



# **GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY**

[Established by the Govt. of NCT of Delhi vide  
Guru Gobind Singh Indraprastha University Act No.9 of 1998]

## **RE-ACCREDITATION REPORT**

### **PART – III : APPENDICES**

[Including Supportive Evidences]

*Submitted for Re – Accreditation*

*to*

## **NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

*An autonomous Institution of the University Grants Commission*  
P.O.Box No. 1075, NAGARBHAVI, BANGALORE – 560 072 KARNATAKA, INDIA

**January, 2012**

**GURU GOBIND SINGH  
INDRAPRASTHA  
UNIVERSITY**

**RE-ACCREDITATION REPORT  
PART – III : APPENDICES  
[Including Supportive Evidences]**

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**APPENDIX: I**

***PROGRAMMES OF STUDIES***  
***AT GGS INDRAPRASTHA UNIVERSITY***  
***(Academic Session 2012-13)***

# **PROGRAMMES OF STUDIES**

**at**

## **GGG INDRAPRASTHA UNIVERSITY**

**ACADEMIC SESSION 2012-13**



**GURU GOBIND SINGH  
INDRAPRASTHA  
UNIVERSITY**

**GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY**

**Sector – 16C, Dwarka, New Delhi – 110075**

[www.ipu.ac.in](http://www.ipu.ac.in)

## **1. THE UNIVERSITY**

The Guru Gobind Singh Indraprastha University came into existence in 1998 by enacting an Act No.9 of 1998 by the Govt. of NCT of Delhi as a teaching and affiliating University. During a short span of Twelve years, it has been able to emerge as one of the giants both in professional and technical education. It offers wide ranging professional and technical academic programmes in the disciplines of Engineering, Architecture, Management, Law, Computer Applications, Journalism, Mass- Communication, Education, Medical and Para-Medical Studies, etc. Almost every academic programme that is offered by this University is of inter disciplinary nature and is knowledge and creativity oriented not only to meet the demand of today but also that of tomorrow.

Almost instantaneously, the University came to be recognized by the University Grants Commission both under Section 2 (f) and 12 (b) of the UGC Act. Further it was graded as 'A' by the National Assessment and Accreditation Council, Bangalore on March 31, 2007 for a period of five years. During the course of Surveillance Audit conducted in August, 2009 by the Standardization Testing & Quality Certification Directorate, Ministry of Communication and IT, Department of Information Technology, Govt. of India, the ISO Certification granted to this University has been upgraded from ISO 9001: 2000 to ISO 9001 : 2008 ; this we could accomplish after having met the requirements of the New Version of ISO. The Association of Indian Universities (AIU) also granted the Status of Regular Membership to this University in November, 2008.

## 2. THE UNIVERSITY SCHOOLS OF STUDIES

The following Schools of Studies are operational in the University's Main Campus (Sector-16-C, Dwarka) and Kashmere Gate Campus :

<b>S. No.</b>	<b>Name of the University Schools</b>
1	School of Architecture & Planning (USAP)
2	School of Basic & Applied Sciences (USBAS)
3	School of Bio-Technology (USBT)
4	School of Chemical Technology (USCT)
5	School of Education (USE)
6	School of Environmental Sciences (USEM)
7	School of Humanities & Social Sciences (USHSS)
8	School of Information Technology (USIT)
9	School of Law & Legal Studies (USLLS)
10	School of Management Studies (USMS)
11	School of Mass Communication USMC)

### 3. PROGRAMMES OF STUDIES BEING CONDUCTED AT UNIVERSITY SCHOOLS OF STUDIES

S. NO.	Schools	Prg. Code	Programme	Examination Mode (EU)	Duration (EU)
1	<b>School of Information Technology</b>	045	Master Of Computer Applications (Software Engineering)	Semester	Six
2		015	Bachelor Of Technology (Information Technology)(Part of Dual Degree Programme)	Semester	Eight
3		032	Bachelor Of Technology (Computer Science And Engineering)(Part of Dual Degree Programme)	Semester	Four
4		215	Master Of Technology (Information Technology)(Part of Dual Degree Programme)	Semester	Four
5		128	Bachelor Of Technology (Electronics And Communications Engineering) (Part of Dual Degree Programme)	Semester	Eight
6		232	Master Of Technology (Computer Science Engineering)(Part of Dual Degree Programme)	Semester	Four
7		042	Master Of Technology (Electronics And Communication Engineering)- Weekend	Semester	Six
8		048	Master Of Technology (Computer Science And Engineering)	Semester	Four
9		053	Master Of Technology (Information Technology)-Regular	Semester	Four
10		065	Master Of Technology (Information Technology)-Weekend	Semester	Six
11		148	Master Of Technology (Digital & Wireless Communication)	Semester	Four
12	<b>School of Management Studies (USMS)</b>	039	Master Of Business Administration	Semester	Four
13		139	MBA (Dual Degree)	Semester	Four
14		885	Master Of Business Administration-Weekend	Semester	Four
15		335	Master Of Business Administration (Banking & Insurance)	Semester	Four
16		336	Master Of Business Administration (Real Estate)	Semester	Four
17	<b>School of Chemical Technology (USCT)</b>	014	Bachelor Of Technology (Chemical Engineering) (Part of Dual Degree Programme)	Semester	Eight
18		095	Master Of Technology (Chemical Engineering)	Semester	Four
19		214	Master Of Technology (Chemical Engineering) (Part of Dual Degree Programme)	Semester	Four
20	<b>School of Bio-Technology (USBT)</b>	013	Bachelor Of Technology (Biotechnology) (Part of Dual Degree Programme)	Semester	Eight
21		213	Master Of Technology (Biotechnology) (Part of Dual Degree Programme)	Semester	Four
22	<b>School of Environmental Sciences (USES)</b>	003	Master Of Science (Biodiversity & Conservation)	Semester	Four
23		047	Master Of Science (Environment Management)	Semester	Four
24	<b>School of Architecture &amp; Planning (USAP)</b>	016	Bachelor of Architecture	Annual	Five
25	<b>School of Basic &amp; Applied Sciences (USBAS)</b>	010	Master Of Technology (Nano Science & Technology)	Semester	Four
26		097	Master Of Technology (Engineering Physics)	Semester	Four
27	<b>School of Humanities &amp; Social Sciences (USHSS )</b>	009	Master of Arts (English & Communication Studies)	Semester	Four
28	<b>School of Law &amp; Legal Studies (USLLS)</b>	038	Bachelor Of Law (Hons.)	Semester	Ten
29		039	BBA LLB (Hons.)	Semester	Ten
30		070	Master Of Law	Semester	Four
31		001	Master of Education	Semester	Two
32		740	Master of Journalism (Mass Communication)	Trimester	Six
33		040	Master in Mass Communication	Semester	Four

#### 4. ELIGIBILITY CRITERIA FOR ADMISSION:

S. NO	Programme Code	Programme	Eligibility
1	045	Master Of Computer Applications (Software Engineering)	Bachelor's Degree of a recognized University in any discipline with at least 50% marks in aggregate and must also have passed Mathematics and English (core or elective or functional) at least at the Senior School Certificate Examination (Class XII) of the CBSE or any other Examination recognized as equivalent thereto. OR BCA/BIT/BIS of a recognized University of at least three years duration with at least 50% marks in aggregate or any qualification recognized as equivalent thereto. OR Bachelor's Degree in Engineering or Technology or a qualification recognized as equivalent thereto with at least 50% marks in aggregate.
2	015	Bachelor Of Technology (Information Technology) (Part of Dual Degree Programme)	Pass in 12 <sup>th</sup> Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study (core/elective/ functional) in the qualifying examination.
3	032	Bachelor Of Technology (Computer Science And Engineering) (Part of Dual Degree Programme)	Pass in 12 <sup>th</sup> Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study (core/elective/ functional) in the qualifying examination.
4	215	Master Of Technology (Information Technology) (Part of Dual Degree Programme)	Pass in 12 <sup>th</sup> Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics Provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study in the qualifying examination.
5	128	Bachelor Of Technology (Electronics And Communications Engineering) (Part of Dual Degree Programme)	Pass in 12 <sup>th</sup> Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics Provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study in the qualifying examination.
6	232	Master Of Technology (Computer Science Engineering) (Part of Dual Degree Programme)	Pass in 12 <sup>th</sup> Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study (core/elective/ functional) in the qualifying examination.

7	042	Master Of Technology (Electronics And Communication Engineering) Weekend	<p><b>A) Eligibility Conditions:</b></p> <p>a) Minimum 60% or equivalent in the qualifying examination as under:-</p> <ol style="list-style-type: none"> <li>1. B.Tech. / B.E. in Electronics &amp; Communication / Electronics Engineering/ Electrical &amp; Electronics Engineering or equivalent</li> <li>2. B.Tech./ B.E. in Electrical / Instrumentation &amp; Control or equivalent</li> <li>3. Grad. I E T E / AMIE (ECE)</li> <li>4. M. Sc. in Electronics / M. Sc. Computer Science</li> <li>5. B. Tech. / B.E. in Computer Science &amp; Engineering / Computer Engineering / Electrical Engineering or equivalent.</li> </ol> <p>b) In addition to above qualification(s), candidates should also have at least one year of professional/teaching experience after completing the qualifying examination.</p> <p><b>B) Admission Criteria:</b></p> <p>Merit list shall be prepared based on the following:</p> <ol style="list-style-type: none"> <li>1. Marks secured in CET at 100 points scale.</li> <li>2. One mark each for an additional year of experience but up to a maximum of ten additional marks. The maximum marks will be 110.</li> </ol>
8	048	Master Of Technology (Computer Science And Engineering)	<p><b>A) Eligibility Conditions:</b></p> <ol style="list-style-type: none"> <li>1) B.Tech./B.E. in Computer Science/Information Technology/ Electronics &amp; Communication Engineering or equivalent degree with 60% marks.</li> <li>2) MCA, M.Sc. (IT)/Computer Science/Electronics with 60% Marks.</li> </ol> <p>Sponsored Category</p> <ol style="list-style-type: none"> <li>1) The Sponsored candidate in addition to the fulfillment of eligibility conditions as a specified above must have a minimum of one year of work experience in a registered firm/company/Industry/Government Department/ Autonomous Organization in the relevant field in which admission is being sought after the competition of qualifying examination.</li> <li>2) A letter from employer must be furnished stating that the candidate is being sponsored to seek admission in M.Tech. (IT)/M. Tech (CSE) full time programme.</li> </ol> <p><b>B) Admission Criteria:</b></p> <p>a) For normal seats: The merit list will be prepared on the basis of the qualified &amp; valid GATE SCORE. If seats remain vacant after admitting students with qualified &amp; valid GATE score, then the admission for vacant seats shall be made on the basis of CET rank/merit for NON GATE candidates, subject to securing of a minimum of 60% marks in qualifying exam.</p> <p>b) For sponsored seats: The merit list will be prepared on the following basis:</p> <ol style="list-style-type: none"> <li>i) Merit list of normal seats;</li> <li>ii) One mark each for an additional year of experience but upto a maximum of ten additional marks. The maximum marks will be 110.</li> </ol>
9	053	Master Of Technology (Information Technology)-Regular	<p><b>A) Eligibility Conditions:</b></p> <ol style="list-style-type: none"> <li>1) B.Tech./B.E. in Computer Science/Information Technology/ Electronics &amp; Communication Engineering or equivalent degree with 60% marks.</li> <li>2) MCA, M.Sc. (IT)/Computer Science/Electronics with 60% Marks.</li> </ol> <p>Sponsored Category</p> <ol style="list-style-type: none"> <li>1) The Sponsored candidate in addition to the fulfillment of eligibility conditions as a specified above must have a minimum of one year of work experience in a registered firm/company/Industry/Government Department/ Autonomous Organization in the relevant field in which admission is being sought after the competition of qualifying examination.</li> <li>2) A letter from employer must be furnished stating that the candidate is being sponsored to seek admission in M.Tech. (IT)/M. Tech (CSE) full time programme.</li> </ol> <p><b>B) Admission Criteria:</b></p> <p>a) For normal seats: The merit list will be prepared on the basis of the qualified &amp; valid GATE SCORE. If seats remain vacant after admitting students with qualified &amp; valid GATE score, then the admission for vacant seats shall be made on the basis of CET rank/merit for NON GATE candidates, subject to securing of a minimum of 60% marks in qualifying exam.</p>

			<p>b) For sponsored seats: The merit list will be prepared on the following basis:</p> <p>i) Merit list of normal seats;</p> <p>ii) One mark each for an additional year of experience but upto a maximum of ten additional marks. The maximum marks will be 110.</p>
10	065	Master Of Technology (Information Technology)-Weekend	<p><b>A) Eligibility Conditions:</b></p> <p>a) Minimum 60% or equivalent in the qualifying examination as under :-</p> <ol style="list-style-type: none"> <li>1. B.Tech. / B.E. in Computer Science / Computer Science &amp; Engineering / Computer Engineering / Information Technology or equivalent degree.</li> <li>2. B.Tech / B.E. in Electronics &amp; Communication / Electronics Engineering or equivalent degree.</li> <li>3. B.Tech./B.E. in Electrical Engineering or equivalent degree.</li> <li>4. MCA/MCA (Software Engineering) or equivalent three years' Master's degree programme.</li> <li>5. M.Sc. in IT / Computer Science / Information Science and Technology / Informatics (Two Years)/ Electronics or equivalent Master's degree.</li> </ol> <p>b) In addition to the above qualification(s), candidates should also have atleast one year of professional / teaching experience after the completion of the qualifying examination.</p> <p><b>B) Admission Criteria:</b></p> <p>Merit list shall be prepared based on the following:</p> <ol style="list-style-type: none"> <li>1. Marks secured in CET at 100 points scale.</li> <li>2. One mark each for an additional year of experience but up to a maximum of ten additional marks. The maximum marks will be 110.</li> </ol>
11	148	Master Of Technology (Digital & Wireless Communication)-Weekend	<p><b>A) Eligibility Conditions:</b></p> <p>B.Tech./B.E. in Electronics &amp; Communication/Electronics Engineering/ Computer Science &amp; Engineering/Information Technology/Electrical Engineering or equivalent/M.Sc. in electronics or equivalent degree with 60% marks.</p> <p><b>B) Admission Criteria:</b></p> <p>a) For normal seats: The merit list will be prepared on the basis of the qualified &amp; valid GATE SCORE. If seats remain vacant after admitting students with qualified &amp; valid GATE score, then the admission for vacant seats shall be made on the basis of CET rank/merit for NON GATE candidates, subject to securing of a minimum of 60% marks in qualifying exam.</p> <p>b) Sponsored Category:</p> <p>The sponsored candidate in addition to the fulfillment of eligibility conditions as specified must have minimum of one year of Full Time Work experience in a registered firm/Company/Industry/Education and Research/Institution/ any Govt. department/Autonomous Organization in the relevant field in which admission is being sought after the completion of the qualifying examination.</p> <p>The Merit list would be prepared after to into account.</p> <p>i) Merit list of normal seats;</p> <p>ii) One mark each for additional year of experience but upto a maximum of ten additional marks. The maximum marks will be 110.</p>

12	039	Master Of Business Administration	<p>Any recognized Bachelor's Degree in any discipline with a minimum of 50% marks in aggregate.</p> <p>OR</p> <p>Bachelor's Degree in Engineering, Technology or any other subject with minimum of 50% marks in aggregate or any qualification recognized as equivalent thereto with minimum of 50% marks in aggregate.</p> <p>OR</p> <p>Passed the Final Examination of the Institute of Chartered Accountants of India or England, the Institute of Cost and Works Accountants of India or England or the Institute of Company Secretaries of India.</p>
13	139	MBA (Dual Degree)	<p>Any recognized Bachelor's Degree in any discipline with a minimum of 50% marks in aggregate.</p> <p>OR</p> <p>Bachelor's Degree in Engineering, Technology or any other subject with minimum of 50% marks in aggregate or any qualification recognized as equivalent thereto with minimum of 50% marks in aggregate.</p> <p>OR</p> <p>Passed the Final Examination of the Institute of Chartered Accountants of India or England, the Institute of Cost and Works Accountants of India or England or the Institute of Company Secretaries of India.</p>
14	885	Master Of Business Administration-Weekend	<p><b>A) Eligibility Conditions:</b></p> <p>i) Graduation or its equivalent in any discipline with atleast 50% marks in aggregate</p> <p>ii) Atleast one year post-qualification executive/supervisory/teaching experience. The cut-off date for counting experience shall be 10th July, 2011.</p> <p>iii) A No-objection certificate is required to be submitted at the time of admission from the current employer.</p> <p><b>B) Admission Criteria:</b></p> <p>Admission shall be based on marks obtained in the qualifying examination (Graduation) and performance in Personal Interview.</p> <p>Merit list shall be prepared based on the following:</p> <p>a) 70% weightage will be given to the percentage secured in the qualifying examination.</p> <p>b) 30% weightage will be given to the performance in Personal Interview.</p> <p>Thus the merit list shall be prepared on the basis of marks earned by each candidate from out of 100 comprising of percentage of marks obtained in eligibility qualification and marks obtained in Personal Interview.</p>

15	335	Master Of Business Administration (Banking & Insurance)	<p><b>A) Eligibility Conditions:</b></p> <p>i) Graduation or its equivalent in any discipline with atleast 50% marks in aggregate</p> <p>ii) Atleast one year post-qualification executive/supervisory/teaching experience. The cut-off date for counting experience shall be 10th July, 2011.</p> <p>iii) A No-objection certificate is required to be submitted at the time of admission from the current employer.</p> <p><b>B) Admission Criteria:</b></p> <p>Admission shall be based on marks obtained in the qualifying examination (Graduation) and performance in Personal Interview.</p> <p>Merit list shall be prepared based on the following:</p> <p>a) 70% weightage will be given to the percentage secured in the qualifying examination.</p> <p>b) 30% weightage will be given to the performance in Personal Interview.</p> <p>Thus the merit list shall be prepared on the basis of marks earned by each candidate from out of 100 comprising of percentage of marks obtained in eligibility qualification and marks obtained in Personal Interview.</p>
16	336	Master Of Business Administration (Real Estate)	<p><b>A) Eligibility Conditions:</b></p> <p>i) Graduation or its equivalent in any discipline with atleast 50% marks in aggregate</p> <p>ii) Atleast one year post-qualification executive/supervisory/teaching experience. The cut-off date for counting experience shall be 10th July, 2011.</p> <p>iii) A No-objection certificate is required to be submitted at the time of admission from the current employer.</p> <p><b>B) Admission Criteria:</b></p> <p>Admission shall be based on marks obtained in the qualifying examination (Graduation) and performance in Personal Interview.</p> <p>Merit list shall be prepared based on the following:</p> <p>a) 70% weightage will be given to the percentage secured in the qualifying examination.</p> <p>b) 30% weightage will be given to the performance in Personal Interview.</p> <p>Thus the merit list shall be prepared on the basis of marks earned by each candidate from out of 100 comprising of percentage of marks obtained in eligibility qualification and marks obtained in Personal Interview.</p>
17	014	Bachelor Of Technology (Chemical Engineering) (Part of Dual Degree Programme)	<p>Pass in 12th Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics</p> <p>Provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study in the qualifying examination.</p>
18	095	Master Of Technology (Chemical Engineering)	<p><b>A) Eligibility Conditions:</b></p> <p>B.Tech./B.E. in Chemical Engineering or equivalent degree with 60% Marks.</p> <p><b>B) Admission Criteria:</b></p> <p>After accommodating dual degree students, merit list will be prepared on the basis of the qualified &amp; valid GATE SCORE. If seats remain vacant after admitting students with qualified &amp; valid GATE score, then the admission for vacant seats shall be made on the basis of marks obtained in the qualifying exams/ degree for NON GATE candidates.</p>
19	214	Master Of Technology (Chemical Engineering) (Part of Dual Degree Programme)	<p>Pass in 12th Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics</p> <p>Provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study in the qualifying examination.</p>

20	013	Bachelor Of Technology (Biotechnology) (Part of Dual Degree Programme)	Pass in 12th Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Biology/ Biotechnology provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study (core/elective/functional) in the qualifying examination.
21	213	Master Of Technology (Biotechnology) (Part of Dual Degree Programme)	Pass in 12th Class of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Biology/ Biotechnology provided the candidate has passed in each subject separately. Candidate must additionally have passed English as a subject of study (core/elective/functional) in the qualifying examination.
22	003	Master Of Science (Biodiversity & Conservation)	B.Sc. degree or equivalent (Botany, Zoology, Biotechnology, Biochemistry, Anthropology or any field of Life Sciences) with minimum 50% marks
23	047	Master Of Science (Environment Management)	B.Sc. Degree or its equivalent with at least 50% marks in aggregate.  OR  B.Sc. (Engg.), B.Tech. or B.E. in Civil/Chemical/ Agricultural Engg. Degree with at least 50% marks in aggregate.
24	016	Bachelor of Architecture	Pass in 12 <sup>th</sup> Class of 10+2 of CBSE or Equivalent with a minimum aggregate of 50% marks and must have passed Mathematics as subject  OR 10+3 years diploma in Architecture recognized by the Central/State Governments (All candidate possessing any of the above qualifications must also have passed the National Aptitude Test of Architecture (NATA) conducted by Council of Architecture.)
25	010	Master Of Technology (Nanoscience & Technology)	<b>A) Eligibility Conditions:</b> M.Sc. (Physics/Applied Physics/Electronics/Mathematics/ Chemistry/ Biotechnology/Biosciences/Life Sciences): BE/B.Tech (Electronics/ Computer Science /Electrical/Mechanical/Engineering Physics /Metallurgy /Material Engineering/Information Technology/Biotechnology /Biomedical /Chemical Engineering or Technology) Minimum 55% aggregate marks in the qualifying degree and Mathematics at +2 level is a must. <b>B) Admission Criteria:</b> The merit list will be prepared on the basis of the qualified & valid GATE SCORE. The next preference in the merit list will be given to NON GATE candidates based on marks obtained in the qualifying degree/exam, subject to securing a minimum of 55% of marks in qualifying degree/exam.
26	097	Master Of Technology (Engineering Physics)	<b>A) Eligibility Conditions:</b> BE/B.Tech. (Eletronics/Computer Science/Electrical/Engineering Physics/IT/IC (or) equivalent OR Post Graduation in Physics/Applied Physics/Electronics/ Mathematics or equivalent with minimum of 55% marks in aggregate in the qualifying degree. However, must have studied Physics at the undergraduate level. <b>B) Admission Criteria:</b> The merit list will be prepared on the basis of the qualified & valid GATE SCORE. The next preference in the merit list will be given to NON GATE candidates based on marks obtained in the qualifying degree/exam, subject to securing a minimum of 55% of marks in qualifying degree/exam.
27	009	Master of Arts (English & Communication Studies)	Graduation in any discipline from a recognized University with aggregate of 50% marks.

28	038	Bachelor Of Law (Hons.)	Pass in 12th Class of 10+2 of CBSE or equivalent with a minimum of 50% marks in aggregate and must also have passed English (core or elective or functional) as a subject.
29	039	BBA LLB (Hons.)	Pass in 12th Class of 10+2 of CBSE or equivalent with a minimum of 50% marks in aggregate and must also have passed English (core or elective or functional) as a subject.
30	070	Master Of Law	LL.B. Degree as required by the Bar Council of India for enrolment as an advocate or an equivalent law degree from a foreign university, in either case with not less than 50% marks.
31	001	Master of Education	A Graduate/Post Graduate in any discipline from a recognized University along with qualifying B.Ed. examination with 60% both in theory and practical separately
32	740	Master of Journalism (Mass Communication)	A) Eligibility Conditions: Bachelor degree from a recognized university with minimum of 50% marks in aggregate. B) Admission Criteria: Merit list shall be prepared based on the following: 1. Percentage of Marks secured in the qualifying degree on a hundred point scale. 2. One mark each for an additional year of experience but up to a maximum of ten additional marks. The maximum marks will be 110.
33	040	Master in Mass Communication	Graduation in any discipline from a recognized University with aggregate of 50% marks.

**MASTER OF COMPUTER APPLICATION  
(Software Engineering)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPAR NAME</b>	<b>CREDITS</b>
IT601	Information Technology	4	IT602	Software Engineering	4
IT603	Computer Architecture	4	IT604	Database Management Systems	4
IT605	Programming And Data Structure	4	IT606	Object Oriented Programming	4
IT607	Foundations of Computer Science	4	MS608	Organizational Behaviour	4
BA609	Mathematics – I	4	BA610	Mathematics – II	4
IT651	Information Technology Lab. (Practical)	2	IT652	Software Engineering Lab. (Practical)	1
IT653	Programming And Data Structure Lab. (Practical)	2	IT654	Database Management Systems Lab. (Practical)	1
IT655	Computer Architecture Lab. (Practical)	2	IT656	Object Oriented Programming Lab. (Practical)	2
			IT658	Term Paper (Practical)	2
<b>Total</b>		<b>26</b>	<b>Total</b>		<b>26</b>
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
IT701	Java Programming	4	IT702	Data Warehousing & Data Mining	4
IT703	Algorithm Analysis And Design	4	IT704	Object Oriented Software Engineering	4
IT705	Web Technology	4	IT706	Computer Graphics	4
IT 751	Java Programming Lab. (Practical)	1	IT752	Data Warehousing & Data Mining (Practical)	1
IT753	Algorithm Analysis And Design Lab. (Practical)	1	IT754	Object Oriented Software Engineering (Practical)	1
IT755	Web Technology Lab. (Practical)	1	IT756	Computer Graphics (Practical)	1
IT757	Computer Networks Lab. (Practical)	1	IT758	Elective Lab. (Practical)	1
			IT760	Minor Project (Practical)	4
			<b>ELECTIVES (Select Any Two)</b>		
			IT708	Enterprise Computing in Java	4
			IT710	Microprocessors	4
			IT712	Software Metrics	4
			IT714	Front End Design Tools	4
			IT716	Digital Signal Processing	4
			IT718	Network Security	4
			IT720	.Net Programming	4
<b>Total</b>		<b>24</b>	<b>Total</b>		<b>24</b>

<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
IT801	Software Verification, Validation & Testing	4	IT854	Dissertation (Practical)	26
IT803	Linux & X-Windows Programming	4	IT856	Seminar And Progress Reports (Practical)	6
IT805	Advanced Computer Networks	4			
IT807	Multimedia Applications	4			
IT851	Software Verification, Validation & Testing Lab. (Practical)	1			
IT853	Linux & X-Windows Programming (Practical)	1			
IT855	Advanced Computer Networks (Practical)	1			
IT857	Multimedia Applications (Practical)	1			
<b>ELECTIVES (Select Any Two)</b>					
IT809	Digital Image Processing	4			
IT811	Advanced Computer Architecture	4			
IT813	Compiler Construction	4			
IT815	Software Project Management	4			
IT817	Fuzzy Sets & Logic	4			
IT819	Neural Networks	4			
IT821	Simulation & Modeling	4			
IT823	Introduction to Multi Agent Systems	4			
IT825	Artificial Intelligence	4			
IT827	Reliability Engineering	4			
IT829	Software Quality Management	4			
IT831	Mobile Computing	4			
IT833	Software Requirement & Estimation	4			
<b>Total</b>		<b>28</b>	<b>Total</b>		<b>32</b>

**Maximum Credits : 160**

**Minimum Credits : 150**

**\*NUES**

**BACHELOR OF TECHNOLOGY (Dual Degree)  
(Information Technology)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
HS101	Communication Skills-I	3	HS102	Communication Skills – II	3
BA103	Chemistry – I	3	IT104	Engineering Mechanics	4
IT105	Introduction to Computers	3	BA108	Mathematics – II	4
IT107	Electrical Science	4	BA110	Physics-II	3
BA109	Mathematics – I	4	BA114	Statistics Theory of Probability and Linear Programming	3
BA111	Physics – I	3	BA118	Chemistry-II	3
HS119	Impact of Science & Technology on Society – I*	1	HS126	Impact of Science & Technology on Society – II*	1
BA151	Chemistry-I Lab (Practical)	1	IT128	Data Structures	3
BA153	Physics-I Lab (Practical)	1	BA156	Physics –II Lab (Practical)	1
IT155	Computer Lab (Practical)	1	BA162	Chemistry –II Lab (Practical)	1
IT157	Engineering Graphics-I (Practical)	1	IT152	Data Structure Lab (Practical)	1
IT159	Electrical Science Lab (Practical)	1	IT154	Engineering Graphics-II Lab (Practical)	1
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
IT201	Computational Methods	4	IT202	Java Programming	4
IT203	Circuits and Systems	4	IT204	Multimedia Applications	4
IT205	Electronic Devices and Circuits	4	IT206	Switching Theory and Logic Design	4
IT207	Object Oriented Programming Using C++	4	MS208	Organization Behaviour	4
IT209	Computer Graphics	4	IT210	Foundations of Computer Science	4
IT211	Database Management Systems	4	IT212	Software Engineering	4
IT251	Electronic Devices and Circuits Lab. (Practical)	1	IT252	Java Programming Lab. (Practical)	1
IT253	Computation Lab. (Practical)	1	IT254	Multimedia Lab. (Practical)	1
IT255	Object Oriented Programming Lab. (Practical)	1	IT256	Switching Theory and Logic Design Lab. (Practical)	1
IT257	Computer Graphics Lab. (Practical)	1	IT258	Software Engineering Lab. (Practical)	1
IT259	DBMS Lab. (Practical)	1			
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
IT301	Computer Architecture	4	IT302	Microprocessors	4
IT307	Digital Signal Processing	4	IT304	Computer Networks	4
IT309	Object Oriented Software Engineering	4	IT306	Algorithm Analysis and Design	4
IT313	Communication Systems	4	IT314	Digital System Design	4
IT315	Linux and Win32 Programming	4	IT316	Digital Communication	4
IT317	Operating Systems	4	IT352	Microprocessor Lab. (Practical)	1
IT353	Digital Signal Processing Lab. (Practical)	1	IT354	Algorithm Analysis & Design Lab. (Practical)	1
IT359	Object Oriented Software Engineering Lab. (Practical)	1	IT360	DSD Lab. (Practical)	1
IT361	Linux and Win32 Programming Lab. (Practical)	1	IT362	Digital Communication Lab. (Practical)	1
IT357	Summer Training (Conducted at the end of the 4 <sup>th</sup> Semester) Report, Seminar and Viva – Voce (Practical)*	1			

