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Curricugum

















15<sup>th</sup> - 16<sup>th</sup> October 2018

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# Objective

- To institutionalize and standardize the process of curriculum revamp on an intermittent basis. Align the curriculum and pedagogy with the requirements/needs of internal and external stakeholders
- To take continuous feedback from various stakeholders through formal and informal channels.
- To curate the curriculum based on the feedback and market requirements
- To set aside the anomalies, redundancies and inconsistencies in the existing curriculum. Brainstorm and ideate, to bring renewed designs for curriculum revamping.

All internal stakeholders i.e. Departments, Faculty members, Students participated and contributed with enthusiasm. External stakeholders like Academic Leaders, Policy Makers , Industry Experts and Alumni came together, they gave valuable inputs and ideas in this two day academic endeavor. The activity went off commendably as a thoughtful balance of putting together the statutory requirements, students' needs, industry expectations and MUJ strengths. A roadmap for futuristic and visionary 'Dream Curriculum' was formulated.



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## Inaugural Address



### Dr K. Ramnarayan, Chairperson, Manipal University Jaipur

Curriculum is summation of all the learning experiences of the students during their stay at University. A curriculum acts invisibly in shaping the future of the students. This conclave offers an opportunity to brainstorm over the 'design' of our future curriculum, to enhance our students' learning. The objective of this conclave is to restructure the current curriculum; and moving from "JUST IN CASE " approach to "JUST IN TIME" learning approach. We need to provide new-learnings to our students so that they can utilize their gained and experienced knowledge in all the walks of life, at all the times. And this curriculum revamp must be a continuous and frequent activity to be done regularly, to assess and monitor the learning outcomes. Our approach needs to be changed from Top-Down Approach to Bottom-Up Approach, as today's learner is well capable to decide his own learning needs. While finalizing the new curriculum, we must also try to incorporate 'fun-factor' to make learning joyful, prominent, and permanent for our students.

## Overview of Curriculum conclave



### Dr GK Prabhu, President , Manipal University Jaipur

Manipal group is known for innovations in the field of education and a vital step in that was the 'Curriculum Conclave' initiative taken up in 2010. Shaping students is akin to sculpting an idol. Students are shaped for the future by the teachers through various academic processes and learning tools envisaged in a curriculum. Thus, designing a curriculum becomes essential, so that students and faculty are working according to a 'plan' to achieve their respective goals. An ideal curriculum must be competent, relevant, and flexible and must offer an unbiased, transparent evaluation. To achieve a 'Dream Curriculum' the inputs of major stakeholders are of utmost importance

# Welcome Address



### Dr. NN Sharma, Pro President, , Manipal University Jaipur

Curriculum conclave offers a platform to debate, discuss and adopt a robust curriculum for transforming our students into future professionals. Education system needs to be made seamless both in content and pedagogy, through a strong curriculum. An updated and market/socially oriented curriculum in turn will help in preparing students to serve both industry and society in a better manner.









Guest for the day **Prof. M.P. Poonia Vice Chairman, AICTE** 

**Prof. A.K. Tiwari Vice President,** UltraTech Cement Ltd.

**Prof. Manoj Singh Gaur,** Director, IIT Jammu



Faculty of Engineering Faculty of Sciences

### Prof. M.P. Poonia Vice Chairman, AICTE

Curriculum revamp is an essential part of academic growth. AICTE needs suggestions from established leading Universities like MUJ, MAHE in preparing new model curriculum. This will help AICTE to utilize the same for improving the quality of education and its outcome for other institutions across the country. Any model curriculum must focus on both Soft infrastructure- teaching-learning part, and Hard infrastructure- Building, Laboratory, Workshop, etc. According to the data that is available to AICTE there was an approved intake of 35.5 lakhs in the academic year 2017-18. A total of 18.9 lakhs students were admitted in institutes across India. Out of which 13.4 lakh students passed in year 2017-18 but only 6.5 lakh students were placed.

The current placement status makes us re-think our strategies and proper grooming of students is required to make them ready for the market. The focus must be on training Hands (Skill), Head (Application) and Heart (Societal Implication) and an appropriate balance among the three. Theoretical knowledge is good but it is not getting connected with the requirements of the industry. The current system focuses on just remembering, but not on the practical/application aspect. The present curriculum is heavily loaded, but with little room for out of the box and creative thinking. ACITE have reduced total credits from 220 to 160 for the future engineering graduates. The effort is to nurture creative thinking, real solutions, decision making and industry readiness. A simple marks sheet (i.e. CGPA) showing the grades is not important for industry. What matters is an appropriate blend of skills pertaining to technical, emotional and social aspects.

S. No.	Course	Credits
1	Humanities and Social Sciences including Management	12
2	Basic Sciences	25
3	Engineering Sciences including workshop, drawing, basics of electri- cal/mechanical/computer, etc.	24
4	Professional core subjects	48
5	Professional Subjects- Electives relevant to chosen specialization/ branch	18
6	Open subjects – Electives from other technical and /or emerging subjects	18
7	Project work, seminar and internship in industry or elsewhere	15
8	Mandatory Courses	Non-credit
	[Induction Training, Indian Constitution, Essence of Indian Tradition- al Knowledge]	
	Total	160

### Internship reforms

S. No.	Time		Duratio	า		Credits/ hours
	Degree	Diploma	Degree	Diplo- ma	Activities	
1	During Sum- mer vacations after 2nd Semester	During Sum- mer vaca- tions after 2nd Semes- ter	4-6 weeks	3-4 weeks	Institutional Work- shop/ Practical Training	Degree 14credits (600 -700 hrs.)
2	During Sum- mer vacations after 4th Semester	During Sum- mer vaca- tions after 4th Semester	4-6 weeks	4-6 weeks	Internship/Training with Industry/ Govt. / NGO/ Institutions	
3	During Sum- mer vacations after 6th Semester	6th Semester	6-8 weeks	3-4 weeks	Internship/Training with Industry/ Govt. / NGO / Start-up/ en- trepreneurial activities Project work etc.	Diploma 10cradits (300-500 hrs.)
4	8th Semester		_	NA	Project work, Seminar (excluding credits for Advanced Courses)	



Curriculum conclave | page 13

### **Salient Features of New Model Curriculum**

The new model curriculum introduces an Induction Program for engineers at the very beginning of the course. The program will focus on Physical activity, Creative Arts, Universal Human Values, Literary tastes, Proficiency Modules, Lectures by Eminent People, Visits to local Areas and Familiarization to Dept. Branch & Innovations.

It encourages Innovation and Research with the establishment of Virtual Laboratories. To diversify the curriculum and hence broaden the spectrum of knowledge courses on Constitution of India, Environment Science/Engineering and Essence of Indian Traditional Knowledge are also included. Practical learning is a lifelong learning and as such focus is on better 'Hands -on experience'. This will encourages problem solving approach. As we are moving toward an age of 'multi-disciplinary' studies, flexibility in different engineering disciplines is offered. Now onwards, 'Summer Internship' is made mandatory.

### **Focus Areas**

To keep pace with the changing times there are certain thrust areas like Genetics, Artificial Intelligence, Robotics, Nanotechnology, 3D Printing and Biotechnology. Students will find these courses challenging as well as interesting.



### Prof. A.K. Tiwari Vice President, UltraTech Cement Ltd.

The current generation of students looks up to teachers with great expectations and as teachers it is our duty to live up to their expectations. There is a huge gap between the expected outcome of a course and what is being taught in the classrooms. The difference between industry requirements and curriculum is as stark as it was earlier. There are hardly any efforts made in the direction to bridge the gaps yet.

Undergraduate courses must focus more on skill development as desired by the industry. While research can be the focus of attention during Masters Programs as a specialization. Another key area of attention can be communication skills of the students. Competent teachers must be teaching students how to tackle a plethora of situations- both verbal and written. Apart from this a certain component of learning can also focus upon 'informal' learning.







### **B.Tech. COMPUTER SCIENCE ENGINEERING**

### BACHELOR OF TECHNOLOGY- COMPUTER SCIENCE ENGINEERING DURATION- 4 YEARS

S.No	<b>Current Schem</b>	e	Proposed Scheme	e	Remarks	
	Heads	Credits	Heads	Credits	(Faculty Vision)	
1.	Core Courses	85	Core Courses	87	•Curriculum Designed in Consultation with Industry	
2.	Program Elective	-	Program Elective		Experts, Academic Experts and Experienced Senior	
3.	Open Elective	12	Open Elective	9	Department.	
4.	Humanities Courses	14	Humanities Courses	12	<ul> <li>Students to be given flexibility in choosing Program Electives offered at school level.</li> <li>One entire semester for project work.</li> <li>Motivation towards credit based curriculum</li> </ul>	
5.	Engineering Science	24	Engineering Science	20		
6.	Basic Science	26	Basic Science	26		
7.	Project Work & Seminar	15	Project Work & Seminar	15		
Total Credits	176		169			
Program Elective Courses	Operating Systems and Virtualization, Networks and Cyber Security, Web Technol- ogies, Embedded Systems and IOT, High Performance (Scientific) Computing, Data Analytics, AI and Soft Computing, Image Processing and Computer Vision, Software Engineering and Project Management.					
Open Elective Courses Offered	Object Orientec ming, Web Tech ty, Android Proc Data Mining.	l Program nologies, gramming	ming using Java (III Soft Computing Teo & App Developme	Semester), chniques, li nt, Databas	, Basics of Linux Program- ntroduction to Cyber Securi- ses and ERP, Introduction to	

### **Student Insight**

Student Representatives: Bharath Reddy, Ebbey Thomas, Aishwarya Murali , Yashovardhan Lakshay and Abhishek

- To incorporate Python and more courses on Machine Learning (ML).
- More focus on ML computation as per industry needs.
- Awareness programs related to current industry practices to be included from 1st year.

