
13	MA	Operation Research	
14	CS	Parallel Processing	
15	MA	Partial Differential Equations	
16	PH	Quantum Computing	
17	PH	Special Theory of Relativity	
18	CS	Systems Programming	
19	MA	Abstract Algebra	
20	CS	Artificial Intellegence	
21	PH	Astrophysics	
22	BT	Biosciences	
23	CS	Computer Graphics	
24	CS	Design of Database Sytems	
25	EC	Digital Signal Processing	X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
26	MA	Game Theory	
27	PH	General Theory of Relativity	
28	CS	Graph Algorithms and	
	244.602.001	Applications	







29	MA	Graph Theory	T	
30	EC	Information Theory and Applications		
31	IΤ	Learning Sciences and Technology		
32	CS	Multi-Dimensional Data Structures		
33	PH	Nano Science and Technology		
34	CS	Network Programming		
35	MA	Numerical Analysis		
36	CS	Principles of Programming Languages		
37	lT	Research Methodology		
38	CS	Soft Computing		
39	CS	Software Engineering Management		
		Credit Summary	Credits	
		Sem1	23	
228		Sem2	23	
		Sem3	23	
		Sem4	26	
		Sem5	25	
		Sem6	25	
		Sem7	25	
		Sem8	25	
		Total	195	



B Tech Course Structure 2017-18 IT

4	year BT	ech New Approved Curricula for 2017-18 batcl		n Techno	logy wef
		BTech I semester (B	1)		
SN	Sub Code	Subject	Contact	Credits	Remarks
1	PD	Professional Dev - I	3	3	
2	MA	Mathematics-I	4	4	
3	PH	Physics-I	4	4	
4	EC	Electrical Circuit Analysis	4	4	
5	CS	Introduction to Computers and Programming	4	4	
6	PH	Physics Lab-I	2	1	
7	EC	Electrical Circuits Lab	2 2	1	
8	CS	Computer Programming Lab	4	2	
9		Institutional Orientation	2	0	
		Total	29	23	

4 year BTech New Approved Curricula for Information Technology wef 2017-18 batch

		BTech II semester (B	(2)		
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - II	3	3	
2	MA	Mathematics-II	4	4	
3	PH	Physics-II	4	4	
4	EC	Basic Electronic Devices and Circuits	4	4	
5	CS	Data Structures	4	4	
6	PH	Physics Lab-II	2	1	
7	EC	Basic Electronics Lab	2	ensured about	the problem one property

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8	CS	Data Structures and Computer Programming Lab			
9	IT	Departmental Orientation	2	0	
		Total	29	23	

4 year BTech New Approved Curricula for Information Technology wef 2017-18 batch

		BTech III semester (B3)			
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev – III	3	3	
2	MA	Mathematics-III	4	4	
3	EC	Digital Electronics	4	4	
4	CS	Object Oriented Programming	4	4	
5	CS	Database Systems	4	4	
6	EC	Digital Electronics Lab	2	1	
7	CS	Object Oriented Programming Lab	2	1	
8	CS	Database Systems Lab	2	1	
9	CS	Unix Programming Lab	2	1	
		Total	27	23	

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4 year BTech New Approved Curricula for Information Technology wef 2017-18 batch

		BTech IV semester (B4)	ľ		
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev – IV	3	3	
2	MA	Mathematics-IV	4	4	
3	EC	Signals and Systems	4	4	
4	IT	Computer Organisation	4	4	•
5	CS	Fundamentals of Algorithms	4	4	
6	EC	Signals and Systems Lab	2	1	
7	CS	Computer Organisation Lab	2	1	

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8	CS	Algorithms Lab	2	1 1	
9	IT	Multimedia Development Lab I	2	1	
10	Civ	Environmental Studies	3	3	
		Total	30	26	

4 year BTech New Approved Curricula for Information Technology wef 2017-18 batch

		BTech V semester (B5)			
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev – V	3	3	
2	EC	Communication Systems	4	4	
3	CS	Operating Systems	4	4	
4	CS	Software Engineering	4	4	
5	EC	Communication Systems Lab	2	1	
6	CS	Operating Systems Lab	2	1	
7	CS	Software Engineering Lab		1	
8	IT	Web Technology Lab	2 2 3	1	
9	IT	DE-I	3	3	
10	IT	Project Part-I	6	3	
		Total	32	25	

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4 year BTech New Approved Curricula for Information Technology wef 2017-18 batch

6.16.16		BTech VI semester (B6)		Part and the second	
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev – VI	3	3	Tromanico
2	CS	Computer Networks	4	4	
4	IT	Data Mining	4	4	
5	CS	Computer Networks Lab	2	1	
7	IT	Multimedia Development Lab II	2	1	
8	IT	Data Mining Lab	2	1	
2	IT	Computer Graphics	4	4	property and

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3	IT	Computer Graphics Lab	2	1 1	
9	IT	DE-II	3	3	
10	IT	Project Part II	6	3	
		Total	32	25	

4 year BTech New Approved Curricula for Information Technology wef 2017-18 batch

		BTech VII semester (B7)			
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - VII	3	3	
2	CS	Software Testing and Debugging	4	4	
3	cs	Software Testing and Debugging Lab	2	1	
4	IT	Web Application Engineering	4	4	
5	IT	DE-III	3	3	
6	IT	DE-IV	3	3	
7	ΙΤ	Project Part I	14	7	
		Total	33	25	

JES

4 year BTech New Approved Curricula for Information Technology wef 2017-18 batch

		BTech VIII semester (B8			
SN	Sub Code	Subject	Contact hours	Credits	Remarks
1	PD	Professional Dev - VIII	3	3	
2	IT	Information Systems	4	4	
3	IT	Information Systems Lab	2	1	
4	PH	Material Science	4	4	
5	IT	DE-V	3	3	
6	IT	DE-VI	3	3	Walter State Control
7	IT	Project Part II	14	7	
		Total	33	25	erior or element access

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		List of Electives	
		(To be updated from time to	RESERVED AND ACCURAGE AND ACCURACY AND ACCURAGE AND ACCURACY AND ACCUR
		time)	A STATE OF THE STA
1	MA	Algebraic Number Theory	
2	BT	Bio-informatics	
3	IT	Computer Games	
4	IT.	Cryptography and Network	Holomorphic management of the control of
		Security	
5	IT	E-commerce	
6	IT	Geographic Information Systems	
7	IT	Human Aspects for Information	
		Technology	
8	CS	Image Processing	
9	MA	Integral Transforms	
10	IT	Learning Sciences and	
		Technology	
11	EC	Mobile Communications	
12	IT	Multimedia Content Creation	
13	MA	Operation Research	
14	MA	Partial Differential Equations	
15	PH	Quantum Computing	
16	PH	Special Theory of Relativity	
17	CS	Systems Programming	
18	MA	Abstract Algebra	
19	CS	Artificial Intelligence	
20	PH	Astrophysics	
21	BT	Biosciences	
22	IT	Computer Animation	
23	CS	Computer Graphics	
24	CS	Design of Database Sytems	
25	IT	Enterprise Application	
		Development	
26	MA	Game Theory	
27	PH	General Theory of Relativity	
28	MA	Graph Theory	
29	IT	Human Computer Interaction	
30	CS	Multi-Dimensional Data Structures	
31	PH	Nano Science and Technology	
32	CS	Network Programming	
33	MA	Numerical Analysis	PERSONAL PROPERTY.
34	AIT	Research Methodology	
35	CS	Software Engineering	RESIDENCE THE PROPERTY OF THE



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Management		
Credit Summary	Credits	
Sem1	23	
Sem2	23	
Sem3	23	
Sem4	26	
Sem5	25	
Sem6	25	
Sem7	25	
Sem8	25	
Total	195	



Annexure 4

DEPARTMENT OF CIVIL ENGINEERING

B. Tech. Structure for admissions of 2017-18:

Subject Code	B.Tech. Civil Engineering Scheme Subject Title	Credits	Contac
	SEMESTERI		- Houre
10B11PD111	Presentation and Communication Skills	3	3
10B11PD199	English	0	2
10B11MA111	Mathematics-I	4	4
10B11PH111	Physics-I	4	4
10B11EC111	Electrical Circuit Analysis	4	4
10B11CI111	Introduction to Computers and Programming	4	4
10B17PH171	Physics Lab-I	1	2
10B17EC171	Electrical Circuits Lab	1	2
10B17CI171	Computer Programming Lab	2	4
	Total	23	30
	SEMESTER II		
10B11PD211	Group and Co-Operative Processes	3	3
10B11MA201	Mathematics - II	4	4
11B11CE211	Building Materials and Construction	4	4
10B11CE211	Engineering Mechanics	4	4
10B11CL212	Chemistry	4	4
11B17CE271	Engineering Graphics and Cad Lab	2	4
10B17CE271	Workshop Practices	1	2
10B17CL271	Chemistry Lab	1	2
	Total	23	29
	SEMESTER III		
10B11PD311	Managerial Economics	3	3
10B11MA312	Numerical Methods	4	4
10B11EC311	Electrical Machines and Instruments	4	4
10B17EC371	Electrical Machines and Instruments Lab	1	2
10B11CE311	Mechanics of Solids	4	4
10B11CE312	Fluid Mechanics	4	4
11B17CE371	Geology and Material Testing Lab	2	4
10B17CE372	Fluid Mechanics Lab	1	2
	Total	23	27
	SEMESTER IV		
10B11PD411	Financial Management	3	3
10B11CE411	Geotechnical Engineering	4	4
10B11CE412	Surveying	4	4

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Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)



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10B11CE413	Structural Analysis	4	4
11B11CE411	Concrete Technology	4	4
10B17CE471	Geotechnical Lab	2	4
10B17CE472	Surveying Lab	2	4
10B11GE411	Environmental Studies	3	3
	Total	26	30
	SEMESTER V		
10B11PD511	Social and Legal Issues	3	3
10B11CE511	Highway Engineering	4	4
10B11CE512	Design of Concrete Structures	4	4
10B11CE513	Water Resources Engineering	4	4
10B11CE514	Water Supply Engineering	4	4
	Elective 1	4	4
10B17CE571	Highway Engineering Lab	1	2
10B17CE572	Concrete Lab	1	2
	Minor Project	4	2
10B17CE574	Environmental Engineering Lab-I	1	2
	Total	28	33
	SEMESTER VI		
10B11PD611	Project Management	3	3
10B11CE611	Design of Steel Structures	4	4
10B11CE612	Foundation Engineering	4	4
10B11CE613	Sewage Treatment and Disposal	4	4
10B11CE614	Transportation Engineering	4	4
10B11CE615	Advanced Structural Analysis	4	4
	Elective 2	3	3
10B17CE672	Foundation Engineering Lab	1	2
10B17CE673	Environmental Engineering Lab-II	1	2
	Total	28	30
	SEMESTER VII		
10B1GPD73*	Entrepreneurial Development/Managing Marketing of Technology	3	3
10B13CE73*	Elective 3	3	3
10B13CE73*	Elective 4	3	3
10B13CE73*	Elective 5	3	3
10B19CE791	Major Project, Part-I	10	20
1301000101	Total	22	32
	SEMESTER VIII		
11B1WPD83*	HSS Elective	3	3
1*B13CE83*	Elective 6	3	3
1*B13CE83*	Elective 7	3	3
1*B13CE83*	Elective 8	3	3
10B19CE891	Major Project, Part-II	10	20
100 190E091	Total	22	32
	IOtal	fine fine	





B Tech Course Structure 2017-18 ECE

S. No.	Subject Code	Name of the Subjects	THE 24 SALES	ours		Credits	
			H	oure	P		
1	10B11PD111	Presentation & Communication Skill	3	0	0	3	
2	10B11MA111	Mathematics-I	3	1	0	4	
3	10B11PH111	Physics-I	3	1	0	4	
4	10B11EC111	Electrical Circuit Analysis	3	1	0	4	
5	10B11CI111	Introduction to Computer and Programming	3	1	0	4	
6	10B17PH171	Physics Lab-I	0	0	2	1	
7	10B17EC171	Electrical Circuits Lab	0	0	2	1	
8	10B17C1171	Computer Programming Lab	0	0	4	2	
9	10B19GE199	Institutional Orientation		0	0	0	
9	1001901199	mstitutional Orientation	- 0	U			
		U SEMPSTED	.1	<u> </u>	Total	23	
S.No.	Subject Code	II SEMESTER Subject Names	10			Credits	
S.140.	Subject Code	Subject Names	Course Hours			Orealts	
			L	T	P		
1	10B11EC211	Basic Electronics & Device Circuits	3	1	0	4	
2	10B11PD211	Group and Cooperative Processes	3	0	0	3	
3	10B11MA211	Discrete Mathematics	3	1	0	4	
4	10B11PH211	Physics-II	3	1	0	4	
5	10B11CI211	Data Structures	3	1	0	4	
6	10B17EC271	Basic Electronics Lab	0	0	2	1	
7	10B17PH271	Physics Lab-II	0	0	2	1	
8	10B17Cl271	Data Structures and Computer Programming Lab	0	0	4	2	
9	10B19EC299	Departmental Orientation	0	0	0	0	
				Ì	Total	23	
		III SEMESTER					
S. No.	Subject Code	Name of the Subjects	25 25	Course Hours		Credits	
			L	T	Р	3-5	
1	10B11PD311	Managerial Economics	3	0	0	3	
2	10B11MA201	Mathematics-II	3	1	0	4	
3	10B11EC311	Electrical Machines and Instruments	3	1	0	4	
4	10B11EC301	Signals & Systems	3	1	0	4	

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5	10B11EC312	Analogue Electronics	3	1	0	4
3	10B17EC371	Electrical Machines and Instruments Lab	0	0	2	1
7	10B17EC307	Signals and Systems Lab	0	0	2	1
3	10B17EC372	Analogues Electronics Lab	0	0	2	1
9	10B28CI408	Multimedia Development Lab-l	0	0	2	1
					Total	23
		IV SEMESTER				
S.No.	Subject Code	Subject Names	CONTRACTOR OF THE PARTY.	urse urs	•	Credits
			L	T	Р	
1	10B11PD411	Financial Management	3	0	0	3
2	10B11MA411	Probability Theory and Random Processes	3	1	0	4
3	17B11EC411	Electromagnetic Engineering	3	1	0	4
4	10B11EC401	Digital Electronics	3	1	0	4
5	17B11EC412	Analogue and Digital Communications	3	1	0	4
6	10B11GE411	Environmental Studies	3	0	0	3
7	10B17EC471	Devices and Circuit simulation Lab	0	0	2	1
8	10B17EC407	Digital Electronics Lab	0	0	2	1
9	17B11EC471	Analogue and Digital Communications Lab	0	0	2	1
10	10B17Cl307	Unix Programming Lab	0	0	2	1
					Total	26
	<u> </u>	V SEMESTER				1
S. No.	Subject Code	Name of the Subjects	Co	urs	e Hours	Credits
	1		L	Ī	` P	
1		HSS Elective-I	3	C	0	3
2	17B11EC511	Linear Integrated Circuits	3	1	0	4
3	10B11EC512	Digital Signal Processing	3	1	0	4
4	10B11CI401	Microprocessor and Controllers	3	1	0	4
5	17B17EC571	Linear Integrated Circuits Lab	0	(2	1
6	10B17EC572	Digital Signal Processing Lab	0	(1
7	10B17Cl407	Microprocessor and Controllers Lab	0) 2	1
8		Network Analysis and Synthesis	3		1 0	4
9		Open Elective- I	3	SE N	0 0	3
10		Minor Project-I	0		0 2	2
					Tota	ıl 27
		VI SEMESTER				1 2
S.No.	Subject Code	Subject Names			e Hours	Credite
			L	CHE 10	T P	10 TE
1		HSS Elective-II	3		0 0	3
2	10B11EC611	Telecommunication Networks	3		1 0	4







3	10B11EC612	VLSI Technology and Applications	1?	3	11	0	4
4	10B11PH611	Material Sciences	일반 (원)	3	1	0	4
5	10B11Cl614	Object Oriented Systems and Programming			1	0	4
6		Open Elective-II			0	0	3
7	10B17EC671	Telecommunication Networks Lab	10		0	2	1
8	10B17EC672	VLSI Lab			0	2	1
9	10B17CI674	Object Oriented Systems and Programming Lab	C		0	4	2
10		Minor Project-II	C)	0	2	2
11	10B19GE698	Industrial Training	C)	0	0	0
						Total	28
		VII SEMESTER				l	
S, No.	Subject Code	Name of the Subjects		Course Hours		Credits	
				L	T	P	
1		HSS Elective-III		3	0	0	3
2	10B19EC791	Project Part-I		0	0	7	7
3	17B11EC512	Antenna theory and Design		3	1	0	4
4	17B17EC572	Antenna theory and Design Lab		0	0	1	1
5	E1	DE-I [Choose Any one]		3	0	0	3
6	E2	DE-II [Choose Any one]		3	0	0	3
7	E3	DE-VI [Choose Any one/ Open departmental]		3	0	0	3
						Total	24
O NI-	10111101	VIII SEMESTER					
S.No.	Subject Code	Subject Names		our:	5		Credits
			L	Т	P		
1		PD Elective-II	3	0	0		3
2	E1	DE-IV [Choose Any one]	3	0	0		3
3	E2	DE-V [Choose Any one]	3	0	0		3
4	E3	DE-VI [Choose Any one/ Open departmental]	3	0	0		3
5	10B19EC891	Project Part II	0	0	9		9
					T	otal	21

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B Tech Course Structure 2017-18 BI

SEMESTER I

Sr. No.	Course	Hour	Credits				
	No.	Title	L Total		T	P	
1.	10B11PD111	Presentation and communication skill	3	0	0	3	3
2.	10B11MA112	Basic Math-I/ OR	3	1	0	4	4
	13B11BT111	Fundamental Biology	2	1	0	3	3
3.	10B11PH111	Basic Engineering & Applied Physics	3	1	0	4	4
4.	13B11BI112	Cell and Molecular Biology	3	1	0	4	4
5.	10B11CI111	Introduction to Computers & Programming	3	1	0	4	4
6.	10B17PH171	Physics Lab-I	0	0	2	2	1
7.	13B17BI173	Introduction to Biocomputing Lab	0	0	2	2	1
8.	10B17CI171	Introduction to Computers & Programming Lab	0	0	4	4	2
9.	13B17BI174	Biological Database Systems Lab	0	0	2	2	1
10.	13B17BI172	Cell and Molecular Biology Lab	0	0	2	2	1
11.	13B17BT171	Fundamental Biology Lab	0	0	2	2	1
		Total				34	25

SEMESTER II

Sr. No.	Course			Contact Hours					
	No.	Title	L Tota	ıl	T	P			
1.	10B11PD211	Group and Cooperative Processes	3	0	0	3	3		
2.	10B11MA212	Basic Math-II	3	1	0	4	4		
3.	14B11BI411	Molecular Genetics	3	1	0	4	4		
4.	10B11BI211	Structural Biology	3	1	0	4	4		
5.	10B11CI211	Data Structures	3	1	0	4	4		
6.	14B17BI272	Molecular Modeling Lab	0	0	4	4	2		
7.	10B17BI271	Structural Biology Lab	0	0	2	2	A DESCRIPTION OF THE		

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8.	10B17CI271	Data Structures & Computer	0	0	4	4	2
		Programming Lab					
9.	14B17BI471	Molecular Genetics Lab	0	0	2	2	1
	Service of the contract of the	Total				31	25

SEMESTER III

Sr. No.	Course			C	ontac	t	Credits
			Hou	rs			
	No.	Title	L Tota	l	Т	P	
1.	10B11PD311	Managerial Economics	3	0	0	3	3
2.	10B11MA311	Probability & Statistics	3	1	0	4	4
3.	10B11CI312	Database Systems	3	1	0	4	4
4.	10B11BI311	Biological Computation	3	1	0	4	4
5.	14BI1BI311	Microbiology & Immune System	3	1	0	4	4
7.	10B17CI372	Database Systems Lab	0	0	2	2	1
8.	10B17BI371	Biological Computation Lab	0	0	4	4	2
9.	14B17BI371	Microbiology & Immune System Lab	0	0	2	2	1
10.	14B17BI372	Linux Lab	0	0	4	4	2
		Total				31	25

SEMESTER IV

Sr. No.	Course	Hour	Credits				
	No.	Title	L Tota	l	Т	P	
1.	10B11PD411	Financial Management	3	0	0	3	3
2.	10B12MA421	Biostatistics	3	1	0	4	4
3.	15B11BI411	Genetic Engineering and Genomics	3	1	0	4	4
4.	10B11CI311	Object Oriented Programming				4	4
5.	15B11BI421	Programming Languages for Bioinformatics	3	1	0	4	4
6.	10B11GE411	Environmental Studies	3	0	0	3	3
7.	15B11BI471	Genetic Engineering and Genomics Lab	0	0	2	2	1
8.	10B17CI371	Object Oriented Programming Lab	0	0	2	2	1
9.	15B12MA481	Bio-Statistics Lab	0	0	2	2	1
10.	15B11BI472	Programming Languages for Bioinformatics Lab	0	0	2	2	
	The second of the production of the second	Total	of the same		1	30	26

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SEMESTER V

Sr.	Course	Course			ontac	t Hours	Credits
No.	No.	Title	L	al	Т	P	Tables (19 for the
1.	10B11PD511	Social & Legal Issues	3	0	0	3	3
2.	10B11CI	Elective from CS Department	3	1	0	4	4
3.	15B11BI511	Structural Bioinformatics	3	1	0	4	4
4.	15B11BI512	Computational Genomics	3	1	0	4	4
5.	10B11BI512	Scripting Languages for BI	3	1	0	4	4
6.	10B17CI472	Fundamentals of Algorithms Lab	0	0	2	2	1
7.	15B17BI571	Structural Bioinformatics Lab	0	0	2	2	1
8.	10B17BT671	Computational Genomics Lab	0	0	2	2	1
9.	15B17BI572	Advanced Database System Lab	0	0	2	2	1
10.	10B17BI572	Scripting Languages for BI Lab	0	0	2	2	1
11.	15B17BI574	Biomedical Informatics Lab	0	0	2	2	1
		Total				31	25

SEMESTER VI

Sr. No.	Course			Hours		ontac	t	Credits
	No.	Title	Title		L Total			
1.	10B11PD611	Project Management/Open Elective	;	3	0	0	3	3
2.	10B11BI612	Machine Learning for Bioinformatics	or	3	1	0	4	4
3.	16B11B1611	Computer Aided Drug Design		3	1	0	4	4
4.	16B11B1612	Data Warehousing and Mining f Bioinformatics	òr	3	1	0	4	4
5.	10B11BI614	Advanced Algorithms f Bioinformatics	or	3	1	0	4	4
6.	10B17BI672	Machine Learning f Bioinformatics lab	or	0	0	2	2	1
7.	16B17BI671	Computer Aided Drug Design Lab		0	0	4	4	2
8.	16B17B1672	Data Warehousing and Mining f Bioinformatics Lab	or	0	0	2	2	1
9.	10B17BI674	Advanced Algorithms f Bioinformatics Lab	or	0	0	2	2	1
10.	16B17BI673	R Language Lab		0	0	2	2	1
		Minor Project			12703			4
		Total					31	29

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SEMESTER VII

Sr.	Course	Course			Contact Hours				
No.	No.	Title	L Total		T	P			
1.		Professional Dev – VII/Open Elective/Moocs	3	0	0	3	3		
2.		DE-I	3	0	0	3	3		
3.		DE-II	3	0	0	3	3		
4.		DE-III	3	0	0	3	3		
	10B19BI791	Project Part-I				20	08		
		Total				32	20		

SEMESTER VIII

Sr.	Course			Contact Hours				
No.	No.	Title			T	Р		
1.		Professional Dev – VIII Open Elective/Moocs	3	0	0	3	3	
2.		DE-IV	3	0	0	3	3	
3.		DE-V	3	0	0	3	3	
4.		DE-VI	3	0	0	3	3	
	10B19BI891	Project Part-II				20	8	
		Total				32	22	
		Total Credits in B.Tech.Bioinformatics					195	



B.Tech Curriculum for Biotechnology

B.Tech I semester (B1)

Sr. No.	Course			Contact Hours					
	No.	Title	L Tota	al	T	P			
1	10B11PD111	Presentation and Communication Skills	3	0	0	3	3		
2	10B11MA112	Basic Math-I/ OR	3	1	0	4	4		
	13B11BT111	Fundamental Biology	2	1	0	3	3		
3	16B1PH112	Basic Engineering & Applied Physics	3		0	4	4		
4	13B11BT112	Cell Biology	3	2	0	5	4		
5	13B21CI121	Introduction to Computers and Basic Programing	3	1	0	4	4		
6	10B17PH171	Physics Lab-1	0	0	2	2	1		
7	13B17BT172	Cell Biology Lab	0	0	4	4	2		
8	13B17BT173	GLP and Instrumentation Lab	0	0	4	4	2		
9	13B18CI281	Basic Computer Programming Lab	0	0	4	4	2		
	13B17BT171	Fundamental Biology Lab	0	0	2	2	1		
		Total				33	25		
	10B11PD199	English* (*This subject will be offered as an audit course for students with less than 60% marks)							

B.Tech II semester (B2)

Sr. No.	Course			Contact Hours					
	No.	Title	L Tota	1	T	P			
1	10B11PD211	Group and Cooperative Processes	3	0	0	3	3		
2	10B11MA212	Basic Math-II	3	1	0	4	4		
3	10B11BT411	Genetics	3	2	0	5	4		
4	14B11BT211	General Chemistry	3	2	0	5	4		
5	14B21CI211	Basic Data Structures	3	1	0	4	4		
6	10B17BT471	Genetics Lab	0	0	4	4	2		
7	14B17BT271	Chemistry Lab	0	0	2	2	1		
8	14B27CI271	Basic Data Structures & Computer	0	0	4	4	2		

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Programming Lab			nuscial and a second
Total		31	24

B.Tech III semester (B3)

Sr. No.	Course			Contact Hours				
	No.	Title	L Tota	1	Т	P	Kalendaria.	
1	10B11PD311	Managerial Economics	3	0	0	3	3	
2	10B11MA311	Probability & Statistics	3	1	0	4	4	
3	10B11BT311	Thermodynamics & Chemical Processes	3	2	0	5	4	
4	10B11BT312	Biochemistry	3	2	0	5	4	
5	10B11BT313	Microbiology	3	2	0	5	4	
6	10B17BT371	Thermodynamics & Chemical Processes Lab	0	0	2	2	1	
7	10B17BT372	Biochemistry Lab	0	0	4	4	2	
8	10B17BT373	Microbiology Lab	0	0	4	4	2	
		Total				32	24	

B.Tech IV semester (B4)

Sr. No.	Course	Course			Contact Hours					
	No.	Title	L Tota	ıl	Т	P				
1	10B11PD411	Financial Management	3	0	0	3	3			
2	10B11BT412	Cell Culture Technology	3	2	0	5	4			
3	15B11EC411	Basic Electronics	3	1	0	4	4			
4	10B11PH212	Biophysical Techniques	3	1	0	4	4			
5	10B11BT413	Molecular Biology	3	2	0	5	4			
7	10B11GE411	Environmental Studies	3	0	0	3	3			
8	10B17BT474	Molecular Biology Lab	0	0	4	4	2			
9	10B17BT472	Animal Tissue Culture Lab	0	0	2	2	1			
10	10B17BT473	Plant Tissue Culture Lab	0	0	2	2	1			
11	15B11EC471	Basic Electronics Lab	0	0	2	2	1			
		Total				34	27			

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B.Tech V semester (B5)

Sr.	Course			Contact Hours				
No.	No.	Title	L Tota	al	Т	P		
1	10B11PD511	Social & Legal Issues	3	0	0	3	3	
2	10B11BI	Elective course from Bioinformatics	3	2	0	5	4	
3	15B11BT511	Bioprocess Engineering	3	2	0	5	4	
4	10B11BT513	Genetic Engineering	3	2	0	5	4	
5	10B11BT514	Immunology	3	2	0	5	4	
6	10B17BT571	Bioinformatics Lab	0	0	2	2	1	
7	15B17BT571	Bioprocess Engineering Lab	0	0	4	4	2	
8	10B17BT573	Genetic Engineering Lab	0	0	4	4	2	
9	10B17BT574	Immunology Lab	0	0	2	2	1	
		Total				35	25	

B.Tech VI semester (B6)

Sr. No.	Course	Course			ontac	t	Credits	
	No.	Title			T	P		
1	10B11PD611	Project Management/Open Elective	3	0	0	3	3	
2	10B11BT611	Comparative and Functional genomics	3	2	0	5	4	
3	10B11BT612	Food and Agricultural Biotechnology	3	2	0	5	4	
4	16B11BT611	Downstream Processing	3	2	0	5	4	
5	10B11BT615	Diagnostics & Vaccine Manufacture Technologies	3	2	0	5	4	
6	10B17BT671	Comparative and Functional Genomics Lab	0	0	4	4	2	
7	10B17BT672	Food and Agricultural Biotechnology Lab	0	0	4	4	2	
8	16B17BT671	Downstream Processing Lab.	0	0	4	4	2	
9	10B17BT675	Diagnostics & Vaccine Manufacture Technologies Lab	0	0	2	2		
10	10B19GE698	Industrial Training					0	
		Minor Project					4	
SHOULD NAME	and Replace and Secretary	Total	No. 10		21.00	37	28	

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B.Tech VII semester (B7)

Sr. No.	Course		t Hours	Credits			
	No.	Title	L Tota		T	P	
1	S RESIDENCE CONTRACTOR	PD Elective-I	3	0	0	3	3
2		DE-I	3	0	0	3	3
3		DE-II	3	0	0	3	3
4		DE-III	3	0	0	3	3
5	10B19BT791	Project Part I				20	8
		Total				32	20

B.Tech VIII semester (B8)

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L Tota		T	P	
1		PD Elective-II	3	0	0	3	3
2		DE-IV	3	0	0	3	3
3		DE-V	3	0	0	3	3
4		DE-VI	3	0	0	3	3
5	10B19BT891	Project Part II				20	8
		Total				32	22
		Total Credits in B.Tech.Biotechnology	10				195



Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS in Biotechnology & Bioinformatics held on 30.05.2018

A meeting of Board of Studies of the Department of Biotechnology & Bioinformatics was held on 30.05.2018at 11:00 AM in the Board room.

	lowing BoS Members were present.	7
1	Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics, JUIT Waknaghat	2018
2	Dr. Anil Kant Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat	And KO 20/5/20
3	Dr TC Bhalla Professor Emeritus Department of Biotechnology HPU Shimla	-D-E
4	Mr. Girish Minocha Managing Director Minchys Industries, Shoghi& Kandaghat	wind
5	Dr Tirtha Raj Singh Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat)	Softer 18
6	Dr. Harish Changotra, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat	Ati
7	Dr. Jayshree Ramana, Assistant Professor (Senior Grade), Department of Biotechnology and Bioinformatics, JUIT Waknaghat	Samana
8	Dr. Saurabh Bansal, Assistant Professor (Grade II), Department of Biotechnology and Bioinformatics, JUIT Waknaghat	030-30105 Tull
9	Head Department of Computer Science and Engineering, JUIT Waknaghat	AM for
10	Head Department, Electronics and Communication Engineering, JUIT Waknaghat	Leave 7
11	Head Department of Physics and Materials Science, JUIT Waknaghat	Shell
12	Head Department of Mathematics JUIT Waknaghat	Leave of As Sene
13	Head Department of Civil Engineering, JUIT Waknaghat	A.
14	Head Department of Humanities and Social Sciences, JUIT Waknaghat Repersented by Traiamsika Gantun	for Triambice



Agenda

- 1. To discuss and approve 1st year courses of new 160 credit hour curriculum of B. Tech. Biotechnology and B. Tech. Bioinformatics which is recommended by Program evaluation committee.
- 2. To discuss and approve course curriculum and syllabi of M.Sc Biotechnology and M.Sc. Bioinformatics which is recommended by Program evaluation committee.
- 3. Modification and approval M. Tech. Biotechnology course curriculum and syllabi

The meeting started with welcome note from Prof Sudhir Kumar and Dr Anil Kant presented the agenda of the meeting to the members. The board discussed the agenda items one by one and following are the recommendation of the BoS.

Agenda Item 1

To discuss and approve 1st year courses of new 160 credit hour curriculum of B. Tech. Biotechnology and B. Tech. Bioinformatics which is recommended by Program evaluation committee.

Resolution

The members were upraised about new AICTE B.Tech 160 credit hour scheme. The proposed 1st year courses of new 160 credit hour curriculum of B. Tech. Biotechnology was discussed.

- 1. Prof Sudhir Kumar proposed that in B.Tech Biotechnology program Genetics course in 2nd semester should be run at LTP 3 0 0 instead of 2 0 0. All the members agreed that can be done by having 21 credits in 2nd semester if allowed or reducing one credit hour from Biophysical Techniques and making its L T P as 3 0 0 instead of 3 1 0.
- 2. Rest of the scheme was approved by BoS members as proposed:
- 3. B.Tech. Bioinformatics curriculum scheme was approved as presented.

Agenda Item 2

To discuss and approve course curriculum and syllabi of M.Sc Biotechnology and M.Sc. Bioinformatics which is recommended by Program evaluation committee.

Resolution

- The proposed M.Sc Biotechnology curriculum was discussed and following resolution was made.
 - a. Prof TC Bhalla proposed a change in nomenclature of course- 'Microbial Technology' to 'General Microbiology' which was accepted by all the members and approved.
 - b. Prof TC Bhalla proposed a change in nomenclature of course- 'Biochemistry and Metabolism' and associeted lab to 'Biochemistry and Intermediary Metabolism' which was accepted by all the members and approved.
 - c. Prof TC Bhalla proposed to shift two specialized courses from 2nd semester to 3rd semester which was also approved by the members.

d. Two core courses were shifted from 3rd semetre to 2nd semester as suggested by Prof.T.C. Bhalla on approval of all the members.

2. The proposed M.Sc Bioinformatics curriculum was discussed approved as presented.

3. The detailed syllabi of MSc BI and BT courses of were circulated among the members which were also approved with some minor modifications as suggested by the members.

Agenda Item 3

Modification and approval M. Tech. Biotechnology course curriculum and syllabi

Resolution

- A. The name of course "Research Methodology" was suggested to be changed to "Research Methodology and Inferential Statistics" (18MS1BT116). The syllabus of this course was changed including inferential statistics. The course will be common to 1st semester of MSc Biotechnology, MSc Bioinforatics and M Tech Biotechnology.
- B. The course code of "Advances in Molecular Cell Biology" (New code 18M11BT117) and "Advances in Molecular Cell Biology lab" (New code 18M11BT177) were changed with minor modifications in the syllabus. This courses will be common to in 1st semeter of MSc Biotechnology, M Tech Biotechnology.

Both A and B approved by all the BoS members.

C. It was proposed by Prof S.P. Gharera and Prof A.K Gupta that M.Tech curriculum need to be modified so that theory and lab courses are allocated in 1st and 2nd semester only. All the members agree that this will facilitate students to take project work at other institutes or on job project work in 3rd and 4th semester if need arises. Prof S.P. Gharera suggested to allocate two elective courses in 1st and 2nd semester each and a 2 credit hour seminar in 3rd and 4th semester. Prof A.K Gupta and Prof S.P. Gharera mentioned that other Departments of University are also following the same pattern.

This proposal was referred to the Departmental Program Evaluation committee to come up with the modified M.Tech curriculum scheme.

Mr. Girish Minocha suggested to strengthen basic chemistry and Biochemistry lab acid base titration (easement of acidity), balancing of biochemical equations, concentration calculation etc. to make students industry ready.

Dr Anil Kant Associate Professor

Member Secretary, BoS Department of Biotechnology

JUIT Waknaghat

Prof. Sudhir Kumar

Chairman BoS, HOD Department of

Biotechnology, JUIT Waknaghat

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT Department of Civil Engineering Minutes of the BOS meeting

Venue:

Board Room JUIT Waknaghat

Date:

08/11/2017 15:00 Hrs

The following were present in the meeting:

Prof. Ashok Kumar Gupta
Prof. S. K. Singh
Prof. S. P. Ghrera
Prof. Karanjeet Singh
Prof. Sudhir Kumar

HOD CE, Chairman
External Expert, Member
HOD CSE/IT, Member
HOD Mathematics, Member
Acting HOD BT/BI, Member

Dr. Anupriya Kaur HOD HSS, Member

Prof. Veeresh Gali Member
Dr. Ashish Kumar Member
Dr. Rajiv Ganguly Member

Dr. Gyani Jail Singh Member Secretary

Dr. Yeshpal Vasishta and Ms. Surabhi Sharma, members, could not make it to the meeting.

Agenda 1: To discuss and approve the new Civil Engineering (B. Tech.) scheme.

Resolution: All the members present were of the firm opinion that B. Tech Civil Engineering Scheme should be of 176 Credits.

The new Civil Engineering B. Tech. scheme [Annexure I] of 176 credits was discuss and approved with few comments as:

(1) The credits of all courses of HSS and basic sciences must be fixes centrally

(2) The courses of Water Resources Engineering and Irrigation Engineering may be clubbed together.

(3) During first year a course like introduction to civil engineering may be included in order to strengthen the departmental level orientation

It was also approved that the present 195 credit B. Tech Civil Engineering scheme should be revised in order to make it Choice Based Credit System (CBCS) scheme w.e.f. academic session 2017-18. The approved scheme is attached in Annexure 11.

Agenda 2: To discuss and approve restarting of the lateral entry scheme at B. Tech. (CE) for diploma students.

Resolution: It was discus and approved.

Agenda 3: To discuss and approve the completion of theory/lab courses in the Ist and II^{nd'} semester only for M. Tech.

1/2



Resolution: It was approved.

Agenda 4: To discuss and approve the minimum requirement of research papers for the award of the M.

Tech. Degree, particularly if only thesis work in 2nd year.

Resolution: After detail deliberation it was not approved.

Agenda 5: To consider and approve the unpaid Indian Citation Indexed (ICI) and UGC approved

journals for the award of the Ph. D. Degree.

Resolution: It was approved that unpaid Indian Citation Indexed (ICI) Journals and unpaid UGC

approved Journals should also be considered for the award of the Ph. D. Degree.

(Prof AK Gypta)

HELTA MAKNAGHA

CIVIL ENGINEERING DEPARTMENT

MINUTES OF BOS MEETING HELD ON 11 MAY 2018

Board of Studies meeting was held on 11th May 2018 in board room at 11.30AM. The following were present:

Prof. Ashok Kumar Gupta, Chairman

Prof. S P Ghrera HoD CSE, Member

Prof. S K Singh, PEC Chandigarh, Member

Prof. Sunil Khah HoD Physics nominee, Member

Prof. Veeresh Gali, Member

Dr. Ashish Kumar, Associate Professor, Member

Dr. Rajiv Ganguly, Associate Professor, Member

Dr. Tanu Sharma, HoD HSS nominee, Member

Dr. Gyani Jail Singh, Member Secretary

After detailed deliberations, revised Civil Engineering B. Tech. Curriculum of 160 credits was approved unanimously as attached under Annexure-1.



Department of Civil Engineering

Attendance Sheet

BOARD OF STUDIES MEETING held on 11th May 2018

80.00 L/2/16, 1. Prof. S. K. Singh

2. Prof. Ashok Kumar Gupta

3. Prof. Veeresh Gali

4. Dr. Ashish Kumar Acher (v. 5. Dr. Rajiv Ganguly) Rganguly

6. HOD CSE&IT

7. HOD ECE

8. HOD BL& BT

9. HOD Physics and Materials Science

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10. HOD Mathematics

12. Dr. G.J. Single A

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Head of the Occarraction	Nomination	Name	Profession	Full Postal Address	constitution
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	Members	1 Dr Vivek Schizal	Associate Prof	Will Waknashat	- FIGURES
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Assistant Registrar (Academics) Jaypee University of Information Technology Waknaghat, Distt. Solan (H.P.)

IGAC

Minutes of the Meeting

2017 <u>Department of Computer Science & Engineering and Information</u> <u>Technology Engineering</u>

Minutes of the meeting of Board of Studies in Computer Science & Engineering Department held on 18th (November 2017) at 11:30 AM in the Board Room, Jaypee University of Information Technology, Waknaghat. The following members were present:

- 1. Prof S P Ghrera, HOD CSE/IT Dept (Chairperson)
- 2. Dr. Vivek Sehgal
- 3. Dr. Hemraj Saini
- 4. Dr. Pardeep Kumar
- 5. Dr. Pradeep Kumar Singh
- 6. Dr. Shailendra Shukla
- 7. Dr. Ravindra Bhatt
- 8. Dr. Amit Kumar Singh
- 9. Dr. Suman Saha
- 10. Dr. Punit Gupta
- 11. Dr. Yugal Kumar
- 12. Prof Dr. Mayank Dave, NIT Kurukshetra
- 13. Prof Dr. Manu Sood, Director, UIIT, HP University
- 14. Nominees from the departments of Electronics & Communication Engineering, Civil Engineering, Bio-Technology/Bio-Informatics, Mathematics, Physics, and Humanities & Social Sciences.

RESOLUTIONS:

1. It was suggested by Prof Mayank Dave (external member) to increase the intake of B Tech CSE and B Tech IT only if there is a sufficient number of hostels, classrooms, tutorial rooms, and laboratories to accommodate them. He also suggested increasing the number of faculty members.

Since new classrooms and labs have been developed, CSE/IT department is now in a position to accommodate the increased intake of students. Moreover, the department of CSE/IT has recently recruited six faculty members and is still in the process of advertising for more recruitment.

In view of the above plan, it was resolved to increase the intake of B Tech (CSE) students (from 180 to 240) from 2018 batch onwards.

- 2. It was also resolved to increase the intake of B Tech IT students (from 30 to 60) from 2018 batch onwards.
- It was resolved to change the title of the programme M Tech CSE (Software System Security) to M Tech CSE (Information Security) as suggested by last Academic Council, and to offer the course from July 2018.

4. It was resolved to introduce following three elective courses for B Tech CSE/IT

Computer Game Design Design and Analysis of Real World Algorithms Mobile and Distributed Computing

It was suggested by Prof Manu Sood and Prof Mayank Dave (external members) to reduce some contents of the course "Computer Game Design," in accordance with 42 lectures. Prof Mayank Dave also suggested including Routing Algorithms, Computer Graphic Algorithms, Machine Learning Algorithms, Concurrency Control Algorithms, and Gaming Algorithms in the course "Design and Analysis of Real World Algorithms." It was resolved that Mr. Puneet Jain and Dr. Suman Saha have already amended the syllabuses of the courses "Computer Game Design" and "Design and Analysis of Real World Algorithms", respectively, as suggested, and the same have been brought up for consideration. The amended syllabuses for both of the above courses were accepted and recommended (the updated and approved course descriptions for both of the courses are given in Annexure I and II).

- 5. It was resolved to approve the changes in the course structure of B Tech (CSE) and B Tech (IT) programs as per details given on the agendas 5 and 6, respectively. It was also resolved to allow B Tech (CSE/IT) elective courses to be offered earlier and facilitate Choice-Based Credit System (CBCS) compliance.
- 6. It was resolved to approve the course structure of M Tech (CSE) and M Tech (CSE Information Security) programmes as per details given on the agenda 7.
- 7. It was resolved to introduce the Massive Open Online Courses (MOOC) for B Tech (CSE/IT) and M Tech (CSE) students as per details given on the agenda 8.
- 8. It was resolved to admit Diploma/BSc non-medical students to second year B Tech (CSE) and B Tech (IT) programmes as lateral entry admission (as per UGC/AICTE guidelines).

- **9.** The recommendations of "report on the analysis of the feedback received from stakeholders" were approved in the meeting.
- 10. Dr. Sudhir Cyal (nominee from BI/BT dept) requested to introduce a new elective course on "Python Programming" for BI/BT students.

Considering the advantages, flexibility, and demand of Python language in solving a wide variety of biological problems, it was resolved to offer "Python Programming" as an elective course for BI/BT students as per the course description attached in Annexure III.

Assistant Registrar (Academics)
Jaynee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

(HOD CSE/IT)

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0) [1987]		Nomination	Name	Profession	Full Postal Address	Date o constitution
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1010			Dr. Hem Rai Saint	Associate Prof	JUIT Waknazhat	10-Apr :18
			Dr Pradeep Kumar Gupta	Associate Prof	JUIT Waknamat	
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		Members	Dr Pradeeo K Singh	Asst Prof	JUIT Waknaghat	40 Km 10
1930	covering different specializations, to be nominated by the		Dr Raini Mohana	Asst Prof	HINT MAKEDAN	10.5n 19
	Academic Council		Dr. Shailendra	Acer Duel	IIII Waknachat	
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183			12 Prof Dr. Wanu Sood	Professor	HP University Shimla	10-Apr 18
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101	Postgraduate Meritanious alumnus nominated by VC One postgraduate mentionious alumnus, to be nominated by the VC.	Member	17 Sh. Rajkumar Tekchandani	Asst Prof	Thapar University	10-A pr-18
φ		Members	18 Dr Raieet Kumar 19 Prof Sudhir Kumar 20 Prof Ar Guota 21 Prof Ar Guota	Associate Prof Professor & HOD Professor & HOD Professor & HOD	Deptt of ECE, JUIT Deptt of BI/BI, JUIT Deptt of CE, JUIT Deptt of Marks, HIIT	10-4pr-18 10-4pr-18 10-4pr-18
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Department of Computer Science & Engineering and Information Technology Minutes of the Meeting of BOS- May 2018

Minutes of meeting of Board of Studies in the Department of Computer Science & Engineering and Information Technology, was held on 5th May, 2018 at 11:30 A.M. in the Board Room, Jaypee University of Information Technology, Waknaghat. The following members were present:

- 1. Prof S P Ghrera, HOD CSE Dept. (Chairperson)
- 2. Dr. Vivek Sehgal
- 3. Dr. Hemraj Saini
- 4. Dr. Pradeep Kumar Gupta
- 5. Dr. Pardeep Kumar
- 6. Dr. Pradeep Kumar Singh
- 7. Dr. Rajni Mohana
- 8. Dr. Shailendra Shukla
- 9. Dr. Ravindara Bhatt
- 10. Dr. Amit Kumar Singh
- 11. Dr. Rajinder Sandhu
- 12. Nominees from the departments of Electronics & Communication Engineering, Civil Engineering, Bio Technology/Bio-Informatics, Mathematics, Physics, and Humanities and Social Sciences.

Members who sent comments by Mail

- 13. Prof Manu Sood Director UIT HP University: Comments received by email.
- 14. Prof M Dave: Dean NIT Kurukshetra: Comments received by email.
- 15. Sh Prantik Thakur DXC Tech: Comments received by email.

RESOLUTIONS:

1. New Curricula: The Departmental Committee had submitted their recommendations based on 160 credit curricula on the lines of AICTE model curricula for CSE and a 180 credit curricula for Honours programme. Subsequently Prof PB Barman had submitted a new curriculum based on scheme considered at JIIT. The same was also referred to the departmental committee. The departmental committee recommended both proposals as acceptable with JIIT based proposal considered better of the two. Accordingly, after deliberation on all issues, it was resolved to recommend both the proposals with first preference for the JIIT based proposal for the curricula of Regular B. Tech. (CSE) and Honours B. Tech. (CSE). Proposals are attached at ANNEX-I-IV as under.

a) ANNEX I B Fech Regular 160 credit curricula based on JIIT (Recommended Priority-1).

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- b) ANNEX-II: B Tech Honours 180 credit curricula based on JIIT (Recommended Priority-1).
- c) ANNEX-III: B Tech Regular 160 credit curricula based on AICTE (Recommended Priority-2).
- d) ANNEX-IV: B Tech Honours 180 credit curricula based on AICTE (Recommended Priority-2).
- 2. On the similar lines as at 1 above, it was resolved to approve the curricula of Regular B. Tech. (IT) and Honours B. Tech. (IT) as under.
 - a) ANNEX-V: B Tech Regular 160 credit curricula based on JIIT(Recommended Priority-1).
 - b) ANNEX-VI: B Tech Honours 180 credit curricula based on JIIT(Recommended Priority-1).
 - c) ANNEX-VII: B Tech Regular 160 credit curricula based on AICTE(Recommended Priority-2).
 - d) ANNEX-VIII: B Tech Honours 180 credit curricula based on AICTE(Recommended Priority-2).
- 3. It was resolved to approve the following detailed course descriptions for B. Tech. CSE/IT, M. Tech. CSE, and M. Tech. CSE (IS). Placed at ANNEX-IX

	Course Code	Subject	Program
i	(18B11CI211)	Programming for Problem Solving	B. Tech
ii	(18B17CI271)	Laboratory - Programming for Problem Solving	B. Tech
iii	(18M1WCI113)	Cyber Warfare and Cyber Crime	M Tech CSE(IS)
iv	(18M11CI114)	Cryptography and Information System Security	M Tech CSE(IS)
V	(18M1WCI115) n	Secure Software Design	M Tech CSE(IS)
vi	(18M1WCI115)	Advanced Mobile and Distributed Computing	M Tech CSE
vii	(18M1WCI332)	Deep Learning	M Tech CSE
viii	(18M1WCI116)	Security Design and Architecture	M Tech CSE(IS)
ix	(18M17CI171)	Software Systems Security Lab -1	M Tech CSE(IS)
х	(18M11CI113)	Advanced Database Systems Security	M Tech CSE(IS)
xi	(18M1WCI114)	Secure Enterprise Computing	M Tech CSE(IS)
xii	(18M1WCI112)	Security Investigation	M Tech CSE(IS)
xii	(18M1WCI111)	Security Risk Analysis	M Tech CSE(IS)
xiii		Web Application Security	M Tech CSE(IS)

- 4. The report of CO-PO and PSO-PEO attainments for the Odd Semester, 2017 was approved in the meeting. Same is placed at ANNEX X
- 5. The course description of "Computer Proficiency Module" for the first year students was approved in the meeting. Same is placed at ANNEX XI
- 6. The recommendations of PEC report and the action taken on the recommendations were approved in the meeting. Same is placed at ANNEX XII.
- 7. It was resolved to approve the course descriptions of the following two programming-based courses for M.Sc. (BI). Same is placed at ANNEX XIII.

OF INFORMA

Assistant Registrar (Marien Technology Waknaghat, Distr. Solan (H.P.)

- i. Programming, C and C++ (18MS1CI111)
- ii. Programming, C and C++ Lab (18MS7CI171)

Suggestion from the external member(s):

- It was suggested by Prof. Manu Sood to include the Action Taken Report (ATR) on the feedback of employees, parents, alumni, and exit students related to the academic year 2016-17 for deliberations and further necessary action. The suggestion was considered by the BOS and action taken report included in this report.
- Prof. Mayank Dave suggested the following three points:
 - i. The course contents of "Web Application Engineering" must include Android and IoS programming.
 - ii. The course "SciLab/MATLAB" (IT-304) should be fruitful in terms of simulation exercises.
 - iii. In Open Elective/MOOC course is there some restriction or student can take any course from any where? Please ensure that it is implementable and can be graded. These are credit courses.

The above suggestions were accepted to be incorporated in the detailed course descriptions concerned.

• The proposal was fully acceptable by Mr. Prantik Thakur.

Chairman NOW and HOD CSEAFT

Prof. Dr. S.P.Ghrera, FBCS(Fellow British Computer Society), SMIEEE

Ph. D(CSE), MBA(HR & TR), ME(Hons) Computer Science, B Sc Engineering(Hons)

Head of Department & Professor

Department of Computer Science & Engineering (CSE) and IT

Jaypee University of Information Technology Waknaghat, HP, India, 173234

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http://www.juit.ac.in/faculty.php?id=63&dep=cse&page=0

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http://www.juit.ac.in/faculty.php?id=63&dep=ict&page=0

Assistant Registra Pacademics

Jaypee University of Intermation Technology

Waknaghat, Distt. Solan (H.P.)

MEMBERS OF BOARD OF STUDIES (2018)

Department of Computer Science & Engineering and Information Technology

1.	Chairperson:	Prof. S P	Ghrera,	HOD,	CSE Dept.	
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Dr. Vivek Sehgal

Dr. Hemraj Saini

High School iii. Dr. Pradeep Kumar Gupta

iv. Dr. Pardeep Kumar

Dr. Pradeep Kumar Singh

vi. Dr. Rajni Mohana

vii. Dr. Shailendra Shukla

viii. Dr. Ravindara Bhatt

ix. Dr. Amit Kumar Singh

Dr. Rajinder Sandhu

3. Nominees from the departments of ECE, Civil, Mathematics, Physics, BT/BI, and Humanities & Social Sciences:

05/05/18

Dr. Rajeev Kumar, HOD, Department of Electronics and Communication

Prof. A K Gupta, HOD, Department of Civil Engineering

Prof. Karanjeet Singh, HOD, Department of Mathematics

Prof. P B Burman, HOD, Department of Physics

Prof. Sudhir Kumar Syal, HOD, Department of Biotechnology and Bioinformatics

vi. Prof. Anupriya Kaur, HOD, Department of Humanities and Social Sciences Triansic Cart

Assistant Regist Jaypee University of Information Technology Waknaghat, Distt. Solan (H.P.)



Brif Sunil Kuman Kharh Shah

4. External Experts:

- i. Prof. Dr. Padam Kumar, JIIT, Noida
- ii. Prof. Manu Sood, Director, UIIT, HP University
- iii. Prof. Mayank Dave, NIT Kurukshetra
- 5. Representative from industry/corporate sectors:
 - i. Sh. Prantik Thakur, Service Delivery Manager, CSC, Indore
 - ii. Sh. Divyansh Srivastava, Microsoft, Redmond, WA, USA
- 6. Postgraduate Meritorious Alumnus:
 - i. Sh. Rajkumar Tekchandani, Asst Prof, Thapar University, Patiala.

HOD (CSE/IT)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT

JUIT/WKG/REGR/2017-18/480

March 7, 2018

NOTIFICATION

The Composition of the Board of Studies of the Department of Electronics & Communication Engineering of Jaypee University of Information Technology, Waknagaht, Distt. Solan (HP) is hereby notified as under:-

 Prof (Dr.) Samir Dev Gupta Dean (A&R) Chairperson

 Prof. (Dr.). D.T. Shahani Professor, Centre for Instrument Design & Development IIT, Delhi

Member

Prof. (Dr.) C.C. Tripathi
 Prof. & HOD, ECE
 University Institute of Engineering & Technology
 Kurukshetra University, Kurukshetra

Member

Dr. Balwinder Singh
 Coordinator & Principal Engineer
 Centre for Development of Advanced Computing,
 A Scientific Society of the Ministry of Communication
 & Information Technology
 A-34, Indl Area, Phase VIII, Mohali (Pb)

Member

 Dr. Rajiv Kumar Associate Professor, Deptt of ECE Member

6. Dr. Shruti Jain Associate Professor, Deptt of ECE Member

 Dr. Neeru Sharma Asst Professor, Deptt of ECE Member

8. Dr. Meenakshi Sood Asst Professor, Deptt of ECE Member

Assistant Registral (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

Contd...2



 Dr. Vikas Baghel Asst Professor, Deptt of ECE Member

Dr. Ashwani Sharma
 Asst Professor, Deptt of ECE

Member

Dr. Shweta Pandit
 Asst Professor, Deptt of ECE

Member

Dan

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Dean of Students

c.c.: Vice Chancellor,

Director & Academic Head

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OF INFORMA

Department of Electronics and Communication Engineering

JUIT Waknaghat

A meeting of Board of Studies of the Department of Electronics and Communication Engineering was held on 21.04.2018 at 10:00 AM in the Board Room.

The following members were present

1.	Prof. Samir Dev Gupta	Chairman
2.	Prof. C.C.Tripathi	External Member
3.	Dr. Balwinder Singh	External Member
4.	Dr. Rajiv Kumar	Member
5.	Dr. Shruti Jain	Member
6.	Dr. Meenakshi Sood	Member
7.	Dr. Neeru Sharma	Member
8.	Dr. Shweta Pandit	Member
9.	Dr. Ashwani Sharma	Member

Leave of absence

Leave of absence was granted to the following members by the Chairman Board of Studies:

- 1. Prof. D.T. Shahani (External Member)
- 2. Dr. Vikas Baghel (Member)

The Chairman welcomed all the members who were present for the meeting. The Chairman further appreciated and thanked the contribution made by Prof. R.C. Jain (HoD ECE, JIIT Noida, former External member), Prof. S.V. Bhooshan (former HoD and Chairman), and Prof. Ghanshyam Singh for their generous support for the growth of ECE Department as a Board of Studies member. The meeting thereafter deliberated on agenda items as had been approved by the Chairman.

Item No. 1 : Confirmation of minutes of Last Meeting of the Board of Studies held on 22.11.2017.

Confirmed

Item No. 2: Approval of new structure for courses starting from Academic Session 2018-19 of 160 credit scheme as per AICTE guidelines.

The following changes in the course structure for B.Tech. 2018-19 has been proposed:

- (i) In conformation with AICTE guidelines, External members of BoS stated Engineering Graphics and Workshop Practices are the backbone of engineering courses. All were of the view that the same should be introduced in the first year B-Tech course curriculum. In view of large number of batches, Engineering Graphics and Workshop Practices may be conducted in batches either in first or second semester, considering constraint of space for both the courses.
- (ii) External members were of the opinion that Chemistry and Chemistry Lab course may be included in the first year under Basic Science courses.
- (iii) In view of inclusion of Chemistry and Chemistry Lab courses, the syllabus of Physics-I, Physics-II and Material Science courses were discussed. External members observed that there is an overlapping in the topics of Material Science course with Physics-I and Physics-II. Therefore, it was suggested to merge the syllabus of Physics-I, Physics-II and Material Science and convert them into two core courses under Basic Sciences.
- (iv) In view of topics covered under fourth course in Mathematics, BoS suggested that Engineering Mathematics 4 should be renamed as Probability and Stochastic Processes.
- (v) After going through the syllabus of Project Management external members felt that the course should be revised as Entrepreneurship and Project Management. To bestow the information about the entrepreneurship, Prof. C.C. Tripathi said that the contents of this course should include risk management, government funding schemes for entrepreneurs and other support provided by the Government.
- (vi) Different HSS core subjects were proposed by the experts keeping AICTE model curriculum in mind: Business Economy and Organisational Behaviour. External members have suggested that IPR, Laws of Engineering and Engineering Ethics subject should be taught to the students as an elective subject.
- (vii) Currently there is a need to have knowledge for design problems, it was suggested by the BoS that some Design workshop should be introduced in the structure.
- (viii) BoS members have suggested that final year should have minimum academic load (in terms of credits) because of Placement activities, GATE, GRE and other competitive examinations.

The revised B Tech course structure with 160 credits is prepared as provided in Appendix I.



Revised changes as proposed by BoS were reviewed by the Vice Chancellor, Chairman Academic Council and following amendments for the batch seeking first year admission (2018) were approved:

- (i) Workshop Practices as introduced in first semester with 2 credits instead of 3 credits.
- (ii) Chemistry and Chemistry Lab course were replaced with Programming I and Programming I Lab course.
- (iii) The credits of Engineering Graphics course were reduced to 2 from 3 credits.
- (iv) Electronics Devices and Circuits were structured as 3-0-0 (L-T-P) in place of 3-1-0 (L-T-P) and Physics Lab II was done away with.

The revised B Tech course structure for First year is prepared as provided in Appendix II.

Item No. 3: New Core / Lab courses for B. Tech-2018-19

Board has suggested revising the syllabus of Electrical Sciences as per AICTE syllabus. Rest recommended was approved

Item No. 4: Modification in Lab courses for B.Tech-2016-17 and 2017-18

As recommended was approved

Item No. 5: Modification in courses for B.Tech-2016-17 and 2017-18

External Members suggested revision of the syllabus of the existing course of Microprocessor and Controllers. It was suggested to include Introduction to 8085 microprocessor, RISC and ARM topics and reduce 8086 portion from the syllabus.

Rest recommended was approved

Item No. 6: New Electives for B.Tech-2018-19

As recommended was approved

The meeting concluded at 13:40 hrs with a vote of thanks by **Prof. Samir Dev Gupta**, Head of Department, ECE.

Absent

(Prof. D.T. Shahani)

W.J.

(Prof. C.C. Tripathi)

(Dr. Balwinder Singh)

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NILLAMO

(Dr. Neeru Sharma)

(Dr. Ashwani Sharma)

Absert

(Dr. Vikas Baghel)

Λ

(Prof. Samir DevGupta)

(Dr. Shruti Jaih)

(Dr. Meenakshi Sood)

(Dr. Shweta Pandit)

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The Director (Academics & Remarks) Juspen University of Information Technology Wakraphen, Solan

Through: The Head, Department of Mathematics, JUTT

Subject - Mathematics Courses for research scholars

Respected Sir,

As per the departmental meeting held on 8* Jan 2017 in the office of the head of department, two new courses are proposed for the 2017 batch admitted research scholars to fulfil the credit requirements of them. The title of the above proposed courses are as follows:

- 1. Advanced Linear Algebra 17 PI WMA 231
 - 2. Mathematical Analysis Alread) Run 1391WMA 232

The complete syllabus and details of the aforesaid courses is also attached herewith.

We request you to approve the courses and provide the necessary subject codes so that the research scholars may register on the day of registration.

Thanking you,

Dr. Rakell Klimair Bigg.

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Jayree University of Information Technology Waknaghat, Distt. Solan (H.P.)

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JAYPEE UNIVERSITY OF INFORMATION TECHONOLOGY WAKNAGHAT

Department of Mathematics

Date: 1 June 2018

Minutes of Board of Studies Meeting

The Board of Studies meeting for Department of Mathematics was held on 1 June 2018 at 10:00 A.M. in the board room. The following members were present:

- 1. Prof. Karanjeet Singh, Chairman
- 2. Dr. R.S. Raja Durai, Member
- 3. Dr. Rakesh K Bajaj, Member
- 4. Dr. Neel Kanth, Member
- 4. Dr. P K Pandey, Member
- 5. Prof. S P Ghrera, HoD CSE & IT
- 6. Prof. Sudhir Syal, HoD BI & BT
- 5. Prof. S K Tomar, External Member (Inputs received through e-mail)

In view of the agenda of the meeting i.e. Review of Syllabi of Maths courses under new B. Tech Structure of 160 credits to be implemented from academic session 2018-19.