SEVENTH SEMETER			EIGHTH SEMETER		
IT401	Advanced Computer Networks	4	98402	Technical Writing*	2
IT413	Front End Design Tools and Web Technologies	4	IT452	Major Project (Report) (Practical)	8
IT451	ACN Lab. (Practical)	1	IT454	Viva – Voce (On major project) (Practical)	2
IT453	FEDT & Web Technology Lab. (Practical)	1	IT456	Seminar and progress report (Practical)*	1
IT455	Laboratory work for electives (Practical)	1	IT458	Laboratory Assignments (Practical)	1
IT457	Minor Project (Practical)	5			
IT459	Summer Training (Conducted at the end of the 6 <sup>th</sup> Semester) Report, Seminar and Viva – Voce (Practical)*	1			

ELECTIVES (SELECT ANY TWO)			ELECTIVES (SELECT ANY TWO)		
IT403	Software Testing	4	IT404	Advanced Computer Architecture	4
IT405	Distributed Systems	4	IT406	Control Systems	4
IT415	Advanced Java Programming	4	IT408	Advanced Database Management Systems	4
IT417	Embedded System Design	4	IT414	Windows .Net Framework and C# Programming	4
IT419	Wireless and Mobile Communication	4	IT416	Mobile Computing	4
IT421	Data Warehousing and Mining	4	IT418	Semantic Web	4

**Maximum Credits : 210**

**Minimum Credits : 200**

**\*NUES**

**BACHELOR OF TECHNOLOGY (Dual Degree)  
(Computer Science & Engineering)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
HS101	Communication Skills-I	3	HS102	Communication Skills – II	3
BA103	Chemistry – I	3	IT104	Engineering Mechanics	4
IT105	Introduction to Computers	3	BA108	Mathematics – II	4
IT107	Electrical Science	4	BA110	Physics-II	3
BA109	Mathematics – I	4	BA114	Statistics Theory of Probability and Linear Programming	3
BA111	Physics – I	3	BA118	Chemistry-II	3
HS119	Impact of Science & Technology on Society – I*	1	HS126	Impact of Science & Technology on Society – II*	1
BA151	Chemistry-I Lab (Practical)	1	IT128	Data Structures	3
BA153	Physics-I Lab (Practical)	1	BA156	Physics –II Lab (Practical)	1
IT155	Computer Lab (Practical)	1	BA162	Chemistry –II Lab (Practical)	1
IT157	Engineering Graphics-I (Practical)	1	IT152	Data Structure Lab (Practical)	1
IT159	Electrical Science Lab (Practical)	1	IT154	Engineering Graphics-II Lab (Practical)	1
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
IT201	Computational Methods	4	IT202	Java Programming	4
IT203	Circuits and Systems	4	IT204	Multimedia Applications	4
IT205	Electronic Devices and Circuits	4	IT206	Switching Theory and Logic Design	4
IT207	Object Oriented Programming Using C++	4	MS208	Organization Behaviour	4
IT209	Computer Graphics	4	IT210	Foundations of Computer Science	4
IT211	Database Management Systems	4	IT212	Software Engineering	4
IT251	Electronic Devices and Circuits Lab. (Practical)	1	IT252	Java Programming Lab. (Practical)	1
IT253	Computation Lab. (Practical)	1	IT254	Multimedia Lab. (Practical)	1
IT255	Object Oriented Programming Lab. (Practical)	1	IT256	Switching Theory and Logic Design Lab. (Practical)	1
IT257	Computer Graphics Lab. (Practical)	1	IT258	Software Engineering Lab. (Practical)	1
IT259	DBMS Lab. (Practical)	1			
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
IT301	Theory of Computation	4	IT302	Microprocessors	4
IT303	Analog and Digital Communication	4	IT304	Computer Networks	4
IT305	Computer Architecture	4	IT306	Algorithm Analysis and Design	4
IT307	Digital Signal Processing	4	IT308	Compiler Design	4
IT309	Object Oriented Software Engineering	4	IT310	Operating Systems	4
IT311	Digital Design Using VHDL	4	IT352	Microprocessor Lab. (Practical)	1
IT351	Analog & Digital Communication Lab. (Practical)	1	IT354	Algorithm Analysis & Design Lab. (Practical)	2
IT353	Digital Signal Processing Lab. (Practical)	1	IT356	Compiler Design Lab. (Practical)	1
IT355	Digital Design Lab. (Practical)	1			
IT357	Summer Training (Conducted at the end of the 4 <sup>th</sup> Semester) Report, Seminar and Viva – Voce (Practical)	1			
<b>SEVENTH SEMESTER</b>			<b>EIGHTH SEMESTER</b>		
IT401	Advanced Computer Networks	4	HS402	Technical Writing	2
IT403	Software Testing	4	IT452	Major Project (Report) (Practical)	8
IT451	ACN Lab. (Practical)	1	IT454	Viva – Voce (On major project) (Practical)	2
IT461	Software Testing Lab. (Practical)	1	IT456	Seminar and progress report (Practical)	1
IT455	Laboratory work for electives (Practical)	1	IT458	Laboratory work for electives (Practical)	1
IT457	Minor Project (Practical)	5			
IT459	Summer Training (Conducted at the end of the 6 <sup>th</sup> Semester) Report, Seminar and Viva – Voce (Practical)	1			
<b>ELECTIVES (SELECT ANY TWO)</b>			<b>ELECTIVES (SELECT ANY TWO)</b>		
IT451	ACN Lab.	1	IT404	Advanced Computer Architecture	4
IT461	Software Testing Lab.	1	IT406	Control Systems	4
IT455	Laboratory work for electives	1	IT408	Advanced Database Management Systems	4
			IT410	Soft Computing	4
			IT412	Natural Language Processing	4
			IT414	Windows .Net Framework and C# Programming	4

**Maximum Credits : 210**

**Minimum Credits : 200**

**\*NUES**

## MASTER OF TECHNOLOGY (Regular)

(Information Technology) (Dual Degree)

<b>NINTH SEMESTER</b>			<b>TENTH SEMESTER</b>		
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPER NAME	CREDITS
ITR-707	Network Management & Security	4	IT-502	Distributed DBMS	4
ITR-719	Cellular and Mobile Communication	4	ITR-630	Enterprise Computing in JAVA	4
ITR-731	Advanced Software Project management	4		Elective – I	4
	Elective – I	4		Elective – II	4
	Elective – II	4		Elective – III	4
IT-551	Network Management & Security Lab. (Practical)	2	IT-552	Advanced DBMS Lab. (Practical)	2
IT-553	Cellular & Mobile Communication Lab. (Practical)	2	IT-554	Enterprise Computing in JAVA Lab. (Practical)	2
IT-555	Advanced Software Project Management Lab. (Practical)	2	IT-556	Lab. Based on Elective Subjects (Practical)	2
<b>ELECTIVES</b>			<b>ELECTIVES</b>		
IT-501	Intelligent Systems	4	IT-504	Advanced Semantic Web	4
IT-503	Optical Communication	4	IT-506	Service Oriented Architecture	4
IT-505	Programming With AVR Microcontroller	4	IT-508	Project Work	4
IT-507	Project Work	4	ITR-606	Wireless Mobile Networks	4
ITR-705	Software Resuability	4	ITR-608	VLSI Design	4
ITR-709	Software Quality Management	4	ITR-612	Real Time Systems & Software	4
ITR-721	Satellite Communication	4	ITR-618	Software Requirement & Estimation	4
ITR-729	Information Storage & Mgt.	4	ITR-620	Neural Networks	4
MS-235	Enterprise Resrouce Planning	4	ITR-622	Network Programming	4
BAEP-705	Nano Science & Engg.	4	ITR-624	Fuzzy Logic & Design	4
BAEP-707	Introduction to Quantum Information and Computation	4	ITR-626	Genetic Algorithms	4
HCS-607	Nonverbal Communication	4	HCS-606	Interpersonal Communication & Personality Development	4
			HCS-702	Research Methodology	4
<b>ELEVENTH SEMESTER</b>			<b>TWELFTH SEMESTER</b>		
IT-951	Dissertation Work – I (Survey and Formulation of the Problem)	20	IT-952	Dissertation (Practical)	24
			IT-956	Comprehensive Viva*	4
IT-953	Seminar & Progress Work	8			

**Maximum Credits : 108**

**Minimum Credits : 100**

**\*NUES**

**BACHELOR OF TECHNOLOGY (Dual Degree)**  
**(Electronics & Communication Engineering)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
98101	Communication Skills-I	3	98102	Communication Skills – II	3
99103	Theory & Technology of Semiconductors	3	101104	Analog Electronics – I	3
15105	Introduction to Computers	3	99106	Environment Studies	3
101107	Network Analysis	3	99108	Mathematics – II	4
99109	Mathematics – I	4	99110	Physics – II	3
99111	Physics – I	3	101112	Signals and Systems	3
98119	Impact of Science & Technology on Society – I*	1	98126	Impact of Science & Technology on Society – II*	1
99151	Theory & Technology of Semiconductors Lab. (Practical)	1	101152	Analog Electronics – I Lab. (Practical)	2
99153	Engineering Physics-I Lab (Practical)	1	15154	Engineering Graphics-II Lab (Practical)	1
15155	Computer Lab (Practical)	1	99156	Physics – II Lab. (Practical)	1
15157	Engineering Graphics-I (Practical)	1	99158	Environment Studies Lab. (Practical)	1
101159	Network Analysis Lab. (Practical)	1	98160	Communication Skills – II Lab (Practical)	1
101161	Communication Skills – I Lab (Practical)	1			
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
15201	Computational Techniques	4	101202	VHDL Based Design	4
101203	Communication Systems – I	4	101204	Communication Systems – II	4
101205	Engineering electromagnetic	4	101206	Transmission Lines,Waveguides Antennas	4
15207	Object Oriented Programming Using C++	4	101208	Control Engineering	4
101209	Digital Electronics	4	101210	Data Structure and Algorithms	4
101211	Analog Electronics – II Lab.	4	101212	Computer Archt. & Operating Systems	4
101251	Computational Techniques Lab (Practical)	1	101252	VHDL Based Design Lab. (Practical)	1
101253	Communication Systems –I Lab. (Practical)	1	101254	Communication System–II Lab (Practical)	1
101255	Object Oriented Programming Using C++ Lab. (Practical)	1	101256	Control Engineering Lab. (Practical)	1
101257	Digital Electronics Lab. (Practical)	1	101258	Data Structure & Algorithm Lab (Practical)	1
101269	Analog Electronics – II Lab. (Practical)	1			
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
101301	Microwave Devices and Circuits	4	101302	Digital System Processing and Appl.	4
101303	Microprocessors and Interfacing	4	101304	Computer Networking	4
101305	Microelectronics	4	101306	Information Theory and Coding	4
101307	Relational Data Base Management Systems	4	101308	Telecommunication Networks	4
101309	Stochastic Systems and Processes	4	101310	OptoElectronics & Optical Communication	4
101311	Principles of Management	2	101312	Mobile Communications	4
101351	Microwave Devices and Circuits Lab. (Practical)	1	101352	Digital System Processing and Applications Lab. (Practical)	1
101353	Microprocessors & Interfacing Lab(Practical)	1	101354	Computer Networks Lab. (Practical)	1
101355	Microelectronics Lab. (Practical)	1	101356	Telecommunication Networks Lab.(Practical)	1
101357	Relational Data Base Management Systems Lab. (Practical)	1	101358	Opto – Electronics & Optical Communications Lab. (Practical)	1
101359	Summer Training (held at the end of the IVth Semester) Report (Practical)*	1			

SEVENTH SEMETER			EIGHTH SEMETER		
15417	Embedded Systems	4	98402	Technical Writing	2
101401	Satellite Communication	4	98424	Ethics & Moral Values	1
101451	Embedded Systems Lab. (Practical)	1	101452	Laboratory work based on Elective or MATLAB (Practical)	2
101453	Laboratory Work based on Electives or MATLAB (Practical)	2	101454	Major Project * (Practical)	8
101455	Minor Project (Practical)	4	101456	Seminar and Progress Report (Practical)	1
101457	Summer Training (held at the end of the 6 <sup>th</sup> Semester) Report, (Practical)	1			
ELECTIVES (SELECT ANY TWO)			ELECTIVES (SELECT ANY TWO)		
101405	Measurement & Instrumentation	4	15404	Advanced Computer Architecture	4
101407	Artificial Intelligence	4	101406	IC Design	4
101409	Introduction to Nanotechnology	4	101408	Power Electronics	4
101411	Neural Networks and Applications	4	15410	Soft Computing	4
101413	Software Engineering	4	101412	Multimedia Communications	4
101415	Radar & Navigation Engg.	4	101414	Financial Management	4
101417	Reliability Engg.	4	101416	Principles of Human Resource Mgt.	4
101419	Computer Graphics & Multimedia	4	101418	Digital Image Processing & Appl.	4
101421	Radio & Television Engg.	4	101420	Fuzzy Logic and systems	4
101423	Principles of Managerial Economics	4	101422	Linear & Nonlinear Optimizations Techqs	4
101425	Principles of Organizational Behaviour	4	101424	Advances in Wireless Communications	4
			101426	Object Oriented Programming Using JAVA	4

**Maximum Credits : 210**

**Minimum Credits : 200**

**\*NUES**

**MASTER OF TECHNOLOGY (Regular)**  
**(Computer Science & Engineering) (Dual Degree)**

NINTH SEMESTER			TENTH SEMESTER		
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPER NAME	CREDITS
ITR-509	Information Security	4	IT-502	Distributed DBMS	4
IT-416	Mobile Computing	4	ITR-630	Enterprise Computing in JAVA	4
ITR-731	Advanced Software Project management	4		Elective – I	4
	Elective – I	4		Elective – II	4
	Elective – II	4		Elective – III	4
IT-551	Information Security Lab. (Practical)	2	IT-552	Advanced DBMS Lab. (Practical)	2
IT-553	Mobile Computing Lab. (Practical)	2	IT554	Enterprise Computing in JAVA Lab. (Practical)	2
IT-555	Advanced Software Project Management Lab. (Practical)	2	IT-556	Lab. Based on Elective Subjects (Practical)	2
<b>ELECTIVES</b>			<b>ELECTIVES</b>		
IT-501	Intelligent Systems	4	IT-504	Advanced Semantic Web	4
IT-503	Optical Communication	4	IT-506	Service Oriented Architecture	4
IT-505	Programming With AVR Microcontroller	4	ITR-606	Wireless Mobile Networks	4
IT-507	Project Work	4	ITR-608	VLSI Design	4
ITR-705	Software Reusability	4	ITR-612	Real Time Systems & Software	4
IT-511	Network Management	4	IT-510	Advanced Software Engineering	4
ITR-721	Satellite Communication		ITR-618	Software Requirement & Estimation	4
ITR-729	Information Storage & Mgt.	4	ITR-620	Neural Networks	4
MS-235	Enterprise Resource Planning	4	ITR-622	Network Programming	4
BAEP-705	Nano Science & Engg.	4	ITR-624	Fuzzy Logic & Design	4
BAEP-707	Introduction to Quantum Information and Computation	4	ITR-626	Genetic Algorithms	4
HCS-607	Nonverbal Communication	4	ITR-628	Information Theory & Coding	4
			IT-508	Project Work	4
			IT-512	High Performance Computing	4
			HCS-606	Interpersonal Communication & Personality Development	4
			HCS-702	Research Methodology	4
<b>ELEVENTH SEMESTER</b>			<b>TWELFTH SEMESTER</b>		
IT-951	Dissertation Work – I (Survey and Formulation of the Problem)	20	IT-952	Dissertation (Practical)	24
			IT-956	Comprehensive Viva*	4
IT-953	Seminar & Progress Work	8			

**Maximum Credits : 108**

**Minimum Credits : 100**

**\*NUES**

**MASTER OF TECHNOLOGY (Weekend)  
(Electronic & Communication Engg.)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>					
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPER NAME	CREDITS			
ECW601	Digital System Design	3	ECW602	Microelectronics Technology	3			
ECW603	Detection And Estimation Theory	3	ECW604	Advanced Digital Signal Processing	3			
ECW605	Modern Digital Communication Systems	3	ECW606	Optical Fiber Communication Systems And Networks	3			
ECW651	Digital System Design Lab (Practical)	2	ECW652	Advanced Digital Signal Processing Lab (Practical)	2			
ECW653	Modern Digital Communication System Lab (Practical)	2	ECW654	Optical Fiber Communication Systems And Networks Lab (Practical)	2			
ECW655	Term Paper - I & Expert Lecture (Practical)	3	ECW656	Term Paper - II & Expert Lecture (Practical)	3			
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>					
ECW701	Advanced VLSI Design	3	ECW702	Industrial Systems	3			
ECW703	Digital Mobile Cellular Systems	3	ECW704	Microwave Integrated Circuits	3			
ECW705	Digital Image Processing	3	ECW752	Elective – I (Practical)	2			
ECW751	Advanced VLSI Design Lab (Practical)	2	ECW754	Microwave Integrated Circuits Lab (Practical)	2			
ECW753	Digital Mobile Cellular Systems Lab (Practical)	2	ECW756	Minor Project (Practical)	4			
ECW755	Digital Image Processing Lab (Practical)	2	<b>ELECTIVES</b>					
ECW757	Term Paper - III & Expert Lecture (Practical)*	3						
						ECW706	Speech Processing	3
						ECW708	Advanced Radiation Systems	3
						ECW710	Embedded Systems And Design	3
			ECW712	Radar And Satellite Communication Technology	3			
			ECW714	Advanced Mobile Computing	3			
			ECW716	Knowledge Management	3			
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>					
ECW801	Enterprise Resource Planning (ERP) And Beyond	3	ECW802	Major Project Part-II/Dissertation (Practical)	16			
ITW851	Elective-II Lab	2	ECW804	Seminar & Progress Reports (Practical)*	3			
ITW853	Elective-III Lab	2	ECW806	Comprehensive Viva (Practical)*	3			
ITW855	Major Project Part - I	4						
<b>ELECTIVES – I (Choose Any One)</b>								
ECW803	Quantum Computing And Nanotechnology	3						
ECW805	MEMS And Sensor Technology	3						
ECW807	Multimedia Technology	3						
ECW809	Smart Antennas Systems	3						
ECW811	Open Ended Topic	3						
<b>ELECTIVES – II (Choose Any One)</b>								
ECW817	Network Security	3						
ECW819	Advanced Computer Communication Networks	3						
ECW821	Virtual Instrumentation	3						
ECW823	Soft Computing	3						
ECW825	Artificial Intelligence And Expert Systems	3						
ECW827	Open Ended Research Topic	3						

**Maximum Credits : 106**

**Minimum Credits : 100**

**\*NUES**

**MASTER OF TECHNOLOGY (Regular)  
(Computer Science & Engineering)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
ITR601	Algorithm Analysis & Design	4	ITR602	Object Oriented Software Engineering	4
ITR603	Software Engineering	4	ITR614	Advanced Database Management System	4
ITR605	Advanced Computer Architecture	4	ITR630	Enterprise Computing In JAVA	4
ITR607	Advanced Computer Networks	4	ITR652	OOSE Lab (Practical)	1
ITR651	Algorithm Analysis Lab (Practical)	1	ITR654	ADBMS Lab (Practical)	1
ITR653	Software Engineering Lab (Practical)	1	ITR656	Java Based Lab (Practical)	1
ITR655	Advanced Computer Networks Lab (Practical)	1	ITR658	Lab Based On Elective (Practical)	1
ITR657	Lab Based On Elective (Practical)	1			
<b>ELECTIVES (Choose Any One)</b>			<b>ELECTIVES (Choose Any Two)</b>		
ITR609	DSD Using VHDL	4	ITR604	Embedded System Design Using 8051	4
ITR611	Database Management Systems	4	ITR606	Wireless Mobile Networks	4
ITR613	Communication Systems	4	ITR610	Digital Signal Processing	4
ITR615	Advanced Computer Graphics	4	ITR620	Neural Networks	4
ITR617	Programming Language	4	ITR622	Network Programming	4
			ITR624	Fuzzy Logic & Design	4
			ITR626	Genetic Algorithms	4
			ITR634	AI and Applications	4
			ITR632	Project Work	4
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
ITR701	Multimedia Technology	4	ITR752	Dissertation (Practical)	24
ITR707	Network Management & Security	4	ITR754	Seminar & Progress Report* (Practical)	4
ITR751	Multimedia Lab. (Practical)	2			
ITR753	NMS Lab. (Practical)	2			
ITR755	Lab Based On Elective(s) (Practical)	2			
ITR757	Minor Project (Practical)	6			
<b>ELECTIVES (Choose Any Four)</b>					
ITR713	Software Testing	4			
ITR719	Cellular & Mobile Communication	4			
ITR723	Distributed Computing	4			
ITR727	Digital Image Processing	4			
ITR729	Information Storage & Management	4			
ITR731	Advanced Software Project Mgt.	4			
ITR733	Data Warehousing & Data Mining	4			
ITR739	Soft Computing	4			
ITR741	Bluetooth Technology	4			
ITR743	Cyber Crime Investigations And Cyber Forensics	4			

**Maximum Credits : 104**

**Minimum Credits : 100**

**\*NUES**

**MASTER OF TECHNOLOGY (Regular)**  
**(Information Technology)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
ITR601	Algorithm Analysis & Design	4	ITR602	Object Oriented Software Engineering	4
ITR603	Software Engineering	4	ITR604	Embedded System Design Using 8051	4
ITR605	Advanced Computer Architecture	4	ITR606	Wireless Mobile Networks	4
ITR607	Advanced Computer Networks	4	ITR652	OOSE Lab (Practical)	1
ITR651	Algorithm Analysis Lab (Practical)	1	ITR654	ESD Lab (Practical)	1
ITR653	Software Engineering Lab (Practical)	1	ITR656	Wireless Mobile Lab (Practical)	1
ITR655	Advanced Computer Networks Lab (Practical)	1	ITR658	Lab Based On Elective (Practical)	1
ITR657	Lab Based On Elective (Practical)	1			
<b>ELECTIVES (Choose Any Two)</b>			<b>ELECTIVES (Choose Any Two)</b>		
ITR609	DSD Using VHDL	4	ITR608	VLSI Design	4
ITR611	Database Management Systems	4	ITR610	Digital Signal Processing	4
ITR613	Communication Systems	4	ITR612	Real Time Systems & Software	4
ITR615	Advanced Computer Graphics	4	ITR614	Advanced Database Management System	4
ITR617	Programming Language	4	ITR616	Software Metrics	4
			ITR618	Software Requirement & Estimation	4
			ITR620	Neural Networks	4
			ITR622	Network Programming	4
			ITR624	Fuzzy Logic & Design	4
			ITR626	Genetic Algorithms	4
			ITR628	Information Theory & Coding	4
			ITR630	Enterprise Computing In JAVA	4
			ITR632	Project Work	4
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
ITR751	Lab Based On Elective – I (Practical)	2	ITR752	Dissertation (Practical)	24
ITR753	Lab Based On Elective – II (Practical)	2	ITR754	Seminar & Progress Report* (Practical)	4
ITR755	Lab Based On Elective – III (Practical)	2			
ITR757	Minor Project (Practical)	6			
<b>ELECTIVES (Choose Any Four)</b>					
ITR701	Multimedia Technology	4			
ITR703	Reliability Engineering	4			
ITR705	Software Reusability	4			
ITR707	Network Management & Security	4			
ITR709	Software Quality Management	4			
ITR711	Design Patterns	4			
ITR713	Software Testing	4			
ITR715	Robotics Engineering	4			
ITR717	Telecommunication Switching System & Networks	4			
ITR719	Cellular & Mobile Communication	4			
ITR721	Satellite Communication	4			
ITR723	Distributed Computing	4			
ITR725	Pattern Recognition	4			
ITR727	Digital Image Processing	4			
ITR729	Information Storage & Management	4			
ITR733	Data Warehousing & Data Mining	4			
ITR741	Bluetooth Technology	4			
ITR743	Cyber Crime Investigations And Cyber Forensics	4			

**Maximum Credits : 104**

**Minimum Credits : 100**

**\*NUES**

**MASTER OF TECHNOLOGY (Weekend)  
(Information Technology)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
ITW601	Operating Systems	3	ITW602	Object Oriented Technology	3
ITW603	Digital System Design	3	ITW604	Algorithm Analysis & Design	3
ITW651	Digital System Design Lab. (Practical)	2	ITW652	Algorithm Analysis & Design Lab(Practical)	2
ITW657	Term Paper – I (Practical)	2	ITW654	Object Oriented Technology Lab (Practical)	2
			ITW660	Term Paper – II (Practical)	2
<b>ELECTIVES (Choose Any One)**</b>			<b>ELECTIVES (Choose Any One)**</b>		
ITW605	Programming & Data Structure (For Non CS background)	3	ITW606	Foundation Of Computer Science (For Non CS background)	3
ITW607	Communication System (For CS background)	3	ITW608	Data Communication (For CS background)	3
ITW653	Programming & Data Structure Lab. (Practical) (For Non CS background)	2	ITW656	Foundation Of Computer Science Lab (Practical) (For Non CS background)	2
ITW655	Communication System Lab. (Practical) (For CS background)	2	ITW658	Data Communication Lab (Practical) (For CS background)	2
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
ITW701	Database Management System	3	ITW702	Software Engineering	3
ITW703	Advanced Computer Networks	3	ITW704	Cellular & Mobile Communication	3
ITW705	Computer Graphics	3	ITW752	Cellular & Mobile Communication Lab (Practical)	2
ITW751	Database Management System Lab (Practical)	2	ITW754	Software Engineering Lab (Practical)	2
ITW753	Advanced Computer Networks Lab (Practical)	2	ITW756	Elective - I Lab (Practical)	2
ITW755	Computer Graphics Lab (Practical)	2	ITW758	Project Work – I (Practical)*	3
ITW757	Term Paper – III (Practical)*	2	<b>ELECTIVES (Choose Any One)</b>		
			ITW706	Multimedia Technology	3
			ITW708	VLSI Design	3
			ITW710	Real Time Systems & Software	3
			ITW712	Data Warehousing & Data Mining	3
			ITW714	Ai & Expert System	3
			ITW716	Digital Signal Processing	3
			ITW718	Theory Of Computation	3
			ITW720	Internet & Web Technology	3
			ITW722	Network Security	3
			ITW724	Advanced Computer Architecture	3
			ITW726	Robotic Engineering	3
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
ITW801	Software Testing	3	ITW802	Dissertation	15
ITW851	Software Testing Lab (Practical)	2	ITW804	Seminar & Progress Reports*	3
ITW853	Elective-II Lab (Practical)	2	ITW806	Comprehensive Viva*	2
ITW855	Elective-III Lab (Practical)	2			
ITW857	Project Work – II *	4			

<b>ELECTIVES – II (Choose Any One)</b>		
ITW803	Neural Network	3
ITW805	Embedded Systems Design	3
ITW807	Fuzzy Logic	3
ITW809	Digital Image Processing	3
ITW811	Designing With ASIC	3
ITW813	Object Oriented Software Engineering	3
ITW815	Cognitive Psychology	3
ITW817	Requirement & Estimation Techniques	3
ITW819	Digital VLSI Design	3
ITW821	Telecommunication Networks	3