### **B.Tech. COMPUTER AND COMMUNICATION ENGINEERING**

BACHELOR OF TECHNOLOGY- COMPUTER AND COMMUNICATION ENGINEERING DURATION- 4 YEARS

S.No	Current Schem	e	Proposed Scheme	2	Remarks	
	Heads	Credits	Heads	Credits	(Faculty Vision)	
1.	Core Courses	85	Core Courses	87	•Providing more time to stu- dents for informal learning.	
2.	Program Elec- tive		Program Elective		•Program core courses to be covered up to 3rd year.	
3.	Open Elective	12	Open Elective	9	•More focus on developing specializations in the later phase of the program.	
4.	Humanities Courses	14	Humanities Courses	12	<ul> <li>Specializations aligned to keep pace with industry</li> </ul>	
5.	Engineering Science	24	Engineering Science	20	requirements. •Inter-disciplinary exposure through Open Electives	
6.	Basic Science	26	Basic Science	26		
7.	Project Work & Seminar	15	Project Work & Seminar	15		
Total Credits	176		169	1		
Program Elective Courses	Operating Systems and virtualization, Networks and Cyber Security, Web Technol- ogies, Embedded Systems and IOT, High Performance (Scientific) Computing, Data Analytics, AI and Soft Computing, Image Processing and Computer Vision, Geomatics and Remote Sensing, Software Engineering and Project Management, Principles of Web Services, Embedded Systems, Networks on Chip, Advance Internet Technol- ogies, Human Computer Interaction, Wireless Sensors and Adhoc Networks, Web Technologies, Internet of Things, Distributed Systems.					
Open Elective Courses Offered	Introduction to Computing Tec	Web Tech hniques.	nologies, Open Sou	rce Techno	ology, Software Testing, Soft	

### **Student Insight**

Student Representatives: Saumya Pandey

- MOOC course to be considered for credits.
- Programming in Python to be included as a core course.
- Minor specialization from 4th year.
- Credit should be allotted to encourage students to gain expertise.
- Credits should be reduced to give more time for informal learning.

### **B.Tech.** - ELECTRICAL AND ELECTRONICS ENGINEERING

### BACHELOR OF TECHNOLOGY- ELECTRICAL AND ELECTRONICS ENGINEERING DURATION- 4 YEARS

S.No	Current Scheme		Proposed Scheme	2	Remarks	
	Heads	Credits	Heads	Credits	(Faculty Vision)	
1.	Core Courses	87	Core Courses	87	•Curriculum is designed with emphasis to develop knowl- edge base of students in line	
2.	Program Elec- tive		Program Elective		with Current technological Industry Demands.	
3.	Open Elective	12	Open Elective	9	basics kills and knowledge related to core Electrical & Electronics stream and other	
4.	Humanities Courses	13	Humanities Courses	12	<ul> <li>interdisciplinary areas.</li> <li>Curriculum will emphasize on Skill Based Learning of students and will help for better employability.</li> <li>Detailed contents of each course will be prepared taking feedback and sugges- tions of Leading Industry and</li> </ul>	
5.	Engineering Science	24	Engineering Science	20		
6.	Basic Science	26	Basic Science	26		
7.	Project Work & Seminar	14	Project Work & Seminar	15	Academic persons in relation with current technology requirements.	
Total Credits	176		169		•Minor project included in 6th semester	
					•Project work for B.Tech hon- ors students is proposed.	
					•Minor specialization on Elec- trical Vehicle Technology and Renewable Energy Sources	
Program Elective Courses	Computer Networks, Control System Design, Data Analytics, Data structures & Algo- rithms, Database Management Systems, Digital System Design using Verilog, Electro- magnetic Field Theory, Energy Auditing, HVDC & FACTS, Modern Power Converters, Solid State Drives, Power Quality Issues, Object Oriented Programming					

Open	Open Electives, Energy Auditing, Introduction to Lighting Design, MATLAB for Engi-
Elective	neers, Solar Photovoltaics, Electric Vehicle Technology
Courses	
Offered	

### **Student Insight**

Student Representatives: Garima Patel , Janvee Menghrajani, Lucky Singh Dhaker, Jay Cheheda, Deepraj Bedi, Tawish Jain, Advaith T

- Inclusion of few courses as per industry demands and proper mentoring should be done.
- Basic Electrical workshop in B.Tech 1st year should be introduced.
- More emphasis on electronics subjects
- Increased use of MATLAB and its practical
- Project in each semester should be included.
- Revision of subjects
- Need to add sub- electric vehicles, industrial automation, matlab, microprocessor with microcontroller courses.

Inter-department minor projects should be emphasized on

### **B.Tech.** - ELECTRONICS AND COMMUNICATION ENGINEERING

### BACHELOR OF TECHNOLOGY- ELECTRONICS AND COMMUNICATION ENGINEERING DURATION- 4 YEARS

		-				
S.No	Current Schem	e	Proposed Scheme	9	Remarks	
	Heads	Credits	Heads	Credits	(Faculty Vision)	
1.	Core Courses	87	Core Courses	87	• Research Activities with the Teaching-Learning process	
2.	Program Elec- tive		Program Elective		• To meet the growing chal- lenges of Industry	
3.	Open Elective	12	Open Elective	9	standards of Professional Ethics	
4.	Humanities Courses	13	Humanities Courses	12	• To mitigate existing indus- try-academia gap	
					Increase the project	
5.	Engineering Science	24	Engineering Science	20	weightage (15+2 Credits)	
					Based on feedback included	
6.	Basic Science	26	Basic Science	26	program electives	
					Proposed PSU Specific core	
7.	Project Work &	14	Project Work &	15	and Electives courses	
	Seminar		Seminar		• Open electives to cater the	
Total	176		169		demand of other branches	
Credits					• Hands-on practical expo- sure to latest equipment in different field through lab.	
					• Selection of PE Courses can provide minor specialization	

Program Elective Courses	Information theory and coding, Data Communication and Networks, RF Circuit Design, Radar & Satellite Communication, Defense Information Systems and Elec- tronic Warfare, Microstrip antennas & filters, Advanced Microwave Engineering, Network Protocols & security, Wireless Communication, Wireless Sensor Networks, Mobile communication Networks, Modern wireless communication system, Internet of Things, Adhoc& MANET Networks, VLSI Testing and Verification, Data Structures and Algorithms, Spread Spectrum Communication, Photonics and Optoelectronics, Energy sources & Technology, Error control Coding, Power Electronics, Digital Image Processing, Digital System Design Using FPGAs, Low Power VLSI Design, ASIC Design & System on Chip, Analog VLSI Design, CAD Tools for VLSI, VLSI/ULSI Process Technol- ogy, Object Oriented Programing, Embedded System Design & RTOS, ARM System Development, Operating System, Machine Learning and Deep Learning, Advanced processors and Controllers, Embedded Computing System Design, Digital Speech Processing.
Open Elective Courses Offered	Introduction to Communication Systems, Electronic Measurement & Mea- suring Instruments, Solar Photovoltaic Technology, Transducers and Instru- mentation, Fundamentals of Image Processing, Advanced Functional Devices Technology, Non-Conventional Energy Sources, Audio and Video Systems, Hybrid Soft Computing Techniques, Optical Fiber Technology, Mobile Cellular Communication

### **Student Insight**

Student Representatives: C Nikhil Varma, Siddhant Arora, Karan Wadhwa, K Sravanthi

- Pro-active attitude towards learning by increasing hands on sessions.
- Digital Image Processing practical should be incorporated.
- Program Elective can be started with 5th semester.
- Industrial Course VLSI should be included.

### **B.tech. - AUTOMOBILE ENGINEERING**

#### BACHELOR OF TECHNOLOGY- AUTOMOBILE ENGINEERING **DURATION-4 YEARS** Remarks S.No **Current Scheme Proposed Scheme** (Faculty Vision) Credits Heads Heads Credits 1. Core Courses 87 Core Courses 90 •Curriculum designed to cater current job skills required by the industry. 2. Program Elec-Program Elective Introduced ASDC certifitive cation (R&D, Service and Quality) 3. 12 9 **Open Elective Open Elective** Bosch certification Electric vehicle technology 4. Humanities 13 **Humanities** 12 Courses Courses Included fluid mechanics lab in 4th semester. 5. Engineering 24 Engineering 20 •Lean six sigma green belt Science Science certification included in 7th semester. 6. **Basic Science** 26 **Basic Science** 26 7. Project Work & 13 Project Work & 13 Seminar Seminar Total 175 170 Credits Program Advanced Internal Combustion Engines, Two and Three Wheeled Vehicle Systems, Elective Materials and Manufacturing of Automotive Components, Product Design and Courses Development, Automotive Air Conditioning Systems, Metrology and Measurement System Analysis (MSA), Computer Aided Design & FEA, Vehicle Body Engineering, Quality System Management, Automotive Noise, Vibrations and Harshness, Earth Moving Equipment. Open Fundamentals of Automobile Engineering, Electrical and Hybrid Vehicle, Engine Emis-Elective sions and Control, Trends in Vehicle Styling and Ergonomics, Lean Six Sigma Green Belt, Advances in Automotive Manufacturing Technology, Advances in Automotive Courses Offered Materials, Process Control and Reliability Engineering, Vehicle Maintenance and Garage Practice, Automotive Safety Systems, Autotronics, Modern Automotive Technology, Product Development.

### **Student Insight**

Student Representatives: Teerth Patel, Manik Raman, Rajan Mohapatra, Rakshit Majumdar

• Electric Vehicular Modelling to be introduced.

• Solid Works Software classes (preferable over Inventor) should be initiated with weekend CAD classes.

- Classes for GATE and other competitive exams to be provided.
- More focus should be given to research based projects.
- More industrial visits to enhance practical knowledge.
- Close book exams should be mandatory.
- Collaboration with ARAI: ARAI faculty can take classes for one semester and provide certification.