The following decisions were taken and approved by all the members of the board of studies:

1.	Mathematics I (18B11MA111)	(Approved)
2.	Mathematics II (18B11MA201)	(Approved)

- 3. Mathematics III (18B11MA11) (Approved)
- 4. Numerical Methods (18B11MA312) (Modified and Approved)
- 5. Discrete Mathematics (18B11MA411) (To be modified)
- 6. Basic Mathematics I (18B11MA112) (Approved)
- 7. Basic Mathematics II (18B11MA212) (Approved) 8. Probability and Statistics (18B11MA311) (To be modified)

9. Biostatistics (18B11MA421) (Approved)

As pointed out by Prof. Ghrera, the syllabus of Discrete Mathematics course is to be redesigned on lines of the text by Rosen jointly in consultation with a CSE faculty to be deputed by the respective HoD.

The inputs received from external member, Prof. S.K-Tomar, through e-mail has been incorporated as vetted by the members.

Prof. Karanjeet Singh Chairman & HoD

Dr. P K Pandey Member

Dr. R.S. Raja Durai

Member

HoD CSE & IT

Dr. Rakesh K Bajaj

Member

Prof. Sudhir Sya

HoD BT & BI

Member

Assistant Registrar (Academics) Jaypee University of Information Technology Waknaghat, Distt. Solan (H.P.)

OF INFORMS IQAC



MINUTES OF THE EMERGENT ACADEMIC COUNCIL MEETING HELD ON JUNE 27, 2018 (WEDNESDAY)

Notice of Emergent Academic Council meeting was sent to all the members of the Academic Council vide E-mail dated 20 June, 2018. Accordingly, Emergent meeting of the Academic Council was conducted on June 27, 2018 (Wednesday) at 3.30 p.m. in the Board Room of Jaypee University of Information Technology, Waknaghat, Solan. The following members of the Council were present during the meeting:-

1.	Prof. Vinod Kumar	*	Chairman
	Vice Chancellor, JUIT, Waknaghat		

2.	Sh. Vinod Sharma	-	Member
	Member Nominated by Pro Chancellor		

3.	Prof. Samir Dev Gupta	Member
	Director & Dean Academics	

4.	Prof. S. P. Ghrera	=	Member
	Professor & Head - CSE / IT Deptt.		
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5.	Prof. Ashok Kumar Gupta		Member
	Professor & Head - CE Deptt.		
6	Prof. Sudhir Sval	2	Member

C.	1 101, budini byai		Michiel
	Professor & Head - BT / BI Deptt.		
7.	Prof. Sunil Kumar Khah	-	Member

5074	Professor - PMS Deptt. / COE		150-150-160-160-160-160-160-160-160-160-160-16
8.	Dr. Neelkanth	-	Representative from Deptt.

	Assistant Protessor (Sr. Grade)	of Mathematics
9.	Dr. Neena Jindal	Representative from Deptt.
	Assistant Professor (Grade-I)	of HSS

	Maj. Gen. Rakesh Bassi, SM (Retd.)	9	Non-Member Secretary
	Registrar & Dean Students		

11. Sh. Sanjay Kumar Verma - Special Invitee Assistant Registrar (Academics)

LEAVE OF ABSENCE

Some members could not attend the meeting due to their pre-engagements for the day of meeting. Leave of absence to such following members was recorded:-





1. Sh Sunil Sharma Ji

2. Prof. Manoj Arora

3. Prof. S. C. Saxena

4. Prof. Padam Kumar

5. Prof. Veeresh Gali

6. Prof. Karanjeet Singh

7. Prof. P. B. Barman

8. Dr. Anupriya Kaur

Nominated Member by Pro Chancellor

- Vice Chancellor, PEC University, Chandigarh

- Vice Chancellor, JIIT, Noida

- Dean (R&D), JIIT, Noida

- Prof. CE Deptt., JUIT, Noida

- Prof. & Head, Deptt. of Maths

- Prof. & Head, Deptt. of PMS

- Prof. & Head, Deptt. of HSS

Prof. Vinod Kumar, Vice Chancellor, JUIT and Chairman, Academic Council extended warm welcome to the members present in the meeting for making it convenient to attend the meeting of the Academic Council. Chairman extended welcome to Prof. Sudhir Syal, who had taken over as HOD of Deptt. of BT / BI as the newly inducted member to the Academic Council and Sh Sanjay Kr. Verma, Assistant Registrar (Academics) who had recently joined the University as special invitee.

The Chairman informed the members about the need of calling the emergent meeting of the Academic Council and agenda of the meeting was placed before the members of the Council. He stated that our University is engaged in imparting professional technical education to the youth and AICTE (All India Council for Technical Education) is the regulatory body for such technical institutions. He further informed that recently AICTE has published "Model Curriculum for Undergraduate Degree Courses in Engineering & Technology – January 2018" as a guide to all the technical institutions and mandated to follow the choice based credit system of total 160 credits for Undergraduate Technical Degree Courses. AICTE has suggested credit distribution for whole four year course (total 160 credits) considering attributes like HSS, Basic Science, Engineering Science, Professional Core, Professional Elective, Open Elective and Project.

Considering AICTE mandated 160 Credit System for Undergraduate Degree Courses, New Course Structure of 1st Year B. Tech. to be effective from current academic session i.e. 2018-19 has been designed and the same is being placed in the Academic Council for detailed deliberation among the members and approval of the Academic Council.

Accordingly, newly designed Course structure of 1st Year B. Tech. as approved by the BOS of various departments was presented through power point presentation for deliberation by the members. The following points were deliberated upon:



- 1. 1st year B. Tech. Course structure should be made common for all the students. Disciplines are divided in two Groups; Group - I (BT / BI) and Group - II (ECE / CE / CSE / IT). Some specific consideration have been given to the students of BT & BI considering Maths and Biology background of the students.
- Basic Mathematics-I has been kept as optional with less course contents for BI / BT students.
- The departments have adopted the AICTE model curriculum. However, some variations considering the essence of the course contents exist, which are well within the AICTE recommendations.
- 4. 100% credits have been assigned for Lecture and Tutorial contact hours and 50% credits for Practical contact hours. i.e. for Lecture & Tutorial 01 contact hour = 01 credit and from Practical 01 contact hour = 0.5 credit
- 5. Engineering Graphics and Workshop Practices kept in alternative semester due to limitations of lab facilities presently e.g. for BT, BI, ECE and CE – Engineering Graphics in 1st Semester and Workshop Practices in 2nd Semester and for CSE & IT – Workshop Practices in 1st Semester and Engineering Graphics in 2nd Semester and then toggled.
- 6. Efforts towards self learning by reducing credits to 160 from existing 195.

Specific Changes / Modifications

- 1. Contact hours for mandatory Induction Program shown as Zero (0) be replaced with Dash (-) due to non credit subject.
- 2. Course content of Workshop Practice to include "Fitter" also. Task was assigned to Dr. Ashok Kumar Gupta, Professor & Head, Deptt. of CE
- 3. Contents of Mechanics be added in the course content of Physics-II. Task was assigned to Dr. P B Barman, Professor & Head, Deptt. of PMS
- 4. Subject codes of all the revised syllabus to be replaced with the new subject codes with 18 as initials.
- Credits weightage for Civil Engineering Deptt. and Computer Sc Deptt. in various verticals which were beyond plus / minus 03 from AICTE model credit distribution were discussed and assigned as follows:-
 - a) <u>Civil Engineering Deptt.</u>
 Engineering Sciences 22, Professional Core 51,
 Professional Elective 21, Open Elective 15
 - b) <u>Computer Science Deptt.</u>
 Professional Core 51, Open Elective 16

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CONCLUSION:

Academic Council unanimously approved the new 1st Year B. Tech. Course Structure / syllabus with above changes / modifications.

Prof. Vinod Kumar directed all Head of the departments to revise the B. Tech. Course Structure / Syllabi for 2nd, 3rd and 4th year considering above guidelines and place the same in their respective BOS for its approval and subsequent approval of the next Academic Council He further suggested that minor changes in the course structure / syllabi should be made on yearly basis and major changes after an interval of four years. Syllabi / course content of GATE Exam to be considered and incorporated while revising syllabi of B. Tech. 2nd, 3rd and 4th year.

The Chairman, thereafter, informed the members about the coverage of JUIT at DD News Channel and about the availability of the link at www.youtube.com and <a href="ww

There being no other points meeting ended at 5.30 p.m. with a vote of thanks to the Chair.

28/6/2018

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Maj. Gen. Rakesh Bassi, SM (Retd.) Registrar & Non-Member Secretary

Above Minutes Confirmed / Not Confirmed

Prof. Vinod Kumar

Vice Chancellor & Chairman

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Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS meeting held on 09.10.2018

A meeting of Board of Studies of the Department of Biotechnology & Bioinformatics was held on 09.10.2018 at 10.30 AM in the Board room. Following BoS Members and attendees were present. Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics, JUIT Waknaghat Dr. Anil Kant Associate Professor, Department of Biotechnology and 2 Bioinformatics, JUIT Waknaghat (Member Secretary BoS) Dr TC Bhalla Professor Emeritus Department of Biotechnology HPU Shimla 3 (External Member BoS) Dr Tirtha Raj Singh Associate professor, Department of Biotechnology and 4 Bioinformatics, JUIT Waknaghat (Member BoS) Dr Harish Changotra Associate professor, Department of Biotechnology and 5 Bioinformatics, JUIT Waknaghat (Member BoS) Dr. Jata Shankar, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat(Invited attendee as M Tech coordinator) 6 Dr. Saurabh Bansal, Assistant Professor (Grade II), Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS) Head (or Representative), Department of Computer Science and Engineering, JUIT Waknaghat (Member BoS) Head (or Representative), Electronics and Communication Engineering, JUIT Waknaghat, (Member BoS) Head (or Representative), Department of Physics and Materials Science, 11 JUIT Waknaghat, (Member BoS) Head (or Representative), Department of Humanities and Social Sciences, 12 JUIT Waknaghat, (Member BoS)



Agenda

1. To discuss and finalize course structure and syllabi of individual courses of 2nd, 3rd and 4th year of new 160 credit hour scheme of B. Tech Biotechnology and B. Tech. Bioinformatics (Attached: B. Tech Biotech B. Tech Bioinformatics, 160 hr Coursecurricula)

2. To discuss the inclusion of new elective courses in M. Tech. Biotechnology course

curriculum. (Attached M.Tech. Course structure and Electives)

3. To approve attainments of last semester's course outcome (CO) and Programme outcome (B.Tech. BT and BI)

4. Discussion on a suggestions and feedback received from our alumni regarding

updating B.Tech. Biotechnology and B.Tech Bioinformatics curriculum.

- Fermentation of Red and White wine, Grape vine yearly cycle, Terroir, in Food and Agricultural Biotechnology/ Traditional Bio processing or any other Received from Mr Kunal our B.Tech. Biotech alumnus related courses: working in wine industry (Chateau de Camarsac) in France
- b. IT oriented content and their applications in Industry: Received from Mr Sahil Sethi our B.Tech. Bioinformatics alumnus working as Bioinformatics and Data Engineer In Pine Biotech, Nebraska USA
- c. Some topics related to organic farming to be included in Agricultural Biotechnology: Received from Shivam Sharma, B.Tech. M. Tech and PhD Biotech alumnus working in Ministry of Agriculture Govt of India
- 5. Approval of agenda items sent to registrar office to included in the Agenda of Academic council meeting

The meeting started with introduction of BoS members and attendees to Prof TC Bhalla, which was mediated by Prof Sudhir Kumar. Dr Anil Kant (Member Secretary) presented the welcome address and handed over the proceedings to Professor Sudhir Kumar. The board discussed the agenda items one by one and following are the recommendation of the BoS.

Agenda Item 1

To discuss and finalize course structure and syllabi of individual courses of 2nd, 3rd and 4th year of new 160 credit hour scheme of B.Tech Biotechnology and B. Tech. Bioinformatics.

The members were apprised about new B.Tech 160 credit hour scheme which AICTE has made mandatory to be followed by all the Technical educational Institutes. AICTE model scheme with recommended credit hours to be allocated to various disciplines, electives, and open electives was also presented to the members.

Resolution

- 1. Course structure of 2nd, 3rd and 4th year of new 160 credit hour scheme of B. Tech. Bioinformatics was presented. Dr TC Bhalla Enquired about the programming languages courses in this structure. Dr Tirthraj clarified that programming languages viz. Perl, Python, HTML, JAVA script and PHP are taught to B. Tech. Bioinformatics students, and are also included in this schemes in two courses.
- ✓ Programming Languages for Bioinformatics 4th Semester
- ✓ Scripting Languages for Bioinformatics 5th Semester



Course structure of 2nd, 3rd and 4th year of new 160 credit hour scheme of B. Tech. Bioinformatics (Annexure-I) was approved by all members of BoS.

- Course structure 2nd, 3rd and 4th year of new 160 credit hour scheme of B.Tech Biotechnology (Annexure-II) as was presented and approved.
- 3. Detailed syllabi of the individual courses of B.Tech Bioinformatics and Biotechnology were presented discussed and following were main observations.

Prof M. Nigam Head of the Electronic and communication said the format of courses should be uniform across the Departments. Member secretary Dr Anil Kant informed that at Department level we have followed a common format and are ready to follow any other common format as and when suggested by higher authorities.

Prof TC Bhalla stated that

- Chemistry course should focus on advanced content over 10+2
- Advanced and popular techniques such as CRISPR should be taught at some level.

Members of BoS were of the view that Chemistry course already have advanced contents over 10+2, and redundancies if any will be taken care off.

Dr Anil Kant informed that techniques CRISPR are already being taught in elective courses such as Plant Biotechnology, and included in Advances in Gene manipulation. Many other courses also contain such latest techniques and developments.

After thorough deliberations, the detailed syllabi of individual core courses were approved to be adopted.

4. List of Elective courses and their detailed syllabi were present to the members for discussion and ratification. Following were main points of discussion

Prof. Bhalla Suggested that name and content of courses of B. Tech., M. Tech degree programmes should have technological orientation, which was agreed upon by all the members. In this context it was decided that courses list below will be referred back to the teaching faculties to change the name/content or drop the courses.

Industrial Enzymes Neurobiology

: Suggested to be named Industrial Enzyme Technologies

: Referred back to teaching faculty for his/her comments: DR

Udaybanu suggested the name to be changed to Experimental Neurology

Virology

: Referred back to teaching faculty his/her comments: Dr Harish informed that Virology course will have a unit on techniques used in virology and requested could to run this courses run as an elective with M.Tech. Code.

Microbial Ecology

: Referred back to teaching faculty his/her comments: Dr Ashok Nadda informed that Microbial Ecology already contained technical contents such as function and regulation of microbial productivity and



metabolism; the importance of microbial processes for the turnover of nutrients and organic carbon.

Discussions were also made on grouping and offering the elective courses in form of buckets and following points emerged and agreed upon by members.

- a. Elective list, Groups should be kept dynamic and elective can be added or dropped as per requirements, availability and expertise of teaching faculties at HOD level, which should be ratified in next BoS meeting.
- b. While grouping elective courses in buckets and offering electives in different semesters care should be taken arrange these according to advancement level of subject matter (Suggestion made by Prof Bhalla and agreed upon by all the members)
- c. Elective of same or related specialization should be preferably put in different groups / buckets so that students with keen interest in a particular field will have a chance to opt for maximum electives of that field (Suggestion made by Prof. M Nigam)
- d. Electives offered in M Tech program can also be included in the electives buckets of B. Tech and B. Tech M. Tech and Integrated programs (with M. Tech. code), to avoid the repetition, overlapping and redundancies of courses. This will also help in offering more choice and flexibility in choice of electives to the students (Suggested by Prof. Sunil Kha). Dr Anil Kant informed the house that this is already being practiced; the courses such as Food Process and Engineering, and Plant Biotechnology with M. Tech/Integrated code are being taken by B. Tech students as well. In future also this will be done by incorporating M Tech electives courses in the appropriate elective buckets of B. Tech Programmes.

After all such deliberations the electives subjects along with their detailed syllabus was approved and ratified. It was also decided to implement the suggestions / observation listed above as such or outcome consultation about courses refereed to concerned faculties.

Agenda Item 2

To discuss the inclusion of new elective courses in M. Tech. Biotechnology course curriculum.

Resolution

M. Tech course structure along with electives and detailed course syllabi were presented.

The members approved M. Tech. Biotechnology course curriculum, (Annexure-III) with a caveat that the observations regarding name and content of courses and dynamic nature of list of electives courses as stated above are also applicable in this case as well.

Agenda Item 3

To approve attainments of last semester's course outcome (CO) and Programme outcome (B.Tech. BT and BI)

Resolution

The odd and even semester data on attainment of course outcome (CO) and Programme outcome were presented (Annexure IV a and IV b).

Prof Sudhir Kumar stated that the attainment level of almost all the PO and PSO are above the minimum criterion of 4.5.

Thus report on data on previous year semesters was therefore ratified.

Agenda Item 4

Discussion on a suggestions and feedback received from our alumni regarding updating B.Tech. Biotechnology and B.Tech. Bioinformatics curriculum.

Resolution

The suggestion received and as stated in the agenda items were brought forward and the house were informed the Department has already taken steps to include the specific topic in the modified syllabi of relevant courses.

Agenda item 5

Approval of agenda items sent to registrar office to included in the Agenda of Academic council meeting.

Prof Sudhir informed BoS members that registrar office asked the Department for agenda item of ACM in a specified format and the Department has already sent the agenda items as listed below

1. Approval for introduction of New Programs / Courses. Nil

2. Approval for discontinuation of any Existing Programs / Courses. Nil

3. Approval for change in nomenclature of Existing Programs / Courses. Nil

 Approval for Increase / Reduction in sanctioned intake of Existing Programs / Courses. Nil

5. Approval for introduction of new Course structure / detailed syllabus. Approval course structure and syllabi of individual courses of 2nd, 3rd and 4th year of new 160 credit hour scheme of B.Tech Biotechnology and B. Tech. Bioinformatics (

 Approval for Revision / Modification / Changes in existing Course Structure / detailed syllabus

Approval of modification M. Tech. Biotechnology course structure and inclusion of new electives

7. Any other item Nil

The agenda items send to registrar office was approved.

Dr Anil Kant Associate Professor

Member Secretary, BoS

Department of Biotechnology

JUIT Waknaghat

Prof. Sudhir Kumar

Chairman BoS, HOD Department of

Biotechnology, JUIT Waknaghat



Department of Computer Science & Engineering and Information Technology

Minutes of the Meeting of BOS-Oct 2018

Minutes of meeting of Board of Studies in the Department of Computer Science & Engineering and Information Technology was held on 6th Oct, 2018 at 11:00 A.M. in the Board Room, Jaypee University of Information Technology, Waknaghat. The following members were present:

- 1. Chairperson: Prof. S P Ghrera, HOD, CSE Dept.
- 2. Members:
 - i. Dr. Vivek Sehgal
 - ii. Dr. Hemraj Saini
 - iii. Dr. Pradeep Kumar Gupta
 - iv. Dr. Pardeep Kumar
 - v. Dr. Ravindara Bhatt
 - vi. Dr. Shailendra Shukla
 - vii. Dr. Hari Singh
 - viii. Dr. Ekta Gupta
 - ix. Dr. Rajinder Sandhu
 - x. Dr. Yugal
- 3. Nominees from the departments of Electronics & Communication Engineering, Civil Engineering, Bio Technology/Bio-Informatics, Mathematics, Physics, and Humanities and Social Sciences.



RESOLUTIONS:

- 1) It was resolved to approve the course descriptions as per 160 and 180 credit curricula for B. Tech CSE (Regular) and B. Tech CSE (Hons.), respectively. The same is placed at ANNEX-I.
- 2) It was resolved to approve the course descriptions as per 160 and 180 credit curricula for B. Tech IT (Regular) and B. Tech IT (Hons.), respectively. The same is placed at ANNEX-II.
- 3) It was resolved to approve the minor changes to the course curriculum as per new 160 credits of B. Tech CSE (Regular) and 180 credits of B. Tech CSE (Hons.) as approved in the last BOS meeting dated 5th May 2018 (placed at ANNEX-III & IV).
- 4) It was resolved to approve the minor changes to the course curriculum as per new 160 credits of B. Tech IT (Regular) and 180 credits of B. Tech IT (Hons.) as approved in the last BOS meeting dated 5th May 2018 (placed at ANNEX-V & VI).
- 5) The recommendations of the Program Evaluation Committee (PEC) report and the action taken on the recommendations were approved in the meeting (placed at ANNEX-VII).
- 6) The recommendations of report on the analysis of the feedback received from stakeholders" were approved in the meeting (placed at ANNEX-VIII).
- 7) The report on CO-PO and PSO-PEO attainments for the even semester 2018 was approved in the meeting (placed at ANNEX-IX).
- 8) The allotments of the Research Groups for the Ph.D. students were approved in the meeting (placed at ANNEX-X).
- 9) The abstracts of thesis allocated to PG students were approved in the meeting. Changes to the title of the thesis may be done with the approval of the chairperson (placed at ANNEX-XI).
- 10) The abstracts of the seminars allocated to the PG students were approved in the meeting. Changes to the title of the seminar may be done with the approval of the chairperson (placed at ANNEX-XII).
- 11) It was resolved to approve the introduction of new electives and the course descriptions of the following elective courses. The same is placed at ANNEX-XIII. As per suggestions from the members, the course "Modelling and Simulation" was renamed to "Modelling and Simulation Techniques."



Suggestions/rectifications/modifications proposed by the members regarding the course curricula of B. Tech. CSE (Regular & Hons.) and B. Tech. IT (Regular & Hons.).

- 12) It was suggested by the representative from the department of mathematics that in the third semester the course should be Mathematics III (instead of IV). Moreover, the course should be of three credits (instead of two credits); as it is not feasible to complete the course with two lectures per week. The suggestions were accepted and approved in the BOS meeting. Additional one credit for mathematics course has been created by dropping one credit IT Workshop Course. The same have been incorporated in the revised curricula attached at ANNEX III, IV, V, and VI.
- 13) It was pointed out by the representative from the Department of Humanities and Social Sciences that in the first semester, the correct course name is "English and Technical Communications" instead of "English". Moreover, in the seventh semester, there is a zero-credit course called "Constitution of India/Essence of Indian Traditional Knowledge". The credit structure of this course should be (1-0-0) instead of (0-0-0). The above errors were rectified and approved in the meeting.
- 14) It was resolved to change the three-credit Biology Course in the fifth semester to Compulsory Science Elective (3-0-0) for B. Tech (CSE) and B. Tech (IT).
- 15) The representative from the Department of Physics suggested for changing the credit scheme of the second semester course "Engineering Physics-II" from (3-1-0) to (3-0-0). To accommodate one credit, an experimental lab course "Engineering Physics Lab-II" (18B17PH271) will also be offered. The suggestions were approved in the meeting.
- 16) It was resolved to introduce the all elective courses freely from time to time. The word freely will imply that courses may be started with the permission of Chairperson of BOS and if found successful be put up for approval of BOS.
- 17) It was resolved in the meeting to include some of the electronics courses for the students of computer science and information technology as Departmental electives.
- 18) It was resolved to structure the elective courses in various buckets. A student cannot opt for more than one course belonging to a bucket.
- 19) The students can opt for MOOCS courses following the eligibility criteria of the University. For MOOCS courses, the permission of department is a must.



MEMBERS OF BOARD OF STUDIES, OCT 2018

Department of Computer Science & Engineering and Information Technology

1.	Chairperson: Prof. S P Ghrera, HOD, CSE Dept.
2.	Members:
	i. Dr. Vivek Sehgal
	ii. Dr. Hemraj Saini
	iii. Dr. Pradeep Kumar Gupta
	iv. Dr. Pardeep Kumar Gupta Valley Kumark
	D. D. i. J. D. H. ()
	vi. Dr. Shailendra Shukla S. Shuch
	vii. Dr. Hari Singh viii. Dr. Ekta Gupta Grandotra Ekta Goodotra
	ix. Dr. Rajinder Sandhu Rojivel
	x. Dr. Yugal
3.	Nominees from the departments of ECE, Civil, Mathematics, Physics, BT/BI, and Humanities & Social Sciences:
	i. Prof. Dr. M J Nigam, HoD, Department of Electronics and Communication
	ii. Prof. Dr. A K Gupta, HoD, Department of Civil Engineering
	iii. Prof. Dr. Karanjeet Singh, HoD, Department of Mathematics For Nalkanth
,	iv. Prof. Dr. PB Burman, HoD, Department of Physics & Materials So'unce
•	v. Prof. Dr. Sudhir Kumar Syal, HoD, Department of Biotechnology and Bioinformatics
	vi. Dr. Anupriya Kaur, HoD, Department of Humanities and Social Sciences
	vii. Prf. S. K. Khah., Dept. of PMS. Schah Jahrlie
	(2000)
	Assistant Registrar (Academics) Javpse (Inversity of Information Technology Wisknaghar, Distt. Solan (H.P.)

4. External Experts:

- i. Prof. Dr. Sanjay Goyal, JIIT, Noida Not frese
- ii. Prof. Dr. Manu Sood, HP University, Shimla Note mercul
- iii. Prof. Dr. Mayank Dave, NIT Kurukshetra

Not fresent

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Iger, CSC, Indore Not fresent

ond, WA, USA

Not present

par University, Patiala.

Not fresent

- 5. Representative from industry/corporate sectors:
 - i. Sh. Prantik Thakur, Service Delivery Manager, CSC, Indore
 - ii. Sh. Divyansh Srivastava, Microsoft, Redmond, WA, USA . Not wesen
- 6. Postgraduate Meritorious Alumnus:
 - i. Sh. Rajkumar Tekchandani, Asst Prof, Thapar University, Patiala. Not free with

HOD (CSEAT)

tant Registrar (Academics) Te University of Information Technology

Waknaghat Distt. Solan (H.P.)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT

JUIT/WKG/REGR/2018-19/480

September 18, 2018

NOTIFICATION

The Composition of the Board of Studies of the Department of Electronics & Communication Engineering of Jaypee University of Information Technology, Waknagaht, Distt. Solan (HP) is hereby notified as under:-

1. Prof (Dr.) M.J Nigam

Chairperson

2. Prof. (Dr.) Samir Dev Gupta

Dean A&R

3. Prof. (Dr.). D.T. Shahani
Professor, Centre for Instrument Design & Development
IIT, Delhi

Member

Prof. (Dr.) C.C. Tripathi
 Prof. & HOD, ECE
 University Institute of Engineering & Technology
 Kurukshetra University, Kurukshetra

Member

5. Dr. Balwinder Singh
Coordinator & Principal Engineer
Centre for Development of Advanced Computing
A Scientific Society of the Ministry of Communication
& Information Technology
A-34, Indl Area, Phase VIII, Mohali (Pb)

Member

 Dr. Rajiv Kumar Associate Professor, Deptt of ECE Member

7. Dr. Shruti Jain Associate Professor, Deptt of ECE Coordinator

8. Dr. Neeru Sharma Asst Professor, Deptt of ECE Member

Dr. Meenakshi Sood
 Asst Professor, Deptt of ECE

Member

Bush

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

Contd...2



 Dr. Vikas Baghel Asst Professor, Deptt of ECE Member

Dr. Shweta Pandit
 Asst Professor, Deptt of ECE

Member

War.

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Dean of Students

c.c.: Vice Chancellor,
Director & Academic Head

Assistant Registrar (Academics) Jaypõe University of Information Technology Waknaghat, Distt. Solan (H.P.) IQAC ON THE PROPERTY OF THE PR

OF INFORM

Department of Electronics and Communication Engineering

JUIT Waknaghat

A meeting of Board of Studies of the Department of Electronics and Communication Engineering was held on 13.10.2018 at 09:30 AM in the Board Room.

The following members were present

1.	Prof. M.J. Nigam	Chairman
2.	Prof. Samir Dev Gupta	Dean A & R
3.	Dr. Balwinder Singh	External Member
4.	Dr. Rajiv Kumar	Member
5.	Dr. Shruti Jain	Coordinator
6.	Dr. Meenakshi Sood	Member
7.	Dr. Neeru Sharma	Member
8.	Dr. Shweta Pandit	Member
9.	Dr. Vikas Baghel	Member
10.	Prof Sudir Syal	HOD, BT & BI Department
11.	Prof. P. B. Barman	HOD, PMS Department
12.	Prof. Sunil Khah	Representative PMS Department
13.	Dr. Hemraj Saini	Representative CSE Department
14.	Dr. Neel Kanth	Representative Mathematics Department
15.	Dr. Sakshi Khanna	Representative HSS Department

Leave of absence

Leave of absence was granted to the following members by the Chairman Board of Studies:

- 1. Prof. D.T. Shahani (External Member)
- 2. Prof. C.C. Tripathi (External Member)

The Chairman welcomed all the members who were present for the meeting. The meeting thereafter deliberated on agenda items as had been approved by the Chairman.

Assistant August (Academics)

Jew de University of Information Technology

Vienaghat, Distt. Solan (H.P.)

Item No. 1 : Confirmation of minutes of Last Meeting of the Board of Studies held on 21.04.2018.

Confirmed

Item No. 2: Approval of finalized updated order of 160 credit schemes as already approved in last BoS for Academic Session 2018-19.

Prof. Barman has suggested a change in the mode of Engineering Physics II of 2nd semester. Instead of 3-1-0(L-T-P) scheme, he suggests that it should run as 3-0 (L-T) with an additional 1 credit Engineering Physics lab II. Board has left the decision on Academic Council.

After discussion with Dr. Neel Kanth regarding the 3rd semester Mathematics course, BoS suggested that Probability and Stochastic Processes should be renamed as Probability and Random Processes.

Rest updated 160 scheme was approved.

Item No. 3: Approval of Syllabi of New courses of 3rd year for 160 credit scheme for B.Tech 2018-19.

Prof. Sunil Khah has suggested revising the contact hours of Electromagnetic Engineering due to redundancy with the Physics and Mathematics course. In view of this board has suggested some changes which were incorporated. The new syllabus of Electromagnetic Engineering is prepared as provided in **Appendix I**.

Rest syllabi of new courses of 3rd year for 160 credit scheme were approved.

Item No. 4: Approval of List of Electives as per 160 credit curricula for B. Tech. ECE.

As recommended was approved.

Item No. 5: Approval of Titles and Syllabi of New Electives for Academic Session 2018-19 for all batches of ECE (2015 onwards).

As recommended was approved.



Minutes of BoS held on 13.10.2018

Item No 6: Approval of List of MOOC courses introduced during the Academic Session

2018-19 for all batches of ECE.

As recommended was approved

Item No.7: Course Outcomes (COs) - Program Outcomes (POs) - Program Specific

Outcomes (PSOs) attainments for the Odd Semester 2017 and Even

Semester 2018.

Prof. Samir DevGupta was of opinion that the PEOs should also be mapped to POs. It was

also mentioned that exit feedback of last year could be used for this mapping.

As recommended was approved

Item No 8: Ph.D. course and its syllabus.

It was suggested by Prof. Sunil Khah, that there must be flexibility in the assessment scheme

of PhD course. Some members were of opinion that it could be done in terms of the

presentation and writing research papers. Finally, Board has given flexibility to the

Supervisors for internal assessment of Scholar.

Syllabus was approved.

Item No. 9: Any other item with the permission of the Chair.

Chairman has suggested reducing the intake seats of B-Tech ECE from 90 to 60.

The meeting concluded at 10:45hrs with a vote of thanks by Prof. M. J. Nigam, Chairman

Board of Studies.

Al	sent
(Prof. D	T. Shahani)

(Dr. Balwinder Singh)

(Prof. Samir DevGupta)

(Dr. Meenakshi Sood)

(Dr Neelkanth)

Jayrne University of Information Technology Waknayhat, Distt. Solan (H.P.)

Absent (Prof. C.C. Tripathi)

(Dr. Neeru Sharma)

Shorts Parel 1 13/10/18

(Dr. Shweta Pandit)



Board of Studies (Physics and Materials Science)

Prof. S.C. Saxena, Acting Vice-Chancellor, JUIT

Prof. Samir Dev Gupta, Director & Academic Head

Prof. T.S. Lamba, Dean (A & R)

Prof. R.S. Chauhan, Dean, BI & BT

Members from Department

Prof. P.B. Barman

HOD

Chairman

Prof. Sunil K. Khah

Dr. Vineet Sharma

Dr. Pankaj Sharma

Dr. Dheeraj Sharma

Dr. Rajesh Kumar

Dr. Surajit Kumar Hazra

L Ragini R. Singh

Dr. Sanjiv Kumar Tiwari

Members from other Departments of JUIT

Prof. Harinder Singh

HOD, Mathematics

Prof. Sunil Bhooshan

HOD, ECE

Prof. S.P. Ghrera

HOD, CSE & IT

Prof. Ashok K.Gupta

HOD, Civil

Members-from-Sister Institutes

Prof. S.C. Katyal D.K. Ray

HOD, Physics, JIIT, Sec.128, Noida

Dr. Anuj Kumar HOD, Physics, JUET, Guna

Members from Other-Institutes

Prof. Mahavir Singh Vice-Chancellor, IEC University Baddi

Atal-Shiksha Nagar, (Kallujhanda),

Near-Village Nanak Pura, Pinjor-Nalagarh Highway,

District Solan, Himachal Pradesh-173205 (India)(on EOL form H.P. University Shimla)

Prof. Anil Vohra

Dean, Academic Affairs,

Kurukshetra University, Kurukshetra, Haryana (Professor, Dept. of Electronic Science,

Kurukshetra University, Kurukshetra, Haryana)

Page 2 of 2



Board of Studies meeting (Physics and Materials Science) - 05-10-2018

Members from the Department

Prof. P.B. Barman

HOD

Chairman

Prof. Sunil K. Khah

Dr. Vineet Sharma

Dr. Pankaj Sharma

Dr. Dheeraj Sharma

Dr. Rajesh Kumar

Dr. Surajit Kumar Hazra

Dr. Ragini R. Singh

Members from other Departments of JUIT

Prof. Sudhir Syal,

HOD, BI & BT

Prof. M.J. Nigam

HOD, ECE (Represented by Dr. Rajiv Kumar, Dept. of ECE, JUIT)

The following members were given leave of absentia as they could not attend the meeting.

Prof. D.K. Rai

HOD, Physics & Materials Science, JIIT, Sec.62, Noida

(Member from Sister Institutes)

Prof. Anil Vohra

Professor, Dept. of Electronic Science,

Kurukshetra University, Kurukshetra, Haryana

(Member from Other Institutes)

Prof. Karanjeet Singh

HOD, Mathematics, (Member from other Departments of JUIT)

Prof. Ashok K.Gupta

HOD, Civil (Member from other Departments of JUIT)

Prof. S.P. Ghrera

HOD, CSE & IT (Member from other Departments of JUIT)

Dr. Sanjiv Kumar Tiwari

(Member from the Department)

Assistant Registrar (Academics)
Jaypea timesisty of Information Technology
Waknaghat, Distt. Solan (H.P.)

3

Minutes of the Board of Studies Meeting of the Department of Physics and Materials Science held on $05^{\rm th}$ of October 2018 in JUIT Board room.

The following members were present.

Members from the Department

Prof. P.B. Barman

HOD

Chairman

Prof. Sunil K. Khah

Dr. Vineet Sharma

Dr. Pankaj Sharma

Dr. Dheeraj Sharma

Dr. Rajesh Kumar

Dr. Surajit Kumar Hazra

Dr. Ragini R. Singh

Members from other Departments of JUIT

Prof. Sudhir Syal,

HOD, BI & BT

Prof. M.J. Nigam

HOD, ECE (Represented by Dr. Rajiv Kumar, Dept. of ECE, JUIT)

The following members were given leave of absentia as they could not attend the meeting.

Prof. D.K. Rai

HOD, Physics & Materials Science, JIIT, Sec.62, Noida

(Member from Sister Institutes)

Prof. Anil Vohra

Professor, Dept. of Electronic Science,

Kurukshetra University, Kurukshetra, Haryana

(Member from Other Institutes)

Prof. Karanjeet Singh

HOD, Mathematics, (Member from other Departments of JUIT)

Prof. Ashok K.Gupta

HOD, Civil (Member from other Departments of JUIT)

Prof. S.P. Ghrera

HOD, CSE & IT (Member from other Departments of JUIT)

Dr. Sanjiv Kumar Tiwari

(Member from the Department)

The following agendas were discussed and deliberated upon. The agenda wise details are given.

Agenda I & II: To change the structure of Engineering Physics-II (18B11PH211) from (3-1-0) to (3-0-0) (Annexure-I) & introduce experimental lab course Engineering Physics Lab-II (18B17PH271) (0-0-2) (Annexure-II) of 01 credit in second semester for B.Tech. CSE, ECE, IT and CE.

Assistant Registrar (Academics)
Jaynee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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The change of the structure and introduction of lab was approved.

<u>Agenda III</u>: To introduce the course Engineering Physics-II (18B11PH211) (3-0-0) (Annexure-I) in second semester for B.Tech. CE.

The department of Civil Engineering have dropped the proposed tailor made structure of Engineering Physics-II. The Civil Engineering students will study the same course which is offered to CSE, ECE, IT in second semester (18B11PH211).

<u>Agenda IV</u>: To propose modification in the course contents of Biophysical Techniques (18B11PH212) for second semester BT/BI students in the light of 160 credits for B.Tech.

The modifications were discussed with the Dept. of BI & BT and were approved. The modified syllabus is attached in the **Annexure-III**.

Agenda V: To ratify the course contents of Materials Science (18B11PH611) for Science Elective (Fifth semester) students in the light of 160 credits for B.Tech. CSE, ECE and IT.

It was discussed that revised Materials Science course will be taught in fifth semester for CSE, ECE, IT students as part of Compulsory Science Elective. As it will be a common course, so it is submitted that this course cannot be taught with open electives and department electives in seventh semester (as suggested by CSE, IT department). The revised course is attached (Annexure-IV)

Agenda VI: To revert back to Engineering Physics-I (18B11PH111) and Engineering Physics-Lab-I course (18B17PH171) in place of existing Basic Engineering Physics-I (18B11PH112) and Basic Engineering Physics Lab-I course (18B17PH172) for 1st semester BI/BT students.

During discussion with HOD, BI & BT and from the inputs of stake holders, it was decided to continue with the Basic Engineering Physics-I (18B11PH112) and Basic Engineering Physics Lab-I course (18B17PH172) with minor revisions as suggested by stake holders. The revised syllabi was discussed and is attached. ((Annexure-V & VI)

All the decisions taken will be submitted to Academic council for approval.

The meeting ended with a vote of thanks.



Board of Studies meeting (Physics and Materials Science) - 05-10-2018

Members from the Departmen

Prof. P.B. Barman

Prof. Sunil K. Khah Dr. Vineet Sharma

Dr. Pankaj Sharma

Dr. Dheeraj Sharma

Dr. Rajesh Kumar -Dr. Surajit Kumar Hazra

Dr. Ragini R. Singh

Members from other Departments of JUIT

Prof. Sudhir Syal,

HOD, BI & BT

Prof. M.J. Nigam

HOD, ECE (Represented by Dr. Rajiv Kumar, Dept. of ECE, JUIT)

12/10/18

Chairman

The following members were given leave of absentia as they could not attend the meeting.

Prof. D.K. Rai HOD, Physics & Materials Science, JIIT, Sec.62, Noida

(Member from Sister Institutes)

Prof. Anil Vohra Professor, Dept. of Electronic Science,

Kurukshetra University, Kurukshetra, Haryana

(Member from Other Institutes)

Prof. Karanjeet Singh HOD, Mathematics, (Member from other Departments of JUIT)

Prof. Ashok K.Gupta HOD, Civil (Member from other Departments of JUIT)

Prof. S.P. Ghrera HOD, CSE & IT (Member from other Departments of JUIT)

Dr. Sanjiv Kumar Tiwari (Members from the Department)

> Assistant Registrar (Academics) Jaypee University of Information Technology Waknaghat, Distt. Solan (H.P.)

3

Department of Physics and Materials Science

Minutes of the Board of Studies Meeting of the Department of Physics and Materials Science held at 11:00 AM in Board Room, JUIT on 08th of May, 2019.

Agenda I: To introduce compulsory science Electives for V Semester students of B. Tech. in CSE, IT and ECP in view of new scheme of 160 credits for B. Tech programmes [Appendix-1 (a & b)]

S. No.	Subject Code	Subject Name	Semester	Status
1 18B1WPH531 Science and Technology of Materials		Technology of	Semester-V (ECE)	Science Elective (Category: Engineering Science)
2	18B1WPH532	Applied Materials Science	Semester-V (CSE, IT)	Science Elective (Category: Basic Science)

The members present agreed to the introduction of above mentioned compulsory science electives for V Semester students of B.Tech. in CSE, IT and ECE,

Agenda II: To introduce New Electives for VII and VIII Semester B. Tech. students in view of new scheme of 160 credits for B. Tech programmes [Appendix-II(a,b &c)]

S. No.	Subject Code	Subject Name	Semester	Status
1	18B1WPH731	Nanotechnology	Semester-VII	Open Elective
2	18B1WPH732	Optical Fiber Network Design	Semester-VII	Open Elective
3	18B1WPH831	Optolectronic Devices	Semester-VIII	Open Elective

The members present agreed to the introduction of above mentioned courses as open electives for VII and VIII semester students of B.Tech. in CSE, IT and ECE.

Agenda III: To change the nomenclature (along with the code) of the course Biophysical Techniques (Old) to Bioinstrumentation Techniques (new) [Appendix-III] along with the code for 2nd semester BT/BI students (2018 Batch) in view of new scheme of 160 credits for B. Tech programmes. The details are given under.

S. No.	Subject Code	Subject Name	Semester	Status
1	18B11PH212	Bioinstrumentation	Semester-II (BT/BI)	Core, (Category:
		Techniques (New) (Biophysical		Basic Science)
	TOB11PH212	Techniques (Old)}		

The members present agreed to the change in nomenclature of the course Biophysical Techniques (Old) to Bioinstrumentation Techniques (new) for 2nd semester BT/BI students (2018 Batch).



Agenda IV: To introduce B.Tech with minors (20 Credits) in Engineering Physics as per the Academic Council Meeting held on October 25, 2018 vide Item No. 15 with following course structure [Appendix-IV(a,b,c,d,e &f)]

1. Advanced Statistical Mechanics (3-1-0) [Appendix-IV(a)]

- 2. Advanced Quantum Mechanics (3-1-0) [Appendix-IV(b)]
- 3. Laser and Photonics (3-0-0) [Appendix-IV(c)]
- 4. Nano electronics (3-0-0) [Appendix-IV(d)]
- 5. Mathematical Methods (3-0-0) [Appendix-IV(e)]
- Computational Techniques (3-0-0) [Appendix-IV(f)]

The members agreed to the introduction of B.Tech with minors (20 Credits) course with a unanimous consent on nomenclature "B.Tech with minors in Computational and Applied Physics" instead of B.Tech with minors in Engineering Physics.

It was also agreed upon to make courses at Serial no. 1, 2, 5 and 6 (14 credits) compulsory and to have open options of few courses available for the opting students as far as courses at serial no. 3 and 4 are concerned in

future.

The following members of Board of Studies meeting in Physics and Materials Science held at11:00AM on 08-05-2019 in JUIT Board Room were present

Members from	Department
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Prof. P.B. Barman

Prof. Sunil K. Khah

Dr. Vineet Sharma

Dr. Pankaj Sharma

Dr. Dheeraj Sharma De

Dr. Rajesh Kumar

Dr. Surajit Kumar Hazra

Dr. Ragini R. Singh Gugs

Dr. Sanjiv Kumar Tiwari

Members from other Departments of JUIT

Prof. Karanjeet Singh

HOD, Mathematics (Dr Neelkanth, Dept. of Mathematics attended the BOS)

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Chairman

Following members were granted leave of absentia

Prof. S.P. Ghrera

HOD, CSE & IT

Prof. Ashok K.Gupta

HOD, Civil

Prof. Sudhir Syal,

HOD, BI & BT

Prof. M.J. Nigam

HOD, ECE

HOD, Physics & Materials Science, JIIT, Sec.62, Noida Prof. D.K. Rai, (Member from Sister Institutes)

Prof. Anil Vohra Dean, Academic Affairs, Kurukshetra University, Kurukshetra, Haryana (Professor, Dept. of Electronic Science, Kurukshetra University, Kurukshetra, Haryana)

(Member from Other Institutes)

Assistant Registrar (Academics) Jaypen University of Information Technology

Wakneghet, Distt. Solan (H.P.)

General

Prior notice for holding meeting of the Academic Council (AC) of JUIT on 25 October, 2018 was circulated among the members of the Academic Council vide E-mail dated 16 October, 2018. Accordingly, Academic Council meeting was conducted on 25 October, 2018 at 10.00 a.m. in the Board Room, Jaypee University of Information Technology, Waknaghat.

Attendance

The following members were present:-

Chairman

Prof. Vinod Kumar

Vice Chancellor, JUIT, Waknaghat

Head of the Other Institution of the Trust

Prof. S. C. Saxena

Vice Chancellor, JIIT, Noida

Industry Professional nominated by the Pro-Chancellor

Sh. Sunil Kumar Sharma

Heads of the Departments / Centres of the University

Prof. M. J. Nigam

Prof. S. P. Ghrera

Prof. A. K. Gupta Dr. Sudhir Kumar

Prof. Karanjeet Singh

Prof. P. B. Barman

Dr. Anupriya Kaur

Head of Deptt. of ECE

Head of Deptt. of CSE/IT

Head of Deptt. of CE Head of Deptt. of BT/BI

Head of Deptt. of Mathematics

Head of Deptt. of PMS

Associate Professor and Head of Deptt. of HSS

Professors other than Heads of Departments

Prof. Sunil Kumar Khah Prof. Ashish Kumar

Deptt. of PMS Deptt. of CE

Non-Member Secretary

Maj Gen Rakesh Bassi, SM (Retd.)

Registrar and Dean of Students

Leave of Absence

Leave of absence was granted to the following members by the Chairman, Academic Council:-

Sh. Vinod Sharma

Prof. Manoj Arora

Prof. Padam Kumar Prof. Samir Dev Gupta Industry Professional nominated by the Pro-Chancellor

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Professor, Civil Engg. Deptt., IIT Roorkee

Dean (R&D), JIIT, Noida

Director (A&R), JUIT, Waknaghat

Welcome and Thanks giving for Incoming / Outgoing Members

The Chairman, Academic Council extended warm welcome to all the members present in the meeting and expressed thanks to Sh. Sunil Sharma and Prof. S. C. Saxena for their presence.

He further appreciated the contributions made by Prof. S V Bhooshan and Prof. Veeresh Gali, the outgoing members of the Academic Council and welcomed the newly inducted members Prof. M J Nigam, Head of Electronics & Comm. Engg. Deptt. and Prof. Ashish Kumar, Civil Engg. Deptt.

Agenda Items

Item No. 1

Confirmation of Minutes of last meetings of the Academic Council held on 02 December 2017 and Emergent Academic Council meeting held on 27 June 2018.

Minutes of the meeting of the last two ACM's dated 02 December 2017 and 27 June 2018 were forwarded to the members and no comments were received. The minutes of the meetings were confirmed.

Item No. 2 Action Taken Report

Detailed deliberations were made on the Action Taken Report of the last two ACM's. Prof S.C Saxena and Sh Sunil Sharma appreciated the efforts made and actions initiated by the team of JUIT. Prof. S.C Saxena suggested to put up JUIT, Regulations and Ordinances, for approval in the next meeting of Executive Council. He further inquired about the progress made by the Centres of Excellence created for the specific purpose and suggested to form Monitoring Committee to review the progress of these centres from time to time.

Prof. Vinod Kumar informed the members that JUIT has adopted 05 villages under Unnat Bharat Abhiyan and working over the issues of Drinking Water, Roads, Sanitation and Medical needs of the villagers as part of activities of Centre of Excellence for Sustainable Technology for Villages.

Item No. 3

Approval towards Caution Money from NRI, M. Tech. M.Sc., Ph.D. students as approved for B. Tech. Students from academic session 2019-20.

Members were informed that as of now JUIT is charging Caution Money of Rs. 10000/- (Refundable) only from B. Tech. students (except NRI students) as a security amount towards recovery of damages if any. Since all students are using the same infrastructure and facilities there are equal possibilities from other students of damages / recoveries as are with the B. Tech. students. In case of involvement in disciplinary activities or damages by NRI, M. Tech., M.Sc., Ph.D. students, University presently has no option for recovery as of now.

Therefore, Academic Council approved charging Caution Money amounting to Rs. 10000/- from all UG, PG and Ph.D. students as is being charged from B. Tech. students.

Item No. 4 Extension of maximum allowable age for admission to Undergraduate Courses in line with JEE (Mains) guidelines.

After detailed deliberation over the issue, Academic Council suggested that Status Quo be maintained till the issue is examined in more detail centrally.

Item No. 5 B. Tech. (Lateral Entry Scheme) to be aligned with AICTE guidelines i.e. additional 20% supernumerary seats (over and above the sanctioned intake) for direct admission to B. Tech. 2nd year.

Introduction of B. Tech. (Lateral Entry Scheme) as per AICTE guidelines i.e. additional 20% supernumerary seats (over and above the sanctioned intake) for admission of Diploma holders directly to B. Tech. 2nd year was approved. However it was decided that these 20% seats should not be merged with the left over seats of the last year and eligibility criteria for admission to both should be specified separately i.e. left over seats be offered to students who have completed B. Tech. 1st year and lateral entry seats be offered to students who have completed three years Diploma in same or allied branch. Specific admission criteria should be published in Admission Brochure separately for both modes of admissions.

Item No. 6 Approval for Amendment in Regulations and Ordinances for Award of Degree in Case of Admission under Lateral Entry.

Upon induction of 160 credit scheme for B. Tech., amendment in Regulations and Ordinances for award of Degree in case of admission under lateral entry was approved to 122 credits i.e. Total Credits (Minus) Credits of B. Tech. 1^{st} year i.e. 160 - 38 (17.5 + 20.5) = 122 credits.

It was decided that the Transcript of a student must clearly specify that admission of student was on the basis of Lateral Entry. Credits obtained from other Institutes and JUIT be separately mentioned and then a total out of 160 credits. However, final CGPA be mentioned on the basis of credits earned at JUIT.

Item No. 7 Mapping of MOOCs with JUIT Grading system

Prof. S.C Saxena informed the members that India has adopted its education system from Britishers wherein 10 point grading scale is followed. On the other hand American education system is following 05 point grading scale. Accordingly some foreign universities are following 05 point grading scale system and hence equivalence of such grading system with the JUIT grading system is necessitated. Academic Council approved the following on the recommendations of a JUIT committee for mapping of MOOCs, with JUIT grading system.



Grading Scheme MOOCs						
	>OR=	Grade				
	80	A +				
	70	\mathbf{A}^{*}				
	60	B+				
	50	В				
	40	C+				
	<40	F				

Item No. 8 Mapping of TAMK (Tampere University of Applied Sciences, Finland) grading system with JUIT grading system

The item as recommended was approved and following equivalence approved: -

TAMK Finland grade equivalence with IUIT Grade							
Passing Grade*	Grade Points	Indian Grade Points	JUIT Equivaler Grade				
Excellent	5	10	A+				
Very Good	4	9	A+				
Good	3	8	A				
Satisfactory	2	6-7	1 B+				
Minimal Pass	1	4-5	В				
Fail	0	0	F				
Pass	S		S				

^{*}Completed courses are evaluated on the competence scale excellent (5), very good (4), good (3), satisfactory (2), minimal pass (1) and fail (0). The marking pass (S) can exceptionally be used if it has been separately stated in the study guide or individual study plan.

Item No. 9 On-line Anti Ragging Undertaking

Considering the odds involved in the submission of On-line anti ragging undertaking at the time of new registration / admission, the item as recommended was approved. However it was decided that no admission will be made without hard copy of the anti ragging affidavit of the parents and individual student as it is statutory requirement and cannot be ignored. Efforts shall be made for getting on-line anti ragging undertaking as soon as feasible and hard copy latest by September 30 of each year.





Item No. 10 Admission review of last three years vis-a-vis sanctioned intake – Decision for introduction of new courses, increase / decrease in take of existing courses, change of nomenclature of existing courses, discontinuation of existing courses.

Statistics showing gradual downfall in number of admissions vis a vis the sanctioned intake of the courses were considered by the Academic Council. Prof S.C Saxena highlighted that all out efforts should be made for increasing the number of admissions. It was also suggested to retain the existing intake of 570, and if required, internal adjustments (increase / reduction) within the programs be made as per the demand of the course / program.

Item No. 11 New Format of Feedback from Students.

To have more objective and comprehensive feedback from the students, new format of Feedback was placed before the Academic Council. Academic Council approved the same with a suggestion to also incorporate attributes suggested in NBA guidelines, to make it more comprehensive. Prof. S.C Saxena suggested that the same will be implemented in other Jaypee Universities.

Item No. 12 Approval of Sports Policy

The draft Sports Policy of JUIT was placed before the Academic Council and after detailed deliberation, the same was approved.

Item No. 13 Approval of the Meeting of Board of Studies (BOS) of various Departments.

Academic Council considered the Minutes of Board of Studies (BOS) of various departments and noted the same.

Item No. 14 Increase / Reduction in Sanctioned Intake of Existing Programs / Courses

Department of Electronics and Communication had recommended for reduction in the sanctioned intake of B. Tech. (Electronics & Communication Engineering) from existing 90 sanctioned intake to 60. The item was considered and resolved that the adjustment could be made within the total sanctioned intake of 570 within the courses / programs. However, total sanctioned intake of Under Graduate programs should be retained as 570.

Item No. 15 New Course Structure and detailed syllabus for B. Tech. 2nd, 3rd and 4th year with 160 Credits / 180 Credits (with Additional Certificate of Minor Area / proficiency in steam X).

The Academic Council considered and approved the following items:-

(i) The Course Structure of 160 Credits as mandated by the AICTE and detailed syllabus from various departments as approved by their respective Board of Students (BOS) was considered and approved. The criteria for award of Honours degree will remain the same as approved in the Academic Council



dated 02 December, 2017. The additional 20 credits for the award of certificate of Minor area / proficiency in steam X, 20 additional credits are required fulfilling the following criteria.

- (i) (a) Conditions for Award of Additional Certificate of Minor Area
 - i. Earning of minimum credits, as required for award of degree.
 - ii. Earns 20 credits in addition to the credits as specified for the program in the minor area.
 - iii. Additional 20 credits in a minor discipline could be earned through MOOCs also and may include supporting courses from allied discipline limited to a maximum of 6 credits.
 - iv. Successfully completing the Industrial Internship within the minimum period of 4 years.
 - v. Completing all the requirements of a degree in the minimum period of 4 years.
- (i) (b) Conditions for award of additional certificate of proficiency in steam X
 - i. Qualify for the award of B. Tech. degree in the minimum period.
 - ii. Have passed in minimum of >50% of B. Tech elective subjects taken from the steam X.
 - iii. Grade Point Average in the elective subjects of (ii.) is >7.0.
 - iv. Major project has been done in steam X with at least 'A' grade
 - v. CGPA for 195 credits (pre 2018 batch) / 160 credits (post 2018 batch) of B. Tech. level is >6.5
- (ii) Introduction of new Elective Courses and Course descriptions (Annexure 18) proposed by department of Computer Sc. & Engineering.
- (iii) Introduction of new elective Course of Computational Electro Magnetics (18M1WEC331) (Annexure 19) for Ph.D. students proposed by Department of Electronics and Communication Engineering.
- (iv) New elective courses and detailed syllabus (Annexure-20) proposed by Department of Electronics and Communication Engineering.
- (v) MOOC courses as listed in item No. 15.2(iv) of agenda proposed by Department of Electronics and Communication Engineering.
- (vi) Introduction of new elective courses and course description (Annexure 21) proposed by department of Biotechnology and Bioinformatics.
- (vii) New Course of Material Science (18B11PH611) with course description (Annexure 22) as compulsory Science elective for 5th Semester CSE, ECE and IT proposed by Department of PMS.
- (viii) New Course of Engineering Physics Lab-II (18B17PH271) with L-T-P of (0-0-2) of 01 credit (Annexure 23) in 2nd Semester of B. Tech. CSE, ECE, IT and CE as proposed by Department of PMS.

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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- (ix) New Courses with course description (Annexure 24) proposed by Department of Mathematics.
- (x) New Courses with course description (Annexure 25) proposed by Department of Humanities and Social Sciences.

Item No. 16 Modification in Existing Course Structure / Detailed Syllabus

The Academic Council considered and approved the following:-

- (i) Modification in detailed syllabus of existing courses of B. Tech. (CSE/IT), M. Tech. (CSE) and M. Tech. (CSE) (IS) (Annexure 26) proposed by Department of Computer Science and Engineering and Information Technology.
- (ii) Modification in existing Theory and Lab Courses (Annexure 27) proposed by Department of Electronics and Communication Engineering.
- (iii) Modification in Course Structure and course description of M. Tech. (Biotechnology) (Annexure 28) proposed by Department of Biotechnology and Bioinformatics.
- (iv) Department of Biotechnology and Bioinformatics has proposed for granting permission to B. Tech. (BT), B. Tech. (BI) and M.Tech.(BT) students to apply for and avail "Khorana program for Scholars", prestigious International fellowship program, jointly initiated by Department of Biotechnology (DBT), Govt. Of India, and Indo-US Science and Technology Forum (IUSSTF) for 10 weeks fellowship to the selected students at US Universities during May to July 2019 with a condition to maintain their attendance requirements as per University rules with no concession / waiver in attendance towards such participation.
- (v) Modification in the course contents of Biophysical Techniques (18B11PH212) (Annexure 29) proposed by Department of PMS.
- (vi) Modification in (L-T-P) of Engineering Physics-II from (3-1-0) to (3-0-0) (Annexure 30) proposed by Department of PMS.
- (vii) Modification in Course contents of Engineering Physics Lab I (18B17PH171), Basic Engineering Physics-I (18B11PH112) and Basic Engineering Physics Lab I (18B17PH172) (Annexure 31) proposed by Department of PMS.





Item No. 17 Reporting Items

Reporting items as mentioned at Agenda item 17.1 to 17.10 were considered and noted by the Academic Council.

Item No. 18 Any other Item with the permission of the Chair.

Prof. P.B. Barman, Professor and Head of PMS Department raised the issue of Plagiarism and measures which can be taken to deal with the issue. Prof. S.C Saxena suggested to deal with the problem by adopting following:-

The guidelines issued by the UGC should be followed. These are mandatory to each University. The guidelines of UGC may be further explained for the convenience of research scholars and faculty.

There being no other points, meeting ended with a vote of thanks to the Chair.

Day

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Non-Member Secretary

Approved

(Prof. Vinod Kumar) Vice - Chancellor

Chairman

Assistant Registrar (Academics)

Jaypee University of Information Technology

Waknaghat, Distt. Solan (H.P.)

B.TECH. COMPUTER SCIENCE AND ENGINEERING

COURSE STRUCTURE

B.Tech. - CSE

As per AICTE revised credit scheme of 160 credits.

Batch - 2018 onwards...