<b>ELECTIVES - III (Choose Any One)</b>		
ITW823	Programming With AVR Microcontroller	3
ITW825	Natural Language Processing & Understanding	3
ITW827	Enterprise Resource Planning	3
ITW829	Soft Computing	3
ITW831	Software Quality Assurance & Certification	3
ITW833	Network Programming	3
ITW835	Advanced VLSI Design	3
ITW837	Advanced Digital Circuit Design	3
ITW839	Mobile Computing	3
ITW841	Total Quality Management	3

**Maximum Credits : 106**

**Minimum Credits : 100**

**\*NUES**

**\*\* Choose Any One Subject which included (Theory & Practical)**

**MASTER OF TECHNOLOGY (Regular)  
(Digital Wireless Communication)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPAR NAME</b>	<b>CREDITS</b>
ITD601	Advanced Digital Communication	4	ITD602	Spread Spectrum Communication	4
ITD603	DSP For Wireless Communication	4	ITD604	Advances In Data And Computer Communication	4
IT503	Optical Communication	4	ITD606	Arm Architecture For Mobile Communication	4
ITR719	Cellular And Mobile Communication	4	ITR606	Wireless Mobile Networks	4
ITR721	Satellite Communication	4	ITR628	Information Theory And Coding	4
ITD651	Digital Comm. Lab (Practical)	2	ITD652	Wireless Mobile Networks Lab (Practical)	2
ITD653	DSP Lab (Practical)	2	ITD654	CDMA Lab (Practical)	2
ITD655	Cellular And Mobile Comm. Lab (Practical)	2	ITD656	Advanced Computer Networks Lab (Practical)	2
ITD657	Satellite Comm. & Optical Comm. Lab (Practical)	2	ITD658	Arm Architecture For Mobile Communication Lab (Practical)	2
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
ITD701	Probability And Stochastic Process	4	ITD752	Dissertation (Practical)	18
ITD703	Adhoc And Sensor Based Networks	4	ITD754	Seminar & Progress Report (Practical)*	3
ITR717	Telecommunications Switching And Networks.	4	ITD756	Comprehensive Viva (Practical)*	3
	Elective – I	4			
	Elective - II	4			
ITD753	Adhoc And Sensor Based Networks Lab. (Practical)	2			
ITD755	Advanced Communication Lab. (Practical)	2			
<b>ELECTIVES - I</b>					
ITR707	Advances And Coding Theory	4			
ITD707	Personal Wireless Networks	4			
ITD709	RF Engineering And Propagation	4			
ITD719	Smart Antennas	4			
ITD713	Secure Wireless Communication	4			
ITD715	Advances In Information Theory	4			
ITD717	RF Design Of Wireless Communications (VLSI)	4			
ITD711	Multimedia Communications And System Design	4			
ITD725	Recent Trends In Mobile Communication Technology	4			
ITD727	Encryption Techniques And Security Protocols	4			
ITD721	Microwave And Radar Engineering	4			
ITD723	Microwave Devices & Circuits	4			
<b>ELECTIVES - II</b>					
ITR727	Digital Image Processing	4			
ITD729	Internet Working Technologies	4			
ITD731	Network Design	4			
ITD733	High Speed Communication Networks	4			
ITD735	Cryptography	4			
ITD737	Sensor Technology And RF MEMS	4			
ITD739	Detection And Estimation	4			
ITD749	Telecommunication System Modeling And Simulation	4			
ITD741	Recent Trends In Optical Network Security	4			
ITD743	Embedded Systems For Mobile Communication	4			
ITD745	Personal Ethics And Human Values	4			
ITD747	Next Generation Networks	4			

**Maximum Credits : 108**

**Minimum Credits : 100**

**\*NUES**

## MASTER OF BUSINESS ADMINISTRATION

FIRST SEMESTER			SECOND SEMESTER		
PAPER CODE	PAPER NAME	CREDIT	PAPER CODE	PAPAR NAME	CREDITS
MS101	Management Process & Organizational Behaviour	4	MS 102	Management of Technology, Innovation and Change	4
MS 103	Decision Sciences	4	MS 104	Financial Management	4
MS 105	Managerial Economics	4	MS 106	Marketing Management	4
MS 107	Accounting for Management	4	MS 108	Business Research	4
MS 109	Information Technology Management	3	MS 110	Operations Management	4
MS 111	Business Communication	4	MS 112	Human Resources Management	4
MS 113	Business and Legal Environment	4	MS 114	E-Business	4
MS 151	Information Technology Management lab. (Practical)	1	MS 116	Managerial Skills Development * (Practical)	2
THIRD SEMESTER			FOURTH SEMESTER		
MS 201	Summer Training Report (Practical)	4	MS 202	Project Dissertation	6
MS 203	Management of International Business	4	MS 204	Business Intelligence and Applications	3
MS 205	Information Systems Management	4	MS 206	Strategic Management	3
MS 207	Entrepreneurship and Small Business Management	4	MS 208	Corporate Social Responsibility, Human Values & Ethics	3
ELECTIVES			ELECTIVES		
Marketing			Marketing		
MS 209	Consumer Behaviour	3	MS 212	Retail Management	3
MS 211	Sales and Distribution Management	3	MS 214	Advertising and Brand Management	3
MS 213	International Marketing	3	MS 216	Rural and Social Management	3
MS 215	Services Marketing	3	MS 218	Internet Marketing	3
Finance			Finance		
MS 217	International Financial Management	3	MS 220	Project Planning and Analysis	3
MS 219	Financial Markets and Institutions	3	MS 222	Mergers, Acquisitions and Corporate Restructuring	3
MS 221	Security Analysis and Investment Management	3	MS 224	Insurance and Risk Management	3
MS 223	Corporate Tax Planning	3	MS 226	Financial Derivatives	3
Human Resource			Human Resource		
MS 225	Compensation Management	3	MS 228	Strategic & International Human Resource Management	3
MS 227	Industrial Relations and Labour Laws	3	MS 230	Organizational Development	3
MS 229	Training & Developments Systems and Practices	3	MS 232	Team Building in Organizations	3
MS 231	Performance Management	3	MS 234	Behaviour Testing & Counseling	3

<b>Information Technology</b>			<b>Information Technology</b>		
MS 233	Systems Analysis and Design	3	MS 236	Front End Design Tools	3
MS 235	Enterprise Resource Planning	3	MS 252	Front End Design Tools Lab. (This paper is based on MS 226 and is part of it)	1
MS 237	Network Applications and Management	3	MS 238	Software Project Management	3
MS 239	Database Management Systems	2	MS 240	Web Technologies	3
MS 251	Database Management Systems Lab. (This paper is based on MS 239 and is part of it)	1	MS 254	Web Technologies Lab. (Practical) (This paper is based on MS-230 and is part of it)	1
			MS 242	Knowledge Management	3
<b>International Business</b>			<b>International Business</b>		
MS 241	International Business Environment	3	MS 244	Global Competitiveness and Strategic Alliance	3
MS 243	Export, Import Policies, Procedures and Documentation	3	MS 246	Distribution and Logistics for International Business	3
MS 245	WTO and Intellectual Property Rights	3	MS 248	Foreign Language	3
MS 247	International Economics	3	MS 250	International Business Negotiation	3

**Maximum Credits : 113**

**Minimum Credits : 104**

**\*NUES**

**MASTER OF BUSINESS ADMINISTRATION  
(Weekend)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
MS(WE)101	Management Process & Organizational Behaviour	3	MS(WE)201	Financial Managements	3
MS(WE)102	Quantitative Methods	3	MS(WE)202	Business Research	3
MS(WE)103	Managerial Economics	3	MS(WE)203	Marketing Management	3
MS(WE)104	I.T. for Managers – I	3	MS(WE)204	I.T. for Managers – II	3
MS(WE)105	Marketing Management	3	MS(WE)205	Human Resource Management	3
MS(WE)106	Accounting for Managers	3	MS(WE)206	Economic Environment of Business	3
MS(WE)107	Term Paper / Minor Project - I	4	MS(WE)207	Term Paper / Minor Project Work – II	4
MS(WE)151	I.T. for Managers Lab. – I	1	MS(WE)251	I.T. for Manager – II	1
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
MS(WE)301	Operations Management	3	MS(WE)401	Strategic Management	3
MS(WE)302	Information Systems Management	3	MS(WE)402	E-Business	3
MS(WE)303	Communication Skills and Report Writing	3	MS(WE)403	Management of International Business	3
MS(WE)304	Management of International Business	3	MS(WE)404	Corporate Governance and Social Responsibility	2
MS(WE)305	Business & Corporate Laws	2	MS(WE)405	Major Research Project	12
MS(WE)306	Minor Project Work – III	4		Elective – IV	3
	Elective – I	3		Elective – V	3
	Elective – II	3		Elective – VI	3
	Elective – III	3			
<b>ELECTIVES</b>			<b>ELECTIVES</b>		
<b>MARKETING</b>			<b>MARKETING</b>		
MS(WE)307	Consumer Behaviour		MS(WE)406	Customer Relationship Management	
MS(WE)308	Retail Management		MS(WE)407	International Marketing	
MS(WE)309	Rural & Social Marketing		MS(WE)408	Advertising & Brand Management	
<b>FINANCE</b>			<b>FINANCE</b>		
MS(WE)311	Financial Markets and Institutions		MS(WE)409	International Financial Management	
MS(WE)312	Financial Derivatives, Options and Futures		MS(WE)410	Financial Derivatives, Options and Futures	
MS(WE)313	Project Planning and Analysis		MS(WE)411	Insurance and Risk Management	
MS(WE)314	Corporate Tax Planning		MS(WE)412	Mergers, Acquisitions and Corporate Restructuring	
<b>HUMAN RESOURCE MANAGEMENT</b>			<b>HUMAN RESOURCE MANAGEMENT</b>		
MS(WE)315	Organizational Development		MS(WE)413	Performance Appraisal and Management	
MS(WE)316	Strategic Human Resource Mgt.		MS(WE)414	Industrial Relations and Labour Laws	
MS(WE)317	Training and Development System and Practices		MS(WE)415	Team Building in Organizations	
MS(WE)318	Compensation Management				

<b>INFORMATION TECHNOLOGY</b>			<b>INFORMATION TECHNOLOGY</b>		
MS(WE)319	Systems Analysis and Design		MS(WE)416	Business Intelligence and Applications	
MS(WE)320	Database Management Systems		MS(WE)417	Software Project Management	
MS(WE)351	Database Management Systems Lab. (This paper is based on DBMS and is part of it)		MS(WE)418	Web Technologies	
MS(WE)322	Network Applications and Management		MS(WE)451	Web Technologies Lab. (This paper is based on Web Technologies and is part of it)	
MS(WE)323	Front End Design Tools		MS(WE)419	Enterprise Resource Planning	
MS(WE)352	Front End Design Tools (This Paper is based on Front End Design Tools and is part of it)				
<b>GLOBAL BUSINESS MANAGEMENT</b>			<b>GLOBAL BUSINESS MANAGEMENT</b>		
MS(WE)324	International Business Environment		MS(WE)420	Distribution and Logistics for International Business	
MS(WE)325	Export, Import Policies, Procedures and Documentation		MS(WE)421	International Economics	
MS(WE)326	Foreign Language		MS(WE)422	Global Competitiveness and Strategic Alliances	
			MS(WE)423	WTO and Intellectual Property Right	
<b>CONSULTANCY MANAGEMENT</b>			<b>CONSULTANCY MANAGEMENT</b>		
MS(WE)327	Business Process Re-engineering		MS(WE)424	Consultancy Practice Fundamental–II	
MS(WE)328	Knowledge Management		MS(WE)425	Project Management	
MS(WE)329	Consultancy Practice Fundamental–I		MS(WE)426	Total Quality Management	

**Maximum Credits : 105**

**Minimum Credits : 100**

**\*NUES**

**MASTER OF BUSINESS ADMINISTRATION  
(Banking & Insurance)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
MS(B&I)101	Principles & Practices of Management & Organization Behaviour	3	MS(B&I)301	Managerial Economics	3
MS(B&I)102	Conceptual Framework & Principles of Insurance	3	MS(B&I)302	Accounting for Managers	3
MS(B&I)103	Principles and Practice of Banking	3	MS(B&I)303	Marketing Management	3
MS(B&I)104	Quantitative Methods & Business Research	3	MS(B&I)304	Regulatory Framework of Financial Sector	3
MS(B&I)201	Human Resource Management	3	MS(B&I)305	Principles & Practices of Risk Management	3
MS(B&I)202	Financial Business Environment	3	MS(B&I)203	IT for Managers	3
MS(B&I)205	Term Paper / Minor Project – I	4	MS(B&I)204	Minor Project – II	4
			MS(B&I)251	IT for Managers Lab.	1
<b>Total</b>		<b>22</b>		<b>Total</b>	<b>23</b>
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
MS(B&I)401	Financial Management	3	MS(B&I)601	Business Ethics and Corporate Social Responsibility	3
MS(B&I)402	Minor Project – III	4	MS(B&I)602	Minor Project	2
	Elective – I	3	MS(B&I)501	Marketing of Services	4
	Elective – II	3		Elective – I	3
	Elective – III	3		Elective – II	3
	Elective – IV	3		Elective – III	3
	Elective – V	3		Elective – IV	3
MS(B&I)502	Business Communication Skills and Personality Development	2			
<b>Total</b>		<b>24</b>		<b>Total</b>	<b>36</b>
<b>ELECTIVES (BANKING)</b>			<b>ELECTIVES (BANKING)</b>		
MS(B&I)403	Indian Banking System		MS(B&I)503	Treasury Operations and Risk Management	
MS(B&I)404	Foreign Trade Policy & Procedures		MS(B&I)504	Mergers, Acquisition & Corporate Restructuring	
MS(B&I)405	Project Planning & Analysis		MS(B&I)603	Strategic Management	
MS(B&I)406	Retailing and CRM in Banking		MS(B&I)604	Financial Derivatives	
MS(B&I)505	Security Analysis and Investment Management		MS(B&I)605	International Banking	
<b>ELECTIVES (INSURANCE)</b>			<b>ELECTIVES (INSURANCE)</b>		
MS(B&I)407	Life Insurance & Elements of Actuarial Science		MS(B&I)606	Life Insurance Scheme	
MS(B&I)408	General Insurance and Reinsurance		MS(B&I)607	Rural and Miscellaneous Insurance	
MS(B&I)409	Fire, IAR, FLOP Insurances		MS(B&I)608	Insurance Claims Management (Life and Non-Life)	
MS(B&I)410	Marine Insurance (Cargo & Hull)		MS(B&I)507	Motor Insurance (OD and TP)	
MS(B&I)506	Life Insurance Underwriting & Legal Aspects		MS(B&I)508	Engineering, Liability and Aviation Insurances	

**Maximum Credits : 105**

**Minimum Credits : 100**

**\*NUES**

**BACHELOR OF TECHNOLOGY (Dual Degree)  
(Chemical Engineering)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
BA-117	Organic Chemistry-I	4	BA-106	Inorganic Chemistry	4
BA-109	Mathematics-I	4	BA-108	Mathematics-II	4
BA-111	Physics-I	3	BA-116	Physics-II	3
HS-101	Communication Skills-I	3	BA-112	Life Sciences	3
HS-119	Impact of Science & Technology on Society*	1	IT-104	Engineering Mechanics	4
IT-105	Introduction to Computers	3	HS-102	Communication Skills-II	3
IT-107	Electrical Science	4	HS-126*	Impact of Science & Technology on Society	1
BA-163	Organic Chemistry-I Lab (Practical)	2	BA-156	Physics-II Lab (Practical)	1
BA-153	Physics-I Lab (Practical)	1	BA-158	Life Sciences Lab (Practical)	1
IT-155	Computer Lab (Practical)	1	BA-160	Inorganic Chemistry Lab (Practical)	2
IT-157	Engineering Graphics-I (Practical)	1	IT-154	Engineering Graphics-II Lab (Practical)	1
IT-159	Electrical Science Lab (Practical)	1			
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
BA211	Physical Chemistry	4	BA212	Applied Mathematics – IV	4
BA213	Applied Mathematics – III	4	BA214	Material Science	4
CT201	Chemical Process Calculations	4	BA216	Physico Organic Chemistry	4
CT203	Fluid Mechanics	4	CT202	Chemical Engg. Thermodynamics- I	3
CT205	Unit Operations – I	4	CT204	Unit Operations – II	4
BA261	Physical Chemistry Lab. (Practical)	2	CT206	Heat Transfer – I	3
CT251	Unit Operation Lab – I (Practical)	2	BA262	Chemistry Lab. (Practical)	2
CT271	Workshop (Practical)	2	CT252	Fluid Mechanics Lab. (Practical)	2
IT275	Computer Programming Lab. (Practical)	2	CT254	Unit Operations Lab. – II (Practical)	2
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
CT301	Chemical Engineering Thermodynamics – II	3	CT302	Chemical Process Control – II	4
CT303	Chemical Reaction Engg. – I	4	CT304	Chemical Reaction Engg. – II	4
CT305	Heat Transfer – II	3	CT306	Computational Methods for Chemical Engineers	3
CT307	Mass Transfer	4	CT308	Chemical Process Industries – II	3
CT309	Process Control – I	4	CT310	Safety, Hazards and Environment	3
CT311	Chemical Process Industries – I	3	39312	Organization Behaviour and Industrial Management	3
CT351	Mass Transfer Lab. (Practical)	2	CT352	Chemical Reaction Engg. Lab. (Practical)	2
CT353	Heat Transfer Lab. (Practical)	2	CT354	Process control Lab. (Practical)	2
			CT356	Seminar (Practical)	2
			CT358	Computational Lab. (Practical)	1
<b>SEVENTH SEMESTER</b>			<b>EIGHTH SEMESTER</b>		
CT401	Process Equipment Design	4	CT402	Chemical Process Engg.	4
CT303	CAD and Simulation	4	CT420	Petroleum Engineering /	
CT405	Introduction to Biochemical Engg.	4	CT422	Polymer Engineering /	
MS411	Introduction to Economics	3	CT424	Biomass for Energy & Chemicals	3
	<b>Elective – I/IDS</b>	3		<b>Elective- III / IDS</b>	3
CT451	CAD & Simulation Lab. (Practical)	2	CT452	Project Work – II (Practical)	9
CT453	Project Work – I (Practical)	4			
CT455	Industrial Training / Visit Report (Practical)	1			

**Maximum Credits : 210**

**Minimum Credits : 200**

**\*NUES**

**MASTER OF TECHNOLOGY (Regular)  
(Chemical Engineering)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
CT-501	Advanced Transport Phenomena	4	CT-502	Computer Aided Process Design	4
CT-503	Advanced Separation Technology	4	CT-504	Advanced Chemical Engineering Thermodynamics	3
CT-505	Advanced System Engineering	4	CT-554	Minor Project	8
CT-553	Advance Control Lab. (Practical)	3			
CT-555	Advance Computational Lab. (Practical)	3			
<b>ELECTIVES</b> <b>(Choose Any Two from either offered by Dept. or by Intra Dept. electives)</b>			<b>ELECTIVES</b> <b>(Choose Any Three from either offered by Dept. or by Intra Dept. electives)</b>		
CT-511	Design of Experiment and Analysis of Engineering Data	3	CT-512	Alternative Energy Sources	3
CT-513	Environmental Engineering and Waste Management	3	CT-514	Process Plant Utilities	3
CT-515	Powder Processing and Technology	3	CT-516	Catalysis and Reactor Design	3
CT-517	Chemical Process Quantitative Risk Analysis	3	CT-518	Membrane Science & Technology	3
			CT-520	Design and Analysis Bio-reactors	3
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
CT-651	Major Project part – I	15	CT-652	Major Project – II	15
CT-653	Project Seminar*	3	CT-654	Project Seminar*	3
<b>ELECTIVES</b> <b>(Choose Any Two from either offered by Dept. or by Intra Dept. electives)</b>					
CT-611	Advanced Petroleum Refining	3			
CT-613	Industrial Pollution Engineering	3			
CT-615	Introduction to Nanotechnology	3			

**Maximum Credits : 90**

**Minimum Credits : 84**

**\*NUES**

**MASTER OF TECHNOLOGY (Dual Degree)  
(Chemical Engineering)**

<b>NINETH SEMESTER</b>			<b>TENTH SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPAR NAME</b>	<b>CREDITS</b>
CT-501	Advanced Transport Phenomena	4	CT-502	Computer Aided Process Design	4
CT-503	Advanced Separation Technology	4	CT-504	Advanced Chemical Engineering Thermodynamics	3
CT-505	Advanced System Engineering	4	CT-554	Minor Project	8
CT-553	Advance Control Lab. (Practical)	3			
CT-555	Advance Computational Lab. (Practical)	3			
<b>ELECTIVES (Choose Any Two from either offered by Dept. or by Intra Dept. electives)</b>			<b>ELECTIVES (Choose Any Three from either offered by Dept. or by Intra Dept. electives)</b>		
CT-511	Design of Experiment and Analysis of Engineering Data	3	CT-512	Alternative Energy Sources	3
CT-513	Environmental Engineering and Waste Management	3	CT-514	Process Plant Utilities	3
CT-515	Powder Processing and Technology	3	CT-516	Catalysis and Reactor Design	3
CT-517	Chemical Process Quantitative Risk Analysis	3	CT-518	Membrane Science & Technology	3
			CT-520	Design and Analysis Bio-reactors	3
<b>ELEVENTH SEMESTER</b>			<b>TWELFTH SEMESTER</b>		
CT-651	Major Project part – I	15	CT-652	Major Project – II	15
CT-653	Project Seminar*	3	CT-654	Project Seminar*	3
<b>ELECTIVES (Choose Any Two from either offered by Dept. or by Intra Dept. electives)</b>					
CT-611	Advanced Petroleum Refining	3			
CT-613	Industrial Pollution Engineering	3			
CT-615	Introduction to Nanotechnology	3			

**Maximum Credits : 90**

**Minimum Credits : 84**

**\*NUES**

**BACHELOR OF TECHNOLOGY (Dual Degree)**  
**(Biotechnology)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
BA-135	Foundation Course in Physico-Inorganic Chemistry - I	3	BA-138	Foundation Course in Physics – II	3
BA-137	Foundation course in Physics – I	3	BA-132	Essential of Mathematics – II	4
BA-133	Life Science – I	4	BA-136	Foundation course in Organic Chemistry – II	3
BA-131	Essential of Mathematics – I	4	BA-134	Life Sciences – II	4
BT-115	Concepts in Biotechnology	3	BT-124	Laboratory Techniques in Biotechnology	4
IT-105	Introduction to Computers	3	IT-120	Electrical Science	4
BA-183	Chemistry – I Lab. (Practical)	1	BA-186	Physics – II Lab. (Practical)	1
BA-185	Physics – I Lab. (Practical)	1	BA-184	Chemistry – II Lab. (Practical)	1
BA-181	Life Sciences – I Lab. (Practical)	1	BA-182	Life Sciences – II Lab. (Practical)	1
IT-155	Computer Lab (Practical)	1	BA-164	Laboratory Techniques in Biotechnology Lab. (Practical)	1
IT-157	Engineering Graphics-I (Practical)	1	IT-166	Electrical Science Lab. (Practical)	1
BT-161	Biotechnology Lab. (Practical)	1			
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
BT-201	Microbiology	3	BT-202	Immunology	3
BA-203	Bioenergetics – I	4	BT-204	Molecular Biology	4
BT-205	Cell Biology	4	BT-206	Enzyme Technology	4
BT-209	Genetics	3	BA-208	Bioenergetics – II	4
BT-211	Biostatistics	3	CT-212	Chemical Engineering – II	4
CT-211	Chemical Engineering – I	4	BT-254	Molecular Biology Lab. (Practical)	2
BT-251	Genetics Lab. (Practical)	2	BT-256	Enzyme Technology Lab. (Practical)	2
BA-253	Bioenergetics – I Lab. (Practical)	2	BA-258	Bioenergetics – II lab. (Practical)	2
BT-255	Cell Biology Lab. (Practical)	2	BT-258	Immunology Lab. (Practical)	1
BT-257	Microbiology Lab. (Practical)	2			
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
BT-301	Plant Tissue Culture	3	BT-302	Bioinformatics	4
BT-303	Microbial Processing Engineering	4	BT-304	Food Biotechnology	3
BT-305	Animal Biotechnology	4	BT-306	Plant Biotechnology	3
BT-307	Recombinant DNA Technology & Applications	3	BT-308	Down Stream Processing	4
BT-309	Developmental Biology	3	BT-310	Biosensor	3
BT-351	Plant Tissue Culture Lab. (Practical)	2	BT-312	Biochemical Engg. & Biotechnology (Elective for CT Students)	3
CT-361	Chemical Engineering Lab. (Practical)	2	BT-352	Bioinformatics Lab. (Practical)	2
BT-355	Animal Tissue Culture Lab. (Practical)	2	BT-354	Food Biotechnology Lab. (Practical)	2
BT-357	Rec. DNA Tech. & Appl. Lab. (Practical)	2	BT-356	Plant Biotechnology Lab. (Practical)	2
BT-359	Developmental Biology Lab. (Practical)	2	BT-358	Downstream / Microbial Processing Lab. (Practical)	2
<b>SEVENTH SEMESTER</b>			<b>EIGHTH SEMESTER</b>		
BT-401	Stem Cells in Health Care	4	BT-402	Industrial Biotechnology	4
BT-403	Environmental Biotechnology	3	BT-404	Intellectual Property Rights in Biotechnology	3
BT-405	Protein Biotechnology	3	BT-406	Molecular & Cellular Diagnostics	3
BT-407	Commercialization, Marketing and Management of Biotechnological Products	4	BT-408	Bio-safety & Bioethics	3
HS-409	Writing Skills for Technical Purposes	4	BT-450	Project Work (Practical)*	18
BT-451	Protein Biotechnology Lab. (Practical)	2			
BT-453	Environmental Biotechnology Lab. (Practical)	1			
BT-455	Field Trips (Practical)	4			

**Maximum Credits : 216**

**Minimum Credits : 200**

**\*NUES**

**MASTER OF TECHNOLOGY (Regular)  
(Biotechnology) (Dual Degree)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
BT-501	Advances in Agricultural Biotechnology	4	BT502	Pharmaceutical Biotechnology	4
BT-503	Proteomics	4	BT-506	Advances in Bioprocess Engg.	4
BT-507	Genomics	4	BT-512	Advanced Bioinformatics	4
BT-509	Seminars*	4	BT-514	Term Paper	4
<b>ELECTIVES (Choose Any One)</b>			<b>ELECTIVES (Choose Any Two)</b>		
CT-513	Environmental Engg. And Waste Management	4	BT-504	Biodiversity and Biotechnology	4
MS-101	Management Function and Organizational Behaviour	4	CT-520	Design and Analysis of Bioreactors	4
			MS-106	Marketing Research	4
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
BT-601	Biotechnology in Health Care	4	BT-652	Dissertation (Practical) (Presentation and Viva, Dissertation Submission)	20
BT-651	Project Work (Seminar / oral presentation, mid term progress report submission)	16			

**Maximum Credits : 80**

**Minimum Credits : 75**

**\*NUES**

**MASTER OF SCIENCE  
(Biodiversity & Conservation)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPAR NAME</b>	<b>CREDITS</b>
BA601	Mathematics	3	EM602	Ecology & Sustainable Development	3
EM-601	Environmental Sampling and Data Analysis	3	EM604	Environmental Modeling	4
EM603	Environmental Microbiology & Chemistry	3	EM606	Solid Waste Management & Disposal	3
EM605	Environmental Geology & Natural Disaster Management	3	EM608	Waste Water Treatment	3
EM607	Waste Supply & Treatment	3	EM610	Environmental Management & Planning	3
EM609	Energy & Environment	3	EM612	Environmental Impact Assessment And Risk Analysis	4
EM611	Management Process and Organizational Behaviour	3	EM616	Remote Sensing and GIS	3
EM651	Water and Waste Water (Practical)	2	EM652	Environmental Modeling (Practical)	2
EM653	Environmental Monitoring (Practical)	2	EM654	Remote Sensing and GIS (Practical)	1
IT665	Introduction to Computers	1			
<b>Total</b>		<b>26</b>	<b>Total</b>		<b>26</b>
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
EM711	Air Pollution and Control	3	EM758	Seminar and Progress Report	4
EM713	Natural Resources Management and Economics	3	EM760	Dissertation	22
EM715	Industrial Pollution Prevention & Control	3			
EM717	Environmental Microbial Technology	3			
MS703	Project Management	3			
EM719	Summer Training Report*	3			
EM755	Environmental Microbial Technology (Practical)	1			
<b>ELECTIVES (Select Any Two)</b>					
EM721	Advanced Remote Sensing / GIS Techniques in Environmental Management	4			
EM723	Advanced Statistical Techniques Applied to Environmental Systems	4			
EM725	Energy Management and Planning	4			
EM727	Advanced Water and Waste Water Treatment Design	4			
EM729	Environmental Bio-Technology	4			
<b>Total</b>		<b>27</b>	<b>Total</b>		<b>26</b>