### **B.tech. - CHEMICAL ENGINEERING**

BACHELOR OF TECHNOLOGY- CHEMICAL ENGINEERING DURATION- 4 YEARS					
S.No	Current Schem	ie	Proposed Scheme	2	Remarks
	Heads	Credits	Heads	Credits	(Faculty Vision)
1.	Core Courses	83	Core Courses	90	•Chemical work as process engineers
2.	Program Elec- tive	-	Program Elective		•Labs as per student input shifted few courses from 5,6, sem
3.	Open Elective	12	Open Elective	9	•In house projects
					•Minor changes- Engineer-
4.	Humanities Courses	10	Humanities Courses	12	ing Economics and project management
5.	Engineering Science	30	Engineering Science	20	-
6.	Basic Science	29	Basic Science	23	-
7.	Project Work & Seminar	10	Project Work & Seminar	15	
Total Credits	174		169		

### **Student Insight**

Student Representatives: Shruti Katti, Akriti Agarwal, Aditi Agarwal, Akshay Srivastava, Harshit Shah

- In 1st year there must be more dedicated courses of chemical engineering.
- Load should be reduced in the 8th Semester.
- Domain specific practical learning and hands-on experience to be increased.
- More Lab practical in each semester.

### **B.tech. - CIVIL ENGINEERING**

### BACHELOR OF TECHNOLOGY- CIVIL ENGINEERING DURATION- 4 YEARS

S.No	Current Scheme		Proposed Scheme	2	Remarks	
	Heads	Credits	Heads	Credits	(Faculty Vision)	
1.	Core Courses	76	Core Courses	87	•Student should meet the needs of the present and fu- ture civil engineering indus-	
2.	Program Elec- tive		Program Elective		opportunities for higher	
3.	Open Elective	12	Open Elective	9	•Focus on entrepreneurial	
4.	Humanities Courses	8	Humanities Courses	12	<ul> <li>Proposal for including Waste</li> <li>Water Management and Building Material Technology courses, as core courses.</li> </ul>	
5.	Engineering Science	6	Engineering Science	20		
6.	Basic Science	13	Basic Science	26		
7.	Project Work & Seminar	10	Project Work & Seminar	15		
Total Credits	125(3rd to 8th Semester)	1	169	1		
Program Elective Courses	Concrete Technology, Advanced Structural Analysis, Open Channel flow and Sedi- ment Transportation , Traffic Engineering and Management, Construction Planning Organization & Equipment, Hydrological Analysis, Advanced Reinforced Concrete Design Repair and Rehabilitation Of Structures, Finite Element Method of Analysis, Ground Improvement Techniques, Building Construction and Project Manage- ment, Design of Foundations and Earth Retaining Structures, Bridge Engineer- ing, Environmental Impact Assessment, Design of Earthquake Resistant Structures, Pre-stressed Concrete Structures Contracts Management and Arbitration, Air Pollu- tion and Control, National Building Code Requirement, Ground Water Engineering, Design of Hydraulic Structures					
Open Elective Courses Offered	Environmental Management, d agement, Build	Impact As Contract N ing Planni	ssessment, Geograp Management, Advar ing, Rural Water Sup	hical Inforn nced Fluid ply and Sa	mation System, Environmental Mechanics, Solid Waste Man- nitation.	

### **Student Insight**

Student Representatives: Vijay Bahadur Singh, Udit Saxena, Shivon Mehta, Vanshika Shrivastava

• Site visits should be encouraged and must be made mandatory.

• Various software related to Civil Engineering should be taught in detail. The software courses can be spread across semesters.

- Lab for Transportation Engineering should be included.
- Color Designing should be taught.
- Students to be involved in departmental projects.
- Coaching classes for government jobs should also be included, if possible in University premises.

• Open elective should not be compulsory and should be optional with the departmental electives.

• The major insistence of students is to increase the field work and laboratory hours throughout the Civil Engineering curriculum.

### **B.tech. MECHATRONICS**

### BACHELOR OF TECHNOLOGY- MECHATRONICS DURATION- 4 YEARS

C No.	Common the Cale and a		Duo no co d C alcono		Demonstra	
5.110	Heads	Credits	Heads	Credits	(Faculty Vision)	
1.	Core Courses	86	Core Courses	87	•To integrate Research Activi- ties with the Teaching-Learn- ing process	
2.	Program Elec- tive	-	Program Elective	-	•Apply the knowledge of various elements of Mecha- tropics such as sensors	
3.	Open Elective	12	Open Elective	9	drives, actuators, controls, and modern software tools to integrate a system for per-	
4.	Humanities Courses	13	Humanities Courses	12	<ul> <li>forming specified tasks.</li> <li>Design, model, analyze, and test intelligent products, sys- tems and controllers using appropriate technology and software tools.</li> <li>To meet the growing chal- lenges of Industry</li> <li>To mitigate existing indus- try-academia gap</li> </ul>	
5.	Engineering Science	24	Engineering Science	20		
6.	Basic Science	26	Basic Science	26		
7.	Project Work & Seminar	12	Project Work & Seminar	15		
Total Credits	173	1	169			
Program Elective Courses	Machine Learning, Machine Tool Technology, Machine Vision and Image Pro- cessing, Mechanical Vibrations, Micro-manufacturing Systems, Nanotechnolo- gy, Systems Modeling and Simulation					
Open Elective Courses Offered	Introduction to and Hydraulic neering, Quali	o Robotio Systems, ty Manag	cs, Introduction to , Network and Proj gement	Mechatro ject Mana	onics Systems, Pneumatic gement, Reliability Engi-	

### Student Insight

•As Mechatronics is a combination of mechanical, electronics and instrumentation, hence number of Program electives maybe increased to have specialization in electives of electronics, mechanical, instrumentation, MATLAB etc.

- IoT labs should be made compulsory.
- Labs in each semester should be increased in order to have more hands on experience.
- Projects should be given in every semester.

### **B.tech. MECHANICAL ENGINEERING**

#### **BACHELOR OF TECHNOLOGY- MECHANICAL ENGINEERING DURATION-4 YEARS** Remarks S.No **Current Scheme Proposed Scheme** (Faculty Vision) Credits Credits Heads Heads 86 1. Core Courses Core Courses 87 •The curriculum focuses to inline and integrate knowledge with industrial requirements. 2. Program Elec-Program Elective tive •Curriculum provides the exposure to skills based 3. **Open Elective** 12 9 **Open Elective** learning. •Curriculum encourages advancement in current tech-Humanities 4. 13 **Humanities** 12 nology and predict future Courses Courses technological scopes. •Curriculum strengthens step 5. Engineering 24 Engineering 20 by step knowledge of the Science Science student 6. **Basic Science** 26 Basic Science 26 7. Project Work & 14 Project Work & 15 Seminar Seminar Total 173 170 Credits Program Industrial Engineering, Finite Element Methods, Turbomachinery, Composite Elective materials, Optimization Techniques, Introduction To Micro Electro Mechanical Courses Systems, Tool Engineering, Alternative Fuels In I.C. Engines, Advanced Manufacturing Techniques, Production Operations Management, Heat treatment, Automatic Control Engineering, Robotics, Power plant Engineering, Renewable Energy Systems, Aerodynamics, Computational Fluid Dynamics Open Introduction to Nanotechnology, Smart Materials, Welding Technology, Mod-Elective ern Manufacturing, Designing for Automation, Industrial Metrology, Introduc-Courses tion to Computer Graphics, Non-destructive Testing, Reliability, Availability Offered and Maintenance Engineering, Energy Conservation, Audit and Management, Theory of Combustion and Emissions, Optimization in Engineering Design, Quality Management, Principles of Industrial Engineering, Engineering Economy, Production Planning and Control

### **Student Insight**

Student Representatives: Nakul Yadav, Tushar Deshpandey, Vishwa , Anuj Shivarathri, Samarth Jain, Medhasvi Kulshreshtha

- Petroleum piping design can be included
- Department electives like solar panel industry should be started.
- Software's like LINK, ANSYS, CREO, CATIA should be included and taught.
- Active skill learning.
- Few courses that are Program elective can be included as core subjects.
- Implementing Practical yoga classes.
- In order to get the course knowledge, before opting for Program Elective, seminar by concerned faculty can be scheduled.
- Technical Communication to be added in 6th or 7th semester.
- More number of industrial courses and industry visits.
- Examinations should be Closed book.
- Every semester courses should include group projects.
- Interlinking of subjects to get better knowledge of application of course, in practical.

### **B.tech. INFORMATION TECHNOLOGY**

BACHELOR OF TECHNOLOGY- INFORMATION TECHNOLOGY DURATION- 4 YEARS					
S.No	Current Scheme		Proposed Scheme		Remarks
	Heads	Credits	Heads	Credits	(Faculty Vision)
1.	Core Courses	85	Core Courses	87	•Curriculum is designed in consultant with industry experts.
2.	Program Elec- tive		12		•It's proposed to have all the seventh semester courses as program elective.
3.	Open Elective	13	Open Elective	9	<ul> <li>Introduce more specific course as per industry re- quirement.</li> <li>More emphasis to be laid on Project-based learning.</li> </ul>
4.	Humanities Courses	24	Humanities Courses	12	
5.	Engineering Science	26	Engineering Science	20	
6.	Basic Science	15	Basic Science	26	
7.	Project Work & Seminar	14	Project Work & Seminar	15	
Total Credits	173		170		
Program Elective Courses	Data Science and Analytics, Embedded Systems and Internet of Things, High Performance Computing, Information Security, Software Engineering , Net- working and Cyber Security, AI and Machine Learning				
Open Elective Courses Offered	IIntroduction to Data Science, Introduction to Python Programming, Web Technologies, Advanced Topics in Computing, Introduction to Real Time Sys- tems, Information and Web Security				

### **Student Insight**

Student Representatives: Ayush Jindal, Jai Srivastav, Riddhi Jain

• Students focus on introduction of Machine Learning and Artificial Intelligence as part of core subjects.

- Inclusion of seminars in courses to enhance subject knowledge as well presentation skills.
- Students emphasized to have flexibility in time table schedule.
- Can include aptitude and soft skill training as classes in their schedule.