Semester III (Second Year) Curriculum (160 credits)

Branch/Course: Computer Science and Engineering

						Contact Hours			
S.No.	Type of Course	Code	Course title	L	T	P	Hrs	Credits	
1	Professional Core Courses	CS xxx	Python Programming Essentials	3	0	0	3	3	
2	Engineering Science Course	CS 301	Object Oriented Systems and Programming	3	0	0	3	3	
3	Professional Core Courses	CS 501	Database Management systems	3	0	0	3	3	
4	Basic Science Course	BSC 301	Mathematics-III (Probability & Statistics)	3	0	0	3	3	
5	Humanities & Social Sciences including Management courses	HSMC 301	Humanities-I (Interpersonal Dynamics, Values and Ethics)	3	0	0	3	3	
6	Professional Core Courses	Lab	Python programming Lab	0	0	4	4	2	
7	Engineering Science Course	Lab	Object Oriented Systems and Programming Lab	0	0	4	4	2	
8	Professional Core Courses	Lab	DBMS Lab	0	0	4	4	2	
9	Engineering Science Course	Lab	IT Workshop (SciLab/MATLAB) Lab	0	0	4	4	2	
			To	tal	Cre	dits	31	23	



Semester IV (Second Year) Curriculum (160 credits)

Branch/Course: Computer Science and Engineering

				Contact Hou			ours	
S.No.	Type of Course	Code Course title		L	Т	P	Hrs	Credits
1	Professional Core Courses	CS 401	Discrete Computatio nal Mathematics	3	0	0	3	3
2	Professional Core Courses	CS xxx	Modelling and Simulation Techniques	2	0	0	2	2
3	Professional Core Courses	CS 403	Operating Systems	3	0	0	3	3
4	Professional Core Courses	CS 404	Design & Analysis of Algorithms	3	0	0	3	3
5	Mandatory Course	МС	Environmental Sciences	2	-		2	0
6	Humanities & Social Sciences including Management courses	HSMC 401	Management 1 (Finance & Accounting)	3	0	0	3	3
7	Professional Core Courses	Lab	Data Simulation Lab	0	0	4	4	2
8	Professional Core Courses	Lab	Operating System Lab	0	0	4	4	2
9	Professional Core Courses	Lab	DAA Lab	0	0	4	4	2
10	Professional Core Courses	Lab	Web Tech Lab	0	0	4	4	2
		eoffska og sag	То	tal (Cred	lits	32	22



			rd Year) Curriculum (16	STATE	ATTE OF	WYDHON		
	Branch	/Course: C	omputer Science and I	_				DESCRIPTION OF THE PROPERTY OF
S.No.	Type of Course	Code	Course title	C	-	act H	ours Hrs	Credits
CARTON	Professional	Code	Course title			ľ	IIIS	Credits
1	Core Courses	CS xxx	Computer Graphics	3	0	0	3	3
2	Basic Science Course	BSC 501	Science Elective	3	0	0	3	3
3	Professional Core Courses	CS 502	Formal Language & Automata Theory	3	0	0	3	3
4	Professional Core Courses	CS 503	Computer Organization and Architecture	3	0	0	3	3
5	Humanities & Social Sciences including Management courses	HSMC - 501	Humanities II (Project Management and Entrepreneurship)	3	0	0	3	3
6	Professional Elective courses	PEC 501	Elective -I	2	0	0	2	2
7	Professional Core Courses	Lab	Computer Graphics Lab	0	0	4	4	2
8	Engineering Science Course	Lab	Multimedia lab	0	0	2	2	1
9	Professional Core Courses	Lab	CO Lab	0	0	2	2	1
10	Professional Elective courses	Lab	Elective -I Lab	0	0	2	2	1

		Cor			
	List of Electives		Т	P	Credits
Elective I					
1	Data Compression	2	0	2	3
2	Principal of Programming Languages	2	0	2	3
3	Java Programming	2	0	2	3
4	Information Security & Coding	2	0	2	3



Semester VI (Third Year) Curriculum (160 credits)

Branch/Course: Computer Science and Engineering

				C	onta	ct H	lours	
S.No.	Type of Course	Code	Course title	L	T	P	Hrs	Credits
1	Professional Core Courses	CS 601	Compiler Design	3	0	0	3	3
2	Professional Core Courses	CS 602	Computer Networks	3	0	0	3	3
3	Professional Elective courses	PEC xxx	Elective II	2	0	0	2	2
4	Professional Elective courses	PEC xxx	Elective III	2	0	0	2	2
5	Open Elective courses	OEC xxx	Open Elective -I (Humanities)	3	0	0	3	3
6	Project	PROJ- CS60	Project - I	0	0	6	6	3
7	Professional Core Courses	Lab	Compiler Design Lab	0	0	4	4	2
8	Professional Core Courses	Lab	Computer Networks lab	0	0	4	4	2
9	Professional Elective courses	Lab	Elective - II Lab	0	0	2	2	1
10	Professional Elective courses	Lab	Elective - III Lab	0	0	2	2	1
			Т	otal (Crec	lits	31	22

		Co	ntact Ho	ours		
	List of Electives	L	Т	P	Credits	
Elective II						
1	Software Testing Fundamentals	2	0	2	3	
2	Machine Learning	2	0	2	3	
3	C# and VB.NET	2	0	2	3	
4	Data Structure and Software Design	2	0	2	3	
Elective III						
1	Artificial Intelligence	2	0	2	3	
2	Data Mining & Data Warehousing	2	0	2	3	
3	Parallel and Distributed Algorithms	2	0	2	3	
4	Digital Image processing	2	0	2	3	



Semester VII (Fourth Year) Curriculum (160 credits) Branch/Course: Computer Science and Engineering

ofessional ective courses ofessional ective courses	Code PEC xxx	Course title Elective IV	2	0	P	Hrs	Credits
ective courses ofessional	de description de la constitución de la constitució	Elective IV	2	0			
					0	2	2
	PEC xxx	Elective V	3	0	0	3	3
oen Elective urses	OEC 701	Open Elective II / MOOC Course*	3	0	0	3	3
sic Science urse	OEC 702	Open Elective III / MOOC Course*	3	1	0	3	3
andatory Course	MC 701	Constituion of India/Essence of Indian Traditional Knowledge	1			1	0
ofessional ective courses	Lab	Elective IV Lab	0	0	2	2	1
oject	PROJ- CS70	Project - II	0	0	12	12	6
		1	otal	Cre	dits	26	18
ar	sic Science irse ndatory Course fessional ctive courses	ndatory Course MC 701 fessional ctive courses ject PROJ-CS70	OEC 702 Open Elective III / MOOC Course* Constituion of India/Essence of Indian Traditional Knowledge fessional ctive courses DEC 702 Open Elective III / MOOC Course* Constituion of Indian Traditional Knowledge Elective IV Lab PROJ- CS70 Project - II	Sic Science or Sic Science of Open Elective III / MOOC Course* 3 Constituion of India/Essence of Indian Traditional Knowledge 1 fessional ctive courses Lab Elective IV Lab 0 PROJ-CS70 Project - II 0 Total	Sic Science or Sic Science of Indian Traditional Knowledge 1 - Fessional Cive courses	OEC 702 Open Elective III / MOOC Course* 3 1 0 Constituion of India/Essence of Indian Traditional Knowledge 1 fessional ctive courses Lab Elective IV Lab 0 0 2 PROJ-CS70 Project - II 0 0 12 Total Credits	OEC 702 Open Elective III / MOOC Course* 3 1 0 3 Constituion of India/Essence of Indian Traditional Knowledge 1 1 fessional ctive courses Lab Elective IV Lab 0 0 2 2 PROJ-CS70 Project - II 0 0 0 12 12 Total Credits 26

		Co	ntact H	lours		
	List of Electives	L	Т	Р	Credits	
Elective IV						
1	Cryptography& network security	2	0	2	3	
2	Advanced Algorithms	2	0	2	3	
3	R-Programming	2	0	2	3	
4	Pattern Recognition	2	0	2	3	
Elective V						
1	Storage Networks	3	0	0	3	
2	Internet of Things	3	0	0	3	
3	Mobile Computing	3	0	0	3	
4	Cloud Computing	3	0	0	3	



	A COLOR OF THE RESIDENCE OF THE PARTY OF THE		ear) Curriculum (Iter Science and I					
				С	onta	ours		
S.No.	Type of Course	Code	Course title	1	Τ	P	Hrs	Credits
1	Professional Elective courses	PEC xxx	Elective VI	3	0	0	3	3
2	Open Elective courses	OEC 801	Open Elective IV / MOOC Course*	3	0	0	3	3
3	Open Elective courses	OEC 802	Open Elective V / MOOC Course*	3	0	0	3	3
4	Project	PROJ-CS80	Project - III	0	0	12	12	6
				Total	Cre	dits	21	15
	*MOOC C	ourses – Will b	e decided by the	Depa	artm	ent		

		Со			
	List of Electives		T	P	Credits
Elective VI					
1	Data Analytics	3	0	0	3
2	BIG DATA	3	0	0	3
3	Network Management	3	0	0	3
4	Graph Theory	3	0	0	3

Credit Break-up for each semester

S.No.	Semester	Credit Break-up	Credit breakup As per AICT B.Tech	E for
1	First	17.5	HSS & Management Courses	12
2	Second	20.5	Basic Science courses	23
3	Third	23	Engineering Science	26
4	Fourth	22	Professional core courses	51
5	Fifth	22	Professional Elective courses (from CSE)	18
6	Sixth	22	Open Electives (from other technical and /or emerging subjects) OR MOOC courses	
7	Seventh	18	Project work, seminar and internship	
8	Eighth	15	Mandatory Courses	
	Total Credits	160	Total Credits	



B.TECH. COMPUTER SCIENCE AND ENGINEERING

COURSE STRUCTURE

B.Tech. - CSE

As per AICTE revised credit scheme of 180 credits.

Batch - 2018 onwards...



Semester III (Second Year) Curriculum (180 CREDITS)

Branch/Course: Computer Science and Engineering

				C	onta	act H	ours	
S.No.	Type of Course	Code	Course title		T	Р	Hrs	Credits
1	Professional Core Courses	CS xxx	Python Programming Essentials	3	0	0	3	3
2	Engineering Science Course	CS 301	Object Oriented Systems and Programming	3	0	0	3	3
3	Professional Core Courses	CS 501	Database Management systems	3	0	0	3	3
4	Basic Science Course	BSC 301	Mathematics-III (Probability & Statistics)	3	0	0	3	3
5	Humanities & Social Sciences including Management courses	HSMC 301	Humanities-I (Interpersonal Dynamics, Values and Ethics)	3	0	0	3	3
6	Professional Core Courses	Lab	Python programming Lab	0	0	4	4	2
7	Engineering Science Course	Lab	Object Oriented Systems and Programming Lab	0	0	4	4	2
8	Professional Core Courses	Lab	DBMS Lab	0	0	4	4	2
9	Engineering Science Course	Lab	IT Workshop (SciLab/MATLAB) Lab	0	0	4	4	2
			T	otal	Cre	dits	31	23



Semester IV (Second Year) Curriculum (180 CREDITS)

Branch/Course: Computer Science and Engineering

				C	onta	ict H	ours		
S.No.	Type of Course	Code	Course title	L	T	P	Hrs	Credits	
1	Professional Core Courses	CS 401	Discrete Computatio nal Mathematics	3	0	0	3	3	
2	Professional Core Courses	CS xxx	Modelling and Simulation Techniques	2	0	0	2	2	
3	Professional Core Courses	CS 403	Operating Systems	3	0	0	3	3	
4	Professional Core Courses	CS 404	Design & Analysis of Algorithms	3	0	0	3	3	
5	Mandatory Course	MC	Environmental Sciences	2	-		2	0	
6	Humanities & Social Sciences including Management courses	HSMC 401	Management 1 (Finance & Accounting)	3	0	0	3	3	
7	Professional Core Courses	Lab	Data Simulation Lab	0	0	4	4	2	
8	Professional Core Courses	Lab	Operating System Lab	0	0	4	4	2	
9	Professional Core Courses	Lab	DAA Lab	0	0	4	4	2	
10	Professional Core Courses	Lab	Web Tech Lab	0	0	4	4	2	
			То	tal	Cre	dits	32	22	



	Sem	ester V (Third	Year) Curriculum (180	CRI	EDIT	rs)		
	Branc	h/Course: Con	nputer Science and Eng	jine	erin	g		
				C	onta	act H	lours	
S.No.	THE REAL PROPERTY OF THE PROPE	Code	Course title	L	Т	P	Hrs	Credits
1	Professional Core Courses	CS xxx	Computer Graphics	3	0	0	3	3
2	Basic Science Course	BSC 501	Science Elective	3	0	0	3	3
3	Professional Core Courses	CS 502	Formal Language & Automata Theory	3	0	0	3	3
4	0010 0001000	CS 503	Computer Organization and Architecture	3	0	0	3	3
an transfer states	Humanities & Social Sciences including		Humanities II (Project	Total S				
5	Management courses	HSMC -501	Management and Entrepreneurship)	3	0	0	3	3
6	Professional Elective courses	PEC 501	Elective -I	2	0	0	2	2
7	Professional Core Courses	Lab	Computer Graphics Lab	0	0	4	4	2
8	Engineering Science Course	Lab	Multimedia lab	0	0	2	2	1
9	Professional Core Courses	Lab	CO Lab	0	0	2	2	1
10	Professional Elective courses	Lab	Elective -I Lab	0	0	2	2	1
11	Professional Elective courses	PEC - HONS	Software Engineering	3	0	0	3	3
12	Professional Elective courses	PEC - HONS LAB	Software Engineering Lab	0	0	4	4	2
			То	tal (Cred	dits	34	27

		Con			
	List of Electives		Т	P	Credits
Elective I					
1	Data Compression	2	0	2	3
2	Principal of Programming Languages	2	0	2	3
3	Java Programming	2	0	2	3
4	Information Security & Coding	2	0	2	3



Semester VI (Third Year) Curriculum (180 CREDITS)

Branch/Course: Computer Science and Engineering

	Type of Course			C	onta	ct H	ours	
S.No.		Code	Course title	L	T	Р	Hrs	Credits
1	Professional Core Courses	CS 601	Compiler Design	3	0	0	3	3
2	Professional Core Courses	CS 602	Computer Networks	3	0	0	3	3
3	Professional Elective courses	PEC xxx	Elective II	2	0	0	2	2
4	Professional Elective courses	PEC xxx	Elective III	2	0	0	2	2
5	Open Elective courses	OEC xxx	Open Elective -I (Humanities)	3	0	0	3	3
6	Project	PROJ-CS60	Project - I	0	0	6	6	3
7	Professional Core Courses	Lab	Compiler Design Lab	0	0	4	4	2
8	Professional Core Courses	Lab	Computer Networks lab	0	0	4	4	2
9	Professional Elective courses	Lab	Elective - II Lab	0	0	2	2	1
10	Professional Elective courses	Lab	Elective - III Lab	0	0	2	2	1
11	Professional Elective courses	PEC-HONS	Artificial Intelligence	2	0	0	2	2
12	Professional Elective courses	PEC-HONS	Machine Learning	2	0	0	2	2
13	Professional Elective courses	PEC-HONS LAB	Artificial Intelligence Lab	0	0	2	2	1
14	Professional Elective courses	PEC-HONS LAB	Machine Learning Lab	0	0	2	2	1
			To	tal (Cre	dits	39	28

		Co	ntact H		
	List of Electives	L	T	P	Credits
Elective II					
1	Software Testing Fundamentals	2	0	2	3
2	Machine Learning	2	0	2	3
3	C# and VB.NET	2	0	2	3
4	Data Structure and Software Design	2	0	2	3
Elective III				DVT SON	
1	Artificial Intelligence	2	0	2	3
2	Data Mining & Data Warehousing	2	0	2	3
3	Parallel and Distributed Algorithms	2	0	2	3
4	Digital Image processing	2	0	2	3



Semester VII	(Fourth Year)	Curriculum (180	CREDITS)
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Branch/Course: Computer Science and Engineering

			Contact			act H	ours	
S.No.	Type of Course	Code	Course title		Т	P	Hrs	Credits
1	Professional Elective courses	PEC xxx	Elective IV	2	0	0	2	2
2	Professional Elective courses	PEC xxx	Elective V	3	0	0	3	3
3	Open Elective courses	OEC 701	Open Elective II / MOOC Course*	3	0	0	3	3
4	Basic Science course	OEC 702	Open Elective III / MOOC Course*	3	1	0	3	3
5	Mandatory Course	MC 701	Constituion of India/Essence of Indian Traditional Knowledge	1		-	1	0
6	Professional Elective courses	Lab	Elective IV Lab	0	0	2	2	1
7	Project	PROJ-CS70	Project - II	0	0	12	12	6
8	Professional Elective courses	PEC-HONS	Internet of Things	2	0	0	2	2
9	Professional Elective courses	PEC-HONS	Cryptography and Network Security	2	0	0	2	2
10	Professional Elective courses	PEC-HONS LAB	Internet of things Lab	0	0	2	2	1
11	Professional Elective courses	PEC-HONS LAB	Cryptography and Network Security Lab	0	0	2	2	1
			То	tal	Cre	dits	34	24

*MOOC Courses – Will be decided by the Department

	Cor	ntact H		
List of Electives	1	T	P	Credits
Cryptography& network security	2	0	2	3
Advanced Algorithms	2	0	2	3
R-Programming	2	0	2	3
Pattern Recognition	2	0	2	3
			September 1	
Storage Networks	3	0	0	3
Internet of Things	3	0	0	3
Mobile Computing	3	0	0	3
Cloud Computing Barrier	3	0	0	3
	Cryptography& network security Advanced Algorithms R-Programming Pattern Recognition Storage Networks Internet of Things Mobile Computing	Cryptography& network security 2 Advanced Algorithms 2 R-Programming 2 Pattern Recognition 2 Storage Networks 3 Internet of Things 3 Mobile Computing 3	List of Electives Cryptography& network security Advanced Algorithms 2 0 R-Programming 2 0 Pattern Recognition 2 0 Storage Networks 3 0 Internet of Things 3 0 Mobile Computing 3 0	Cryptography& network security 2 0 2 Advanced Algorithms 2 0 2 R-Programming 2 0 2 Pattern Recognition 2 0 2 Storage Networks 3 0 0 Internet of Things 3 0 0 Mobile Computing 3 0 0



	Branch/C	ourse: Com	puter Science and E	ng	ine	ering		
				C	onta	ict H	ours	
S.No.	Type of Course	Code	Course title	11	ī	P	Hrs	Credits
1	Professional Elective courses	PEC xxx	Elective VI	3	0	0	3	3
2	Open Elective courses	OEC 801	Open Elective IV / MOOC Course*	3	0	0	3	3
3	Open Elective courses	OEC 802	Open Elective V / MOOC Course*	3	0	0	3	3
4	Project	PROJ- CS80	Project - III	0	0	12	12	6
5	Professional Elective courses	PEC- HONS	Graph Theory/Data Analytics	3	0	0	3	3
			To	tal	Cre	dits	24	18

		Co	Contact Hours				
	List of Electives		T	P	Credits		
Elective VI							
1	Data Analytics	3	0	0	3		
2	BIG DATA	3	0	0	3		
3	Network Management	3	0	0	3		
4	Graph Theory	3	0	0	3		

Credit Break-up for each semester

S.No.	Semester	Credit Break-up	Credit breakup As per AICTE fo (HONS.)	r B.Tech	
1	First	17.5	HSS & Management Courses	12	
2	Second	20.5	Basic Science courses	23	
3	Third	23	Engineering Science	26	
4	Fourth	22	Professional core courses	51	
5	Fifth	27	Professional Elective courses (from CSE)	38	
6	Sixth	28	Open Electives (from other technical and /or emerging subjects) OR MOOC courses	15	
7	Seventh	24	Project work, seminar and internship	15	
8	Eighth	18	Mandatory Courses		
He World	Total Credits	180	Total Credits	180	



Course Structure for B Tech IT (Regular) (160 Credits)

		Branch/Cor	urse: Information Technology					
	Type of			Cont	act H			
Sr	Course	Code	Course title	L	T	P	Hr	Cr
1	HSS & Management Course	HSMC 301	Humanities-I (Interpersonal Dynamics, Values and Ethics)	3	0	0	3	in the second
2	Basic Science Course	BSC 301	Mathematics-III (Probability & Statistics)	3	0	0	3	;
3	Engineering Science Course	ECS 301	Object Oriented Systems and Programming	3	0	0	3	
4	Professional Core Courses	IT 301	Python Programming with Raspberry Pi	3	0	0	3	3
5	Professional Core Courses	CS 303	Database Management systems	3	0	0	3	3
6	Professional Core Courses	IT 304	Python programming with Raspberry Pi Lab	0	0	4	4	2
7	Engineering Science Course	ECS 302	Object Oriented Systems and Programming Lab	0	0	4	4	2
8	Engineering Science Course	IT 305	IT Workshop (SciLab/MATLAB) Lab	0	0	4	4	2
9	Professional Core Courses	CS 306	DBMS Lab	0	0	4	4	23



					rse: Information Technology	Branch/Cou		
	s	Hours	tact	Cor			Type of	
Cr	Hr	P	Г	L	Course title	Code	Course	Sr
3	3	0	0	3	Management 1 (Finance & Accounting)	HSMC 401	HSS & Management Course	1
3	3	0	0	3	Discrete Computational Mathematics	CS 401	Professional Core Courses	2
2	2	0	0	2	Modelling and Simulation Techniques	IT 402	Professional Core Courses	3
3	3	0	0	3	Operating Systems	CS 403	Professional Core Courses	4
3	3	0	0	3	Design & Analysis of Algorithms	CS 404	Professional Core Courses	5
2	2		-	2	Environmental Sciences	MC 401	Mandatory Course	6
4	4	4	0	0	Data Simulation Lab	IT 405	Professional Core Courses	7
4	4	4	0	0	Operating System Lab	CS 406	Core Courses	8
4	4	4	0	0	DAA Lab	CS 407	Core Courses	9
4	4	4	0	0	Web Tech Lab	IT 408	Professional Core Courses	10
		4	0	0 0	Operating System Lab DAA Lab	CS 406 CS 407	Professional Core Courses Professional Core Courses Professional	9



			7: B Tech IT (Regular) (160 Credits) urse: Information Technology					
	Type of			C	ontact	Hour	s	hija s
Sr	Course	Code	Course title	L	Т	P	Hr	Cr
1	HSS & Management Course	HSMC - 501	Humanities II (Project Management and Entrepreneurship)	3	0	0	3	
2	2.5.00.5.0	BSC 501	Science Elective	3	0	0	3	
3	Professional Core Courses	IT 501	Information Systems	3	0	0	3	
4	Professional Core Courses	IT 502	Advanced Java	3	0	0	3	
5	Professional Core Courses	CS 503	Computer Organization and Architecture	3	0	0	3	
6	Professional Elective courses	PEC 501	Elective -I	2	0	0	2	
7	Professional Core Courses	IT 504	Advanced Java Lab	0	0	4	4	
8	Professional Core Courses	IT 505	Information Systems Lab	0	0	2	2	
9	Professional Core Courses	CS 506	CO Lab	0	0	2	2	
10	Professional Elective courses	PEC 507	Elective -I Lab	0	0	2	2	
				Т	otal C	redits	27	2



	Branch/Cou	ırse: Information Technology					
Type of			Co	ntact	Hour	s	
Course	Code	Course title	L	T	P	Hr	Cr
Professional Core Courses	IT 601	Data Mining	3	0	0	3	
Core Courses	CS 602	Computer Networks	3	0	0	3	
Professional Elective courses	PEC 601	Elective II	2	0	0	2	ia varijens
Professional Elective courses	PEC 602	Elective III	2	0	0	2	
Open Elective courses	OEC 601	Open Elective -I (Humanities)	3	0	0	3	
Project	PROJ-IT60	Project - I	0	0	6	6	
Professional Core Courses	IT 603	Data Mining Lab	0	0	4	4	
Professional Core Courses	CS 604	Computer Networks lab	0	0	4	4	
Professional Elective courses	PEC 603	Elective - II Lab	0	0	2	2	
Professional Elective courses	PEC 604	Elective - III Lab	0	0	2	2	
	Course Professional Core Courses Professional Core Courses Professional Elective courses Professional Elective courses Open Elective courses Project Professional Core Courses Professional Elective courses Professional Core Courses Professional Elective courses	Type of Course Course Professional Core Courses Professional Core Courses Professional Elective courses PEC 601 Professional Elective courses PEC 602 Open Elective courses OEC 601 Professional Core Courses IT 603 Professional Core Courses PEC 603 Professional Elective courses PEC 603 Professional Elective courses	Type of Course Code Course title Professional Core Courses Professional Core Courses Professional Elective courses PEC 601 Professional Elective courses PEC 602 Elective II Open Elective courses PEC 601 Open Elective -I (Humanities) Professional Core Courses PROJ-IT60 Professional Core Courses PEC 603 Data Mining Lab Professional Core Courses PEC 603 Elective - II Lab Professional Elective courses PEC 603 Elective - II Lab	Type of Course Course Course Course Course Course Courses Core Courses IT 601 Data Mining 3 Professional Core Courses CS 602 Computer Networks 3 Professional Elective courses PEC 601 Elective II 2 Professional Elective courses OEC 601 Open Elective -I (Humanities) 3 Professional Core Courses IT 603 Professional Core Courses CS 604 Computer Networks 0 Professional Core Courses FEC 603 Elective - II Lab OProfessional Elective courses Elective - II Lab OProfessional Elective courses Elective - II Lab OProfessional Elective courses OF 603 Elective - II Lab OProfessional Elective courses OF 603 Elective - II Lab OF II Lab	Course Code Course title Contact	Type of Course Code Course title Course title L T P	Type of Course Code Course title Contact Hoursestand Core Courses IT 601 Data Mining Core Courses IT 601 Data Mining Core Courses CS 602 Computer Networks CORE Courses CS 601 Elective II CORE Courses CS 602 Elective III CORE Courses CS 601 CORE Courses CS 601 CORE Courses CS 601 CORE Courses CS 604 CORE COURSE CS 604 CS 604

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		Branch/Co	ourse: Information Technology	3744					
	Type of				Cor	itact	Hour	s	
Sr	Course	Code	Course title	L	T	Г	P	Hr	Cr
1	Professional Elective courses	PEC 701	Elective IV		2	0	0	2	
2	Professional Elective courses	PEC 702	Elective V		3	0	0	3	de cultura por por
3	Open Elective courses	OEC 701	Open Elective II / MOOC Course*		3	0	0	3	
4	Open Elective courses	OEC 702	Open Elective III / MOOC Course*		3	0	0	3	
5	Mandatory Course	MC 701	Constituion of India/Essence of Indian Traditional Knowledge		1			1	
6	Professional Elective courses	PEC 703	Elective IV Lab		0	0	2	2	
7	Project	PROJ- IT70	Project - II		0	0	12	12	
					Tot	al C	redits	25	



			III : B Tech IT (Regular) (160 Cre rrse: Information Technology					
Altania,	Type of			C	s			
Sr	Course	Code	Course title	L	T	P	Hr	Cr
1	Professional Elective courses	PEC 801	Elective VI	3	0	0	3	3
2	Open Elective courses	OEC 801	Open Elective IV / MOOC Course*	3	0	0	3	3
3	Open Elective courses	OEC 802	Open Elective V / MOOC Course*	3	0	0	3	3
4	Project	PROJ-IT80	Project - III	0	0	12	12	6
				T	otal C	redits	21	15

S.	Semester	Proposed	PROPOSED Credit breakup for			
No		Credits	regular B.Tech(CSE)	townselv process	a expense estimate e	
•						
1	First	17.5				
2	Second	20.5				
3	Third	23	160 credits for 4 year B.Tech CSE curricula			
4	Fourth	22	B.Tech CSEcurrena			
5	Fifth	22				
6	Sixth	22				
7	Seventh	18				
8	Eighth	15				
	Total	160				
S. No	Group(s)		Credit breakup As per AICTE for regular B.tech (GENERAL)	AICTE- CSE Credit	PROPO SED Credit	
1	HSS & Managen	nent	12	12	12	
2	Basic Science cou	irses	25	24	23	
3	Engineering Scie	nce	24	29	25	
4	Professional core	courses	48	49	52	
5	Professional Elec	tive	18	18	18	
6	Open Electives (f	rom	18	12	15	
7	Project work, sen	ninar and	15	15	15	
8	Mandatory Cour	ses				
	To	tal	160	159	160	



Course Structure for B Tech IT (180 Credits)

			B Tech IT (180 Credits) ourse: Information Technology					
Sr	Type of Course	Code	Course title	Cont	act H	ours P	Hr	Cr
1	HSS & Management Course	HSMC 301	Humanities-I (Interpersonal Dynamics, Values and Ethics)	3	0	\$304±00	BENES	(P119) (1971) - 170
2	Basic Science Course	BSC 301	Mathematics-III (Probability & Statistics)	3	0	0	3	
3	Engineering Science Course	ECS 301	Object Oriented Systems and Programming	3	0	0	3	
4	Professional Core Courses	IT 301	Python Programming with Raspberry Pi	3	0	0	3	
5	Professional Core Courses	CS 303	Database Management systems	3	0	0	3	
6	Professional Core Courses	IT 304	Python programming with Raspberry Pi Lab	0	0	4	4	
7	Engineering Science Course	ECS 302	Object Oriented Systems and Programming Lab	0	0	4	4	
8	Engineering Science Course	IT 305	IT Workshop (SciLab/MATLAB) Lab	0	0	4	4	
9	Professional Core Courses	CS 306	DBMS Lab	0	. 0	4	4	
					No.	Total	31	



		Branch/C	ourse: Information Technology					
	Type of			Contact Hours			s	
Sr	Course	Code	Course title	L	T	P	Hr	Cr
1	HSS & Management Course	HSMC 401	Management 1 (Finance & Accounting)	3	0	0	3	
2	Professional Core Courses	CS 401	Discrete Computational Mathematics	3	0	0	3	(E) O A SI VE
3	Professional Core Courses	IT 402	Modelling and Simulation Techniques	2	0	0	2	
4	Professional Core Courses	CS 403	Operating Systems	3	0	0	3	
5	Professional Core Courses	CS 404	Design & Analysis of Algorithms	3	0	0	3	
6	Mandatory Course	MC 401	Environmental Sciences	2	Accessors in	Rose sul	2	Company of a
7	Professional Core Courses	IT 405	Data Simulation Lab	0	0	4	4	:
8	Professional Core Courses	CS 406	Operating System Lab	0	0	4	4	:
9	Professional Core Courses	CS 407	DAA Lab	0	0	4	4	2
10	Professional Core Courses	IT 408	Web Tech Lab	0	0	4	4	
5 7					,	Γotal	32	2



			B Tech IT (180 Credits) Durse: Information Technology					
	Type of				ontact			
Sr	Course	Code	Course title	L	T	P	Hr	Cr
1	HSS & Management Course	HSMC - 501	Humanities II (Project Management and Entrepreneurship)	3	0	0	3	3
2	Basic Science course	BSC 501	Science Elective	3	0	0	3	3
3	Professional Core Courses	IT 501	Information Systems	3	0	0	3	3
4	Professional Core Courses	IT 502	Advanced Java	3	0	0	3	3
5	Professional Core Courses	CS 503	Computer Organization and Architecture	3	0	0	3	3
6	Professional Elective courses	PEC 501	Elective -I	2	0	0	2	2
7	Professional Core Courses	IT 504	Advanced Java Lab	0	0	4	4	2
8	Professional Core Courses	IT 505	Information Systems Lab	0	0	2	2	1
9	Professional Core Courses	CS 506	CO Lab	0	0	2	2	1
10	Professional Elective courses	PEC 507	Elective -I Lab	0	0	2	2	1
11	Professional Elective courses	PEC- HONS	Web ApplicationEngineering	3	0	0	3	3
12	Professional Elective courses	PEC- HONS Lab	Web Application Engineering Lab	0	0	4	4	2

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Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distr. Solan (H.P.)

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	Branch/Co	ourse: Information Technology					
Type of Course	Code	Course title	L	ontact T	Hour P	s Hr	Cr
Professional Core Courses	IT 601	Data Mining	3	0	0	3	
Professional Core Courses	CS 602	Computer Networks	3	0	0	3	
Professional Elective courses	PEC 601	Elective II	2	0	0	2	
Professional Elective courses	PEC 602	Elective III	2	0	0	2	
Open Elective courses	OEC 601	Open Elective -I (Humanities)	3	0	0	3	
Project	PROJ-IT60	Project - I	0	0	6	6	
Professional Core Courses	IT 603	Data Mining Lab	0	0	4	4	
Professional Core Courses	CS 604	Computer Networks lab	0	0	4	4	
Professional Elective courses	PEC 603	Elective - II Lab	0	0	2	2	
Professional Elective courses	PEC 604	Elective - III Lab	0	0	2	2	
Professional Elective courses	PEC- HONS	Artificial Intelligence	2	0	0	2	
Professional Elective courses	PEC- HONS	Machine learning	2	0	0	2	
Professional Elective courses	PEC- HONS Lab	Artificial Intelligence Lab	0	0	2	2	
Professional Elective courses	PEC- HONS lab	Machine learning lab	0	0	2	2	
	Course Professional Core Courses Professional Core Courses Professional Elective courses Professional Elective courses Open Elective courses Professional Core Courses Professional Core Courses Professional Elective courses	Type of Course Courses Professional Core Courses Professional Core Courses Professional Elective courses Open Elective courses Open Elective courses Open Elective Courses Professional Elective Courses Open Elective Courses IT 603 Professional Core Courses Professional Elective Courses PEC 603 Professional Elective Courses PEC 604 Professional Elective Courses PEC HONS Professional Elective Courses PEC- HONS Professional Elective Courses	Course Code Course title Professional Core Courses IT 601 Data Mining Professional Core Courses CS 602 Computer Networks Professional Elective courses PEC 601 Elective III Professional Elective courses PEC 602 Elective III Open Elective courses OEC 601 Open Elective -I (Humanities) Project PROJ-IT60 Project - I Professional Core Courses IT 603 Data Mining Lab Professional Elective courses CS 604 Computer Networks lab Professional Elective courses PEC 603 Elective - II Lab Professional Elective courses PEC 604 Elective - III Lab Professional Elective courses PEC- HONS Machine learning Professional Elective courses PEC- HONS Artificial Intelligence Lab Professional Elective courses PEC- HONS Artificial Intelligence Lab	Type of Course Course Course Course Course Course Courses Code Course title Core Courses Computer Networks Interpretation of the Networks Interpretation of th	Type of Course Course Course Course Code Course itile Core Courses IT 601 Data Mining 3 0 Professional Core Courses CS 602 Computer Networks 3 0 Professional Elective courses PEC 601 Elective III 2 0 Professional Elective courses PEC 602 Den Elective III 2 0 Open Elective Courses OEC 601 Open Elective -I (Humanities) 3 0 Project PROJ-IT60 Project -I Professional Core Courses CS 604 Computer Networks lab 0 0 Professional Elective courses PEC 603 Elective - II Lab 0 0 Professional Elective courses PEC 604 Elective - II Lab 0 0 Professional Elective courses PEC 604 Elective - II Lab 0 0 Professional Elective courses PEC HONS Artificial Intelligence Professional Elective courses PEC-HONS Lab Artificial Intelligence Lab 0 0 Professional Elective courses PEC-HONS Artificial Intelligence Lab 0 0 Professional Elective courses PEC-HONS Artificial Intelligence Lab	Type of Course Code Course title Contact Hour Corressional Core Courses IT 601 Data Mining 3 0 0 0 0 0 0 0 0 0	Type of Course Code Course title Course I T P Hr



		Branch/Co	ourse: Information Technology					
	Type of			C	ontact	Hour	s	
Sr	Course	Code	Course title	L	T	P	Hr	Cr
1	Professional Elective courses	PEC 701	Elective IV	2	0	0	2	2
2	Professional Elective courses	PEC 702	Elective V	3	0	0	3	3
3	Open Elective courses	OEC 701	Open Elective II / MOOC Course*	3	0	0	3	3
4	Open Elective courses	OEC 702	Open Elective III / MOOC Course*	3	0	0	3	3
5	Mandatory Course	MC 701	Constituion of India/Essence of Indian Traditional Knowledge	1	an and the		1	(
6	Professional Elective courses	PEC 703	Elective IV Lab	0	0	2	2	1
7	Project	PROJ- IT70	Project - II	0	0	12	12	(
8	Professional Elective courses	PEC- HONS	Internet of Things	2	0	0	2	2
9	Professional Elective courses	PEC- HONS	Cryptography & network Security	2	0	0	2	2
10	Professional Elective courses	PEC- HONS Lab	Internet of Things lab	0	0	2	2	1
11	Professional Elective courses	PEC- HONS Lab	Cryptography & network Security Lab	0	0	2	2	1
						Total	33	24

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		Semester VIII	: B Tech IT (180 Credits)					
		Branch/Co	ourse: Information Technology					
	Type of			C	s			
Sr	Course	Code	Course title	L	T	P	Hr	Cr
1	Professional Elective courses	PEC 801	Elective VI	3	0	0	3	3
2	Open Elective courses	OEC 801	Open Elective IV / MOOC Course*	3	0	0	3	3
3	Open Elective courses	OEC 802	Open Elective V / MOOC Course*	3	0	0	3	3
4	Project	PROJ-IT80	Project - III	0	0	12	12	6
5	Professional Elective courses	PEC- HONS	Graph Theory/Data Analytics	3	0	0	3	3
						Total	24	18

S.	Semester	Proposed	ses – Will be decided by the Depa PROPOSED Credit breakup for		22 Sept. 10 10 10 10 10 10 10 10 10 10 10 10 10	1
No	Semester	Credits	B.Tech IT			
1	First	17.5				
2	Second	20.5	1 450.00 400 W. 4			18
3	Third	23	160+20=180 credits for 4 year			
4	Fourth	22	B.Tech IT curricula			
5	Fifth	27				
6	Sixth	28				
7	Seventh	24				1 6
8	Eighth	18				
	Total	180				
S. No			Credit breakup As per AICTE for regular B.tech Hons (GENERAL)	AICTE- CSE Hons	PROPO SED Credit	
1	HSS & Manageme	nt	12		12 1	2
2	Basic Science cours	ses	25		24 2	23
3	Engineering Science	e	24		29 2	25
4	Professional core c	ourses	48	4	19 5	52
5	Professional Electi	ve	38		38 3	8
6	Open Electives (fre	om	18		12 1	5
7	Project work, semi	nar and	15		15 1	5
8	Mandatory Course	es				
	Tota	ıl	180	17	9 180	



JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, SOLAN

COURSE CURRICULUM OF ECE DEPARTMENT- 2018 batch (160 CREDITS)

B. TECH ELECTRONICS & COMMUNICATION ENGINEERING 3rd SEMESTER

S. No.	Category Code	Subject Code	Name of the Subjects	C	ourse H	ours	Credits	Total Hours
				L	T	P		
1	Basic Sciences	18B11MA311	Probability and Random Processes	3	1	0	4	4
2	Professional Core	18B11EC311	Electrical Machines and Instruments	3	0	0	3	3
3	Professional Core	18B17EC371	Electrical Machines and Instruments Lab	0	0	2	1	2
4	Professional Core	18B11EC312	Digital Electronics & Logic Design	3	1	0	4	4
5	Engg Science	18B11EC313	Electronics Device & Circuits	3	1	0	4	4
6	HSS	18B11HS311	Interpersonal Dynamics, Values and Ethics	3	0	0	3	3
7	Professional Core	18B17EC372	Digital Electronics & Logic Design Lab	0	0	2	1	2
8	Engg Science	18B17EC373	Electronics Device &Circuits Lab	0	0	2	1	2
						Total	21	24

B. TECH (ELECTRONICS & COMMUNICATION ENGINEERING) 4th SEMESTER

S. No.	Category Code	Subject Code	Name of the Subjects	Co	ourse H	ours	Credits	Total Hours
				L	T	P		
1	HSS	18B11HS411	Finance and Accounts	3	0	0	3	3
2	Basic Sciences	18B11MA411	Discrete Mathematics	3	0	0	3	3
3	Professional Core	18B11EC411	Analogue Electronics	3	0	0	3	3
4	Professional Core	18B11EC412	Signals & Systems	3	1	0	4	4
5	Professional Core	18B11EC413	Analogue and Digital Communications	3	1	0	4	4
6	Professional Core	18B17EC472	Signals and Systems Lab	0	0	2	1	2
7	Professional Core	18B17EC473	Analogue and Digital Communications Lab	0	0	2	1	2
8	Professional Core	18B17EC471	Analogues Electronics Lab	0	0	2	1	2
9	Engg Science	18B17EC372	Phython Lab (ECE Deptt)	0	0	2	1	2
10		ations (resembles to a	Environmental Studies	2	0	0	0	2
1,3517						Total	21	27



JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, SOLAN COURSE CURRICULUM OF ECE DEPARTMENT- 2018 batch (160 CREDITS)

B. TECH ELECTRONICS & COMMUNICATION ENGINEERING 5th SEMESTER

S. No.	Category Code	Subject Code	Name of the Subjects	Co	ourse H	ours	Credits	Total Hours
				L	Т	P		
1	HSS	18B11HS511	Project Management and Entrepreneurship	3	0	0	3	3
2	Professional Core	18B11EC511	Digital Signal Processing	3	1	0	4	4
3	Professional Core	18B11EC512	Microprocessor and Interfacing	3	0	0	3	3
4	Professional Core	18B11EC513	Electromagnetic Engineering	3	1	0	4	4
5	Professional Core	18B17EC572	Microprocessor and Interfacing Lab	0	0	2	1	2
6	Engg Science		Science Elective	3	0	0	3	3
7	Deptt Elective		Deptt Elective DE-I	3	0	0	3	3
8	Professional Core	18B17EC571	Digital Signal Processing Lab	0	0	2	1	2
						Total	22	24

B. TECH (ELECTRONICS & COMMUNICATION ENGINEERING) 6 th SEMESTER

S. No.	Category Code	Subject Code	Name of the Subjects	Co	ourse H	ours	Credits	Total Hours
				L	Т	P		
1	Professional Core	18B11EC611	Wireless and Data Communication	3	0	0	3	3
2	Professional Core	18B11EC612	VLSI Technology and Applications	3	1	0	4	4
3	Open Elective		Open Elective I (HSS Elective)	3	0	0	3	3
4	Open Elective		Open Elective II	3	0	0	3	3
5	Open Elective		Open Elective III	3	0	0	3	3
6	Deptt Elective		Deptt Elective DE-II	3	0	0	3	3
7	Professional Core	18B17EC672	VLSI Lab	0	0	2	1	2
8	Professional Core	18B11EC671	Mini Project/Electronic Design workshop	0	0	2	1	2
9	Professional Core	18B17EC673	Adv Communication Lab	0	0	2	1	2
10			Industrial Training	0	0	0	0	0
						Total	22	25

Assistant Re Jaypee University Information Technology Waknaghat, Distt. Solan (H.P.)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, SOLAN

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B. TECH ELECTRONICS & COMMUNICATION ENGINEERING 7 $^{\mathrm{th}}$ SEMESTER

S. No.	Category Code	Subject Code	Name of the Subjects	Co	ourse H	ours	Credits	Total Hours
				L	Т	Project Hours		
1	Project		Project Part-I	0	0	7	7	7
2	HSS		Indian Constitution	1	0	0	0	1
3	Open Elective		Open Elective IV	3	0	0	3	3
4	Deptt Elective	ptower of the annual	Deptt Elective DE III	3	0	0	3	3
5	Deptt Elective		Deptt Elective DE-IV	3	0	0	3	3
						Total	16	17

B. TECH (ELECTRONICS & COMMUNICATION ENGINEERING) 8 $^{\rm th}$ SEMESTER

S. No.	Category Code	Subject Code	Name of the Subjects	Co	ourse H	ours	Credits	Total Hours
				L	Т	Project Hours		
1	Open Elective		Open Elective V	3	0	0	3	3
2	Deptt Elective		Deptt Elective DE-V	3	0	0	3	3
3	Deptt Elective		Deptt Elective DE-VI	3	0	0	3	3
4	Deptt Elective		Deptt Elective DE-VII	3	0	0	3	3
5	Project		Project Part II	0	0	8	8	8
						Total	20	20
la la			TOTAL CREDITS				160	
			TOTAL HOURS				184	HAR
			HSS			m seed	12	Marity.
			Basic Science				24	
			Engg Science	lank livereis	in Section		27	
			Professional CORE				46	
		Profession	Professional Elective				21	
			OE				15	Etherse.
			PROJECT				15	16



B. Tech. COURSE CURRICULUM OF CIVIL ENGINEERING DEPARTMENT

B.	TECH	3rd	SEMESTER

S. No.	Type of Course	Subject Code	Name of the Subjects	Cou	ırse Ho	urs	Credits	Total Hours
				L	Т	P		
1	Engineering Science Courses		Engineering Mechanics	3	0	0	3	3
2	Professional Core Courses		Concrete Technology Lab	0	0	2	1	2
3	Professional Core Courses		Building Materials & Construction	3	0	0	3	3
4	Professional Core Courses		Surveying	3	0	0	3	3
5	Professional Core Courses		Water Supply Engineering	3	0	0	3	3
6	Professional Core Courses		Surveying Lab	0	0	2	1	2
7	Basic Science Courses		Chemistry	3	0	0	3	3
8	Basic Science Courses		Chemistry Lab	0	0	2	1	2
9	Basic Science Courses		Numerical Methods	3	0	0	3	3
10	Humanities & Social Science Including Management Courses		Interpersonal Dynamics, Values and Ethics	3	0	0	3	3
				7	Γotal		24	27

D. I LCII TIII BENILBIEN	B.	TECH	4th	SEMESTER
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S. No.	Type of Course	Subject Code	Name of the Subjects	Cou	irse Ho	Credits	Total Hours	
				L	Т	P		
1	Professional Core Courses		Mechnanics of Solids	3	0	0	3	3
2	Engineering Science Courses		Computer Aided Civil Engineering Drawing	0	0	2	1	2
3	Professional Core Courses		Fluid Mechanics	3	0	0	3	3
4	Professional Core Courses		Water Resources Engineering	3	0	0	3	3
5	Professional Core Courses		Geotechnical Engineering	3	0	0	3	3
6	Professional Core Courses		Geotechnical Engineering Lab	0	0	2	1	2
7	Professional Core Courses		Fluid Mechanics Lab	0	0	2	1	2
8	Humanities & Social Science Including Management Courses		Finance and Accounts	3	0	0	3	3
9	Mandatory Courses	(Environmental Science	2	1 OF INF	DRMA DO	0	2
		Assistant Bails	tit Academics)	CINEVERS	Total	AC	18	23

Jaypee University of Information Waknaghat, Distt. Solan (H.P.)

			B. TECH 5th SEMESTER					
S. No.	Type of Course	Type of Course Subject Code Name of the		Cou	ırse Ho	ours	Credits	Total Hours
				L	Т	P		
1	Professional Core Courses		Structural Analysis	3	0	0	3	3
2	Professional Core Courses		Sewage Treatment and Disposal	3	0	0	3	3
3	Professional Elective Courses		Elective -1	3	0	0	3	3
4	Professional Core Courses		Environmental Engineering Lab	0	0	2	1	2
5	Professional Core Courses		Design of Concrete Structures	3	1	0	4	4
6	Professional Core Courses		Highway Engineering	3	0	0	3	3
7	Professional Core Courses		Highway Engineering Lab	0	0	2	1	2
	Humanities & Social Science Including Management Courses		Project Management and Entrepreneurship	3	0	0	3	3
9 1	Professional Core Courses		Foundation Engineering	3	0	0	3	3
				Total			24	26

			B. TECH 6th SEMESTER					
S. No.	Type of Course	Subject Code	Name of the Subjects	Cou	ırse Ho	urs	Credits	Total Hours
				L	Т	P		
1	Professional Core Courses		Concrete Technology	3	0	0	3	3
2	Professional Elective Courses		Elective -2	3	0	0	3	3
3	Professional Core Courses		Design of Steel Structures	3	0	0	3	3
4	Professional Elective Courses		Elective -3	3	0	0	3	3
5	Professional Elective Courses		Elective -4	3	0	0	3	3
6	Open Elective		Open Elective 1	3	0	0	3	3
7	Professional Core Courses		Computer Aided Planning and Costing	0	0	4	2	4
8 I	Project		Minor Project	0	0	6	3	6
				Total			23	28



S. No.	Type of Course	Subject Code	Name of the Subjects	urse Ho	urs		Credits	Total Hour
				L	Т	P		
1	Open Elective		Open Elective 2	3	0	0	3	3
2	Open Elective		Open Elective 3	3	0	0	3	3
3	Project		Major Project-I	0	0	12	6	12
4	Professional Elective Courses		Elective - 5	3	0	0	3	3
5	Professional Elective Courses		Elective - 6	3	0	0	3	3
6	Mandatory Courses		Indian Constitution (HSS Audit)	1	0	0	0	1
				Total			18	25

			B. TECH 8th SEMESTER					
S. No.	. Type of Course	o. Type of Course Subject Code	ype of Course Subject Code Name of the Subjects un	urse Ho	urse Hours		Credits	Total Hours
				L	Т	P		
1	Project		Major Project-II	0	0	12	6	12
2	Professional Elective Courses		Elective - 7	3	0	0	3	3
3	Open Elective		Open Elective 4	3	0	0	3	3
4	Open Elective		Open Elective 5	3	0	0	3	3
				Total			15	21

S.No.	Group(s)	Credit Distribution	
1	Humanities and Social Sciences including Management courses	12	
2	Basic Science courses	24	
3	Engineering Science courses	22 As	sis
4	Professional core courses	F1	ype akn
5	Professional Elective courses (from CSE branch)	21	
6	Open subjects – Electives (from other technical and /or emerging subjects) OR MOOC courses	15	
7	Project work, Seminar and Internship	15	
8	Mandatory Courses	0	
	Total credits	160	



S.No.	Semester	Proposed Credits	
1	First	17.5	
2	Second	20.5	
3	Third	24	
4	Fourth	18	Credit breakup for B.Tech (CE)
5	Fifth	24	
6	Sixth	23	
7	Seventh	18	
8	Eighth	15	
	Total	160	





	List of Electives	C	Credits		
	Elective I	Lecture	Tutorial	Practical	
1	CONSTRUCTION TECHNOLOGY AND MANAGEMENT	3	0	0	3
2	SOLID WASTE MANAGEMENT	3	0	0	3
3	AIR AND NOISE POLLUTION AND CONTROL	3	0	0	3

	Elective II	Lecture	Tutorial	Practical	Credits
1	ADVANCED STRUCTURAL ANALYSIS	3	0	0	3
2	PAVEMENT ANALYSIS AND DESIGN	3	0	0	3
3	INDUSTRIAL WASTE TREATMENT	3	0	0	3

	Elective III	Lecture	Tutorial	Practical	Credits
1	TRANSPORTATION ENGINEERING	3	0	0	3
2	TRAFFIC ENGINEERING	3	0	0	3
3	HIGHWAY CONSTRUCTION, MAINTAINANCE AND MANAGEMENT	3	0	0	3

	Elective IV	Lecture	Tutorial	Practical	Credits
1	ADVANCED CONCRETE TECHNOLOGY	3	0	0	3
2	UNDERGROUND TECHNOLOGY	3	0	0	3
3	OPEN CHANNEL FLOW AND HYDRAULIC MACHINE	3	0	0	3

	Elective V	Lecture	Tutorial	Practical	Credits
1	FEM AND ITS APPLICATIONS IN CIVIL ENGINEERING	3	0	0	3
2	ENVIRONMENTAL MANAGEMENT AND IMPACT ASSESSMENT	3	0	0	3
3	ADVANCED FOUNDATION ENGINEERING	3	0	0	3

	Elective VI	Lecture	Tutorial	Practical	Credits
1	EARTHQUAKE ENGINEERING	3	0	0	3
2	PRESTRUCTURE CONCRETRE STRUCTURE	3	0	0	3
3	DAM AND RESERVOIR DESIGN	3	0	0	3

Ballian	Elective VII	Lecture	Tutorial	Practical	Credits
1	ADVANCED REINFORCED CONCRETE DESIGN	3	0	0	3
2	ADVANCED HIGHWAY MATERIAL AND CONSTRUCTION	3	0	0	3
3	HYDROPOWER ENGINEERING	3	0	0	3



Course structure of 2nd, 3rd and 4th year of new 160 credit hour scheme of B. Tech. Biotechnology

B.Tech Biotechnology III Semester (B3)

Sr.	Course			Co	ntact	Hours	Credits
No.	No.	Title	L	T	P	Total	
1	To be Generated	Interpersonal Dynamics Values and Ethics	3	0	0	3	3
2	To be Generated	Probability & Statistical Techniques	3	1	0	4	4
3	To be Generated	Chemistry	3	0	0	3	3
4	To be Generated	Biochemistry	3	0	0	3	3
5	To be Generated	Genetics	3	1	0	4	4
6	To be Generated	Genetics Lab.	0	0	2	2	1
7	To be Generated	Thermodynamics & Chemical Processes	3	1	0	4	4
8	To be Generated	Chemistry Lab	0	0	2	2	1
9	To be Generated	Biochemistry Lab	0	0	2	2	1
10	To be Generated	Thermodynamics & Chemical Processes lab	0	0	2	2	1
		Total	VIII.			29	25

B.Tech Biotechnology IV Semester (B4)

Sr.	Course			Co	ntact	Hours	Credits
No.	No.	Title	L	T	P	Total	
1	To be Generated	Finance and Accounts	3	0	0	3	3
2	To be Generated	Cell Biology and Culture Technologies	3	1	0	4	4
3	To be Generated	Molecular Biology	3	0	0	3	3
4	To be Generated	Introduction to Bioinformatics	3	1	0	4	4
5	To be Generated	Cell Biology and Culture Technologies lab	0	0	2	2	1
6	To be Generated	Molecular Biology Lab	0	0	2	2	1
7	To be Generated	Introduction to Bioinformatics lab	0	0	2	2	1
8	To be Generated	Microbiology	3	1	0	4	4
9	To be Generated	Microbiology Lab	0	0	2	2	1
10	To be Generated	Environmental Studies	2	0	0	2	Audit course
		Total				28	22

B.Tech Biotechnology V Semester (B5)

Sr.	Course			C	ontac	t Hours	Credits
No.	No.	Title	L	T	P	Total	
1	To be generated	Project Management and Entrepreneurship	3	0	0	3	3
2	To be generated	Bioprocess Engineering	3	1	0	4	4
3	To be generated	Genetic Engineering	3	1	0	4	4
4	To be generated	Immunology	3	1	0	4	4
5	To be generated	Departmental Elective-I	3	0	0	3	3
6	To be generated	Bioprocess Engineering Lab	0	0	2	2	1
7	To be generated	Genetic Engineering Lab	0	0	2	2	1
8	To be generated	Immunology Lab	0	0	2	2	1
9	To be generated	Minor project-I		0	2	2	1
K-Suite II-II-I	in management of the males of	Total		detail to the same	nocumple	26	22

B.Tech Biotechnology VI Semester (B6)

Sr.	Course			Conta	ict H	ours	Credits
No.	No.	Title	L	T	P	Total	
1	To be generated	Downstream Processing	3	1	0	4	4
2	To be generated	Food and Agricultural Biotechnology	3	0	0	3	3
3	To be Generated	Departmental Elective- II	3	0	0	3	3
4	To be Generated	Departmental Elective-III	3	0	0	3	3
5	To be Generated	Open Elective-I	3	0	0	3	3
6	To be Generated	Open Elective-II	3	0	0	3	3
7	To be generated	Downstream Processing Lab.	0	0	2	2	1
8	To be generated	Food and Agricultural Biotechnology Lab	0	0	2	2	1
9	To be generated	Minor Project-II	0	0	4	4	2
10	To be generated	Industrial Training	The same		I I I I I I I I I I I I I I I I I I I		Audit
		Total	i de la constante de la consta			27	23

B.Tech Biotechnology VII Semester (B7)

Sr.	Course	Course			Contact Hours			
No.	No.	Title	L	T	P	Total		
1	To be generated	Departmental Elective- IV	3	0	0	3	3	
2	To be generated	Open Elective - III	3	0	0	3	3	
3	To be generated	Open Elective - IV	3	0	0	3	3	
4	To be generated	Major Project Part I			10	10	5	
5	To be generated	Indian Constitution	1	0	0	1	Audit	
		Total		9 76		20	14	

B.Tech VIII Semester (B8)

Sr.	Course			Co	ntact	Hours	Credits
No.	No.	Title	L	T	P	Total	
1	To be generated	Departmental Elective- V	3	0	0	3	3
2	To be generated	Departmental Elective- VI	3	0	0	3	3
3	To be generated	Open Elective-V	3	0	0	3	3
4	To be generated	Major Project Part II			14	14	7
		Total				23	16

Total Credits	in	B.Tech.	199/200*	160
Biotechnology				

^{*}One hour difference in the case of students with Maths Background (Fundamental Biology in First Semester)

List of Electives		
Biotechnology Specific Elective Cou	ırses	Bioinformatics Specific Elective Courses
Phytopharmaceuticals and	Industrial Enzyme Technologies (M	Computational Molecular
Biological	Tech Code)	Evolution
Bioenergy & Biofuels IPR	Antibody Engineering Technologies	Computational Biomedical
	(M Tech Code)	Image Analysis
Biosafety & Bioethics	Biosensors: Principle and	Computational Systems Biology
Industrial Plant Tissue Culture	Application Experimental Neurology	Dataware housing and Mining
industrial Plant Tissue Culture	Experimental Neurology	for Bioinformatics
Peptide Therapeutics	Virology	Advanced Algorithms for
		Bioinformatics
Industrial Plant Tissue Culture	Diagnostics & Vaccine Manufacture	Structural Bioinformatics
Peptide Therapeutics	Bioresources & Industrial Product	and the second s

Peptide Therapeutics	Traditional Bioprocessing & Their	
	Up scaling	
Nano-Biotechnology	Advanced Genetic Engineering	
Infectious Diseases	Food Processing & Engineering (M Tech Code)	
Genetic Counseling		
Comparative & Functional genomics	Vaccine Production (M Tech Code)	
QC Analysis and Management (M Tech Code)	Plant Biotechnology (M Tech Code)	
Clinical Diagnostics (M Tech Code)	Advances in Gene manipulations (M Tech Code)	

Student can enroll a MOOCS course of at least 12 weeks from SYAWAM* after the approval of competent authority. Elective courses would be offered in form of different buckets DE I to VI and OP I to OP V from Electives courses offered by department and open electives of host Department and other departments.

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	Humanities and Social Sciences, Management	Basic Science courses	Engineering Science courses		ona		Project work,	Mandatory Courses	Total	Contact
Reccom	courses 12	33	24	riolessicial core courses	18	ciecuives 18	Jeilillais 15	NA	160	S IDOL
Sem1	English and Technical Communication (2-0-0)(2), English and Technication Communication lab. (0-0-2)(1) Total=3	Basic Engineering Physics (3-1-0)(4) Basic Engineering Physics-1 Lab (0-0-2)(1) Basic Marths-1 (3-1-0) (4) or Fundamental Biology (3-0-0) (3) Fundamental Biology lab(0-0-2) (1), Total=9	Programming for Problem solving (3-0-0)(3), Programming for Problem solving Lab (0-0- 2)(1), Engineering graphics (0-0-3)(1.5) Total=5.5					Mandatory Induction Program(0-0-0)	17.5	8
Sem2		Basic Maths∙2 (3·1-0) (4), Biophy, Tech. (3·1- 0)(4), Total=8	Basic Electrical Sciences (3.1-0) (4), Basic Electrical Sciences lab (0-0-2)(1) Data Structure (3.1-0)(4) Data Structure lab, (0-0-4)(2), Workshop Practices (0-0-3)(1.5) Total=12.5						20.5	8
Sem3	Interpersonal Dynamics Values and Ethics (3-0-0) Total =3	Prob. & Stats. Tech. (3-1-0)(4) Chemistry (3- 0-0) (3) Chemistry Lab (0-0-2)(1) Total =8	Thermodynamics and Chemical Processes (3-1- Biochem (3-0-0) (3) Biochem lab (0-0-2) (1). One of the mical Genetics (3-1-0) (4) Genetics Lab. (0-0-2) (1) Total=5 (1) Total=	Biochem (3-0-0) (3) Biochem lab (0-0-2) (1), Genetics (3-1-0) (4) Genetics Lab. (0-0-2) (1) Total Credit-9					22	39
Sem4	Finace and Accounts (3-0- 0)(3)Total=3			Cell Biology and Culture Technologies (3-1-0) (4)cell Biology and Culture Technologies lab (0-0-2) (1) Moleculas Bio (3-0-0) (3) Moleculas Bio Lab (0-0-2) (1) intro to Bioinfo (3-1-0) (4) introbiology (3-1-0) (4) Microbiology (3-1-0)				EVS Compul. (Audit)(2-0-0)	8	28
Sem5	Project Management and Entrepreneurship (3-0-0) (3) Total=3		Genetic Eng (3-1-0) (4) Bioprocess Engg Lab (0-2) (1) Immunology (3-1-0) (4), Immuno (0-0-2) (1) Total = 5	Genetic Eng (3-1-0) (4) Genetic Eng Lab (0-0-2) (1) Immunology (3-1-0) (4), Immuno Lab (0-0-2) (1) Total=10	DE-1 (3) Total=3		Minor project-i (1) Total=1		z	56
Sem6				Downstream processing (3-1-0) (4), Downstream processing lab (0-0-2) (1,), Food & Agri (3-0-0) (3), Food & Agri lab (0-0-2) (1), 2) (1), Total=9	DE-II (3) DE-III (3)Total=6	0E-I (3) 0E-II (3) Total=6	DE-II (3) DE-III OE- (3) OE-II Minor project-II (3)Total=6 (3)Total=6 (2)Total=2	Industrial Training (Audit)	æ	æ
Sem7					DE-IV (3),Total=3	OE-III (3) OE- IV (3) Total=6	Major project-I (5) Total=5	Indian Const.(HSS Audit) (1-0-0)	21	20
Sem8				A 101500	DE-V (3), DE-VI (3)Total=6	0E-V (3)Total=3	Major project-II (7) Total=7		16	23
Total	12	25	28	47	18	15	15		160	199/20



Course structure of 2^{nd} , 3^{rd} and 4^{th} year of new 160 credit hour scheme of $\,\,$ B. Tech. Bioinformatics

B.Tech Bioinformatics III SEMESTER (B3)

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1		Interpersonal Dynamics Values and Ethics	3	0	0	3	3
2.		Cell and Molecular Biology	3	0	0	3	3
3.		Database Systems	3	1	0	4	4
4.		Biological Computation	3	1	0	4	4
5.		Microbiology & Immune System	3	1	0	4	4
7.		Database Systems Lab	0	0	2	2	1
8.		Cell and Molecular Biology Lab	0	0	2	2	1
9.		Microbiology & Immune System Lab	0	0	2	2	1
10.		Linux Lab	0	0	2	2	1
11.		Biological Computation Lab	0	0	2	2	1
		Total	BILL			28	23

B.Tech Bioinformatics IV SEMESTER (B4)

Sr.	Course		Contact				Credits
No.	H					Total	
y Well	No.						
1		Finance and Accounts	3	0	0	3	3
2.		Bio-Statistics	3	0	0	3	3
3.		Genetic Engineering and Genomics	3	0	0	3.	3
4.		Object Oriented Programming	3	1	0	4	4
5.		Structural Biology	3	0	0	3	3
6.		Programming Languages for	3	0	0	3	3
		Bioinformatics					
7.		Structural Biology Lab	0	0	2	2	1
8.		Object Oriented Programming Lab	0	0	2	2	1
9.		Bio-Statistics Lab		0	2	2	1
10.		Genetic Engineering and Genomics Lab	0	0	2	2	1
11.		Programming Languages for Bioinformatics Lab	0	0	2	2	1
12.	H made set septimi	Environmental Studies	2	0	0	2	Audit course
		Total			The state of	31	24



B.Tech Bioinformatics V SEMESTER (B5)

Sr.	Course			Credits			
No.			Hours				
	No.	Title	L	T	P	Total	
1.		Project Management and Entrepreneurship	3	0	0	3	3
2.		Design and Analysis of Algorithms	3	0	0	3	3
3.		Bioprocess Engineering	3	1	0	4	4
4.		Scripting Languages for Bioinformatics	3	0	0	3	3
5.		Design and Analysis of Algorithms Lab		0	2	2	1
6.		Structural Bioinformatics Lab	0	0	2	2	1
7.		Bioprocess Engineering Lab	0	0	2	2	1
8.		Scripting Languages for Bioinformatics Lab	0	0	2	2	1
9.		Departmental Elective-I	3	0	0	3	3
10.		Open Elective-I	3	0	0	3	3
11.		Minor Project Part-I	0	0	2	2	1
		Total				29	24

B.Tech Bioinformatics VI SEMESTER (B6)

Sr.	Course			C	onta	et Hours	Credits
No.	No.	Title	L	T	P	Total	
1.		Machine Learning for Bioinformatics	3	0	0	3	3
2.		Computer Aided Drug Design	3	0	0	3	3
3.		Machine Learning for Bioinformatics lab	0	0	2	2	1
4.		Computer Aided Drug Design Lab	0	0	2	2	1
5.		Advanced Algorithms for Bioinformatics Lab	0	0	2	2	1
6.		R Language Lab	0	0	2	2	1
7.		Departmental Elective-II	3	0	0	3	3
8.		Departmental Elective-III	3	0	0	3	3
9.		Open Elective-II	3	0	0	3	3
10.	ne Sachterfrankfills	Minor Project Part-II	0	0	4	4	2
11.		Industrial Training					Audit
		Total			L-Sin	27	21

B.Tech Bioinformatics VII Semester (B7)

Sr.	Course	Course		Contact Hours				
No.	No.	Title	L T P Total			Credits		
1		Departmental Elective- IV	3	0	0	3	3	
2		Open Elective - III	3	0	0	3	3	
3		Open Elective - IV	3	0	0	3	3	
4		Major Project Part I	0	0	10	10	5	
5	Parket second and the second	Indian Constitution	1 200	0	0	1	Audit	
		Total			J	20	14	

B.Tech Bioinformatics VIII Semester (B8)

Sr.	Course			Contact Hours			
No.	No.	Title	L T		P Total		Credits
1		Departmental Elective- V	3	0	0	3	3
2		Departmental Elective- VI	3	0	0	3	3
3	USANO RIMBARANI IN IN	Open Elective-V	3	0	0	3	3
4		Major Project Part II	0	0	14	14	7
		Total		-	17	23	16

Total Credits in B.Tech Bioinformatics	205	160
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Biotechnology Specific Elective Co	urses	Bioinformatics Specific Elective Courses
Phytopharmaceuticals and Biological	Industrial Enzyme Technologies (M Tech Code)	Computational Molecular Evolution
Bioenergy & Biofuels IPR	Antibody Engineering Technologies (M Tech Code)	Computational Biomedical Image Analysis
Biosafety & Bioethics	Biosensors: Principle and Application	Computational Systems Biology
Industrial Plant Tissue Culture	Experimental Neurology	Dataware housing and Mining for Bioinformatics
Peptide Therapeutics	Virology	Advanced Algorithms for Bioinformatics
Industrial Plant Tissue Culture	Diagnostics & Vaccine Manufacture	Structural Bioinformatics
Peptide Therapeutics	Bioresources & Industrial Product	Structural Bioinformatics
Peptide Therapeutics	Traditional Bioprocessing & Their Up scaling	
Nano-Biotechnology	Advanced Genetic Engineering	
Infectious Diseases	Food Processing & Engineering (M Tech Code)	
Genetic Counseling		
Comparative & Functional genomics	Vaccine Production (M Tech Code)	OF INFORM

QC Analysis and Management (M Tech Code)	Plant Biotechnology (M Tech Code)	
Clinical Diagnostics (M Tech Code)	Advances in Gene manipulations (M Tech Code)	

Student can enroll a MOOCS course of at least 12 weeks from SYAWAM* after the approval of competent authority. Elective courses would be offered in form of different buckets DE I to VI and OP I to OP V from Electives courses offered by department and open electives of host Department and other departments B.Tech Bioinformatics students are allowed to take electives offered By Computer Science Department as Departmental electives.