**Maximum Credits : 105**

**Minimum Credits : 100**

**\*NUES**

**MASTER OF SCIENCE  
(Environment Management)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPAR NAME</b>	<b>CREDITS</b>
BA601	Mathematics	3	EM602	Ecology & Sustainable Development	3
EM-601	Environmental Sampling and Data Analysis	3	EM604	Environmental Modeling	4
EM603	Environmental Microbiology & Chemistry	3	EM606	Solid Waste Management & Disposal	3
EM605	Environmental Geology & Natural Disaster Management	3	EM608	Waste Water Treatment	3
EM607	Waste Supply & Treatment	3	EM610	Environmental Management & Planning	3
EM609	Energy & Environment	3	EM612	Environmental Impact Assessment And Risk Analysis	4
EM611	Management Process and Organizational Behaviour	3	EM616	Remote Sensing and GIS	3
EM651	Water and Waste Water (Practical)	2	EM652	Environmental Modeling (Practical)	2
EM653	Environmental Monitoring (Practical)	2	EM654	Remote Sensing and GIS (Practical)	1
IT665	Introduction to Computers	1			
<b>Total</b>		<b>26</b>	<b>Total</b>		<b>26</b>
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
EM711	Air Pollution and Control	3	EM758	Seminar and Progress Report	4
EM713	Natural Resources Management and Economics	3	EM760	Dissertation	22
EM715	Industrial Pollution Prevention & Control	3			
EM717	Environmental Microbial Technology	3			
MS703	Project Management	3			
EM719	Summer Training Report*	3			
EM755	Environmental Microbial Technology (Practical)	1			
<b>ELECTIVES (Select Any Two)</b>					
EM721	Advanced Remote Sensing / GIS Techniques in Environmental Management	4			
EM723	Advanced Statistical Techniques Applied to Environmental Systems	4			
EM725	Energy Management and Planning	4			
EM727	Advanced Water and Waste Water Treatment Design	4			
EM729	Environmental Bio-Technology	4			
<b>Total</b>		<b>27</b>	<b>Total</b>		<b>26</b>

**Maximum Credits : 105**

**Minimum Credits : 100**

**\*NUES**

## BACHELOR DEGREE IN ARCHITECTURE

<b>FIRST YEAR</b>			<b>SECOND YEAR</b>		
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPAR NAME	CREDITS
AP101	Architectural Design –I (Studio / Practical)	12	AP201	Architectural Design – II (Studio/Practical)	20
AP102	Building construction and Material – I (Studio / Practical)	10	AP202	Building Construction and Material – II (Studio / Practical)	10
AP103	Drawing Communication – I (Studio / Practical)	12	AP103	Drawing Communication – II (Studio / Practical)	12
AP104	History of Human Settlement & Vernacular Architecture (Studio / Practical)	4	AP211	Theory of Structures – II	6
AP105*	Model Workshop* (Studio / Practical)	6	AP212*	Building Services – I*	4
AP106*	Surveying and Leveling* (Studio / Practical)	2	AP213	History of Architecture – I	4
AP111	Theory of Structures – I	4	AP214	Psychology	2
AP112	Climatology, Environmental Studies and Landscape	4			
AP113	Sociology of Architecture	2			
<b>ELECTIVE – I (STUDIO / PRACTICAL)</b>			<b>ELECTIVE – II** (STUDIO / PRACTICAL)</b>		
AP121	Art & Design Discipline(s)	8	AP221	Elective – II	8
AP122	Urban Issues (s)	8			
AP123	Construction Technologies & Advance Sciences (s)	8			
AP124	Computer and Information Technology(s)	8			
AP125	Ecology and Landscape	8			
AP126	Contemporary History, Theory and Philosphy(s)	8			
<b>Total</b>		<b>64</b>	<b>Total</b>		<b>66</b>
<b>THIRD YEAR</b>			<b>FOURTH YEAR</b>		
AP301	Architectural Design – III (Studio / Practical)	20	AP401	Architectural Design – IV (Studio / Practical)	10
AP302*	Building Construction and Material – III* (Studio / Practical)	12	AP402	Building Construction and Material – IV (Studio / Practical)	6
AP303	Advanced Computer Application (Studio / Practical)	2	AP403	Research Work (Studio / Practical)	8
AP311	Theory of Structures – III	6	AP404	Architectural Thesis (Studio / Practical)	28
AP312**	Building Services – II**	4	AP411	Theory of Structure – IV	2
AP313	History and Theory of Architecture – II	8	AP412*	Building Services – III*	2
AP314	Quantities, Specification, Estimation and Contract Management	4	AP413	Professional Practice – I	4
<b>ELECTIVE – III*** (STUDIO / PRACTICAL)</b>			<b>ELECTIVE – IV** (STUDIO / PRACTICAL)</b>		
AP331	Elective – III	8	AP431	Elective – IV	4
<b>Total</b>		<b>64</b>	<b>Total</b>		<b>64</b>
<b>FIFTH YEAR</b>					
AP501	Practical Training (Studio / Practical)	56			
AP502	Professional Practice – II (Online Course)	8			
<b>Total</b>		<b>64</b>			

**Maximum Credits : 316**

**Minimum Credits : 316**

**\*NUES**

**MASTER OF TECHNOLOGY (Regular)**  
**(Nano Science & Technology)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
NST101	Elements Of Physics	4	NST102	Fabrication Techniques And Characterisation Of Nanomaterials	4
NST103	Elements Of Physical Chemistry	4	NST104	Soft Synthetic Routes And Some Novel Nanomaterials	4
NST105	Nanoparticles And Microorganisms, Bionanocomposites	3	NST106	Nanodevices And Nanosensors	4
NST107	Elements Of Material Science And Properties Of Nanomaterials	4	NST108	Scientific Computation And Simulation*	1
NST109	Nanotechnology & Society*	1	NST110	Solution And Surface Phenomenon	4
NST111	Basic Mathematics/Life Sciences	2	NST112	Business Enterprise In Nanotechnology And Project Management*	1
NST151	Laboratory – I (Practical)	6	NST152	Laboratory – II (Practical)	6
NST153	Self Study – I (Practical)	3	NST154	Self Study – II (Practical)	3
			NST156	Scientific Computation & Simulation (Practical)	2
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
NST201	Advanced Nanomaterials	3	NST202	Project Work /Internship (Seminar) (Practical)	20
NST203	Semiconductor Nanostructures And Nanoparticles	3	NST204	Comprehensive Viva Voce (Practical)*	5
NST213	IPR & Nanotechnology	1			
NST251	Self Study-III (Practical)	2			
NST253	Minor Project (Practical)	5			
NST255	Summer Training (Viva-Voce) (Practical)	4			
<b>ELECTIVES (Choose Any Two)</b>					
NST205	Molecular Nanoelectronics	3			
NST207	Photonics & Plasmonics	3			
NST209	Carbon Nanotubes & Functionalisation	3			
NST211	Computational Nanoscience	3			

**Maximum Credits : 105**

**Minimum Credits : 100**

**\*NUES**

**MASTER OF TECHNOLOGY (Regular)  
(Engineering Physics)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
BAEP601	Mathematical Physics 1	3	BAEP602	The Physics Of Information Technology	3
BAEP603	Optimization Methods	3	BAEP604	Advance Statistical Physics	3
BAEP605	Computational Physics - I	3	BAEP606	Computational Physics – II	3
BAEP607	Statistical Physics	3	BAEP608	Alternative Energy Technologies	3
ITEP609	Concepts Of OOP Using C++	3	BAEP610	Minor Project – II	4
BAEP611	Minor Project-I	4	HSEP614	Philosophy Of Science & Technology*	2
HSEP621	Language Behaviour And Communication Skills *	2	ITEP622	Concepts Of DBMS	3
BAEP651	Lab – 1 (Practical)	4	BAEP652	Lab. – II (Practical)	4
ITEP653	Lab-OOP (Practical)	1	ITEP654	DBMS Lab. (Practical)	1
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
BAEP701	Embedded Systems	3	BAEP702	Project Work (Practical)	20
BAEP703	Photovoltaic Engineering	3	BAEP704	Comprehensive Viva/Seminar (Practical)	5
BAEP705	Nano-Science & Engineering	3			
ITEP717	Computer Architecture	3			
SMSEP715	Project Management System*	2			
BAEP751	Lab - III (Simulation, Parallel & Grid Computing) (Practical)	4			
BAEP753	Training Report (Practical)	3			
<b>ELECTIVES - I (Choose Any One)</b>					
BAEP707	Introduction To Quantum Information And Computation	3			
BAEP709	Photonics	3			
BAEP711	Ion Beam Technology	3			
BAEP713	Computational Biology	3			
<b>ELECTIVES - II (Choose Any One)</b>					
ITEP721	Coding Theory	3			
ITEP761	Coding Theory Lab (Practical)	1			
ITEP723	SE/OOSE	3			
ITEP763	Se/OOSE Lab (Practical)	1			
ITEP725	Multimedia & Visualization Techno.	3			
ITEP765	Multimedia & Visualization Techno. Lab (Practical)	1			
ITEP727	Computers Networks	3			
ITEP767	Computers Networks Lab (Practical)	1			

**Elective – II is 4 credit grouped into 3 credit theory and 1 credit lab.**

**Maximum Credits : 105**

**Minimum Credits : 100**

**\*NUES**

## BACHELOR OF LAW (Honours)

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPER NAME	CREDITS
LLB 101	Legal Method	4	LLB 102	History – II (Legal History)	4
BALLB 103	History – I (Indian History)	4	BALLB 104	Political Science – II	4
BALLB 105	Political Science – I	4	LLB 110	Law of Contract – II	4
LLB 107	Law of Contract – I	4	LLB 112	Techniques of communication, Client Interviewing and Counseling	4
LLB 111	English and Legal Language	4	BALLB 114	Environmental Studies	4
BALLB 113	Sociology – I (Introduction to Sociology)	4	BALLB 116	Sociology – II (Indian Society)	4
BALLB 115	Economics – I (Microeconomic Analysis)	4	BALLB 118	Economics – II (Macroeconomic Analysis)	4
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
LLB 201	Business Law	4	LLB202	Law of Torts and Consumer Protection	4
LLB 203	Family Law – I	4	LLB204	Family Law – II	4
LLB 205	Constitutional Law – I	4	LLB206	Constitutional Law – II	4
LLB 207	Law of Crime – I	4	LLB208	Law of Crime – II	4
LLB 209	Advocacy Skills	4	LLB210	Administrative Law	4
BALLB 213	History – III (History of Modern Europe: 1740-1947)	4	BALLB214	Economics – III (Economic Development and Policy)	4
BALLB 215	Political Science – III	4	BALLB 216	Sociology – III (Sociology and Law)	4
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
LLB301	Code of Civil Procedure – I	4	LLB302	Code of Civil Procedure – II	4
LLB303	Code of Criminal Procedure – I	4	LLB304	Code of Criminal Procedure – II	4
LLB305	Law of Evidence	4	LLB306	Public International Law	4
LLB307	Corporate Law	4	LLB308	Investment and Competition Law	4
LLB309	Jurisprudence – I	4	LLB310	Property Law	4
LLB311	Human Rights Law	4	LLB312	Jurisprudence – II	4
BALLB313	French / German	4	BALLB314	French / German	4
BALLB315	Summer Training Project	4			
<b>SEVENTH SEMESTER</b>			<b>EIGHTH SEMESTER</b>		
LLB401	Land Laws	4	LLB402	Alternative Dispute Resolution	4
LLB403	Law and Technology	4	LLB404	International Trade Law	4
LLB405	Intellectual Property Rights	4	LLB406	Law, Poverty and Development	4
LLB407	Labour Law – I	4	LLB408	Labour Law – II	4
LLB409	Environment Law	4	LLB410	Interpretation of Statutes	4
LLB411	Tax Law	4	LLB412	Optional Subjects (Any one of the following): a. Woman and Law b. Air and Space Law c. Election Law d. International Commercial Law	4
<b>NINTH SEMESTER</b>			<b>TENTH SEMESTER</b>		
LLB501	Legal Ethics and Court Craft	4	LLB502	Dissertation Viva-Voce	14
LLB503	Drafting, Pleading and Conveyancing	4	LLB504	Internship	10
LLB505	Legal Writing and Research (Seminars and Research paper) Internal	10			
LLB507	Optional Subjects (Any one of the following): a. Banking and Insurance Law b. International Humanitarian Law c. Indirect Taxes d. International Refugee Law e. Criminology f. Socio-Economic Offences g. International Economic Law h. Private International Law i. Law of International Organizations j. Health Care Law k. Security Law l. Forensic Science m. Comparative Law	4			

**Maximum Credits : 270**

**Minimum Credits : 260**

**\*NUES**

**B.B.A. L.L.B.**  
**(Honours)**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>PAPER CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>
LLB101	Legal Method	4	LLB102	History – II (Legal History)	4
LLB107	Law of Contract – I	4	LLB110	Law of Contract – II	4
LLB111	English and Legal Language	4	LLB112	Techniques of Communication, Client Interviewing and Counseling	4
BBALLB117	Principles of Management	4	BBALLB120	Financial Accounting	4
BBALLB119	Managerial Economics	4	BBALLB122	Operational Research in Management	4
BBALLB121	Business Statistics	4	BBALLB124	Information Technology Fundamentals	4
BBALLB123	Socio-Political Systems in India	4	BBALLB126	Economic Environment of Business	4
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
LLB201	Business Law	4	LLB202	Law of Torts and Consumer Protection	4
LLB203	Family Law – I	4	LLB204	Family Law – II	4
LLB205	Constitutional Law – I	4	LLB206	Constitutional Law – II	4
LLB207	Law of Crime – I	4	LLB208	Law of Crime – II	4
LLB209	Advocacy Skills	4	LLB210	Administrative Law	4
BBALLB217	Financial Management	4	BBALLB218	Human Resources Management	4
BBALLB219	Organizational Behaviour	4	BBALLB220	Marketing Management	4
<b>FIFTH SEMESTER</b>			<b>SIXTH SEMESTER</b>		
LLB301	Code of Civil Procedure – I	4	LLB302	Code of Civil Procedure – II	4
LLB303	Code of Criminal Procedure – I	4	LLB304	Code of Criminal Procedure – II	4
LLB305	Law of Evidence	4	LLB306	Public International Law	4
LLB307	Corporate Law	4	LLB308	Investment and Competition Law	4
LLB309	Jurisprudence – I	4	LLB310	Property Law	4
LLB311	Human Rights Law	4	LLB312	Jurisprudence – II	4
BBALLB315	Summer Training Project	4	BBALLB316	Strategic Management	4
BBALLB317	Business Ethics and Corporate Social	4			
<b>SEVENTH SEMESTER</b>			<b>EIGHTH SEMESTER</b>		
LLB401	Land Laws	4	LLB402	Alternative Dispute Resolution	4
LLB403	Law and Technology	4	LLB404	International Trade Law	4
LLB405	Intellectual Property Rights	4	LLB406	Law, Poverty and Development	4
LLB407	Labour Law – I	4	LLB408	Labour Law – II	4
LLB409	Environment Law	4	LLB410	Interpretation of Statutes	4
LLB411	Tax Law	4	LLB412	Optional Subjects (Any one of the following): e. Woman and Law f. Air and Space Law g. Election Law h. International Commercial Law	4

NINTH SEMESTER			TENTH SEMESTER		
LLB501	Legal Ethics and Court Craft	4	LLB502	Dissertation Viva-Voce	14
LLB503	Drafting, Pleading and Conveyancing	4	LLB504	Internship	10
LLB505	Legal Writing and Research (Seminars and Research paper) Internal	10			
LLB507	Optional Subjects (Any one of the following): a. Banking and Insurance Law b. International Humanitarian Law c. Indirect Taxes d. International Refugee Law e. Criminology f. Socio-Economic Offences g. International Economic Law h. Private International Law i. Law of International Organizations j. Health Care Law k. Security Law l. Forensic Science m. Comparative Law	4			

**Maximum Credits : 270**

**Minimum Credits : 260**

**\*NUES**

**L.L.M.**

<b>FIRST SEMESTER</b>			<b>SECOND SEMESTER</b>		
<b>COURSE CODE</b>	<b>PAPER NAME</b>	<b>CREDITS</b>	<b>COURSE CODE</b>	<b>PAPER NAME</b>	
GEN-107	Law and Social Transformation in India	6	HRL-102	Human Rights Jurisprudence	6
GEN-109	Constitutionalism	6	HRL-104	International Human Rights Law	6
GEN-111	Legal Research and Methodology	6	HRL-106	Protection and Enforcement of Human Rights in India	6
GEN-113	Judicial Process	5	HRL-152	Project Work / Practical Training*	5
GEN-151	Project Work *	2	HRL-154	Comprehensive Viva-Voce*	2
			ADR-108	Evolution and Concept of ADR	6
			ADR-110	Arbitration Law in India	6
			ADR-112	International Commercial Arbitration	6
			ADR-152	Project Work / Practical Training*	5
			ADR-154	Comprehensive Viva-Voce*	2
			IPR-114	Nature, Emergence and Development of IPRs	6
			IPR-116	Copyright Law & Neighbouring Rights	6
			IPR-118	Patents Law	6
			IPR-152	Project Work / Practical Training*	5
			IPR-154	Comprehensive Viva-Voce*	2
			ITL-120	WTO and International Trade	6
			ITL-122	Regulation of International Trade in India	6
			ITL-124	Settlement of International Trade Disputes	6
			ITL-152	Project Work / Practical Training*	5
			ITL-154	Comprehensive Viva-Voce*	2
			CRL-132	Law of Corporate Management and Governance	6
			CRL-134	Competition and Consumer Protection Laws	6
			CRL-130	Regulation of Capital Market and Foreign Investment	6
			CRL-152	Project Work / Practical Training*	5
			CRL-154	Comprehensive Viva-Voce*	2
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
HRL-201	International Humanitarian Law and Refugee Law	6	HRL-252	Dissertation and Viva-Voce*	25
HRL-203	Disadvantaged Groups and Human Rights	6	ADR-2 52	Dissertation and Viva-Voce*	25
HRL-205	Human Rights Education	6	IPR-252	Dissertation and Viva-Voce*	25
HRL-251	Project Work / Practical Training*	5	ITL-252	Dissertation and Viva-Voce*	25
HRL-253	Comprehensive Viva-Voce*	2	CRL-252	Dissertation and Viva-Voce*	25
ADR-207	Mediation	6			
ADR-209	Conciliation and Negotiation	6			
ADR-211	Practical Training in ADR Skills	6			
ADR-251	Project Work / Practical Training*	5			
ADR-253	Comprehensive Viva-Voce*	2			
IPR-213	Law Relating to Trademarks	6			
IPR-215	Law Relating to Designs and Geographical Indications	6			

IPR-217	Teaching and Research in IPRs	6			
IPR-251	Project Work / Practical Training*	5			
IPR-253	Comprehensive Viva-Voce*	2			
ITL-219	International Sale and Carriage of Goods	6			
ITL-221	International Investment Laws	6			
ITL-223	International Commercial Arbitration	6			
ITL-251	Project Work / Practical Training*	5			
ITL-253	Comprehensive Viva-Voce*	2			
CRL-231	Corporate Taxation	6			
CRL-233	Banking & Insurance Laws	6			
CRL-235	The Law of Corporate Finance and Securities Regulations	6			
CRL-251	Project Work / Practical Training*	5			
CRL-253	Comprehensive Viva-Voce*	2			

**Maximum Credits : 100**

**Minimum Credits : 100**

**\*NUES**

## MASTER OF EDUCATION

FIRST SEMESTER			SECOND SEMESTER		
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPER NAME	CREDITS
MED601	Philosophical and Sociological Perspective on Education	5	MED602	Curriculum Development	5
MED603	Advance Educational Psychology	5	<b>ELECTIVES (Any One)</b>		
MED605	Methodology of Educational Research	5	MED604	Educational Technology	5
<b>ELECTIVES (Any One)</b>			MED606	Science Education	5
MED607	Educational Management, Planning and Finance	5	MED608	Social Science Education	5
MED609	Educational Evaluation	5	MED610	Language Education	5
MED611	Teacher Education in India: Growth and Development	5	MED612	Special Education	F5
MED613	Educational & Vocational Guidance	5	<b>DISSERTATION AND SEMINARS ETC.</b>		
<b>PRACTICAL FOR THE CORE PAPERS</b>			MED614	Dissertation	6
MED651	Philosophical and Sociological Perspective on Education	2	MED616	Seminar/Viva/Project Work	04
MED653	Advance Educational Psychology	2			
MED655	Methodology of Educational Research				
<b>PRACTICAL FOR THE ELECTIVE (The one corresponding to the Elective chosen)</b>			<b>PRACTICAL FOR THE ELECTIVE (The one corresponding to the Elective chosen)</b>		
MED657	Educational Management, Planning and Finance	2	MED654	Educational Technology	2
MED659	Educational Evaluation	2	MED656	Science Education	2
MED661	Teacher Education in India: Growth and Development	2	MED658	Social Science Education	2
MED663	Educational & Vocational Guidance	2	MED660	Language Education	2
			MED662	Special Education	2
<b>Total</b>			<b>50</b>		

**Maximum Credits : 99**

**Minimum Credits : 99**

**\*NUES**

## MASTER OF JOURNALISM & MASS COMMUNICATIN

<b>FIRST TRIMESTER</b>			<b>SECOND TRIMESTER</b>		
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPAR NAME	CREDITS
MJMC-101	Communication Theory	4	MJMC-104	Development Communication	4
MJMC-102	Print Media and Journalism	3	MJMC-105	Integrated marketing Communication – I	3
MJMC-103	Computer Applications	3	MJMC-106	Radio News and Programme	3
MJMC-151	Print Media and Journalism Lab. (Practical)	2	MJMC-154	Integrated Marketing Communication Lab. – I (Practical)	2
MJMC-152	Computer Application Lab. (Practical)	2	MJMC-155	Radio News and Programmes Lab. (Practical)	2
MJMC-153*	Field Work*	2	MJMC-156*	Field Work*	2
<b>Total</b>		<b>16</b>	<b>Total</b>		<b>16</b>
<b>THIRD TRIMESTER</b>			<b>FOURTH TRIMESTER</b>		
MJMC-107	Media Laws & Ethics	4	MJMC-201	Media Management	4
MJMC-108	Integrated Marketing Communication – II	3	MJMC-202	Photo Journalism	3
MJMC-109	New Media and Journalism	3	MJMC-203	Video Production Techniques	3
MJMC-157	Integrated Marketing Communication Lab. – II (Practical)	2	MJMC-251	Photo Journalism Lab. (Practical)	2
MJMC-158	New Media and Journalism (Practical)	2	MJMC-252	Video Production Techniques Lab. (Practical)	2
MJMC-159	Field Work	2	MJMC-253	Minor Project – I	4
<b>Total</b>		<b>16</b>	<b>Total</b>		<b>18</b>
<b>FIFTH TRIMESTER</b>			<b>SIXTH TRIMESTER</b>		
MJMC-204	Media and Communication Research	4	MJMC-207	TV & Film Appreciation	3
MJMC-205	TV News and Programmes	3	MJMC-208	Fiction Film-making	3
MJMC-206	Documentary Film-making	3	MJMC-257	Fiction Film-making Lab. (Practical)	2
MJMC-254	TV News and Programmes Lab. (Practical)	2	MJMC-258	Comprehensive Viva-Voce (Practical)	4
MJMC-255	Documentary Film-making Lab. (Practical)	2	MJMC-259	Minor Project	10
MJMC-256	Minor Project – II	4			
<b>Total</b>		<b>18</b>	<b>Total</b>		<b>22</b>

**Maximum Credits : 106**

**Minimum Credits : 100**

**\*NUES**

## MASTER IN MASS COMMUNICATION

FIRST SEMESTER			SECOND SEMESTER		
PAPER CODE	PAPER NAME	CREDITS	PAPER CODE	PAPAR NAME	CREDITS
MMM-101	Introduction to Social Science	5	MMM-102	Journalism : Concepts & Principles	5
MMM-103	Introduction to Indian Literature	5	MMM-104	Advertising & Public Relations Concepts & Principles	5
MMM-105	Development of Media Industries, Professions & Careers	4	MMM-106	Media Laws & Ethics	4
MMM-107	Introduction to Still Photography & Cinema	4	MMM-108	Media Laws & Ethics	4
MMM-109	Communication Theory	4	MMM-110	Media Economics & Management	4
MJMC-151	Still Photography Lab. (Practical)	3	MJMC-151	Print Media Lab. (Practical)	3
MJMC-152	Seminar – Presentation (Practical)	3	MJMC-152	Project –Presentation	3
<b>Total</b>		<b>28</b>	<b>Total</b>		<b>28</b>
SPECIALIZATION IN CORPORATE COMMUNICATION					
THIRD SEMESTER			FOURTH SEMESTER		
MMCC-201	Principles & Concepts of Corporate Communication	4	MMCC-202	Corporate Communication Practices & Strategies	4
MMCC-203	Business Communication & Visual Language	4	MMCC-204	Integrated Marketing Communication & Events	4
MMCC-205	Basics of Advertising, Designing & Graphics	4	MMCC-252	Integrated Marketing Communication & Events Lab. (Practical)	4
MMCC-251	Business Communication & Visual Language Lab. (Practical)	3	MMCC-254	Major Project (Practical)	10
MMCC-253	Advertising, Designing & Graphics Lab. (Practical)	3	MMCC-256	Comprehensive Viva-Voce (Practical)	4
MMCC-255	Minor Project (Practical)	4			
MMCC-257	Industrial Training Report*	4			
<b>Total</b>		<b>26</b>	<b>Total</b>		<b>26</b>
SPECIALIZATION IN JOURNALISM & NEWS MEDIA					
THIRD SEMESTER			FOURTH SEMESTER		
MMJN-201	Journalism : Concepts & Practices	4	MMJN-202	Specialized Area in Contemporary Journalism	4
MMJN-203	Fundamentals of Reporting & Editing	4	MMJN-204	News Production, Presentation & Anchoring	4
MMJN-205	Advance Reporting, Writing Photo Journalism	4	MMJN-252	News Production, Presentation & Anchoring Lab. (Practical)	4
MMJN-251	Reporting & Editing Lab. (Practical)	3	MMJN-254	Major Project (Practical)	10
MMJN-253	Advance Journalism & Photo Lab. (Practical)	2	MMJN-256	Comprehensive Viva-Voce (Practical)	4
MMJN-255	Minor Project (Practical)	4			
MMJN-257	Industrial Training Report* (Practical)	4			
<b>Total</b>		<b>26</b>	<b>Total</b>		<b>26</b>

<b>SPECIALIZATION IN NEWS MEDIA &amp; CONVERGENCE</b>					
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
MMNM-201	Information Technology for Media	4	MMNM-202	E-Business Journalism	4
MMNM-203	Cyber Media Writing	4	MMNM-204	Internet Advertising & P.R.	4
MMNM-205	Mobile & Visual Communication	4	MMNM-252	Internet Advertising & P.R. Lab. (Practical)	4
MMNM-251	Cyber Media Writing Lab. (Practical)	3	MMNM-254	Major Project (Practical)	10
MMNM-253	Mobile & Visual Communication Lab. (Practical)	3	MMNM-256	Comprehensive Viva-Voce (Practical)	4
MMNM-255	Minor Project (Practical)	4			
MMNM-257	Industrial Training Report*	4			
<b>Total</b>		<b>26</b>	<b>Total</b>		<b>26</b>
<b>SPECIALIZATION IN T.V. PRODUCTION</b>					
<b>THIRD SEMESTER</b>			<b>FOURTH SEMESTER</b>		
MMTV-201	Production, Direction & Ethical Issues	4	MMTV-202	Production Styles, Marketing & Commissioning	4
MMTV-203	Techniques of Camera & Light	4	MMTV-204	Script & Screeplay Writing	4
MMTV-205	Sound & Post Production	4	MMTV-252	Script & Screenplay Lab. (Practical)	4
MMTV-251	Camera & Light Lab. (Practical)	3	MMTV-254	Major Project (Practical)	10
MMTV-253	Sound & Editing Lab. (Practical)	3	MMTV-256	Comprehensive Viva-Voce (Practical)	4
MMTV-255	Minor Project (Practical)	4			
MMTV-257	Industrial Training Report *	4			
<b>Total</b>		<b>26</b>	<b>Total</b>		<b>26</b>

**Maximum Credits : 108**

**Minimum Credits : 102**

**\* NUES**

**APPENDIX : II**  
***STAFF DEVELOPMENT CELL***

## **STAFF DEVELOPMENT CELL : ITS CHARTER, COMPOSITION AND MODUS OPERANDI**

A Staff Development Cell (SDC) has been established in the University in August 2011 for the purpose of meeting the training and development needs of the teaching and non-teaching employees of the University. Given below are the details of the charter, composition and progress to date of the SDC:

### **1. CHARTER**

- (i) SDC shall identify the Training/Development needs of various employees of the University
- (ii) SDC shall identify the types of programmes to be organized for the various categories of employees of the University.
- (iii) SDC shall make a calendar of programmes to be conducted during each year.
- (iv) SDC shall recommend the staff for the training programmes/Workshops/Conferences conducted outside the University, which shall help in the development of the individual employee for the benefit of the University.
- (v) SDC shall coordinate with Institutions outside the University for conduct of training programmes, faculty exchange and other similar activities as deemed fit by SDC.
- (vi) Any other activities deemed fit for staff development from time to time.