![](_page_32_Picture_0.jpeg)

![](_page_33_Picture_0.jpeg)

![](_page_34_Picture_0.jpeg)

### **B.Sc. - BIOTECHNOLOGY**

#### The Course structure is designed as per the CBCS of UGC guidelines

- Total credits: 148 (Hons.) /132 (Pass)
- Programme Duration: 3 Years
- Core Course Credits: 84
- Ability Enhancement Courses: English Communication and EVS (5 Credits)
- Skill Enhancement Courses: 7 Credits including FoC in I semester
- Discipline Specific Electives: Total 22 Credits including 6 credits dedicated for project work

in V semester

- Generic Elective: Total 24 credits
- Mandatory Learning Courses: Total 6 credits (semester will be fixed as per the MUJ rules)
- Tentative list of Core courses in Biotechnology Hons. (14 courses)
- Cell Biology: Structure & Dynamics
- Elements of Biochemistry
- Microbiology
- Recombinant DNA Technology
- Genetics
- Forensic Science
- Plant Tissue Culture Technology
- Bioinformatics
- Immunology
- Analytical Techniques
  - Animal Cell Culture
  - Industrial Biotechnology and Food Technology
  - Biophysics
  - Entrepreneurship Development
- Tentative list of SEC (any two)
- Cell based assay
- Telomere length measurement
- Immunohistochemistry
- In silico Drug Design
- Expression, Purification of Therapeutic Peptides & Proteins
- Fortification of food using microorganisms (Probiotics)
- Biopharmaceutical Technology
- Cellular & Molecular Diagnostics
- Multi OMICs Technology
- Nutraceutical and Food Processing

### A. For B.Sc. :Biological Sciences

- Total credits: 132
- Programme Duration: 3 Years
- Core Course Credits: 72
- Ability Enhancement Courses: English Communication and EVS (5 Credits)
- Skill Enhancement Courses: 15 Credits including FoC in I semester
- Discipline Specific Electives: Total 34 Credits, project is not assigned in this programme
- Mandatory Learning Courses: Total 6 credits (semester will be fixed as per the MUJ rules)
- Core Courses- Biological Sciences (12 Core Courses)

### Introduction to Biotechnology
- Molecular Biology
- Environmental Biotechnology
- Agriculture Biotechnology
- Introduction to Nanobiotechnology
- Ethical issues in Biotechnology
- Diversity of Cryptogams
- Diversity of Phanerogams
- Plant Pathology and Lichenology
- Palaeobotany
- Morphology and Anatomy of Angiosperm
- Plant Physiology
- Plant Breeding

### **Taxonomy and Embryology of Angiosperms**

- Ethnobotany
- Applied Botany
- Tentative list of SEC (any two) in Biological Sciences
- Biopharmaceutical Technology
- Cellular & Molecular Diagnostics
- Clinical Research & Data Management
- Fermentation & Bioprocessing
- Multi OMICs Technology
- Organic Farming
- Mushroom Culture
- Ethnobotany & Plant Breeding

Note: We shall organize the BOS for finalization of these courses and syllabi for these programme

### Student Insight

### **ADDITIONS IN EXISTING CURRICULUM:**

- Applied Bioinformatics and Drug Designing
- Future prospects for masters
- Relates with other subjects like Genomics
- Oncology
- Specialization for M.Sc. and basics in B.Sc.
- Prominent topic of interest and promising future prospects
- Zoology as a subsidiary subject
- Animal cell biology deals with a major sector of biotechnology.
- Focus can be on human physiology and anatomy
- Developmental Biology
- Important portion of M.Sc. entrance exams
- Will provide in depth knowledge related to evolution and human development
- Minor specialization in M.Sc. program
- Subjects like Microbiology, Bioinformatics and Genetics can be added for specialization in masters.
- Will help in PhD program
- Forensic Sciences
- A better insight to students about future prospects
- Can be introduced in both B.Sc. and M.Sc.

### Modifications in the existing curriculum:

- Projects, Dissertations and Internships
- Internships will give a practical exposure to students.
- Will enhance practical knowledge and field situations.
- Avoid repetition of topics
- Topics like PCR, immobilization, hybridoma are repeated in different semesters and can be replaced by other relevant topics.
- Upgradation of syllabus
- Syllabus of Fundamentals of Computer (FoC) needs to be modified. Languages like C++
- and software like PyMol may be taught in relevance to Biotechnology.
- More focus on Animal cell related practicals
- Animal cells are major research interests of scientists across the globe.
- What we study in theory, must be demonstrated through practical
- Botany needs to be balanced
- Botany modules can be reduced and other modules such as genetics, molecular biology, etc. can be introduced.
- Molecular biology can be a part of biotechnology module:
- Students having chemistry as a subsidiary subject miss out on molecular biology, since it is a botany module.

### **RECOMMENDATIONS FROM FACULTY**

Keeping in view the recommendations/suggestions of the students for a dream curriculum and UGC guidelines, we shall modify the syllabi and structure of the programme in the forthcoming BoS, in the Department.

### B.Sc. - Chemistry / M.Sc. Chemistry

Department of Chemistry, MUJ offers one Under-Graduate and one Post graduate Program: B.Sc. Hons. (Chemistry) and M. Sc.

### The Course structure is designed as per the CBCS of UGC guidelines

- Total credits: 148 (Hons.) /132 (Pass)
- Programme Duration: 3 Years
- Core Course Credits: 84
- Ability Enhancement Courses: English Communication and EVS (5 Credits)
- Skill Enhancement Courses: 7 Credits including FoC in I semester
- Discipline Specific Electives: Total 22 Credits including 6 credits dedicated for project work in V semester
  - Generic Elective: Total 24 credits
  - Mandatory Learning Courses: Total 6 credits (semester will be fixed as per the MUJ rules)

### Core courses for B. Sc. (Chemistry Hons.) Program

- Structure, Bonding and Periodicity
- Basics of organic Chemistry and Stereo Chemical Principles
- The Gaseous State and Thermodynamics
- Main group Elements-I and Ionic structures
- Saturated and Unsaturated Hydrocarbons
- Kinetics, equilibrium, and Phase Rule
- Main group elements-II
- Halogen and Oxygen containing Functional Groups
- Conductance and Electrochemistry
- Coordination Chemistry, Symmetry and group theory
- Reactive Intermediates and Oxygen containing Functional Groups
- The Solid State, liquid State and Solutions
- Nuclear and Analytical Chemistry
- Chemistry of Biomolecules
- Quantum Chemistry and its Application to Molecular Spectroscopy
- Green Methods in Chemistry
- Organic Spectroscopy
- Molecular Statistics and photo chemistry
- Organometallic Chemistry

### **Student Insight**

Chemistry is a scientific discipline involving compounds of atoms, their composition, structure, properties, behavior, and the changes they undergo during a reaction with other compounds. Currently these **modules** are being taught:

Physical Chemistry, Organic Chemistry, Inorganic Chemistry, Green Chemistry, Analytical Chemistry, Quantum Chemistry and Spectroscopy.

### Suggestions

- Reduction in courses offered by Mathematics and Biotechnology Department
- More Introduction to the laboratory machines and equipment??
- Should include industrial visits as a part of curriculum
- Career counseling sessions should be there
- Attention towards internships and placements

### B.Sc. -Mathematics / M.Sc. Mathematics by Research / BCA

Department of Mathematics and Statistics, MUJ offers 03 Under Graduate and 01 Post Graduate Programmes: B.Sc. Hons. (Mathematics), B.Sc. (Pass), BCA and M.Sc. (Mathematics by Research).

### The Course structure is designed as per the CBCS of UGC guidelines

- Total credits: 148 (Hons.) /132 (Pass)
- Programme Duration: 3 Years
- Core Course Credits: 84
- Ability Enhancement Courses: English Communication and EVS (5 Credits)
- Skill Enhancement Courses: 7 Credits including FoC in I semester

• Discipline Specific Electives: Total 22 Credits including 6 credits dedicated for project work in V semester

- Generic Elective: Total 24 credits
- Mandatory Learning Courses: Total 6 credits (semester will be fixed as per the MUJ rules)
- The revised Model Curriculum has been designed to acquaint students with the industry requirements and can have hands-on experience. The students will develop a problem solving approach and will be able to meet the challenges of future.
- Model Curriculum has been designed in such a way that it encourages innovation and research. Total number of credits have been reduced and many new courses have been incorporated in consultation with the experts.
- The BSc (Hons.) Mathematics and BSc (Pass) curriculum covers courses in pure and applied Mathematics and Statistics.
- Nurtures creative and analytical abilities of undergraduate students.
- Cultivates analytical skills through tutorials and labs.
- A lot of opportunities are available in the field of data science. So keeping pace with market needs some courses related to it have been introduced in the BCA programme.
- Offers opportunity to engage in developmental research work.
- To acquire, or to revive, and to extend skill in computation.
- To learn to interpret statistical results correctly.
- To learn where and how to apply statistics.

### **Student Insight**

- Replace FoC with C Programming Language: It will help 3rd semester students from non-computer science background. Knowledge of computer programming will be further helpful for internships.
- Introduction of Projects from IV Semester: Students will gain experience in the field of research. Introducing it in VI semester is too late.
- Language Lab course can be replaced with a course focusing on soft skills. More advanced techniques to be included in the form of soft skills. Practice for Group Discussions (GD) and Personal Interview (PI) should be given, which is helpful in placements and professional life.

Current English courses can be replaced with Professional Communication course: Inclusion of phonetics and emphasis on grammar and pronunciation will enhance their communication and writing skills.