160 Credit Scheme for B.Tech. Bioinformatics

Commission Com									Mandatory Courses		
English and Technical Black Engineering Physical (3-10)(4) Communication (2-10) Com		Humanities and Social Sciences including Management courses	Basic Science courses	Engineering Science courses	Professional core courses	Professional Elective courses	Open subjects – Electives from other technical and for emerging		Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Traditional		Total
Size Engineering Physics (15-34)	Reccomended Credits AICTE	a	8	24					Micwiedge	Signal Cledic	sinou
Figure 20 Communication				71.7	48	18	18	8	s	160	
Basic Mathr. 2 3-0 (4), Bodoy Structure & Septembra 3-0 (4), Data	Sem1	English and Technical Communication (2-0-0)(2), English and Technical Communication lab. (0-0- 2)(1) Total=3							Mandatory Induction Program(0-0-0)	27.2	8
Biol. Comput. (3-10)(4) Biol. Biol. Comput. (3-10)(4) Biol. Comp	Sem2		Basic Maths-2 (3-1-0) (4), Biophy. Tech. (3-1-0)(4), Total=8	Basic Electrical Sciences (3-1-0) (4), Basic Electrical Sciences lab (0-0-2)(1) Data Structure & Algorithms (3-1-0)(4) Data Structure & Algorithms lab. (0-0-4)(2), Workshop Practices (0-0-3)(1.5)						20.5	Ŋ
Str. Bio. (3-0-0)(3) Biostatistics (3-0-0)(3) Copes (3-0-0)(3) Cope	Sem3	Interpersonal Dynamics Values and Ethics (3-0-0), Total=3	Cell & Mol. Biology (3-0-0)(3), Cell & Mol. Biology Lab (0-0-2)(1) Total= 4		Biol. Comput. (3-1-0)(4) Biol. Comput. Lab. (0-0-2)(1) Linux Lab (0-0-2)(1) Mirco. and Immun.syst. (3-1-0)(4) Mirco. and Immun.syst. Lab. (0-0-2)(1), Total=11					8	88
Project Management and Entreperveneurship (3-0-0) (3) Pesign & Anal. Of Algo, (3-0-0) (3) Pesign & Anal. Of Algo, (3-0-0) (3) Pesign & Anal. Of Algo, (3-0-0) (3) Entreperveneurship (3-0-	Sem4	Finace and Accounts (3-0-0)(3) Total=3	Biostatistics (3-0-0)(3) Biostatistics Lab (0-0-2)(1), Total=4	Oops(3-1-0)(4), Oops Lab (0-0-2)(1), Total=5	Str. Bio. (3-0-0)(3), Str. Bio. Lab (0-0-2)(1), Gen. Engg. Geno. (3-0-0)(3) Gen. Engg. Geno. Lab. (0-0-2)(1), Prog. Lang. Bl (3-0-0)(3) Prog. Lang. Bl Lab. (0-0-2)(1), Total= 12				EVS Compul. (Audit)(2-0-0)	22	33
Adv. Algo. Bi Lab. (10-0.2)(1) CADD (3-0.00) For Bi. (3-0.0)(3) Mach For Bi. (3-0.0)(3) Mach For Bi. (3-0.0)(3) Mach For Bi. (3-0.0)(3) Mach Total=10 DE-IV DE	Sem5	Project Management and Entrepreneurship (3-0-0) (3) Total=3			Design& Anal. of Algo. (3-0-0)(3) Design & Anal. Of Algo Lab. (0-0-2)(1) Srr. Bl Lab. (0-0-2)(1) Bioprocess Egg. (3-1-0)(4) Bioprocess. Lab. (0-0-2)(1) Ser. Lang. For Bl (3-0-0)(3)Ser. Lang. for Bl Lab. (0-0-2)(1), Total=14	Line Salasani	OE-1 (3)Total=3	Minor project-l (1)Total=1		77	20
DE-IV DE-IV Major project-I Indian Const.(HSS (3)Total=3 (3)Total=6 (5)Total=5 Audit) (1-0-0) DE-V (3). D	Sem6				Adv. Algo. Bl Lab. (0-0-2)(1) CADD (3-0-0)(3) CADD Lab. (0-0-2)(1) Mach.l. For Bl. (3-0-0)(3) Mach.l.for Bl Lab. (0-0-2)(1) R Lang. Lab. (0-0-2)(1)	DE-II (3) DE-III (3) Total=6	OE-II (3) Total=3	Minor project-II (2) Total=2		#	72
25 28 47 18 18 15 15 15 15 15 15 15 15 15 15 15 15 15	Sem7					DE-IV (3)Total=3	OE-III (3), OE-IV (3)Total=6	Major project-I (5)Total=5	Indian Const.(HSS Audit) (1-0-0)	72	8
22 25 28 47 13 (25.4.4.5)	Sem8					DE-V (3), DE-VI (3) Total=6	0E-V (3) Total=3	Major project-II (7)Total=7		16	23
	Fotal Credits	12	22	28	•	1.8	135	15		9	300



Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS meeting held on 17.04, 2019

A meeting of Board of Studies of the Department of Biotechnology & Bioinformatics was held on 17.04. 2019at 11:0 AM in the Board room. Following BoS Members and attendees were present. Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics, JUIT Waknaghat Dr T.C. Bhalla Professor Emeritus Department of Biotechnology HPU Shimla (External Member BoS) 3 Dr Harish Changotra Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS) Head (or Representative), Department of Computer Science and 4 Engineering, JUIT Waknaghat (Member BoS) 5 Head (or Representative), Electronics and Communication Engineering, JUIT Waknaghat, (Member BoS) 6 Head (or Representative). Department of Physics and Materials Science. JUIT Waknaghat, (Member BoS) 7 Head (or Representative), Department of Humanities and Social Sciences. JUIT Waknaghat, (Member BoS) 8 Head (or Representative), Department of Civil Engineering, JUIT Waknaghat, (Member BoS) Dr. Jata Shankar, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as M. Tech. coordinator) 10 Dr Udaybanu Assistant professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as B. Tech. coordinator) Dr. Anil Kant Associate Professor. Department of Biotechnology and 11 Bioinformatics, JUIT Waknaghat (Member Secretary BoS) 12. Varay Blandson, PS, DEVICE, ICAR-CPRI

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Dr Anil Kant member secretary welcome the members of BoS. Professor Sudhir Kumar presented the agenda items one by one before the house for discussion/approval. Following are the recommendation/resolutions of the BoS.

Agenda Item 1

1. To approve the minutes of last BoS meeting held on 09.102018 (Item No1: Minutes of BoS 9.10.2018)

Discussion:

Resolution: Approved as presented

Agenda Item 2

To consider the approval of change of name of some courses (Item No: Change of Name of Courses)

Discussion: Professor Sudhir Kumar explained the reason of proposed changes.

Resolution: Members agreed and approve the said changes as presented.

Agenda Item 3

To consider the approval of elective courses to be offered to students as per 160 credit curricula for B.Tech. Biotechnology and B.Tech. Bioinformatics (2018 batch onwards). (Item No. 3a) B. Tech Biotechnology Electives; (Item No. 3b) B. Tech Bioinformatics Electives)

Discussion: Members were of the view that courses can be added or deleted in the respective elective buckets as per relevance and or availability faculty members.

Resolution: Approved as presented

Agenda Item 4

To consider the approval of Open Electives for 160 credit curricula (2018 batch onwards). (Item No 4: B. Tech Open Electives)

Discussion: Open elective courses are offered to the students of other Departments. Prof Sudhir Kumar explicated objectives and target group of students of each proposed open elective courses eg:

- a. Biology For Engineers: May beof interest of any Engineering branch student
- b. Industrial Chemistry: Students of Civil Engineering
- c. Food Nutrition & Health Care: A general course may be of interest of any non biology student. The knowledge gained could be useful life long for good personal and family nutrition and healthcare.
- d. Sustainable Technologies for Waste Management, Civil Engineering students

Prof TC Bhalla has a look at the proposed courses, and suggested that a unit on composting and waste management can be added in "Sustainable Technologies for Waste Management" course.

Dr Anil Kant Proposed that this new unit could be; Agricultural Waste Management, composting techniques will be part of it.



Resolution: The observations were passed on to concerned faculties and rest of the courses were approved as presented

Agenda Item 5

To consider the approval of offering following Proficiency areas in B. Tech Biotechnology and B. Tech Bioinformatics with a minimum of >50% of B. Tech Elective subjects taken from any of the stream mentioned below. The other conditions for attaining Proficiency are as approved by ACM of October 25, 2018.

- a. B. Tech Biotechnology Proficiency: Industrial Biotechnology (Item No5a: Courses and Detailed syllabus)
- b. B. Tech. Bioinformatics Proficiency: Biomedical Informatics (Item No 5b: Courses and Detailed syllabus)

Discussion: Professor Sudhir Kumar explained the concept of Proficiency areas.

Resolution: Proficiency areas, courses and course syllabi were approved as presented.

Agenda Item 6

To consider the approval of offering following Minor Proficiency areas of 20 Credit each in Biotechnology and Bioinformatics

- a. Minor Proficiency in Biotechnology (Item No 6a: 20 Credit rourses for minor Proficiency in Biotechnology)
- b. Minor Proficiency in Bioinformatics (Item No 6b: 20 Credit courses for minor Proficiency in Bioinformatics)

Discussion: Dr Anil Kant explained the concept of minor proficiency. Minor proficiency of 20 credit is an offer to interested and laborious students of other disciplines, who develop interest in Biotechnology and Bioinformatics. The students of Biotechnology can also opt for minor proficiency in Bioinformatics and vice-versa. In this case also the extra 20 credit hours completed by students would be mentioned in their degree certificate in form of minor proficiency acquired.

Dr Vinay Bhardwaj appreciated the idea of offering proficiency and minor proficiency and overall efforts of the department to continuously update the curricula and syllabi on regular basis. He also enquired about the overall governing body, which approves all such proposals. He was apprised by Prof Sudhir Kumar that 'Academic Council' of the university is the highest body which ultimately ratify the decisions related to academic affairs.

Resolution: Minor Proficiency areas and courses and course syllabi were approved as presented.

Agenda Item 7

To consider approval of MOOC courses in lieu of some core courses for failed students of discontinued 195 scheme Batches. (Item No 7: MOOC courses in lieu of some core courses of discontinued 195 scheme Batches).

Discussion: Professor Sudhir Kumar explained that this is being proposed to help and facilitate the students of discontinued 195 scheme batches to enable them to complete their degree timely.

Resolution: The aged item was approved as presented



Agenda Item 8

To consider approval of minor modifications in course names in M Tech Biotechnology, MSc. Biotechnology and MSc Bioinformatics course structure. (Item No 8a 8b and 8c; respective course structure with included changes).

Discussion: Dr Anil Kant explained the reasons for such minor modifications. Mainly these changes are being proposed to remove the redundancy in names of some courses of MSc, M Tech and PhD programmes.

Resolution: The modifications in course names were approved to adopted as presented.

Agenda Item 9

To consider approval of detailed syllabus of MSc Biotechnology and MSc Bioinformatics in latest JUIT course format. (Item No 9 a Detailed syllabus of MSc Biotechnology; Item No b) Detailed syllabus of MSc Bioinformatics)

Discussion: Prof TC Bhalla, scrutinized syllabi of some course and found these appropriate. Dr Anil Kant told that these syllabi have been discussed in length and breadth in one of previous BoS meeting and only minor changes in syllabi required as a consequence of change in name of few courses, mentiond in item no. 8 are proposed to be ratified through this BoS meeting.

Resolution: The detailed course syllabi of MSc Biotechnology, MSc Bioinformatics and M Tech Biotechnology was approved

Agenda Item 10

To consider the following proposal with respect to Course work and DPMC Structure of DRDO sponsored PhD students. The suggestion came from Director, DIHAR DRDO-Leh.(Item No 10)

a. It is proposed that Ph.D. candidates sponsored by DRDO may have their course work during condensed semester in winters. The hostel facility will be provided by JUIT as per availability and existing policy.

b. DRDO sponsored candidates work in DRDO Labs. (Leh or Chandigarh), so majority of the DPMC members need to be from DRDO along with supervisor from JUIT. DPMC may also be held at Chandigarh or Leh in the presence of JUIT supervisor.

Discussion: The proposal was agreed upon and appreciated by members.

Resolution: Approved as presented

Agenda Item 11

Department of Biotechnology	Chairman BoS, HOD Department of Biotechnology, UIT Waknaghat Liteur No 1 is rust as but the approved
	OD Department of Biotechnology, UIT Waknaghat
Ull Waknaghat	UIT Waknaghat
	I tem No 1 is not as pur me appro-
	of AC.
Prof. (Dr.) Samir Dev Gupta	Prof. (Dr.) Vinod Kumar,
Director & Academic Head	Vice Chancellor JUIT Waknaghat
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	21 8 8
Assistant Registrar (Academics per minus)	5 & 6 are revised as
Agenda form	Complete and Sandanian

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT

JUIT/WKG/REGR/2018-19/444

February 26, 2019

NOTIFICATION

The Composition of the Board of Studies of the Department of Electronics & Communication Engineering of Jaypee University of Information Technology, Waknagaht, Distt. Solan (HP) is hereby notified as under:-

1. Prof (Dr.) M.J Nigam

Chairperson

2. Prof. (Dr.). Debashish Ghosh Head of Department Department of ECE IIT, Roorkee Member

Prof. (Dr.) C.C. Tripathi
Prof. & HOD, ECE
University Institute of Engineering & Technology
Kurukshetra University, Kurukshetra

Member

4. Dr. Balwinder Singh
Coordinator & Principal Engineer
Centre for Development of Advanced Computing
A Scientific Society of the Ministry of Communication
& Information Technology
A-34, Indl Area, Phase VIII, Mohali (Pb)

Member

Dr. Shruti Jain
 Associate Professor, Deptt of ECE

Member Secretary

 Dr. Rajiv Kumar Associate Professor, Deptt of ECE Member

 Dr. Neeru Sharma Asst Professor, Deptt of ECE Member

8. Dr. Meenakshi Sood Asst Professor, Deptt of ECE Member

Contd...2



 Dr. Vikas Baghel Asst Professor, Deptt of ECE Member

 Dr. Shweta Pandit Asst Professor, Deptt of ECE Member

11. Special Invitees

- i) Prof. Samir Dev Gupta, Director & Academic Head
- ii) Prof. S.P. Ghrera, HOD, CSE/IT
- iii) Prof. Ashok Kr. Gupta, HOD, CE
- iv) Prof. Karanjeet Singh, HOD, Mathematics
- v) Prof. P.B. Barman, HOD, PMS
- vi) Prof. Sudhir Kumar, HOD< BT&BI
- vii) Dr. Anupriya Kaur, HOD, HSS

Ban

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Dean of Students

c.c.: Vice Chancellor,

Director & Academic Head

All HODs

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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Department of Electronics and Communication Engineering

JUIT Waknaghat

A meeting of Board of Studies of the Department of Electronics and Communication Engineering was held on 23.03.2019 at 09:30 AM in the Board Room.

The following members were present

1. Prof. M.J. Nigam	Chairman
2. Prof. Samir Dev Gupta	Dean A & R
3. Prof. D. Ghosh	External Member
4. Dr. Rajiv Kumar	Member
5. Dr. Shruti Jain	Member Secretary
6. Dr. Meenakshi Sood	Member
7. Dr. Neeru Sharma	Member
8. Dr. Shweta Pandit	Member
9. Dr. Vikas Baghel	Member
10. Prof. P. B. Barman	HOD, PMS Department
11. Prof. Sunil Khah	Representative PMS Department
12. Prof. Ashish Kumar	Representative Civil Engineering Department
13. Dr. Anil Kant	Representative BT & BI Department
14. Dr. Hemraj Saini	Representative CSE Department
15. Dr. Neel Kanth	Representative Mathematics Department
16. Dr. Sakshi Khanna	Representative HSS Department

Leave of absence

Leave of absence was granted to the following members by the Chairman Board of Studies:

- 1. Prof. C.C.Tripathi (External Member)
- 2. Dr. Balwinder Singh (External Member)

The Chairman welcomed all the members who were present for the meeting. The meeting thereafter deliberated on agenda items as had been approved by the Chairman.



Item No. 1 : Confirmation of minutes of Last Meeting of the Board of Studies held on 13.10.2018.

It was suggested by Prof. Samir Dev Gupta to make a list of PhD courses and syllabi. Prof. P.B. Barman has informed that the mode of Engineering Physics II is 3-0-0 (L-T-P) and Engineering Physics Lab II is 0-0-2 (L-T-P).

Rest approved

Item No. 2: To consider the approval of new Electives for 160 credit curricula for B.Tech ECE (2018 batch onwards).

Prof. D Ghosh has suggested that based on GATE, GRE and other competitive examinations syllabus, Automatic Control System should be included as a core course. After rigorous discussion on this topic, board has suggested replacing "Electrical Machines and Instruments" subject with "Automatic Control System" and also replacing the laboratory courses. Some portion of the subject contents are being already covered in Electrical Sciences syllabus.

Changes have been incorporated. Rest recommended was approved.

Item No. 3: To consider the approval of syllabi of Professional Electives as per 160 credit curricula for B.Tech. ECE (2018 batch onwards).

It was suggested by Prof. Samir Devgupta that there is overlapping in Microwave subjects. So board has suggested clubbing the syllabus of Microwave Components and Devices and Microwave Theory and Techniques into one course titled "Microwave Theory and Techniques". He also suggested re-checking of Radar Principles and Applications syllabus.

The new syllabus of Microwave Theory and Techniques and Radar Principles and Applications is reframed and provided in **Appendix I**. Rest syllabi of electives for 160 credit scheme were approved.

Course codes needs to be generated by Administration.



Item No. 4: To consider the approval of change in Course titles of some approved electives as per 160 credit curricula for B. Tech ECE (2018 batch onwards).

As recommended was approved.

Item No. 5: To consider the approval of Open Electives for 160 credit curricula (2018) batch onwards)

It was suggested by Prof. P.B Barman that two lectures per week for one Theory course are insufficient for students. Later board has suggested that out of four open electives: two open electives should run on 2-0-2 (L-T-P) scheme and two electives on 3-0-0 (L-T-P) scheme. As per the suggestions changes has been incorporated and provided in Appendix II.

The syllabi of all open electives have also been incorporated. Course codes needs to be generated by Administration.

Item No 6: To consider the approval of B-Tech ECE Proficiency in "Communication and Signal Processing".

As recommended was approved

Item No.7: To consider the approval of courses for 160 credit Curricula of B-Tech ECE with additional certificate of Proficiency.

It was suggested by Board that there should be change in titles of some courses. As per the suggestions changes has been incorporated and provided in **Appendix 111**.

Item No 8: To consider the approval of courses for 160 credit Curricula of B-Tech with additional certificate of Minor in ECE.

Board has suggested making electives of Minor structure simple so that Computer Science or Civil Engineering students can opt for the course.

OF INFORMA

As per the suggestions changes has been incorporated and provided in Appendix IV.

Item No. 9: To revise the syllabi of Lab courses for 2016 and 2017 batches

As recommended was approved

Item No. 10: To revise the syllabi of Lab courses for 2018 batch (160 credit scheme)

As recommended was approved

Item No. 11: To approve the MOOC course to be introduced during the Academic A Session 2018-19 for all batches of ECE.

As recommended was approved

Item No. 12: To consider the change in nomenclature for core courses of 160 credit scheme for 2018 batch.

As per the suggestions changes has been incorporated and provided in **Appendix V** and the new 160credit scheme for ECE department is provided in **Appendix VI**.

Item No. 13: Any other item with the permission of the Chair.

There is a change in nomenclature of Network Analysis and Synthesis to "Network Theory" for 2017 batch.

Open Elective floated for 5th semester of 3 credits (3-0-0) for 2017 batch will be considered as Professional elective. The list of electives and their syllabi is provided in **Appendix VII**

The meeting concluded at 1145hrs with a vote of thanks by Prof. M. J. Nigam, Chairman Board of Studies.



(Prof. D.Ghosh)

Absent (Dr. Balwinder Singh)

(Prof. Samir DevGupta)

(Dr. Shruti Jain)

tleurs 23.3.19
(Dr. Meenakshi Sood)

(Dr. Vikas Baghel)

(HOD, BT / BI Department)

(Prof. Sunil Khah)

(HOD, HSS Department)

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Absent (Prof. C.C. Tripathi)

(Prof. M. J. Nigam)

(Dr. Rajiv Kumar)

(Dr. Neeru Sharma)

(Dr. Shweta Pandit)

(HOD, CSE Department)

(HOD, PMS Department)

For Null cent (HOD, Mathematics Department)

(HOD, Civil Engineering Department)

Assistant Registrar (Academics)
Jaypee University of Information Technology

Waknaghat, Distt. Solan (H.P.)



Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS meeting held on 08.08, 2019

A meeting of Board of Studies of the Department of Biotechnology & Bioinformatics was held on **08.08**, **2019** at 12:30 PM in the Board room,

Following BoS Members and attendees were present. Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics, JUIT Waknaghat 2 Dr Harish Changotra Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS) 3 Head (or Representative), Department of Computer Science and Engineering, JUIT Waknaghat (Member BoS) 4 Head (or Representative). Department of Electronics and Communication Engineering, JUIT Waknaghat, (Member BoS) 5 Head (or Representative), Department of Physics and Materials Science, JUIT Waknaghat, (Member BoS) Head (or Representative), Department of Civil Engineering, JUIT Waknaghat, (Member BoS) Head (or Representative), Department of Humanities and Social Sciences, JUIT Waknaghat, (Member BoS) 8 Dr. Tiratha Raj Singh, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as M. Tech. coordinator) Dr Udaybanu Assistant professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as B. Tech. coordinator) Dr. Jayashree Assistant Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member Secretary BoS) 11 Dr. Saurabh Bansal Assistant Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member Secretary BoS)

Updated minutes agres corrections in front (Agada No. 1)

OF INFORM

Professor Sudhir Kumar presented the agenda items one by one before the house for discussion/approval. Following are the recommendation/ resolutions of the BoS.

Agenda Item 1

1. To consider the approval of offering following Proficiency areas in B. Tech Biotechnology and B. Tech Bioinformatics with a minimum of >50% of B. Tech Elective subjects taken from any of the stream mentioned below. The other conditions for attaining Proficiency are as approved by ACM of October 25, 2018.

Discussion: Professor Sudhir Kumar explained the proposed Proficiency areas and the respective course credits.

- a. B. Tech Biotechnology Proficiency: Industrial Biotechnology
- b. B. Tech Biotechnology Proficiency: Medical Biotechnology
- c. B. Tech. Bioinformatics Proficiency: Biomedical Informatics
- d. B. Tech. Bioinformatics Proficiency: Systems Biology

Members were of the view that courses can be added or shuffled in the respective proficiencies

Resolution: Members approved the same and suggested some changes as listed below:

- In Medical Biotechnology: Inclusion of one elective in the 7th Semester (Stem Cells and Regenerative Medicines)
- In Biomedical Informatics: Computational Biomedical Image Analysis could be offered in 5th Semester and Stem Cells and Regenerative Medicines could be shifted to 7th Semester
- In Systems Biology: Comparative & functional genomics could be offered in the 5th semester and NGS Data analysis & Applications in the 7th semester

Agenda Item 2

To consider the approval of offering following Minor areas of 20 Credit each in Biotechnology and Bioinformatics: Minor in Biotechnology & Minor in Bioinformatics **Discussion:** Professor Sudhir Kumar explained the proposed Minor areas and the respective course credits.

Resolution: Approved as presented

Agenda Item 3

Any other item with the permission of the Chair:

To consider the approval of minor modifications in Integrated M.Tech course curriculum with additional 12 Course credits to match 75 credits of M.Tech program

Discussion: Minor Change in the course curriculum to be offered was proposed by Prof Sudhir Kumar, as listed below:

- To match the M.Tech Course Curriculum the dissertation credit is revised to 10 credits each in the 9th. 10th and 11th semester
- Further, one elective from M.Tech curriculum with 03 credits is included each in the 10th & 11th semester
- An advanced lab course (Advanced Bioinformatics Lab) to match M. Tech Course curriculum with course credit 01 is introduced in the 10th semester (Course is already approved for the M.Tech Program)

The elective courses will be selected from the list of already approved electives of the departmental M. Tech program.

	Code	Credits	Electives in 10th Semester
1		03	Food Processing & Engineering
2		03	Plant Tissue Culture Technologies
3		03	Advances in Computational System Biology
4		03	Microbial Ecology

	Code	Credits	Electives in 11th Semester
1		03	Vaccine Production
2		03	QC Analysis and Management
3		03	Plant Biotechnology
4.		03	Advances in Gene manipulations
5			,

Department of BT & BI JUIT

Prof. Samh Dev Gupta

Director & Academic Head 21/08/2010 JUIT

Prof. Sudhir Kumar Chairman BoS,

Department of BT & BI JUIT

Item No. 1 is us as x but the approval of the

IQAC

Prof. Vinod Kumar, Vice Chancellor, JUIT.

Then No. 1 is corrected as per Acm oct 2018.

- uplated minutes are attached in Bos Gilo.

DEPARTMENT OF CIVIL ENGINEERING

MINUTES OF BOS MEETING HELD ON AUGUST 17th, 2019

Board of Studies meeting was held on 17th August 2019 in board room at 11.00 a.m. The following were present:

Prof. Ashok Kumar Gupta, Chairman

Dr. Ashish Kumar, Professor, Member

Dr. Rajiv Ganguly, Associate Professor, Member

Prof. (Dr.) P.B. Barman, HOD, Dept. of Physics & Material Science, Member

Dr. Hemraj Saini, Nominee (HoD CSE)

Dr. Anil Kant Thakur, Nominee (HoD BT & BI)

Dr. Naveen Jaglan, Nominee (HoD ECE)

Dr. Saurabh Rawat, Member Secretary

Mr. Tanmay Gupta, Special Invitee

Agenda 1: Minor and Proficiency Programme in Civil Engineering

After detailed deliberations, Agenda I was approved unanimously as attached under Annexure-I.

Agenda 2: M.Tech. Program in Transportation Engineering by Civil Engineering Department

Prof. Ashok Kumar Gupta suggested the new M. Tech. Program and its significance due to the increasing demand of Transportation and Highway Engineers. It was suggested by the members to increase total credits of the programme to 76 credits, at par with other running programmes. After detailed deliberations, M. Tech. programme was approved unanimously as attached under ANNEXURE – II.

Agenda 3: Admission criteria for M. Tech. Program in Environmental Engineering

Prof. Ashok Kumar Gupta suggested B. Tech. in Civil Engineering / Chemical Engineering / Environmental Engineering to be eligible for admission in M. Tech. Environmental Engineering (EE) Programme. He also recommended for acquiring this practise in accordance to premium institutes like IITs/NITs/ CFTIs. After discussion, the members suggested addition of B. Tech. in Biotechnology/ M.Sc. in Environmental Engineering and M. Sc. in Chemistry also to the proposed agenda. The same was approved after discussion.



Agenda 4: Minutes of Departmental Consultative Committee as given in Annexure III for perusal and discussion.

Prof. Ashok Kumar Gupta briefed about the minutes of Departmental Consultative Committee, which were approved unanimously and attached under ANNEXURE - III.

Agenda 5: Updation of existing list of journals for Ph.D. programme in Civil Engineering.

Prof. Ashok Kumar Gupta informed about the addition of three new SCOPUS indexed Journals which have been added to the existing list of Journals maintained by the Department of Civil Engineering. The added Journals were approved by all the members and are given at ANNEXURE – IV.

Attendance Sheet

Agenda for Board of Studies Meeting, August 17, 2019

Venue: JUIT Board Room at 11:00 AM

S. No.	Members	Signature
1.	Prof. (Dr.) Ashok Kumar Gupta, Chairman	13-18/19
2.	Prof. S K Singh, PEC Chandigarh, Member Dr. Yeshpal Vashishtha,	
3.	Executive engineer, HPPWD Kangra, H. P., Member	
4.	Ms. Surabhi Sharma, Assistant Professor, J. N. Government Engineering College, Sundernagar, Mandi, H. P. Member	
5.	Prof. (Dr.) Brig. S.P. Ghrera (Retd.) HOD, Dept. of CSE & IT, Member	W. D. T.
6.	Prof. (Dr.) M. J. Nigam, HOD, Dept. of ECE, Member	accent can 198119
7.	Prof. (Dr.) P.B. Barman, HOD, Dept. of Physics & Material Science, Member	July 12/18/19
8.	Prof. (Dr.) Sudhir Kumar, HOD, Dept. of BT&BI, Member	For July 1718/19
9.	Prof. (Dr.) Karanjeet Singh, HOD, Dept. of Mathematics, Member	
10.	Dr. Anupriya Kaur, HOD, Dept. of HSS, Member Dr. Ashish Kumar,	
11.	Professor, Member	Higher ar
12.	Dr. Rajiv Ganguly, Associate Professor, Member	Rganguly
13.	Dr. Saurabh Rawat, Member Secretary	MATORIA ON TORY
14.	Mr. Tanmay Gupta Assistant Registran (Academics) Special Invitee Jaypee University of Information Technology Waknaghat, Distr. Solan (H.P.)	TQAC S
	and August 1911. 20130 (H.F.)	\ 972 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

Department of Computer Science & Engineering and Information <u>Technology</u>, Waknaghat

Minutes of the Meeting of BOS, August 2019

Minutes of meeting of Board of Studies in the Department of Computer Science & Engineering and Information Technology was held on 22nd August 2019 at 11:00 A.M. in the Board Room, Jaypee University of Information Technology, Waknaghat. The following resolutions were passed in the meeting:

RESOLUTIONS: It was resolved to approve various Proficiency Curricula and Courses for B. Tech CSE and B. Tech IT. (placed at Annexure-I) It was resolved to approve the bucket for Open Electives II & III for 7th semester and Open Electives IV & V for 8th semester. (placed at Annexure-II) It was resolved to approve the curricula for minor in CSE. (placed at Annexus III) It was resolved to approve the curricula for minor in IT. (placed at Annexure-IV) It was resolved to approve the revised list of departmental electives for B. Tech CSE (160 credits) duly incorporating the proficiency electives. (placed at Annexure-V) It was resolved to approve the revised list of departmental electives for B. Tech IT 6) (160 credits) duly incorporating the proficiency electives. (placed at Annexure-VI) It was resolved to approve the revision of courses in the 160 credit curricula of B. 7) Tech IT. (placed at Annexure-VII) 8) The report on CO-PO and PSO-PEO attainments for the odd semester 2018 was approved in the meeting (placed at Annexure-VIII).

Prof. Web SP Ghrera (CSE/IT Dept)

Annex-IX).

9)

Assistant Registra (School of Jaypee University of Information Technology Waknaghat, Distr. Solan (H.P.)

Att sheet

The recommendations of the Program Evaluation Committee (PEC) report and the action taken on the recommendations were approved in the meeting (placed at

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Department of Electronics and Communication Engineering

JUIT Waknaghat

A meeting of Board of Studies of the Department of Electronics and Communication Engineering was held on 17.08.2019 at 09:30 AM in the Board Room.

The following members were present

1.	Prof. M.J. Nigam	Chairman
2.	Prof. Samir Dev Gupta	Dean A & R
3.	Dr. Balwinder Singh	External Member
4.	Dr. Rajiv Kumar	Member
5.	Dr. Shruti Jain	Member Secretary
6.	Dr. Meenakshi Sood	Member
7.	Dr. Neeru Sharma	Member
8.	Dr. Shweta Pandit	Member
9.	Dr. Vikas Baghel	Member
10.	Dr. Naveen Jaglan	Co-opted Member
11.	Dr. Nafis uddin Khan	ECE Department
12.	Prof. P. B. Barman	HOD, PMS Department
13.	Dr. Anil Kant	Representative BT & BI Department
14.	Ms. Triambica Gautam	Representative HSS Department

Leave of absence

Leave of absence was granted to the following members by the Chairman Board of Studies:

- 1. Prof. C.C.Tripathi (External Member)
- 2. Prof. Debasis Ghosh (External Member)

The Chairman welcomed all the members who were present for the meeting. The meeting thereafter deliberated on agenda items as had been approved by the Chairman.

Item No. 1 : Confirmation of minutes of Last Meeting of the Board of Studies held on 23.03.2019.

As per the suggestion of Prof. D. Ghosh in the last BoS meeting, Automatic Control System has been added in 160 course curriculum in 3rd semester.

Also, change in course titles, syllabi of laboratory courses and addition of professional & open electives has been incorporated in the new scheme.

Rest approved

Item No. 2: To consider the approval of B-Tech ECE Proficiency in Embedded Systems,

Communication Technology, Machine Learning, Signal Processing,

Digital Image Processing, and Microwave and RF Design

The new titles of B-Tech Proficiency Program in ECE were approved in lieu of Item No 6 of BoS held on 23-03-2019.

Changes have been approved.

Item No. 3: To consider the approval of course titles for B-Tech Proficiency Program in ECE.

All the course titles in every proficiency field have been approved.

Item No. 4: To consider the approval of course titles for B-Tech Minor Program in ECE.

As per the suggestion of Dr. Meenakshi Sood, Biomedical Signal Processing course has been replaced to any Elective course run by the department.

Rest as recommended was approved

Item No. 5: To revise the elective course of "Network Theory".

As recommended was approved

Item No 6: To approve the Course Outcomes (COs) - Program Outcomes (POs) - Program Specific Outcomes (PSOs) attainments for 2018-19 (Odd Semester 2018 and Even Semester 2019).

As recommended was approved

Item No.7: To approve the newly floated Ph.D. course and its syllabus.

Dr. Balwinder Singh has suggested some changes in the syllabus. As per the suggestions changes has been incorporated and provided in **Appendix A**.

Item No 8: To approve the MOOCs to be introduced during the Academic Session 2019-20 for all batches of ECE.

Board has suggested giving only one MOOC of Computer Vision instead of two. So Introduction of Computer Vision has been deleted.

Rest all courses were approved.

Item No. 9: Any other item with the permission of the Chair.

Open Elective floated for 6^{th} semester of 3 credits (3-0-0) for 2017 batch will be considered as Professional elective. The list of electives and their syllabi is provided in **Appendix B**

The meeting concluded at 10:30AM with a vote of thanks by **Prof. M. J. Nigam**, Chairman Board of Studies.

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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Absent (Prof. D.Ghosh)

(Dr. Balwinder Singh)

(Prof. Samir DevGupta) 17/04/2-18

(Dr. Shruti Jaih)

(Dr. Meenakshi Sood

(Dr. Vikas Baghel)

(HOD, BT / BI Department)

July 13/8/2019

(HOD, Mathematics Department)

(HOD, Civil Engineering Department)

Absent (Prof. C.C. Tripathi)

(Prof. M. J. Nigam)

Dr. Rajiv Kumar)

(Dr. Neeru Sharma)

(Dr. Shweta Pandit)

Absent
(HOD, CSE/IT Department)

(HOD, PMS Department)

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(HOD, HSS Department)



General

Academic Council meeting was held on 05 September, 2019 at 11.00 a.m. in the Board Room, Jaypee University of Information Technology, Waknaghat. The Chairman, Academic Council extended warm welcome to all the members present in the meeting and expressed thanks to Prof. S. C. Saxena for his presence.

Attendance

The following members were present:-

Chairman

Prof. Vinod Kumar

Vice Chancellor, JUIT, Waknaghat

Head of the Other Institution of the Trust

Prof. S. C. Saxena

Vice Chancellor, JIIT, Noida

The Deans of all Faculty of the University

Prof. Samir Dev Gupta

Director, JUIT

Heads of the Departments / Centres of the University

Prof. M. J. Nigam

Head of Deptt. of ECE

Prof. S. P. Ghrera

Head of Deptt. of CSE&IT Head of Deptt. of BT&BI

Dr. Sudhir Kumar Prof. Karanjeet Singh

Head of Deptt. of Mathematics

Prof. P. B. Barman

Head of Deptt. of PMS

Dr. Anupriya Kaur

Associate Professor and Head of Deptt. of HSS

Professors other than Heads of Departments

Prof. Sunil Kumar Khah

Deptt. of PMS

Prof. Ashish Kumar

Deptt. of CE

Non-Member Secretary

Maj Gen Rakesh Bassi, SM (Retd.)

Registrar and Dean of Students

Leave of Absence

Leave of absence was granted to the following members by the Chairman, Academic Council:-

Sh. Sunil Sharma Sh. Vinod Sharma Prof. Manoj Arora

Prof. A. K. Gupta

Industry Professional nominated by the Pro-Chancellor

Industry Professional nominated by the Pro-Chancellor

Vice Chancellor, BML Munjal University, Gurgaon

Head of Deptt.of CE

Agenda Items

Item No. 1 Confirmation of Minutes of last meeting of the Academic Council held on 25 October 2018.

Minutes of the meeting of the last ACM dated 25th October 2018 were forwarded to the members and no comments were received. The minutes of the last ACM confirmed.

Item No. 2 Action Taken Report

Detailed deliberations were made on the Action Taken Report of the last ACM. The action taken on the items resolved in the last ACM were noted by the members.

Chairman informed the members about increase in number of admissions under lateral entry this year due to introduction of 20% additional supernumerary seats under lateral entry for candidates qualified with 3 years Diploma course. He mentioned that students who have not undergone the mandatory courses in their erstwhile Institute for B. Tech First year are being offered such mandatory courses during their B. Tech Second year in addition to their scheduled B. Tech second year curriculum.

Prof. S C Saxena noted the attributes of the New on-line 'Feedback Form' developed for getting the end semester feedback from the students and suggested for developing Google Feedback Form so as to enable the students to submit their feedback on-line through Web.

Item No. 3 Mapping of Grades of University of Florida at Gainsville, USA with JUIT grading system.

Members were informed that under student exchange program, University is having MoU with University of Florida at Gainsville, USA. Students selected to undergo their final semester courses at University of Florida at Gainsville are being awarded grades as per their grading system on a 5 point grading scale, which is different with that of 10 point grading system being followed at JUIT. After detailed deliberation, the following proposed equivalence of grades of University of Florida at Gainsville, USA with JUIT grading system were approved by the Council:-

University of F	lorida Grades	
Passing Grade	Grade Points	JUIT Equivalent Grade
Α	4	A+
A-	3.67	A+
B+	3.33	A
В	3	Assessment Assessment
В-	2.67	B+
C+	2.33	B+
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C-	1.67	C+
D+	1.33	C+
D	1	C
D-	0.67	D
S	0	F

Item No. 4 Registration Fee for Summer Semester / left over credits taken beyond 8th Semester of study (upto maximum 12 Credits) in B Tech Programme.

The issue of revision of registration fee for Summer Semester and fee for left over credits taken beyond 8th Semester (upto maximum 12 credits) for B Tech students was brought to the notice of the members of the Council. Members agreed to the proposed revised fee for summer semester and fee for left over credits taken beyond 8th semester (upto maximum 12 credits) and approved the fee as under, applicable w.e.f. Academic Session 2019-20:-

Type of Registration	Fee per Project / Theory Course	Fee per Lab Course
Fee for Registration to Summer Semester	Rs. 10000/-	Rs. 7000/-
Fee for Registration of left over credits beyond 8th semester (upto 12 credits)	Rs. 10000/-	Rs. 7000/-
Fee for Registration of left over credits beyond 8 th semester (more than 12 credits)	Full Semester Tuition batch of students	Fee as applicable to their

Item No. 5

Amendment in conditions for subjects / courses to be offered for the Summer Semester.

Amendment in conditions for subjects / courses to be offered for the Summer Semester 2020 onwards were deliberated, and after deliberation, the following were resolved for implementation w.e.f. Academic Session 2019-20:-

- The minimum required registration strength of students for subjects / courses for the Summer Semester for common and allied discipline as well as for core discipline will be 10.
- Courses on one to one basis will be allowed for registration in regular odd and even semesters only, and to those students who are left with one / two courses to complete their degree requirements.

Item No. 6 Students failed in Summer Semester Course(s) are not eligible for Supplementary Examination.

 The ACM decided that the students undertaken Summer Semester, and in the event of their failure in a Course(s) can only be allowed to register during the regular semester as and when that Course(s) is available. Such students are not eligible for Supplementary Examination.

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Item No. 7 Ph.D Examination Fee.

The Chairman informed the members about the expenses involved in evaluation of Ph.D Thesis by both the Foreign & Indian Examiners. Further, expenses towards conduct of Viva Voce including expenses towards Lodging, Boarding & travel are large. AICTE has also made provision towards charging of Ph.D Thesis Examination Fee from the Ph.D Scholars for meeting such expenses.

The ACM approved the implementation of Ph.D Examination Fee of Rs. 25000/-with effect from 01 January, 2020. This fee is to be deposited at the time of submission of the Ph.D Thesis.

Item No. 8 Course Credits Requirement for award of Integrated Degree.

Course Credits requirement for award of Integrated M. Tech Degree in Biotechnology was considered. After detailed deliberations, following credits were approved for completing the award of Integrated M. Tech degree in Biotechnology:-

- Integrated M. Tech in Biotechnology for 2014-19 admission batch 255
- Integrated M. Tech in Biotechnology for 2016-21 admission batch (195 + 76) 271 Credits
- Integrated M. Tech programme discontinued w.e.f. Academic Session 2016 onwards.

Item No. 9 Amendment in conditions for Improvement of Grades.

The item proposed for amendment in conditions for improvement of grades was considered and after deliberations, following amendment in conditions for improvement of grades were approved:-

- Grade improvement be allowed only for the Theory subject(s) during the regular semester provided the subject is on offer and there is no clash in time table.
- The credit registration limit for the purpose of improvement of grade shall be the normal credit limit as in the case of a regular student in a regular semester.
- Grade improvement is only allowed, if CGPA is less than 6.
- Additional Fee of Rs. 10000/- per subject for improvement of grade is to be charged.
- In case grade in the subject taken for improvement improves, the grade obtained after improvement will replace the earlier obtained grade.
- If student secures 'F' grade after the improvement, the minimum grade after grade improvement will be 'D', (Keeping in view that the student has already passed this subject earlier).

Item No. 10 Inclusion of term "Honours" in Provisional Degree Certificate and Transcript for Bachelor of Technology Programme.

The item as proposed was unanimously agreed upon and approved. The format of Provisional Degree Certificate and Transcript with honours as given in Annexure – 6 was also approved.

Item No. 11 To consider and approve the amendments in the sections related to appraisals, assessments and evaluation in the Ph.D Ordinance.

Item related to amendment in the publication norms under appraisals, assessments and evaluation for Ph.D were placed for consideration of the ACM. After detailed deliberations, the ACM approved the following:-

i) In addition to the other provisions mentioned in the Regulations and Ordinances for submission of the Ph.D Thesis, a Ph.D Scholar must have published atleast four research papers from the thesis work, out of which, three must be in SCI/SCOPUS/SCIE/ Webs of Science indexed journals.

This amendment will be effective for the Ph.D research scholars to be admitted w.e.f. January, 2020 and onward.

- ii) In Ph.D Thesis, the work published in research papers having authorship of the Ph.D scholar and his/her supervisor(s) will only be included in the Ph.D thesis. The amendment will be effective from September 2019.
- Item No. 12 Introduction of MOOCs against the Core Courses for students not able to complete the course requirement within 04 years against one / two left over courses.

The proposed item was deliberated, but members could not reach to a conclusion. The Council agreed to drop the item and continue with the existing regulations of offering MOOCs against the Elective Courses only.

Item No. 13 Approval of the Meeting of Board of Studies (BoS) of various Departments.

Academic Council considered the Minutes of Board of Studies (BoS) of various departments and noted the same.

Prof. S C Saxena suggested to the members present in the meeting that Minutes of the BoS should specifically mention new / addition / modification / augmentation in the proposed course / syllabus, if proposed by the BoS of the department.

Item No. 14 Approval for New Course Structure and detailed syllabus.

The Academic Council considered and approved the following items:-

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Computer Science & Engg. and Information Technology Department

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4.1.1	i) Detailed course structure of Minor in Computer Science & Engineering / Information Technology (Annexure – 12). ii) 10 Proficiency programmes (Annexure – 12).
4.1.2	Courses of the Open Electives II & III for 7th Semester and Open Electives IV & V for 8th Semester (Annexure – 13).
4.2	Electronics and Communication Engineering Department
4.2.1	i) Detailed course structure of Minor in Electronics and Communication (Engineering (Annexure – 14). ii) 06 Proficiency programmes (Annexure – 14).
4.2.2	Detailed syllabi of five New Professional Electives for 5th / 6th Semester (Annexure - 15).
	Detailed syllabus of Applied Artificial Intelligence and Neural Networks be sent to Prof. S C Saxena for analysing the contents of the courses.
4.2.3	New syllabus for Ph.D Course - Reconfigurable Computing for 2019-20 admitted batch (Annexure - 16). Prof. S C Saxena suggested that the above course be included in the P.G. Programme and be offered to the Ph.D Scholars also.
4.3	Civil Engineering Department 2
4.3.1	Detailed course structure of Minor in Civil Engineering (Annexure – 17). ii) 06 Proficiency programmes (Annexure – 17). Nomenclature of Proficiency in Water Management be changed appropriately as per the contents of the courses offered under the proficiency.
4.4	Biotechnology and Bioinformatics Department
.4.4.1	i) Detailed course structure of Minor in Biotechnology and Minor in Bioinformatics (Annexure - 18). ii) 02 - 02 each Proficiency programmes of Biotechnology and Bioinformatics (Annexure - 18).
4.4.2	i) Course Structure and detailed syllabus of M. Sc. Biotechnology (Annexure - 19). ii) Course Structure and detailed syllabus of M.Sc. Bioinformatics (Annexure - 20).
14.4.3	i) Detailed syllabus of the Professional Elective – IV (Annexure – 21). ii) Professional Elective – VI for 2018 batch onwards for B. Tech Biotechnology and B. Tech Bioinformatics (Annexure – 21).
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- 14.5 Physics and Materials Science Department 14.5.1 Detailed syllabus of Compulsory Science Electives for 5th Semester for B. Tech CSE, IT and ECE students under New 160 Credit Scheme (Annexure - 22). Detailed syllabus of New Open Electives for 7th and 8th Semester for B. Tech 14.5.2 students (Annexure - 23). Modification in Existing Course Structure / Detailed Syllabus / Admission Item No. 15 Criteria The Academic Council considered and approved the following items:-Computer Science & Engg. and Information Technology Department 15.1 Change in Elective Courses for B. Tech Information Technology for 7th and 8th 15.1.1 Semester under New 160 Credit Scheme (Annexure - 24). 15.2 **Electronics & Communication Engineering Department** Change in Course Title / Nomenclature of 11 Courses of B. Tech Electronics & 15.2.1 Communication Engineering under New 160 Credit Scheme (Annexure - 25). 15.3 **Civil Engineering Department** Change in admission criteria for M. Tech Environmental Engineering. 15.3.1 Department has proposed change in the eligibility criteria for admission to M. Tech. (Environmental Engineering). As of now B. Tech. (Civil Engineering) is only considered for admission to M. Tech. (Environmental Engineering). Department has proposed additional inclusion of B. Tech. (Chemical Engineering) / B. Tech. (Environmental Engineering) for admission in M. Tech. (Environmental Engineering). Prof. S C Saxena suggested that future prospects of the students may also be analyzed, so that they may not face any difficulty in future in getting job having such a combination of their degrees. 15.4 **Biotechnology & Bioinformatics Department** Minor change in Course Nomenclature and Syllabus of M. Tech Biotechnology 15.4.1 (Annexure - 26). Research Methodology (13M11BT115) be changed to Research Methodology and Ethics (18M11BT113) and IPR Biosafety and Bioethics (13M11BT113) be changed to Patenting in Biotechnology (18M11BT114).
 - 15.5.1 (Change in nomenclature and code of old scheme Course Biophysical Techniques (10B11PH212) to Course Bioinstrumentation Techniques (18B11PH212) under New 160 Credit Scheme (Annexure 27).

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Physics and Materials Science Department

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Item No. 16 Reporting Items

Reporting items as mentioned at Agenda item 16.2 to 16.4 and 16.6 & 16.7 were considered and noted by the Academic Council.

Under reporting item 16.1, Prof. S C Saxena suggested that instead of having one DPMC Seminar at DRDO Lab Chandigarh for the Ph.D Scholars of DRDO, they may be facilitated to have Seminar on Web based facility. It will avoid travel of number of DPMC members to DRDO Chandigarh from JUIT, Waknaghat.

Under reporting item 16.5, Prof. S C Saxena suggested amendment in the conditions for allowing M. Tech Fellowship as under:-

<u>For GATE Qualified Candidates</u>: Initially fellowship be provided for one year. Continuation of fellowship to second year be subject to acquiring CGPA \geq 7.5.

<u>For Non GATE Qualified Candidates</u>: Fellowship be provided during second year subject to acquiring CGPA≥8 in M. Tech First year.

Fellowship be continued for whole second year.

Item No. 17 Any other Item with the permission of the Chair.

Prof. S C Saxena suggested for formalizing the Counselling Schedule for the admissions for the Academic Year - 2020-21. Cut Off dates for receiving applications vis a vis Counselling Schedule be notified well in advance in the admission brochure itself.

Proforma for offering Departmental Minor and Proficiencies be developed. Students be informed of the same during the Induction programme. Proficiency Coordinators be appointed from each department and proficiency coordinators must inform the students about the proficiencies on offer in their respective departments.

Prof. S C Saxena stressed the importance of the New Education Policy of the Government and requested the members to go through the Education Policy document especially for Higher and Technical Education.

There being no other points, meeting ended with a vote of thanks to the Chair.

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Non-Member Secretary

Approved

Man

(Prof. Vinod Kumar) Vice – Chancellor Chairman



Department of Computer Sc. & Engg. and Information Technology

Minor Program in CSE

Minor program in CSE consist the following major disciplines in which student has to complete 14 mandatory credits and 6 non-mandatory credits to complete total 20 additional credits.

Subject Code	Туре	Semester	Name of the Subject(s)	Credits
18B11Cl412	Mandatory	4	Design & Analysis of Algorithms	3
18B17Cl472	Mandatory	4	Design and Analysis of Algorithms Lab	2
18B11CI513	Mandatory	5	Formal Language & Automata Theory	3
18B1WCI575	Mandatory	5	Multimedia Lab	1
18B11Cl612	Mandatory	6	Compiler Design	3
18B17Cl672	Mandatory	6	Compiler Design Lab	2
18B1WCI733	Non-Mandatory	7	Advanced Algorithms	2
18B1WCI773	Non-Mandatory	7	Advanced Algorithms Lab	1
18B1WCI740	Non-Mandatory	7	Computational Techniques and Algorithms in Engineering	3
18B1WCI834	Non-Mandatory	8	Network Management	3
18B1WCI831	Non-Mandatory	8	Data Analytics	3
			TOTAL	14+6

Minor program in IT

Minor program in IT consist the following major disciplines in which student has to complete 14 mandatory credits and 6 non-mandatory credits to complete total 20 additional credits.

Category Code	Type	Semester	Name of the Subjects	Credits
18B1WCI639	Mandatory	4	Software Engineering	3
18B1WCI679	Mandatory	4	Software Engineering Lab	2
18B11CI512	Mandatory	5	Information Systems	3
18B17CI572	Mandatory	5	Information Systems Lab	1
18B11CI613	Mandatory	6	Data Mining	3
8B17CI673	Mandatory	6	Data Mining Lab	2
	Non-Mandatory	7	Building IoT and Network Applications	2
	Non-Mandatory	7	Building IoT and Network Applications Lab	1
	Non-Mandatory	7	An Introduction to Statistical learning	3
	Non-Mandatory	8	Foundations of Blockchain	3
	Non-Mandatory	8	Fog Computing in IoT	3
			TOTAL	14+6

Proficiency courses in CSE & IT discipline

Proficiences proposed and the elective courses relevant to each proficiency are outlined below. A student is required to take 50% of the electives in the regular curricula from the list of courses prscribed for each proficiency.

i. Proficiency in Information Security

As digital information moves to a more networked and globalized infrastructure, it is essential that one should understand the threats to this information. The creation of effective corporate-wide security plans with well established security programs, policies, controls, and procedures as well as awareness and training initiatives is getting more focus with the rising demand of Information security professionals.

Proficiency in Information security consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credits
Elective -1	5th Sem	Data Compression	2
Elective -1	5th Sem	Data Compression Lab	1
Elective -2	6th Sem	Digital Forensics	2
Elective -2	6th Sem	Digital Forensics lab	1
Elective -3	6th Sem	Information Security	2
Elective -3	6th Sem	Information Security Lab	1
Elective -4	7th Sem	Cryptography& network security	2
Elective -4	7th Sem	Cryptography& network security Lab	1
Elective -5	7th Sem	Information Auditing & Risk Managem	nent 3
Elective -6	8th Sem	Ethics and Information Technology	3

ii. Proficiency in Data Sciences

Unlike classical statistics, the need to process and manage massive amounts of data has become a key feature of modern statistics. Data Science provides a foundation for problem-solving in a data-driven society. Data Science applies core concepts in computer science, statistics and mathematics to problems in a wide variety of fields, from physical, social, biomedical, and behavioral sciences to arts and humanities. This proficiency will enable students with preliminary data collection, manipulation, access and/or analysis skills as are appropriate to data needs in their majors.

Proficiency in Data Sciences consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credits
Elective -1	5th Sem	Foundation for Data Science and Visualization	2
Elective -1	5th Sem	Data Science and Visualization Lab	1
Elective -2	6th Sem	Machine learning	2
Elective -2	6th Sem	Machine Learning Lab	1
Elective -3	6th Sem	Data Mining & Data Warehousing	2
Elective -3	6th Sem	Data Mining & Data Warehousing Lab	1
Elective -4	7th Sem	Artificial Intelligence	2
Elective -4	7th Sem	Artificial Intelligence Lab	1
Elective -5	7th Sem	Optimization Methods in Business Analytics	3

iii. Proficiency in Machine learning

Rising demand of Machine learning (ML) have exploded in importance in recent years and garnered attention in a wide variety of application in diverse areas such as bioinformatics, fraud detection, intelligent systems, perception, finance, information retrieval, and other areas. This proficiency will allow undergraduates to learn about the core principles of machine learning.

Proficiency in machine learning consist the following major disciplines:

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Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Foundation for Data Science and Visualization	2
Elective -1	5th Sem	Data Science and Visualization Lab	1
Elective -2	6th Sem	Machine learning	2
Elective -2	6th Sem	Machine Learning Lab	1
Elective -3	6th Sem	Data Mining & Data Warehousing	2
Elective -3	6th Sem	Data Mining & Data Warehousing Lab	1
Elective -4	7th Sem	Artificial Intelligence	2
Elective -4	7th Sem	Artificial Intelligence Lab	1
Elective -5	7th Sem	Introduction to Deep Learning	3
Elective -6	8th Sem	Probabilistic Graphical Models	3

iv. Proficiency in Computer Graphics

Computer Graphics provides an exciting and rapidly developing industry with myriad opportunities for working in film and TV, scientific and medical visualisation, computer games and the web. This proficiency will allow undergraduates to focus on producing computer-generated graphics and is particularly useful for those interested in animation, and game designing.

Proficiency in computer graphics consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Foundation for Data Science and Visualization	2
Elective -1	5th Sem	Data Science and Visualization Lab	1
Elective -2	6th Sem	Computer Animation	2
Elective -2	6th Sem	Computer Animation Lab	1
Elective -3	6th Sem	Digital Image processing	2
Elective -3	6th Sem	Digital Image processing Lab	1
Elective -4	7th Sem	Game Development and Design	2
Elective -4	7th Sem	Game Development Lab	1
Elective -5	7th Sem	Computer Vision	3
Elective -6	8th Sem	Information Modeling	3

v. Proficiency in Big Data and Visual Analytics

Big Data and Business Analytics is a fast growing field with applications in business decision making, patient care, political decision making, criminal justice, IT security etc. This

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proficiency provides knowledge of key concepts, methods, techniques, and tools of big data and visual analytics from organization perspective to the various undergraduates.

Proficiency in big data and visual analytics consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Big Data using Hadoop	2
Elective -1	5th Sem	Big Data using Hadoop Lab	1
Elective -2	6th Sem	Machine learning	2
Elective -2	6th Sem	Machine Learning Lab	1
Elective -3	6th Sem	Data Mining & Data Warehousing	2
Elective -3	6th Sem	Data Mining & Data Warehousing Lab	1
Elective -4	7th Sem	Computational Data Analysis	2
Elective -4	7th Sem	Computational Data Analysis lab	1
Elective -5	7th Sem	Introduction to Deep Learning	3
Elective -6	8th Sem	Information Visualization	3

vi. Proficiency in Image Analysis and Processing

Recent explosive growth of digital imaging technology makes the problems of automated image interpretation more exciting and relevant than ever. Image analysis and processing is a highly interdisciplinary field of study that incorporates elements from mathematics, engineering, and computer science to understand, design, and utilize imagery and imaging systems to study scientific phenomena. This proficiency provides knowledge of modern methods of automatic processing and analysis of digital images and video, and methods of image understanding and computer vision to the various undergraduates.

Proficiency in image analysis and processing consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Image Analysis and Pattern Recognition	2
Elective -1	5th Sem	Image Analysis and Pattern Recognition Lab	1
Elective -2	6th Sem	Computer and Robot Vision	2
Elective -2	6th Sem	Computer and Robot Vision lab	1
Elective -3	6th Sem	Digital Image processing	2
Elective -3	6th Sem	Digital Image processing Lab	1
Elective -4	7th Sem	Computational Data Analysis	2
Elective -4	7th Sem	Computational Data Analysis lab	1
Elective -5	7th Sem	Computer Vision	3
Elective -6	8th Sem	Information Visualization	3

vii. Proficiency in Cloud Computing

With the wide usage of Internet and the increasing popularity of mobile computing devices (e.g. smartphones, tablets, and laptops) in society, computer users are migrating their computing usage and data storage from a single personal computing environment to a webbased, distributed and networked computing environment. This proficiency will equip

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undergraduates with the essential knowledge of cloud computing and various tools and technologies.