### **2. COMPOSITION**

- |       |                        |   |
|-------|------------------------|---|
| (i)   | Chairperson:           | Prof. P.C. Sharma, USBT                           |
| (ii)  | Associate Chairperson: | Sh. A.K. Verma, JR (GA)                           |
| (iii) | Co-ordinator:          | Dr. Meenakshi Handa, Associate Professor,<br>USMS |
| (iv)  | Member:                | Dr. Yogesh Tyagi, Assistant Professor.<br>USBS    |
| (v)   | Member:                | Dr. Renu Tomar, Assistant Registrar<br>(Exam.)    |

### **3. MODUS-OPERANDI**

- (i) The SDC has requested the Deans/Heads of Departments of the University to provide information on the various types of training and development requirements for the enhancement of Knowledge, Skills and Abilities and career growth for the teaching and non-teaching members of their Schools/Departments. This is to be done through (a) taking feed-back on self-assessment by the employee for training needs (b) assessment by the Dean/HOD/Reporting Officer. Responses have been received so far from the Examination Division, USEM, and Jt Registrar (Coordination).
- (ii) The SDC is in the process of identifying and liaising with organizations outside the University offering various types of training and developmental programmes at different levels so that University employees could be sponsored for the same.
- (iii) The SDC is in the process of compiling a report on the training and development activities organized by the Schools/Developments of the university as well as the various training programmes/orientation and refresher courses attended by the staff of the University.
- (iv) Based on the feed back received from Section (i) above the SDC shall prepare a calendar of training/development activities for the next one year which would encompass in-house programmes as well as programmes conducted by external institutions which could be attended by University staff.

XXX  
XX  
X

## **APPENDIX : III**

### ***REGULATION GOVERNING THE UPGRADATION/ CHANGE OF BRANCH OF THE STUDENTS IN THE ENGINEERING DEGREE PROGRAMMES IN THE THIRD SEMESTER OF STUDIES***

## ***Regulation Governing the Upgradation / Change of Branch of the Students in the Engineering Degree Programmes in the Third Semester of Studies***

The upgradation/change of branch of the students in the Engineering Degree Programme in the 3<sup>rd</sup> semester of their studies is governed by the **Regulations titled as "Regulation Governing the Upgradation/change of Branch of the Students in the Engineering Degree Programmes in the Third Semester of Studies."** These regulations are as reproduced below:

1. In the case of University School of Studies this upgradation Scheme shall be applicable in all the Engineering/Technology Degree Programmes, whether integrated or dual degree, excepting in the case of B.Tech./M.Tech. (Integrated/Dual Degree) Biotechnology programme.
2. The upgradations/change of branch shall strictly be based on the University School-wise/Institution-wise common merit list of the students (without making any branch-wise differentiation) prepared on the basis of C.P.I. obtained by the student in the First Semester Examinations conducted by the University. The upgradation/change of branch shall be affected in the University Schools of Studies, University Maintained Institution(s) and Government / Self-financing Engineering Institutions on the basis of the preferences of branch(es) given by the students.
3. The upgradation/change of branch shall be restricted to a maximum of 5% of the sanctioned intake of the academic session in which the students have been admitted, in each branch of Engineering, subject to availability of vacant seats. If the existing vacancies are less than 5% in any branch of Engineering, then the actual number of vacant seat(s) shall be filled through upgradation/change of branch.
4. The orders for upgradation/change of branch for all the University Schools of Studies, University Maintained Institution(s) and Government/Self-financing Engineering Institutions shall be effective from the beginning of the third semester.
5. The policy of reservation and category-wise allocation shall not be applicable on upgradation/change of branch.
6. The upgradation/change of branch shall be subject to taking of examination in additional paper/s, if any, as per the requirement of Scheme of Examinations and Syllabi of the relevant Engineering branch which shall be decided by the concerned Dean.
7. Notwithstanding anything stated in this Regulation, for any unforeseen issues arising, and not covered by this Regulation, or in the event of differences of interpretation, the Vice-Chancellor may take a decision, which shall be treated as final.

XXX  
XX  
X

## **APPENDIX : IV**

### ***PROFORMA FOR FEEDBACK OF STUDENTS ON THE OVERALL PERFORMANCE OF THE UNIVERSITY***

## PROFORMA FOR FEEDBACK OF STUDENTS ON THE OVERALL PERFORMANCE OF THE UNIVERSITY

You are required to provide the following information on the scale of 1 to 5 from lowest rating to maximum rating for the services of the University being provided to the students in the University Schools of Studies.

Name : \_\_\_\_\_

Enrolment No. : \_\_\_\_\_

Programme : \_\_\_\_\_

School : \_\_\_\_\_

1      2      3      4      5

### A. USS

1. How do you rate the teaching process
2. Competence of the faculty
3. Punctuality of faculty
4. Laboratory facilities and practicals/experiments demonstrated.
5. Computer Facilities
6. Availability and maintenance of teaching aids  
[black boards, writing materials, OHP, etc.]
7. Cleanliness of rooms and proper sitting and environmental conditions arrangement (ergonomically designed)
8. Placement process

### B. UIRC

1. Availability of Text and Reference Books as per needs of students
2. Journals/ Magazine/ Newspapers
3. Study environment and facilities in UIRC
4. Courtesy of the staff

### C. Administrative Support from the University

1. Admission Process
2. Examination
3. Support in other matters

### D. Accounts Branch

- (i) Fee Receipt System
- (ii) Refunds
- (iii) Distribution of Scholarships
- (iv) Other matters

**E. Hostel Services**

1. Cleanliness in rooms
2. Quality of furniture and its availability
3. Quality of internet facility
4. Kitchen

**F. Cafeteria Services**

1. Quality of food supplied through cafeteria
2. Cleanliness and Hygiene in Kitchen area
3. Use of Head caps, Hand Gloves and Shoe
4. Availability of Proper storage facilities for eatables
5. Availability of safety equipment

**G. Overall Satisfaction Level**

Tick Mark ( √ ) the appropriate.

1. Unsatisfactory
2. Satisfactory
3. Good
4. Very Good
5. Excellent

XXX  
XX  
X

## **APPENDIX : V**

**FACULTY APPRAISAL AND DEVELOPMENT SYSTEM (FADS) [PART – II OF THIS FORMAT IS EMPLOYED FOR SEEKING FEEDBACK FROM STUDENTS ABOUT THE FACULTY]**

## **FACULTY APPRAISAL AND DEVELOPMENT SYSTEM (FADS)**

### **1. Preamble**

The Universities are committed to move on the path of excellence with a clear vision for quality of education and research. Image of any academic institution is determined by the quality of its faculty, their research and academic achievements. The University must provide full freedom to the faculty members in performing academic work of their choice within a framework. So, it is necessary to periodically review the faculty performance (David Shepherd et al 2009) to ensure the following.

1. The work done by faculty is in tune with the university's national and international requirements.
2. The teachers continuously benchmark against the best in the world and set high standards of teaching and research.
3. University rewards high performers and motivates under performers.

Faculty Appraisal and Development System (FADS) should focus on the delivery by quality faculty in different activities they undertake. Faculty at any University is expected:

- a) To teach in the Academic Programmes including MDP / FDP / Training Programmes of similar type.
- b) To teach and guide students in the Undergraduate, Postgraduate and Doctoral Programmes.
- c) To carry out research, publish papers in scholarly journals and to bring different research grants from national and international agencies.
- d) To organize national / international workshops / seminars / conferences / conventions / conclaves / summit.
- e) To undertake consultancy assignments.
- f) To undertake institution building activities.

It is in relation to each of these activities that a faculty member's contribution needs to be measured and a suitable mechanism needs to be evolved.

## **2. Work Norms (Expected Minimum Work Output)**

Minimum performance expected from a University faculty in an academic year is 8 courses (of 3 credits teaching) or equivalent units. It is expected that faculty member require devoting 180 hours to teach a course of 3 credits which include teaching, preparations, assignments / quizzes / projects / question paper setting and evaluation etc. Hence, they would be required to devote 1440 working hours in any academic year.

Therefore, minimum unit point i.e. 8 units to be earned by the faculty in an academic year is as per the norms of "Expected minimum work output" as delineated in the output based faculty work norms based on 1 course of 3 credit equal to one unit. If the University follows the semester system it turns out to be 12 hours teaching load in a week which is lower than the University Grants commission norms.

For other academic activities (practical, research, training, publication, academic administration etc.) faculty members' contribution needs to be measured with appropriate "teaching unit" equivalence. These equivalence needs to be work out based on output rather than input and a suitable mechanism needs to be evolved.

To facilitate the process, the academic calendar should begin from Aug 1 of an academic year to June 30 of the next year.

## **3. Quality Assurance**

For emphasizing quality in all endeavors, the following broad criteria should be used for different activities.

1. Academic Programmes
  - a) Innovation in Pedagogy
  - b) Development of new courses / new material
  - c) Students' feedback
  
2. MDP or Any Other Training Programme
  - a) Innovation in pedagogy
  - b) Management Level for which the Programme is conducted (middle management, senior management, and top management)
  - c) Participants' feedback
  - d) New Programmes floated according to clientele needs
  
3. Research Publications
  - a) National / International (in Referred Journals)
  - b) Case Studies
  - c) Books / Book Chapters in reputed Publishing house

4. Doctoral Programme

- a) Supervisor
- b) Conduction of advanced doctoral level course

5. Workshops / Seminars / Conferences

- a) Coordinator of the Programme
- b) Members of the Programme

6. Institution building activities

- a) Chairmanship of Various Committees of the University
- b) Membership of Various Committees of the University
- c) Membership of other Statutory Bodies of the University

## **5. Faculty Performance Review**

The process of appraisal will consider, in addition to quantitative evaluation on the basis of faculty work norms, evaluation on qualitative performance which is reflected through the positive contribution of an individual faculty in overall development of the University and the subject area of specialization, feedback of the academic activities like teaching in academic programme, MDP or training programmes of similar type. Hence, the feedback for teaching, training and research shall be an integral part of the faculty performance appraisal (Course Evaluation Feedback Performa Attached at Appendix I).

The process for the performance appraisal system would be as follows.

- (i) Maximum workload
- (ii) MDP (or any other training programme of similar type) Load + Quality
- (iii) Academic programs Load + Quality
- (iv) Research and publications (Quantity + Quality)
- (v) Doctoral Programme supervised
- (vi) Workshops / seminars / conferences
- (vii) Institution building activities

Deans/Heads will administer the feedback questionnaire to students for academic programmes and also for MDPs and any other training programme of similar type. This information will be shared by the concerned Deans with the Vice-Chancellor. Consolidated feedback will be shared with the individual faculty members. No individual faculty will take feedback on their own cases from Students / Trainees.

Faculty members shall receive the soft copy of the Performa for the academic plan and work performed from the Dean's office (Annexure A & B by May 15 every year). They shall submit the same completed in every respect by May 30 or June 30 as the case may be to their respective Deans.

However, the course allocation meeting in the respective faculty area should also take place by first week of April every year. Dean along with faculty member should discuss the research and training agenda of the year.

Dean's office shall compile these data along with the feedback for teaching, training and research. This will be followed by a meeting of the individual faculty member with the Dean to complete the process of appraisal. The Appraisal Report of the faculty members will be the basis for writing their **Annual confidential report**.

Faculty Appraisal and Development System Committee (FADS-C) will be constituted periodically to undertake a comprehensive evaluation of the faculty members. The period could be 3 years and shall also include past performances data. In addition to the students feedback / MDP or any other training programme of similar type, participants feedback would be taken. Comprehensive evaluation would involve obtaining assessment of research outputs from internal / external experts. The committee will recommend for appropriate action for the high performing and poor performing faculty members. Recommendation of the committee may be input to the selection committee at the time of selection of the faculty to higher positions or academic incentives.

## **6. Incentives for the Faculty Members**

The following are the suggested incentives/ rewards.

1. Longer duration placements in institutions of excellence through faculty exchange programme
2. Flexible norms for attending national and international seminars / conferences may be introduced (faculty members may be permitted to attend two national conferences every year and one international conference once in 3 years). This may be made more flexible in case of high performers as proposed
  - a) Professors/Associate Professors scoring more than 14 unit points and Assistant Professors scoring more than 13 points, the reward would be attending one additional international conference in 3 years in addition to the existing norms of international travel grant / or payment of Rs. 20,000 cash.
  - b) Professors/Associate Professors scoring more than 16 unit points and Assistant Professors scoring more than 15 points, the reward would be attending one additional international conference in 2 years in addition to the existing norms of international travel grant or payment of Rs. 30,000 cash.

c) Professors/Associate Professors scoring 18 units and above and Assistant Professors scoring 17 points and above, the reward would be attending one additional international conference in 1 year in addition to the existing norms of international travel grant or payment of Rs. 50,000 cash.

3. Grants for procurement of books, journals, memberships of professional society, procurement of software and hardware etc., would be Rs 5000 on reimbursable basis.

4. Best Researcher and Trainer award be constituted annually. Modalities of such award should be worked out.

Above measures will promote a "performance centric academic culture at any University" and shall provide academic freedom to the faculty members to plan their teaching, research and training agendas as per their specialization.

Faculty Appraisal and Development System (FADS) can be reviewed from time to time to make it effective and relevant to the context.

## **7. Process for the development of work norms**

Faculty members being the centrifugal force of any academic institution require performing many academic and other academic related administrative activities. Measurement of these activities, mostly intangible in nature, requires dynamic approach. The most suitable approach for such type of situation is to develop work norms rather than job quantifications. These norms act as guidelines to the faculty members to select basket of academic activities by themselves keeping in mind the University's requirements.

### **BROAD GOALS FOR FACULTY WORK NORMS**

1. Optimum utilization of faculty resources
3. Creating the right blend of academic activities based on ability and challenges in the field.
4. Balancing the work between activities which are non-remunerative and those for which faculty receives additional compensation.
4. It can be used as a mechanism for faculty development.
5. It can be used as faculty performance measurement by incorporating the qualitative performance of the faculty members.

## ACTIVITY LIST

Faculty members require performing different types of academic activities. The lists of activities are:

1. Academic Programmes teaching
2. Open / sponsored / in-company MDP (or any other training programme of similar type) / On campus MDP or Training (fee which no honorarium is paid)
3. Ph.D guidance
4. Academic Administrative Service (Deanship, Chairmanships, Committee memberships, etc.)
5. Professional Service (Organizing conferences / seminars / editing journal / membership of board / other external committee etc.)
6. Funded Projects (Research, Infrastructure Development)
7. Publications (and presentations at National / International conferences)
8. Consultancy (Honorary or with Compensation)

## BASIC CREDIT UNIT

For the purpose of developing such a broad guidelines "Academic Courses" is taken as the basic unit. The following is recommended for quantification.

- |                                    |                 |
|------------------------------------|-----------------|
| 1. Courses with 1 Credit           | =0.33 Unit      |
| 2. Courses with 2 Credit           | =0.66 Unit      |
| 3. Courses with 3 Credit           | =1.00 Unit      |
| 4. Courses with 4 Credit           | =1.33 Units     |
|                                    | and likewise... |
| 5. Practical courses with 1 credit | = 0.20          |
| 6. Practical courses with 2 credit | = 0.40          |
| 7. Practical courses with 3 credit | = 0.60          |
| 8. Practical courses with 4 credit | = 0.80          |
|                                    | and likewise... |

## EQUIVALENCES

Work equivalence of other activities based on the expected time faculty members are required to devote.

### Academic Activities Other Than Class Room Courses

- |   |                     |
|---|---------------------|
| 1. Major Project Guidance (per student)                                       | 0.025*No of Credits |
| 2. Dissertation guiding work (per student)                                    | 0.025*No of Credits |
| 3. Minor Project Guidance/Summer Internship<br>Project Guidance (per student) | 0.025*No of Credits |

All  
combined  
up to  
maximum  
of  
2 Units

### Ph.D Guidance/Post Doctoral fellow guidance Activity

1. Guiding one Ph.D Scholar (per year) = 1.00 Unit  
(To be counted each year for maximum upto 4 years after registration)  
(Units get shared with co-supervisor)
2. Guiding one Post Doctoral fellow (per year) = 0.25 Unit

### MDP /FDP/EDP Or Any Other Training Programme

	<b>Sponsored</b>	<b>Fee Based (Open)</b>
1. Coordinating four-weeks of MDP / Training Programme of Similar Type	= 0.50 Unit	1.0 Unit
2. Coordinating three-weeks of MDP / Training Programme of Similar Type	= 0.40 Unit	0.80 Unit
3. Coordinating two-weeks of MDP / Training Programme of Similar Type	= 0.30 Unit	0.60 Unit
5. Shorter duration of MDP / Training Programme of Similar Type between 1 and 5 days		
	1 Day = 0.10 Unit	0.20 Unit
	2 -3 Days = 0.15 Unit	0.30 Unit
	4- 5 Days = 0.20 Unit	0.40 Unit

For every thirty hours of MDP teaching, 0.66 unit of work would be granted. Credit on pro-rata basis would be available for actual number of sessions taken.

## Research / Publications

1. Patents procured in the academic year =2.00 Unit
2. One refereed publication in International journal =2.00 to 4.00 Unit  
(The credit will be granted on final Acceptance of the paper depending upon the impact factor)

**[ a) The Journal with 0-1.99 impact factor would fetch 2.00 Unit points; b) The Journal with 2 - 5 impact factor would fetch 3.00 Unit points; c) The Journal of more than 5 impact factor would fetch 4.00 Unit points]**

3. One refereed publication in National Journal / One Publication = 1.00 Unit  
In refereed international proceedings.  
(The credit will be granted on final acceptance of the paper)
4. Publication in refereed National proceedings = 0.20 Unit

**Note :** *An international journal is one, which has international Editorial board, international authors, international readership, and international subscription and is included in the standard abstracting/ indexing services.*

*Equal shared weightage for all authors would be given for joint publications. However, in case of joint publications first author and corresponding authors will get 50% more weightage of the equal shared weightage. A list of journals / proceedings to be classified as referred International / National reputed publishing houses to be worked out by a faculty committee, preferably by the SRC of the Schools from time to time and shall be circulated to all the faculty members.*

5. Course material development in the form of booklet / Tech. No = 0.10 Unit  
(Copy of which must be made available to the Dean's Office)
6. A paper presented in Seminar / Conference, not published in the proceedings = 0.10 Unit
7. One paper in non-refereed journals = 0.10 Unit
8. One book (published by reputed publishing house) = 2.00 Unit
9. One book (publish in other publishing house) = 0.50 Unit
10. Conference proceedings (edited) = 1.00 Unit
11. One conference proceedings (published by the University)  
Editor = 0.50 Unit  
Members = 0.20 Unit
12. Popular article published in University publications (such as University Magazine, Newsletters) = 0.10 Unit
13. Editor, University Newsletter = 0.50 Unit  
Editor, University Magazine = 0.20 Unit  
Member, Editorial Board, Newsletter and Magazine
14. Editor, University School's Journal = 0.50 unit  
Members of the Editorial Board = 0.10 unit
15. Coordinator, National Conference organized by the University = 0.50 Unit  
Additional Coordinators = 0.20 Unit

16. Coordinator for an International Conference Organized by the University	=	1.00 Unit
Additional Coordinators	=	0.25 Unit
17. Writing a book review	=	0.10 Unit
18. Writing one book chapter	=	0.25 Unit
19. Coordinating a workshop	=	0.25 Unit
20. News paper / News letter articles (in the area of specialization)	=	0.10 Unit
21. Director, Moot Court	=	0.25 Unit
Convener	=	0.10 Unit
Member	=	0.10 Unit
22. Chairman of Statutory Committees (per committee)	=	0.25 Unit
Members of Statutory Committees (per committee)	=	0.10 Unit
23. Funded Research Project (Individual/Institutional/ School wise) (Output is defined as a written research reports and release of funds)		

<p>Not more than 1 Unit</p>
---------------------------------

**National Projects**

Rs. 50.0 Lakh and above per year	=	2.0 Unit
Rs. 25.0-<50.0 Lakh per year	=	1.50 Unit
Rs. 10.0-<25.0 Lakh per year	=	1.00 Unit
Rs. 5.0-<10.0 Lakh per year	=	0.75 Unit
Rs. Below 5 lakh per year	=	0.5 Unit

*(For international research projects, credits would be more than 20% than that of national research projects. Information related to research / publication / project reports be made available to the respective Deans).*

*(The credit for unit in Projects will be given only in the first year).*

**NOTE:** For all joint work except research publications, the credit shall get shared in proportion. If a 3 credit course is taught jointly with equal number of sessions by two persons each one will get a credit of 0.50 unit. Likewise if it is taught by more than two persons the credit will be proportionately shared by all the participating members. For all activities this approach will be followed.

**Task Chairmanship/Coordinatorship/ Inchargeship (Academic Administration)**

Since task chairmanships are very demanding, the following norms regarding workload are to be followed for different position holders, as indicated below.

1. Deans	=	2.50 Unit
2. Director/ Proctor/ Chief Warden	=	2.00 Unit
3. Wardens	=	0.50 unit
4. Chairperson of other academic committees constituted by the Vice-Chancellor	=	0.25 Unit
5. Members	=	0.10 Unit

- |   |             |
|---|-------------|
| 6. Coordinator, Training & Placements in Schools  | = 1.0 Unit  |
| Members   | = 0.25 Unit |
| 7. Faculty members posted in Administration<br>such as Incharge Examination Cell, UCITIM etc. | = 1.00 Unit |

*(As far as possible, the tasks headship should be assigned to the senior faculty members and whose academic contribution are well-established and junior faculty members or faculty members whose academic contribution is not well established should be encouraged to devote more time for academic activities rather than on academic administrative activities for their growth).*

## **School/ University level Committees**

### **Committees on**

Cultural /Sports/ Discipline/ Attendance/Timetable/Grievance /Technical Purchase/Library/ Organising Seminar, Chair person/ Convenor Conference, Workshop/ Lab Management/ Repair/Coordinator for each Maintenance / Curriculum Development/ Journal Publication/ Committee = 0.25 units;  
Industrial/ RTI/Court/ Field etc.

Members for each  
committee = 0.10 units

**(With maximum of 0.5 units)**

## **OTHER ACTIVITIES**

### **1. General**

Institutional Development Activities = 0.1 Unit for each activity  
For all the following combined activities (with maximum of 0.5 units)

1. Admission Counseling
2. Examination Superintendent
3. Deputy Superintendent
4. Observers
5. University Representatives
6. Invigilators
7. Visits of the Affiliation Committees etc.

## **Consultancy Activities**

This activity is supposed to be over and above the normal workload of the faculty member. It is in addition to the salary of the faculty members since it fetches consulting fees so much higher than their daily salary, no unit is assigned to such consulting work. However, this activity shall be encouraged to the faculty members as it will bring lots of field experience to them.

Any activity, which is remunerative, shall not fetch any unit.

## **GENERAL OBSERVATIONS**

The above norms are means to facilitate individual faculty members to plan and regulate their own activities and also assess their performance in quantitative terms. The intent of these norms is not to control any faculty members but to help and guide activities of individuals as well as those of the University in a manner so that work goes on smoothly through a balanced and coordinated participation of every member. The units have been assigned on the basis of expected time required to be devoted for the performance of the academic activities and also to avoid double accounting for the same / similar academic activities. It is expected that every care must be taken in operationalizing the guidelines contained in this document so as to achieve the synergy.

## **EXPECTED MINIMUM WORK OUTPUT**

The minimum unit point to be earned by the University faculty in an academic year is fixed at 8 units. Out of this total of 8 units in a year, ideally 3 unit points should come from course teaching from Professors/Associate Professors and ideally 4 unit points should come from course teaching for an Assistant Professor. However, this will depend on the requirements of the schools and therefore certain amount of adjustment may be an inevitable necessity.

Moreover, if number of course units assigned by a school to a teacher is less than prescribed limit, faculty members may be given leverage for this short comings. In such special circumstances, faculty member should devote more time for research and earn units through research publications and other academic activities.

**Note:**

- (1) *Academic activities for which unit equivalence has not been worked out, in such cases units shall be finalized by a duly constituted Dean's Committee and shall be approved by the Vice-Chancellor whenever such need arises.*
- (2) *The appraisal of faculty members who are designated as Controller of Examinations, Registrar, Dy. Registrar, Assistant Registrar, Officer on Special Duty (OSD), Director (Colleges) etc. will not come under this system of evaluation as these are full time academic administrative activities.*
- (3) *Notwithstanding anything stated in this document, for any unforeseen issues arising, not covered by this document, or in the event of differences of interpretation, the Vice-Chancellor may take a decision, after obtaining necessary opinion/advice of a Committee consisting of any or all the Deans of the Schools. The decision of the Vice-Chancellor shall be final.*
- (4) *The Faculty Appraisal and Development System (FADS) document may be subject to review after every three years.*

**ACADEMIC ACTIVITY PLAN  
FOR THE PRESENT ACADEMIC YEAR  
(To be submitted by May 30)  
(Proposed)**

NAME OF THE FACULTY \_\_\_\_\_

NAME OF THE SCHOOL OF STUDIES \_\_\_\_\_

SESSION \_\_\_\_\_

DATE OF SUBMISSION \_\_\_\_\_

**A. TEACHING**

<b>S No.</b>	<b>Name of the Course</b>	<b>Semester</b>	<b>Credits</b>	<b>Unit</b>

**TOTAL NO. OF EQUIVALENT UNIT (A):** \_\_\_\_\_**B. RESEARCH**

<b>S No.</b>	<b>Name of Research Project</b>	<b>External Funding</b>	<b>Duration</b>	<b>Project Cost</b>	<b>Unit</b>

**TOTAL NO. OF EQUIVALENT UNIT (B):** \_\_\_\_\_**C. PUBLICATIONS (including Case Development, Course Material Development and Book Writing)**

<b>S No.</b>	<b>Publications details</b>	<b>Unit</b>

**TOTAL NO. OF EQUIVALENT UNIT (C.):** \_\_\_\_\_

**D. MDPs/FDPs/or Any Other Training Programme**

<b>S No.</b>	<b>Name of Training Programme</b>	<b>In-company / Open</b>	<b>Course Coordinator and or Teaching Faculty</b>	<b>Duration From To</b>	<b>No. of Sessions</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT CREDITS (D):** \_\_\_\_\_

**E. Ph.D SUPERVISION**

<b>S No.</b>	<b>Name of the Student</b>	<b>Date of Registration</b>	<b>Co-Supervisor</b>	<b>Current Status</b>	<b>Date of Submission</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT UNIT (E):** \_\_\_\_\_

**F. PROJECT REPORTS/DISSERTATION/MINOR PROJECTS**

<b>S No.</b>	<b>No. of the Students</b>	<b>Semester</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT CREDITS (F):** \_\_\_\_\_

**G. ACADEMIC ADMINISTRATIVE RESPONSIBILITY**

<b>S No.</b>	<b>Name of the Task</b>	<b>Chairperson / Members</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT UNITS (G):** \_\_\_\_\_

**H. ANY OTHER ACTIVITIES**

<b>S No.</b>	<b>Activity Details</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT UNITS (H):** \_\_\_\_\_

**TOTAL NO. OF CREDITS PLANNED DURING PRESENT ACADEMIC YEAR**

<b>S No.</b>	<b>Responsibility</b>	<b>Units</b>
A.	Teaching	
B.	Research	
C.	Publications	
D.	Training	
E.	Ph.D. Supervision	
F.	Dissertation/Project Work/Minor Project/Summer Internship Projects	
G.	Academic Administrative Responsibility	
H.	Any other activities	
<b>Total</b>		

(Signature of the Faculty member)

**ACADEMIC ACTIVITY PLAN (achieved)**  
**(SELF APPRAISAL)**  
*(To be submitted by June 30)*

NAME OF THE FACULTY \_\_\_\_\_  
 NAME OF THE SCHOOL OF STUDIES \_\_\_\_\_  
 SESSION \_\_\_\_\_  
 DATE OF SUBMISSION \_\_\_\_\_