Faculty of Design, Faculty of Arts & Law & Faculty of Management & Commerce

Guest for the day

Ar. Vijay Garg, President, CoA

**Shri Arindam Das** Director, NIFT, Gandhinagar





### Ar. Vijay Garg, President, Council of Architecture

Dynamic social and industrial scenarios calls for periodic curriculum revisions in order to synchronize it with the changing needs of society and industry. Some areas of studies like Design education are essentially unlike other courses offered by any University. The students have to be taught more through day-to-day experiences and live projects. They should be motivated and encouraged to take up Summer-Internship. This will enable them to understand the functioning of real life scenarios. This will also help them identify the gaps between academics and industry. Students of Design courses cannot be taught from books, as data in books is history for them. Questions can be asked about the utility of Design courses. They play a vital role in the development of society and simultaneously contribute to the economic growth of society.

UGC the academic regulatory body in our country is trying to strengthen the Design education system through certain provisions in the current pedagogy. It now permits credit exchange for learners within or beyond their institution. A scheme of sharing infrastructure by various institutions has also contributed a lot in developing an enriched, resourceful learning environment for the students.

The need of the hour is to build professionals who are industry ready, but this in itself is a huge challenge. Researchers working in the field have clearly stated the rapid changes in economy and the resulting needs of industry, and the subsequent gap between demand and supply. Some studies highlights among other factors the lack of qualified and competent teachers in this changing paradigm. Thus, there is an equal need to train faculty members by visualizing and opting lateral thinking, to design for tomorrow.

Manipal University Jaipur



### Shri Arindam Das, Director, NIFT

BASIC CONCEPT OF CREATIVITY- The definition of 'design' does not limit to dictionary meaning or its scientific term, rather it is everywhere. Design talks about your cognitive skills, your perception, and your personality. Study of Design requires a process, where in you identify a problem and search for an innovative solution. It is an unconventional use of knowledge, and is hybrid and collaborative use of disciplines.

Currently Design Education is moving rapidly, using CRAFT BASED IDEAS. The basic concept of developing Design Education is working on STAGED DEVELOPMENT, which means a basic art should undergo a systematic approach, yet having a flavor of multidisciplinary inputs.



There are two paradoxes in Design Education today:

- How to have the element of creativity in today's education system?
- The student of today relies on available knowledge, available inspirations, and inbox ideas, and concepts.

To cater to the changing profile of students, we need to provide them with multi-facet learning. A teacher needs to be more of a facilitator or guide to the learners, rather than being only an instrument of information. A teacher should be friendly to students, motivating and encouraging them to explore new things and providing a healthy learning environment. Role of a teacher is more of a mentor in today's scenario.

The main objective of curriculum revamping for Design Education should be focusing on the PROCESS THAN THE DESIGN, and the approach of TEACHING should be futuristic.

The curriculum development of any Design Institution is decided by:

- Vision and mission of the institute.
- Requirement of domain- needs of the target audience.
- Endorsing requirements of society.

### KEY ELEMENTS FOR CURRICULUM DEVELOPMENT

A good and healthy curriculum can be drafted and achieved by adhering to the following points:

- By setting overall learning objectives.
- By having pre and well defined levels of learning.
- Constituents of Modules breaking the entire modules in smaller elements of learning.
- By pre- setting LEARNING OUTCOMES of each module.
- By application of effective ASSESSMENT STRATEGY.
- Clear Articulation of Graduate Profile- One has to know the objective of the entire

program, in terms of person and personality not only at the end of a program, but also at the completion of each level.

- Quantitative and Qualitative mapping of the program.
- Level Descriptors- Defines the expected learning achievement at each level.

Apart from the above mentioned key elements, there are few other points which also play a pivotal role in drafting a healthy curriculum. They are as follows:-

• Alumni and Industry Engagements – To get constant feedback on needs of the industry, which will help in bridging the gap.

- To stress on integrated learning and development of cognitive skills.
- Encouragement in having a multi-disciplinary approach to problem solving.
- Development of a life-long learning attitude.
- Encouragement of an independent and proactive learning.







### B. ARCH.

BACHELOR OF ARCHITECTURE (B.Arch.) DURATION- 5 YEARS								
S.No	Current Schem	e	Proposed Scheme	2	Remarks			
	Heads	Credits	Heads	Credits	(Faculty Vision)			
1.	Core Courses	138	Core Courses	136	<ul> <li>Professional Practices in the form of Internships should be placed in 8th Semester (currently</li> </ul>			
2.	Building Science & Applied Engi- neering	55	Building Science & Applied Engi- neering	47	<ul><li>effective in 9th and 10th semester).</li><li>It will enable students to</li></ul>			
3.	Open Elective	4	Open Elective	6	get logical and reason- able semester to draw on			
4.	Program Elec- tive	0	Program Elective	11	paper			
5.	Professional Ability En- hancement Courses	53	Professional Abil- ity Enhancement Courses	50				
Total Credits	250		250	•				

### **Student Insight**

The program should aim to develop HOLISTIC PERSONALITY of a student, and this can be achieved by :

- Multi and Interdisciplinary learning needs to be incorporated in the course. This can be very helpful in breaking the constrains, and healthy Design Briefs can be achieved.
- Study of any CRAFT CLUSTER to be made mandatory for any of the Design Project.
- Basics of ENTREPRENEURSHIP to be incorporated in Course, so that the students also learn skills to establish their own business ventures.
- Advance Level Design Software knowledge to be merged with course contents, which will enable students to be updated with the industry requirements.
- Advance level DRAPING inputs to become a part of curriculum, as draping is quick way of expressing ideas.

### **B.DES. (FASHION DESIGN)**

BACHELOR OF DESIGN (FASHION DESIGN) DURATION- 4 YEARS								
S.No	Current Schem	e	Proposed Scheme	•	Remarks			
	Heads	Credits	Heads	Credits	(Faculty Vision)			
1.	Core Courses	133	Core Courses	96	The students of Design should be encouraged to participate in LIVE			
2.	Open Elective	0	Open Elective	6	CLASSROOM PROJECTS,			
3.	Program Elec- tive	4	Program Elective	4	DEBATES, WORKSHOPS, NATIONAL & INTERNA-			
4.	Interdisciplin- ary	13	Interdisciplinary	18	TIONAL CONFERENCES, and EXHIBITIONS			
5.	Employability Enhancement Courses	50	Employability Enhancement Courses	42				
Total Credits	200		166					

### **Student Insight**

The program should aim to develop HOLISTIC PERSONALITY of a student, and this can be achieved by :

- Multi and Interdisciplinary learning needs to be incorporated in the course. This can be very helpful in breaking the constrains, and healthy Design Briefs can be achieved.
- Study of any CRAFT CLUSTER to be made mandatory for any of the Design Project.
- Basics of ENTREPRENEURSHIP to be incorporated in Course, so that the students also learn skills to establish their own business ventures.
- Advance Level Design Software knowledge to be merged with course contents, which will enable students to be updated with the industry requirements.
- Advance level DRAPING inputs to become a part of curriculum, as draping is quick way of expressing ideas.
- TEXTILES is integral part of FASHION STUDIES, so CREATIVE TEXTILES also needs to be incorporated in Fashion Design Course.
- Inputs on Foreign Language as an optional or elective course needs to be initiated, this will support students to interact with international clients.
- Development of Soft skills is very essential for any Design student; skills like content writing, paper writing, documentation, creative writing, etc. promotes valuable and authentic PORTFOLIOS. Soft skills like public speaking and presentations, also enhances overall personality of a DESIGNER.
- To reduce the practice of OUTSOURCING, a student should have good in-house infrastructure provided by the institution. DYING & PRINTING LABS will help students to have a hands-on experience internally.
- An in-house RESOURCE CENTER 'is a must for any DESIGN discipline. A sample study can be done internally, and a student need not waste time in outsourcing the same.

### **B.DES. (INTERIOR DESIGN)**

BACHELOR OF DESIGN (INTERIOR DESIGN) DURATION- 4 YEARS								
S.No	Current Schem	ne	Proposed Scheme	•	Remarks			
	Heads	Credits	Heads	Credits	(Faculty Vision)			
1.	Core Courses	84	Core Courses	81	The duration of this pro- gram should be 4 years			
2.	Arts & Human- ities Courses	19	Arts & Humanities Courses	18	with multiple exit option in 3rd year.			
3.	Open Elective	0	Open Elective	9	To qualify for 4 years, the existing students enrolled in 3rd year			
4.	Program Elec- tive	8	Program Elective	6	program can undergo an additional BRIDGE COURSE.			
5.	Basic Science	6	Basic Science	6	This Bridge course can			
6.	Engineering Science	18	Engineering Science	15	be in the form of work- shops, residential design projects, and program			
7.	Employability Enhancement Courses	15	Employability Enhancement Courses	31	electives.			
Total Credits	150 Currently 3 Year Course)		) 169					

### **Student Insight**

- Option of multiple exit should be introduced in 3rd year.
- For students enrolling for 4 Years program a special semester dedicated to THESIS and DIS-SERTATION (8 weeks each) is to be incorporated in the current course scheme.
- The new course to focus more on aesthetic utilization of space in terms of Green Design and Sustainable Design.
- A lot of scope to be given in MATERIAL EXPLORATION. This will enable students to realize nuances of material, their behavioral patterns and will promote hands-on learning.
- Proposes options for Higher Education in the fields of Interior Design at MUJ.
- Provision for 2 mandatory internship, one should be after 6th semester in summers (as MLP) and another internship in eighth semester.
- Inputs on Foreign Language as an optional or elective course needs to be initiated.
- Development of essential soft skills for Design student.
- New scheme proposes to offer open electives.