Proficiency in cloud computing consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Cloud Computing: Concepts, Technology & Architecture	2
Elective -1	5th Sem	Cloud Computing: Concepts, Technology & Architecture Lab	1
Elective -2	6th Sem	Machine Learning	2
Elective -2	6th Sem	Machine Learning Lab	1
Elective -3	6th Sem	Architecting Distributed Cloud Applications	2
Elective -3	6th Sem	Architecting Distributed Cloud Applications Lab	1
Elective -4	7th Sem	Artificial Intelligence	2
Elective -4	7th Sem	Artificial Intelligence Lab	1
Elective -5	7th Sem	Storage Networks	3
Elective -6	8th Sem	Cloud Computing Security	3

viii. Proficiency in Human Computer Interaction

Human-Computer Interaction (HCI) is the study of how humans interact with technology through principled design, communication, and construction. HCI addresses the design, evaluation, and implementation of computer based systems for the benefit of human use. This proficiency provides undergraduates core knowledge about techniques for building successful user interfaces.

Proficiency in human computer interaction consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Human-Computer Interaction	2
Elective -1	5th Sem	Human-Computer Interaction Lab	1
Elective -2	6th Sem	Computability, Complexity & Algorithms	2
Elective -2	6th Sem	Computability, Complexity & Algorithms Lab	1
Elective -3	6th Sem	Pattern Recognition	2
Elective -3	6th Sem	Pattern Recognition Lab	1
Elective -4	7th Sem	Artificial Intelligence	2
Elective -4	7th Sem	Artificial Intelligence Lab	1
Elective -5	7th Sem	Computer Vision	3
Elective -6	8th Sem	Knowledge-Based AI: Cognitive Systems	3

ix. Proficiency in Artificial Intelligence

With the rapid increase in data volumes, advanced algorithms, and improvements in computing power and storage have made possible for machines to learn from experience and perform human-like tasks. Artificial Intelligence has fulfilled this dream which can be applied to almost every field. This proficiency introduces students to the techniques of artificial intelligence programming and the basic theoretical concepts of artificial intelligence, knowledge representation, and automated reasoning.

Proficiency in artificial intelligence consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Foundation for Data Science and Visualization	2
Elective -1	5th Sem	Data Science and Visualization Lab	1
Elective -2	6th Sem	Machine learning with Python	2

Elective -2	6th Sem	Machine Learning with Python Lab	1
Elective -3	6th Sem	Statistics and Exploratory Data Analytics	2
Elective -3	6th Sem	Statistics and Exploratory Data Analytics Lab	1
Elective -4	7th Sem	Artificial Intelligence	2
Elective -4	7th Sem	Artificial Intelligence Lab	1
Elective -5	7th Sem	Introduction to Deep Learning	3
Elective -6	8th Sem	Reinforcement Learning	3

x. Proficiency in Social Computing

The collaborative exchange of ideas is essential to the success of difficult initiatives, including software architecture and design, project management and organizational transformation. Technology has made collaboration at a distance possible in new ways that present their own set of challenges. Social computing is concerned with systems of this sort and the mechanisms and principles that underlie them. This proficiency introduces undergraduates to the major challenges and opportunities for creating online communities.

Proficiency in social computing consist the following major disciplines:

Elective	Semester	Name of the Subjects	Credit
Elective -1	5th Sem	Social Media	2
Elective -1	5th Sem	Social Media Lab (Node XL)	1
Elective -2	6th Sem	Statistics and Data Science	2
Elective -2	6th Sem	Statistics and Data Science Lab	1
Elective -3	6th Sem	From Graph to Knowledge Graph	2
Elective -3	6th Sem	From Graph to Knowledge Graph Lab	1
Elective -4	7th Sem	Artificial Intelligence	2
Elective -4	7th Sem	Artificial Intelligence Lab	1
Elective -5	7th Sem	Cloud Computing	3
Elective -6	8th Sem	Social and Information Network Analysis	3

Department of Computer Sc. & Engineering and Information Technology

	COURS	E CURRIC	CULUM OF CSE&IT DEPARTMENT- LIST OF OPEN ELECTIVES	2018 ba	ten (1	OU CRE	DI15)	
S. No.	Category Code	Semester		C	Course Hours			Total Hours
				L	T	P		
			OPEN ELECTIVE II (7th Semester)				
1	OE2	7th Sem	Object Oriented Programming	2	0	2	3	4
2	OE2	7th Sem	Advanced Data Structures	2	0	2	3	4
3	OE2	7th Sem	Software Testing Methodologies	2	0	2	3	4
			OPEN ELECTIVE III (7th Semester)				
1	OE2	7th Sem	Fundamentals of Cloud Computing	3	0	0	3	3
3	OE2	7th Sem	Network Security and Cryptography Techniques	3	0	0	3	3
3	OE2	7th Sem	Internet of Things Architecture and Design	3	0	0	3	3
			OPEN ELECTIVE IV (8th Semester)				
1	OE3	8th Sem	Advanced Java	2	0	2	3	4
2	OE3	8th Sem	Artificial Intelligence using Python	2	0	2	3	4
3	OE3	8th Sem	Mobile Application Development	2	0	2	3	4
			OPEN ELECTIVE V (8th Semester)					
1	OE3	8th Sem	Network Management	3	0	0	3	3
2	OE3	8th Sem	ARM based Embedded System Design	3	0	0	3	3
3	OE3	8th Sem	Image Processing Techniques	3	0	0	3	3



Department of Electronics & Communication Engineering

Minor Programme in Electronics and Communication Engineering

Minors are coherent sequences of courses taken in addition to the courses required for the Bachelor of Engineering students chosen from a considerable variety of complementary courses under the categories of technical and complementary studies.

Department of Electronics and Communication Engineering, JUIT, Waknaghat proudly offers minor in Electronics and Communication Engineering for all concerned students. This minor program covers the most current theories and practices used in Electronics and Communication Engineering. The program provides a valuable adjunct credential to engineering students pursuing their major degree in various fields. Engineering students from any branch may choose from a considerable variety of complementary courses under the categories of technical and complementary studies offered by Electronics and Communication Engineering Department JUIT, Waknaghat. This minor program is rigorous enough to serve as a introductory credential for students subsequently electing to pursue advanced studies in Electronics and Communication Engineering.

Conditions for Award of Additional Certificate of Minor in Electronics and Communication Engineering

- 1. Earning of minimum credits, as required for award of Major degree.
- 2. Earns 20 credits in addition to the credits as specified for the programme in the minor area.
- 3. Additional 20 credits in a minor discipline could be earned through MOOCs also and may include supporting courses from allied discipline limited to a maximum of 6 credits.
- 4. Successfully completing the Industrial Internship within the minimum period of 4 years.
- 5. Completing all the requirements of a degree in the minimum period of years.

Following is the course curriculum outline for proposed Minor programme in Electronics and Communication Engineering, from which subjects worth 20 credits may be chosen by the student:

		E CURRICULUM FOR MINOR PROGRAM					
S. No.	MINOR IN ELECTRONICS AND COMMUNICATION ENGINEERING S. No. Semester Name of the Subjects Course Hours Credits						
			L	T	P		
1	3	Digital Electronics & Logic Design	3	1	0	4	4
2	3	Digital Electronics & Logic Design Lab	0	0	2	1	2
3	4	Modern Analog and Digital Communication	3	1	0	4	4
4	5	Microprocessor and Interfacing	3	0	0	3	3
5	5	Microprocessor and Interfacing Lab	0	0	2	1	2
6	6	Advance Communication Lab	0	0	2	1	2
7	6	Wireless and Data communication	3	0	0	3	3
8	7	Internet of Things	3	0	0	3	3
					Total	20	23

* Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

Proficiency Programme in Electronics and Communication Engineering

Electronics and Communication Engineering students can choose to either broaden their background or attain in-depth coverage of a particular subject by enrolling in a Proficiency Programme. Proficiency courses are coherent sequences of courses that may be taken in place of regular elective slots required for the B. Tech degree, in the chosen field of proficiency.

Conditions for award of additional certificate of proficiency in Electronics and Communication Engineering

- 1. Qualify for the award of B. Tech. degree in the minimum period.
- 2. Have passed in minimum of >50% of B. Tech elective subjects taken from Electronics and Communication Engineering Department.
- 3. Grade Point Average in the elective subjects of (2) is >7.0.
- 4. Major project has been done in Electronics and Communication Engineering Department with at least 'A' grade
- 5. CGPA for 195 credits (pre 2018 batch) /160 credits (post 2018 batch) of B. Tech. level is >6.5.

At present Department of Electronics and Communication Engineering JUIT, Waknaghat offers following proficiency programmes:

- 1. Proficiency in Embedded System
- 2. Proficiency in Communication Technology
- 3. Proficiency in Machine Learning
- 4. Proficiency in Signal Processing
- 5. Proficiency in Digital Image Processing
- 6. Proficiency in Microwave and RF Design

The Proficiency programmes offered in aforementioned areas are designed primarily for students of Electronics and Communication Engineering Department, JUIT to experience the engineering approach to the solution of design problems. Students pursuing any of the proficiency courses will be better prepared for careers in Electronics and Communication Engineering. These proficiency courses will provide students with a technical and competitive edge over most traditional Electronics and Communication Engineering undergraduates in the Electronics and Communication Engineering job marketplace. As per 160 credit course curricula, a student must opt minimum 3 courses from chosen field of proficiency in place of regular elective courses to get additional certificate of proficiency in chosen field.

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Following are the course curriculum outline for proposed 6 proficiency courses:

1. Proficiency in Embedded Systems:

	COUR	AYPEE UNIVERSITY OF INFORMATION TECHNO SE CURRICULUM FOR PROFICIENCY PROGRAM)LO //MF	GY, E (16	SOI 0 C	LAN REDITS)		
		PROFICIENCY IN EMBEDDED SYSTE					A.E.L.	
S.			11.00	Cour Iour			Total	
No.	No. Semester	Name of the Subjects	L	T	P	Credits	Hours	
1	5	Switching Theory and Logic Design	3	0	0	3	3	
2	6	Embedded system design	3	0	0	3	3	
3	7	FPGA based Instrumentation System Design	3	0	0	3	3	
4	7	Real Time Operating System	3	0	0	3	3	
5	8	Digital CMOS ICs	3	0	0			
6	8	CAD Algorithms for Synthesis of Digital Systems	3	0	0	3	3	

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

2. Proficiency in Communication Technology:

	JA COUR	YPEE UNIVERSITY OF INFORMATION TECHNO SE CURRICULUM FOR PROFICIENCY PROGRA	MME	(16	0 CI	LAN REDITS)	
		PROFICIENCY IN COMMUNICATION TECH	NOL	OG'	Y		
S.			Course Hours			Total	
No.	Semester	rame of the Subjects	L	Т	P	Credits	Hours
1	5	Communication Engineering	3	0	0	3	3
2	6	Optical Communication Systems	3	0	0	3	3
3	7	Next Generation Communication Systems	3	0	0	3	3
4	7	OFDM and Applications	3	0	0	3	3
5	8	Cognitive Radio Networks	3	0	0	3	NEW THE STATE
6	8	Wireless Communication and Mobile Networks	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

3. Proficiency in Machine Learning:

	JA	YPEE UNIVERSITY OF INFORMATION TEC	HNOLOG	GY,	soi	AN	
STOP	COURS	SE CURRICULUM FOR PROFICIENCY PROG	RAMME	(16	0 Cl	REDITS)	
		PROFICIENCY IN MACHINE LEAD	RNING			enter a voice	
S.	acoustin district			our: Iour		Total	
No.	Semester	Name of the Subjects	L	T	P	Credits	Hours
1	5	Introduction to Machine Learning	3	0	0	3	3
2	6	Machine Learning for Data Analysis	3	0	0	3	3
3	7	Pattern Analysis in Machine Intelligence	3	0	0	3	3
4	7	Optimisation Techniques	3	0	0	3	3
5	8	Artificial Intelligence Techniques	3	0	0	3	3
6	8	Soft Computing Techniques	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

4. Proficiency in Signal Processing:

		YPEE UNIVERSITY OF INFORMATION TECH					
	COURS	SE CURRICULUM FOR PROFICIENCY PROGR	AMME	(16	0 CI	REDITS)	
		PROFICIENCY IN SIGNAL PROCES	SING				
S.				Course Hours			Total
No.	Semester	nester Name of the Subjects	L	Т	P	Credits	Hours
1	5	Statistical Signal Processing	3	0	0	3	3
2	6	Digital Filter Design and Applications	3	0	0	3	3
3	7	Time Frequency Analysis and Applications	3	0	0	3	3
4	7	Wavelets and Applications	3	0	0	3	3
5	8	Adaptive Signal Processing and Machine Intelligence	3	0	0	3	3
6	8	Bioelectronic Sensors	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

5. Proficiency in Digital Image Processing:

		JAYPEE UNIVERSITY OF INFORMATION TECHNOLOG	Y, S	OL	NAN.		
	C	OURSE CURRICULUM FOR PROFICIENCY PROGRAMME	(160	CR	EDI	TS)	
		PROFICIENCY IN DIGITAL IMAGE PROCESSIN	G				
S.			Course Hours			Total	
No.	Semester	Name of the Subjects	L	Т	P	Credits	Hours
1	5	Fundamentals of Digital Image Processing and Applications	3	0	0	3	3
2	6	Computer Vision	3	0	0	3	3
3	7	Forensic Image Processing	3	0	0	3	3
4	7	Medical Image processing	3	0	0	PROPERTY AND	la de la constante de la const
5	8	Applied Medical Signal Processing	3	0	0	3	3
6	8	Remote Sensing and Satellite Image Processing	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

6. Proficiency in Microwave and RF Design:

		JAYPEE UNIVERSITY OF INFORMATION TECHNO	LOGY	, sc	LA	N	
	COL	JRSE CURRICULUM FOR PROFICIENCY PROGRAM	1ME (1	60 (CRE	DITS)	
		PROFICIENCY IN MICROWAVE AND RF D	ESIGN	I			
s.				Cour Iour	ours		Total
No.	. Semester	Name of the Subjects	L	Т	P	Credits	Hours
1	5	RF Integrated Circuits	3	0	0	3	3
2	6	Fundamentals of Computational Electromagnetics	3	0	0	3	3
3	7	Microwave Theory and Techniques	3	0	0	3	3
4	7	Antenna and Wave Propagation	3	0	0	3	
5	8	Design of Modern Antennas	3	0	EN/F	Section 1	3
6	8	RF Engineering	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

Department of Civil Engineering

Minor Programme in Civil Engineering

Minors are coherent sequences of courses taken in addition to the courses required for the Bachelor of Engineering students chosen from a considerable variety of complementary courses under the categories of technical and complementary studies.

Department of Civil Engineering, JUIT, Waknaghat proudly offers minor in Civil Engineering for all concerned students. This minor program covers the most current theories and practices used in Civil Engineering. The program provides a valuable adjunct credential to engineering students pursuing their major degree in various fields. Engineering students from any branch may choose from a considerable variety of complementary courses under the categories of technical and complementary studies offered by Civil Engineering Department JUIT, Waknaghat. This minor program is rigorous enough to serve as a introductory credential for students subsequently electing to pursue advanced studies in Civil Engineering.

Conditions for Award of Additional Certificate of Minor in Civil Engineering

- 1. Earning of minimum credits, as required for award of Major degree.
- 2. Earns 20 credits in addition to the credits as specified for the programme in the minor area.
- Additional 20 credits in a minor discipline could be earned through MOOCs also and may include supporting courses from allied discipline limited to a maximum of 6 credits.
- 4. Successfully completing the Industrial Internship within the minimum period of 4 years.
- 5. Completing all the requirements of a degree in the minimum period of years.

Following is the course curriculum outline for proposed Minor programme in Civil Engineering, from which <u>subjects worth 20 credits (15 from mandatory course, 5 from remaining courses) may be chosen by the student</u>:

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, SOLAN COURSE CURRICULUM FOR MINOR PROGRAMME(160 +20 CREDITS) MINOR IN CIVIL ENGINEERING (Mandatory courses- 15 credits) Total **Course Hours** S. No. Semester Name of the Subjects Credits Hours L T P Surveying 3 1 0 0 3 3 Mechanics of Solids 3 3 3 4 0 0 2 Geotechnical Engineering 3 3 3 3 6 0 0 Design of Concrete Structures 7 3 3 3 4 0 0 Fluid Mechanics 3 3 3 0 0 5 8

Can choose remaining 5 credits from any of the following courses

G N		Name of the Subjects	Cou	rse H	ours	G 111	T 4 1 II	
S. No.	Semester		L	T	P	Credits	Total Hours	
1	3	Surveying Lab	.0	0	2	1	2	
2	5	Construction Technology and Management	3	0	0	3	3	
3	6	Geotechnical Engineering Lab	0	0	2	1	2	
4	7	Concrete Technology Lab	0	0	2	1	2	
5	7	Water Supply Engineering	3	0	0	3	3	
6	8	Transportation Engineering	3	0	0	3	3	
7	8	Fluid Mechanics Lab	0	0	2	1	2	

* Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

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Proficiency Programme in Civil Engineering

Civil Engineering students can choose to either broaden their background or attain in-depth coverage of a particular subject by enrolling in a Proficiency Programme. Proficiency courses are coherent sequences of courses that may be taken in place of regular elective slots required for the B. Techdegree, in the chosen field of proficiency.

Conditions for award of additional certificate of proficiency in Civil Engineering

- 1. Qualify for the award of B. Tech. degree in the minimum period.
- 2. Have passed in minimum of >50% of B. Tech elective subjects taken from Civil Engineering Department.
- 3. Grade Point Average in the elective subjects of(2) is >7.0.
- 4. Major project has been done in Civil Engineering Department with at least 'A' grade
- 5. CGPA for 195 credits (pre 2018 batch) /160 credits (post 2018 batch) of B. Tech. level is >6.5.

At present Department of Civil Engineering JUIT, Waknaghat offers following proficiency programmes:

- 1. Proficiency in Computer Aided Design
- 2. Proficiency in Building Design and Construction
- 3. Proficiency in Geotechniques
- 4. Proficiency in Water Management
- 5. Proficiency in Transportation Engineering
- 6. Proficiency in Construction Technology and Management

The Proficiency programme offered in aforementioned areas are designed primarily for students of Civil Engineering Department, JUIT to experience the engineering approach to the solution of design problems. Students pursuing any of the proficiency course will be better prepared for careers in Civil Engineering. These proficiency courses will provide students with a technical and competitive edge over most traditional civil engineering undergraduates in the civil engineering job marketplace. As per 160 credit course curricula, a student must opt minimum 4 courses from chosen field of proficiency in place of regular elective courses to get additional certificate of proficiency in chosen field.

Following are the course curriculum outline for proposed 6 proficiency courses:

1. Proficiency in Computer Aided Design:

	JAYPEE UNIVERSITY OF INFORMATION T	ECH	NOLO	GY,	SOLAN	
	COURSE CURRICULUM FOR PROFICIENCY PR					TS)
	PROFICIENCY IN COMPUTER AID	ED DE	SIGN			
S. No.	Name of the Subjects		ne of the Subjects Course Hours			Total Hours
		L	T	p		
1	Computer Applications in Envi ronmental Engineering	1	0	4	3	5
2	Building Drawing	1	0	4	3	5
3	Simulations in Geotechnical Engineering	1	0	4	3	5
4	Computational models in Transportation Engineering	1	0	4	3	5
5	Construction Management Computations	1	0	45	3	- 5
6	Modellin g. Simulation and Computer Applications	3	0	0	3 OF IN	ORMA N. 3.

* Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above

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2. Proficiency in Building Design and Construction

	JAYPEE UNIVERSITY OF INFORMAT	ION TE	CHNC	LOG	Y, SOLAN	
selvinia.	COURSE CURRICULUM FOR PROFICIEN	CY PRO	GRAN	IME (160 CREDI	TS)
	PROFICIENCY IN BUILDING DESIG	N AND C	ONST	RUCT	ION	
S. No.	Name of the Subjects		ırse H	ours	Credits	Total Hours
		L	T	р	la maricia.	
1	Advanced Reinforced Concrete Design	3	0	0	3	3
2	Building Drawing	1	0	4	3	5
3	Design of Prestressed Concrete Structures	3	0	0	3	3
4	Construction Safety and Health	3	0	0	3	3
5	Advanced Structural Analysis	3	0	0	3	3
6	Construction Technology and Management	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

3. Proficiency in Geotechniques:

	JAYPEE UNIVERSITY OF INFORMA COURSE CURRICULUM FOR PROFICIEN					TS)	
	PROFICIENCY IN GEO	DTECHNI	QUES				
S. No.	Name of the Subjects	Cot	ırse H	ours	Credits	Total Hours	
		L	Т	р			
1	Geosynthetics	3	0	0	3	3	
2	Geoenvironment	3	0	0	3	3	
3	Underground Technology	3	0	0	3	3	
4	Advanced Foundation Engineering	3	0	0	3	3	
5	Simulations in Geotechnical Engineering	1	0	4	3	5	
6	Ground Improvement Techniques	3	0	0	3	3	

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

4. Proficiency in Water Management:

	JAYPEE UNIVERSITY OF INFORMAT			y as any large trans		
	COURSE CURRICULUM FOR PROFICIENCE	CY PRO	GRAN	ME (160 CREDI	TS)
	PROFICIENCY IN WATER I	MANAGI	EMEN	T		
S. No.	Name of the Subjects	Cou	irse H	ours	Credits	Total Hours
		L	T	р		
1	Open Channel Flow and Hydraulic Machine	3	0	0	3	3
2	Dam and Reservoir Design	3	0	0	3	3
3	Hydropower Engineering	3	0	0	3	3
4	Process Design in Environment Engineering	3	0	0	3	3
5	Surface Water Quality Management	3	0	0	3	3
6	Industrial Wastewater Treatment	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.



5.Proficiency in Transportation Engineering:

	JAYPEE UNIVERSITY OF INFORMATION TE	CHNC	DLOG	GY, S	SOLAN	
	COURSE CURRICULUM FOR PROFICIENCY PRO	GRAN	MME	(160	CREDITS)
	PROFICIENCY IN TRANSPORTATION	ENGI	NEEL	RING	3	
S. No.	Name of the Subjects	12 15. 6	Cours Hour		Credits	Total Hours
		L	T	p		e de la constantion de la cons
1	Pavement Analysis and Design	3	0	0	3	3
2	Highway Construction, Maintenance and Management	3	0	0	3	3
3	Transportation Engineering	3	0	0	3	3
4	Traffic Engineering	3	0	0	3	3
5	Advanced Highway Material and Construction	3	0	0	3	3
6	Computational models in Transportation Engineering	1	0	4	3	5

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

6. Proficiency in Construction Technology and Management:

	JAYPEE UNIVERSITY OF INFORMATION TECHNOLO	OGY	, so	LAI	'	
	COURSE CURRICULUM FOR PROFICIENCY PROGRAMM	1E (1	60 C	RE	DITS)	
	PROFICIENCY IN CONSTRUCTION TECHNOLOGY AND MA	ANA	GEN	1EN	T	
S. No.	Name of the Subjects	10000	Cours Tour		Credits	Total Hours
		L	T	p		
1	Construction Technology and Management	3	0	0	3	3
2	Construction Management Computations	1	0	4	3	5
3	Construction Planning and Control	3	0	0	3	3
4	Construction Techniques	3	0	0	3	3
5	Construction Financial Management	3	0	0	3	3
6	Heavy/Civil Construction Equipment, Methods, and Management	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.



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Department of Biotechnology & Bioinformatics

Minor Programme and Proficiencies in Biotechnology & Bioinformatics

To consider the approval of offering following Minor areas of 20 Credits each in Biotechnology and Bioinformatics: Minor in Biotechnology & Minor in Bioinformatics

Minor in Biotechnology

S.No.	Subject Code	Name of the Subjects	Cou L	rse Hou T	ırs P	Credits	Total Hours
1	18B11BT312	Biochemistry	3	0	0	3	3
2	18B17BT372	Biochemistry Lab	0	0	2	1	2
3	18B11BT414	Microbiology	3	1	0	4	4
4	18B17BT474	Microbiology Lab	0	0	2	1	2
5	18B11BT511	Bioprocess Engineering	3	1	0	4	4
6	18B17BT571	Bioprocess Engineering Lab	0	0	2	1	2
7	18B11BT612	Food and Agricultural Biotechnology	3	0	0	3	3
8	18B1WBT731	Industrial Enzymes Technologies	3	0	0	3	3
		Credit breakup: Credits Semester Credits 3 rd 4 4 th 5 5th 5 6th 3 7 th 3				20	23
					Total		

Minor in Bioinformatics

S.No.	Subject Code	Name of the Subjects	Course Hours			Credits	Total Hours
			L	T	P		
1	18B11BI313	Biological Computation	3	1	0	4	4
2	18B17BI373	Biological Computation Lab	0	0	2	1	2
3	18B11BI414	Programming Languages for Bioinformatics	3	0	0	3	3
4	18B17BI474	Programming Languages for Bioinformatics Lab	0	0	2	1	2
5	18B11BI512	Scripting Languages for Bioinformatics	3	0	0	3	3
6	18B17BI572	Scripting Languages for Bioinformatics Lab	0	0	2	1	2
7	18B11BI612	Computer Aided Drug Design	3	0	0	3	3
8	18B17BI672	Computer Aided Drug Design Lab	0	0	2	1	2

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9	18B1WBI731	Computational Systems Biology	3	0	0	3	3
		Credit breakup: Semester Credits 3 rd 5 4 th 4 5th 4 6th 4				20	24
	n paramatan			delection (1)	Total	Sicronologi	



Proficiencies in Biotechnology & Bioinformatics

B. Tech Biotechnology Proficiency: Industrial Biotechnology

The courses included in Industrial Biotechnology proficiency are designed to give more exposure and insights to students in the specific domain so that they will have an edge to be employed in such a sector. Applications of industrial Biotechnology are widespread across multiple industries like food, pharmaceutical, chemical, bio-products, textiles, medicine, nutrition, and environmental conservation etc.

S.No.	Subject Code/Se mester	Name of the Subjects	Cou	rse Hou	rs	Credits	Total Hours
			L	T	P		
1	Semester 5	Industrial Plant Tissue Culture	3	0	0	3	3
2	Semester 6	Manufacturing Process and Industrial Products	3	0	0	3	3
3	18B1WBT731	Industrial Enzymes Technologies	3	0	0	3	3
4	14B1WBT741	Bioresources and Industrial Products	3	0	0	3	3
5	Semester 8	Food Processing and Engineering	3	0	0	3	3
6	Semester 8	Bioprocess Modelling and Simulation	3	0	0	3	3
7	18B19BT791	Major Project Part I	0	0	10	5	10
8	18B19BT891	Major Project Part II	0	0	14	7	14
					Total	-	•

B. Tech Biotechnology Proficiency: Medical Biotechnology (Approved Elective Courses)

Medical biotechnology deals with the healthcare and pharmacy sectors. Discoveries in this field mostly pertain to drugs, vaccines, diagnostics etc. The field of medical biotechnology is experiencing rapid growth in recent years, leading to the development of several innovative techniques for preventing, diagnosing and treating diseases. As ample thrust is being imparted globally to the discipline of Medical Biotechnology, this proficiency is proposed with an aim to impart more knowledge and exposure to interested students in this area.

S.No.	Subject Code/Se mester	Name of the Subjects	Cour	rse Hour	Credits	Total Hours	
			L	Т	P	No.	The Avide
1	18B1WBT532	Comparative & Functional Genomics	3	0	0	3	3
2	18B1WBT632	Infectious Diseases	3	0	0	3	3



					Total	-	-
8	18B19BT891	Major Project Part II	0	0	14	7	14
7	18B19BT791	Major Project Part I	0	0	10	5	10
6	18B1WBT833	Diagnostics & Vaccine Manufacture	3	0	0	3	3
5	18B1WBT831	Genetic Counselling	3	0	0	3	3
4	14B1WBT739	Stem Cells and Regenerative Medicines	3	0	0	3	3
3	18B1WBT633	Nano-Biotechnology	3	0	0	3	3

B. Tech. Bioinformatics Proficiency: Biomedical Informatics

Biomedical instrumentation, techniques, signal and image processing is the utmost requirement in current healthcare sectors. With the increase in several lifestyle diseases; health care is on priority to facilitate human beings through technological interventions. Biomedical Informatics proficiency will provide a strong platform to our students to improve their scientific and practical research in the field of health informatics.

S.No.	Subject Code/Se mester	Name of the Subjects	Cou	Course Hours		Credits	Total Hours
			L	Т	P		
1	Semester 5	Applied Medical Signal Processing	3	0	0	3	3
2	Semester 5	Computational Biomedical Image Analysis	3	0	0	3	3
3	Semester 6	Cheminformatics	3	0	0	3	3
4	Semester 6	Clinical Data Management System	3	0	0	3	3
5	14B1WBT739	Stem Cells and Regenerative Medicines	3	0	0	3	3
6	Semester 8	Bioprocess Modelling and Simulation	3	0	0	3	3
7	18B19BI791	Major Project Part I	0	0	10	5	10
8	18B19B1891	Major Project Part II	0	0	14	7	14
neze					Total	-	e di

B. Tech. Bioinformatics Proficiency: Systems Biology (Approved Elective Courses) With the advent of new technologies and generation of deluge of genomic and proteomic data, these is a need to deal with it in a collective manner and systems biology is the solution for that. Computational Systems Biology provides the study of biological systems for their annotation towards solving complex and polygenic diseases and other global problems. This proficiency will help our students to learn this upcoming area with an aim to achieve state-of-the-arts specializations. It will help them to establish a new team of bioinformaticicans with systems and synthetic biology preparations.

S.No.	Subject Code	Name of the Subjects	Course Hours		Credits	Total Hours	
			L	T	P	(EASSELE OF I	
1	18B1WBI531	Structural Bioinformatics	3	0	0	3	3
2	18B1WBT532	Comparative & Functional Genomics	3	0	0	3	3
3	18B1WBT632	Infectious Diseases	3	0	0	3	3
4	18B1WBI731	Computational Systems Biology	3	0	0	3	3
5	18B1WBI834	NGS Data Analysis & Applications	3	0	0	3	3
6	18B1WBI831	Computational Molecular Evolution	3	0	0	3	3
7	18B19BT791	Major Project Part I	0	0	10	5	10
8	18B19BT891	Major Project Part II	0	0	14	7	14
7-1-1	Dirth passers abbreviolan		And an arrange	derivative)	Total	-	



Department of Biotechnology & Bioinformatics

M. Sc. Biotechnology Course Curriculum (2018-2020) I st SEMESTER (MS1)

S.No.	New Code	Subject	L-T-P	Credits
1	18MS1BT111	General Microbiology	3-0-0	3
2	18MS1BT112	Molecular Genetics and Genomics	3-0-0	3
3	18MS1BT113	Biochemistry and Intermediary Metabolism	3-0-0	3
4	18MS1BT114	Research Methodology and Inferential Statistics	3-0-0	3
5	18MS1BT115	GLP and Bioinstrumentation	3-0-0	3
6	18MS1BT116	Introduction to IPR	3-0-0	3
7	18MS7BT111	General Microbiology lab.	0-0-2	1
8	18MS7BT112	Molecular Genetics and Genomics lab	0-0-2	1
9	18MS7BT113	Biochemistry and Intermediary Metabolism lab.	0-0-2	1
		Total	24	21

II nd SEMESTER (MS2)

S.No.	New Code	Subject	L-T-P	Credits
1	18MS1BT211	Immunology and Immunotechnology	3-0-0	3
2	18MS1BT212	Bioprocess Technology	3-0-0	3
3	18MS1BT213	Plant and Animal Biotechnology	3-0-0	3
4	18MS1BI214	Basic Bioinformatics	2-0-0	2
5		Elective-I	3-0-0	3
6	18MS7BT211	Immunology and Immunotechnology lab.	0-0-2	1
7	18MS7BT212	Bioprocess Technology lab.	0-0-2	1
8	18MS7BT213	Plant and Animal Biotechnology lab	0-0-2	1
9	18MS1BT215	Environmental Biotechnology	3-0-0	3
10	18MS7BI214	Basic Bioinformatics lab.	0-0-2	1
11	18MS9BT211	Masters Research review seminar	0-0-2	1
		Total	27	22

III ed SEMESTED (MS3)

III ru S.	ENIESTER (MISS			
S.No.	Code	Subject	L-T-P	Credits
1	18MS1BT311	Food Biotechnology	3-0-0	3
2	18MS1BT312	Enzymology and Enzyme Technology	3-0-0	3
3	18MS1BT313	Recombinant DNA Technology	3-0-0	3
4		Elective-II	3-0-0	3
5	18MS7BT311	Food Biotechnology lab.	0-0-2	1
6	18MS7BT312	Enzymology and Enzyme Technology Lab	0-0-2	1
7	18MS7BT313	Recombinant DNA Technology Lab.	0-0-2	1
8	18MS9BT311	Master's Research Thesis Part-I	0-0-8	4
		Total	26	19

IV th SEMESTER (MS4)

S. No.	New Code	Subject	L-T-P	Credits
1	18MS9BT411	Master's Research Thesis Part-II	0-0-26	13
		Total	26	13

Total Credit Hours: 75

Electives: Elective courses would be offered from the exiting approved elective courses of the Department

OF INFORMA

Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS meeting held on 17.12. 2019

A meeting of Board of Studies of the Department of Biotechnology & Bioinformatics was held on 17.12. 2019 at 3:00PM in the Board room.

Following BoS Members and attendees were present. Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics, JUIT Waknaghat Dr Harish Changotra Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS) 3 Dr. Jayashree Ramana, Assistant Professor (Senior Grade), Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS) 4 Dr. Saurabh Bansal, Assistant Professor (Senior Grade), Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS) 5 Head (or Representative), Department of Computer Science and Engineering, JUIT Waknaghat (Member BoS) Head (or Representative), Electronics and Communication Engineering, 6 JUIT Waknaghat, (Member BoS) 7 Head (or Representative), Department of Physics and Materials Science, JUIT Waknaghat, (Member BoS) Head (or Representative), Department of Mathematics, JUIT Waknaghat, 8 (Member BoS) 9 Head (or Representative), Department of Civil Engineering, JUIT Waknaghat, (Member BoS) Head (or Representative), Department of Humanities and Social Sciences, 10 JUIT Waknaghat, (Member BoS) 11 Dr. Tiratha Raj Singh Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat 12 Dr. Anil Kant Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member Secretary BoS)



Dr Anil Kant member secretary welcome the members of BoS. Professor Sudhir Kumar presented the agenda items one by one before the house for discussion/approval. Following are the recommendations/ resolutions of the BoS.

Agenda Item 1

Ratification of detailed course syllabi of elective courses of M.Sc. Biotechnology Program

Discussion:

Professor Barman suggested that in course Nano-biotechnology: Principles and Applications some introductory subtopics in unit 1 and 2 may require reshuffling. He further suggested to reduce of number of lectures devoted to general aspects of Nano-Technology (Unit 1-3) and corresponding increase in number of lectures for units (4-6) dedicated to Nano-biotechnology Principles and Applications.

Resolution: The course coordinator Dr Abhisek was called upon and conveyed observation. All the members including him agreed to bring such changes in the detailed syllabus.

Dr Naveen suggested that lab component may be included in course such as "Molecular and Clinical Diagnostics" which was seconded by Dr Sakshi.

Resolution: Prof Sudhir suggested that Course coordinator on his discretion can include some virtual experiments or hand on experiments within the framework of 3-0-0 elective structure if possible, which is already being practiced otherwise also.

Dr Vishal Deptt. of Mathematics suggested to includes "sampling plans" in MSc elective Quality control and quality Assurance.

Resolution: The matter has been conveyed to course coordinator Dr Gopal Bisht for consideration.

Agenda Item 2

Inclusion of another course in lieu of Bioprocess Engineering for BI students opting for minor proficiency in Biotechnology

This was required to remove a discrepancy: Bioprocess Engineering and Bioprocess Engineering Lab are also a core course of BI Program and student opting for Biotechnology minor proficiency from Bioinformatics definitely require a different course to avoid repetition of the course.

It was suggested by Dr Harish and seconded by Dr Anil Kant to replace this course with Immunology and Immunology Lab from the same semester.

Resolution: This was accepted by all the members.

Prof Sudhir also suggested replacing

> Microbiology with Cell biology and Cell Culture Technology

Microbiology lab with Cell biology Cell culture technology lab
 Food and Agriculture Biotechnology with Down Stream Processing

As per Professor Sudhir and other members these replacement would give better representation of Biotechnology as a Discipline in Minor proficiency for students from non

Biotechnology streams.

Resolution: The suggestion was accepted by all the members.

Agenda Item 3

Minor changes in Bioinformatics Minor Proficiency

This agenda item was brought up by Dr Tiratha Raj Singh in conjunction with changes being made in Minor Proficiency for improvements or to remove some observed discrepancies.

As per his observation in Bioinformatics Minor proficiency it is necessary to remove some overlapping of topics in courses "Biological Computation", Biological Computation lab." and "Introduction to Bioinformatics", Introduction to Bioinformatics lab." As Introduction to Bioinformatics" and Introduction to Bioinformatics lab." are core course for Biotechnology stream. This would result in duplication of some of the topics in case a Biotechnology stream student opting for Bioinformatics minor Proficiency.

Resolution: Prof Sudhir Kumar and Dr Tiratha Raj suggested replacing "Biological Computation" and "Biological Computation lab." with "Database Management Systems" and "Database Management System lab". This was approved by all present and conveyed to Dr Udayabanu to bring the changes in said proficiency.

Any other item with the permission of the Chair: Nil Prof. Sudhir Kumar Dr Anil Kant Associate Professor Chairman BoS, Member Secretary, BoS HOD Department of Biotechnology & Department of Biotechnology & Bioinformatics Bioinformatics, JUIT Waknaghat JUIT Waknaghat Prof. (Dr.) Vinod Kumar, Prof. (Dr.) Samir Dev Gupta ... Wice Chancellor JUIT Waknaghat Director & Academic Head 1555 ...

General

Considering the worldwide COVID-19 pandemic, it was not possible to conduct the physical meeting of the members of the Academic Council. Accordingly meeting of the Academic Council was scheduled through Google Meet. The Chairman, Academic Council extended warm welcome to all the members present in the meeting.

Attendance

The following members were present:-

Chairman

Prof. Vinod Kumar

Vice Chancellor, JUIT, Waknaghat

Head of the Other Institution of the Trust

Prof. S. C. Saxena

Vice Chancellor, JIIT, Noida

Distinguished Academician nominated by the Pro-Chancellor

Prof. Lalit Kumar Awasthi

Director, NIT Jalandhar

Industry Professional nominated by the Pro-Chancellor

Lt Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.) Director, Jaiprakash Power Ventures Ltd.

The Dean of all Faculty of the University

Prof. Samir Dev Gupta

Dean (Academics) & Head of Deptt. - CSE/IT, JUIT

Heads of the Departments / Centres of the University

Prof. M. J. Nigam

Head of Deptt. of ECE

Prof. Karanjeet Singh

Head of Deptt. of Mathematics

Prof. P. B. Barman

Head of Deptt. of PMS

Prof. Ashok Kumar Gupta

Head of Deptt. of CE

Prof. Sudhir Kumar

Head of Deptt. of BT&BI

Dr. Anupriya Kaur

Associate Prof and Head of Deptt. of HSS

Professors other than Heads of Departments

Prof. Sunil Kumar Khah

Deptt. of PMS

Prof. Ashish Kumar

Deptt. of CE

Non-Member Secretary

Maj Gen Rakesh Bassi, SM (Retd.)

Registrar and Dean of Students

Assistant Regionary

Jaypee University of Information Technology

Waknaghat, Distt. Solan (H.P.)

Leave of Absence

Leave of absence was granted by the Chairman, Academic Council to the following members:-

Sh. Sunil Sharma Dr Satish Kumar Executive Vice Chairman, JAL Director, NIT, Kurukshetra

Contribution of the Outgoing Members of the Academic Council

Chairman, recognised and expressed gratitude for the contribution made by the outgoing members of the Council.

Outgoing Members: -

Prof. Manoj Arora

Late Prof. Padam Kumar Sh. Vinod Sharma Prof S P Ghrera Vice Chancellor, BML Munjal University

Dean (R&D), JIIT Noida

Executive President, Jaiprakash Associates Ltd.

Former HOD (CSE/IT), JUIT

Induction of New Members

Chairman, Academic Council extended warm welcome to the newly inducted members.

Newly Inducted Members:-

Dr. Satish Kumar Director, NIT Kurukshetra

Prof. Lalit Kumar Awasthi Director, NIT Jalandhar

Lt Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.) Director, Jaiprakash Power Ventures Ltd.

- Distinguished Academician nominated by the Pro-Chancellor
- Distinguished Academician nominated by the Pro-Chancellor
- Industry Professional nominated by the Pro-Chancellor

Agenda Items

Item No. 1

CONFIRMATION OF MINUTES OF LAST MEETING OF THE ACADEMIC COUNCIL HELD ON 05 SEPTEMBER 2019

Minutes of the meeting of the last ACM held on 5th September 2019 were forwarded to the members and no comments were received. The minutes of the last ACM as per **Annexure** – 1 were confirmed.





Item No. 2 ACTION TAKEN REPORT

The action taken on the items resolved in the last ACM were noted by the members. (Annexure -2 to Annexure -10)

Chairman informed the members about the item 2.10, Allowing MOOCs against the Core Courses which was placed before the Academic Council in its last meeting held on 5th September, 2019 but the same was not resolved. Post discussion this is taken up as an Agenda Item for inclusion within this Academic Council Meeting as part of Item No. 12 for consideration and approval.

Prof. S C Saxena advised to consider Introduction of MOOCs for 4/3 credits core courses in the curriculum. He pointed out that JUIT must look into such courses where the syllabus of courses offered by NPTEL, Coursera etc is matching with those in the existing curriculum.

Item No. 3 APPROVAL FOR EVALUATION SCHEME OF SEMINAR FOR M.Sc PROGRAMS

Chairman, Academic Council informed the members that presently no provision for evaluation scheme of Seminar for M.Sc Program started during the Academic Session 2019-20 exists in the Regulations and Ordinances. Department of Biotechnology / Bioinformatics has suggested the evaluation scheme of Seminar for M. Sc programs as is being followed for M. Tech programs. After detailed deliberation, evaluation scheme for M.Sc Seminar as per Annexure – 11 was approved by the Council. Distribution of marks will be as under:-

Day to day work done prior to Midterm		20%
Day to day work done after Midterm & upto End term Seminar		20%
Midterm Seminar and report	and the same of	20%
End term report "TERM PAPER"		20%
End term Seminar		20%

Item No. 4 APPROVAL FOR TWO CREDITS - RESEARCH AND PUBLICATION ETHICS (RPE) MANDATED BY UGC.

Members were informed about the two credit course for awareness about publication ethics and publication misconducts entitled "Research and Publication Ethics" (RPE) mandated by UGC for all Ph.D students for their course work. The credit requirement for Ph.D course work as specified by the UGC is almost same as being followed at JUIT. Comparison of the course contents was also made and only practical sessions / assignments were missing in JUIT course content, which have been proposed for inclusion. The revised course contents after inclusion of practical session / assignment is appended at Annexure -12. The item was considered and approved by the Academic Council.

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APPROVAL FOR FORMAT OF GRADE-SHEET, TRANSCRIPT, PROVISIONAL DEGREE AND DEGREE PARCHMENT FOR STUDENTS WITH MINOR SPECIALIZATION

Council considered the SOP for offering Minor Specialisation as per Annexure 13 and format of Grade –Sheet, Transcript, Provisional Degree and Degree Parchment for students with Minor specialization. The formats of the same were discussed and minor change in wording as well as layout was suggested and approved. The amended formats are as per Annexure 14.

Prof. Saxena suggested the importance of inter disciplinary Minor specialization offered to the students and stressed that important Core Courses be offered as Minor and flexibility of choosing Courses out of listed Minors be given to the students. However, Proficiency be offered out of the Elective Courses as per the area of interest of the student.

Item No. 6 TO CONSIDER AND RATIFY SEAT INTAKE FOR ADMISSIONS IN ACADEMIC YEAR 2020-21

Chairman, Academic Council informed the members about the proposed seat intake for admissions for 2020-21. Academic Council considered the item and approved the following for Academic Session 2020-21:-

Undergraduate Programs (B. Tech.)

S.No.	Program	Seat Intake (2020-21)
1.	Bioinformatics	30
2.	Biotechnology	30
3.	Civil Engineering	60
4.	Computer Sc. & Engg.	330
5.	Electronics & Comm. Engg.	60
6,	Information Technology	60
	Total	570

Postgraduate Programs (M. Tech.)

S.No.	Program	Seat Intake (2020-21)
1.	Biotechnology	18
2.	Construction Management	18
3.	Environmental Engineering	18
4.	Structural Engineering	18
5.	Computer Sc. & Engg.	18
6.	Computer Sc. & Engg. (Information Security)	18
7.	Electronics & Comm, Engg.	18
	Total	126 YOF 1
		187

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Postgraduate Programs (M. Sc.)

S.No.	Program	Approved Seat Intake (2020-21)
1.	Bioinformatics	30
2.	Biotechnology	30
3.	Statistics	30
4.	Physics	30
	Total	120

Doctoral Programs (Ph.D.)

S.No.	Program
1.	Bioinformatics
2.	Biotechnology
3.	Civil Engineering
4.	Computer Sc. & Engg.
5.	Electronics & Comm. Engg.
6.	Humanities and Social Sciences
7.	Mathematics
8.	Physics and Materials Science

Item No. 7 APPROVAL OF THE MINUTES OF MEETING OF BOARD OF STUDIES (BoS) OF DEPARTMENTS

Academic Council considered the Minutes of Board of Studies (BoS) of Department of Biotechnology / Bioinformatics held on 17 December 2019 as per Annexure – 15 and noted the contents.

Item No. 8 APPROVAL FOR INTRODUCTION OF NEW COURSES / MODIFICATION IN EXISTING COURSE STRUCTURE / DETAILED SYLLABUS

Department of Biotechnology / Bioinformatics proposed following and the same was considered by the Academic Council and approved as under:-

8.1 Introduction of Elective Courses of M. Sc. Biotechnology

Name of Course	Elective	Semester
Molecular and Clinical Diagnostics	Elective – I	Second
Quality Control and Quality	Elective – I	Second
Assurance		to a constructive of the area for the area for the second
Nanobiotechnology: Principles and	Elective – II	Third
Applications /		
Cell Signaling	Elective – II	Third

The detailed syllabus of the above floated Elective Courses are as per Annexure – 16.



8.2 Change in Courses offered to Minor Specialization of B. Tech. Biotechnology

Existing	Courses		To be Replaced with
Microbio	ology		Cell Biology and Cell Culture Technology
Microbio	ology Lab		Cell Biology Cell Culture Technology Lab
Food	and	Agriculture	Down Stream Processing
Biotechn	ology	10 H S 11 M 1 M 1	

1. Immunology in place of Bioprocess Engineering, if already done.

2. Immunology Lab in place of Bioprocess Engineering Lab, if already done.

The revised Courses to be offered under Minor specialization of B. Tech. Biotechnology are as per Annexure - 17.

Prof. Saxena mentioned that Bioprocess Engineering and Bioprocess Engineering Lab seem to be core courses of the program. Hence, before dropping some courses, the course contents of the courses should be examined and taken care of.

8.3 Change in Courses offered to Minor Specialization of B. Tech. Bioinformatics

Existing Courses	To be Replaced with
Biological Computation	Bioinformatics Data Management
Biological Computation Lab	Bioinformatics Data Management Lab

The revised Courses to be offered under Minor specialization of B. Tech. Bioinformatics are as per Annexure - 18.

Prof. S C Saxena suggested that nomenclature of the Database Management System be changed since Database Management Systems course is core course of CSE / IT.

Item No. 9 RATIFICATION OF THE ACADEMIC DECISIONS TAKEN DURING LOCKDOWN DUE TO COVID – 19 PANDEMIC.

Chairman, Academic Council apprised the members about the academic decisions taken during the lockdown due to COVID – 19 pandemic. The academic decisions taken as per Annexure – 19 & Annexure – 20 were considered and noted by the members.

Some new initiatives considering the lockdown due to COVID have been taken so that the academic activities of the students are completed in time bound period. Some of them are as under:-

• M/s Mercer Mettl engaged for conduct of on-line exam.

• T3 – Exam of Final year students in on-line mode

• T3 – On-line Exam of final year students to be conducted during 18-20 June 2020.

Students opting for offline mode T3 Exam to be conducted during 1-13 July

Assistant Regis ray Ac demics)
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in Campus.

 Rest all other academic activities of first year, second year and third year students to be completed between 16-30 July, 2020.

Prof. S C Saxena informed the members about the change in Admission Calendar – 2020 due to spread of COVID-19 and uncertainty of the schedule of the admissions for 2020. The Admission Calendar has been designed considering the present situation and guidelines of the regulatory bodies. However, upcoming situation can't be predicted at this stage and decisions may get modified keeping the further situation emerging wrt COVID – 19.

Prof. Saxena requested the Head of Departments to join hands with the Hon'ble Vice Chancellor, JUIT so as to maximise the number of admissions since this is going to be a challenge.

Lt Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.) appreciated the initiatives taken during the lockdown and expressed his concern regarding the psychological trauma being faced by students and parents during the COVID-19 pandemic and suggested some counselling sessions for the students and their parents by faculty members.

The Chairman briefed the Council Members regarding efforts made in this regard.

Maj Gen Rakesh Bassi, SM (Retd.) informed the members about the engagement of a Bangalore based 24x7 online professinal psychological counselling firm M/s DOST and engagement of Dr. Shalini Dhadhwal, Professional Psychologist who is taking care of the psychophysical health of the students even during lockdown by sharing the links sent by them with the students. He also shared the psychophysical feedback of the students given by Bangalore based firm with the members. Prof S. C. Saxena stated that the suggestion by Lt Gen R. M. Chadha was relevant and would be implemented in all Universities of Jaypee Group,.

Item No. 10 DBT TO SPONSOR 10 SEATS UNDER M.Sc (BIOTECHNOLOGY) AT JUIT

Members were appraised regarding the proposal submitted to DBT -Annexure – 21 for sponsoring seats in M.Sc. Biotechnology Program.

The Council was apprised that DBT has a restriction of allowing only 10 additional seats in non DBT category if they sponsor 10 seats through DBT. The Chairman informed that JUIT has asked DBT that JUIT will be able to take the 10 DBT sponsored seats with the condition that 20 seats under non DBT category will be allowed since seat intake for the M.Sc Program has already been advertised by JUIT in public domain.

After deliberation Academic Council approved the item in principal.



Item No. 11 REPORTING ITEMS

The following Reporting Items were considered and noted by the Academic Council:-

- a) Submission of AQAR 2018-19 to NAAC.
 - Chairman appraised the members about the submission of AQAR (Annual Quality Assurance Report) for year 2018-19 to NAAC Annexure 22.
- b) Report on Implementation of NAD (National Academic Depository) Members were appraised the status of uploaded documents (Grade-sheet,, Transcript, Provisional Degree and Final Degree Parchment) on NAD Portal upto 01.06.2020. Annexure - 23

Item No. 12 ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR

Introduction of MOOCs against the Core Courses.

The item listed in last ACM held on 05 September, 2019 regarding introduction of MOOCs against the Core Courses was not resolved in the last meeting. The item was again placed for reconsideration by the members of the Council. After detailed deliberation, members felt that since regulatory bodies are encouraging on-line courses, JUIT should also consider the same by offering MOOCs / Online Courses against the Core Courses. The item was resolved as under:-

MOOCs / SWAYAM / NPTEL Online Courses will be allowed against the Core Courses with the following conditions:-

- Credit requirement of the Core Courses should match with the credit requirement of the MOOC / online courses opted by the student.
- Maximum limit of earning credit through MOOC's / Online Courses shall be 10% of the total credits required for award of degree as per UGC Gazette Notification No. 295 dated 19 July, 2016 – (Credit Framework for Online Learning Courses through SWAYAM) – Regulation - 2016.

There being no other points, meeting ended with a vote of thanks to the Chair.

Wor.

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Non-Member Secretary

Approved

Prof. Vinod Kumar Vice Chancellor Chairman

Assistant Registral (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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General

The period of COVID-19 lockdown necessitated some decisions to be taken for the students enrolled in EVEN SEMESTER – 2020. Also, approvals for various modifications being proposed in the academic schedule of 2020-21 session have to be taken by the Academic Council. Hence an emergent meeting of the Academic Council was held on 06 August, 2020 (Thursday) at 4.00 pm through online mode. The Chairman, Academic Council extended warm welcome to all the members present in the meeting.

Attendance

The following members were present:-

Chairman

Prof. Vinod Kumar

Vice Chancellor, JUIT, Waknaghat

Head of the Other Institution of the Trust

Prof. S. C. Saxena

Vice Chancellor, JIIT, Noida

Distinguished Academician nominated by the Pro-Chancellor

Dr. Satish Kumar

Director, NIT Kurukshetra

Prof. Lalit Kumar Awasthi

Director, NIT Jalandhar

Industry Professional nominated by the Pro-Chancellor

Lt Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.) Director, Jaiprakash Power Ventures Ltd.

The Dean of all Faculty of the University

Prof. Samir Dev Gupta

Dean (Academics) & Head of Deptt. - CSE/IT

Heads of the Departments / Centres of the University

Prof. Karanjeet Singh

HoD Mathematics

Prof. P. B. Barman

HoD PMS

Tion. 1. D. Barman

HoD CE

Prof. Ashok Kumar Gupta

HoD BT&BI

Prof. Sudhir Kumar Dr. Rajiv Kumar

HoD ECE

Dr. Anupriya Kaur

HoD HSS

Professors other than Heads of Departments

Prof. Sunil Kumar Khah

Deptt. of PMS

Prof. Ashish Kumar

Deptt. of CE

Non-Member Secretary

Assistant Registrar (Academics)

Jaypee University of Information Technology

Maj Gen Rakesh Bassi, SM (Retd.)

Waknan Registrar and Dean of Students



Leave of Absence

Leave of absence was granted by the Chairman to the following member:-

Sh. Sunil Sharma

Executive Vice Chairman, JAL

Contribution of the Outgoing Members of the Academic Council

Chairman, Academic Council recognised and expressed gratitude for the contribution made by the outgoing member Prof. M J Nigam, Former HoD ECE

Induction of New Members

Chairman, Academic Council extended warm welcome to the newly inducted member Dr. Rajiv Kumar, HoD ECE.

Agenda Items

ITEM NO. 1 APPROVAL FOR REVISED ACADEMIC SCHEDULE DURING THE ODD SEMESTER – 2020 AND EVEN SEMESTER – 2021.

Chairman, Academic Council informed the members that due to COVID-19 pandemic, conduct of on-campus teaching and learning activities in the forthcoming ODD SEMESTER – 2020 & EVEN SEMESTER – 2021 are being withheld. Regulatory bodies have issued several instructions for conduct of online teaching till the COVID situation subsides. Considering above and also the screen exposure time of students, it was proposed to reduce the academic load of the students to 50% - 60% of the approved load in teaching scheme for the ODD SEMESTER – 2020 & EVEN SEMESTER – 2021.

The item was considered by the Academic Council and approved as follows: -

- Only those Theory Courses and Computer based Lab classes which are
 possible to be conducted online will be included during the regular semester
 i.e. ODD SEMESTER-2020 & EVEN SEMESTER -2021 with upper ceiling
 of screen time around 03 hours per day. Further, other lab classes, which are
 not possible during this period, are to be shifted to SUMMER SEMESTER 2021 when the University is expected to open for in Campus activities.
- 2. The remaining Theory Courses of the regular semesters are to be conducted during the SUMMER SEMESTER 2021.
- 3. The approved revised Academic Schedule for the ODD SEMESTER-2020 and EVEN SEMESTER-2021 are as given in **Annexure** 1.

Dr. Satish Kumar suggested that in order to make teaching more effective for the above module of online teaching, study material like PPTs, Notes be shared among the students well in advance before the schedule of the class. Students can be asked to go through the study material at their own and come ready with their doubts / problems during the scheduled online classes.

Prof Saxena suggested inclusion of additional one hour per week interactive session

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for removing difficulties/doubts of students of each subject during the online classes.

Lt. Gen. Ravindra Mohan Chadha raised query regarding on-screen time of 2.7 hours mentioned in Annexure – 1. Chairman, Academic Council informed that actual on-screen time will be more as stipulated against each program due to Project Work & doubts clearing sessions.

ITEM NO. 2 APPROVAL FOR REPLACEMENT OF COURSES OF B. TECH. 7TH SEMESTER COMPUTER SCIENCE & ENGINEERING AND INFORMATION TECHNOLOGY.

Two courses of B. Tech. 7th Semester Computer Science & Engineering and Information Technology; **SOFTWARE TESTING AND DEBUGGING** (10B1WCI515) and **SOFTWARE TESTING AND DEBUGGING LAB** (10B1WCI575) were core courses for 2017 admitted batch.

Considering the demand and placement requirements of the students, these 02 courses were offered as Elective Courses during their 5th Semester of study. Department of CSE & IT proposed inclusion of two new courses in lieu of above two courses for B. Tech. 7th Semester Computer Science & Engineering and Information Technology during ODD SEMESTER – 2020 as under:-

Course Code	Title	Credits
18B1WCI831	DEEP LEARNING	3
20B17CI771	ADVANCED SOFTWARE SYSTEM LAB	2

Dr. Satish Kumar requested the Chairman, Academic Council for sending the detailed syllabus of Deep Learning (18B1WCI831) for his perusal.

The Academic Council approved the proposal.

ITEM NO. 3 APPROVAL FOR RESCHEDULING OF ONLINE CLASSES FOR ODD SEMESTER – 2020.

Considering the ongoing COVID situation and the schedule proposed by the Regulatory bodies i.e. AICTE / UGC, rescheduling of ONLINE classes for ODD SEMESTER – 2020 is proposed for consideration and approval of the Council.

Program / Year	Commencement of online Classes		
Ph. D	17 August, 2020		
M. Tech. 2 nd Year	17 August, 2020		
M. Sc. 2 nd Year	17 August, 2020		
B. Tech. 2 nd , 3 rd & 4 th Year	17 August, 2020		
New Entrants (1st Year)	01 September, 2020		
Ph.D. / M. Tech. / M.Sc. / B. Tech.			

The Council considered and approved.



APPROVAL FOR RUNNING ONE TO ONE COURSES FOR THOSE B. TECH. STUDENTS WHO HAVE COMPLETED 4 YEARS DURATION OF STUDY AND HAVE NOT ACQUIRED 195 CREDITS TOWARDS AWARD OF DEGREE.

B. Tech. students admitted during the year 2015 & 2016 have already completed the stipulated duration of 4 years of study but some of the students could not acquire 195 credits as required for the award of Degree. As Summer semester during summer 2020 could not be conducted for students having backlog courses, it is proposed to run One to One Courses of duration of two months starting from 17 August, 2020 for these students. The item was considered by the Council and approved as under:-

1. ONE TO ONE COURSES (Two Months Duration commencing from 17 August, 2020):

Students in 5th & 6th year, who are short of credits towards award of degree, are allowed to take courses on one-to-one basis. Students can register for not more than 03 courses with a upper ceiling of 12 credits; irrespective of industrial training having been completed or in the process of completion. Evaluation of such courses is done through one Mid Term & End Term Examinations.

2. COURSES ON OFFER DURING REGULAR SEMESTER:-

Those students, who are short of credits towards award of degree, and are not able to complete 195 credits by attending ONE TO ONE COURSES as stated above, can register during the regular semester subject to the courses on offer for the same. In case there are students who have to register for backlog courses not being offered during regular semester they can opt for courses on ONE TO ONE basis with a upper ceiling of 02 courses with the special permission of the Vice Chancellor. Such courses will run for the whole semester and regular evaluation will be done on the basis of T1, T2 & T3 Examinations.

3. REGISTRATION TO 5TH & 6TH YEAR

In case students still fail to acquire the minimum required 195 credits towards award of degree during the ODD Semester by availing any one of the above two options, they will have to register for the regular semester in 5^{th} year / 6^{th} year.

ITEM NO. 5 APPROVAL FOR COURSE STRUCTURE AND SYLLABI OF DBT SUPPORTED M. SC. BIOTECHNOLOGY PROGRAM,

Ten seats to M.Sc. Biotechnology Program from the Academic Year – 2020-21 were approved by the Department of Biotechnology (DBT) under DBT supported program. As per mandate conditions of the DBT, students enrolled against the DBT supported seats have to follow the course structure / syllabi as prescribed by the DBT for such students.

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Thus, the proposed course structure and syllabi shall remain common to all students of JUIT, Waknaghat admitted in M. Sc. Biotechnology program in year 2020-21, irrespective of either admitted against DBT supported seat or NON DBT supported seat.

The council considered the proposed course structure and syllabi for M.Sc. Biotechnology program and approved the same as given in Annexure -2.

ASSIGNED TO FACULTY APPROVAL FOR RESPONSIBILITIES ITEM NO. 6 MEMBERS IN ODD SEMESTER 2020-21.

Most of the academic activities are expected to be carried out in on-line mode during the ODD SEMESTER - 2020 due to COVID and as per the guidelines of the regulatory bodies. Procedure and evaluation of engagement of faculty members during the ODD SEMESTER-2020-21 has been proposed under four parameters. Percentage weightage is assigned to each parameter and evaluation will be done according to the self appraisal of individual faculty and vetting will be done by the HoD concerned / Dean.

The proposed parameters and weightage assigned to each parameter were considered by the Council and approved as under:-

TEACHING, TRAINING & EVALUATION (50% WEIGHTAGE)

- Preparation of quality PPT slides. About 8 10 PPT slides for each lecture class of 55 minutes duration.
- 5 MCQ type questions for each lecture class.
- Regular assessment of tutorial sheets and their return to students.
- There will be additional hour / week interactive session for removing difficulties for each subject.
- Each faculty will complete 2 virtual labs of his / her concerned speciality of his / her department. Prior approval of HoD will be required before taking up the activity of the virtual labs.
- Development of a new course in emerging area of his / her specialization along with preparation of PPT slides for the whole course. Prior approval of the Dean (Academics) is to be taken for this activity.

RESEARCH & DEVELOPMENT AND IPR (30% WEIGHTAGE)

- Publication of at least one Scopus / SCI indexed research paper in a journal by every faculty member in each semester.
- If there is more than one author in a paper, then weightage will be distributed amongst the authors.
- Regular guidance to Ph.D scholars, if someone is supervising Ph.D.
- Patents submitted, published and granted.
- Govt. funded research projects / consultancy projects on going / new assigned.