**A. TEACHING**

S No.	Name of the Course	Semester	Credits	Unit

**TOTAL NO. OF EQUIVALENT UNIT(A):** \_\_\_\_\_

**B. RESEARCH**

S No.	Name of Research Project	External Funding	Duration	Project Cost	Unit

**TOTAL NO. OF EQUIVALENT UNIT (B):** \_\_\_\_\_

**C. PUBLICATIONS (including Case Development, Course Material Development and Book Writing)**

S No.	Publications details	Unit

**TOTAL NO. OF EQUIVALENT UNIT (C) :** \_\_\_\_\_

**D. MDPs/FDPs/or Any Other Training Programme**

<b>S No.</b>	<b>Name of Training Programme</b>	<b>In-company / Open</b>	<b>Course Coordinator and or Teaching Faculty</b>	<b>Duration From To</b>	<b>No. of Sessions</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT CREDITS (D) :** \_\_\_\_\_

**E. Ph.D SUPERVISION**

<b>S No.</b>	<b>Name of the Student</b>	<b>Date of Registration</b>	<b>Co-Supervisor</b>	<b>Current Status</b>	<b>Date of Submission</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT UNIT (E):** \_\_\_\_\_

**F. PROJECT REPORTS/DISSERTATION/MINOR PROJECTS**

<b>S No.</b>	<b>No. of the Students</b>	<b>Semester</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT CREDITS (F):** \_\_\_\_\_

**G. ACADEMIC ADMINISTRATIVE RESPONSIBILITY**

<b>S No.</b>	<b>Name of the Task</b>	<b>Chairperson / Members</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT UNITS (G) :** \_\_\_\_\_

**H. ANY OTHER ACTIVITIES**

<b>S No.</b>	<b>Activity Details</b>	<b>Units</b>

**TOTAL NO. OF EQUIVALENT UNITS (H) :** \_\_\_\_\_

**TOTAL NO. OF CREDITS PLANNED DURING PRESENT ACADEMIC YEAR**

<b>S No.</b>	<b>Responsibility</b>	<b>Units</b>
A	Teaching	
B	Research	
C	Publications	
D	Training	
E	Ph.D. Supervision	
F	Dissertation/Project Work/Minor Project/Summer Internship Projects	
G	Academic Administrative Responsibility	
H	Any other activities	
<b>Total</b>		

(Signature of the Faculty member)

**COURSE EVALUATION PROFORMA**  
**(To be filled in by the Students)**

Teacher's Name \_\_\_\_\_

Subject Name with Code \_\_\_\_\_

Session \_\_\_\_\_

Date \_\_\_\_\_

**Directions:**

Please tick the (√) the rating



Unsatisfactory (1)      Satisfactory (2)      Good (3)      Very Good (4)      Outstanding (5)

S.No.	Parameter	Rating				
		(1)	(2)	(3)	(4)	(5)
1	The objectives of this course were made clear to me by this teacher	(1)	(2)	(3)	(4)	(5)
2	The teacher speaks and explains things clearly	(1)	(2)	(3)	(4)	(5)
3	The teacher adheres to schedules and enforces discipline	(1)	(2)	(3)	(4)	(5)
4	This teacher is stimulating and interesting to listen to	(1)	(2)	(3)	(4)	(5)
5	The lectures were well structured and focused on the topics	(1)	(2)	(3)	(4)	(5)
6	The teacher has enthusiasm and concern for students	(1)	(2)	(3)	(4)	(5)
7	The teacher has fair knowledge of the subject matter	(1)	(2)	(3)	(4)	(5)
8	The teacher's method of teaching was effective	(1)	(2)	(3)	(4)	(5)
9	Time spent on lecturing by the teacher for course coverage is	(1)	(2)	(3)	(4)	(5)
10	This teacher encourages students to raise pertinent questions and answers them.	(1)	(2)	(3)	(4)	(5)

(Signature of the student- optional)

*For Office Use:*

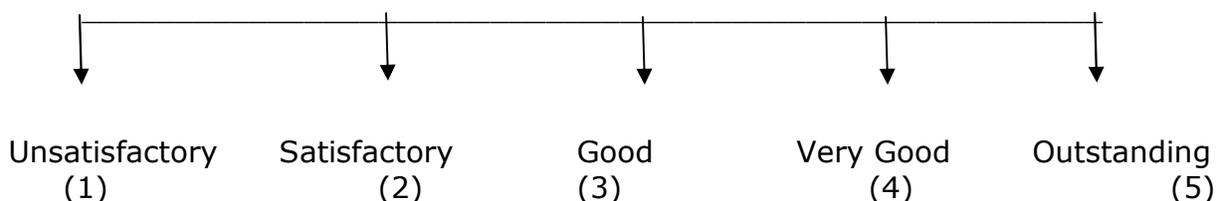
Total Score (words & figures):
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**Part III**

Annexure -D

**Assessment of the Faculty by the Dean**

Dean will indicate his/her evaluation of the faculty on each parameter by putting in the appropriate number in the column.



S.No.	Parameter	Rating				
		(1)	(2)	(3)	(4)	(5)
1	Innovations/experiments introduced in the course	(1)	(2)	(3)	(4)	(5)
2	Contribution in Curriculum Development	(1)	(2)	(3)	(4)	(5)
3	Organizing and participation in seminars/workshops, special lectures, FDP's, summer institutes etc.	(1)	(2)	(3)	(4)	(5)
4	Contribution to the corporate life of the school/university	(1)	(2)	(3)	(4)	(5)
5	Communication skills (oral and written)	(1)	(2)	(3)	(4)	(5)
6	Initiative and adaptability (resourcefulness in handling normal and unforeseen problems and willingness to take responsibilities in the new area of work)	(1)	(2)	(3)	(4)	(5)
7	Ability to inspire and motivate	(1)	(2)	(3)	(4)	(5)
8	Interpersonal relations and team work	(1)	(2)	(3)	(4)	(5)
9	Integrity and trustworthiness	(1)	(2)	(3)	(4)	(5)
10	General conduct	(1)	(2)	(3)	(4)	(5)

*For Office Use:*

Total Score(words & figures):
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(Signature of the Dean)

## FINAL ASSESSMENT OF FACULTY

The final faculty appraisal shall be on the basis of following procedure:

The conversion table for unit earned in Academic Activity Plan (Self Appraisal) to marks shall be on the basis of 8 units equivalent to 60 marks and 16 and above equivalent to 100 marks. *(As per the work norms for the faculty members each member must earn minimum of 8 units.)*

1. The table for the conversion is as follows:

Units	Marks
8	60
9	65
10	70
11	75
12	80
13	85
14	90
15	95
16 and above	100

2. The feedback of the students, after taking the average of all the courses out of 50 should be converted to 100 marks.
3. Dean's Assessment shall be made out of 50 marks which will be converted to 100 marks.

**Overall appraisal of the faculty would be done on the following basis:**

- (i) 60 % of Self Appraisal  
*(moderated and evaluated by the Dean/Vice Chancellor in presence of the faculty members as the case may be)*
- (ii) 25 % of the students' feedback
- (iii) 15 % of the Dean's/Vice Chancellor assessment

**(Overall appraisal = 0.6 \* Self appraisal + 0.25 \* Students' feedback + 0.15 \* Dean's/Vice Chancellor assessment)**

These marks shall be further mapped using the following scale

- (a) 80 and above = Outstanding
- (b) 70 - 79 = Very Good
- (c) 60 - 69 = Good
- (d) 55 - 59 = satisfactory
- (e) Less than 55 = Unsatisfactory

The overall Appraisal of the faculty member for the year (.....)

( Signed by the Dean/ Vice chancellor)

XXX  
XX  
X

**APPENDIX : VI**

***SUBJECTS AND THEIR WEIGHTAGES INCLUDED  
IN EACH OF THE COMMON ENTRANCE TEST***

**SUBJECTS AND THEIR WEIGHTAGES INCLUDED IN EACH OF THE ENTRANCE TEST**

Sr. No.	Name of the Programme	Subjects of Entrance Test
1.	MCA (SE)/MCA	(i) Mathematics - (25%), (ii) English Language & Comprehension-(25%), (iii) Computer Awareness-(25%), (iv) Logical and Analytical Ability-(25%)
2.	Master in Mass Communication	(a) Communication Skills (English) (b) National/International Politics (c) Culture/Literature (d) current Affairs (e) Print Media (f) TV (g) Radio (h) Cinema/Films
3.	MPT (Neurology) MPT (Musculoskeletal) MPT (Sports)	(i) Anatomy (ii) Biomechanics (iii) Exercise (iv) Electrotherapy (v) Physiotherapy-Rehabilitation in Clinical Sciences: (a) Musculoskeletal (b) Neurology
4.	MOT (Neurology) MOT (Musculoskeletal)	(i) Anatomy (ii) Biomechanics (iii) Exercise (iv) Occupational Therapy in Mental Health (v) Occupational Therapy in Rehabilitation of Musculoskeletal and Neurology conditions (vi) Occupational Therapy in Physical Dysfunction
5.	Master of Prosthetics and Orthotics (MPO)	(i) Anatomy (ii) Biomechanics (iii) Electrotherapy (iv) Applied Mechanics and strength of materials (v) Prosthetics and (vi) Orthotics
6.	MPH (FE)	Section I: General Aptitude Section II: Allied Health Sciences (Biotechnology, Biochemistry, Microbiology and Entomology) Section III: Public Health
7.	M.Sc. (EM)	(i) Chemistry-(25%), (ii) Environment Science-(25%), (iii) Either Botany and Zoology-(50%), or Physics and Mathematics-(50%).

8.	LL.M.	(i) General Knowledge (including English Language)- (20%) (ii) Jurisprudence, Constitutional Law, Law of Torts, Criminal Law, Commercial Law & Family Law- (30%) (iii) Public International Law, Human Rights Law and Environment Law – (30%), (iv) Current Trends in Law – (20%)
9.	MA (English & Communication Studies)	(i) English Language & Comprehension – (50%), (ii) General Awareness-(20%), (iii) Culture/Literature-(30%),
10.	MBA (SEM)	(i) English Language & Comprehension (ii) Numerical Ability & Mathematics (iii) Logical Reasoning & Data Interpretation (iv) Computer Science
11.	M.Sc.(Forensic Science)	(i) Knowledge of Science (B.Sc. level with strong background of Chemistry as of the subject) (ii) General Proficiency in English Class 12 <sup>th</sup> Standard. (iii) Critical thinking (quantitative reasoning and problem solving attitude. (iv) Decision Making (v) Awareness of Laboratory safety (vi) Observation and attention to details (vii) Computer Proficiency (viii) Interpersonal skills (ix) Public Speaking (x) Oral and Written communication (xi) Time management (xii) Prioritization of tasks
12.	M.A./M.Sc. (Criminology)	(i) General Knowledge. (ii) General Proficiency in English (Class 12 <sup>th</sup> Standard.) (iii) Elementary Knowledge of Social Science. (iv) Understanding different facets of human behavior (v) Sensitivity to social problems (vi) Inclination to social research (vii) Proficiency in expression both verbal and in writing (viii) Elementary knowledge in computer applications.
13.	MBBS	(i) Physics (ii) Chemistry (iii) Botany (iv) Zoology
14.	BDS/BAMS	(i) Physics (ii) Chemistry (iii) Botany (iv) Zoology
15.	Master of Education	(a) Teaching Aptitude (40%) (b) General Awareness and Logical Reasoning (30%) (c) English/communication skills (30%)
16.	M.Sc. (Biodiversity & Conservation)	(i) Life Sciences (ii) Taxonomy, morphology, anatomy, physiology, genetics, evolution, ecology, biogeography and economic uses of all the five kingdoms and virus.) (50%) (iii) Biotechnology (20%) (iv) General Knowledge related to Environment issues (20%)

17.	MBA	(i) English Language & Comprehension -(30%), (ii) Numerical Ability-(30%), (iii) Computer Awareness-(10%), and (iv) Reasoning ability including data interpretation-(30%)
18.	BCA	(i) English Language & Comprehension -(15%), (ii) Mathematics -(30%), (iii) Computer Awareness -(30%), (iv) General Knowledge-IT and Science Related-(25%).
19.	B.Sc. (Hons.) Nursing	(i) Physics-(20%) (ii) Chemistry -(20%) (iii)Biology - (40%) (iv)English Language and Comprehension-(10%) (v)General Awareness about Health related Matters-(10%)
20.	B.Ed.	(i) English Comprehension - (10%) (ii) Mental Ability - (20%) (iii) Reasoning - (20%) (iv) General Awareness - (20%) (v) Aptitude for Teaching - (30%)
21.	Lateral Entry (B. Pharma)	(i) Pharmaceutical Chemistry (20%), (ii) Pharmaceutics (20%), (iii) Pharmacognosy (10%), (iv) Biochemistry and Clinical Pathology (10%), (v) Human Anatomy and Physiology (10%), (vi) Hospital and Clinical Pharmacy (10%), (vii) Pharmacology and Toxicology (10%), (viii) Drug Store and Business Management (10%)
22.	B.A., LL. B (Hons.) BBA., LL.B (H)	(i) English Language & Comprehension -(25%) (ii) General knowledge (25%), (iii) Legal Aptitude-(25%), (iv) Reasoning-(25%)
23.	BJ(MC)	(i) English Language & Comprehension -(25%), (ii) General Awareness-(25%), (iii) Reasoning-(25%), (iv) Media Aptitude-(25%).
24.	BBA/ BBA-CAM/BBA (B&I)/BBA (T&TM)	(i) English Language & Comprehension-(25%), (ii) General Awareness-(25%) (iii) Logical and Analytical Ability -(25%)and (iv) Aptitude relating to the field of Management and for Communication Skills-(25%).
25.	BHMCT	(i) English Language & Comprehension -(30%) (ii) General Awareness-(20%) (iii) Logical and analytical ability including Computer awareness- (30%) (iv) Knowledge of accounts/commerce & SCIENCE-(20%)
26.	BPT/BOT/BPO/MLT/BASLP/ B.Pharma/ BHMS	(i) Physics -(25%), (ii) Chemistry-(25%) (iii) Biology -(50%)

27.	B.Tech./M.Tech. (Dual Degree) Chemical Engg. B.Tech./M.Tech. (Dual Degree) Information Technology B.Tech/M.Tech. (Dual Degree) Computer Sc & Engg, Electronics & Communication Engg., Mechanical & Automation Engg., Power Engg., Electric & Electronic Engg., Tool Engg., and Instrumentation & Control Engg.)	(i) Physics-(33.33%) (ii) Chemistry-(33.33%) (iii) Mathematics-(33.33%)
28.	Lateral Entry to B.Tech. (Engineering/ Technology) programmes (2 <sup>nd</sup> yr/3 <sup>rd</sup> semester) for Diploma Holders	(i) Applied Mechanics-(25%) (ii) Applied Mathematics-(25%) (iii) Fundamentals of Electrical Engineering and Electronics-(25%) (iv) Fundamentals of Mechanical Engineering & Computer Awareness-(25%)
29.	Lateral Entry in B.Tech for B.Sc Graduate (2 <sup>nd</sup> yr/ 3 <sup>rd</sup> semester)	(i) B.Sc Level Mathematics – (40%) (ii) English (10+2 level – (20%) (iii) Analytical & Logical Reasoning – (20%) (iv) Scientific Aptitude – (20%)
30.	B.Tech. / M.Tech. (Dual Degree) Biotechnology	(i) Physics-(25%), (ii) Chemistry-(25%) and (iii) Biology (Botany and Zoology) or Biotechnology -(50%)

**APPENDIX : VII**

***SELECTION PROCESS FOLLOWED FOR  
RECRUITMENT OF THE FACULTY***

## SELECTION PROCESS FOLLOWED FOR RECRUITMENT OF THE FACULTY

- (a) Faculty Requirements are collected from the Deans of University Schools of Studies from time to time alongwith necessary details pertaining to cadre in which the faculty is needed, their specialization, etc.
- (b) These requirements are analyzed and finalized.
- (c) Finalized faculty positions are first got approved in the Finance Committee/Board of Management and advertised in National Daily/Dailies, Employment News, University's Website ([www.ipu.ac.in](http://www.ipu.ac.in)) along with required qualifications/experience, etc.
- (d) The applications are received and scrutinized and short listed candidates are invited for presentation-cum-interviews on specified date/s.
- (e) The subject/discipline-wise Selection Committees, as provided in terms of Clause 16 of the First Statute of the University, are constituted for appointment to the posts of Professors, Associate Professor, Assistant Professor and Other academic staff ;
- (f) Each Selection Committee is comprised of :
  - (i) The Vice-chancellor
  - (ii) A Pro-Vice-chancellor (nominated by the Vice-chancellor)
  - (iii) The Deans of the University School of Studies concerned
  - (iv) Three experts not connected with the University to be nominated by the Vice-chancellor from a panel of not less than seven names approved by the Academic Council for each post.
- (g) The actual selection process, as followed by these Selection Committees, is quite rigorous. Each applicant first makes a power-point or projector-aided presentation on a topic of his/her choice followed by brief question-answer session by the members of the Selection Committee and thereafter a detailed personal interview is taken.
- (h) The recommendations of the Selection Committees are thereafter placed for the consideration and approval by the Board of Management.

One of the distinguishing feature of the University's Selection process is that **'it is one throughout the year basis.'** The vacancies are uploaded on the University's Website and as there is no cut off date for submission of applications any person is allowed to submit application at any point of time for any of the vacant position ; of course, the University's Website is updated in respect to the available number of vacancies.

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**APPENDIX : VIII**  
***SUMMARY OF EXAMINATIONS REFORMS***

## **SUMMARY OF EXAMINATIONS REFORMS**

### **A. Reforms in conduct of Common Entrance Tests (CETs) :**

- (i) On line Admission Form submission has been introduced. This facilitates the candidates to submit online Application Fee and have access to the copy of Admit Card.
- (ii) In order to ensure that no cases of impersonation take place, the entire data in the form is scanned and enrollment numbers. Test Centres are allotted to the students randomly through an in-house developed software.
- (iii) The qualified candidates are called for counselling.
- (iv) The record of the admitted students is updated at the counselling venue and a computerized receipt is generated for the students.
- (v) To make the counselling process transparent, the status of the seats is displayed online indicating filled seats, vacant seats and the rank of the last admitted students.
- (vi) Every day, in the evening, after completion of the counselling, seat status is displayed on the University Website. It helps to the students appearing for the counselling on the subsequent days.
- (vii) The list of the admitted students is provided to the examination branch and affiliated colleges.

### **B. Instructions for photographs :**

- a) The candidate should affix his/ her recent colour photograph with white background of size 3" X4" your face should cover about 75% of the photo (without attestation) taken on or after 1<sup>st</sup> January, 2011. The photograph should be pasted (not stapled) in the space marked for it ;
- b) Photograph should not have cap, googles, etc.(Spectacles are allowed). The face of the candidate should cover about 75% of the photo. The photo should not be hazy. The candidate is also advised to write his/ her name and application number on the reverse side of the photograph before affixing on the form ; the candidate should keep two identical photographs with him/ her, in reserve which may have to be used at the time of Entrance Test/ Counselling/ Admission, in case of doubt regarding identity ;

- c) The candidate should keep two identical photographs with him/her, in reserve which may have to be used at the time of Entrance Test/ Counselling/ Admission, in case of doubt regarding the identify ; and,
- d) Visible mark of identification : Candidate should mention visible mark of identification.

**C.** CET Cell is continuously enriched with relevant software and electronic gadgets. It is pertinent to mention that results are always declared in a time bound manner.

**D. Declaration of Results :**

The results are declared on the website of the University. This ensures that the parents have the access to performance record of their wards.

**E. Reform for conduct of End-Term Examinations :**

- a) Based on the data base of the admitted students, examination department generates computerized attendance sheet and admit cards.
- b) The cover page of the answer sheet contains an OMR Sheet consisting of two parts.
- c) A student appearing for the examination has to fill up the first part of the OMR sheet with the personal details such as roll number, etc. the second part is for the use of evaluators. The evaluator has to fill up the marks obtained by the student in the remaining part.
- d) The first part of the OMR sheet containing the student details, is detached after the completion of the examination. It helps the examination department in creating database of the students appeared for the examination.
- e) After evaluation of the answer sheet, second part of the OMR sheet, containing the marks, is detached and provided to the examination department. The marks are scanned by the specialized scanners in the examination department and the results are declared immediately.
- f) A copy of the result is uploaded on the University Website.

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**APPENDIX : IX**  
***STAGES OF EVALUATION***

## **STAGES OF EVALUATION**

1. Declaration of Schedule of Class Tests and End-term Examination (Given in the Academic Calendar)
2. Conduct of Class Test –I and II
3. Showing the answer scripts of the class tests to the students and if there is any grievance to any student, the same is entertained through rechecking/ re-totaling.
4. Displaying of marks secured by the students on the notice boards of the respective University Schools of Studies.
5. Approval of Panel of Examiners by the Board of Studies of the Schools
6. Declaration of Internal Assessment marks
7. Conduct of laboratory examinations
8. Conduct of End-term examinations of theory courses
9. Centralized evaluation
10. Declaration of Results
11. The University is in the process of finalization of rules/ procedures to allow the students to inspect their End-Term Answer Scripts of their End-Term Examination.

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**APPENDIX : X**

**REGULATION FOR INSPECTION OF ANSWER SHEETS - 2011**

## **REGULATION FOR INSPECTION OF ANSWER SHEETS - 2011**

- 1.** Title: The regulations made hereunder shall be called the Regulation for Inspection of Answer Sheets - 2011.
- 2.** Objectives: To provide the procedure for inspection of answer sheets of the examinations conducted by the University in a manner which is consistent with the practical feasibility, efficacy and integrity of the examination processes.
- 3.** Scope of the regulation: Disclosure of following documents shall come under the purview of this regulation.
  - a. Evaluated answer sheets including the OMR sheets of the Common Entrance Tests.
  - b. Such other documents as may be specified by the Registrar of the University.  
*[Names of such documents shall be specified by COE]*
- 4.** Definitions:
  - a. Evaluated answer sheets: Means the answer sheets written by the examinees of the University in their annual/semester end examinations or the filled in OMR sheets of the Common Entrance Tests of the University with respect to which results have been declared by the University.
  - b. Requested documents: Means any evaluated answer sheets or any other answer sheets notified under section 3(b).
- 5.** The evaluated answer sheets or any other requested document held in the custody of the University shall be available for inspection after the declaration of the concerned result, in the manner and to the extent as provided herein below.
  - a. Only the examinees of the University shall have the right to inspect their respective evaluated answer sheets and shall be allowed to only take note of the marks obtained in various questions and /or sub questions. In case any examinee is less than 18 years of age, one of the guardians as per University records shall be permitted to accompany the child to inspect the evaluated answer sheets.
  - b. All requests/applications for the inspection of the requested documents should be made within 15 days from the date of the declaration of result to the office of the Controller of Examinations accompanied by a demand draft/IPO in favour of Registrar, GGSIPU payable at Delhi for the fee as prescribed from time to time.

- c. On receipt of such applications for inspection a schedule of inspection for the examinee applicants shall be prepared and notified on the University website and informed to the concerned examinee applicants. The said schedule for inspection shall state the date, time, venue and contact person in respect of such inspection. The schedule of inspection should be notified within 25 days of the receipt of application so as to provide for inspection no later than 45 days from the receipt of application for inspection.
- d. The examinee applicant shall be required to present himself/herself for inspection of the answer sheets as per the notified schedule for inspection. If an examinee applicant fails to present himself/herself for inspection of the requested documents as per the schedule for inspection, it shall be construed that he/she has abandoned his/her right for inspection.
- e. A request for change in date and time for inspection, if any, would be permitted by the competent authority as and when an application to this effect is made by the concerned examinee applicant immediately after notification of the schedule of inspection, at least one week in advance of the scheduled inspection.
- f. Each of the applicant examinees shall be allowed not more than 20 minutes to inspect the requested documents and take note of the marks obtained thereof, if any.
- g. Pursuant to such inspection, if any factual error in the nature of totaling mistake or non evaluation of any question or part of question in the requested document or incorrect entry of marks in the result etc. is claimed by examinee applicant and a request for correction in the prescribed form accompanied by fee as prescribed from time to time is made within two working days from the date of inspection, appropriate measures to verify the claims and rectify the error including the revision of the result, if required shall be done.
- h. All inspections of the requested document shall be done in the presence and supervision of the deputed officer(s) or authorized staff(s), who shall ensure congenial and friendly conduct of inspection of the requested documents by the examinee-applicants besides assuring the safety, security and integrity of the said requested documents. Any act of tampering and such other acts prejudicial to the safety, security or integrity of the requested documents during the process of inspection shall be immediately reported to the competent authority for appropriate disciplinary action including forfeiture of right to inspection.

- i. A record of material details in respect of inspection of the requested documents done by the examinee applicants, including certificate of inspection shall be obtained from the said examinee applicants.
- j. All requested documents before being made available for inspection to the examinee applicants will be duly scrutinized, as per rechecking provisions of the University Ordinance as applicable by the University.
- k. Effective measures to hide the identity details of the concerned evaluators to ensure non disclosure of evaluators' details to the examinee applicants while inspecting the requested documents shall be duly undertaken.
- l. All applications for disclosure of requested documents received before or after the notification of this regulation shall be treated as the request for inspection of the respective requested documents. Further the applications received before the notification of this regulation shall forthwith be processed for inspection of requested documents without requiring the examinee applicants to deposit any more fee than what they have already deposited.
- m. In case of any ambiguity or such other provision requiring any clarification, the decision of the Controller of Examinations shall be final.

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**APPENDIX : XI**

***PROCEDURE FOR REGISTRATION &  
MONITORING OF RESEARCH SCHOLARS FOR  
PURSUING THEIR RESEARCH FOR THE AWARD  
OF THE DEGREE OF DOCTOR OF PHILOSOPHY***

## **PROCEDURE FOR REGISTRATION & MONITORING OF RESEARCH SCHOLARS FOR PURSUING THEIR RESEARCH FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY**

1. List of Recognized Supervisors as approved by the School Research Committee alongwith available slots with specialization areas is available in the different University Schools of Studies – both those functional at the University Campuses and those which are maintained by the University for providing leaderships role to the affiliated institutions; the consolidated information in regard to the recognized supervisions of the University is also available with the office of the Director (Research & Consultancy).
2. It is keeping these available slots alongwith specializations in view that the applications are invited from the eligible scholars interested in pursuing Ph.D. twice in an year – Once in June and Second in December through an advertisement published in the Newspapers having all-India circulation.
3. Eligible candidates are required to appear in a Research Aptitude Test (RAT) conducted by the University. This test includes multiple choice type questions on General Intelligence, numerical aptitude, english language, reasoning and general awareness. NET (JRF)/GATE qualified (with valid data) are exempted from appearing for RAT Examination
4. The Result of this Test alongwith marks secured is sent to the different Deans of the respective Schools of Studies. The SRC of the different Schools of Studies decides the cut off marks upto which applications are to be invited for personal interview's; this cut off is determined on the basis of available vacant slots and the specialization areas which could be offered by the different Schools of Studies.

5. An Interview Committee is constituted by the Dean which normally is comprised of the members of the SRC plus the proposed recognized supervisor/s.
6. Those candidates who are declared successful on the basis of cut off marks as approved by SRC, are interviewed by the Interview Committee of each Schools of Studies.
7. Result of successful candidates is declared and they are provisionally registered for Ph.D.
8. Thereafter each candidate is required to complete the Courseware Requirement which among other specialized subject/s include Course I and II on Research Methodology, Philosophy of Management/ Law, Research Ethics and Technical Writing, Intellectual Property Rights and Directed courses as prescribed by BOS of the School. The duration of courseware requirement is one academic session.
9. Those who successfully completes the courseware requirement prepares the synopsis on the subject they propose to pursue for their Doctoral Research. The prepared synopsis is presented in the meeting of the SRC.
10. After the approval of these synopsis by SRC, the case is put up in the meeting of the respective BOS for its formal approval. Once it is formally approved, the candidate is considered as formally registered Research Scholar of the School, from the date on which the BOS accorded its approval or, from any other date specified by the BOS.
11. The progress of each Research Scholar is monitored on a six-monthly basis by the SRC and the candidate is required to make a Pre-Ph.D. submission to the SRC before its formal submission to the University for its evaluation.
12. The rest of the process is governed by the different provisions of the Ordinance : 12 – Governing Programmes Leading to Degree of Doctor of Philosophy.

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**APPENDIX : XII**  
***ORDINANCE GOVERNING THE SPONSORED  
RESEARCH PROJECTS***

## **ORDINANCE GOVERNING THE SPONSORED RESEARCH PROJECTS**

In pursuance of the Sub Section 23 of Section 5 of Guru Gobind Singh Indraprastha Vishwavidyalaya Act, 1998, the Board of Management of the Guru Gobind Singh Indraprastha University, hereby makes the following Ordinance which would govern the carrying out of the Minor /Major Research Projects granted to the faculty members/s by external National / International research / funding agencies /institutions /industrial houses of the private sector like UGC, AICTE, DST, DBT, CSIR, ICSSR, ICAR, ICMR, DOE & Ministries Govt. of India or international organizations/ consultancy such as UNO, UNESCO, ADB, etc.