### **B.F.A. (APPLIED ARTS)**

BACHELOR OF FINE ARTS (B.F.A- Applied Arts) DURATION- 4 YEARS							
S.No	Current Scheme		Proposed Scheme	•	Remarks		
	Heads	Credits	Heads	Credits	(Faculty Vision)		
1.	Core Courses	108	Core Courses	77	• The duration of this pro- gram should be 4 years		
2.	Arts & Human- ities Courses	42	Arts & Humanities Courses	27	with multiple exit option in 3rd year.		
3.	Open Elective	0	Open Elective	6	To qualify for 4 years, the existing students enrolled in 3rd year		
4.	Program Elec- tive	8	Program Elective	8	program can undergo an additional BRIDGE COURSE.		
5.	Basic Science	3	Basic Science	3	This Bridge course can		
6.	Engineering Science	65	Engineering Science	45	shops, residential design projects, and program		
7.	Employability Enhancement Courses	15	Employability Enhancement Courses	31	electives.		
Total Credits	226		166				

### **Student Insight**

Bachelor of Fine Arts has three main Domains- PAINTING, FINEARTS AND APPLIED ART. MUJ offers BFA (APPLIED ART).

- Industry needs students who are proficient in technology. So computer based learning in form of UI (user interface) and UX (user experience) to be stressed in the new curriculum.
- Film making and editing inputs are integral part of applied art courses, such inputs enable students to make their work expressive.
- A course on ANIMATION as a CORE must be included in our curriculum.
- Provisions for LIVE PROJECTS from industry to be made mandatory part of the curriculum, as it will help the students to explore and interact with industry. It will also strengthen the professional relations for placements and internship purposes.
- We wish to have our own SPACE, where students can install their art work for review and feedback.



# FoAL

Faculty of Arts & Law

### LLB

LLB DURATION- 5 YEARS									
S.No	Current Schem	е	Proposed Scheme	2	Remarks				
	Heads	Credits	Heads	Credits	(Faculty Vision)				
1.	Core Courses	96	Core Courses	96	Based on Bar Council of India.				
2.	Clinical	16	Clinical	16					
3.	Optional	32	Optional	28	earlier scheme.				
4.	Open Elective	6	Open Elective	6	30 Core, 7 Major and 3     Minor courses.				
Total Credits	150	<u> </u>	140 + 6 ( MLC)	<u> </u>	Clinical courses to be tak- en in the lower semesters				

### **Student Insight**

- Adjacent and Incidental Laws should be included.
- The pool shall consist of courses from various field like Agriculture, Intellectual property, International Trade, etc.
- Proposed dissertation in 10th Semester

### B.A. (Eco. Hons.)

BACHELOR OF ARTS (Eco. Hons.) DURATION- 3 YEARS								
S.No	<b>Current Schem</b>	е	Proposed Scheme	•	Remarks			
	Heads	Credits	Heads	Credits	(Faculty Vision)			
1.	Core Courses	72	Core Courses	84	Business Communication     and, Economic Histo-			
2.	DSE Cours- es(Programme Electives)	8	DSE Courses(Pro- gramme Elec- tives)	24	ry and Thoughts to be included			
3.	GE/Interdisci- plinary (Sub- sidiary)	40	GE/Interdisciplin- ary (Subsidiary)	22				
4.	Compulsory Courses (AEC- C,SEC)	18	Compulsory Courses (AEC- C,SEC)	10				
5.	Open Elective (to be offered as GE)	6	Open Elective (to be offered as GE)	Offered as GE				
6	Dissertation (to be offered as DSE)	6	Dissertation (to be offered as DSE)	Offered as DSE				
Total Credits	150		140					

### **Student Insight**

Students wanted to include the following courses:

- Critical Thinking
- Entrepreneurial Skills
- Political Economy
- Money and Financial Markets
- Energy Economics
- Economic Reasoning

### B.A. (English. Hons.)

BACHELOR OF ARTS (English Hons.) DURATION- 3 YEARS								
S.No	Current Schem	e	Proposed Scheme	•	Remarks			
	Heads	Credits	Heads	Credits	(Faculty Vision)			
1.	Core Courses	80	Core Courses	84				
2.	DSE Cours- es(Programme Electives)	0	DSE Courses(Pro- gramme Elec- tives)	24				
3.	GE/Interdisci- plinary (Sub- sidiary)	40	GE/Interdisciplin- ary (Subsidiary)	22	-			
4.	Compulsory Courses (AEC- C,SEC)	18	Compulsory Courses (AEC- C,SEC)	18				
5.	Dissertation	6	Dissertation	Offered as GE				
6	Open Electives	6	Open Electives	Offered as DSE				
Total Credits	150		148					

### **Student Insight**

- It should not be compulsory to study the same subsidiary paper for all the three years.
- Foreign Languages (French/ Spanish/ German/ Chinese) should be introduced as options for subsidiary course.
- Internship practices such as Content Writing, Film studies, Travel writing should be given importance.
- Presentations, Drama Performances, Debate competitions, Magazines should be done on a regular basis.
- Department should introduce a Journal and students to be the part of the editorial board.
- More well-known works of literature should be included.

### B.A. / B.Sc. (Psychology Hons.)

### BACHELOR OF ARTS/ SCIENCE (Psychology Hons.) DURATION- 3 YEARS

S.No	<b>Current Schem</b>	e	<b>Proposed Schem</b>	e	Remarks
	Heads	Credits	Heads	Credits	(Faculty Vision)
1.	Compulsory Courses	14	Compulsory Courses	10	
2.	Subsidiary/ Elective Cours- es	40	Subsidiary/Elec- tive Courses	40	
3.	Open Elective Courses	6	Open Elective Courses	6	
4.	Core Courses	82	Core Courses	84	
5.	Project Work & Seminar	8	Project Work & Seminar	8	
Total Credits	150	1	148	1	

### Student Insight

Students wanted following courses to be included

- History of Psychology
- Drugs and Behavior
- Experimental Psychology
- Behavioral Change
- Violence as Human Behavior
- Applied Psychology

### **B.A.** (Liberal Arts)

S.No	<b>Current Schem</b>	е	Proposed Scheme	2	Remarks
	Heads	Credits	Heads	Credits	(Faculty Vision)
1.	Core & Major Courses	68	Core & Major Courses	72	•
2.	DSE Cours- es(Programme Electives)	36	DSE Courses(Pro- gramme Elec- tives)	24	
3.	GE/Interdisci- plinary (Sub- sidiary)	24	GE/Interdisciplin- ary (Subsidiary)	26	
4.	Compulsory Courses (AEC- C,SEC)	18	Compulsory Courses (AEC- C,SEC)	10	
5.	Open Elective (to be offered as GE)	0	Open Elective (to be offered as GE)		
6	Dissertation ( To be offered as DSE)	4	Dissertation (To be offered as SEC)		
Total Credits	150		132		

### **Student Insight**

The courses to be included are as follows:

- Linguistics
- The idea of Arts
- Art of editing in print media
- Fine arts appreciation

### **B.A. (JOURNALISM & MASS COMMUNICATION)**

## BACHELOR OF ART ( JOURNALISM & MASS COMMUNICATION) DURATION- 3 YEARS

S.No	Current Schen	ne	Proposed Scheme		Remarks
	Heads	Credits	Heads	Credits	(Faculty Vision)
1.	Core & Major Courses	68	Core & Major Courses	56	Highlights of few import- ant core courses: Photog-
2.	AECC	36	AECC	10	raphy, Photojournalism and Reporting, Advertis-
3.	SEC	24	SEC	19	ing and Public Relations, Video and Television
4.	DSE	18	DSE	23	<ul> <li>Production, New Media and Online Journalism</li> <li>Salient features of our programme curriculum:</li> </ul>
5.	GE	0	GE	15	Summer Internships, Dissertation, Production Projects, Intercultural
Total Credits	132		138		<ul> <li>Studies, Gender and Human Rights, Media and Event Management, Me- dia Entrepreneurship.</li> <li>Students can opt for dis- cipline specific electives based on their interest.</li> </ul>

### **Student Insight**

The courses to be included are as follows:

- Foreign Correspondence
- Multi-cam Production
- Reporting for Radio and Production of Feature Show
- Equipment Studies
- Set Designing
- Basics of Pre-Production
- Basics of Production
- Basics of Post-Production
- Film Studies
- Lies, Trust and Tech
- Programming in Web

### **B.PES.**

BACHELOR PHYSICAL EDUCTION SCIENCE DURATION- 3 YEARS								
S.No	<b>Current Schem</b>	e	Proposed Scheme	e	Remarks			
	Heads	Credits	Heads	Credits	(Faculty Vision)			
1.	Core Courses	65	Core Courses	74	Students can opt for     discipline specific			
2.	DSE	50	DSE	44	electives based on their			
3.	GE	6	GE	6	interest			
4.	AECC, GSE	18	AECC, GSE	18				
5.	OE	Offered as GE	OE	Offered as GE				
	Dissertation	6	Dissertation	Offered as CC				
Total Credits	145		142					







### **B.B.A.**

BACHELOR OF BUSINESS ADMINISTRATION DURATION- 3 YEARS									
S.No	<b>Current Schem</b>	e	Proposed Scheme	2	Remarks				
	Heads	Credits	Heads	Credits	(Faculty Vision)				
1.	Core Courses	63	Core Courses	69	Introduction of single specialization instead of				
2.	Ability En- hancement Compulsory Courses	23	Ability Enhance- ment Compulsory Courses	15	<ul> <li>dual.</li> <li>Introduction of special- ization in third semester instead of fifth semes-</li> </ul>				
3.	Skill Enhance- ment Courses	16	Skill Enhance- ment Courses	11	ter. <ul> <li>Twelve courses in each</li> </ul>				
4.	Discipline Spe- cific Elective	24	Discipline Specific Elective	36	specialization on offer instead of the current four.				
5.	Dissertation	18	Dissertation	11					
6	Open Electives	6	Open Electives	6					
Total Credits	150			148					

### B.Com.

S.No	Current Scheme		Proposed Scheme		Remarks
	Heads	Credits	Heads	Credits	(Faculty Vision)
1.	Core Courses	91	Core Courses	92	Courses to be CIMA / CGMA compliant.
2.	Ability En- hancement Compulsory Courses	8	Ability Enhance- ment Compulsory Courses	5	
3.	Skill Enhance- ment Courses	15	Skill Enhance- ment Courses	21	
4.	Discipline Spe- cific Elective	16	Discipline Specific Elective	16	
5.	Dissertation	20	Dissertation	8	
6	Open Electives	0	Open Electives	6	
Total Credits		150		148	-

### B.H.M.

BACHELOR OF HOTEL MANAGEMENT DURATION- 3 YEARS									
S.No	Current Scheme		Proposed Scheme		Remarks				
	Heads	Credits	Heads	Credits	(Faculty Vision)				
1.	Humanities Courses	39	Humanities Courses	25	Structure more simpli- fied (reduced to 160 +				
2.	Basic Science	4	Basic Science	2	credits).				
3.	Engineering Science	3	Engineering Science	0	<ul> <li>Soft Skills and exper- imental learning is enhanced to meet industry requirements and students' proposals</li> <li>MOOC course intro- duced</li> <li>Internship weightage increased.</li> </ul>				
4.	OE & MOOC Courses	6	OE & MOOC Courses	2					
5.	PE & Core Courses	97	PE & Core Courses	89					
6	Project Work/ Seminar	41	Project Work/ Seminar	42	Course structure is     more competitive				
Total Credits	190			160+6	(Benchmark WGSHS).				