PROFESSIONAL DEVELOPMENT (20% WEIGHTAGE)

Conduction, participation and / or coordination of on-line FDP, Seminars, Conferences, Short Term Training Courses, Refresher Courses, Webinar, Summer Schools, Talks, Lectures, etc.

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Book writing / Chapter writing in a quality book of reputed publisher.

 One course of SWAYAM or NPTEL is to be completed by each faculty member in each semester. Prior approval of the Dean (Academics) is to be taken before undertaking development of such courses.

Delivery / conduction / attending of Webinar of concerned areas.

ADMINISTRATIVE ASSIGNEMENTS (0% TO 100% WEIGHTAGE)

 Due weightage will be given to such assignments, as per the degree of involvement and time spent.

Proforma for filling up the activities by each faculty member every week for all the above parameters is as given in Annexure - 3.

Procedure:-

 HoD will check the weekly chart of each teacher and forward the same with comments to Dean (Academics) at the end of each week.

Dean (Academics) will give the recommendations to Vice Chancellor by 22nd
Day of each month clearly indicating the involvement and regularity of each
faculty in these activities.

 Based on the engagement, the number of working days of each teacher will be approved by the Vice Chancellor and sent to the Registry for further necessary action.

Prof. Saxena stressed over the professional development of the faculty.

Dr. Satish Kumar suggested for inclusion of Research Projects from Govt. funding agency under IPR contribution.

ITEM NO. 7 REPORTING ITEMS

The following Reporting Items were considered and noted to the Academic Council:-

7.1 Promotion of students of intermediate Semester of 2019-20 to the next semester. (7.1.1 - B. Tech 2nd, 4th, 6th Semester / M. Tech. 2nd Semester / M.Sc. 2nd Semester, 7.1.2 - Promotion to Next Semester)

Evaluation of 65% of component of assessment has already been done through T1 (on-campus), T2 (On-line) and TA (Internal). Assessment of balance 35% of the component of assessment towards T3 marks for the students of intermediate semesters done on the basis of previous semester SGPA i.e. T3 Marks = ((Previous Semester SGPA/10)*35). Results of the students declared by 18 July, 2020 and students promoted to next semester.

This proposal is keeping in view the guidelines issued by the UGC vide letter No. F.1-1/2020(Secy) dated 29 April, 2020.

The Academic Council considered and approved the same.

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7.2. Examination of Final Year Students. (7.2.1 – B. Tech. Final Year Students, 7.2.2 – Backlog Examinations of B. Tech. Final Year Students, 7.2.3 – M. Tech. 4th Semester Students, 7.2.4 – Ph.D Students)

Evaluation of 65% of component of assessment has already been done through T1 (on-campus), T2 (On-line) and TA (Internal). Assessment of rest 35% of the component of assessment towards T3 marks is to be done through online proctored Examination for final year students in two phases alongwith backlog courses. Result of the same declared by 06 July 2020 for first phase and by 21 July 2020 for second phase examination.

This proposal is keeping in view the revised guidelines issued by the UGC vide letter No. F.1-1/2020(Secy) dated 29 April, 2020 and 06 July 2020.

Project / Dissertation of the M. Tech. Final year students were conducted in online mode and results were declared on 20 June, 2020.

DPMC of the Ph.D scholars is being conducted in online mode and on the recommendation of the Dean's Committee, Ph.D Scholars are being promoted to the next semester. Final defence of 09 Ph.D scholars conducted in online mode.

The Academic Council considered and approved.

7.3 Evaluation of MOOC Courses

Students having pass certificate issued by NPTEL and who have given their consent for option 1 i.e. PASS grade were considered for declaration of the result. Pass grade is not being considered towards calculation of SGPA / CGPA. However, credits of the course(s) counted towards the total credits for award of degree. Total 22 students were registered for MOOCs courses out of which 16 students gave their consent and they have been declared pass. Rest 06 students were awarded with "I" grade (Incomplete) in the registered MOOCs courses.

7.4 Teaching Assistance ship / Fellowship to Ph.D Students

Due to COVID-19 lockdown, Teaching assistance-ship / fellowship to Ph.D students was on hold for the month of March, April, May as scholars did not attended the University during the duration. On the recommendation of the Sub Committee of the Academic Council, fellowship of the scholars was approved and released as under:-

<u>JUIT Funded Teaching Assistance-ship</u>: It has two components i.e. Research Component - 60% and Teaching Component - 40%, so Research Component i.e. 60% of fellowship was released.

Govt. / Project Funded Fellowship: Full fellowship was released as scholars were involved in research as well as in the project work.

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ITEM NO. 8 ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR

Prof Saxena informed the members about the **New Education Policy** and provisions therein. He suggested that even if later on-campus activities are allowed, University should adopt 25% to 30% teaching through online mode in their regular Curriculum.

There being no other points, meeting ended with a vote of thanks to the Chair.

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Maj Gen Rakesh Bassi, SM (Retd) Registrar & Non-Member Secretary

Approved

Prof. Vinod Kumar Vice Chancellor Chairman

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M. SC. (BIOTECHNOLOGY) DBT REMODELED COURSE CURRICULUM 2020

M. Sc. Biotechnology DBT remodeled Course Curriculum (2020)

1	 CI	M	ES	TF	D /	MC	11

S.No.	Subject	L-T-P	Credits
1	Biochemistry-MI	3-0-0	3
2	Cell and Molecular Biology-MI	3-0-0	3
3	Plant and Animal Biotechnology-MI	2-0-0	2
4	Microbiology-M1	2-0-0	2
5	Genetics-MI	2-0-0	2
6	Basics of Mathematics and Statistics-MI	2-0-0	2
7	Basics of Chemistry and Physics-MI	2-0-0	2
8	Laboratory I: Biochemistry and Analytical Techniques-M1	0-0-8	4
9	Laboratory II: General Microbiology-MI	0-0-4	2
10	Laboratory III: Plant and Animal Biotechnology-Ml	0-0-4	2
	Total	32	24

II nd SEMESTER (MS2)

S.No.	Subject	L-T-P	Credits
1	Genetic Engineering-MII	3-0-0	3
2	Immunology-MII	3-0-0	3
3	Bioinformatics-MII	2-0-0	2
4	Genomics and Proteomics-MII	2-0-0	2
5	Molecular Diagnostics-MII	2-0-0	2
6	Research Methodology and Scientific Communication Skills-MII	2-0-0	2
7	Elective-I-MII	2-0-0	2
8	Seminar-I-MII	1-0-0	1
9	Laboratory IV: Molecular Biology and Genetic Engineering-MII	0- 0-8	4
10	Laboratory V: Immunology-MII	1 -0-6	3
	Total	31	24

III rd SEMESTER (MS3)

S.No.	Subject	L-T-P	Credits
1	Bioprocess Technologies and Engineering-MIII	3-0-0	3
2	Emerging Technologies-MIII	2-0-0	2
3	Critical Analysis of Classical papers-MIII	2-0-0	2
4	Bioentrepreneurship-MIII	2-0-0	2
5	Intellectual Property Rights, Biosafety and Bioethics-MIII	2-0-0	2
6	Project Preposal Preparation and Presentation-MIII	2-0-0	2
7	Seminar-II-MIII	l - 0 -0	
8	Laboratory VI: Bioprocess Engineering and Technology-MIII	0-0-8	4
9	Laboratory VII: Bioinformatics-MIII	0-0-4	2
10	Dissertation-MIII		4
	Total	26	24

IV th SEMESTER (MS4)

S. No.	Subject	L-T-P	Credits
1	Dissertation-MIV		20
2	Elective-II-MIV	2-0-0	2
	Total	2	22

Total Credit Hours: 94

Electives: Elective courses would be offered from the exiting approved elective courses of the Department

Recommended Electives: 1. Biological Imaging 2. Computational Biology 3. Drug Discovery and

Development 4. Environmental Biotechnology 5. Microbial Technology 6. Nanobiotechnology 7. Proteint

Engineering 8, Vaccines

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M.Sc. Biotechnology

S.No.	Title	Credit
X.	SEMESTER ONE	
1	Biochemistry	3
2	Cell and Molecular Biology	3
3	Plant and Animal Biotechnology	.3
4	Microbiology	2
5	Genetics	2
6	Basics of Mathematics and Statistics	2
7	Basics of Chemistry and Physics	2
8	Laboratory I: Biochemistry and Analytical Techniques	4
9	Laboratory II: Microbiology	2
10	Laboratory III: Plant and Animal Biotechnology	2
	TOTAL	24
	SEMESTER TWO	
1	Genetic Engineering	3
2	Immunology	3
3	Bioinformatics	2
4	Genomics and Proteomics	2
5	Molecular Diagnostics	2
6	Research Methodology and Scientific Communication Skills	2
	Elective I	2
. 8	Seminar	1
9	Laboratory IV: Molecular Biology and Genetic Engineering	4
10	Laboratory V: Immunology	3
	TOTAL	24
	SEMESTER THREE	
1	Bioprocess Engineering and Technology	3
2	Emerging Technologies	2
3	Critical Analysis of Classical Papers	2
4	Bloentrepreneurship	2
5	Intellectual Property Rights, Biosafety and Bioethics	2
6	Project Proposal Preparation and Presentation	2
7	Seminar	1
8	Laboratory VI: Bioprocess Engineering and Technology	4
9	Laboratory VII: Bioinformatics	2
10	Dissertation	4
	TOTAL	24
	SEMESTER FOUR	
1	Dissertation	20
2	Elective II	2
************	TOTAL	22
	TOTAL CREDITS	94

Recommended Electives:

1. Biological Imaging I 2. Computational Biology I 3. Drug Discovery and Development I 4. Environmental Biotechnology I 5. Microbial Technology I 6. Nanobiotechnology I 7. Protein Engineering I 8. Vaccines

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Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS meeting held on 05.12.2020

A meeting of The Board of Studies of the Department of Biotechnology and Bioinformatics was held on 05.12.2020 at 11:00 AM online via Google meet.

	wing BoS Members and attendees were present.	/ 100.
	Dr. Sudhir Kumar, Head, Department of Biotechnology JUIT Waknaghat	Calebo
	Dr. Anil Kant Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member Secretary BoS)	11/2/2020
3	Dr TC Bhalla Ex, Professor Emeritus Department of Biotechnology HPU Shimla (External Member BoS)	- Helpel
4	Shimla (External Member Bos) Mr Girish Minocha, Managing Director Minchys Industries Kandaghat, Solan	expects;
5	Dr Vinay Bhardwaj, Head Division of Crop Improvement, CPRI Shimla	Property
6	Dr Tirtha Raj Singh Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	13000
7	Dr Harish Changotra Associate professor, Department of Brown	211 02 9/11/2
8	Program)	Jska gliere
9	Dr. Saurabh Bansal, Assistant Professor (Senior Grade), Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	030212 W
10	JUIT Waknaghat, (Member BoS)	atril 2020
1	Dr Rahul Shrivastava, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as coordinator M Sc Microbiology)	(DE RATHEIN

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Dr Anil Kant presented the welcome address and introduced External BoS members to the house. Professor Sudhir Kumar also welcomed the members. Dr Anil Kant presented the agenda items one by one for discussion and following were the item wise recommendations.

1. To ratify the adoption of DBT remodelled curriculum and syllabi along with elective courses for MSc Biotechnology, for MSC Biotechnology Program from academic session 2020-21.

Name of Course	Elective Basket	Semester	Credit s
Nanobiotechnology - MII	Elective-I	Second	02
Environmental Biotechnology	Elective-1	Second	02
Protein Engineering MII	Elective-I	Second	02
Vaccines MIV	Elective-II	Fourth	02
Drug Discovery and Development MIV	Elective-II	Fourth	02
Computational Systems Biology MIV	Elective-II	Fourth	02

Dr Anil Kant informed the house that to adopt the DBT recommended curriculum and syllabi is one of the term and condition of DBT to support our MSc Biotechnology under their flagship PG Teaching program, sanctioned to us this year and we accepted these term and conditions. Prof TC Bhalla congratulated the Department for this achievement.

Following recommendations were made by the Departmental level committee regarding the adoption of this curriculum. These recommendations have been endorsed by Hon'ble VC through Dean Academic and Research.

Recommendation of the committee

- a) The DBT remodelled curriculum and syllabi would be applicable for all the students (DBT, Non DBT) admitted in MSc biotechnology program with respect from academic session 2020-21.
- b) Course nomenclature, credits and distribution in four semesters will be kept largely similar as that of DBT remodelled curriculum, apart from some minor changes in course names to avoid similarity in nomenclature of already running courses of other programs of Biotechnology and Bioinformatics.
- c) Course codes may be assigned by JUIT academic cells as per specified norms.

Deliberations:

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Prof. TC Bhalla and Mr Girish Minocha suggested some valuable changes with respect to the sequence of courses and credits of the courses.

Professor Sudhir and Dr Anil Kant were of the view that it would be better to adopt the curriculum unchanged, because of our commitment of implementing DBT endorsed curriculum as part of terms and conditions already signed.

Dr Vinay Bhardwaj enquired about the inclusion of some latest techniques in the syllabi particularly genome editing.

Dr Anil Kant informed that faculty always have a flexibility to incorporate the advance topics in their respective courses, and there is an existing course viz. "Emerging Technologies" in which such advance topics can be easily adjusted. Topics are also assigned as a credit seminars which are part of the curriculum.

Dr Suarabh Bansal pointed out a discrepancy with respect to names of courses "Bioprocees Engineering and Technology", and Microbiology which were rectified.

M.Sc Ist Semester

Nomenclatu	change ire
Laboratory	II: Microbiolog
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M.Sc 3rd Semester

Existing Nomenclature	Proposed Nomenclati	change ire	in.
Bioprocess Technology and -	Bioprocess	Engineering	and
Engineering -MIII	Technology	-MIII	

Resolution: The MSc course structure and syllabi were approved to be adopted as proposed

To discuss the proposal of including specializations viz. I Industrial Biotechnology,
 Medical Biotechnology in M.Tech. Biotechnology program via mean of assigning the projects in 3rd & 4th semester in the areas of specialization and electives taken by the students in respective area of specialization as per attached (Annexure 2, detailed scheme of proposal)

Deliberations: Dr Jata Shankar presented the proposal, Members participated in discussion and most of the members were opined that this can enhance job prospectus of the students.

Resolution: The proposal of including specializations in M.Tech program was approved as presented.

3. To discuss the proposal of changing the name of undergraduate B.Tech. Bioinformatics program to the proposed B. Tech Bioinformatics and Data Science. An

Elective course Artificial Intelligence is proposed to be included in fourth year of B. Tech., Bioinformatics.

Deliberations: Dr Tiratharaj presented the proposal. Professor Sudhir Kumar informed that such nomenclature of any degree does not exist in UGC and AICTE list of the degrees and sought the advice from the members. Prof TC Bhalla and other members opined that it may require deep deliberations on part of University, so as to satisfy the regulatory body's requirements in such a scenario.

Resolution: The proposal changing the name of undergraduate B. Tech. Bioinformatics program to the proposed B.Tech Bioinformatics and Data Science was not approved.

To discuss and finalize the course structure of new post graduate program; MSc Microbiology. This program is proposed to be initiated in place of MSc Bioinformatics. M.Sc Bioinformatics program did not admit any students since past three years. For this, a Departmental level committee consisting of Dr Rahul Shrivastava, Dr Anil Kant, Dr TirathaRaj and Dr Ashok Nadda have been constituted to submit course structure (Proposed Course with modifications).

Deliberations: Dr Rahul Shrivastava presented the proposal. The matter was discussed in details and following changes were made in the proposed course structure.

- 1) "Fungal Biology" has been included as core course in semester 1
- 2) Name of Basic Bioinformatics and respective lab changed to Bioinformatics and Bioinformatics lab respectively to coincide courses in MSc Biotechnology, so as to offer these common courses in these programs.
- 3) The contents of microbial physiology to be included in the course "General Microbiology"
- 4) "Microbial Genetics and Physiology" will not have any overlap with that of "Molecular Biology "Course credits of Basic Mathematics and Statistics and Bioinformatics reduced from 3 to 2 to coincide with courses in MSc Biotechnology.

Resolution: The course structure of MSc Microbiology is approved after including the suggestions in the structure and with a commitment to incorporate suggestion while developing the syllabi of specific courses mentioned above.

Member Secretary, BoS Department of Biotechnology

JUIT Waknaghat

Prof. Sudhir Kumar

Chairman BoS. HOD Department of

Biotechnology, JUIT Waknaghat



Department of Computer Science & Engineering and Information Technology

Minutes of the Meeting of BoS, DEC 2020

Minutes of meeting of Board of Studies in the Department of Computer Science & Engineering and Information Technology was held online through "Google Meet" on 15th December 2020, 10:00 a.m. at Jaypee University of Information Technology, Waknaghat. The following resolutions were passed in the meeting.

RESOLUTIONS:

- 1) It was resolved to approve the course structure of "Open Elective Curricula" offered by the Department of Computer Science & Engineering and Information Technology for B. Tech students of other departments (placed at Annexure-I).
- 2) It was resolved to approve the course description of "Open Elective Curricula" offered by the Department of Computer Science & Engineering and Information Technology for the B. Tech. students of other departments (placed at Annexure-II).
- 3) It was resolved to approve the course descriptions of "Proficiency Curricula" for B. Tech (CSE) and B. Tech (IT) (placed as Annexure-III).
- 4) It was resolved to approve the changes in the course description of the course "Multimedia Development Lab II" (placed at Annexure-IV).
- 5) It was resolved to change the title of the course from "Computer Graphics" to "Computer Graphics and its Applications" for B. Tech (IT) students. Moreover, the credits of the course have been reduced from 3 credits to 2 credits (placed at Annexure-V (A).
- 6) It was resolved to change the title of the course from "Computer Graphics Lab" to "Computer Graphics and its Applications Lab" for B. Tech (IT) students. The credits of the course have also been reduced from 2 credits to 1 credit (placed at Annexure-V (B)).
- 7) It was resolved to approve the change the title of the B. Tech (CSE/IT) Project in 160 credit curricula as below:
 - Project-I to be stated as Minor Project (for 6th Semester)
 - Project-II to be stated as Major Project-I (for 7th Semester)
 - Project-III to be stated as Major Project-II (for 8th Semester)

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Suggestions from the External Members:

- 8) It was pointed out by Prof. Manu Sood (external member) that the open elective courses "Software Testing" and "Software Testing Lab" should be offered to the B. Tech students of other departments if they have already studied the course "Software Engineering". As an alternative, he suggested including an introductory part of Software Engineering in the course "Software Testing". Accordingly, the modifications should also be made to the course "Software Testing Lab". The suggestions were accepted and approved in the BoS meeting. The same have been incorporated in the course description attached at Annexure II.
- 9) It was suggested by Prof. Seema Bawa (external member) to include the latest editions of reference books required for all the courses. Moreover, the references should be in a uniform/standard format. The suggestions were accepted and incorporated in the course descriptions attached as Annexure II and Annexure III.
- 10) The weightage of attendance marks in theory courses and lab courses is 5% and 15%, respectively. It was suggested by Prof. Himanshu Aggarwal (external member) to distribute the attendance weightage into two parts, i.e. 60% for attendance and 40% for class participation. The suggestion was accepted and approved in the meeting.

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distr. Solan (H.P.)

Prof. Dr. Samir Dev Gupta (HoD, CSE/IT)

MEMBERS OF BOARD OF STUDIES (DECEMBER 2020)

Department of Computer Science & Engineering and Information Technology

1. Chairperson: Prof. Dr. Samir Dev Gupta, HoD, CSE/IT Dept.



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2. Members:

i. Dr. Vivek Seghal

ii. Dr. P. K. Gupta

iii. Dr. Hemraj Saini

iv. Dr. Ravindra Bhatt

v. Dr. Pardeep Kumar

vi. Dr. Rajni Mohana

vii. Dr. Amol Vasudeva

viii. Dr. Yugal Kumar

ix. Dr. Ekta Gupta Grandotra

x. Dr. Rajinder Singh Sandhu

xi. Dr. Hari Singh

xii. Dr. Jagpreet Sidhu

3. Nominces from the departments of ECE, Civil, Mathematics, Physics, BT/BI, and Humanities and Social Sciences:

Ekto Grandotra

i. Prof. Dr. A K Gupta, Professor & HoD, Dept of CE, JUITW

ii. Prof. Dr. Karanjeet Singh, Professor & HoD, Dept of Maths, JUITW ABSENT)

iii. Prof. Dr. P B Burman, Professor & HoD, Dept of Physics & Material Science, JUITW

iv. Dr. Rajiv Kumar, Associate Prof & HoD, Dept of ECE, JUITW

v. Dr. Anupriya Kaur, Associate Prof & HoD, Dept of HSS, JUITW

vi. Dr. Tiratha Raj Singh, Associate Professor, Dept of BT/BI, JUITW

4. External Experts:

- i. Prof. Dr Manu Sood, Professor, HP University, Shimla
- ii. Prof. Dr. Seema Bawa, Professor, Thapar Institute of Engineering & Technology
- iii. Prof. Dr. Himanshu Aggarwal, Professor, Punjabi University, Patiala

5. Representative from industry/corporate sector

- i. Sh. Prantik Thakur Agile Practitioner and Service Delivery Manager at DXC Technologies, Indore. (ABSENT)
- ii. Sh. Yogesh Khurana Data Analyst UBER, Hyderabad (ABSENT)

6. Postgraduate Meritorious Alumnus:

i. Dr. Rajkumar Tekchandani, Asst Professor, Thapar Institute of Engineering & Technology, Patiala.

Prof. Dr. Samir Dev Gupta (HoD, CSE/IT)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT

JUIT/WKG/REGR/2019-20/0693

9.

Dr. Shweta Pandit

Asst Prof. Deptt of ECE

October 31, 2020

NOTIFICATION

The Composition of the Board of Studies of the Department of Electronics & Communication Engineering of Jaypee University of Information Technology, Waknagaht, Distt. Solan (HP) is hereby notified as under:-

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1.	Dr. Rajiv Kumar HOD, Deptt of ECE	Chairperson
2.	Prof. (Dr.) Debashish Ghosh HOD, Deptt of ECE IIT, Roorkee	Member
3.	Prof. (Dr.) C.C. Tripathi Prof. & HOD, ECE University Institute of Engineering & Technology Kurukshetra University, Kurukshetra	Member
4.	Dr. Balwinder Singh Joint Director & Head Centre for Development of Advanced Computing A Scientific Society of the Ministry of Communication & Information Technology A-34, Indl Area, Phase VIII, Mohali (Pb)	Member
5.	Dr. Neeru Sharma Asst Prof. Deptt of ECE	Member
6.	Dr. Salman Raju Taluri Asst Prof. Deptt of ECE	Member
7.	Dr. Sunil Datt Sharma Asst. Prof. Deptt of ECE	Member
8.	Dr. Vikas Baghel Asst Prof., Deptt of ECE	Member

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

Member



Dr. Shruti Jain
 Assoc Prof. Deptt of ECE

Member Secretary

11. Special Invitees (JUIT)

- a) Prof. Samir Dev Gupta, Dean (Academics) & HOD, Dept of CSE/IT
- b) Prof. Ashok Kr. Gupta, HOD, CE
- c) Prof. Karanjeet Singh, HOD, Mathematics
- d) Prof. P.B. Barman, HOD, PMS
- e) Prof. Sudhir Kumar, HOD, BT&BI
- f) Dr. Anupriya Kaur, HOD, HSS

May.

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Dean of Students

c.c.: Vice Chancellor, Dean (Academics)

All HODs

All Memaabers

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Department of Electronics and Communication Engineering

JUIT Waknaghat

A meeting of Board of Studies of the Department of Electronics and Communication Engineering was held on 12-12-2020 at 10:00 AM via online mode.

The following members were present

1.	Prof. Samir Dev Gupta	Dean Academics
2.	Dr. Rajiv Kumar	Chairman
3.	Prof. D. Ghosh	External Member
4.	Prof. C.C. Tripathi	External Member
5.	Dr. Balwinder Singh	External Member
6.	Dr. Shruti Jain	Member Secretary
7.	Dr. Salman Raju	Member
8.	Dr. Sunil Datt Sharma	Member
9.	Dr. Vikas Baghel	Member
10.	Dr. Naveen Jaglan	Co-opted Member
11.	Dr. Nafis uddin Khan	ECE Department
12.	Dr. Emjee P	ECE Department
13.	Dr. Alok Kumar	ECE Department
14.	Mr. Munish Sood	ECE Department
15.	Mr. Pankaj Kumar	ECE Department
16.	Mr. Anuj Maurya	ECE Department
17.	Prof. P. B. Barman	HOD, PMS Department
18.	Dr. Pradeep Kumar Gupta	Representative CSE & IT Department
19.	Dr. Anil Kant	Representative BT & BI Department
20.	Mr. Pramod Kumar	Co-opted Member for online issue

Leave of absence

Leave of absence was granted to the Dr. Shweta Pandit by the Chairman Board of Studies,

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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The Chairman welcomed all the members who were present for the meet thereafter deliberated by Dr. Shruti Jain on agenda items as had beer. Chairman.

Item No. 1 : Confirmation of minutes of Last Meeting of the Board of Studies held on 17.09.2019.

Prof. C. C. Tripathi was in the opinion of changing the name of Proficiency to Specialization. But, Prof. Samir Dev has explained him all the details.

Rest approved

Item No. 2: To consider the addition of new B.Tech. branch : Electronics and Computer Engineering

All the members have given the consent of the new B.Tech. branch and its courses. There is same suggestion from Prof. C.C. Tripathi and Dr. Balwinder that Cyber Security, Data Science course should be added in the scheme.

Later, after discussion it has been approved that Proficiency with Cyber Security and Data Science will be added.

Item No. 3: Regarding approval of the changes in the existing M.Tech. Course structure.

Dr. Balwinder was in the opinion that the courses of M.Tech. are too many and can be reduced. Also, he has given a suggestion to rename Project I and Project II to Dissertation I and Dissertation II respectively.

Prof. C.C. Tripathi has given a suggestion that there should be one Industrial Internship after 2^{nd} semester.

New modified course structure is attached as Annexure I.



Item No. 4: To consider the approval in scheme of M.Tech. in ECE with specialization in *Internet of Things*.

As per the suggestion of Board the changes has been incorporated and added as Annexure II.

Item No. 5: To consider the approval of syllabi of Proficiency for B.Tech. ECE.

As recommended was approved

Item No 6: To approve the MOOC course to be introduced during the Academic Session 2020-21 for all batches of ECE.

As recommended was approved

Item No.7: To approve the titles and syllabi of New Electives for Academic Session 2017-18 for all batches of ECE (2017 onwards)

As recommended was approved

Item No 8: To approve the newly floated Ph.D. course and its syllabus.

As recommended was approved

The meeting concluded at 1210hrs with a vote of thanks by **Dr. Rajiv Kumar**, Chairman Board of Studies.

Minutes of BoS held on 12-12-2020 (Prof. C.C. Tripathi) (Prof. D.Ghosh) (Dr. Balwinder Singh) (Dr. Rajiv Kumar) (Dr. Sunil Datt Sharma) DV. Salman Ragn. T (Dr. Nafis Udin Khan) (Dr. Salman Raju) veen Jaglan) (Mr. Munsih Sood) (Mr.Anuj Maurya) (HoD PMS Department) (HOD, CSE/ IT Department)

Assistant Registrer (Academics)
Jaypee University of accommon Jechnology
Waknaghat, Distr. Splan (H.P.)

(HOD, BT / BI Department)

(Mr. Pramod Kumar)

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General

Academic Council meeting of Jaypee University of Information Technology, Waknaghat was held on 29 December, 2020 at 11.30 a.m. in online mode through Google Meet. The Chairman, Academic Council extended warm welcome to all the members present in the meeting and expressed thanks to Sh Sunil Sharma Ji, Prof. S. C. Saxena, Prof. Lalit Kumar Awasthi and Lt. Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.) for their presence. The detailed agenda of the meeting was presented for deliberation and decision of the Academic Council.

Attendance

The following members were present:-

Chairman

Prof. Vinod Kumar

Vice Chancellor, JUIT, Waknaghat

Head of the Other Institution of the Trust

Prof. S. C. Saxena

Vice Chancellor, JIIT, Noida

Distinguished Academician nominated by the Pro-Chancellor

Prof. Lalit Kumar Awasthi

Director, NIT Jalandhar

Industry Professional nominated by the Pro-Chancellor

Sh. Sunil Sharma,

Executive Vice Chairman, Jaiprakash Associates Ltd.

Lt Gen Ravindra Mohan Chadha,

PVSM, AVSM (Retd.)

Director, Jaiprakash Power Ventures Ltd.

The Dean of all Faculty of the University

Prof. Samir Dev Gupta

Dean (Academics) & Head of Deptt. - CSE/IT

Heads of the Departments / Centres of the University

Prof. Karanjeet Singh

HoD Mathematics

Prof. P. B. Barman

HoD PMS

Prof. Ashok Kumar Gupta

HoD CE

Prof. Sudhir Kumar

HoD BT&BI

Dr. Raijy Kumar

HoD ECE

Dr. Anupriya Kaur

HoD HSS



Professors other than Heads of Departments

Prof. Sunil Kumar Khah Prof. Ashish Kumar

Deptt. of PMS Deptt. of CE

Non-Member Secretary

Mai Gen Rakesh Bassi, SM (Retd.)

Registrar and Dean of Students

Leave of Absence

Leave of absence was granted by the Chairman to the following member:-

Dr. Satish Kumar

Director, NIT Kurukshetra

Agenda Items

ITEM NO. 1 CONFIRMATION OF MINUTES OF LAST MEETINGS OF THE ACADEMIC COUNCIL

Minutes of the meeting of the last ACM held on 04 June 2020 and 06 August 2020 were forwarded to the members and no comments were received. The minutes of the last ACM as per Annexure – 1 and Annexure – 2 were confirmed.

ITEM NO. 2 ACTION TAKEN REPORT

The action taken on the items resolved in the last ACM dated 04 June 2020 and 06 August 2020 were noted by the members. (Annexure – 3 and Annexure – 4)

- ITEM NO. 3

 APPROVAL FOR INTRODUCTION OF NEW COURSES / MODIFICATION IN EXISTING COURSE STRUCTURE / DETEAILED SYLLABUS
 - 3.1 DEPARTMENT OF BIOTECHNOLOGY & BIOINFORMATICS
 - 3.1.1 Introduction of Elective I and Elective II for M.Sc (Biotechnology) Program for 2020 onward batches.

Chairman, Academic Council informed that Department of Biotechnology & Bioinformatics through its BoS held on 05.12.2020 had recommended inclusion of Elective Courses for M.Sc (Biotechnology) program for batches admitted 2020 onward as Elective – I and Elective – II. After detailed deliberation, the following Elective Courses were approved by the Academic Council:-





Name of Course		Elective Basket	Semester	Credits
Nanobiotechnology - M	ш	Elective-I	Second	02
Environmental Biotech - MII		Elective—I	Second	02
Protein Engineering M	п/	Elective-I	Second	02
Vaccines MIV		Elective-II	Fourth	02
Drug Discovery Development MIV	and	Elective-II	Fourth	02
A CONTRACTOR OF THE PARTY OF TH	Systems	Elective-II	Fourth	02

Students have to opt for One Elective out of three courses given above during second and fourth semester.

3.1.2 Change in nomenclature of two Courses of M.Sc (Biotechnology).

Members were informed that Department of Biotechnology & Bioinformatics through its BoS held on 05.12.2020 has proposed for changes in nomenclature of two Courses of M.Sc (Biotechnology) Program. After detailed deliberation, the following changes in the nomenclature of the courses M.Sc (Biotechnology) 1st Semester and 3rd Semester were approved by the Academic Council:-

M.Sc 1st Semester

Existing Nomenclature			Approved Nomenclatur			
Laboratory	II:	General	-	Laboratory	II:	Microbiology-
Microbiology	-MI			MI		

M.Sc 3rd Semester

Existing Nomenclature		Approved Nomenclati	AND REAL PROPERTY AND ADDRESS OF THE PARTY O	in
Bioprocess Technology Engineering -MIII	and	Bioprocess Technology	Engineering -MIII	and

Assistant Registrar (Academic



3.1.3 M.Tech (Biotechnology) with specialization in Industrial Biotechnology and Medical Biotechnology

Chairman, Academic Council informed the members that Department is running M.Tech (Biotechnology) program. Since last 3 – 4 years there are inadequate numbers of admissions viz-a-viz sanctioned intake of the PG program. This is adversely affecting NIRF ranking of the University.

Considering the above facts, Department has proposed through its BoS held on 05.12.2020 for offering M.Tech (Biotechology) program with two more specializations i.e. Industrial Biotechnology and Medical Biotechnology from the Academic Session 2021-22 so as to make the programs more demanding. However, the sanctioned intake of the program will remain unchanged i.e. 18 seats including newly proposed two specializations.

Students desirous of pursuing specialization will be required to:-

• Select 3rd & 4th Semester Seminar topics from the area of specialization.

 Select 3rd & 4th Semester Project Thesis Part I and Project Thesis Part II from the area of specialization.

 Opt for at least two Elective Courses in the area of specialisation as per given specialization:-

Specialisation	Code	Credits	Course
Industrial Biotechnology	20M1WBT131	03	Food Processing & Engineering (1 st Sem)
	20M1WBT132	03	Plant Tissue Culture Technologies (1st Sem)
	20M1WBT231	03	QC Analysis and Management (2 nd Sem)
	20M1WBT232	03	Industrial Enzyme Technology (2 nd Sem)
Medical Biotechnology	20M1WBT133	03	Vaccine Production (1 st Sem.)
G,	20M1WBT134	03	Advances in Gene Manipulations (1 st Sem.)
	20M1WBT233	03	Cancer Biology (2 nd Sem.)
	20M1WBT234	03	Clinical Diagnostics (2 nd Sem.)





Prof. S. C. Saxena suggested for inclusion of internship provisions in the PG program as it will open the placement opportunities for the PG students.

Members considered the recommendations of the BoS of the Department and approved the same.

3.1.4 Introduction of new Post Graduate Program M.Sc (Microbiology) in place of existing M.Sc (Bioinformatics) Program

M.Sc Programs in four disciplines i.e. M.Sc (Biotechnology), M.Sc (Bioinformatics), M.Sc (Physics) and M.Sc (Statistics) were introduced in the Academic Session 2018-19. Since introduction of M.Sc Programs, only M.Sc (Biotechnology) program is attracting reasonable number of admissions and there is no admission to other three M.Sc programs since its inception.

Considering the fact, Department of Biotechnology & Bioinformatics through its BoS held on 05.12.2020 recommended for introduction of M.Sc (Microbiology) Program with a sanctioned intake of 30 seats from Academic Session 2021-22 in place of existing M.Sc (Bioinformatics) program. The course structure of M.Sc (Microbiology) is as given in **Annexure** – 5.

Academic Council considered the recommendations and approved introduction of M.Sc (Microbiology) in place of M.Sc (Bioinformatics) from Academic Session 2021-22 with sanctioned intake of 30 seats to the program.

3.2 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING / INFORMATION TECHNOLOGY

3.2.1 Introduction of one more specialization in M.Tech (Computer Science & Engineering) with specialization in Data Science.

Department of Computer Sc. & Engineering & Information Technology is running M.Tech (Computer Sc. & Engg.) and M.Tech (Computer Sc. & Engg.) with specialization in (Information Security) with a sanctioned intake of 18 seats in each program. During last 3 years there are inadequate number of admissions to the M.Tech (CSE) program and no admissions to M.Tech (CSE) (IS) program.

Considering the number of admissions to the program, Department has proposed for introduction of one more specialization in M.Tech (Computer Sc. & Engg) with specialization in Data Science from the Academic Session 2021-22.

Academic Council considered the proposal of the Department and in principle approved introduction of one more specialization in M.Tech (Computer Sc. & Engg) with specialization in Data Science. However, the sanctioned intake of M.Tech (Computer Sc. & Engg.) Program including two specializations i.e. (Information



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Security) and (Data Science) shall remain as 18 seats only.

Since the item was not moved / recommended through the BoS of the Department, the same has to be moved / recommended through the Departmental BoS alongwith detailed Course Structure and Syllabi of the newly proposed M.Tech (CSE) with specialization in Data Science.

Prof. Lalit Kumar Awasthi, Director – NIT Jalandhar suggested introduction of specialization in Artificial Intelligence considering the scope of the program. Chairman, Academic Council informed the members that Department has already proposed for One Year Certificate Course in Artificial Intelligence and Machine Learning.

3.2.2 Introduction of One Year Certificate Course in Artificial Intelligence and Machine Learning.

Chairman, Academic Council informed the members about the letter received from Chairman, HPPERC (D.O. Letter No. HP-PERC11806 dated 05 October, 2020) wherein he has requested for initiating Skill Development Courses in the University for building additional capabilities of Diploma, UG & PG students so as to match with the industry needs.

Considering the request, Departments of Civil Engg., Biotechnology & Bioinformatics, Computer Sc. & Engg and Information Technology and Humanities & Social Sciences have offered various Skill Development Certificate Courses of different durations.

In Principle approval of the Academic Council was sought for introduction of such skill development certificate courses.

Prof. S. C. Saxena observed that the item had not been moved through the BoS of the Department and Entry level qualification, course contents, duration of the course etc. had yet to be worked out. He suggested the detailed proposal be submitted for approval by the Academic Council. Academic Council in principle approved the item.

Prof. Lalit Kumar Awasthi, Director – NIT Jalandhar suggested introduction of PG Diploma with certain specific credits and certificate alongwith credits earned for each course / component.

Academic Council considered the suggestion and directed to come up with detailed proposal in next Academic Council meeting.



3.2.3 Approval for Course Structure of Open Electives for B.Tech (Computer Sc. & Engineering) & B.Tech (Information Technology) Programs.

Department of Computer Sc. & Engineering and Information Technology through its BoS held on 15.12.2020 has recommended for approval of the Course Structure of Open Electives for students of other than CSE & IT.

Academic Council considered the recommendation of the Departmental BoS and approved the Course Structure of Open Electives as given in Annexure – 6.

3.2.4 Approval for detailed syllabus of Open Electives for B.Tech (Computer Sc. & Engg.) and B.Tech (Information Technology) Program.

Department of Computer Sc. & Engineering and Information Technology through its BoS held on 15.12.2020 has recommended for approval of the detailed syllabus of Open Electives for students of other than CSE & IT.

Academic Council considered the recommendation of the Departmental BoS and approved the detailed syllabus of Open Electives as given in **Annexure** – 7.

3.2.5 Approval for detailed syllabus of Proficiency Courses of B.Tech (Computer Sc. & Engg.) and B.Tech (Information Technology) Programs.

Department of Computer Sc. & Engineering and Information Technology through its BoS held on 15.12.2020 has recommended for approval of the detailed syllabus of Proficiency Courses of B.Tech (Computer Sc. & Engg.) and B.Tech (Information Technology).

Academic Council considered the recommendation of the Departmental BoS and approved the detailed syllabus of Proficiency Courses of B.Tech (Computer Sc. & Engg.) and B.Tech (Information Technology) as given in Annexure – 8.

3.2.6 Approval for change in detailed syllabus of Multimedia Development Lab – II. for B.Tech (CSE & IT)

Department of Computer Sc. & Engineering and Information Technology through its BoS held on 15.12.2020 has recommended for change in detailed syllabus of Multimedia Development Lab-II for B.Tech (CSE & IT).

Academic Council considered the recommendation of the Departmental BoS and approved the change in detailed syllabus of Multimedia Development Lab-II is as given in **Annexure** – 9.

Approval for change in the nomenclature of the Elective-I Courses of B.Tech (Information Technology)

Department of Computer Sc. & Engineering and Information Technology through its BoS held on 15.12.2020 has recommended for change in the nomenclature of the Elective – I Courses of B.Tech (Information Technology).

Academic Council considered the recommendation of the Departmental BoS and approved the change in the nomenclature of the Elective-I Courses of B.Tech (Information Technology) as under:-

Existing Nomenclature		Approved change in nomenclature
Computer Graphics		Computer Graphics and its Applications (20B1 WCI733)
Computer Graphics Lab	•	Computer Graphics and its Applications Lab (20B17CI773)

The detailed syllabus of the courses with changed nomenclature is given in Annexure - 10.

Approval for change in the title of the Project of B.Tech (Computer Sc. & 3.2.8 Engg.) and B.Tech (Information Technology) program for batches 2018 onwards.

Department of Computer Sc. & Engineering and Information Technology through its BoS held on 15.12.2020 has recommended for change in the title of the Project of B.Tech (Computer Sc. & Engg.) and B.Tech (Information Technology) programs for batches 2018 onwards.

Academic Council considered the recommendation of the Departmental BoS and approved the change in the title of the Project of B.Tech (CSE) and B.Tech (IT). The approved changes are as under:-

6th Semester Project – I to be stated as Minor Project 7th Semester Project – II to be stated as Major Project – I

8th Semester Project – III to be stated as Major Project – II





- 3.3 DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
 - 3.3.1 Introduction of New Undergraduate Program B.Tech in Electronics and Computer Engineering with an intake of 60 seats.

Department is running B.Tech (Electronics & Comm. Engg.) program which is not attracting sufficient number of admissions to the program and continuous downfall in number of admissions to the program is observed since last 3 to 4 years. Earlier the sanctioned intake of the program was 120 and considering the shortfall in the number of admissions to the program the sanctioned intake was reduced to 60 seats. This year also admitted strength was only 20 students against 60 sanctioned seats to the program.

Considering the above facts, the Department through its BoS held on 12.12.2020 recommended for introduction of B.Tech in Electronics & Computer Engineering with an intake of 60 seats to the program from the Academic Session – 2021-22.

Academic Council considered the recommendation of the Departmental BoS and approved introduction of new undergraduate program B.Tech in Electronics and Computer Engineering with sanctioned intake of 60 seats to the program in addition to existing B.Tech (Electronics & Comm. Engg.) from the Academic Session 2021-22. The detailed Course Structure of the program is as given in Annexure – 11.

Prof. S. C. Saxena suggested teaching of CSE related basic courses by involvement of existing faculty of ECE department having expertise of the subject. Faculty for newly introduced UG courses should be worked out and recruitment be done considering the course content of the UG program.

3.3.2 Approval for changes in the Course Structure of M.Tech (Electronics & Communication Engg.) Program.

Department of Electronics and Communication Engineering through its BoS held on 12.12.2020 has recommended for change in the Course Structure of M.Tech (Electronics & Comm. Engg.) program for the Academic Session – 2021-22.

Academic Council considered the recommendation of the Departmental BoS and approved the change in the Course Structure of M.Tech (Electronics & Comm.Engg.) program from the Academic Session – 2021-22. The approved Course Structure of the Program is as given in Annexure – 12.



3.3.3 Introduction of M.Tech (Electronics & Comm. Engg.) with specialisation in Internet of Things (IoT) in the existing M.Tech Program in Electronics & Comm. Engg.

Department of Electronics & Communication Engineering is running M.Tech (Electronics & Comm. Engg.) Program with a sanctioned intake of 18 seats. M.Tech in (Electronics & Comm. Engg.) is not attracting admissions to the program since last four academic sessions i.e. from 2017-18 onwards.

The Department through its BoS held on 12.12.2020 recommended introduction of M.Tech (Electronics & Comm. Engg.) with specialization in Internet of Things (IoT) from the Academic Session 2021-22.

Academic Council considered the recommendations of Departmental BoS and approved introduction of M.Tech (Electronics & Comm. Engg.) with specialization in Internet of Things (IoT) from the Academic Session 2021-22. However, the sanctioned intake of M.Tech (Electronics & Comm. Engg.) Program including specialization i.e. (Internet of Things) shall remain 18 seats only. The detailed Course Structure of M.Tech (Electronics & Comm. Engg.) with specialization in Internet of Things is given in Annexure – 13.

3.3.4 Approval of detailed syllabi of Proficiency Courses of B.Tech (Electronics & Comm. Engg.) Program.

Department of Electronics and Communication Engineering through its BoS held on 12.12.2020 has recommended for approval of detailed syllabi of Proficiency Courses of B.Tech (Electronics & Comm. Engg.) Program.

Academic Council considered the recommendation of the Departmental BoS and approved the detailed syllabi of Proficiency Courses of B.Tech (Electronics & Comm. Engg.) Program. The approved detailed syllabus of Proficiency Courses is given in Annexure – 14.

3.3.5 Approval for new Courses and Syllabus for PG Program.

Department of Electronics and Communication Engineering through its BoS held on 12.12.2020 has recommended for approval of new courses and syllabus for PG program.

Academic Council considered the recommendation of the Departmental BoS and approved new courses and syllabus for PG programs. The approved new courses and its syllabus is given in Annexure - 15.



3.4 DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

3.4.1 Introduction of BBA (Bachelor of Business Administration) Program from Academic Year 2021-22 with a sanctioned intake of 90 seats.

In order to provide multidisciplinary approach and diversity mandated by New Education Policy and to open a channel of admission for Business and Management courses for students who have done 10+2 and are interested in taking Management Degree as a career, Department of Humanities and Social Sciences has proposed for introduction of BBA (Bachelor of Business Administration Program) from the Academic Year 2021-22 with a sanctioned intake of 90 seats to the program.

Academic Council considered the proposal of the Department and in principle approved introduction of BBA (Bachelor of Business Administration) program from the Academic Session -2021-22. The detailed proposal of the department is given in Annexure - 16.

The Academic Council directed that the same must be moved / recommended through the Departmental BoS alongwith details of entry level qualification, mode of admission, selection criteria, no. of seats, Fee structure, Credit requirement, Course Structure and syllabi of the newly proposed BBA program.

APPROVAL OF THE MINUTES OF MEETING OF BOARD OF STUDIES (BoS) OF DEPARTMENTS

- 4.1 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Biotechnology / Bioinformatics held on 05.12.2020 as given in Annexure 17 and noted the contents.
- 4.2 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Computer Sc. & Engg. and Information Technology held on 15.12.2020 as given in Annexure 18 and noted the contents.
- 4.3 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Electronics & Comm. Engg. held on 12.12.2020 as given in Annexure 19 and noted the contents.





ITEM NO. 5 REPORTING ITEMS

The following Reporting Items were considered and approved by the Academic Council:-

5.1 To ratify admission status for the Academic Session 2020-21.

Chairman apprised the members about the admission status for the Academic Session 2020-21.

5.2 Implementation of NAD (National Academic Depository) through Digilocker.

Members were apprised about the implementation of NAD through Digilocker and status of uploaded documents. The format of Final Degree Parchement as per Digilocker is as given in Annexure - 20.

5.3 Printing of Degree Parchment

Chairman apprised the members about the status of printing of Degree Parchment. Total 461 degree parchments were printed and are ready for dispatch to the students. Degree Scroll is as given in **Annexure** – 21.

5.4 Document Retention Policy for the Alumni.

Members were apprised about the document retention policy for the alumni wherein some important documents for retention were identified and unwanted folios were discarded. The proceedings of the Committee constituted for segregation is as given in $\mathbf{Annexure} - 22$.

5.5 Classification of Files maintained at Registry.

Chairman apprised the members about the classification of files maintained at Registry considering the importance of the documents and retention period of the file. Details of files maintained by each individual staff along with approved classification are as given in Annexure - 23.

5.6 Repolishing of Medals of Merit.

Members were apprised about the repolishing of Medals of Merit which had deteriorated due to long storage.

5.7 Annual Report.

Members were apprised about the printing of Annual Report of JUIT for 2018-19 and 2019-20 and submission to Regulatory Body and Govt. of H.P. in compliance to JUIT Act.

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5.8 Placement Status 2020 passed out batch and 2021 passing out batch.

Members were apprised of the placement status for 2020 passed out batch and 2021 passing out batch. The placement status of 2020 passed out batch is as given in Annexure – 24 and for 2021 passing out batch is as given in Annexure – 25.

5.9 Teaching learning process for ODD Semester 2020.

Members were informed about the teaching learning process adopted for the ODD Semester 2020 separately for intermediate students and newly admitted students.

5.10 Change in nomenclature of two courses of Minor in Information Technology.

Members were apprised about the change in nomenclature of two courses of Minor in Information Technology. The approved changes are as under:-

Existing Nomenclature	Approved changes in Nomenclature
Software Engineering (3 Credits)	Software Engineering Practices (3 Credits)
Software Engineering Lab (2 Credits)	Software Engineering Practices Lab (2 Credits)

Approval of the Chairman, Academic Council is as given in Annexure - 26.

ITEM NO. 6 ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR

Sh. Sunil Sharma Ji, Executive Vice Chairman, JAL appreciated the efforts being made for improving the academic content and quality. He also suggested the following:-

- Certain valuable inputs had been forwarded by Academic Council members to enhance the academic standards and practices so as to improve University rankings. These inputs must be shared with other members too. The Chairman informed that he is compiling the inputs received from the members and will share the same.
- Need for restructuring of the Course Structure considering demand of the industry so as to make students more employable in the industry. Practical sessions to provide hands on experience should be incorporated in the course structure.
- 3. There is a need to develop skill development courses within the University considering the entrepreneurship needs of the region of Himachal, Chandigarh, Punjab and other adjoining areas so as to motivate the youth for self employment.





- 4. The alumni network should be capitalised for enhancing the perception of the University.
- Courses where sufficient number of admissions are not forthcoming should either be dropped or outflow of expenses on such courses to be minimized.
- 6. Introduction of MBA program can be evaluated for commencement.

Lt Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.) suggested for following:-

- 1. Need to explore admission of defence personnel in PG programs.
- 2. Placement initiatives should be carried out by nominating a dedicated team for such purpose.
- 3. Efforts for placement drive under University Entry Scheme should be made to place the students in Defence Services Technical Arms / Services.

There being no other points, meeting ended with a vote of thanks to the Chair.

Wars'

Maj Gen Rakesh Bassi, SM (Retd) Registrar & Non-Member Secretary

Approved

Prof. Vinod Kumar Vice Chancellor Chairman





Preamble to proposal for M.Sc Microbiology Course and Course Structure

The Department has well equipped labs with all basic (microbiology, molecular biology, biochemistry etc) along with High-end lab equipments including HPLC, DNA sequencer etc. Faculty with PhDs and Post-Doctoral from reputed Institute and University across the globe provides strong academic strength for teaching as well as research in the area of basic and applied microbiology.

The Department already offers an M.Sc Biotechnology Program, with DBT sponsored seats, further re-assuring the Departmental strengths in running a Microbiology Post - Graduate Program. A large number of queries with the Admission Cell, and at the Departmental level, along with multiple job opportunities for M.Sc Microbiology passed students both in academia and corporate world justifies for such a program to be offered from the next session. M.Sc. approved list of courses Microbiology is also included in the (https://www.ugc.ac.in/oldpdf/modelcurriculum/microbiology.pdf). No add-on faculty, lab staff, lab space or facilities would be required, for the program to run.

Proposed Course Structure - Next Page

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<u>Proposed M. Sc. Microbiology Course Curriculum (2021-2023)</u> I st SEMESTER (MBI)

S.No.	New Code	Subject	L-T-P	Credits
1		General Microbiology and Bacteriology MBI	3-0-0	3
2		Basics of Mathematics and Statistics MBI	2-0-0	2
3		Biochemistry - MBI	3-0-0	3
4		Molecular Biology MBI	3-0-0	3
5		Virology MBI	2-0-0	2
6		Fungal Biology MBI	2-0-0	2
7		General Microbiology and Bacteriology Lab MBI	0-0-4	2
8		Biochemistry Lab MBI	0-0-2	1
9		Molecular Biology Lab MBI	0-0-4	2
10		GLP and Bioinstrumentation Lab MBI	0-0-2	1
		Total	27	21

II nd SEMESTER (MRID

S.No.	New Code	Subject	L-T-P	Credits
1		Immunology and Immunotechnology- MBII	3-0-0	3
2		Enzymes and Bioprocess Technology- MBII	3-0-0	3
3		Microbial Genetics and Physiology- MBII	3-0-0	3
4		Recombinant DNA Technology- MBII	3-0-0	3
5		Bioinformatics - MBII	2-0-0	2
6		Immunology and Immunotechnology Lab- MBII	0-0-2	1
7		Enzymes and Bioprocess Technology Lab- MBII	0-0-2	1
8		Basic Bioinformatics Lab- MBII	0-0-2	1
9		Recombinant DNA Technology lab- MBII	0-0-4	2
10		Masters Research Review seminar- MBII	0-0-2	1
		Total	26	20

III rd SEMESTER (MBIII)

S.No.	Code	Subject	L-T-P	Credits
1		Environmental Microbiology MBIII	3-0-0	3
2		Diagnostic Microbiology and vaccines MBIII	3-0-0	3
3		Elective-I	3-0-0	3
4		Master's Dissertation &Thesis Part-I	0-0-16	8
		Total	25	17

IV th SEMESTER (MRIV)

S. No.	New Code	Subject	L-T-P	Credits
1		Food & Dairy Microbiology MBIV	3-0-0	3
2		Plant and Agricultural Microbiology MBIV	3-0-0	3
3		Elective-II	3-0-0	3
4		Master's Research Thesis Part-II	0-0-16	8
		Total	25	17

Total Credits: 75

		ELECTIVE - 1		
S. No.	New Code	Subject	L-T-P	Credits
1		IPR, Biosafety and Bioethics MBIII	3-0-0	3
2		Biosensors:Principles & Applications MBIII	3-0-0	3
3		Computational Systems Biology MBIII	3-0-0	3
4	Vitalian Selimon	Protein Engineering MBIII	3-0-0	3

ELECTIVE - 2								
S. No.	New Code	Subject	L-T-P	Credits				
1		Microbial Toxicology MBIV	3-0-0	3				
2		Experimental models in microbial Research MBIV	3-0-0	3				
3		Nano-Biotechnology MBIV	3-0-0	3				
4		QC Analysis and Management MBIV	3-0-0	3				

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, SOLAN

COURSE CURRICULUM OF DEPARTMENT CSE&IT - 2018 Batch (160 CREDITS)

LIST OF OPEN ELECTIVES

S. No.	Category Code	Semester	Name of the Subjects		Cours Hour		Credits	Total Hours
				L	T	P		
		O	PEN ELECTIVE II (7th Semeste	er)				
1	OE2	7	Introduction to C++ Programming	2	0	0	2	2
2	OE2	7	Object-Oriented Technologies using Java	2	0	0	2	2
3	OE2	7	Software Testing Methodologies	2	0	0	2	2
4	OE2	7	Introduction to C++ Programming Lab	0	0	2	1	2
5	OE2	7	Object-Oriented Technologies using Java Lab	0	0	2	1	2
6	OE2	7	Software Testing Methodologies Lab	0	0	2	1	2
		O	PEN ELECTIVE III (7th Semest	er)				
1	OE3	7	ARM based Embedded System Design	3	0	0	3	3
2	OE3	7	Software Defined Network	3	0	0	3	3
3	OE3	7	Introduction to Statistical learning	3	0	0	3	3
		O	PEN ELECTIVE IV (8th Semest	er)				
1	OE4	8	Principles of Distributed Database Systems	3	0	0	3	3
2	OE4	8	Foundations of Blockchain	3	0	0	3	3
3	OE4	8	Computational Biology	3	0	0	3	3
		O	PEN ELECTIVE V (8th Semeste	er)				
1	OE5	8	Wireless Sensor Networks: Protocols and Applications	3	0	0	3	3
2	OE5	8	Service Oriented Architecture	3	0	0	3	3
3	OE5	8	Multimedia Systems and Applications	3	0	0	3	3

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M-Tech in Electronics and Communication Engineering With Specialization in Internet of Things (IoT)

	SEMEST	ER - I					
S. No.	Name of the Subjects	Co	urse Ho	ours		Total	Credits
		C/E	L	T	P		
1	Embedded Systems and Applications	C	3	0	0	3	3
2	Sensor and Smart Instrumentation	C	3	0	0	3	3
3	Object Oriented Programming	C ·	3	0	0	3	3
4	DEPARTMENTAL ELECTIVE - I	Е	3	0	0	3	3
5	DEPARTMENTAL ELECTIVE - II	Е	3	0	0	3	3
6	DEPARTMENTAL ELECTIVE - III	Е	3	0	0	3	3
7	LAB - I	С	0	0	6	3	3
					Total	21	21
	SEMEST	ER - II					
S.No.	Subject Names	Co	urse Ho	ours		Total	Credits
		C/E	L	T	P		
1	Digital System design using verilog HDL	C	3	0	0	3	3
2	Artificial Intelligence and Expert Systems	C	3	0	0	3	3
3	Network Security Protocols	C	3	0	0	3	3
4	DEPARTMENTAL ELECTIVE - IV	Е	3	0	0	3	3
5	DEPARTMENTAL ELECTIVE - V	E	3	0	0	3	3
6	DEPARTMENTAL ELECTIVE - VI	Е	3	0	0	3	3
7	LAB - II	C	0	0	6	3	3
					Total	21	21
	SEMESTI	ER - III					
S. No.	Name of the Subjects	Co	urse Ho	ours		Total	Credits
		C/E	L	T	P		
1	Seminar - I	C	0	0	6	6	3
2	Dissertation Part - I	C	0	0	28	28	14
					Total	34	17
	SEMESTI	ER - IV					
S.No.	Subject Names	Co	urse Ho	ours		Total	Credits
		C/E	L	T	P		
1	Seminar - II	С	0	0	6	6	3
2	Dissertation Part - II	С	0	0	28	28	14
					Total	34	17





List of Departmental Electives for Specialization in IoT

Elective - I

IoT Architecture and Protocols

Wireless Technologies for IoT

Elective - II

Industrial Automation and IIoT

Intelligent Robotics and Shared Autonomy

Elective - III

IoT Signal Processing

Data Acquisition and Intelligent signal Processing

Elective - IV

Image Sensing and Realtime Processing

Medical Image Processing and Applications

Elective - V

Antennas for IoT

RF technology for 5G and IoT

Elective - VI

Applied Machine Learning for IoT

Smart Internet of Things

Following are the course curriculum outline for proposed 6 proficiency courses:

1. Proficiency in Embedded Systems:

	JA	YPEE UNIVERSITY OF INFORMATION TECHNO	LO	GY,	SOL	AN	
	COURS	SE CURRICULUM FOR PROFICIENCY PROGRAM	IME	(16	0 Cl	REDITS)	WEEK.
		PROFICIENCY IN EMBEDDED SYSTEM	M .				
S. Semester Name of the Subje		Name of the Subjects	Course Hours			Credits	Total Hours
No.			L	Т	ГР		
1	5	Switching Theory and Logic Design	3	0	0	3	3
2	6	Embedded system design	3	0	0	3	3
3	7	FPGA based Instrumentation System Design	3	0	0	3	3
4	7	Real Time Operating System	3	0	0	3	3
5	8	Digital CMOS ICs	3	0	0	3	3
6	8	CAD Algorithms for Synthesis of Digital Systems	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

2. Proficiency in Communication Technology:

		YPEE UNIVERSITY OF INFORMATION TECHNO		_			
	COURS	SE CURRICULUM FOR PROFICIENCY PROGRAM				REDITS)	
		PROFICIENCY IN COMMUNICATION TECHN	OL	OG!	Y		
s.	Semester	Name of the Subjects		Cou Hou	AND SOLD	Credits	Total
No.			L	T	P		Hours
1	5	Communication Engineering	3	0	0	3	3
2	6	Optical Communication Systems	3	0	0	3	3
3	7	Next Generation Communication Systems	3	0	0	3	3
4	7	OFDM and Applications	3	0	0	3	3
5	8	Cognitive Radio Networks	3	0	0	3	3
6	8	Wireless Communication and Mobile Networks	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

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3. Proficiency in Machine Learning:

		YPEE UNIVERSITY OF INFORMATION TECH					
	COURS	E CURRICULUM FOR PROFICIENCY PROGR		(16	0 CI	REDITS)	
		PROFICIENCY IN MACHINE LEAR	NING	N. I			
S. Samestar		Semester Name of the Subjects		Cou Hot	0.000000	Credits	Total
No.	Bemester		L	T	P		Hours
1	5	Introduction to Machine Learning	3	0	0	3	3
2	6	Machine Learning for Data Analysis	3	0	0	3	3
3	7	Pattern Analysis in Machine Intelligence	3	0	0	3	3
4	7	Optimisation Techniques	3	0	0	3	3
5	8	Artificial Intelligence Techniques	3	0	0	3	3
6	8	Soft Computing Techniques	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

4. Proficiency in Signal Processing:

		YPEE UNIVERSITY OF INFORMATION TECH					
	COURS	SE CURRICULUM FOR PROFICIENCY PROGR	0.5-3 1-10 1-0-15	(16	0 Cl	REDITS)	
		PROFICIENCY IN SIGNAL PROCESS	SING				
			9169	ours Iour	3000		Total
S. No.	Semester	Name of the Subjects	L	T	P	Credits	Hours
1	5	Statistical Signal Processing	3	0	0	3	3
2	6	Digital Filter Design and Applications	3	0	0	3	3
3	7	Time Frequency Analysis and Applications	3	0	0	3	3
4	7	Wavelets and Applications	3	0	0	3	3
5	8	Adaptive Signal Processing and Machine Intelligence	3	0	0	3	3
6	8	Bioelectronic Sensors	3	0	0	3	3

* Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

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5. Proficiency in Digital Image Processing:

Skill		JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY	2, S	OLA	N	FC)	
	CO	URSE CURRICULUM FOR PROFICIENCY PROGRAMME (160	CKI	SDI	(8)	
Halo		PROFICIENCY IN DIGITAL IMAGE PROCESSING					
S.	Semester Name of the Subjects			Cou Hou	351132	Credits	Total Hours
No.	Semester	Ttaine of the Subjects	L	T	P		Hours
1	5	Fundamentals of Digital Image Processing and Applications	3	0	0	3	3
2	6	Computer Vision	3	0	0	3	3
3	7	Forensic Image Processing	3	0	0	3	3
4	7	Medical Image processing	3	0	0	3	3
5	8	Applied Medical Signal Processing	3	0	0	3	3
6	8	Remote Sensing and Satellite Image Processing	3	0	0	3	3

^{*} Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

6. Proficiency in Microwave and RF Design:

		JAYPEE UNIVERSITY OF INFORMATION TECHNOL	LOGY	, so	LAI	N TOO'	
	COU	RSE CURRICULUM FOR PROFICIENCY PROGRAM	ME (1	60 C	RE	DITS)	
		PROFICIENCY IN MICROWAVE AND RF DE					
s.	C	Name of the Subjects	Course Hours			Credits	Total Hours
No.	Semester		L	Т	P		Hours
1	5	RF Integrated Circuits	3	0	0	3	3
2	6	Fundamentals of Computational Electromagnetics	3	0	0	3	3
3	7	Microwave Theory and Techniques	3	0	0	3	3
4	7	Antenna and Wave Propagation	3	0	0	3	3
5	8	Design of Modern Antennas	3	0	0	3	3
6	8	RF Engineering	3	0	0	3	3

* Elective courses from MOOC or NPTEL may be chosen by student (maximum 6 credits) in case course content matches with subjects mentioned above.

Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS meeting held on 16.07.2021

A meeting of The Board of Studies of the Department of Biotechnology and Bioinformatics was held on 16.07.2021 at 11:00 AM online via Google meet.

Following BoS Members and attendees were present.

1	Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics,	المعتبين
	JUIT Waknaghat	*CAP
2	Dr. Anil Kant Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member Secretary BoS)	Auto
3	Dr TC Bhalla Ex, Professor Emeritus Department of Biotechnology HPU Shimla (External Member BoS)	Bros.
5	Dr Vinay Bhardwaj, Head Division of Crop Improvement, CPRI Shimla	Bless
6	Dr Tirtha Raj Singh Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	Bojh
7		
8	Dr.Jata Shankar, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as coordinator M. Tech. Program)	Jata Shankar
9	Dr. Saurabh Bansal, Assistant Professor (Senior Grade), Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	Mansal
10	Dr Rahul Shrivastava, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as coordinator M Sc Microbiology)	Anyhugh
11	Head, Electronics and Communication Engineering, JUIT Waknaghat, (Member BoS)	faintem

Dr Anil Kant presented the welcome address. Professor Sudhir Kumar also welcomed the members. Dr Anil Kant presented the agenda items, which were later elaborated by program coordinators one by one for discussion and following were the item wise recommendations.

1. To ratify the contents of "Biology bridge course" for Odd Semester 2021 first year students. This is in order to cover the contents of Biology which were deleted by CBSE and State Boards for 10+2 class students due to Covid-19 pandemic

Deliberations:

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Prof Sudhir presented the details of the agenda item, informing that bridge course content has been discussed at Departmental level, and with the Head of Department of Jaypee sister Universities. Dr Vinay Bhardwaj ascertained that it is an agreeable step, and is in favour of the students, whose learning is affected in the Covid pandemic. Prof. TC Bhalla and all the members agreed to adopt the bridge course should be accepted as proposed

Resolution: Bridge course content approved to be adopted as proposed

2 To allocate the approved elective courses to odd and even semesters for M. Tech Biotechnology with specializations in Industrial Biotechnology and Medical Biotechnology.

Deliberations: Dr Jata Shankar presented the proposal, Members participated in discussion and all of the members agreed to adopt the proposal as presented.

Resolution:

3 To discuss and approve the 1st year syllabus for the courses of M.Sc. Microbiology.

Deliberations: Dr Rahul Shrivastava presented the proposal. Prof Sudhir said that syllabus of the common courses would be prepared in line with DBT remodelled syllabi. Members agreed to the proposal to be accepted.

Resolution: The syllabi of MSc Microbiology first year was accepted to be approved as per information provided by Dr Rahul Srivastava and Prof Sudhir Kumar.

Any other item with the permission of the Chair: The following item was proposed later and now available for all members for their information and suggestions.

The Chairman of BoS proposed to put forth an agenda item regarding modification in the existing publication policy of restricted authorship for PhD scholars. As per existing publication rules; scholars are allowed to publish their research papers with guide and coguides only. This policy certainly has advantages to stop gifted authorship, and unnecessary outsourcing of reachwok. However;

- Sometimes scholars and guides require genuine contribution from other (Intra and Inter Departmental) faculty members of JUIT. But in view of restriction of authorship both sides become hesitant to collaborate.
- At times we need the contribution of national / foeign collaborators in doing certain experiments and scholars also seek their intellectual input to solve their research problems.
- Exiting joint publications with collaborators is foremost requirement to submit the joint research projects for financial supports

• Existing clause of restricted authorship may also hamper the steps towards internationalization of JUIT.

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So we seek modifications in the proposed publication policy of authorship of publication for PhD scholars.

Dr Anil Kant Associate Professor Member Secretary, BoS Department of Biotechnology

JUIT Waknaghat

-

Prof. Sudhir Kumar Chairman BoS, HOD Department of Biotechnology, JUIT Waknaghat

Assistant Registrar (Academics)

Jaypee University of Information Technology Waknaghat, Distt. Solan (H.P.)

DEPARTMENT OF CIVIL ENGINEERING

MINUTES OF BOS MEETING HELD ON JULY 19th, 2021

Board of Studies meeting was held on 19thJuly 2021 in online mode through Video call link: https://meet.google.com/dhj-bngx-bjx from 11.00 a.m. The following were present:

Prof. Ashish Kumar, Chairman

Prof. S.K. Singh (PEC Chandigarh, External member)

Dr. Yashpal Vashsishtha (Executive engineer, HPPWD Kangra, H. P., External member)

Dr. Ashok Kumar Gupta, Professor, Member

Prof. Samir Dev Gupta (HoD, CSE)

Dr.Rajiv Kumar, (HoD ECE)

Dr. Neelkanth, Nominee (HoD, Mathematics)

Dr. Anil Kant, Nominee (HoD BT & BI)

Dr. Saurabh Rawat, Member Secretary

Dr. Tanmay Gupta, Special Invitee

Dr. Amardeep, Special Invitee

Dr. Chandrapal Gautam, Special Invitee

Agenda 1:Detailed syllabus of open electives to be added in B. Tech.

After detailed deliberations, Prof. Samir Dev Gupta suggested the omission of pre – requisite for open elective courses for B. Tech. The revised Agenda I was approved unanimously as attached under Annexure-I.

Agenda 2: Enforcement of norms for Consultancy work

Prof. Ashish Kumar suggested the norms of Consultancy work to be enforced as taken in accordance with JUET, GUNA where the same norms have been approved for distribution of consultancy. After detailed deliberations, Prof. Samir Dev Gupta recommended further

discussion with Chairman, Academic Council. However, the norms for consultancy distribution were approvedunanimously as attached under ANNEXURE – II.

Agenda 3: IntroducingPart-time M. Tech. Programme

Prof. Ashish Kumar suggested introduction of part – time M. Tech. programme in [Structural Engineering (SE), Construction Management (CM), Environmental Engineering (EE)] to match the demanding need of part – time masters programme in the current scenario. He also recommended for acquiring this practise in accordance to premium institutes like IITs/NITs/CFTIs. Prof. Ashok Kumar Gupta also empathized on the need of running the part – time M. Tech. as per requests he has been regularly receiving from people working in the field such as Pollution Control Board, HP. After discussion, the members suggested the following:

[1]. Minimum Qualification:

- (a) A valid B.Tech. degree in Civil Engineering or Civil Engineering & Infrastructure Engineering or or AMIE with minimum 60% for Part Time M. Tech in Structural Engineering (SE) and Construction Management (CM).
- (b) A valid B.Tech. degree in Civil Engineering/Civil Engineering & Infrastructure Engineering/Agriculture Engineering/ChemicalEngineering or AMIE or M.Sc. in Environmental Science/Chemistry/Agriculture with minimum 60% for Part – Time M. Tech in Environmental Engineering (EE).
- [2]. Revision of attendance criteria to 80% from 75% as proposed.
- [3]. Preparation of entrance exam in such a manner to assess the eligibility and suitability of the candidate for the related M. Tech. program. A common exam for entrance in Part Time M. Tech in Structural Engineering (SE) and Construction Management (CM). For Part Time M. Tech in Environmental Engineering (EE), the entrance examination to be framed as per the various background of the candidates appearing.

After a detailed deliberation and valuable feedback and suggestion from both the external and internal members, Agenda 3 was approved as attached under ANNEXURE – III.

Agenda 4:Introducing New B. Tech program in Civil and Infrastructure Engineering

Prof. Ashish Kumar suggested the introduction of a new B. Tech. program in Civil and Infrastructure Engineering as decided by G-2. He informed that the program has been framed as per the guidelines of AICTE, satisfying the credits norms for courses from Basic

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Science, Humanities and Social Sciences including Management courses, Engineering Science, Professional core courses, Professional Elective and Open courses, Project work, Seminar and Internship with maximum limit 160 credits for the program. After a detailed deliberation, Prof. Ashok Kumar Gupta suggested inclusion of core subjects from fields of Mechanical Engineering and Electrical Engineering in the program course syllabus so as to produce engineers with a blended engineering knowledge as primarily required for Hydropower projects. The revision was agreed unanimously, and Agenda IV was approved unanimously as attached under ANNEXURE - IV.

Agenda 5:Use of open-source software in different relevant undergrad subjects

Prof. Ashish Kumarinformed about the addition of open source softwares to undergraduate subjects such as Mechanics of solid, Finite Element Method, Structural Dynamics, Advanced Structural Analysisas per the suggestion from G-2. He also briefed about the importance of adding these open source softwares to match the present employment requirements of the market and also its significance in teaching of the course in online teaching mode. After detailed deliberation, the members suggested the following:

Addition of open – source softwares related to Surveying and Advance Surveying Courses, Fluid Mechanics, River Engineering, Environmental Engineering and BIM for Construction Management courses. The agenda for addition of all these open - source softwares were approved by all the members and are given at ANNEXURE – V.

Agenda 6:M.Tech. Program in Highway Engineering by Civil Engineering Department

Prof. Ashish Kumarproposed the introduction of a new M.Tech. Program in Highway Engineering by Department of Civil Engineering. The vision and mission of M. Tech. in Highway Engineering regarding the present recruitment scenario was also described by him. After detailed deliberation, the members suggested the following:

- [1]. Inclusion of elective course on Highway Bridges and Flyovers.
- [2]. Addition of open source softwares for core courses.

The suggested revisions along with the proposed curricula and elective courses were approved unanimously as attached under ANNEXURE - VI.

Agenda 7: Syllabus of proficiency Programme in Civil Engineering

Prof. Ashish Kumarsuggested the syllabus of Proficiency Programme in Civil Engineering. Prof. S. K. Singh suggested addition of flexible retaining structure and Vibroflotation methods in the syllabus for proficiency in Geotechniques. The syllabus wasapproved by all the members and is given at **Annexure VII**.

Assistant Registrar (Academics)
Jaypee University of Information Technology
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DEPARTMENT OF CIVIL ENGINEERING, JUIT

ATTENDANCE SHEET

Board of Studies Meeting, July19, 2021

Venue: Online through Google Meet (Video call link: https://meet.google.com/dhj-bngx-bjx) from 11:00 AM onwards

S. No.	Members	Signature
1.	Prof. (Dr.) Ashish Kumar, Chairman	Achielus
2.	Prof. S. K. Singh, PEC Chandigarh, Member	garem
3.	Dr. Yeshpal Vashishtha, Executive engineer, HPPWD Kangra, H. P., Member	You
4.	Ms. Surabhi Sharma, Assistant Professor, J. N. Government Engineering College, Sundernagar, Mandi, H. P., Member	In absentia
5.	Prof. (Dr.) Samir Dev Gupta, HOD, Dept. of CSE & IT, Member	Agr
6.	Dr. Rajiv Kumar, HOD, Dept. of ECE, Member	Jaintour
7.	Prof. (Dr.) P.B. Barman, HOD, Dept. of Physics & Material Science, Member	in absentia
8.	Prof. (Dr.) Sudhir Kumar, HOD, Dept. of BT&BI, Member	Author
9.	Prof. (Dr.) Karanjeet Singh, HOD, Dept. of Mathematics, Member	N. 11001
10.	Dr. Anupriya Kaur, HOD, Dept. of HSS, Member	John HOD HES DEPT
11.	Prof. Ashok Kumar Gupta, Professor, Member	A.
12.	Dr. Saurabh Rawat, Member Secretary	Janvary
13.	Dr. Tanmay Gupta, Special Invitee, Member	Tang
14.	Dr. Amardeep, Special Invitee, Member	Amerilast.
15.	Mr. Chandrapal Gautam, Special Invitee, Member	Chardra Pul
	Assistant Registrar (Academics) Jaypee University of Information Technology Waknaghat Distr. Solan (H.P.)	IQAC REPRESENTATION OF THE PROPERTY OF THE PRO

Waknaghat, Distt. Solan (H.P.)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Minutes of the meeting of Board of Studies - FEBRUARY 6, 2021

A meeting of the BoS members was held on February 6, 2021 at 11:00 a.m. on Google meet platform. The following were present:

1. Dr. Anupriya Kaur, HoD HSS	Chairperson
2. Dr. Purva Kansal, Professor Punjab University	Member
3. Mr. Balkar Singh, AGM, PEDA Chandigarh	Member
4. Prof. Mukesh Barua, IIT Roorkee	Member
5. Prof. Yashwant Kumar, Professor HPU	Member
6. Ms. Ana Aggarwal, Regional Business manager GSK	Member
7. Dr. Amit Srivastava, JUIT Waknaghat	Member
8. Dr. Tanu Sharma, JUIT Waknaghat	Member
9. Prof. Ashish Kumar, CE, JUIT Waknaghat	Member
10. Dr. Anil Kant, BI/BT JUIT Waknaghat	Representative BI/BT
11. Dr. Neena Jindal, JUIT Waknaghat	Coordinator

Agenda details:

- I. Introduction of three year BBA program
- II. Change of nomenclature from Department of Humanities and Social Sciences to Department of Humanities and Management
- III. Course structure of BBA program
- IV. Admission policy for intake to BBA program
- V. Course outline for new elective courses for B. Tech program (160)credits
 - Service Design and Marketing
 - Leadership Through Literature and Cinema
- VI. Course outline for course work -PhD
 - Investment Analysis

Handouts/Documentation provided at the time of meeting

- Course Structure Bachelor of Business Administration
- Course Outline Service Design and Marketing
- Course Outline Leadership through Literature and Cinema
- Course outline Investment Analysis

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Dr Anupriya Kaur Chairperson welcomed all BoS members. In her opening remarks she stated the role and contribution of the Department so far and the plan for future. Some background factors such as the key drivers to introduction of BBA program and the likely profile of prospective students was presented. Following which the agenda items were addressed.

Item I: Introduction of three year BBA program

As proposed was approved

Item II: Change of nomenclature from Department of Humanities and Social Sciences to Department of Humanities and Management

As proposed was approved

Item III: Course structure of BBA program

Based on the discussion among members the following changes are made to the proposed course structure

- 1. Nomenclature of the course Fundamentals of Management changed to Principles and practices of Management
- 2. LTP structure of the course IT tools for Business changed to 0-0-4 (2 credits)

Rest Approved.

Final course structure (Annexure 1)

Item IV: Admission policy for intake to BBA program

As proposed was approved

Item V. Course outline for new elective courses for B. Tech program (160)c redits

As proposed was approved

- Service Design and Marketing (Annexure 2)
- Leadership Through Literature and Cinema (Annexure 3)

Item VI: Course outline for course work -PhD

As proposed was approved

Investment Analysis (Annexure 4)

Amidst the discussion which ensued amongst the members some aspects are highlighted below:

- 1. Prof Mukesh Barua suggested that specialisation such as in operation research etc. may be offered. Dr Anupriya acknowledged the importance of including contemporary fields such as Business Analytics, Tourism/Digital marketing, Financial analytics etc and suggested inclusion of the same in the course structure following the experience, feedback and response from the initial set of students.
- 2. Prof. Yashwant Kumar suggested that training on communication skills is crucial and should be integrated as much as possible amidst the pedagogy of B. Tech scheme of courses and BBA program. The same is in practice and further avenues would be explored to strengthen the same.
- 3. An orientation on report writing (further to Business communication course in sem 1) may be provided at the end of sem 4 preceding the summer internship facilitating effective report writing.

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Dr. Neena Jindal – Assistant Professor

Jan Hoo Hos DEPT

Dr Anupriya Kaur - Associate Professor & Head

Composition of BOARD OF STUDIES: Dept of CSE and IT

Appendix-XVII to Para 11.1 of University Grants Commission, Performa for submission of information by state private uriversities, Norms and Standards, Information about the composition of the statutory bodies of the University in that the Board of Studies of the Department of CSE and IT at JUIT Waknaghat is composed as under.

Prof. Dr. Vinod Kumar

Approved by

Prof. D. Samir Dev Gupta

Prog. Confemies) and HOD CSE & IT

Prof. 120 Dec.
Jaypee University of Information Technology Assistant Registrar (Academics) Wakneghet, Distt. Solan (H.P.)



Department of Computer Science & Engineering and Information Technology, Waknaghat

Minutes of the Meeting of BoS, July 2021

Minutes of meeting of Board of Studies in the Department of Computer Science & Engineering and Information Technology was held online through "Google Meet" on 24th July 2021, 11:00 a.m. at Jaypee University of Information Technology, Waknaghat. The following resolutions were passed in the meeting.

RESOLUTIONS:

- 1) It was resolved to approve the minutes of the last meeting of BoS held on December 15, 2020.
- 2) It was pointed out by Prof. Manu Sood and Prof. Himanshu Aggarwal as specified in *Agenda* 2, that the MS programs are not approved by UGC and AICTE. So, after a long discussion it is decided to rework out this course again that will meet with the exiting guidelines of the regulator(s).
- 3) It was resolved to rename the course "Discrete Computational Mathematics" of 3 credits (3-0-0) to "Discrete Mathematics" of 3 credits (3-0-0) for B. Tech CSE 4th semester 160 credits curriculum.
- 4) It was resolved to rename the course "Discrete Computational Mathematics" of 3 credits (3-0-0) to "Discrete Mathematics" of 3 credits (3-0-0) for B. Tech IT 4th semester 160 credits curriculum.
- 5) It was resolved to approve the course structure for M. Tech in Computer Science & Engineering (with specialization in Data Science) program with some modifications, as suggested by the external members.
- 6) It was resolved to approve the course curriculum of M. Tech in Computer Science & Engineering (with specialization in Data Science) program with some modifications, as suggested by the external members.



- 7) It was resolved to approve the course structure of One Year **Skill** Certification Course in "Artificial Intelligence (AI) and Machine Learning (ML)".
- 8) It was resolved to approve the course curriculum of One Year Skill Certification Course in "Artificial Intelligence and Machine Learning".
- 9) It was resolved to approve the "Development of Internet of Things (IoT) Research Lab"

Suggestions from the External Members:

- 10) It was suggested by Prof. Himanshu to combine two elective courses of Mathematics for Semester I and Semester II into a single course. The suggestion was accepted and approved in the meeting.
- 11) It was suggested by Prof. Manu Sood to remove two elective courses (Web Application Security and Advanced Mobile and Distributed Computing) and replace them with the courses that are more justifiable with the Data Science technology. Considering his suggestion, the above two courses have been replaced with "Knowledge-Based AI: Cognitive Systems" and "Reinforcement Learning", respectively. It was also suggested by him that the course "Big Data Analytics" should be included as a core course instead of an elective course. He also emphasized on including the Artificial Intelligence course in this M. Tech program. The suggestions were accepted and approved in the BoS meeting. All the suggestions have been incorporated in the revised course structure as well as in the course description attached at Annexure II and Annexure III, respectively.

Table I summarizes the modifications made in M. Tech CSE program with specialization in Data Science

Table I: Summary of the modifications made

S No	Modifications				
1	The departmental electives are realigned as per recommendations of the experts				
2	Two elective courses of Mathematics have been combined into a single course that will be offered in Semester I.				
3	Two courses "Web Application Security" and "Advanced Mobile and Distributed Computing" have been dropped. "Knowledge-Based AI: Cognitive Systems" and "Reinforcement Learning" have been introduced in place of above two dropped courses, respectively.				

4	"Big data Analytics" is introduced as one of the core courses in Semester II, and "Advanced Computational Techniques" has been introduced in as an Elective in the bucket DE-IV.				
5	"Computational Data Analysis" has been replaced with "Introduction to Statistical Learning" in elective bucket DE-III				
6	"Pattern Recognition" course has been replaced with "Artificial Intelligence Techniques".				

12) It was suggested by Mr Debasis Behura to include a topics based on "Bias in AI" and "The Current Challenges and Issues in Ethics" for One Year Certification Course in "Artificial Intelligence and Machine Learning". The suggestions were accepted and approved in the BoS meeting. The same has been incorporated in the course description attached at Annexure-V.

Prof. Dr. Samir Dev Gupta (HoD, CSE/IT)

MEMBERS OF BOARD OF STUDIES (JULY 2021)

Department of Computer Science & Engineering and Information Technology, Waknaghat

- 1. Chairperson: Prof. Dr. Samir Dev Gupta, HoD, CSE/IT Dept.
- 2. Dean Academics & Research: Prof. Dr. Ashok Kumar Gupta

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3. Members:

i	Dr. Vivek Seghal	Vivil Setart
ii	Dr. P. K. Gupta	Eth Ch Chang
iii	Dr. Hemraj Saini	- Article - Control - Cont
iv	Dr. Ravindra Bhatt	Jania Market
v	Dr. Pardeep Kumar	The modern by Hirrary conse
vi	Dr. Rajni Mohana	Rm
vii	Dr. Amol Vasudeva	1 d Car
viii	Dr. Yugal Kumar	gugne Enta:
ix	Dr. Ekta Gandotra	Enta:
x	Dr. Rajinder Singh Sandhu	A-5-7-43
хi	Dr. Hari Singh	the site
xii	Dr. Jagpreet Sidhu	156 SUN

4. Nominees from the departments of Physics, Civil, ECE, Mathematics, BT/BI, and Humanities and Social Sciences:

Dr. P B Burman, Professor & HoD, Dept of Physics & Material Science, JUITW

	Dr. Ashish Kumar, Professor & HoD, Dept of Civil Engineering,	
ii	JUITW	- Herperion.
iii	Dr. Rajiv Kumar, Associate Professor&HoD, Dept of ECE, JUITW	Pairehauer
iv	Dr. Neel Kanth, Assistant Professor (Senior Grade), Dept of Mathematics, JUITW	Nedkant
v	Dr. Anil Kant, Associate Professor, Dept of BT and BI, JUITW	Author
vi	Dr. Anupriya Kaur, Associate Professor&HoD, Dept of HSS, JUITW	Jones

5. External Experts:

i	Dr Manu Sood, Professor, HP University, Shimla	m/s francis
ii	Dr. Himanshu Aggarwal, Professor, Punjabi University, Patiala	Jimandun -
iii	Dr. Seema Bawa, Professor, Thapar Institute of Engineering & Technology, Patiala	ABSENT

6. Representative from industry/corporate sector

ì	Mr. Debasis Behura	
ii	Sh. Yogesh Khurana, Data Analyst UBER, Hyderabad	ABSENT

7. Postgraduate Meritorious Alumnus:

Dr. Rajkumar Tekchandani, Asst Professor, Thapar Institute of Engineering & Technology, Patiala.

Prof. Dr. Samir Dev Gupta (HoD, CSE/IT)

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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Composition of BOARD OF STUDIES: Dept of CSE and IT

Appendix-XVII to Para 11.1 of University Grants Commission, Performa for submission of information by state private universities, Norms and Standards, Information about the composition of the statutory bodies of the University in that the Board of Studies of the Department of CSE and IT at JUIT Waknaghat is composed as under.

SNo Category	Nomination	Name	Profession	Affiliation	Constitution
i issud of the Department	Champerson 1 1	Prof. Dr. Vrvek Kr. Schgal Professor	Professor	JUIT Waknighat	
		2 Dr Hemraj Saini	Associate Pref	1011 Walinghat	
		3 Dr.P. K. Gupta	Associate Prof	FUIT Waknaghat	
		4 Dr. Rasindra Bharr	Assence at Prof	Several Western Print	
	\$	Dr. Pardeep Kumir	Associate Prof.	JUII Waknaghat	
faculty members of different levels covering different	9	6 Dr. Rajni Mohams	Associate Prof	Hajr Waknaghar	
acidizations. At least five faculty members at different.	Members	The Almol Vacudina	Associate Prof.	Hill Wakmeghat	Nav. 10, 2021
grees covering different specializations, to be nonunited		Dr. Yagai Kumar	Asst.Prof	reits Makraghal	
	6	9 Dr. Bkta Gupta	Asst Prof	HISTORY OF THE PROPERTY OF THE PARTY OF THE	
		10 Dr. Rumder Stoph Sandar	Lake Pater	MOIT Wathauthat	
		The Hard Sings	Act Par	Title Waldnaghath	
		2 F Thr Jagoroot Sidhu		White Wales was	
		Dr. Mithuniay Smeh	TANK TENDEN	TUIT Wakeaunat	*
		14 Prof. Dr. Manu Sood	Professor	HP University, Shimla	
The statement of the control of the	Y	12080	Destacent	Kunikshetra University	
dealer the University to be communical the fire Actualonic	Members	PS903 1		Kurukshetra	Nov 10, 2021
Compl		Prof. Dr. Himmshu Aggarwal	Professor	Punjahi University, Paizala	
Concernant of from indiatry copyrides sociosially duesa claims to piscenses to Academic Council. The concentrate from indiatry conventing accomplision.	Members	P. Dr. Diversi Chahal.	Research team lend R&D and Consultant at TCS Importance Lab	TCS Innovations Lab, Pune Area, India	Nive (t) 2023
con trinfing in rinacingly to be dominated by the contents Contain		18 Mr. Saurabh Sud	Manager - Cyber Security	at KPMG, Germany	
Participations mentioned alumnits nominated by the VC feet pregentifusing mentionious alumnits to be nominated by	Members 19	Members 19 Dr Rajkumar Tekchandani Asst Prof	Asst Prof	Thapar University	Nov 18, 2023
le VC				· · · · · · · · · · · · · · · · · · ·	
The Commence Processing	2 2	20 Prof. Dr. Ashish Kumar 21 Prof. Dr. Karanicci Sineh	Professor & HoD	Dept of CE JUIT	
Age with the appropriat of the VC. Co-opt as member,	Members 22	Prof. Dr. P.B. Burman	Professor & HoD	Dept of Physics & Material	Now to men
scale, wherever special courses of studies are to be		23 Prof. Dr. Sudhrr Syal	Professor & HoD	Dept of BIVEL IUIT	
	4	24 Dr Rain Kumar	Associate Prof&HoD	Dept of ECE, 111T	
	9	LA MILDING RAIL	ASSOCIATE PTOLOGICALOU	Legit of HOS, JULI	

Prof. Dr. As

Prof. Dr. Vivet Kr. Schgal Hob (CSE&HT)

Prof. Dr. Ashok Kumar Gupta Dean (Academics)

Wice Chancelor
Vice C

Department of Electronics and Communication Engineering

JUIT Waknaghat

A meeting of Board of Studies of the Department of Electronics and Communication Engineering was held on 23-07-2021 at 03:00PM in online mode.

The following members were present

1.	Prof. Samir Dev Gupta	Dean Academics&HoD CSE Department
2.	Prof. Ashok Gupta	Dean Academics and Research
3.	Dr. Rajiv Kumar	Chairman
4.	Prof. D. Ghosh	External Member
5.	Dr.Balwinder Singh	External Member
6.	Dr. Shruti Jain	MemberSecretary.
7.	Dr. Shweta Pandit	Member
8.	Dr. Salman Raju	Member
9.	Dr. Sunil Datt Sharma	Member
10.	Dr. Vikas Baghel	Member
11.	Dr.Emjee P	ECE Department
12.	Dr.Nafis U Khan	ECE Department
13.	Mr. Munish Sood	ECE Department
14.	Mr. Anuj Maurya	ECE Department
15.	Dr. Ashish Kumar	HoD, Civil Engineering Department
16.	Dr. Pradeep Kumar Gupta	Representative CSE & IT Department
17.	Dr.Anil Kant	RepresentativeBT& BI Department
18.	Dr. NeelKanth	Representative Mathematics Department
19.	Mr. Pramod Kumar	Co-opted Member for online issue

Leave of absence

Leave of absence was granted to the Prof. C.C. Tripathiby the Chairman Board of Studies.

Assistant Registrar (Academics)
Jaypee University of Information Technology
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The Chairman welcomed all the members who were present for the meeting. The meeting was thereafter deliberated by Dr. Shruti Jain on agenda items as had been approved by the Chairman.

Item No. 1: To approve the minutes of last meeting of the BoS held on December 12, 2020.

Dr. Shruti Jain has presented the last minutes of meeting and overview the course structure of M.Tech (ECE), M.Tech. in IoT and B.Tech. in ECM which was approved in the last BoS.

The minutes of the last BoS meeting were approved by the BoS members.

Item No. 2: Interchange of following two courses in 160 credit scheme – Automatic Control Systems & Lab (4 credits) of 3rdsem and Fundamentals of Signals and Systems & Lab (5credits) of 4thsem for 2021-2022 batch onwards.

Dr. Rajiv Kumar said that Fundamentals of Signals and Systems course is prerequisite of many ECE courses similar to Modern Analog and Digital
Communication, therefore it is not appropriate to run both these courses in the same
semester. Therefore, the shifting of Signals and Systems course and Lab from 4th
semester to 3rd semester and Automatic Control Systems & Lab from 3rd to 4th
semester is proposed for approval. The viewpoints of the BoS members were asked to
which Dr.Balwider Singh was of opinion to have balanced credits after swapping. In
addition, Dr.Debashish Ghosh also agreed with the proposal and conveyed that since
for the Automatic Control Systems course, knowledge of Laplace transform, ROC etc
is required which will be covered in Signals and Systems course. Other BoS members
also agreed for the shifting of the courses as proposed.

Approved.

Item No. 3: To review the structure of 160 credit ECE scheme with reference to Professional Electives (PE) courses and Open electives (OE) courses.

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Dr. Rajiv Kumar said that it is proposed to move most of the PEs and OEs to the 5th, 6th, and 7th semester in order to reduce the burden of 8th semester students. He informed that however, the number of credits for PE and OE in the new proposed scheme will remain same. Afterwards, Dr. Rajiv Kumar has presented the existing position of OEs and PEs where he said that there are three OEs and one PE in 6thsemester, one OE and two PEs in 7thsemester and one OE and three PEs in 8thsemester.

Dr. Ashok Gupta has asked for the comparison of the proposed revised scheme with the other department to which Dr. Rajiv Kumar informed that this new scheme is matched with the CSE and Civil department.

Further, in the proposed scheme there will be three PEs and one OE in 6thsemester, two OEs and two PEs in 7thsemester, and two OEs and one PE in 8thsemester. All PEs and OEs are of 3 credits with 3 hours.

Approved

Item No. 4: To consider the review, assessment and approval of 1st and 2nd Semester's syllabi of MTech. Electronics and Communication Engineering.

Dr. Sunil Datt presented and informed the committee that there are total six courses in first and second semester of ECE and has shown the courses. Dr. Balwinder Singh queries about Object Oriented Programming (OOPs) course mentioned in the structure and was of opinion that this course the students already study in their B.Tech. program. Dr. Rajiv Kumar mentioned about OOPs course in M.Tech. structure will be advanced version of B.Tech. OOPs program to which Dr. Balwinder Singh agreed.

Dr. Sunil Datt Sharma afterwards presented the courses available for Departmental electives. Dr. Balwinder Singh mentioned to have the courses similar to the one studied in B.Tech. level under DE-V and has suggested to have advanced form of these courses for the M.Tech. structure.

Dr. Ashok Gupta advised to have at least one OE bucket available to the students in order not to restrict the student within the department boundaries. He was of opinion of the interdisciplinary course structure. Dr. Balwinder Singh also agreed with his suggestion. In this context, it is mentioned to convert one DE to OE. Dr. Balwinder Singh said to have OE as it is also mentioned in the AICTE modular syllabus policy for both M.Tech. Dr. Debashish Ghosh said that both AICTE policy and University norms could be added.

Based on the suggestion of committee members, Departmental Elective VI was converted into Open Electives and the electives of particular bucket has been shifted to another buckets of Department Elective. Changes has been incorporated and added as *Annexure I*.

All course syllabi have been approved with incorporating the recommendations and suggestions of BoS members.

Item No. 5: To consider the review, assessment and approval of 1st and 2nd Semester's syllabi of M.Tech. in ECE with specialization in *Internet of Things*

This agenda item is also presented by Dr. Sunil Datt Sharma and informed the committee members that there are same core courses for M.Tech. in ECE with specialization in IoT as that of M.Tech. in ECE scheme.

Dr. Ashok Gupta advised to have at least one OE bucket available to the students in order not to restrict the student within the department boundaries. He was of opinion of the interdisciplinary course structure.

Based on the suggestion of committee members, Departmental Elective VI was converted into Open Electives and the electives of particular bucket has been shifted to another bucket of Department Elective. Changes has been incorporated and added as *Annexure II*.

Also, there is following change in the two course names:

- a) IoT Signal Processing to Signal Processing for IoT
- b) Data Acquisition and Intelligent signal Processing to Intelligent Signal Processing

All course syllabi have been approved with incorporating the recommendations and suggestions of BoS members.

Item No. 6: To consider the review, assessment and approval of all syllabi of new B.Tech. branch: *Electronics and Computer Engineering (ECM)*.

Dr. Shruti Jain informed that the course structure of ECM was already approved in the last BoS. The syllabusof various courses was designed in consultation with the faculty members of CSE department. She informed that there is total 90 courses in the ECM including DEs and OEs excluding first year, second year, Basic Science and Engineering Science courses. She informed that we are left with the designing of two lab courses namely Wireless Sensor Networks Lab and Game theory with Computer Applications lab, which are elective courses lab, due to the unavailability of the resources.

She informed that all the syllabus was reviewed by different faculty members of the department and suggestions has been incorporated by the coordinator.

Dr. Ashok Gupta was of opinion to fix the syllabus at least in tentative form beforehand to which Dr. Shruti Jain informed that 99% of the scheme's courses are final.

Rest all course syllabi have been approved as recommended.

Item No. 7: Any other permission with the chair.

1. Reporting item: To approve the syllabi for newly floated Open Electives for 2018 batch onwards

Following six courses were approved

- 1. Automation and Robotics
- 2. Machine Learning for Wireless Communications
- 3. Signal Processing for Machine Learning

- 4. Digital Systems
- 5. Artificial Intelligence Techniques for Genomic Signal Processing
- 6. Image Sensing and Reconstruction

2. Reporting item: To approve the syllabi for newly floated Professional Electives for 2018 batch onwards

Following courses were approved

- 1. AVR Based Embedded System Design
- 2. AVR Based Embedded System Design Lab

3. Correction in course contents of Electrical Sciences

As recommended was approved

The meeting concluded at 4:30 PM with a vote of thanks by **Dr. Rajiv Kumar**, Chairman Board of Studies.

Annexure I

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Master of Technology in Electronics & Communication Engineering

S. No.	Course Code	Name of the Subjects		Course Hours			Total	Credits
			C/E	L	T	P		
1		Embedded Systems and Applications	C	3	0	0	3	3
2		Sensor and Smart Instrumentation	C	3	0	0	3	3
3		Object Oriented Programming	С	3	0	0	3	3
4		Departmental Elective - I	Е	3	0	0	3	3
5		Departmental Elective - II	Е	3	0	0	3	3
6		Departmental Elective - III	Е	3	0	0	3	3
7		Advanced Communication Lab	С	0	0	6	3	3
			AND AND ASSESSED.			Total	21	21
SEMES	STER - II							
S.No.	Course	Subject Names		Course	-	JOFINFOR	Total	Credits

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(Prof. D.Ghosh)



(Prof. Samir DevGupta)



(Dr. Rajiv Kumar)



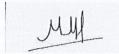
(Dr. Salman Raju)



(Dr. Vikas Baghel)



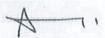
(Dr.EmjeePuthooran)



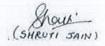
(Mr. Munish Sood)



(Dr.Balwinder Singh)



(Prof. Ashok Gupta)



(Dr. Shruti Jain)



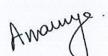
(Dr. Sunil Datt Sharma)



(Dr. Shweta Pandit)



(Dr.Nafis U Khan)



(Mr. Anuj Maurya)

(Dr. Ashish Kumar, HoD Civil Engg)

(Dr. Pradeep Gupta, CSE Deptt.)



Stutted

(Dr. Anil Kant, BT& BI Deptt.)

Nedkanth 23/7/2021

(Dr. Neel kanth, Maths Deptt)

Romad Kumar

(Mr. Pramod Kumar)



General

Academic Council meeting of Jaypee University of Information Technology, Waknaghat was held on 28 July, 2021 at 11.00 a.m. in online mode through Google Meet. The Chairman, Academic Council extended warm welcome to all the members present in the meeting and expressed thanks to Sh Sunil Sharma, Prof. S. C. Saxena, Prof. Lalit Kumar Awasthi and Lt. Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.) for their presence.

Chairman - Academic Council informed the members about inclusion of two members in new capacity:-

- Prof. Ashok Kumar Gupta was earlier member of Academic Council in the capacity of Head Civil Engg Department has been included as Dean upon assuming appointment of Prof. of Civil Engineering and Dean (Academics & Research)
- Prof. Ashish Kumar was earlier member of Academic Council as Professor other than Heads of Department has been included as Head of Civil Engineering Department as he has assumed the appointment Head Civil Engg. Deptt. .

The detailed agenda of the meeting was presented for deliberation and decisions of the Academic Council.

Attendance

The following members were present:-

Chairman

Prof. Vinod Kumar

Vice Chancellor, JUIT, Waknaghat

Head of the Other Institution of the Trust

Prof. S. C. Saxena

Pro-Chancellor, JIIT, Noida

Distinguished Academician nominated by the Pro-Chancellor

Prof. Lalit Kumar Awasthi

Director, NIT Jalandhar

Industry Professional nominated by the Pro-Chancellor

Sh. Sunil Sharma

Lt Gen Ravindra Mohan Chadha,

PVSM, AVSM (Retd.)

Executive Vice Chairman, Jaiprakash Associates Ltd.

Director, Jaiprakash Power Ventures Ltd.

The Dean of all Faculty of the University

Prof. Samir Dev Gupta

Dean (Academics) & Head of Deptt. - CSE/IT

Prof. Ashok Kumar Gupta

Dean (Academics & Research)

Heads of the Departments / Centres of the University

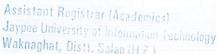
Prof. Karanjeet Singh Prof. P. B. Barman

Prof. Sudhir Kumar

HoD Mathematics

HoD PMS

HoD BT&BI









Prof. Ashish Kumar Dr. Rajiv Kumar

HoD CE HoD ECE

Dr. Anupriya Kaur

HoD HSS

Professors other than Heads of Departments

Prof. Sunil Kumar Khah

Deptt. of PMS

Non-Member Secretary

Maj Gen Rakesh Bassi, SM (Retd.)

Registrar and Dean of Students

Leave of Absence

Leave of absence was granted by the Chairman to the following member:-

Dr. Satish Kumar

Director, NIT Kurukshetra

Agenda Items

ITEM NO. 1 CONFIRMATION OF MINUTES OF LAST MEETINGS OF THE ACADEMIC COUNCIL

Minutes of the meeting of the last ACM held on 29 December 2020 were forwarded to the members and no comments were received. The minutes of the last ACM as per Annexure - 1 were confirmed.

ITEM NO. 2 ACTION TAKEN REPORT

The action taken on the items resolved in the last ACM dated 29 December 2020 were noted by the members.

ITEM NO. 3 APPROVAL FOR INTRODUCTION OF BRIDGE COURSES FOR B.TECH 1ST YEAR STUDENTS TO BE ADMITTED IN ACADEMIC SESSION 2021-22 & 2022-23.

Due to COVID-19 Pandemic during the Academic Session 2020-21 some of the important portions of class 12th syllabus were dropped by the CBSE, which was essential for the students to be enrolled to B. Tech Programs.

A committee under the Chairmanship of Prof Rajiv Saxena, Vice Chancellor, JU Anoopshahr was formed to design course contents of the Bridge Courses.

After detailed deliberation, the Academic Council approved the following Bridge Courses to be offered during the B.Tech $1^{\rm st}$ Semester for students to be admitted in the Academic Year -2021-22 and 2022-23.

Courses	For	Contents
Bridge Course 1 (30 Hrs.)	ECM	Physics (10 Hrs.) and Maths (20 Hrs.)
Bridge Course 2	BT, BI	hysics (10 Hrs.) and Biology (20 Hrs.)

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Bridge Course 3 Civil Physics (10 Hrs.), Maths (20 Hrs.) and (40 Hrs.) Chemistry (10Hrs.)

The above branch specific Bridge Courses will be Audit courses and mandatory for the students to pass and qualify.

Course contents and topics of the courses are as per Annexure -2 and detailed lecture plan is as per Annexure -3.

ITEM NO. 4

APPROVAL FOR FAST TRACK SEMESTER FOR STUDENTS HAVING SHORT OF CREDITS UPTO 12 CREDITS TOWARDS AWARD OF DEGREE AS A ONETIME SPECIAL PERMISSION DUE TO COVID PANDEMIC.

For the Academic Year-2020-21, Summer Semester could not be conducted due to deferred courses of ODD & EVEN SEMESTER of Academic Session 2020-21 which were offered to all regular students during the EXTENDED SEMESTER-2021. Some of the students of 2015, 2016 & 2017 batches are having upto 12 credits short towards award of degree requirement due to their backlog courses.

A onetime special permission considering COVID Pandemic for all such student is sought to offer the backlog courses in the FAST TRACK Semester for students having upto 12 credits short so that they may be able to complete the requirement for award of degree by 30 September 2021.

The following was proposed:-

Semester Schedule: 16 August 2021 to 25 September 2021

Evaluation Scheme: Mid Term Examination (40 Marks) and End Term Examination (60 Marks).

After detailed deliberations, members unanimously agreed to the proposal and approved FAST TRACK Semester for students having upto 12 credits short for 2015, 2016 and 2017 batches as one time measure.

ITEM NO. 5 APPROVAL - POLICY FOR RETENTION OF FACULTY FEEDBACK FORMS.

Faculty Feedback is taken from the students in every semester i.e. ODD SEMESTER & EVEN SEMESTER each year. No defined policy for retention of Faculty Feedback forms is available as of now.

At present hard copies of the faculty feedback forms for the following semesters are available in our record room:-

- EVEN SEMESTER-2017-18
- ODD SEMESTER-2018-19
- EVEN SEMESTER-2018-19
- ODD SEMESTER-2019-20

In order to maintain the records of the Faculty Feedback for last 05 academic years, summary sheets of Faculty Feedback were retrieved from the Campus Connect for the following Academic Years:-

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Academic Year	Semester	Remarks
2016-17	ODD SEMESTER EVEN SEMESTER	Summary sheet retrieved from Campus Connect
2017-18	ODD SEMESTER EVEN SEMESTER	Summary sheet retrieved from Campus Connect
2018-19	ODD SEMESTER EVEN SEMESTER	Summary sheet retrieved from Campus Connect
2019-20	ODD SEMESTER EVEN SEMESTER	ODD SEMESTER Summary sheet retrieved from Campus Connect. EVEN SEMESTER not available due to COVID-19 Lockdown.
2020-21	ODD SEMESTER EVEN SEMESTER	Summary Sheet – Feedback collected in online mode.

All the above summary sheets of the Faculty Feedback have been counter signed by the Registrar & Dean of Students and by the Chairman, Academic Council for future record purpose.

Upon deliberation over the issue, members felt that Regulatory Bodies are asking for the Faculty Back Forms for last 05 Academic Sessions irrespective of the fact whether in hard copy or summary sheet of online faculty feedback.

Accordingly, members of the Council considered the policy decision of retention of the Faculty Feedback for last 05 Academic Sessions. The duly signed summary sheet retrieved from Campus Connect for last 05 Academic Sessions be retained. The available Hardcopies of the Faculty Feedback Forms collected from students for following Semesters be kept in records till they complete course of study at the University:-

- **EVEN SEMESTER-2017-18**
- ODD SEMESTER-2018-19
- **EVEN SEMESTER-2018-19**
- ODD SEMESTER-2019-20

APPROVAL FOR DEVELOPMENT OF 10T RESEARCH LAB. ITEM NO. 6

Department of Computer Science & Engineering and Information Technology proposed for development of IoT Research Lab.

The need of development of IoT Research Lab was elaborated to the members of the Council and members agreed in principle for development of IoT Research Lab.

The Research Lab shall be common for all the departments and will be used by the Research Scholars. However, procurement of the items as per Annexure - 4 will be done in a phased manner considering the availability of the funds.

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- APPROVAL FOR COURSE STRUCTURE / MODIFICATION IN COURSE STRUCTURE OF VARIOUS DEPARTMENTS.
 - 7.1 APPROVAL FOR COURSE STRUCTURE OF ELECTIVE COURSES FOR M.TECH BIOTECHNOLOGY WITH SPECIALISATION IN INDUSTRIAL BIOTECHNOLOGY.

Department of Biotechnology & Bioinformatics through its BoS held on 16.07.2021 recommended Elective Courses for M.Tech Biotechnology with specialisation in Industrial Biotechnology. The proposed Elective Courses are as under:-

ELECTIVE COURSES ODD SEMESTER

S.No.	Course Code	Credits	Odd Semester (1 st Semester)	
1	20M1WBT131	03	Food Processing & Engineering	
2	20M1WBT132	03	Plant Tissue Culture Technologies	
3	18M1WBT134		Microbial Ecology	
4	20M1WBT134		Advances in Gene Manipulations	

ELECTIVE COURSES EVEN SEMESTER

S.No.	Course Code	Credits	Even Semester (2 nd Semester)
1	20M1WBT231	03	QC Analysis and Management
2	20M1WBT232	03	Industrial Enzyme Technology
3	11IIWBT433	03	Plant Biotechnology
4	18M1WBT133		Advances in Computational System Biology

Members of the Council considered the recommendation of the departmental BoS and approved the above Elective Courses for ODD & EVEN SEMESTER for M.Tech Biotechnology with specialisation in Industrial Biotechnology.

7.2 APPROVAL FOR COURSE STRUCTURE OF ELECTIVE COURSES FOR M.TECH BIOTECHNOLOGY WITH SPECIALISATION IN MEDICAL BIOTECHNOLOGY.

Department of Biotechnology & Bioinformatics through its BoS held on 16.07.2021 recommended Elective Courses for M.Tech Biotechnology with specialisation in Medical Biotechnology. The proposed Elective Courses are as under:-

ELECTIVE COURSES ODD SEMESTER

S.No.	Course Code	Credits	Odd Semester (1st Semester)
1	20M1WBT133	03	Vaccine Production
2	11BIWBT840	03	Nano Biotechnology
3	20M1WBT134		Advances in Gene Manipulations
4	18M1WBT134		Microbial Ecology

ELECTIVE COURSES EVEN SEMESTED

S.No.	Course Code	Credits	Even Semester (2 nd Semester)
1	20M1WBT233		Cancer Biology
2	20M1WBT234		Clinical Diagnostics
3	20M1WBT231		QC Analysis and Management
4	18M1WBT133	03	Advances in Computational System Biology

Members of the Council considered the recommendation of the departmental BoS and approved the above Elective Courses for ODD & EVEN SEMESTER for M.Tech Biotechnology with specialisation in Medical Biotechnology.

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7.3 APPROVAL FOR COURSE STRUCTURE OF M.TECH (COMPUTER SCIENCE & ENGINEERING) WITH SPECIALISATION IN DATA SCIENCE.

Department of Computer Science & Engineering and Information Technology through its BoS held on 24.07.2021 recommended for approval of the Course Structure of M.Tech (Computer Science & Engineering) with specialisation in Data Science.

Members considered the recommendation of the departmental BoS and approved the Course Structure for M.Tech (Computer Science & Engineering) with specialisation in Data Science.

The approved Course Structure is as per Annexure – 5.

7.4 APPROVAL FOR MODIFICATION IN COURSE STRUCTURE OF M.TECH (ELECTRONICS & COMMUNICATION ENGINEERING).

Department of Electronics & Communication Engineering through its BoS held on 23.07.2021 recommended for modification in Course Structure of M.Tech (Electronics & Communication Engineering).

Members considered the recommendation of the departmental BoS and approved modification in Course Structure of M.Tech (Electronics & Communication Engineering).

The approved modified Course Structure of M.Tech (Electronics & Communication Engineering) is as per Annexure - 6.

7.5 APPROVAL FOR MODIFICATION IN COURSE STRUCTURE OF M.TECH (ELECTRONICS & COMMUNICATION ENGINEERING) WITH SPECIALISATION IN (IoT).

Department of Electronics & Communication Engineering through its BoS held on 23.07.2021 recommended for modification in Course Structure of M.Tech (Electronics & Communication Engineering) with specialisation in IoT.

Members considered the recommendation of the departmental BoS and approved modification in Course Structure of M.Tech (Electronics & Communication Engineering) with specialisation in IoT.

The approved modified Course Structure of M.Tech (Electronics & Communication Engineering) with specialization in IoT is as per Annexure -7.





7.6 APPROVAL FOR INTERCHANGE IN TWO COURSES OF B.TECH (ELECTRONICS & COMMUNICATION ENGINEERING) COURSE STRUCTURE.

Department of Electronics & Communication Engineering through its BoS held on 23.07.2021 recommended for interchange in two courses of B.Tech (Electronics & Communication Engineering) Course Structure.

Members considered the recommendation of the departmental BoS and approved interchange in two courses of B.Tech (Electronics & Communication Engineering) as under:-.

Course Name	Credits	Proposed Interchange
Automatic Control Systems 18B11EC311	3	To be offered in B.Tech (ECE) 4 th Sem in place of
Automatic Control Systems Lab 18B17EC371	1	3 rd Sem.
Fundamentals of Signals & Systems 18B11EC412	4	To be offered in B.Tech (ECE) 3 rd Sem in place
Fundamentals of Signals & Systems Lab 18B17EC472	1 -	of 4th Sem.

However, the above interchange of the courses will be effective from new admission batch i.e. batch to be admitted in Academic Session 2021-22.

7.7 APPROVAL FOR RESHUFFLING OF COURSES OF PROFESSIONAL ELECTIVES AND OPEN ELECTIVES - COURSE STRUCTURE OF B.TECH (ELECTRONICS & COMMUNICATION ENGINEERING).

Department of Electronics & Communication Engineering through its BoS held on 23.07.2021 recommended for reshuffling of Courses of Professional Electives and Open Electives - Course Structure of B.Tech (Electronics & Communication Engineering).

Members considered the recommendation of the departmental BoS and approved the reshuffling of Courses of Professional Electives and Open Electives for Course Structure of B.Tech (Electronics & Communication Engineering).

The approved reshuffling of Professional Electives & Open Electives is as per Annexure - 8. The revised Course Structure incorporating new arrangements of Professional Electives & Open Electives of B.Tech (Electronics & Communication Engineering) is as per Annexure - 9.

The above reshuffling of Professional Electives & Open Electives will be effective from new admission batch i.e. batch to be admitted in Academic Session 2021-22.

7.8 APPROVAL FOR CHANGE IN NOMENCLATURE OF TWO COURSES OF B.TECH 1ST SEMESTER.

Department of Humanities & Social Sciences through its BoS held on 20.07.2021 recommended for change in nomenclature of two courses of B. Tech 1st Semester.

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Members considered the recommendation of the departmental BoS and approved the following changes in two courses of B.Tech 1st Semester:-

Existing Nomenclature	Approved Nomenclature
English & Technical Communication	English
English & Technical Communication Lab	English Lab

The L-T-P structure & credits of the above courses will remain unchanged. The above changes in the nomenclature will be effective from new admission batch i.e. batch to be admitted in Academic Session 2021-22.

7.9 APPROVAL FOR INTRODUCTION OF TWO NEW COURSES.

Department of Humanities & Social Sciences through its BoS held on 20.07.2021 recommended for introduction of two new Courses.

Academic Council considered the recommendation of the departmental BoS and approved introduction of following two courses in the semester mentioned against each:-

Course	Credits	Credits L-T-P Sem		
Life Skills & Effective Communication	02 1-0-2		To be inducted in 2 nd Semester	
Professional Communication Practice	Audit	0-0-2	To be inducted in 3 rd Semester	

The introduction of above two courses will be effective from new admission batch i.e. batch to be admitted in Academic Year 2021-22.

7.10 CHANGE IN CREDITS OF 3RD SEMESTER COURSE "INTERPERSONAL DYNAMICS VALUES AND ETHICS"

Department of Humanities & Social Sciences through its BoS held on 20.07.2021 recommended for change in Credits of 3rd Semester Course "Interpersonal Dynamics Values and Ethics"

Academic Council considered the recommendation of the departmental BoS and approved following changes in the Credits of the 3rd Semester Course "Interpersonal Dynamics Values and Ethics":-

Existing L-T-P & Credits	Approved L-T-P & Credits
3-0-0 (03 Credits)	1-0-0 (01 Credit)

The above approved change in the Credits of the course will be effective from the new admission batch i.e. batch to be admitted in Academic Year -2021-22.



ITEM NO. 8 APPROVAL FOR COURSE CONTENTS OF COURSES LISTED UNDER APPROVED COURSE STRCTURES OF VARIOUS DEPARTMENTS.

8.1 APPROVAL FOR COURSE CONTENTS OF COURSES LISTED UNDER APPROVED COURSE STRUCTURE OF M.Sc. (MICROBIOLOGY) 1ST YEAR PROGRAM.

Department of Biotechnology & Bioinformatics through its BoS held on 16.07.2021 recommended for approval of Course contents of courses listed under approved Course Structure of M.Sc. (Microbiology) 1st Year Program for 2021 onward batches.

Academic Council considered the recommendation of the departmental BoS and approved the Course contents of courses listed under approved Course Structure of M.Sc (Microbiology) 1st Year Program for 2021 onward batches as per **Annexure** – 10.

8.2 APPROVAL FOR COURSE CONTENTS OF COURSES LISTED UNDER COURSE STRUCTURE OF M.TECH (COMPUTER SCIENCE & ENGINEERING) SPECIALISATION IN DATA SCIENCE.

Department of Computer Science & Engineering and Information Technology through its BoS held on 24.07.2021 recommended for approval of Course contents of Courses listed under Course Structure of M.Tech (Computer Science & Engineering) specialisation in Data Science.

Members considered the recommendation of the departmental BoS and approved the Course contents of Courses listed under Course Structure of M.Tech (Computer Science & Engineering) specialisation in Data Science as per Annexure-11.

8.3 APPROVAL FOR COURSE CONTENTS OF COURSES LISTED UNDER COURSE STRUCTURE OF M.TECH (ELECTRONICS & COMMUNICATION ENGINEERING) – 1ST YEAR PROGRAM.

Department of Electronics & Communication Engineering through its BoS held on 23.07.2021 recommended for approval of Course contents of Courses listed under Course Structure of M.Tech (Electronics & Communication Engineering) for 1st Year Program (1st & 2nd Semester).

Academic Council considered the recommendation of the departmental BoS and approved the Course contents of Courses listed under Course Structure of M.Tech (Electronics & Communication Engineering) for 1^{st} Year Program (1^{st} & 2^{nd} Semester) as per **Annexure** – 12.

8.4 APPROVAL FOR COURSE CONTENTS OF COURSES LISTED UNDER COURSE STRUCTURE OF M.TECH (ELECTRONICS & COMMUNICATION ENGINEERING) SPECIALISATION IN INTERNET OF THINGS (16T) – 1ST YEAR PROGRAM.

Department of Electronics & Communication Engineering through its BoS held on 23.07.2021 recommended for approval of Course contents of Courses listed under Course Structure of M.Tech (Electronics & Communication Engineering) specialisation in Internet of Things (IoT) - 1st Year Program (1st & 2nd Semester).

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Academic Council considered the recommendation of the departmental BoS and approved the Course contents of Courses listed under Course Structure of M.Tech (Electronics & Communication Engineering) specialisation in Internet of Things (IoT) - 1st Year Program (1st & 2nd Semester) as per Annexure – 13.

8.5 APPROVAL FOR COURSE CONTENTS OF COURSES LISTED UNDER APPROVED COURSE STRUCTURE OF B.TECH (ELECTRONICS & COMPUTER ENGINEERING PROGRAM.

Department of Electronics & Communication Engineering through its BoS held on 23.07.2021 recommended for approval of Course contents of Courses listed under approved Course Structure of B.Tech (Electronics & Computer Engineering) Program.

Academic Council considered the recommendation of the departmental BoS and approved the Course contents of Courses listed under approved Course Structure of B.Tech (Electronics & Computer Engineering) Program as per Annexure – 14.

8.6 APPROVAL FOR COURSE CONTENTS OF COURSES LISTED UNDER APPROVED PROFICIENCY COURSES OF B.TECH (CIVIL ENGINEERING) PROGRAM.

Department of Civil Engineering through its BoS held on 19.07.2021 recommended for approval of Course contents of Courses listed under approved Proficiency Courses of B.Tech Civil Engineering Program.

Academic Council considered the recommendation of the departmental BoS and approved the Course contents of Courses listed under approved Proficiency Courses of B.Tech Civil Engineering Program as per Annexure – 15.

8.7 APPROVAL FOR COURSE CONTENTS OF COURSES OF "OPTIMIZATION TECHNIQUES" AND "FINITE ELEMENT METHODS" LISTED UNDER APPROVED OPEN ELECTIVE – III OF B.TECH (CIVIL ENGINEERING) PROGRAM.

Department of Civil Engineering through its BoS held on 19.07.2021 recommended for approval of Course contents of Courses of "Optimization Techniques" and "Finite Element Methods" listed under approved Open Elective – III of B.Tech (Civil Engineering) Program.

Academic Council considered the recommendation of the departmental BoS and approved the Course contents of Courses of "Optimization Techniques" and "Finite Element Methods" listed under approved Open Elective – II of B.Tech (Civil Engineering) Program as per Annexure – 16.

ITEM NO. 9 APPROVAL OF THE MINUTES OF MEETING OF BOARD OF STUDIES (BoS) OF DEPARTMENTS.

9.1 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Biotechnology and Bioinformatics held on 16.07.2021 as given in Annexure – 17 and noted the contents.

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- Academic Council considered the Minutes of Board of Studies (BoS) of Department 9.2 of Computer Science & Engineering held on 24.07.2021 as given in Annexure – 18 and noted the contents.
- 9.3 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Electronics & Communication Engineering held on 23.07.2021 as given in Annexure - 19 and noted the contents.
- 9.4 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Civil Engineering held on 19.07.2021 as given in Annexure - 20 and noted the contents.
- 9.5 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Humanities & Social Sciences held on 20.07.2021 as given in Annexure - 21 and noted the contents.

ITEM NO. 10 REPORTING ITEMS.

The following Reporting Items were noted by the Academic Council:-

CHANGE IN COURSE STRUCTURE OF PROFESSIONAL ELECTIVES 10.1 AND OPEN **ELECTIVES** OF **B.TECH** (ELECTRONICS COMMUNICATION ENGINEERING) PROGRAM.

> Chairman apprised the members about the change in Course Structure of Professional Electives and Open Electives of B.Tech (Electronics & Communication Engg.) Program. The approved changes are as per Annexure -22.

10.2 CHANGE IN COURSE STRUCTURE OF PROFESSIONAL ELECTIVES OF B.TECH (INFORMATION TECHNOLOGY) PROGRAM.

Chairman apprised the members about the change in Course Structure of Professional Electives of B.Tech (Information Technology) Program. The approved changes are as per Annexure - 23.

DISCARDING OF T1, T2 AND MID TERM RESULTS. 10.3

> Members were apprised about discarding of T1, T2 and MID TERM Result Files. The list of discarded Result Files is as per Annexure - 24.

EVALUATION SCHEME FOR EXTENDED SEMESTER (SPECIAL 10.4 SEMESTER - JUNE/JULY 2021).

> Members were apprised about the Evaluation Scheme followed for EXTENDED SEMESTER (Special Semester - JUNE/JULY 2021). The approved Evaluation Scheme is as per Annexure - 25.

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10.5 CHANGE IN COURSE STRUCTURE OF PROFICIENCY COURSES OF B.TECH (COMPUTER SCIENCE & ENGINEERING) AND B.TECH (INFORMATION TECHNOLOGY) PROGRAMS.

Members were apprised about the change in Course Structure of Proficiency Courses of B.Tech (Computer Science & Engineering) and B.Tech (Information Technology) Program. The approved changes are as per Annexure - 26.

10.6 RETENTION OF ACADEMIC / OTHER DOCUMENTS FOR PH.D ALUMNI

Chairman apprised the members about the retention of Academic & other Documents for Ph.D Alumni. The documents identified for retention are as per Agenda item 10.6 and proceedings of the Committee are as per Annexure – 27 & Annexure – 28.

10.7 AGREEMENT WITH INDIASPARK (OPC) PRIVATE LIMITED, GURGAON, HARYANA FOR IMB OPEN P-TECH (ONLINE LEARNING PROGRAM)

Chairman apprised the members about Agreement signed with Indiaspark (OPC) Private Limited, Gurgaon, Harynana for IMB Open P-Tech (Online Learning Program). Detailed Agreement is as per Annexure – 29.

10.8 DATE OF NOTIFICATION, DATE FOR AWARD OF PH.D DEGREE AND COMPLETION DATE ON FINAL DEGREE PARCHMENT – PH.D. STUDENTS

Chairman apprised the members that earlier, the date of final oral defence viva of the Ph.D scholar was considered as the date of Notification for award of Ph.D degree as the final defence viva recommendations were approved by the Vice Chancellor on the day of viva itself.

Due to COVID-19 situation, final oral defence viva of the scholar is now being conducted in online mode and recommendation from the examiner is taken through e-mail and is put up for signature of the other DPMC members and approval of Dean and Vice Chancellor. In such conditions, date of final oral defence viva and final approval by the Vice Chancellor differ.