### **1. Short title and Commencement.**

- (i) This may be called the Guru Gobind Singh Indraprastha University Ordinance 32: Governing the Sponsored Research Projects carried out by any faculty members/s of the University School of Studies(s) with the help of financial assistance provided by any national / international external agency both from Governmental and private sector, and semi-Government institutions and NGOs.
- (ii) This Ordinance shall come into force with effect from the date it is approved by the Lt. Governor of Govt. of NCT of Delhi as Chancellor of the University.

### **2. Definitions.**

- (i) **'Sponsored Research Projects'** are those projects which are funded either fully or partially by external agencies, i.e. other than the University. External Agency /cies could either be from India or abroad including the International level institutions-regional or global-like World Bank, UNO, UNESCO, ADB. Thus, these may include national level agencies like AICTE, UGC, DST, DBT, CSIR, ICSSR, ICAR, ICMR, Ministries of Govt. of India, Industrial Houses of the private sector, etc. and international institutions like World Bank, UNO, UNESCO, ADB etc. The funding agency could be from the Govt. sector, semi-Government sector, private sector or even an NGO.

(ii) **'Sponsoring Agency'** is the external agency / group of agencies from which the financial support is received, either fully or partially, for carrying out the approved 'Research Project.'

(iii) **'Funding' / 'Financial Support' / 'Assistance'** covers the total funds granted for meeting both recurring and non-recurring expenditure inclusive of overhead/ contingent expenditure for the entire period of the Research Project.

(iv) **'Principal Investigator'** denotes the individual faculty member of any University School of Studies / Specialized Center for Study / Center of Excellence who submits the Research Project to the Sponsoring Agency and is one who is primarily accountable for the completion of the research project and thereafter submission of its duly audited accounts of the funds utilized to the sponsoring Agency, as also handing over the Capital Asset Register along with the Equipment either to the concerned University School / Centre of Excellence or to the University as may be decided by the Vice-Chancellor.

(v) **'Co-Investigator (s)' / 'Joint Investigator(s)'** are those other faculty members(s) who agree/s to assist the 'Principal Investigator.' In case the Principal Investigator leaves the University then any one, if there are more than one, of the 'Co-Investigator(s)/ Joint Investigator(s)' may be designated as Principal Investigator by the Sponsoring Agency on the recommendation of the Vice-Chancellor of the University. In case any Co-Investigator / Joint Investigator is appointed as Principal Investigator for the sponsored research project, then he shall be accountable for the completion of all tasks referred to in Sub-Clause 2(v) above.

(vi) All other personnel such as 'Research Fellow', 'Research Associate', 'Research Assistant', 'DEO' or any other personnel permitted by the sponsoring Agency, and appointed as per the qualifications & procedure prescribed by the Sponsoring Agency and in the absence of laid down qualifications & procedure of the sponsoring agency, as per the laid down procedure of the University, and whose salary + other allowances and perks are paid out of the approved/ sanctioned funding/ financial support, shall be termed as '**Staff**' of the Sponsored Research Project.

**3. Submission of Research Project:**

(i) All research projects, whether minor or major, shall be submitted to the external funding agency through the Office of the Registrar and it would be incumbent on the faculty/ies / University Schools (s) to submit minimum of three copies of the full research project. Of the three copies, the first one would be forwarded to the sponsoring agency, second one would be returned to the Principal Investigator / Principal Institutional Investigator & third one shall be forwarded, for purposes of maintaining centralized record, to the Officer-In-Charge for Research & Consultancy in the University.

The same research project could also be submitted to more than one sponsoring agency but then this fact must be clearly mentioned in the forwarding letter by the Principal Investigator. And, if it so happens that the same research project is approved by more than one funding agency, then it will be obligatory on the part of the Principal Investigator to accept it only from one sponsoring agency.

(ii) If the research project is considered fit for its funding by any of the sponsoring agency (in case it is submitted to more than one), then the Sanction Letter / Approval along with the funding shall be received, normally by the Registrar with a copy of to the Principal Investigator. It is in this sanction letter that the terms and conditions and the purposes for which funds are to be utilized are mentioned. The duration of the research project is also mentioned. While this approval / sanction letter shall be forwarded by the Registrar to the Officer-In-Charge for Research & Consultancy.

- (iii) Usually the funds are released by the sponsoring authority to the University through the Office of the Registrar, who would forward the same to the Controller of Finance who would will take necessary action for depositing the same with the University under the Head of Sponsored Research Projects which may again have several agency-wise-sub-Heads and in each sub-head there could be a further sub-sub head indicating the 'title of the project' and the 'name of the Principal Investigator.'

#### **4. Execution of Sponsored Research Projects.**

- (i) All the Sponsored Research Projects shall be executed strictly in accordance with the terms and conditions laid down in Sanction / Approval Letter as issued by the sponsoring agency.
- (ii) If, as part of terms and conditions of the Sanction Approval letter there in a provision for creation of the Project Committee then the same will be proposed by the Principal Investigator, and shall be got approved from the Vice-Chancellor through the Office of the concerned Dean; the composition shall, however, be as per the laid down conditions of the Sponsoring Agency, if any.
- (iii) The entire staff as approved by the Sponsoring Agency shall be appointed on contract basis and for the approved duration as per the qualifications prescribed in the terms and conditions of the Sanction / Approval letter received from the Sponsoring Agency and they shall be paid salary & other allowances plus perks as have been mentioned in the Sanction Letter.

In all such cases where the qualification, etc. have not been spelt out, then the University rules for the positions carrying equivalent cadre/s shall be followed by the Principal Investigator.

- (iv) In so far as the purchase of Capital equipment and non-Capital items, Consumables and other Contingency expenditure is concerned the Principal Investigator shall follow the laid down financial rules and procedure of the University.

If some funds are received under the Sub-Head of '**Overhead Expenses**' then 50% of the same may be retained by the University for meeting out its administrative expenses and the rest may be allowed to be utilized by the Principal Investigator on the approved heads of expenditures as per the financial rules and procedures of the University at a given point of time.

- (v) Once the Sponsored Research Project is over it shall be the responsibility of the Principal Investigator to submit the audited accounts and Utilization Certificate to the Sponsoring Agency and handover the Capital Asset Register along with the Capital Assets to the concerned University School/ Centre of Excellence or to the University as may be decided by the Vice-Chancellor.

- 5. Notwithstanding anything stated in this Ordinance, for any unforeseen issues arising, and not covered by this Ordinance, or in the event of differences of interpretation, the Vice-Chancellor shall take a decision. However, he may obtain the opinion/advice of a Committee consisting of any or all the Deans of the Schools. The decision of the Vice-Chancellor shall be final.

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## **APPENDIX: XIII**

### ***AMENDED REGULATION IN REGARD TO APPROVED RESEARCH CENTRE AND APPROVED SUPERVISOR***

**Amended Regulation in regard to Approved Research Centre and Approved Supervisor for pursuing Studies/Guiding Research Studies for Ph. D Under Clause 1 (i) (b) of the University's Ordinance Governing Programmes Leading to Degree of Doctor of Philosophy.**

**I. Approved Research Centre:**

1. In terms of Sub Clause (i) **(b)** of Clause (1) of the University's Ordinance Governing Programmes Leading to Degree of Doctor of Philosophy any institution that has been established and promoted by the Central/State Government/Registered Society/Trust for promoting the cause of higher education in any discipline can be considered by the Academic Council for designating them as "Approved Research Centre" for pursuing research leading to the award of the Degree of Doctor of Philosophy (Ph. D) of the Guru Gobind Singh Indraprastha University provided they meet the following conditions:
  - (i) **The Institution whether belonging to Central / State Government or has come to be promoted by a private registered society/ trust should at least be in existence with an uninterrupted and continual functional status of 15 years or more and should have attained a position of national or international importance.**
  - (ii) **The institution is involved either in conducting post-graduate programmes or promoting research with a proven track record of research carried out, demonstrated by research publications/articles/ monographs/reports etc. ; the minimum number of published research papers/ articles in standard referred national / international research journals shall in no case be less than 50 during the preceding period of five years to be counted from the date of the receipt of the request by the University.**
  - (iii) The institution must have adequate infrastructure in the shape of building, equipment, laboratories, library that may be considered necessary for carrying out research of the Doctoral level and it should provide an undertaking that the available facilities shall be made available to the Research Scholars that may be registered for Ph. D in the Guru Gobind Singh Indraprastha University on behalf of the institution.
  - (iv) The institution should also have regular and qualified staff to the satisfaction of the University.
  - (v) Of the teaching staff of the Institute those who meet the eligibility qualifications & experience shall be approved as "Supervisors" as per the procedure prescribed in **the PhD ordinance.**

- (vi) **The University shall not entertain any request for PhD work for which the University does not have SRC & BOS.**
- (vii) Each of the Approved Research Centre which is owned and managed by the self-financing institutions and managed by the self-financing institutions and promoted by the trust/society shall have to pay an initial application fee of Rs.30,000/- at the time of submission of application, thereafter an initial fee of Rs.5 Lakh in the year it is approved. Thereafter, they shall be paying a Continuation Fee of Rs.50,000/- per annum. The government institution will pay an initial fee of rs.30,000/- in the year to be approved thereafter a continuation fee of Rs.10,000/- per annum to be deposited in the University. Each Approved Research Centre/ Institution shall fill yearly proforma alongwith the details of projects undertaken, the research publications published by the Approved Research Centre/ Institutes in the academic year. The filled proforma and continuation fee shall reach to the University latest by 31<sup>st</sup> August of each year failing which the status of Approved Research Centre/ Institution stands withdrawn.
- (viii) **The Approved Research Centre cannot charge any extra fee from the Research Scholars other than those prescribed from time to time by GGSIP University i.e., registration, annual fee, course fee, and thesis submission fee.**
- (ix) **On the lines of GGSIP fellowships, the Approved Research Centres should also offer Junior Research and Post Doctoral Research Fellowships to research students with a view to generate warranted research environment at their Centres.**

2. Each of the Research Scholar, so registered at any of these Approved Centre shall be required to pay fee etc to the University separately as may be prescribed by the University from time to time.
- 3 All such Approved Research Centres shall function in accordance with the overall superintendence of the concerned School Research Committee and the Board of Studies, and the University's Ordinance Governing Programmes Leading to Degree of Doctor of Philosophy shall be applicable on all the Research Scholars of these Centres in toto.

## II. **Approved Supervisor:**

1. Each Approved Research Centre shall forward to the Vice-Chancellor Curriculum Vitae of all of its regularly recruited faculty members alongwith the photocopy of all of the credentials in support of their qualifications and experience as soon as the University accords such a status but in no case later than one month from the date such an information is given to the concerned institution. Further such a Centre shall forward, latest by May 31 of each year, the Curriculum Vitae and details of experience etc. of all the new faculty members who might have been appointed on a regular basis & also who left.

2. (a) The Vice-Chancellor shall get these CVs of the faculty examined and verified by a Committee comprising of the following:
  - a) Dean of the Concerned School.
  - b) One Member to be nominated by the Vice-Chancellor from the SRC/BOS of the Concerned School
  - c) One Professor, to be nominated by the Vice-Chancellor, from out of all the Professors of the University.
  - d) One expert, from outside the University Schools to be nominated by the Vice-Chancellor.
- (b) This Committee will examine and verify the qualifications and experience possessed by each faculty members vis-à-vis the eligibility conditions prescribed by the University for the different Cadres of teaching positions in the different disciplines as also with reference to Clause **8 (b)** (iii) and **8(b)(iv)** of the University's Ordinance Governing Programmes Leading to Degree of Doctor of Philosophy. In case of need, the Committee may also invite any of the faculty for seeking clarification/s or having discussions in respect of their qualifications & experience. Thereafter, the list of all those faculty members who are found meeting the qualifications as referred to above for supervising Ph. D Scholars may be prepared also specifying the number of Research Scholars they can supervise.
3. All the "Approved Supervisors" shall be entitled to supervise the Ph. D. Research Scholars registered for pursuing research at their respective Approved Research Centres as per the recommendations made by the Committee referred to above as per Clause 2. Each Approved Supervisor can supervise a maximum of Two research scholars at at time with the maximum ceiling of 18 in an Approved Research Centre. In case any supervisor leave the Approved Research Centre/ Institute after taking a Ph.D. scholar then it will be the responsibility of that Approved Research Centre/ Institute to provide the Supervisor.

**III.** Notwithstanding anything stated in this Regulation, for any unforeseen issues arising, and/or not covered by this Regulation, or in the event of differences of interpretation, the Vice-Chancellor may take a decision, after obtaining, if necessary, the opinion / advice of Committee consisting of some Deans of the Schools. The decision of the Vice-Chancellor shall be final."

XXXX  
XXX  
X

**APPENDIX: XIV**

***CAPABILITY PROFILE OF THE FACULTY OF  
THE UNIVERSITY SCHOOLS OF STUDIES***

**CAPABILITY PROFILE**  
**OF THE**  
**FACULTY**  
**OF**  
**DIFFERENT UNIVERSITY SCHOOLS OF STUDIES**



**GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY**  
**MAIN CAMPUS: SECTOR 16-C, DWARKA**  
**NEW DELHI-110075**

**2012**

**1. UNIVERSITY SCHOOL OF BASIC & APPLIED SCIENCES [USBAS]**

## **UNIVERSITY SCHOOL OF BASIC AND APPLIED SCIENCES (USBAS)**

The School of basic and applied sciences at G.G.S Indraprastha University is well equipped to carry out both teaching and research through its various departments namely Chemistry, Physics, Mathematics, Botany and Zoology. The school endeavors to impart education of fundamentals so that students can well appreciate the intricacies of day to day problems and attempt to solve applied problems.

On one hand Basic Sciences contribute to the foundations of numerous professions and industries and on the other hand one sees the urge to create new scientific knowledge driven by intellectual curiosity besides the desire to have reliable information's for application.

The school faculty is in constant touch with various experts in the relevant field, is open to and willing to experiment with latest ideas in teaching.

The School has developed syllabi for various core courses that are being taught to the students of the university enrolled in its various schools like, Information Technology, Chemical Technology, Bio-Technology, Environment Management and Software Engineering. These syllabi will also be followed up by the faculty of the various self- financing colleges that have been affiliated to the University.

The well equipped laboratories of the school are being used by university students to carry out experiments to verify some fundamental concepts being taught to them. These laboratories are also expected to be a model for the affiliated colleges.

Through the accomplishment of this school, an attempt will be made for contributions to improving agricultural production, controlling the spread of diseases, increasing the efficiency of energy productions and reducing environment pollution.

### **Professors**

- Dr. A. K. Narula
- Dr. (Mrs.) Saroj Aggarwal
- Dr. Avinash C. Sharma
- Dr. Vinod Kumar

### **Associate Professors**

- Dr. (Mrs.) Shruti Aggarwal
- Dr. (Mrs.) Anu Venugopalan
- Dr. Anindya Datta

### **Reader**

- Dr. (Mrs.) Rashmi Bhardwaj
- Dr. (Mrs.) Vaishali Singh
- Dr. Tapan Kr. Jain

### **Assistant Professors**

- Dr. (Mrs.) Anita Mohan
- Dr. (Mrs.) Abha Aggarwal
- Dr. Gulshan Kumar
- Dr. Arif Ali Khan
- Dr. (Ms.) Anjana

- Dr. (Ms.) Kriti Batra
- Dr. (Ms.) Archana Khurana
- Dr. S. Neeleshwar
- Dr. Yogesh Kr. Tyagi
- Dr. Ram Shankar Gupta
- Dr. (Ms.) Leena Khanna
- Dr. (Ms.) Shipra Mittal Gupta
- Dr. Rajesh Kumar
- Dr. Satyabrata Mohapatra
- Sh. Mukesh Kumar

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## **PROFESSORS**

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### **Vinod Kumar**

Dean and Professor  
B.Sc. (Hons), M.Sc, Ph. D.

### **Academic & Research Interests:**

- Accelerator Driven subcritical systems.
- Radiation Damage in materials
- Relativistic Heavy Ion Collisions.

**Professional Vision:** Developments related to Accelerator Physics and advance. Developments based on the Physics in area of Material Science.

**Action Plan:** A mega Project was submitted to DAE (BRNS) from the University and review committee is visiting to settle down various developmental questions on 27/08/11.

### **Areas of Research, Development and Consultancy:**

- Physical effects & their simulation
- Accelerator based Science and Applications.
- Monte carlo simulation for different kinds of applications
- Application of accelerators.
- USBAS can take up proposals from colleges & other researchers including industry for making use of XRD & AFM and may other recently developed facilities following university rules.

### **Future Research Plans:**

- Development related to advance techniques of characterisation of materials
- Study of radiation damage in a scenario of new radiation sources.
- Monte Carlo Simulation of related Physical Effects.

**Prof. A.K. Narula**

M.Phil.,Ph.D.

**Academic & Research Interests: Chemistry** Organometallic Chemistry, Catalytic Chemistry, Lowervalent Chemistry, Alkoxide Chemistry, Coordination Chemistry, Epoxy Resins, Value Added Products,

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]**

Principal Investigator for successfully completed **7 projects** from various funding

Agencies (UGC, CSIR & DST).

**Professional vision & Action Plans:**

- To conduct research and engage in scholarship and to publish their findings.
- Seek research funds in support of their research.
- The requirement to undertake research is a career expectation and over time will be balanced as appropriate with the other obligatory responsibilities of the University.
- To work towards the establishment of Centre of Excellence in Chemical Sciences.
- To establish a centre of excellence in Research in Chemical Sciences to raise the research profile and to focus strengths in areas where there is a concentration of research excellence, including areas of applied external research funding. As such this may help to the areas of research excellence and build the research reputation.
- It will also serve as vehicles for engaging with other research institutions and industry and facilitate interdisciplinary and multidisciplinary relationships

**Areas of Research, Development and Consultancy:**

- Consultancy in chemistry actively involving in product development, experimental, chemistry, inorganic chemistry, oxidation-reduction chemistry and phosphorus chemistry; process improvement, optimization and troubleshooting;
- Training Programme can be offered in Analytical Chemistry course and Organometallic Chemistry course.
- Project can be undertaken related to synthetic chemistry

I am a synthetic chemist focusing on following areas of research in chemistry: Alkoxide chemistry, organometallic chemistry, Lower-valent metal chemistry, Catalytic chemistry, modified epoxy resins and value added products. Through out my Doctoral Programme career, I was working on Alkoxide Chemistry, a precursor for synthesis of purest form of metal oxides used as superconductivity materials.

After my doctoral degree, I moved to University of Nice France, as a post-doctoral fellow associated with Professor Jean G.Riess. Under the guidance of Jean G.Riess, I had a great flexibility to explore different subjects and significantly expanded my Research horizon. After coming back to India, I started working on lower valent metal chemistry and soon my research pursuit followed Polymer Chemistry. During the past four years, I started working on value added products based on products prepared by mixing the powder of bark of tree and Poly Vinyl Chloride(PVC) and bagasse with Poly propylene. I believe that most of my research accomplishments up to date set the scope of, and open directions for, my research in the future. In addition, I plan to expand my research in the field of value added products with an emphasis on preparation and use of nano materials.

**Future Consultancy Plans:** My future consultancy plan will be Chemical Consulting Services that will be started as a part time consulting activity, primarily for consulting to Pharmaceutical chemistry, environmental engineering firm and providing solutions for green chemistry.

**Dr. Avinash Sharma**

Professor & Director Academic Affairs  
M.Sc. (HS) Ph.D

**Academic & Research Interests:** Broad area : Theoretical Particle Physics: QCD, Neutrino Physics, Quantum Computation.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken]:** Major R & D Project with industry collaboration & funded by DST.

**Areas of Research, Development and Consultancy:**

- Software development (Biometric & smartcard based security & identification) nanoscience & Technology (thermoelectric devices)
- High Energy Physics, Nano Science & Technology, Neutrino physics, Biometric & Smart Card Security System.

**Future Research Plans:** Continue research work in area of particle physics.

**Future Consultancy Plans:** Undertake consultancy project in "Smart Card & Biometric based Security & Identification system".

**Prof. (Mrs.) Saroj Aggarwal**

M.Sc, Ph.D

Dr. Saroj Aggarwal did her graduation from Agra University in first division & later obtained PG Degree in Physical Chemistry from Kanpur University, again in first division. She served Dayanand PG College at Kanpur for 2 years & then shifted to Kurekshetra University to start work for Ph.D. Degree as C.S.I.R. Fellow & then as U.G.C. Research Fellow. She was awarded Ph.D. Degree in 1976 from Kurukshetra University on the topic "Phase Transitions". After working for about one & a half year as a Post Doctoral Fellow of C.S.I.R. & joined as Lecturer in Kurukshetra University in 1978.

**Additional Information:** She has the experience of organising seminars & has published many research papers in a number of reputed journal such as Journal of Indian Chemical Society Journal of Pune & Applied Physics, Indian Journal of Chemistry, Proceedings of National Academy of Sciences, Proceedings of National system Conference. She continues to work in the broad area of characterisation of Polymers & she is guiding research in this subject. She became reader in 1991 & joined this University in May 1999. She is a Fellow of Indian Chemical Society.

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**ASSOCIATE PROFESSORS**

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**Dr. Anu Venugopalan**

Ph.D

**Academic & Research Interests:** Theoretical Physics. Teaching and Research, Quantum Mechanics, Nanoscale Physcis, Quantum Information, Computational Physics.

**Professional Vision:** To strive for excellence in teaching and do quality research in interesting problems/areas.

**Action Plan:** To continue teaching, learning, researching and writing.

**Areas of Research, Development and Consultancy:**

- Computational Physics (Matlab Based), Quantum Information, Nanoscience Foundation of Quantum Mechanics.
- Theoretical Physics. Teaching and Research, Quantum Mechanics, Nanoscale Physcis, Quantum Information, Computational Physics

**Future Research Plans:** To develop further problems and work on them in the current areas of interest/ expertise.

**Dr. Anndya Datta**

M.Sc, Ph. D.

**Academic & Research Interests:** Nanotechnology, Two dimensional systems, Multiferroics, Transport in Nanocomposite.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken].:**

Co-PI: Indo-Russian Project: Funding Agency: DST: "Investigation on synthesis and properties of magnetic nanostructures and nano composites by electromagnetic methods" carried out at IACS, Kolkata.

**Professional Vision:** To create an impact with nanotechnology which may have some influence on mass.

**Action Plan:** To conduct research and training in nanotechnology in the field of sensor and energy. The materials aspect can be taken up at first stage.

**Areas of Research, Development and Consultancy:** In India, Nanotechnology is slowly entering the chemical Industry. Activated surface and interfaces can generate different functionality. Point and Ink may be one are area to look at. To create an impact with nanotechnology which may have some influence on mass.

**Future Research Plans:** In two dimensional nanosystem, the recent excitement is in grapheme related field. We will try to establish different ways to producing grapheme; different characteristics will be carried over to find out fictionalization properties of the said surface.

**Future Consultancy Plans:** To create an impact with nanotechnology which may have some influence on mass.

**Dr. Rashmi Bhardwaj**

Ph.D. (Mathematics), M.Sc. (Mathematics)

**Academic & Research Interests:** Space Dynamics, Celestial Mechanics, Integral Equations & Boundary Value Problem(s), Non - linear Dynamics, Chaos, Fractal(s), Wavelet(s), Ordinary & Partial Differential Equations, Biomathematics, Financial Mathematics, Applied Mathematics, Numerical Techniques, Statistics & Stochastic Processes, Bio-Informatics, Bio-Statistics, Nano-photonics, Pharmo-kinetics, Atmospheric & Environmental Sciences.

**Industry – Society Interface [Projects/ Consultancy/ Training Programmes already undertaken]:**

- Lectures on "Numerical Computing" for Advances Level Course in Computer Science conducted by "IETE" Lodhi Road, New Delhi.
- "Visiting Associate" of Inter-University Centre for Astronomy and Astrophysics (IUCAA)
- "Career Award for Young Teachers" awarded by All India Council for Technical Education.

- Presentation on Solar Energy- A Paradigm of Environmental Protection, Conservation of Energy, Paper Recycling Industry etc. with a view to protect & conserve Environment.
- Lectures on "Research Methodology" for Ph.D. Scholars.
- Invited talks in Seminars/ Symposia/ Conferences.

**Professional Vision:** Excellence in Teaching, Research and Knowledge Transfer.

**Action Plan:** Action plans include the following, subject to the availability of administrative support, budget and manpower:

- Setting up state of the art research & teaching lab in Mathematics.
- Preparing structured Lectures/ Presentations.
- Designing the modern techniques/ mathematical models & innovations in the context of real world problem(s).
- Organizing Seminars/ Symposia/ Conferences.
- Guiding & Supervising Ph.D. Scholars.
- Publishing Research Papers/ Articles/ Books.

**Areas of Research, Development and Consultancy:**

- Consultancies can be offered for Mathematical model.
- Training Programmes on Pharmo Kinetics, Bio Mathematics, Financial Mathematics, Atmospheric & Environmental Sciences can be offered.
- Projects on Space Dynamics, Meteorological Modeling, Applied Mathematics etc. can be undertaken.

**Future Research Plans:** The future research plans will include Atmospheric Analysis, Satellite's motion, Meteorological Modeling etc.

**Future Consultancy Plans:** The possibilities of consultancy plans can be explored from Organizations in Public & Private Sectors for developing the Mathematical Models. Corporate/ University communication in this regard is required to play pro active role.

**Dr. Vaishali Singh**

M.Sc, Ph.D

**Academic & Research Interests:** Physical Chemistry and Nanosciences, "My research is oriented towards synthesis & characterization of nanomaterials'.

**Professional Vision:** My vision is to see GGSIPU develop as a centre of excellence in the field of Nano Science & Technology.

**Action Plan:**

- To help in developing state of art laboratory for the DST-funded M.Tech. Nano Science & Tech.
- To cohesively work with my fellow faculties at USBAS to design and introduce new experiments in the course and improve the contents form time to time.
- To Carryout meaningful research in the fascinating field of NanoScience.

**Future Research Plans:** Towards the applications of Nanomaterials

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## ASSISTANT PROFESSORS

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### Dr. Arif Ali Khan

Ph. D. (Chemistry)

**Academic & Research Interests :** Teaching and Research in Organometallics, organophosphorus chemistry, Coordination chemistry, Organic Synthesis, bio diesels Synthesis.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken].:**

- Research Projects 1. CSIR-New Delhi – 2007-2010
- Academic Exchange – DFG, Germany with Univ of Bonn, Germany (2009-2010)
- Orientation Program – 2006 at JMI New Delhi
- Post Doctoral Training – TU-BS, Germany (2001-2003).

**Professional Vision:** To acquire excellence in Academic and Research methodologies.

**Action Plan:** Work hard in a well organised way to achieve the target.

**Areas of Research, Development and Consultancy:**

- Synthesis-organic/inorganic/organometallics/biodiesels/ phosphine catalysts/coordination compounds.
- Syntheses of Air-sensitive compounds/organophosphorus compounds/phosphine catalyst.
- Biodiesels/organometallics/Phosphine catalysts/Organo-Phosphorus compounds Coordination Chemistry and metal in catalysed organic synthesis.

**Future Research Plans:** Synthesis of Novel/optically active phosphine complexes for a symmetric organic synthesis. Development of new methods for the production of Biodiesels.

**Future Consultancy Plans:** Ready to accept any consultancy projects in Synthetic chemistry, Organic, Inorganic & Biodiesels, Organometallics, Phosphine Catalysts.

### Dr. Anjana

Ph.D from JNU, New Delhi, Post Doctoral from University of Monitoba, Canada

**Academic & Research Interests:** Theoretical Investigations of Electronic structure and optical & Transport properties of semiconductor based nanostructure, Organic molecular based semiconductor, Organic Polymers, Thermoelectric materials.

**Professional Vision:** Teaching: To improve the academic excellence by making the students do simulations on their syllabus content using new simulation techniques & Softwares.

**Research:** To use, for theoretical investigations, new simulation techniques & Softwares for the designing & Simulations of nanodevices such as LEO's MOSFETS, Thermoelectric device.

**Action Plan:** To take research projects for the above mentioned research activities from various funding agencies such as DST, UGC/AICTE.

- To collaborate with the experimental groups & various R & D departments of the industry for discussion & verification of the theoretical investigation
- To attend national/international Conferences for the exchange of ideas.

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered on the designing & simulations of nanodevices such as MOSFET; LED's, Thermoelectric devices.
- Training/Workshops can be offered to the graduate, post graduate & research students as well as to the people from various industrial organisations on the designing & simulation of the nanodevice using MATLAB & other relevant software.
- In future, the projects would be undertaken in the designing of the nanodevices such as LED's MOSFET's thermoelectric devices and investigations on increasing the efficiency of these devices.