### **Student Insight**

- Theory Credits < Practical Credits.
- A dedicated course on soft skills development.
- Suggestions to have an open elective courses for Non B.Tech. For example courses like Food Photography, Food Journalism, etc.
- Practice sessions for lab work.
- Minor subjects to be introduced as per industrial relations.
- Different certified foreign languages (like French, Italian, Spanish, and German) should be inculcated.

### MBA

MASTER OF BUSINESS ADMINISTRATION DURATION- 2 YEARS									
S.No	Current Scheme		Proposed Scheme		Remarks				
	Heads	Credits	Heads	Credits	(Faculty Vision)				
1.	Core Courses	63	Core Courses	61	Make it contemporary, flexible and experiential				
2.	Specialisation Courses	42	Specialisation Courses	42	learning based which should be appreciated				
3.	Internship/ Dissertation	7	Internship/ Dis- sertation	8	by the industry.				
Total Credits	112			111					

### **Student Insight**

- Digital Marketing should be taught in the third trimester.
- Employer Branding as a subject should be there for HR specialization.

# **Concluding Remarks**

### Vinod V. Thomas, Registrar - Evaluation, MAHE

It would be imperative on our part to distill the learnings that happened during the conclave, students, policy makers, alumni, corporate leaders and faculty representatives shared their insights. The observation made during the conclave basically aimed at bridging the identified gaps so that a holistic curriculum is developed which will cater to the needs of students and society which are presented as below:-

- Frequent feedbacks need to be obtained from students and its implementation should be regularly monitored.
- Homogeneity on basic curriculum structure across the University is desirable.

• Revision of Curriculum structure can be planned in a way where in scope of minor changes are permissible in every semester. Over all curriculums should be revised every 3, 4 or 5 year depending on the duration of program.

• Since MUJ is undergoing major curriculum revamping, so a fair and logical understanding of this change is required.

• There is high recommendation of incorporating only those factors in curriculum which is achievable, the curriculum revision becomes useless if set goals are too high to achieve. So it is suggested to focus and implement tasks only which are realizable.

• Every country has its own norms for deciding the credit system, in our country AICTE approves 160 credits in Engineering and UGC supports CHOICE BASED CREDIT SYSTEM, and basic problem we face is with deliberation of CBCE system, so this is an issue to be addressed.

• A clear distinguishing factor to be understood among Pass Course and Honors Program, and students with academic brilliance to be encouraged to take up Honors Programs.

• In our country the drop out percentage of students in academic session is relatively low, which does not signify that they are serious for learning; whereas, research says that majority of our students have no vision and they, more often than not, aimlessly seek degree .This issue needs to be addressed by education institutes, thus, framing a curriculum which ignites the interest of a learner for the program is what we must aim at.

• Research is another field where we need to work seriously, students should be encouraged to opt for papers on Research Methodologies; students with research inclination should be attached to faculty mentors and both should work in areas of promoting research work through publications, and paper writing and presentations.

• MOOC should be incorporated in the curriculum, program for which relevant MOOCs need to be identified, and faculty members should be encouraged to pursue MOOCs, so that they, in- turn, help students in completing MOOCs.

Frequent Teacher- Student discussion need to happen for discussing gaps in existing curriculum, and accumulated feedback should be incorporated after due diligence.
We need to have clarity in terms of defining our terminologies – as we merely mention skill enhancing activities to be initiated, but a clarity on what kind of skills need to be enhanced needs to be clearly articulated. Whether one need to work on cognitive skills, knowledge attributes or skill attributes needs to be clearly identified.


# Annexture

Annexture

	Existing Scheme of MUJ		AICTE 2018	3-22	MIT 2018-22		Proposed Sch	Proposed Scheme of MUJ	
	Credits	Percentage	Credits	Percentage	Credits	Percentage	Credits	Percentage	
Humanities Courses	13	7.5	12	7.5	8	4.7	12	7.1	
Basic Science	26	15.0	25	15.6	27	15.9	26	15.4	
Engineering Science	24	13.9	24	15.0	21	12.4	20	11.8	
Open Elective Courses	12	6.9	18	11.3	12	7.1	9	5.3	
Program Elective & Core Courses	86	49.7	66	41.3	89	52.4	87	51.5	
Project Work & Seminar	12	6.9	15	9.4	13	7.6	15	8.9	
Total Credits	173	100.0	160	100.0	170	100.0	169	100.0	



## Proposed Scheme of B.Sc. (Hon.) 2019 -22 Comprative Study

	Existing Scheme of MUJ		UGC (CBCS)		Proposed Scheme of MUJ	
		Credits	Percentage	Credits	Percentage	Credits
Core Courses (CC)	88	58.7	84	56.8	84	56.8
Ability Enhancement Compulsory Courses (AECC)	8	5.3	8	5.4	5	3.4
Skill Enhancement Courses (SEC)	3	2.0	8	5.4	7	4.7
Disciplne Specific Elective (DSE)	40	26.7	24	16.2	22	14.9
Generic Elective (GE)	8	5.3	24	16.2	24	16.2
Mandatory Learning Courses (MLC, Open Elective)	3	2.0			б	4.1
Total Credits	150	100.0	148	100.0	148	100.0

**Existing Scheme of MUJ** 







MUJ

**Proposed Scheme of** 

Generic Elective (GE)
Mandatory Learning Courses (MLC, Open Elective)

# Proposed Scheme of B.Sc. 2019 -22 Comprative Study

	Existing Scheme of MUJ		UGC (CBCS)	UGC (CBCS)		Proposed Scheme of MUJ	
	Credits	Percentage	Credits	Percentage	Credits	Percentage	
Core Courses	120	80.0	72	54.5	72	54.5	
Ability Enhancement Compulsory Courses (AECC)	17	11.3	8	6.1	5	3.8	
Skill Enhancement Courses (SEC)	7	4.7	16	12.1	15	11.4	
Disciplne Specific Elective (DSE)		0.0	36	27.3	34	25.8	
Mandatory Learning Courses (MLC, Open Elective)	6	4.0			6	4.5	
Total Credits	150	100.0	132	100.0	132	100.0	







Proposed Scheme of MUJ Credits



Mandatory Learning Courses (MLC, Open Elective)

## Proposed Scheme of B.Arch. 2019 -24 Comprative Study

	Existing Scheme of MUJ		COA 201	DA 2017 MAHE			Proposed Scheme of MUJ	
	Credits	Percent- age	Credits	Per- centage	Credits	Percentage	Credits	Percent- age
Professional Core Courses (PC)	138	55.2	117	45.0	124	49.6	136	54.4
Building Science & Applied Engineer- ing (BS&AE)	55	22.0	52	20.0	42	16.8	47	18.8
Elective Courses	4	1.6	39	15.0	12	4.8	17	6.8
Professional Ability Enhancement Courses (PAEC)	53	21.2	52	20.0	72	28.8	50	20.0
Total Credits	250	100.0	260	100	250	100.0	250	100



Building Science & Applied Engineering (BS&AE) Elective Courses

Professional Ability Enhancement Courses (PAEC)





MAHE Scheme - EXISTING



Proposed Scheme of B.Des. (Interior Design) 2019 -23 Comprative Study

	Existing Sch	Existing Scheme of MUJ		22	Proposed Scheme of MUJ	
	Credits	Percentage	Credits	Percentage	Credits	Percentage
Arts + Humanities Courses	19	12.7	22	13.1	18	10.7
Basic Science	6	4.0	3	1.8	6	3.6
Engineering Science	18	12.0	18	10.7	18	10.7
Open Elective Courses	0	0.0	0	0.0	9	5.3
Professional Core + Programme Elective Courses	92	61.3	90	53.6	87	51.5
Employbility Enhancement course	15	10.0	35	20.8	31	18.3
Total Credits	150	100.0	168	100.0	169	100.0



\* The proposed credits of 169 will change to 140 credits for 3 year exit option (with BA degree)

	Existing Scheme of MUJ		Existing	Scheme of MAHE	Proposed Scheme of MUJ	
	Credits	Percentage	Credits	Percentage	Credits	Percentage
Professional Core +Prog elective	132	66.0	153	76.5	94	56.6
Interdisciplinary	13	6.5	11	5.5	18	10.8
Open Elective Courses	0	0.0	3	1.5	6	3.6
Compulsory	5	2.5	5	2.5	6	3.6
Employbility Enhancement courses	50	25.0	28	14.0	42	25.3
Total Credits	200	100.0	200	100.0	166	100.0