Considering above, it was decided that the date of approval by the Vice Chancellor on final defence recommendation would be considered as date of Notification and award of Ph.D degree and completion date in final Ph.D Degree parchment.

Copy of the approval is as per Annexure - 30.

10.9 CHANGE IN 4TH SEMESTER COURSE STRUCTURE OF B.TECH (INFORMATION TECHNOLOGY) PROGRAM.

Members were apprised about the change in 4th Semester Course Structure of B.Tech (Information Technology) Program. Approval for change in the Course Structure is as per Annexure – 31.

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EVALUATION SCHEME FOR 04 CREDIT COURSE (03 CREDITS 10.10 THROUGH MOOCS & 01 CREDIT THROUGH TUTORIAL)

Members were apprised about the Evaluation Scheme for 04 Credit Course (03 Credits through MOOCs and 01 Credit through Tutorial). The approved Evaluation scheme is as per Annexure -32.

10.11 IMPLEMENTATION OF NATIONAL EDUCATION POLICY - 2020.

Members were apprised about the letter received from HPPERC directing not to implement NEP till clear guidelines are obtained from the Central Regulatory Bodies / Government to ensure the uniformity in courses as well as syllabus of various Universities across the country. Copy of letter is as per Annexure – 33.

10.12 UGC GUIDELINES ON EXAMINATIONS AND ACADEMIC CALENDAR IN VIEW OF THE COVID-19 PANDEMIC - JULY 2021.

Chairman apprised the members about the UGC Guidelines on Examinations and Academic Calendar in view of the COVID-19 Pandemic – July 2021. The detailed Guidelines and Academic Calendar is as per Annexure - 34.

RATIFICATION OF SEAT INTAKE - ACADEMIC YEAR - 2021-22. 10.13

Chairman apprised the members about the Seat Intake for various programs for Academic Year - 2021-22 as under:-

Undergraduate Programs (B.Tech)

Program	-	Seat Intake
Computer Science & Engineering		330
Information Technology		60
Civil Engineering		60
Biotechnology		30
Bioinformatics		30
Electronics & Communication Engineering		30
Electronics & Computer Engineering		30
Total	•	570

Post Graduate Programs (M.Sc)

Program	and the state of t	Seat Intake
Biotechnology		30
Microbiology		30
Total		60

CSE with specialisation in Data Science

Post Graduate Programs (M.Tech)		
Program	-	Seat Intake
Computer Science & Engineering		36
CSE with specialisation in Information Security		

Electronics & Communication Engineering ECE with specialisation in Internet of Things (IoT)

Biotechnology Biotechnology
BT with specialisation in Industrial Biotechnology
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BT with specialisation in Medical Biotechnology

CE with specialization in Construction Management
CE with specialization in Structural Engineering
CE with specialization in Environmental
Engineering
Total - 132

10.14 USE OF OPEN SOURCE SOFTWARE IN DIFFERENT UNDERGRADUATE COURSES.

Chairman apprised the members about the use of Open Source Software in different Undergraduate Courses. The list of open source software listed by department of Civil Engineering is as per Annexure - 35.

ITEM NO. 11 ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR

There being no other points, meeting ended with a vote of thanks to the Chair.

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Maj Gen Rakesh Bassi, SM (Retd) Registrar & Non-Member Secretary

Approved

Prof. Vinod Kumar Vice Chancellor Chairman

Assistant Registrar (Academics)
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M. Sc. Microbiology Course Curriculum (2021-2022)

Ist SEMESTER (MBI)

S.No.	Subject	L-T-P	Credits
1	General Microbiology and Bacteriology	3-0-0	3
2	Basics of Mathematics and Statistics	2-0-0	2
3	Biochemistry – MBII	3-0-0	3
4	Molecular Biology	3-0-0	3
5	Virology	2-0-0	2
6	Fungal Biology	2-0-0	2
7	General Microbiology and Bacteriology Lab	0-0-4	2
8	Biochemistry Lab	0-0-2	1
9	Molecular Biology Lab	0-0-4	2
10	GLP and Bioinstrumentation Lab	0-0-2	1
	Total	27	21

IInd SEMESTER (MBII)

S.No.	Subject	L-T-P	Credits
1	Immunology and Immunotechnology	3-0-0	3
2	Enzymes and Bioprocess Technology	3-0-0	3
3	Microbial Genetics and Physiology	3-0-0	3
4	Recombinant DNA Technology	3-0-0	3
5	Bioinformatics - MBII	2-0-0	2
6	Immunology and Immunotechnology Lab	0-0-2	1
7	Enzymes and Bioprocess Technology Lab	0-0-2	1
8	Bioinformatics Lab - MBII	0-0-2	1
9	Recombinant DNA Technology lab	0-0-4	2
10	Masters Research Review seminar	0-0-2	1
	Total	26	20

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M. SC. (MICROBIOLOGY) PROGRAM

I st SEMESTER (MBD)

S.No.	New Code	Subject	L-T-P	Credits
1	21MS1MB111	General Microbiology and Bacteriology	3-0-0	3
2	20MS1MA111	Basics of Mathematics and Statistics	2-0-0	2
3	20MS1BT111	Biochemistry	3-0-0	3
4	21MS1MB112	Molecular Biology	3-0-0	3
5	20B1WBI831	Virology	2-0-0	2
6	21MS1MB113	Fungal Biology	2-0-0	2
7	21MS7MB171	General Microbiology and Bacteriology Lab	0-0-4	2
8	21MS7BT171	Biochemistry Lab	0-0-2	1
9	21MS7MB172	Molecular Biology Lab	0-0-4	2
10	21MS7MB173	GLP and Bioinstrumentation Lab	0-0-2	1
		Total	27	21

II nd SEMESTER (MBII)

S.No.	New Code	Subject	L-T-P	Credits
1	18MS1BT211	Immunology and Immunotechnology	3-0-0	3
2	21MS1MB211	Enzymes and Bioprocess Technology	3-0-0	3
3	21MS1MB212	Microbial Genetics and Physiology	3-0-0	3
4	18MS1BT313	Recombinant DNA Technology	3-0-0	3
5	20MS1BT213	Bioinformatics	2-0-0	2
6	18MS7BT211	Immunology and Immunotechnology Lab	0-0-2	1
7	21MS7MB271	Enzymes and Bioprocess Technology Lab	0-0-2	1
8	18MS7BI214	Basic Bioinformatics Lab	0-0-2	1
9	18MS7BT373	Recombinant DNA Technology lab	0-0-4	2
10	18MS9BI211	Masters Research Review seminar	0-0-2	1
		Total	26	20

III rd SEMESTER (MBIII)

		III I d DENIEDI EK (MDIII)		
S.No.	Code	Subject	L-T-P	Credits
1	21MS1MB311	Environmental Microbiology	3-0-0	3
2	21MS1MB312	Diagnostic Microbiology and vaccines	3-0-0	3
3		Elective-I	3-0-0	3
4	21MS9MB311	Master's Dissertation &Thesis Part-I	0-0-16	8
	N = 11 light over the state of	Total	25	17

IV th SEMESTER (MBIV)

S. No.	New Code	Subject	L-T-P	Credits
1	21MS1MB411	Food & Dairy Microbiology MBIV	3-0-0	3
2	21MS1MB412	Plant and Agricultural Microbiology MBIV	3-0-0	3
3		Elective-II	3-0-0	3
4	21MS9MB411	Master's Research Thesis Part-II	0-0-16	8
		Total	25	17

Total Credits: 75

Approved in Academic Council Meeting held on 28 July, 2021

Assistant Registrar (Academics)

Jaypee University of Information Technology Waknaghat, Distt. Solan (H.P.)

OF INFORMA

		ELECTIVE - 1		
S. No.	New Code	Subject	L-T-P	Credits
1	21MS2MB311	IPR, Biosafety and Bioethics	3-0-0	3
2	21MS2MB312	Biosensors:Principles & Applications	3-0-0	3
3	21MS2MB313	Computational Systems Biology	3-0-0	3
4	21MS2MB314	Protein Engineering	3-0-0	3

	ELECTIVE - 2					
S. No.	New Code	w Code Subject		Credits		
1	21MS2MB411	Microbial Toxicology MBIV	3-0-0	3		
2	21MS2MB412	Experimental models in microbial Research MBIV	3-0-0	3		
3	21MS2MB413	Nano-Biotechnology MBIV	3-0-0	3		
4	21MS2MB414	QC Analysis and Management MBIV	3-0-0	3		

Course Structure Master of Technology in Data Science

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

Semester I

Sr. No.	Course Code	Course Name	C/E	L	Т	P	Hr	Cr
1		Advanced Data Structures	C	3	0	0	3	3
2		Elective - Mathematical Foundations forData Science	Е	3	0	0	3	3
3		Introduction to Data Science	C	3	0	0	3	3
4		DE- I	Е	3	0	0	3	3
5		DE- II	Е	3	0	0	3	3
6		DE- III	Е	3	0	0	3	3
7	107104100000	Advanced Data Structures Lab	C	0	0	1	2	1
8		Data Science Lab	C	0	0	2	4	2
9		Elective – Mathematical Foundations for Data Science Lab	Е	0	0	2	4	2
		Total Credits						23

Semester II

Sr. No.	Course Code	Course Name	C/E	L	Т	P	Hr	Cr
1		Soft Computing	C	3	0	0	3	3
2		Deep Learning Techniques	C	3	0	0	3	3
3		Big Data Analytics	С	3	0	0	3	3
4		DE- IV	Е	3	0	0	3	3
5		DE- V	Е	3	0	0	3	3
6		DE- VI	Е	3	0	0	3	3
7		Soft Computing Lab	C	0	0	1	2	1
8		Deep Learning Techniques Lab	C	0	0	2	4	2
9		Big Data using Hadoop Lab	C	0	0	2	4	2
		Total Credits						23

Semester III

Sr. No.	Course Code	Course Name	C/E	L	T	P	Cr
1		Seminar	C	0	0	4	2
2		Project, Part I	C	0	0	24	12

Semester IV

Sr. No.	Course Code	Course Name	C/E	L	T	P	Cr
1		Seminar	С	0	0	4	2
1	I Parker special comment	Project Part II	C	0	0	28	14



Summary

Semester	Cr
I	23
I	23
III	14
IV	16
Total	76

Departmental Electives

DE- I	Data Storage Technologies	Data Warehousing and Data
		Mining
DE- II	Data Visualization	Artificial Intelligence Techniques
DE- III	Introduction to Statistical Learning	Cryptography and Information System security
DE- IV	Advanced Computational Techniques	Medical Image Analysis
DE- V	Knowledge-Based AI: Cognitive Systems	Social and Information Network Analysis
DE- VI	Reinforcement Learning	Natural Language Processing

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OF INFORMA

Department of Biotechnology and Bioinformatics JUIT Waknaghat

Minutes of BoS Consultation held in Nov.2021

A consultation with members of The Board of Studies of the Department of Biotechnology and Bioinformatics was called upon to deliberate the proposed agenda by sharing the agenda points and supporting documents via email on 10.11.2021. The observations, suggestions and approval were invited via email.

Following BoS Members were consulted.

Fol	lowing BoS Members were consulted.	
1	Dr. Sudhir Kumar, Head, Department of Biotechnology and Bioinformatics, JUIT Waknaghat	12/11/2021
2	Dr. Anil Kant Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member Secretary BoS)	Augh 77/11/2021
3	Dr TC Bhalla Ex, Professor Emeritus Department of Biotechnology HPU Shimla (External Member BoS)	Approval email received on 15.11.2021 (copy attached)
4	Mr Girish Minocha, Managing Director Minchys Industries Kandaghat, Solan	Approval email received on 17.11.2021 (copy attached)
5	Dr Vinay Bhardwaj, Head Division of Crop Improvement, CPRI Shimla	Approval email received on 12.11.2021 (copy attached)
6	Dr Tirtha Raj Singh Associate professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	Borning21
7	Dr. Jata Shankar, Associate Professor, Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Invited attendee as coordinator M. Tech. Program)	12/201/2051 7/49/
8	Dr. Saurabh Bansal, Assistant Professor (Senior Grade), Department of Biotechnology and Bioinformatics, JUIT Waknaghat (Member BoS)	12/1201/2021 18/11/2021
9	Head (or Representative), Deptt. of Electronics and Communication Engineering, JUIT Waknaghat, (Member BoS)	(distilled
10	Head (or Representative), Deptt. of Mathematics, JUIT Waknaghat, (Member BoS)	Karan 121
11	Head (or Representative), Deptt. of Computer science Engineering, JUIT Waknaghat, (Member BoS)	Visit count 12/11/51
12	Head (or Representative), Deptt. of Civil Engineering, JUIT Waknaghat, (Member BoS)	Achorius 19/11/3
13	Head (or Representative), Physics and Material Science, JUIT Waknaghat, (Member BoS)	JANK JOHN JANK

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1. It is proposed to offer two new open electives in 8th semester (Detailed syllabi attached)

Elective 1: Human Disease and Diagnostics

Elective 2: Computational Biology for Engineers

Resolution: Approved as presented

2. B.Tech Bioinformatics Program: It is proposed to modify the course structure and curriculum of this program to make it more attractive to the students as well as to enhance the placement and employability of the students. We propose to revise the curriculum with courses on Information and Data sciences, Artificial Intelligence, Biomedical and Health Informatics etc. The revised curriculum will be put forth in the next ACM.

Resolution: Approved as presented

3. It is proposed to consider NEET score and ranks for the admission in B.Tech Biotechnology and B.Tech Bioinformatics Programs, in addition to existing criteria. In these programs there exists a provision of taking admission on the basis of 10+2 marks and JEE rank, But as per trends in the last few years the students with JEE ranks rarely seek admission in Biotechnology and Bioinformatics programs. Inclusion of NEET qualification would enhance the prospectus of students with NEET score in our programs.

Resolution: Approved as presented

Dr Anil Kant Associate Professor

Member Secretary, BoS

Department of Biotechnology

JUIT Waknaghat

Prof. Sudhir Kumar

Chairman BoS, HOD Department of

Biotechnology, JUIT Waknaghat

Assistant Registra Academics)

Jaypee University of Information Technology

Waknaghat, Distt. Solan (H.P.)

M. Tech. Biotechnology - 2021 Batch onwards

Program Educational Objectives (PEOs)

PEO-1: To impart basic and advance knowledge in the emerging areas biotechnologies

PEO-2: To inculcate the laboratory skills to cater the needs of industries and high end research

PEO-3: To inculcate team work with ethics to solve problems using multidisciplinary approaches

M.Tech. Biotechnology Course Curriculum

FIRST SEMESTER

Sr.No.	Code	Subject	L-T-P	Credits
1	13M11BT111	Advances in Molecular Cell Biology	3-0-0	3
2	13M17BT171	Advances in Molecular Cell Biology Lab	0-0-2	, 1
3	18M11BT113	Research Methodology and Ethics	3-0-0	3
4	18M11BT114	Patenting in Biotechnology	3-0-0	3
5	13M11BT112	Advanced Bioinformatics	3-0-0	3
6	13M17BT172	Advanced Bioinformatics Lab	0-0-2	1
7	13M11BT114	High Throughput Technologies	3-0-0	3
8	Elective	DE-1	3-0-0	3
9	Elective	DE-II	3-0-0	3
		Total	25	23

SECOND SEMESTER

Sr.No.	Code	Subject	L-T-P	Credits
1	14M11BT211	Industrial Biotechnology	3-0-0	3
2	14M17BT271	Industrial Biotechnology Lab	0-0-2	1
3	14M11BT212	Immunotechnology	3-0-0	3
4	14M17BT272	Immunotechnology Lab	0-0-2	1
5	14M11BT214	Bioenterpreunership Management	2-0-0	2
6	14M11BT213	Functional Genomics	3-0-0	3
7	14M17BT273	Functional Genomics Lab	0-0-2	1
8	14M11BT215	Metabolic Engineering	3-0-0	3
9	Elective	DE-III	3-0-0	3
10	Elective	DE-1V	3-0-0	3
10	Dicerro	Total	26	23

THIRD SEMESTER

Sr.No.	Code	Subject	L-T-P	Credits
1		Seminar	0-0-4	2
4.		Project- Thesis Part I		12
11 11 11 11 11		Total	04	14

FOURTH SEMESTER

Sr. No.	Code	Subject	L-T-P	Credits
unit means on		Seminar	0-0-4	2
3		Project- Thesis Part II		14
٥.		Total	04	16

Total Credit Hours: 76

Approved in Academic Council Meeting held on 28 July, 2021

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Waknaghat, Distr. Solan (H.P.)

M. Tech. Biotechnology Electives courses

		14 6 3 6 3	ODD SEMESTER
	Course Code	Credits	Elective Courses
1	20M1WBT131	03	Food Processing & Engineering
2	20M1WBT132	03	Plant Tissue Culture Technologies
3	18M1WBT134	03	Microbial Ecology
4	20M1WBT134	03	Advances in Gene manipulations
5	20M1WBT133	03	Vaccine Production
6	18M1WBT133	03	Advances in Computational System Biology

	EVEN SEMESTER				
	Course Code	Credits	Elective Courses		
1	20M1WBT232	03	Industrial Enzyme Technology		
2	20M1WBT231	03	QC Analysis and Management		
3	20M1WBT234	03	Clinical Diagnostics		
4	11IIWBT433	03	Plant Biotechnology		
5	11BIWBT840	03	Nano Biotechnology		

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Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

JUIT/CED/2021-22/15

08-11-2021

To, Vice chancellor JUIT Waknaghat

Sub: Reframing of committee of Board of studies (BOS) of Civil engineering Department

Respected Sir,

The previous committee of Board of studies (BOS) of Civil Engineering department was approved on 31-10-2017. Kindly accord the approval to reframe the committee of BOS.

The proposed contained members for BOS are as:

 Dr. Ashish Kumar Prof. & HOD, Civil Engg.

Chairperson

Prof. B.R. Gurjar
 Professor
 Department of Civil Engineering
 IIT Roorkee, Roorkee – 247667, Uttarakhand India

Member

Prof. Arun Goel
 Professor
 Department of Civil Engineering
 NIT Kurukshetra, India

Member

 Dr Ashish Dhamaniya Associate Professor Dept. of Civil Engineering Sardar Vallabhbhai National Institute of Technology Surat, Gujarat, - 395007

Member

Er. Kapil Dutt Sharma
 Sr. Manager(Civil)/Executive Engineer
 Renukaji Dam Division -IV
 HPPCL Dadahu, District Sirmour (HP)

Member

Mr. Rijul Bajaj
 Asst. Manager, PT&DIC,
 Larsen & Toubro Ltd, Delhi Regional office, Gurgaon, India

Member

Member

 Prof. Ashok Kumar Gupta, Professor, Dept of Civil engineering

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distr. Solan (H.P.)

Dean(Academics & Research)

 Dr. Rajiv Ganguly Professor, Dept of Civil engineering Member Coodinator

 Dr. Saurabh Rawat Assistant Professor, Dept of Civil engineering Member

 Dr. Saurav Assistant Professor, Dept of Civil engineering Member

 Dr. Amardeep Assistant Professor, Dept of Civil engineering

12. Head of Department, ECE, JUIT
13. Head of Department, CSE&IT, JUIT

14. Head of Department, BT&BI, JUIT 15. Head of Department, PMS, JUIT

16. Head of Department, Mathematics, JUIT

17. Head of Department, HSS, JUIT

Member

Co-opted Member Co-opted Member Co-opted Member

Co-opted Member Co-opted Member

Co-opted Member

Yours faithfully

(Dr. Ashish Kumar)

Prof. & HOD, Civil Engg.

Encls: Approved composition of Board of Studies dated 31-10-2017

please may approve

8/11/21 DOG (ASR)

Avalor odlarow

Distt. Solan (H.P.)

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DEPARTMENT OF CIVIL ENGINEERING, JUIT

MINUTES OF MEETING

BOS, CED (16th November 2021; 3.00 PM onwards)

Prof. Ashish Kumar, HOD, Civil Engineering Department began the BOS meeting by introducing the newly added external members. The brief introduction of the following newly added external members was done:

- 1. Prof. Arun Goel, NIT Kurukshetra
- 2. Prof. B. R. Gurjar, IIT Roorkee
- 3. Dr. Ashish Dhamaniya, SVNIT Surat
- 4. Er. Kapil Dutt Sharma, Executive Engineer, HPPCL
- 5. Er. Rijul Bajaj, Assistant Manager, L&T, Gurugram

The introduction of the members and co – opted members was followed with the discussion on the proposed agendas.

Agenda 1: Proposed new curriculum of B.Tech Civil Engineering with Computer Applications.

Prof. Ashish Kumar proposed a new program of B. Tech Civil Engineering with Computer Applicationshaving a total of 160 credits for batch of 30 students with a aim of fulfilling the present day practice of Civil Engineering applications in real life such as Design of Smart Highway systems, Sensor based technology for monitoring of pollution, Cyber security of Buildings, Use of Data analysis techniques for feasibility of construction projects, Use of AI systems for predicting soil and rock properties, bearing capacity and slope stability determinations, Use of Machine Learning in identifying hydrological responses in a catchment after precipitation and many such more applications. The Programme included advance computer application-based courses from 5th semester onwards. Included an industrial training of 6 months and 12 credits in 7th semester for preparing the students for field practices. Prof. Ashish focussed on the fact that continuous monitoring of the student performance during industrial training will be done by assigning a mentor from concerned industry and host institution each. The student will also be evaluated by the conventional mid – sem and end sem project viva and report submission. He also elaborated that the electives are specifically designed for computer - based application.

Dr. B. R. Gurjar welcomed the idea of starting such a programme. He recommended to also assess the efficiency of such B. Tech programs by conducting a survey based on institution without the conduction of the c

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Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

output already running such programmes and its response from industries. Dr. Arun Goel recommended addition of courses such as AI, machine learning courses and computer based projects. He also suggested to remove MOOC courses from 7th semester so that the students can entirely focus on the industrial training. However, since the program is designed in accordance to the AICTE norms, the same was resolved. He also suggested inclusion of courses such as NCC, sports and Yoga in the first four semesters. He also advised to shift course like chemistry from 3rd sem to 1st or 2nd sem. However, the same was resolved as the first two semester courses are common to all the branches, hence no changes were possible. Bifurcation of course into theory and computer application-based labs was suggested by Dr. Ashish Dhamaniya. He also recommended that core courses such as Highway Engineering should have labs on MX Road and 3D civil in Highway Likewise for courses such as Water resources. Mr. Rijul Bajaj suggested adding electives which are entirely focussed on digitalization in construction industry like courses dealing with survey with drones, JCBs with digitalization, automation in construction industry etc. In agreement to the suggestion by Mr. Rijul, Prof. Vivek Seghal also informed about an open course which will soon be offered by CSE department, JUIT regarding digitalization of output from various industries. With the incorporation of these suggested changes the agenda 1 was approved unanimously.

Agenda 2: Modification in existing curriculum structure of B.Tech Civil EngineeringProf.Ashish Kumardiscussed the modification of introduction of Industrial Training in 7th semester substituted for Major Project (Part – I and II) so that the students are prepared as per the industry demands. He also detailed about the shifting of Elective 5 and Elective 6 from 7th semester to 8th semester. Dr. Arun Goel suggested modification of the course name 'Minor project' to be as 'Project'. With these suggested modification, Agenda 2 was approved unanimously.

Agenda 3: Enforcement of norms for Consultancy work

Prof. Ashish Kumar detailed about the enforcement of norms for Consultancy work to be takenby the department of civil engineering, JUIT. He discussed the percentage bifurcation between university and faculty for various consultancy services and the guidelines which were prepared in accordance with IIT Delhi and Thapar University. However, Dr. B. R. Gurjar recommended comparable evaluation of the suggested norms with norms as followed by IIT Roorkee for better practices. Dr. Arun Goel also agreed with the suggestion and suggested to compare and include norms of IIT Roorkee which are feasible with the present were present where the present were present which were present where the present was a present where the present were present where the present was a present where the present which were present which were present the present which were present which were present which were present the present which were present which we present which were present which we present which were present which were prese

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

university criteria. The same suggestion was also appreciated by Prof. Ashok Kumar Gupta. The norms for consultancy distribution after suggested revision were approved.

Agenda 4: Detailed syllabus of open electives to be included in B. Tech.

Prof. Ashish Kumar suggested introduction of two open electives (a) Remote Sensingand Geomatics and (b) Introduction to Sustainable Engineering and Energy EfficientBuildings in the present B. Tech curriculum. He also detailed about the course syllabus for both the courses. Dr. Arun Goel suggested replacing remote sensing with GIS. He also suggested re designing of syllabus with inclusion of topics such as Drone Technology for surveys. He insisted on changing the course name from 'Sustainable Engineering and Energy Efficient' to 'Green Technology'. However, detailing about the primary aim of introducing the open electives, Prof Ashok Kumar Gupta elaborated that the open electives should be designed such that it attracts students from other departments. Hence a broader term such as Sustainable Engineering' was recommended to make it more general. With these deliberations and incorporation of suggested modifications, Agenda 4 was also approved by all the members.

Rajiv Ganguly

Prof. Rajiv Ganguly

(BOS, Member Coordinator)

Prof. Ashish Kumar

(BOS, Chairperson)

Department of Computer Science & Engineering and Information Technology, Waknaghat

Minutes of the Meeting of BoS, November 2021

Minutes of meeting of Board of Studies in the Department of Computer Science & Engineering and Information Technology was held online through "Google Meet" on 20th November 2021, 11:00 a.m. at Jaypee University of Information Technology, Waknaghat.

RESOLUTIONS:

- It was resolved to approve the minutes of the last meeting of BoS held on 24th July, 2021.
- 2) It was resolved to approve the open elective course on "Digital Twin-Fundamental Concepts to Applications in Advanced Manufacturing" with some modifications as suggested by the external members.
- 3) It was resolved to approve the open elective course on "Affective Computing".
- 4) It was resolved to approve the proficiency elective course on "Machine Learning Engineering for Production" along with some points suggested by the members.
- 5) It was resolved to approve the modifications in the course "Python Programming Lab (18B17CI374)".
- 6) It was resolved to approve the modifications in the course "Object-Oriented Systems and Programming (18B11CI311)".
- 7) It was resolved to approve the modifications in the course description of "Object-Oriented Systems and Programming Lab (18B17CI371)".
- 8) It was resolved to approve the modifications in the course "IT Workshop Lab (18B17CI372)".

Suggestions from Internal/External Members:

- 9) It was pointed out by Prof Sunil Khah as well as the external members (Prof. Manu Sood and Prof Himanshu Aggarwal) that the course content of "Digital Twin -Fundamental Concepts to Applications in Advanced Manufacturing" is too heavy to be completed within 42 lectures. So, it was suggested by them to eliminate some contents. The suggestion was accepted and approved in the meeting. All the suggestions have been incorporated in the course description attached at Annexure-I.
- 10) It was suggested by Dr. Ravindra Bhatt and Prof. Himanshu to include a Case Study in the course "Machine Learning Engineering for Production". The suggested was accepted and approved in the meeting. The same has been incorporated in Annexure-III.
- It was suggested by Prof. Himanshu Aggarwal to complete 56 hours in all the 2 credit 11) labs. The suggestion was accepted and incorporated.
- It was suggested by Prof Shuchita Upadhyay to include some overview of using Graphics in LATEX for the course "IT Workshop Lab (18B17CI372)". The suggestion was accepted and approved in the meeting. The same has been incorporated in the course description attached at Annexure-VII (Experiment #6).
- All the agenda points were appreciated and accepted by the external member Dr. Dheeraj Chahal through email. The copy of communicated mail has been attached.

Prof. Dr. Vivek Sehgal

(HoD, CSE/IT)

MEMBERS OF BOARD OF STUDIES (NOVEMBER 2021)

Department of Computer Science & Engineering and Information Technology, Waknaghat

Chairperson: Prof. Dr. Vivek Sehgal, HoD, CSE/IT Dept.

2.	Mem	bers:

i. Dr. P. K. Gupta

Dr. Hemraj Saini ii.

Dr. Ravindra Bhatt iii.

Dr. Pardeep Kumar

Dr. Rajni Mohana

Pardeelp Kurs av. Rajni Moleva... vi. Dr. Amol Vasudeva

vii. Dr. Yugal Kumar

viii. Dr. Ekta Gandotra

Dr. Rajinder Singh Sandhu

Dr. Hari Singh X.

Dr. Jagpreet Sidhu 🧳

xii. Dr. Mrituyunjay Singh

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Waknaghat, Distt. Solan (H.P.)

Department of Electronics and Communication Engineering

JUIT Waknaghat

A meeting of the Board of Studies of the Department of Electronics and Communication Engineering was held on 18-11-2021 at 10:00 AM in online mode.

The following members were present

1.	Dr. Rajiv Kumar	Chairman
2.	Prof. D. Ghosh	External Member
3.	Prof. C.C. Tripathi	External Member
4.	Dr. Balwinder Singh	External Member
5.	Prof. Samir Dev Gupta	Professor
6.	Dr. Shruti Jain	Member Secretary
7.	Dr. Shweta Pandit	Member
8.	Dr. Salman Raju	Member
9.	Dr. Sunil Datt Sharma	Member
10.	Dr. Vikas Baghel	Member
11.	Dr. Naveen Jaglan	ECE Department
12.	Dr. Alok Kumar	ECE Department
13.	Mr. Pardeep Garg	ECE Department
14.	Mr. Munish Sood	ECE Department
15.	Mr. Anuj Maurya	ECE Department
16.	Mr. Pankaj Kumar	ECE Department
17.	Prof. Karanjeet Singh	HoD, Mathematics Department
18.	Prof. Ashish Kumar	HoD, Civil Engineering Department
19.	Prof. Vivek Sehgal	HoD, CSE & IT Department
20.	Dr. Anil Kant	Representative BT& BI Department
21.	Mr. Abhishek Kumar	Co-opted Member for online issue



Leave of absence:

Leave of absence was granted to Prof. Ashok Gupta, Dean Academics and Research by the Chairman Board of Studies.

The Chairman welcomed all the members who were present for the meeting. The meeting was thereafter deliberated by Dr. Shruti Jain on agenda items approved by the Chairman.

Item No. 1: To approve the minutes of the last meeting of the BoS held on July 23, 2021.

Dr. Shruti Jain presented the minutes of the meeting which was approved in the previous BoS.

The minutes of the previous BoS meeting were approved by the BoS members.

Item No. 2: To consider the revision in the course structure of ECE as Minor Program.

In the existing ECE minor programme, Modern analogue and Digital Communication, Advanced Communication Lab, Wireless and Data Communication and Internet of Things are proposed as compulsory courses along with Digital Electronics and Logic Design, Digital Electronics and Logic Design Lab, and Microprocessor and Interfacing. In the newly revised structure, Modern analogue and Digital Communication, Advanced Communication Lab, Wireless and Data Communication and Internet of Things are dropped as compulsory courses and in their place, electives have been introduced. These electives have been categorized into four buckets. This modification has been done by considering the feedback from the students and faculty members.

To this modification, Prof. C.C Tripathi has suggested keeping a documentary record for the reason to modify the existing curriculum as these documents can be asked / required by the rating agencies like NBA and NAAC. Also, Dr. Tripathi has suggested going for SWAYAM / MOOCs courses. Dr. Shruti said that our university also emphasises on MOOC's courses. Students can opt electives from the university or any MOOC's course.

All the changes in the minor courses were added as Annexure I.

Approved.

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

OF INFORMA

Item No. 3: To consider the addition of new Open Electives in the 8th semester in the ECE curriculum for the 2018 batch.

To improve the skill/knowledge of students depending on the market scenario, six open electives have been introduced. These, Python for Data Science and Machine Learning, Digital Image Processing using Python, Renewable Energy Systems, Biomedical Imaging System, Introduction to Graph Theory, Machine learning with its applications. To this, Prof. Samir Dev Gupta suggested introducing the courses that are not offered by other departments. Apart from this, Prof. C. C. Tripathi has suggested looking into the terminology of Honours and Proficiency degree from the perspective of AICTE. Prof. Samir Dev Gupta reminded all the members that in the ordinances of JUIT, Honours degree is awarded to students based on CGPA and Proficiency degree is different from the Honours course. Prof. C.C Tripathi suggested following the guidelines set by AICTE concerning Proficiency and Honours degrees.

After discussion three courses were removed from the list namely Python for Data Science and Machine Learning, Introduction to Graph Theory, Machine learning with its applications.

The final lists of electives are appended as *Annexure II*.

Approved

Item No. 4: To consider the change of credits of two professional electives from 3-0-0 as:

i.	Optical Communication system	2-0-0
eii.	Optical Communication system Lab	0-0-2
1	Optical Networks	2-0-0
iv.	Optical Networks Lab	0-0-2

Prof. Samir Dev Gupta suggested correlating the theory and lab with sufficient provision of hardware equipment. Prof. Tripathi suggested to have a more hardware-oriented approach to labs than experiments based on simulations and software. In view of this, Dr. Rajiv Kumar has explained that the list of experiments of Optical Communication system Lab comprises Hardware experiments and Optical Networks Lab consists of hardware & simulation based experiments.

Item No. 5: To consider the change in the course contents of Advance Communication Lab running in the 6th sem from 2019 batch onwards.

This lab has been fine-tuned with the introduction of new experiments.

The syllabus of the lab course has been approved by BoS members.

Item No. 6: Any other with permission of the chair.

Dr. Shruti Jain requested the external members to give some suggestions to improve the admissions in the ECE department. To this request, Prof. C.C Tripathi has suggested to having conversations with the parents to convince their ward to choose ECE.

The meeting concluded at 11:15 AM with a vote of thanks by **Dr. Shruti Jain**, Secretary Board of Studies.

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distr. Solan (H.P.)

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Attendance sheet of BoS held on 18-11-2021

Digital

(Prof. D.Ghosh)



(Dr. Balwinder Singh)

(Dr. Rajiv Kumar)

Dr. Salman Raju)

(Prof. C. C. Tripathi)



(Prof. Samir Dev Gupta)

(Dr. Sunil Datt Sharma)

Luck Pandit
20/11/21

(Dr. Shweta Pandit)

(Dr. Alok Kumar)

(Mr. Pankaj Kumar)



Attendance sheet of BoS held on 18-11-2021 (Prof. Karanjeet Singh, Mathematics Deptt.) (Dr. Vivek Sehgal, CSE & IT Deptt..)



JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Minutes of the meeting of Board of Studies - July 20, 2021

A meeting of the BOS members was held on July 20, 2021 at 03:00 p.m. on Google meet platform. The following were present:

1.	Dr. Anupriya Kaur, HoD HSS	Chairperson
2.	Dr. Purva Kansal	
	(Approval received via mail)	Member
3.	Mr. Balkar Singh, AGM, PEDA Chandigarh	Member
4.	Prof. Yashwant Kumar	
	Professor HPU Business School Summer Hill Shimla	Member
5.	Ms. Ana Aggarwal, Regional Business manager GSK	
	(Approval received via mail)	Member
6.	Dr. Amit Shrivastva, JUIT Waknaghat	Member
7.	Dr. Tanu Sharma, JUIT Waknaghat	Member
8.	Dr. Ashish Kumar, HOD CE, JUIT Waknaghat	Member
9.	Dr. Neena Jindal, JUIT Waknaghat	

Item 1 Nomenclature change

- English and technical Communication changed to English (2-0-0)
- English and technical communication Lab changed to English lab (0-0-2)

Approved as proposed

Item 2 Introduction of new courses

Sem2

• Life Skills & Effective Communication: Credit 2; Hours 1-0-2

Sem 3

Professional Communication Practice: Credit 0; Hours 0-0-2 (Audit Course)

Approved as proposed

Assistant Registrar (Academics)
Jaypee University of Information Technology
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OF INFORM

Item 3 Credit change IDVE

• Interpersonal Dynamics Values and Ethics (sem 3) credit change to 1-0-0

Approved as proposed

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Dr. Neena Jindal – Assistant Professor

Jour HOD HAS DEPT

Dr Anupriya Kaur - Associate Professor & Head

Dural

Prof. Purva Kansal Professor University of Business School Punjab University, Chandigarh Sh. Balkar Singh AGM(EC)

Punjab Energy Development Sciences Chandigarh

Almin

Prof. Yashwant Kumar Professor, HPU Business School Summer Hill, Shimla As Aganal.

Ms. Ana Aggarwal Regional Business Manager GSK

Unit

Dr. Amit Srivastava Associate Professor Department of HSS, JUIT Yann Shama

Dr. Tanu Sharma Associate Professor Department of HSS, JUIT

Ashisalu

Prof. Ashish
Professor & HOD
Department of Civil engineering, JUIT

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Minutes of the meeting of Board of Studies - Nov 20, 2021

An approval was sought via mail on the course outlinesfor the courses introduced in the B.Tech scheme (160 credits) 2021 as had been approved in the previous BOS held on July 20, 2021.

- 1. Life Skills and Effective Communication 1-0-0
- 2. Life Skills and Effective Communication Lab 0-0-2
- 3. Professional Communication Practice (Audit) 0-0-2

APPPROVED

Augal

Prof. Purva Kansal Professor University of Business school Punjab University, Chandigarh

Prof.Yashwant Kumar Professor, HPU Business School Summer Hill, Shimla

Dr. Amit Srivastava Associate Professor Department of HSS, JUIT Sh. Balkar Singh AGM(EC)

Punjab Energy Development Sciences Chandigarh

An Agarval.

Ms. Ana Aggarwal Regional Business Manager-GSK

Dr. Tanu Sharma Associate Professor Department of HSS,

Janu Sharma

JUIT

Dr Anupriya Kaur (Head-HSS)

Prof. Ashish Professor & HOD

Department of Civil engineering, JUIT

Assistant Registrar (Academics)
Jaypee University of Information Technology
Waknaghat, Distt. Solan (H.P.)

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MINUTES OF MEETING OF ACADEMIC COUNCIL HELD ON **29 NOVEMBER 2021**

General

Academic Council meeting of Jaypee University of Information Technology, Waknaghat was held on 29 November, 2021 at 11.00 a.m. in online mode through Google Meet. Prof. S. C. Saxena extended welcome to Prof. Rajendra Kumar Sharma, Vice Chancellor, JUITfor taking over the responsibility of Chairman - Academic Council.

The Chairman, Academic Council extended warm welcome to all the members present in the meeting and expressed thanks to outstation membersSh. Sunil Sharma, Prof. S.C. Saxena, Dr.Satish Kumar, Prof. LalitKumar Awasthi and Lt. Gen Ravindra Mohan Chadha, PVSM, AVSM (Retd.)for their presence in the meeting.

He also appreciated the contributions made by Prof. Vinod Kumar, Advisor, JUIT, the outgoing members of the Council, and welcomed the newly inducted members Prof. Rajiv Ganguly - Professor, Civil Engineering Departmentand Prof. Vivek Sehgal - Head, Computer Science & Engineering Department.

Attendance

The following members were present:-

Chairman

Prof. Rajendra Kumar Sharma

Vice Chancellor, JUIT, Waknaghat

Head of the Other Institution of the Trust

Prof. S.C. Saxena

Pro-Chancellor, JIIT, Noida

Distinguished Academician nominated by the Pro-Chancellor

Dr. Satish Kumar

Ex-Director, NIT Kurukshetra

Prof. Lalit Kumar Awasthi

Professor, NIT, Hamirpur, Ex-Director, NIT-Jalandhar

Industry Professional nominated by the Pro-Chancellor

Sh. Sunil Sharma

Executive Vice Chairman, Jaiprakash Associates Ltd.

Lt Gen Ravindra Mohan Chadha,

PVSM, AVSM (Retd.)

Director, Jaiprakash Power Ventures Ltd.

Special Invitee

Prof. Vinod Kumar

Advisor, JUIT, Waknaghat

The Dean of all Faculty of the University

Prof. Ashok Kumar Gupta

Dean (Academics& Research)

Heads of the Departments / Centres of the University

Prof. Karanjeet Singh **HoDMathematics** Prof. P. B. Barman HoDPMS Prof. Sudhir Kumar HoDBT&BI Prof. Ashish Kumar HoDCE Prof. Vivek Sehgal HoD CSE/IT **HoDECE** Dr. Rajiv Kumar Dr. Anupriya Kaur

HoDHSS

MINUTES - ACADEMIC COUNCIL - 29 NOVEMBER 2021

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Professors other than Heads of Departments

Prof. Sunil Kumar Khah

Deptt. ofPMS

Prof. Rajiv Ganguly

Deptt. Of CE

Non-Member Secretary

Maj Gen Rakesh Bassi, SM (Retd.)

Registrar and Dean of Students

Leave of Absence, if any

All members were present.

Agenda Items

ITEM NO.1/2021

CONFIRMATION OF MINUTES OF LAST MEETING OF THE ACADEMIC COUNCIL

-2

Minutes of the meeting of the last ACM held on 28 July 2021 were forwarded to the members and no comments were received. The minutes of the last ACM as per Annexure – I were confirmed.

ITEM NO. ACTION TAKEN REPORT ON THE MINUTES OF THE MEETING OF THE LAST ACADEMIC COUNCIL HELD ON 28 JULY 2021

The actions taken on the items approved in the last ACM dated 28 July 2021 were noted by the members.

ITEM NO. APPROVAL FOR CHANGE IN ELIGIBILITY CRITERIA FOR ADMISSION TO 3/2021-2 BTECH -2^{ND} YEAR THROUGH LATERAL ENTRY (DIPLOMA HOLDERS)

Students having 03 years Diploma in the same branch or relevant branches of Engineering are offered a seat to BTech -2^{nd} Year program through lateral entry in the same specialization. However, AICTE allows lateral entry admission to BTech -2^{nd} year program from multidisciplinary specializations. The relevant extract of AICTE Handbook -2021-22 is attached at Annexure -2.

The item was placed before the members of the Academic Council to broaden our pool of candidates by modifications in the entry level eligibility criteria as per AICTE guidelines as under;-

Admission Branch	Existing Eligibility	Proposed Eligibility
BTech - CSE BTech - IT	Diploma in CSE / IT	Diploma in CSE / IT or in a relevant discipline.
BTech - ECE	Diploma in ECE / EE	Diploma in ECE / EE or in a relevant discipline.
BTech – CE	Diploma in CE	Diploma in Civil Engg. or in a relevant discipline.
BTech – ECM		Diploma in ECE / IT / CSE / EE or in a relevant discipline

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Jaypee University of Information Technology
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Council was of the opinion that Chairman Academic Council can constitute a committee every year before start of the admission process for finalizing entry level qualifications for admissionsduring that particular Academic Year other than the above approved eligibility criteria.

Academic Council considered the proposed modifications in the entry level eligibility criteria and approved the same.

ITEM NO. APPROVAL FOR CALCULATING SGPA and CGPA UPTO 02 DECIMAL 4/2021-2 PLACES

SGPA and CGPA is being shown in the Grade-Sheet / Transcript / Provisional Degree Certificate up to 01 Decimal place. The need of awarding SGPA and CGPA up to 02 decimal points was felt as all other Universities / Institutions are awarding SGPA and CGPA up to 02 decimal places. This will also help in deciding the merit of the students in case of a tie while awarding Certification / Medals etc. The item was placed before the members of the council for consideration.

After deliberations on the item, members unanimously agreed to the proposal and approved the item.

ITEM NO. APPROVAL FOR LIST OF EXPERTS FOR CONDUCTING INTERVIEWS OF 5/2021-2 THE FACULTY POSITIONS OF VARIOUS DEPARTMENTS

Lists of Experts for conducting interviews for the faculty positions of various departments were placed before the Academic Council for its approval.

The proposed list of subject experts for departments mentioned below are as per Annexure mentioned against each department:-

Deptt. of BT/BI - Annexure - 3
Deptt. of CSE / IT - Annexure - 4
Deptt. of PMS- Annexure - 5
Deptt. of HSS - Annexure - 6

The Academic Council considered the proposed list of the subject experts and approved the same.

ITEM NO. APPROVAL FOR DEDICATED ADMISSION CELL MANNED BY DEDICATED 6/2021-2 STAFF

Considering round the year Admission activities, the need for manning of the admission cell round the year by dedicated staff was felt in order to make the Admission Cell more responsive to candidates as in turn help in achieving targeted admissions. The dedicated team will plan the admission activities like advertisement, participation in Education Expos, conduct of School / Polytechnic outreach programs and attending admission related queries of the admission aspirants.

Accordingly, manning of Admission Cell by two dedicated staff was proposed for the approval of the Academic Council.

Members of the Council were of the opinion that this proposal was an administrative

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matter and as such approval be accorded by the Vice-Chancellor after consent of appropriate authority.

ITEM NO. NOTING OF THE MINUTES OF MEETING OF BOARD OF STUDIES (BoS) OF 7/2021-2 VARIOUS DEPARTMENTS

- 7.1 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Biotechnology and Bioinformatics held on 17.11.2021 as given in Annexure 7 and noted the contents.
- 7.2 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Computer Science & Engineering held on 20.11.2021 as given in Annexure 8 and noted the contents.
- 7.3 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Electronics & Communication Engineering held on 18.11.2021 as given in Annexure 9 and noted the contents.

Prof. S.C. Saxena suggested some amendments in the Annexure -9 - Item No. 02 "To consider revision in the Course Structure of ECE as Minor Program".

Annexure – I "Slight Modification in Minor Degree in ECE" – Prof. Saxena suggested that the proposal restricted the choice to students in the Minor specialization and more flexibility needs to be given to the students for earning additional 20 credits towards minor specialization. The item needs to be reviewed and decided forfurther deliberations. The item was deferred for next council meeting.

7.4 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Civil Engineering held on 16.11.2021 as given in Annexure – 10 and noted the contents.

Prof. S. C. Saxena gave his observations on Agenda Item 2 of the Annexure – 10 and emphasised that the basic structure of the program should not be changed but courses as per the need of the specialization be included. The item was deferred for next council meeting.

Chairman — Academic Council brought forward the need for Internship Embedded Degree Program and the existing system of internship by the students in their final year who have been selected in some companies and are attending condensed semester due to internship in the selected company. The pool of such students should be increased so that students get opportunity of internship in the chosen area / company.

Prof. Saxena advised that internship embedded degree programs have various implications and this should be well planned, monitored and mentored way before consideration.

7.5 Academic Council considered the Minutes of Board of Studies (BoS) of Department of Humanities & Social Sciences held on 20,11,2021 as given in Annexure – 11 and noted the contents.

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ITEM NO. APPROVAL FOR INTRODUCTION OF NEW PROGRAMMES / COURSES OF VARIOUS DEPARTMENTS

8.1 APPROVAL FOR INTRODUCTION OF NEW UNDERGRADUATE PROGRAMME – BTECH (CIVIL ENGINEERING WITH COMPUTER APPLICATION)

Considering the rapid advances in the field of Computer Science, the present practice of Civil Engineering applications in real life include Design of Smart Highway System, Sensor based technology for monitoring of pollution, Cyber Security of Buildings, Use of Data analysis techniques for feasibility of construction projects, Use of AI systems for predicting soil and rock property, bearing capacity and slope stability determination. The need for incorporating latest computer based applications with Civil Engineering is in vogue. The proposed nomenclature of the Program is approved by the AICTE and included in the AICTE Handbook – 2021-22 (Copy of the relevant page of AICTE Handbook is at Annexure – 12).

Accordingly, Department of Civil Engineering proposed introduction of New Undergraduate BTech in Civil Engineering with Computer Application with a sanctioned intake of 30 seats to the program from the Academic Session 2022-23 for approval of the Academic Council. The proposed Course Scheme of the Program is as per Annexure – 13.

The proposal was well appreciated but Prof. S.C. Saxena suggested that before introduction of a new program, there is a need to work on the demand of the program, admission status in other institutions and placement status of the program.

Prof. Satish Kumar was in support of the concept of Computer Application embedded degree program with Civil Engineering and suggested for inclusion of courses related to Autocad, Finite Element Methods, Building Design, Structural Analysis of the Buildings, Roads and Bridges. He requested Prof. Ashok Kumar Gupta to analyse above factors before the introduction of a new program. It was decided that a detailed analysis of above factors be sent to Prof. Saxena for review at his level.

The item was deferred and to be considered in the next meeting of the Academic Council.

8.2 APPROVAL FOR INTRODUCTION OF NEW PROFESSIONAL ELECTIVE – DEPTT. OF COMPUTER SC & ENGG. AND INFORMATION TECHNOLOGY

Department of Computer Science & Engineering and Information Technology through its BoS held on 20.11.2021 recommended for introduction of new Professional Elective as under:-

1	Professional	Moduca	
1	ri to tessionar	Machine Learning Engineering for Production	3-0-0
l	Elective – VI	Production	
395			

The approved course content is as per Annexure – 14. The above change is proposed to be effective from 2021-22 admission batch.

Members considered the recommendation of the departmental BoS and approved introduction of proposed Professional Elective – VI.

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ITEM NO. APPROVAL FOR CHANGE/MODIFICATION IN SCHEME OF COURSES OF 9/2021-2 VARIOUS DEPARTMENTS

9.1 APPROVAL FOR MODIFICATION IN COURSE SCHEME OF BTECH (CIVIL ENGINEERING)

Industrial Training enables the students to work on real life projects, increase familiarity with current market trends, improve their existing technical skills and learn in-demand technical skills. Industrial Training provides an adequate platform to the students for experiencing corporate work culture, teachings about professional ethics and also improves communication and interpersonal skills.

Considering all above, Department of Civil Engineering through its BoS held on 16.11.2021 recommended for modification in Course Scheme of BTech (Civil Engineering) Program for approval of the Academic Council. The modified Course Scheme of the Program is as per Annexure – 15.

The item was considered by the Academic Council and it was decided that this proposal required further deliberations as it involves major structural changes in the Course Structure.

The item was deferred and can be included in the next meeting of the Academic Council with deliberated facts and figures.

9.2 APPROVAL FOR MODIFICATION IN COURSE SCHEME OF BTECH (BIOINFORMATICS)

Considering the demand of computer related streams and thereby employability of the students, Department of Biotechnology & Bioinformatics proposed for modification of Course Scheme of BTech (Bioinformatics) program by including courses on Information Science, Data Science, Artificial Intelligence, Machine Learning. The item was placed for getting in principal approval of the Academic Council before restructure of the Course Scheme of the program.

Academic Council considered the item and Prof. S.C. Saxena suggested that BTech Bioinformatics Program should have at least 50% computer oriented courses in the Course Scheme.

Council agreed for restructuring of the Course Scheme of BTech Bioinformatics and was of the opinion that BTech Bioinformatics program should be more attractive than BTech Biotechnology program.

9.3 APPROVAL FOR MODIFICATION IN COURSE SCHEME OF BTECH – ELECTRONICS & COMM. ENGINEERING - MINOR PROGRAM

Departmental BoS of Electronics & Communication Engineering during the meeting held on 18.11.2021 recommended for modification in the Course Scheme of BTech ECE Minor Program. The proposed modification is as per **Annexure** – 16.

The item was considered and it was decided to consider the item in next meeting of the Council after intense deliberations on the item.

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9.4 APPROVAL FOR CHANGE IN CREDITS OF PROFESSIONAL ELECTIVES / INTRODUCTION OF TWO NEW LAB COURSES – DEPTT. OF ELECTRONICS & COMMUNICATION ENGG

Departmental BoS of Electronics & Communication Engineering during the meeting held on 18.11.2021 recommended for introduction of two new Lab Courses for Professional Elective Courses. The proposed modification in Professional Electives are as under:-

Optical Communication System	(02 Credits)	(2-0-0) Revised Credits
Optical Communication System Lab	(01 Credit)	(0-0-2) New to be introduced
Optical Networks	(02 Credits)	(2-0-0) Revised Credits
Optical Networks Lab	(01 Credit)	(0-0-2) New to be introduced

The approved course contents of the courses are as per Annexure – 17. The above changes are proposed to be effective from 2021-22 admission batch.

The item was considered and council approved above modification in the Professional Electives with inclusion of two new labs.

ITEM NO. APPROVAL FOR ADDITION OF OPEN ELECTIVES BY VARIOUS 10/2021-2 DEPARTMENTS

Various Departments at JUIT proposed for offering new State-of-Art Open Electives. The details of proposed Open Electives are as under:-

Deptt.	Open Elective	Credit	Course Contents	
CE	Remote Sensing and Geomatics	3	As per Annexure - 18	
	Introduction of Sustainable Engineering and Energy Efficient Buildings	3		
ECE	Digital Image Processing using Python	3	As per Annexure - 19	
	Renewable Energy Systems	3		
	Biomedical Imaging System	3		
CSE/IT	Digital Twin – Fundamental Concepts of Application in Advanced Manufacturing	3	As per Annexure - 20	
	Affective Computing	3		
BT/BI	Human Disease and Diagnostics	3	As per Annexure - 21	
	Computational Biology For Engineers	3		
PMS	Computational Nanostructures & Nanotechnology	3	To be developed.	
	Bio-Sensors	3		
MATHS 🛦	Soft Computing and Optimization Algorithms	3	To be developed.	
	Linear Algebra for Data Science and Machine Learning	3		
HSS	Digital Product Management	3	To be developed.	
	Investment Analysis and Portfolio Management	3		

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Prof. S.C. Saxena suggested that Electives are optional courses and these should not have a pre-requisite course. The approved course contents of the courses are as per Annexure mentioned against each.

The item was approved with a modification of removing the pre-requisite criterion.

ITEM NO. SEAT RATIFICATION FOR ACADEMIC SESSION 2022-23 11/2021-2

Sanctioned strength for various courses for the Academic Session – 2022-23 was proposed for approval of the Academic Council as under:-

Undergraduate Programs (BTech)	
Program	Approved Intake for AS-2022-23
Computer Science & Engineering	360
Information Technology	60
Civil Engineering	30
Civil Engineering with Computer Application	30
Biotechnology	30
Bioinformatics	30
Electronics & Communication Engineering	30
Electronics & Computer Engineering	30
Total	600

Post Graduate Programs (MSc)	
Program	Approved Intake for AS-2022-23
Biotechnology	30
Microbiology	30
Total	60

Post Graduate Programs (MTech)	
Program	Approved Intake for AS-2022-23
Computer Science & Engineering (CSE) CSE with specialisation in Information Security CSE with specialisation in Data Science	
Electronics & Communication Engineering (ECE) ECE with specialisation in Internet of Things	
Biotechnology	-18
Construction Management Structural Engineering Environmental Engineering	
Total	72

Note: PG Program (MTech) seat intake for each department will be 18 seats. A program will run with 5 or more students only.

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Doctoral Programs (PhD)	
Program	Approved Intake for AS-2022-23
Computer Science & Engineering	
Civil Engineering	
Biotechnology	Seats subject to availability of
Bioinformatics	Supervisor in each department.
Electronics & Communication Engg	
Mathematics	
Physics & Materials Science	
Humanities & Social Sciences	

After deliberations, Academic Council approved above sanctioned intake for the Academic Session 2022-23.

ITEM NO. REPORTING ITEMS. 12/2021-2

The following Reporting Items were noted by the Academic Council:-

12.1 APPROVAL FOR CONDUCT OF T3 EXAM (FOR STUDENTS OTHER THAN NEW ADMISSIONS) / END TERM EXAM (FOR NEWLY ADMITTED STUDENTS) IN PAPER / PEN MODE

Chairman Academic Council apprised the members about the decision taken for conduct of T3 Final Exam (for students other than new admission) and End Term Exam (for newly admitted students) in Paper / Pen Mode. Schedule of Examination is as under:-

2 nd Year Students	-	07-11 December 2021
3 rd Year Students	2	14-20 December 2021
4 th Year Students	-	23-27 December 2021
1st Year Students		02-08 February 2022

Copy of the approval is as per Annexure -22.

12.2 CHANGE IN EVALUATION SCHEME OF NEWLY ADMITTED FIRST SEMESTER STUDENTS OF BTECH, MTECH, MSC & PHD – ADMITTED IN ACADEMIC SESSION 2021-22

Chairman Academic Council apprised the members about the change in Evaluation Scheme of newly admitted First Semester students due to long ongoing admission process for the Academic Year – 2021-22 as admissions are allowed up to 30 November 2021 as per revised admission calendar announced by AICTE dated 25.10.2021. Copy of the same is as per Annexure - 23. The approved evaluation scheme is as under:-

Theory Courses:

Mid-Term Examination	3	30 Marks
End-Term Examination	-	45 Marks
Teacher's Assessment	-	25 Marks

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Practical Courses:

Mid-Term Viva-Voce Examination (P1)	20 Marks
End-Term Viva-Voce Examination (P2)	20 Marks
Teacher's Assessment (P3)	60 Marks

Copy of the approval is as per Annexure - 24.

Prof. Saxena suggested that this practice of change in evaluation system should not be repeated as regulatory bodies are stressing on continuous evaluation process.

12.3 EARNING / TRANSFER OF CREDITS – UNIVERSITY OF FLORIDA (UFL), USA

Members were apprised of the decision taken for earning / transfer of credits for students attending University of Florida (UFL), USA in the last semester as communicated by Dr. Vikas Saxena of JIIT Noida vide e-mail dated 10.09.2021 (Copy placed at Annexure – 25). As per the decision, the following has been implemented:-

- Students registering for 8th semester studies at UFL will take up total 12 credits irrespective of branch specialization and the same will be transferred / equated to the 8th semester credit requirement of the specialized branch i.e. CSE/IT/ECE.
- the 8th semester credit requirement of the specialized branch i.e. CSE/IT/ECE.

 2. The balance credits of 8th Semester, if any irrespective to the specialization will be added to the Projects credits of the specialization.

Copy of the approval by Chairman - Academic Council is as per Annexure - 26.

12.4 DEGREE FORMAT - MSC (BIOTECHNOLOGY) PROGRAM

Members were apprised of the approved Degree format for MSc (Biotechnology) Program. Copy of the approval and approved Degree Format is as per Annexure – 27.

12.5 ADMISSION STATUS - ACADEMIC SESSION 2021-22

Members were apprised of the admission status for the Academic Session 2021-22 as on 27.11,2021. The sanctioned strength vis-a-vis admission status as on 27.11.2021 is as under:-

UG Programs (BTech)	Sanctioned	Admitted
Computer Sc. &Engg.	330	309
Information Technology	60	47
Electronics & Comm. Engg.	30	11
Electronics & Computer Engg.	30	16
Civil Engineering	60	12
Biotechnology	30	13
Bioinformatics	30	09
Total	570	417

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PG Programs (MTech)	Sanctioned	Admitted
Computer Science & Engineering	12	
CSE (Information Security)	12	
CSE (Data Science)	12	
Electronics & Communication Engineering	12	
ECE (Internet of Things)	12	06
Biotechnology	12	07
BT (Industrial Biotechnology)	12	
BT (Medical Biotechnology)	12	e de la Propie
Civil (Construction Management)	12	
Civil (Structural Engineering)	12	06
Civil (Environmental Engineering)	12	•
Total	132	19

PG Programs (MSc)	Sanctioned	Admitted
Biotechnology	30	26
Microbiology	30	09
Total	60	35

Doctoral Programs (PhD)	Sanctioned	Admitted
Computer Science & Engineering		07
Civil Engineering		06
Biotechnology		01
Bioinformatics		01
Electronics & Communication Engg	7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	05
Mathematics		01
Physics & Materials Science		02
Humanities & Social Sciences		02
Total		25

12.6 COURSE CONTENTS OF ALREADY APPROVED COURSES OF DEPTT. OF HUMANITIES & SOCIAL SCIENCES

Chairman apprised the members about the approval of Course Contents of following courses of Humanities & Social Sciences through its BoS held on 20,11,2021;-

- Life Skills and Effective Communication (1-0-0) (21B11HS211)
- Life Skills and Effective Communication Lab (0-0-2) (21B17HS271)
- Professional Communication Practice (Audit) (0-0-2)(21B11HS311)

The approved course contents of the courses are as per Annexure -28.

12.7 MODIFICATION IN ALREADY APPROVED COURSE CONTENTS OF COURSES OF DEPTT. OF COMPUTER SC. & ENGINEERING AND INFORMATION TECHNOLOGY

Chairman apprised the members about the approval for modification in Courses Contents of following courses of Computer Science & Engineering and Information Technology through its BoS held on 20.11.2021:-

- Python Programming Lab (18B17C1374)
- Object Oriented Systems and Programming (18B11C1311)

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(Established under HP Legislative Assembly Act No. 14 of 2002 and UGC Section 2(f) Approved)

- Object Oriented Systems and Programming Lab (18B17C1371)
- IT Workshop Lab (18B17Cl372)

The approved course contents of the courses are as per Annexure - 29. The above modification will be effective from the batch admitted in 2021-22.

MODIFICATION IN COURSE CONTENTS OF ALREADY APPROVED 12.8 COURSE OF DEPTT, OF ELECTRONICS & COMMUNICATION ENGG

Chairman apprised the members for modifications in course contents of already approved course of Deptt, of Electronics & Communication Engg as approved by the BoS held on 18.11.2021.

The modified course content of Advance Communication Lab (18B17EC673) is as per Annexure - 30.

PLACEMENT CALENDAR 12.9

Members were apprised of the activities planned for students in their 2nd& 3rd year of studies to improve the campus placements.. Placement Calendar has been designed which includes training on personality development, communication skills & resume building, group discussions, aptitude training and mock interview sessions. The approved Placement Calendar is as per Annexure - 31. Lt Gen RM Chadha, PVSM, AVSM (Retd) suggested that he would like to speak to students of the passout batch going for placements. Chairman informed that as and when JUIT opens up for On Campus student activity for final year students in full we shall arrange for the meeting.

ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR ITEM NO. 13/2021-2

OPENING OF UNIVERSITY FOR THE NEXT SEMESTER 13.1

The issue of mode of opening of the University for the next semester was also discussed and Academic Council was of the opinion that JUIT should wait for the Govt directives in this regard especially in view of the new COVID variant "Omicron".

There being no other point, meeting ended with a vote of thanks to the Chair.

(Maj Gen Rakesh Bassi, SM (Retd)) Registrar & Non-Member Secretary

Confirmed

(Prof Rajendra Kumar Sharma) Chairman, Academic Council&

Vice-Chancellor, JUIT, W

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