# Proposed Scheme of B.Des. (Fashion Design) 2019 -23 Comprative Study



Proposed Scheme of BFA (Applied Arts) 2019 -23 Comprative Study

	Existing	Scheme of MUJ	Proposed Scheme of MUJ		
	Credits	Percentage	Credits	Percentage	
Arts + Humanities Courses	33	16.5	22	14.7	
Basic Science	3	1.5	3	2.0	
Engineering Science	0	0.0	0	0.0	
Open Elective Courses	0	0.0	0	0.0	
Professional Core + Programme Elective Courses	111	55.5	85	56.7	
Employbility Enhancement course	53	26.5	40	26.7	
Total Credits	200	100.0	150	100.0	





## Proposed Scheme of LLB 2019-24 Comprative Study

	Existing Scheme of MUJ		BCI (Minimui	n)	Proposed Scheme of MUJ	
	Credit	Percentage	Credit	Percentage	Credit	Percentage
Compulsory	24x4=96	61.53	80	66.66	24x4=96	64.86
Clinical	4x4=16	10.25	16	13.33	4x4=16	10.81
Optional	8x4=32	23.07	24	20	7x4=28	18.91
OE	2x3=6	5.12	NA	NA	2x3=6	5.40
Total Credits	150	100	120	100	140+6 (MLC)	100



	Existing Schem	ne of MUJ	BCI (Minimum)		Delhi NLU		Proposed Scheme of MUJ	
	Credit	Percentage	Credit	Percentage	Credit	Percentage		
Non-Law	14x4=56	22.22	57 Major x 4=228	95	57 Major x 4=228	95	7x4=28 3x3=9 Total=37	16.12
Compulsory	29x4=116	46.03					30x4=120	48.38
Clinical	4x4=16	6.34					4x4=16	6.45
Optional	6x4=24	9.52					6x4=24	9.67
Honours	8x4=32	12.69	3 Minor x3=9	5	3 Minor x3=9	5	10x4=40	16.12
OE	2x3=6	3.17	NA	NA	NA	NA	2x3=6	3.22
Total Credits	250	100	237	100	237	100	237+6 (MLC)	100

## Proposed Scheme of BALLB (Hons) 2019-24 Comprative Study



# Proposed Scheme of LLM 2019-20 Comprative Study

	Existing Scheme of MUJ		UGC		Proposed MUJ	
	Credit	Percentage	Credit	Percentage	Credit	Percentage
Compulsory	9	32.14	9	37.5	9	37.5
Specialization	19	67.85	15	62.5	15	62.5



## Proposed Scheme of BA Economics (Hons2019 -22 Comprative Study

	Existing Scheme of BA Eco. (Hons)		UGC CB	CS System	University of Calcutta/ DU 2018-21		Proposed Scheme of BA Economics (Hons)	
	Credits	Percentage	Credits	Percent- age	Credits	Percentage	Credits	Percent- age
Core Courses	72	48.0	84	60.0	84	60.0	84	60.0
DSE Courses(Programme Electives)	8	5.3	24	17.1	24	17.1	24	17.1
GE/Interdiscipliniary (Subsidiary)	40	26.7	24	17.1	24	17.1	22	15.7
Compulsory Courses (AECC,SEC)	18	12.0	8	5.7	8	5.7	10	7.1
Open Elective (to be offered as GE)	6	4.0					offered as a GE	
Dissertation (to be offered as DSE)	6	4.0	to be offered as a DSE				offered as a DSE	
Total Credits	150	100.0	140	100.0	140	100.0	140	100.0

#### Existing Scheme of BA Economics (Hons)



# UGC CBCS System





60%

17%

17%

DSE Courses(Programme Electives)

Open Elective (to be offered as GE)

□ GE/Interdiscipliniary (Subsidiary)

Compulsory Courses (AECC,SEC)

Core Courses

University of Calcutta/DU 2018-21

#### Proposed Scheme of BA Economics (Hons)



# Proposed Scheme of BA English (Hons.) 2019 -22 Comprative Study

	Existing Scheme of BA English (Hons)		UGC CB	UGC CBCS System		University of Calcutta 2018-21		Proposed Scheme of BA English (Hons)	
	Credits	Percentage	Credits	Percent- age	Credits	Percentage	Credits	Percent- age	
Core Courses	80	53.3	84	60.0	84	60.0	84	57.5	
DSE Courses(Programme Electives)	0	0.0	24	17.1	24	17.1	24	16.4	
GE/Interdiscipliniary (Subsidiary)	40	26.7	24	17.1	24	17.1	24	16.4	
Compulsory Courses (AECC,SEC)	18	12.0	8	5.7	8	5.7	8	5.5	
Open Elective Courses	6	4.0					6	4.1	
Dissertation	6	4.0	to be offered as DSE		as DSE		offered as DSE		
Total Credits	150	100.0	140	100.0	140	100.0	146	100.0	









## Proposed Scheme of Psychology 2019 -22 Comprative Study

	Existing Scheme of MUJ		UGC Sugge	sted 2018-21	Proposed Scheme of MUJ	
	Credits	Percentage	Credits	Percentage	Credits	Percentage
Compulsory Courses	14	9.3	10	7.1	12	8.6
Subsidiary/Elective Courses	40	26.7	30	21.4	30	21.4
Open Elective Courses	6	4.0	6	4.3	6	4.3
Core Courses	82	54.7	84	60.0	84	60.0
Project Work & Seminar	8	5.3	10	7.1	8	5.7
Total Credits	150	100.0	140	100.0	140	100.0



# Proposed Scheme of BA Liberal Arts 2019 -22 Comprative Study

	Existing Scheme of BA Liberal Arts		UGC CBCS System		Proposed Scheme of BA Liberal Arts	
	Credits	Percentage	Credits	Percent- age	Credits	Percentage
Core Courses	68	45.3	84	60.0	64	49.2
DSE Courses(Programme Electives)	36	24.0	24	17.1	40	30.8
GE/Interdiscipliniary (Subsidiary)	24	16.0	24	17.1	16	12.3
Compulsory Courses (AECC,SEC)	18	12.0	8	5.7	10	7.7
Open Elective (to be offered as GE)	0	0.0	offered as a GE		a GE	
Dissertation (to be offered as DSE)	4	2.7	to be offered as a DSE offered as a DSE		a DSE	
Total Credits	150	100.0	140	100.0	130	100.0

**Existing Scheme of BA Liberal Arts** 







## Proposed Scheme of BPES 2019 -22 Comprative Study

	Existing Scheme of BPES		UGC CBCS Sys	tem for BA (Honrs)	Proposed Scheme of BPES	
	Credits	Percentage	Credits	Percentage	Credits	Percentage
Core Courses	65	44.8	84	60.0	74	52.9
DSE Courses(Programme Electives)	50	34.5	24	17.1	42	30.0
GE/Interdiscipliniary	6	4.1	24	17.1	6	4.3
Compulsory Courses (AECC,SEC)	18	12.4	8	5.7	18	12.9
Open Elective (to be offered as GE)	offered a	as a GE			offered as a GI	
Dissertation (to be offered as DSE)	6	4.1	to be offered as a DSE		offered as a CC	
Total Credits	145	100.0	140	100.0	140	100.0









# Proposed Scheme of BA J&MC 2019 -22 Comprative Study

	UGC CBCS		Proposed Scheme of MUJ		
	Credits	Percentage	Credits	Percentage	
Core Courses	48	36.4	48	36.4	
AECC	8	6.1	9	6.8	
SEC	24	18.2	20	15.2	
DSE	24	18.2	22	16.7	
GE	12	9.1	12	9.1	
Project, Dissertation & Internship	16	12.1	21	15.9	
Total Credits	132	100.0	132	100.0	





# Proposed Scheme of BBA 2019 -22 Comprative Study

	Existing Scheme of MUJ		MAHE 2018-22	2	Proposed Scheme of MUJ	
	Credits	Percentage	Credits	Percentage	Credits	Percentage
Core Courses	63	42.0	63	48.5	69	46.6
Ability Enhancement Compulsory Courses (AECCs)	23	15.3	3	2.3	15	10.1
Skill Enhancement Course (SECs)	16	10.7	7	5.4	11	7.4
Discipline Specific Electives (DSEs)	24	16.0	28	21.5	36	24.3
Dissertation/Projects	18	12.0	0	0.0	11	7.4
Generic Elective (Open Electives) (OEs)	6	4.0	29	22.3	6	4.1
Total Credits	150	100.0	130	100.0	148	100.0







### Proposed Scheme of BCA 2019 -22 Comprative Study

	UGC CBCS		Proposed Scheme of MUJ		
	Credits	Percentage	Credits	Percentage	
Core Courses	116	83	124	89	
"Ability Enhancement Compulsory Courses (AECC)"	4	3	-	-	
Discipline Specific Elective (DSE)	20	14	16	11	
Total Credits	140	100	140	100	
Total Credits	132	100.0	132	100.0	



## Proposed Scheme of BHM 2019 -23 Comprative Study

	Existing Scheme of MUJ		UGC 2018-22		WGSHA 2017-21		Proposed Scheme of MUJ	
	Credits	Percentage	Credits	Percentage	Credits	Percentage	Credits	Percentage
Humanities Courses	39	20.5	26	16.3	21	12.4	23	14.4
Basic Science	4	2.1	2	1.3	2	1.2	2	1.3
Engineering Science	3	1.6	0	0.0	0	0.0	0	0.0
Open Elective Courses	6	3.2	2	1.3	5	2.9	6	3.8
Program Elective & Core Courses	97	51.1	84	52.5	110	64.7	93	58.1
Project Work & Seminar	41	21.6	46	28.8	32	18.8	36	22.5
Total Credits	190	100.0	160	100.0	170	100.0	160	100.0



## Proposed Scheme of MBA 2019 -21 Comprative Study

	Existing Scheme of TSB		AICTE 201	8-20	Proposed Scheme of MUJ		
	Credits	Percentage	Credits	Percentage	Credits	Percentage	
Core Courses	63	56.3	54	52.9	54	52.9	
Specialisation Courses	42	37.5	42	41.2	42	41.2	
Internship/ Dissertation	7	6.3	6	5.9	6	5.9	
Total Credits	112	100.0	102	100.0	102	100.0	





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