**Future Research Plans:** To enhance and broaden the research activities in the designing & simulation of nanodevices such as LED's, MOSFET's, thermoelectric devices. To procure the research projects for the above and collaborate with the experimental groups & R & D departments of the industry.

**Future Consultancy Plans:** Future Consultancy & Collaborative work can be done with the R & D departments of the industry based on nanodevices such as LED, MOSFET's & thermoelectice devices.

**Dr. Kriti Batra**

Ph.D Physics Delhi University JRF-NET (CSIR)

**Academic & Research Interests:** Raman Scattering, Spectroscopy, Surface Enhanced Raman Scattering, Atomic-Molecular Physices, Nanomaterial Synthesis, Embedded Systems, Microcontrollers programming-Interfacing Matlab Programming etc.

**Professional Vision:** To set up a research lab both for theoretical simulations and experimental techniques in the field of surface enhanced. Raman Spectroscopy & study of surface Plasmon resonance.

**Action Plan:** To take collaborative projects with IUAC/DST/ UGC to implement the above research. To publish research papers in the field of nanomaterial synthesis, surface Plasmon resonance, Effect of radiation etc. Requisition of space for setting the research lab.

**Areas of Research, Development and Consultancy:**

- Field Surface Enhanced Raman Spectroscopy
- Designing with PIC, AVR etc Microcontrollers, Surface & Tip Enhanced Raman Spectroscopy, Study of Instrumentation Techniques using SEM, TEM, PFM, XRD, UV-Vis etc.

**Future Research Plans:** To enhance and broaden the research activities in the designing & simulation of nanodevices such as LED's, MOSFET's, thermoelectric devices. To procure the research projects for the above and collaborate with the experimental groups & R & D departments of the industry.

**Future Consultancy Plans:** To develop a centre of excellence in the field of Raman Spectroscopy which can provide consultancy to outside agencies like forensic departments- for detection of fingerprints, Archaeological departments (analysis of heritage structures), Biomedical Departments (Cancer Cell detection), Geology departmental (Soil detection) etc and so many other applications.

**Dr. Archana Khurana**

Ph.D (Mathematics), University of Delhi, JRF-NET (CSIR) Qualified

**Academic & Research Interests:** Optimization Methods; Linear and Non-linear Transportation Problems, Integer Programming Problems, Flow-shop and Job-shop scheduling Problems.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Sanctioned a Major Research Project entitled "On some aspects of Transportation Problem" from University Grant Commission (UGC) for 3 years in 2011.

Reviewer of the International Journal-Discrete Mathematics, Elsevier Publications. Attended an Orientation Programme from Academic Staff College, Jamia Millia Islamia, Delhi in 2009

**Professional Vision:** To provide the best quality education to students and do excellent research so that my passion for teaching and research gets nurtured.

**Action Plan:** Would keep on writing good research articles, encourage students about the applications of mathematics in engineering and shall provide consultancy to Industries in the field of optimization.

**Areas of Research, Development and Consultancy:** Currently I am working on Linear and Non-linear Transportation Problems so I can offer consultancy to various companies in the field of Logistics and supply chain Management

- Integer Programming Problems and its applications in scheduling problems
- Linear and Non-Linear Transportation Problems.

The application of operations Research in airline planning processes has resulted in significant benefit to the industry through cost reduction, revenue improvements, operational efficiencies, and automated tools. Airline scheduling includes determining the concurrent flow of passengers, cargo, aircraft and flight crews through a space-time network, performing aircraft maintenance, and developing ground based as gates. Thus in future there can be a project on Airline Optimization.

**Future Research Plan:**

- To work on Non-linear Transportation and Transshipment Problems
- To develop cutting planes for integer programming problems.
- To study set covering problem and fixed charge problems.

**Future Consultancy Plans:** Currently I am working on transportation problems and Integer Programming Problems which has various Industrial applications in warehouse location problems, fixed problems, Planning and Scheduling problems. I shall plan to provide consultancy to the industries on the same. I am also a Reviewer of the International Journal Discrete Mathematics Journal, Elsevier Publication and would like to be the Reviewer of other International Journals as well.

**Dr. S Neeleshwar**

M.Sc, Ph.D

- **Academic & Research Interests :**  
Nanomaterials fabrication a characterization
- Development of Thermoelectric Materials
- Magnetic materials & Superconductors.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Planning explore the possibility of Energy materials tie up with Industry.

**Professional Vision:** Development Room temperature thermoelectric device.

**Action Plan:** Setup Research Lab as per needs.

**Areas of Research, Development and Consultancy:**

- Fabrication Nanomaterials, Thermoelecterication
- Magnetic Materials, Super conductive.
- Synthesis & Characterization of Nano Materials
- Material Science/Nano Material/ Thermoelectic Moderia.

**Future Research Plans:**

- Investigation of New materials for Energy Conversion.
- Develop the thermopower as well as Resistive for measurement for nano materials.

**Future Consultancy Plans:** We would be able to develop successfully the new materials for Industrial needs.

**Dr. Yogesh K Tyagi**

M.Sc., Ph. D. (Biochemistry/Chemistry)

**Academic & Research Interests:** Teaching and Research in the area of Biochemistry & Medicinal Chemistry.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken].:**

- Pharmaceutical Industry
- Synthesis of novel molecules and Instrumentation
- Bioorganic Chemistry & Medicinal Chemistry.

**Professional Vision:**

- To develop creative, innovative and motivating environment of knowledge to the students.
- To understating the mechanism of different bio molecules against different diseases. This will be helpful in finding a novel drug candidate against different deadly diseases.

**Action Plan:**

- Effective transfer of update knowledge and values to the students
- To design and synthesize novel molecules to target the various biological activities.

**Areas of Research, Development and Consultancy:**

- Synthesis, characterization and applications of nanomaterials.
- Use of Instruments like, IR, UV, X-RD etc.
- Synthesis & Characterization of nanomaterials, Photo chemistry of Nanoparticles, Photocatalysis

**Future Research Plans:** To design and synthesize novel molecules to target the different biological activities; Studies on the photochemical and microbial degradation of two selected pesticide; Decolonization & degradation study of azo dyes using hybrid chemico-biological methods.

**Dr. Ram Shankar Gupta**

M.Sc., Ph. D.

**Academic & Research Interests:** -Differential Geometry, Geometry of sub manifolds and Geometry of hyper surfaces of Riemannian and Semi-Riemannian manifolds. 10 yrs of research experience. 21 Research papers published in International journals of repute, 4 research papers are accepted for publication and some more research articles has been communicated for publications. One major research project sponsored by UGC and also guiding a research scholar for Ph.D degree.

In addition to my research interests, I am interested in teaching mathematics at both graduate and post graduate levels. I have more than 8 years experience of teaching.

My experience, so far in teaching and research has been very positive and satisfactory, and I would love to continue having such interactions with students.

**Professional Vision:** My vision is to produce good research scholars in the field of Differential Geometry.

**Action Plan:** I have one major research project sponsored by UGC and also guiding a research scholar for Ph.D.

**Areas of Research, Development and Consultancy:**

- Synthesis, characterization and applications of nanomaterials.
- Use of Instruments like, IR, UV, X-RD etc.
- Synthesis & Characterization of nanomaterials, Photo chemistry of Nanoparticles, Photocatalysis

**Future Research Plans:** Research Projects in the field of Differential Geometry and to supervise research scholars for Ph.D.

**Dr. Leena Khanna**

Ph. D.Chemistry, M.Sc. Organic Chemistry (Gold Medalist), B.Sc. (H) Chemistry

**Academic & Research Interests:** Can teach Organic Chemistry of Advance Level, Synthesised long chain Polyphenolic lipids, Fluorinate Heterocycles & isolated no. of Natural Products from the plant extracts.

**Professional Vision:** Nature is a rich source of Bioactive & Pharmocologically important compounds and we can isolate & synthesis them in bulk to spread their economical medicinal use.

**Action Plan:** Isolation & Synthesis of Natural Products form Plant Extracts. Synthesis of some active naturally occurring Polyphenolic Lipids.

**Areas of Research, Development and Consultancy:**

- Short and multistep synthesis of some heterocyclic compounds, its purification & characterisation using various spectrochemical techniques.
- Use of Instrumental & spectrochemical Methods like IR, UV, NMR, Mass etc. to identify the Organic Compound.
- Synthesis of some naturally occurring biologically important Resorcinolic Lipids
- Synthesis of some new Benzimidazoles derivatives.

**Future Research Plans:** To Synthesis some useful Natural Products and Heterocyclic compounds in the Lab by New Economical & Efficient Method.

**Future Consultancy Plans:** Prepared Research Proposals for DST.

**Dr. Shipra Mittal Gupta**

Ph. D.

**Academic & Research Interests :**

- Research on synthesis of nanoparticles by wet chemical method, their characterization & photochemistry.

-Teaching nanoscience/Chemistry at both post graduate & graduate levels.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken].:**

1. DST Sponsered Research Project titled "Synthesis & characterization of cupled nanoparticles of photodegradation of pesticides.
2. Orientation Program 2010 at OR-63f, Delhi Univeristy
3. Post Deoctoral Training at AIST Tsukuba, Japan (2004-2006)

**Professional Vision:** To acquire excellence in Academic and research and to produce good research scholars in the area.

**Action Plan:** Working on a major research project sponsored by DST in well organized and efficient method.

**Areas of Research, Development and Consultancy:**

- Synthesis, characterization and applications of nanomaterials.
- Use of Instruments like, IR, UV, X-RD etc.
- Synthesis & Characterization of nanomaterials, Photo chemistry of Nanoparticles, Photocatalysis

**Future Research Plans:**

Interested in working on more research projects in the field of nanoscience & supervise research scholars for Ph.D.

**Future Consultancy Plans-** Ready to accept any consultancy project in the field related to synthesis or characterization of nanomaterials

**Dr. Satyabrata Mohapatra**

Ph. D. Physics

**Academic & Research Interests:** Developing & Teaching Nanoscience & Technology & Engineering Physics curriculum. Synthesis of functional nanomaterials and Plasmonic nanocomposites for optical & biomedical application.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken].:**

- DST Young Scientist Project 2009-12
- IUAC UFUP Project (2009-2012)
- IUAC UFR Project (2010 -2013)

**Professional Vision:** Setting up of world class Nanoscience Centre & strengthening the ongoing research activities and student training Establishing low energy cluster beam facility.

**Action Plan:**

- Comprehensive plan for strengthening NST program is being initiated
- International collaborative projects with NIMS, Japan & Mexican groups already submitted for finalizations.

**Areas of Research, Development and Consultancy:** Nanoscience & Nano Technology

**Future Research Plans:** Establishing low energy cluster in a beam facility and Ion beam engineering of multifunctional plasmonic nanomaterials for biomedical applicators. Setting up of plasmonics Research Facilities at GGSIPU.

**Future Consultancy Plans:** Consultancy for Nanoscience & Solar photovoltaics based industries.

**Mukesh Kumar**

M.Sc. Physics, M.tech, Laser Science and Applications

**Academic & Research Interests:** I have interest in Free Electron Laser (FEL) and its application in medical diagnostics.

**Future Research Plans:** Designing of Free Electron Laser for X-Ray Generation (Wavelength Source)

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XXX  
X

## **2. UNIVERSITY SCHOOL OF BIOTECHNOLOGY [USBT]**

## **UNIVERSITY SCHOOL OF BIOTECHNOLOGY (USBT)**

### **OUR MISSION**

To generate world-class manpower and knowledge-base for biotechnology industry, research and education based on national values, social awareness and conscience.

### **ABOUT USBT**

USBT was founded in 1999 with the mission of generating world-class manpower and knowledge-base for biotechnology education, research and development based on national values, social awareness and conscience. The vision of USBT has been to impart learner-oriented education, research, demonstration and dissemination of knowledge to the needs of a sustainable society.

### **PROGRAMMES OFFERED**

USBT began with a five and a half year integrated B. Tech/M. Tech course of 11 semesters and Ph.D programme. From the academic session 2004-2005 onwards, the M. Tech programme has been delinked from B.Tech programme and the two programmes are being offered under dual degree programme. Admission is strictly through an All India Common Entrance Test. Students with 10+2 in physics, chemistry, biology or biotechnology are eligible. Overwhelming demand of Biotechnology professionals, led to an increase in seats from 30 to 45 in the academic session 2006-07. The applicant's intake ratio has been highly competitive, being 130 to 1 for the academic session 2007-08.

### **INFRASTRUCTURE**

USBT is equipped with advanced equipments costing over Rs. 5 crores and has been ranked first in terms of library and infrastructure, and an overall seventh in India by Cyber Media Research (publishers of biotech magazine Biospectrum). USBT is the youngest among all Top Ten Biotech Schools. 2005 survey, it was ranked third in the country for B.Tech (Biotechnology) education. The USBT has established state of the art laboratories for teaching and research in different areas of biotechnology viz. plant tissue culture, animal tissue culture, genomics, proteomics, microbial technology and bioinformatics. USBT recently, acquired automatic DNA sequencer and FT-NIR facility also.

From August 1<sup>st</sup> 2010, we are going to shift to new state of the art labs at the Dwarka campus, where we would strive to ensure that new labs are GLP compliant in order to attract industrial funding. Considering the demands of training and research in the post genomic era, we plan to actively pursue projects and collaborative programs in plant/animal/microbial functional genomics, stem cell biology and industrial biotechnology. Additional facilities are also being planned such as animal house, green house, radioisotope facility, departmental library, bioinformatics lab, nano-biomaterials, tissue engineering, synthetic biology, and pharmaceutical/nutraceutical teaching and research facility.

## **RESEARCH PROGRAMME**

Advanced contemporary research is an important activity of the USBT that has led to 200 research papers in last seven years - of which more than 100 are in international journals. Presently, there are 25 students pursuing Ph.D under the guidance of faculty members. Our research areas span various disciplines of biotechnology like plant biotechnology, structural and functional genomics and proteomics, microbial & plant based bioactives, biotic and abiotic stress signaling, development and metabolic regulation, animal biotechnology, immunology and molecular biology of human pathogens and disease, microbial biotechnology, food biotechnology, pharmaceutical biotechnology, biosensors, & bioinformatics, etc.

## **STUDENTS' PROFILE**

Our students' profile reflects its national character in terms of various regions, communities and gender. After completing B.Tech/M.Tech course a majority of students opt for PhD in India (IISc, NCBS, CCMB, JNCASR, NCCS, ICGEB, IGIB, NII, IITD, IITM, IITK, IITB, FMS, IIM Ahmedabad & IIM Luknow) or abroad in Universities like Cambridge, Göttingen, Tufts, Penn State, Ohio State, Utah, Iowa State, Chicago, Massachusetts, Texas A & M, Cincinnati, Nebraska, and Max-Planck Institute, Frankfurt. Some successfully combine this course with MBA programme. Students have also been regularly offered jobs by industrial organizations such as Reliance, Panacea Biotech, TCGA, BCIL, Jubilant Organosys, and E-value serve. Students of the USBT have proven their academic acumen by successfully qualifying in many national (UGC/CSIR/- NET, ICMR, GATE, CAT, IIFT, IMI, ICFAI, XIMB) and international (GRE, TOEFL, IELTS, GMAT) competitive examinations, often with top scores and ranks.

## **FACULTY**

USBT boasts of an excellent faculty profile. Faculty Members of the USBT are Ph.D holders from reputed institutions in India and abroad and represent diverse areas such as Genomics, Bioinformatics, Agricultural Biotechnology, Biomedical Research, Food Biotechnology, Pharmaceutical Biotechnology, Environmental Biotechnology and Industrial Biotechnology, as well as IPR, Biosafety, Bioethics Commercial & Management of Biotechnology issues, as evidenced by their publications, conference presentations, awards, and extramural research grants. Some of them are Fellows of National Academies/Societies/Professional bodies. Faculty members have availed top research Fellowships like Alexander von Humboldt, JSPS, INSA-DFG, INSA-Royal Society, BOYSCAST, UNESCO Biotechnology Award, etc. to work in world-renowned institutes in Germany, Japan, UK and USA. The faculty consciously orients and updates themselves by attending refresher/orientation courses and participating in national/international conferences/symposia/workshops. Two faculty members have been conferred with the Best Teacher Award of the University for consecutive years. So far the faculty has attracted extramural funding of Rs. 3.71 crore in the form of sponsored research projects from various granting agencies like DRDO, CSIR, DST, AICTE, UGC and MOEF.

## **Objectives**

- ◆ To attract quality faculty and build in-house competencies in all aspects of biotechnology.
- ◆ To focus our teaching and research investments strategically around national economic goals.
- ◆ To empower the students with the latest tools, techniques and awareness in biotechnology.
- ◆ To facilitate comprehensive learning combining the scientific, technological and social aspects. To seek new models of collaboration with other institutes, universities and industries.

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## **PROFESSORS**

- Dr. K. Kannan
- Dr. Prakash Chand Sharma
- Dr. Rajinder Kumar Gupta
- Dr. Rakha Hari Das

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## **ASSOCIATE PROFESSORS**

- Dr. Nandula Raghuram
- Dr. Kamal K. Aggarwal
- Dr. (Mrs.) Meenu Kapoor
- Dr. (Mrs.) Promila Gupta

### **Assistant Professors**

- Dr. Suresh Kumar
- Dr. (Ms.) Nimisha Sharma
- Dr. Monika Gandhi nee Katyal
- Dr. Ram Singh Purty
- Dr. (Ms.) Rinu Sharma
- Sh. Sayan Chatterjee

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## **PROFESSORS**

### **Rajinder K. Gupta Professor & Dean**

Ph.D., Microbiology/Biotechnology, 1992, University of Idaho, ID, USA  
Ph.D., Organic Chemistry of Natural Products, 1978, University of Delhi.  
M.Sc, Chemistry - Organic major, 1974, I Div, University of Delhi.  
B.Sc. (Honors), Chemistry, 1972, I Div, University of Delhi.

### **Distinguished International Award**

Alexander von Humboldt Fellow (Germany): 1979-1982

### **Business Qualifications:**

1. International Business at the University of Idaho.
2. Business Law at the University of Idaho.
3. "Developing Entrepreneurship for Small Industry-DESI", June-July 1994, by Konrad Adenauer Foundation (Germany) & PHD Chamber of Commerce & Industry.
4. "Managing Biotechnology in a Time of Transition" Oct-Nov. 2000 at Kuala Lumpur, Malaysia, by ISNAR (Netherlands), ODA (Japan), SADC (Switzerland) & MARDI (Malaysia).

### **Academic and Research interests**

My research interests are "Phytomedicines", "Antibiotics from Rare *Actinomycetes*", *Actinomycetes* as biocontrol agents, biotransformations, bioactive molecules from microorganisms & plants (natural products) and biosensor. Value addition of agricultural food products, edible coatings, etc.

**Industry- society Interface** [Projects/Consultancy/Training Programmes already undertaken]

- Completed Research Projects worth Rs. 21.766 Lakhs
- Received grant from Ministry of Forests & Environment, Rs. 16.93 Lakhs, (Sep. 2008-Aug 2011).
- Received grant from AICTE, Rs. 13.2 Lakhs (December 2008-November 2010).
- Industrial Consultancy: Rs. 17.5 Lakhs (Individual consultancy).
- UGC SAP Joint Project (5 faculty members) Rs. 65 Lakhs (June 2011-June 2016).

### **Professional Vision:**

- Provide trained manpower to our biotechnology industry.
- Reduce post harvest loss of food commodities in our country through our research work.
- To carry out my teaching and research job honestly, and to be a socially responsible citizen.

**Action Plan:** I'm trying my best to work on the above mentioned lines.

**Future Research Plans:** Novel antibiotics& antifungal agents, value addition of agricultural food products, edible coatings, pesticide residues etc.

**Future consultancy plans:** Food Quality Control, value addition of our food commodities, edible coating, reduction of post harvest losses. New Antibiotics & biotransformations in the production of chiral pharmaceutical products.

### **Areas of Research, Development and Consultancy:**

- Food Quality Control & New Drug Development
- Food Biotechnology, Food Quality Control.
- Chemical & Pharmaceutical Industry R & D needs.

**Prof. P. C. Sharma** *FNASc.*

B.Sc.(Botany), M.Sc.(Botany), M.Phil.(Agricultural Botany), Ph.D. (Agricultural Botany)

### **Academic & Research Interests:**

Prof. P.C. Sharma did his M.Phil. & Ph.D in Genetics from Meerut University. He has 25 years teaching and research experience. Prior to joining this University in Nov. 2002, he served in Choudhury Charan Singh University, Meerut as Lecturer and subsequently as Reader in the Department of Agricultural Botany, and as Coordinator, Department of Biotechnology. His main teaching and research areas cover genetics, plant molecular biology, agricultural biotechnology and bioinformatics. He has over 70 research publications to his credit. He has availed INSADFG International Exchange Fellowship in 1992 and 1998, UNESCO biotechnology Fellowship in 2000 at plant molecular biology unit of Frankfurt University, Frankfurt, Germany. During these visits, he worked on development of molecular markers for DNA fingerprinting and genome mapping in chickpea. In 2002, he was awarded long term JSPS invitation Fellowship for Research in Japan, which he availed at Iwate Biotechnology Research Centre, Kitakami, Japan to work in front line areas like Virus Induced Gene Silencing and Serial Analysis of Gene Expression. His group's most recent research on in silico mining of microsatellites has been published in high ranking international journals and led to the development of two highly accessed microsatellite databases. He has been PI/Co-PI in different research projects sanctioned by DBT, DRDO, ICAR, etc. He is a Fellow of the National Academy of Sciences, India.

### **Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]**

#### *Research Highlights*

- Development of molecular markers (RAPDs, DAF, SSRs, AFLPs, SCAR) for genome characterization, genome mapping and gene tagging for different crop species like chickpea, wheat, Brassica, pigeon pea, potato, etc.
- Preparation of databases for micro satellite data retrieval in eukaryotic genomes, ESTs, Unigenes; In silico mining of micro satellites for understanding genome divergence and evolution; Virus induced gene silencing (VIGS) and high throughput expression profiling using Serial Analysis of Gene Expression (SAGE) to understand host-pathogen interactions and stress! Development of eXT data base for seabuckthorn and identification of abiotic resistance genes; Genetic polymorphism for breast cancer, hypertension in Indian population;
- Cytogenetical studies (karyotypes, DNA estimations, Autotetraploid, Induced interchanges) in some legume crops like chickpea, lentil, pea, etc;
- Induced mutations and Biometrical studies in different crops

#### *Awards/Fellowships for Research Abroad:*

- JSPS Invitation Fellowship for Research in Japan (Long term) Iwate Biotechnology Research Centre, Kitakami, Iwate, Japan (Jan 2002-Oct 2002)
- UNESCO, Biotechnology Action Council (Paris, France) Fellowship availed during summer 2000 at Plant Molecular Biology Unit, Biocentre, Department of Biology, Frankfurt University, Germany (about three months summer 2000)
- INSA-DFG International Exchange Fellowship Plant Molecular Biology Unit, Biocentre, Department of biology, Frankfurt University, Germany (Nov 1997 -Jan 1998)
- INSA-DFG International Exchange Fellowship Plant Molecular Biology Unit, Department of Biology, Botanical Institute, Frankfurt University, Frankfurt, Germany (Feb-Oct 1993)

- Travel fellowship from International Genetics Federation to attend XVI International Congress of Genetics, Toronto, Canada.
- Selected for visiting Germany (4 weeks) under INSA International Collaboration/Bilateral Exchange Program (to be availed in 2008-2009)

### **Research Projects/Grants**

- Co-principal Investigator, Department of Biotechnology (BT), Govt. Of India sponsored R & D project "Development of PCR based hypervariable STMs markers for tagging HMW glutenin genes in wheat" 1995-2000 (Total budget Rs 77.4 lacs)
- Principal Investigator/Co-investigator, ICAR sponsored ad-hoc project "Isolation of microsatellite markers in potato" 2001-2004 (Total budget 14.70 lacs)
- Principal Investigator, LSRB, DRDO sponsored research project "Development of SSR markers for seabuckthorn", 2008-2011 (Total Budget 30.1 lacs)
- Principal Investigator, DBT sponsored project "Transcriptome analysis and identification of cold tolerance genes in Seabuckthorn Hippophae sp.) (2009-2012) (Rs. 61.42 lacs)
- Member Consultancy Project for Delhi Marketing Board, Govt. of Delhi.

### **Research Supervision**

- Ph.D (Agricultural Botany): 4 awarded
- Ph.D (Biotechnology): 5 awarded; 1 submitted; 5 continuing
- M.Phil (Agricultural Botany) Projects: 17
- M.Sc (Ag.) Ag. Botany Thesis: 20
- M.Sc. (Biotechnology) Project Reports- 50
- B.Tech (Biotechnology) Projects: 18
- M.Tech (Biotechnology) Projects: 6

**Professional Vision and Action Plan:** To provide globally competitive knowledge and skills to biotechnology students. To remain front runner in terms of academic output including research grants, publications and dissemination of acquired knowledge

**Areas of Research, Development and Consultancy:** Agricultural biotechnology, bioprospecting, characterization of biodiversity, data mining and bioinformatics.

**Future Research Plans:** To conduct research in the field of agricultural biotechnology involving molecular markers, functional genomics, transience, markers assisted selection and bioinformatics.

**Future Consultancy Plans:** Development of Detailed Project Reports for establishment of institution for biotechnology teaching and research. Biomarker screening. Scientific writing.

**Prof. K Kannan**

Ph.D

**Academic & Research Interests:** Teaching Biochemistry, Cell Biology, Developmental Biology, Protein Chemistry, Sem Cell Biology Research: Proteins, Stem cells, System Biology.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Consultant for Mahaan Proteins, Olympus Indian Pvt. Ltd. Director Span Group of Companies, Surat GM and Associate Director Ranbaxy.

**Professional Vision:** To provide Quality Man power for HRD, Industry and Entrepreneurship.

**Action Plan:** Give a Global Perspective in Biotechnology suited to Local Needs.

**Areas of Research, Development and Consultancy:**

- Diagnostic in stem cell characterization.
- Biopharmaceutical in Stem Cell Based Therapy.
- R & D, Manufacturing, Quality Assurance, Marketing

**Future Research Plans:** To focus on treatment of viral diseases like HIV using the ubiquitin Reception.

**Future Consultancy Plans:** Provide consultancy for manufacturing quality assurance, R & D and marketing in Biotechnology.

**Prof. R. H. Das**

M.Sc., Ph. D.

**Academic & Research Interests:** Teaching protein biochemistry and biology, Molecular Biology, and Genetic engineering. Research interest includes down regulation of genes by DNase and siRNA in understanding gene expressions

**Industry – Society Interface [Projects /Consultancy/Training Programmes already undertaken]:** Actively engaged in imparting literacy to slum dwellers kids so that they can be admitted into primary schools run by MCD. Presently the President of Vivekanand Resurgence Foundation ( Regd. No. S38284), a voluntary organization in North Delhi.

**Areas of Research, Development and Consultancy:** Functional characterization of bioactive compounds, an in house collaborative project

**Future Research plans:** functional characterization of bioactive compounds from natural sources.

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## ASSOCIATE PROFESSORS

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### Dr. Nandula Raghuram

Ph.D. (Life Sciences – plant molecular biology), JNU, 1994

M.Phil. (Zoology – genetic engineering) Pune University, 1988

M.Sc.Ed. (Life Sciences) RCE-NCERT, Utkal University, 1984

**Academic and Research Interests:** Molecular biology, functional genomics, bioinformatics, plant signal transduction, gene regulation, metabolic regulation, intellectual property rights, bioethics, science dissemination and policy research in science and higher education.

### Industry-Society Interface

#### Research Projects Undertaken:

- Rs. 89,50,000 ICAR-NICRA project “Molecular approach to improve NUE in rice to minimize the impact of fertilizer N on climate change” (Ongoing)
- Rs. 20,00,000 CSIR project “Microarray analysis of G-protein-regulated genes in rice” (Ongoing)
- Rs. 11,90,000 UGC project “Biochemical & molecular characterization of NO<sub>3</sub><sup>-</sup> assimilation in *Spirulina*” (completed)
- Rs. 18,50,000 DST project “Molecular characterization of nutrient signaling & N-use efficiency in rice” (completed)
- Rs. 22,00,000 CSIR project “Screening for G-protein-regulated genes in plants using microarrays” (completed)
- Rs. 1,50,000 industry project “Studies on the Enzymes of N Metabolism in *Spirulina*” (completed).
- Rs. 7,00,000 UGC project: “Molecular Biology of Nitrogen Metabolism in Crop Plants” (completed).

#### Consultancies Undertaken:

- Hindustan Lever Research Centre, Mumbai, on history of R&D at HLL etc. (1998-99).
- BSV Ltd., Mumbai, for R&D manpower and monoclonal antibody facility (1999-2000)
- Labprocure.com, Mumbai, Advisor, Web content development & site audit (2001)
- Prime Labs, New Delhi, Conversion of dish washers into labware washers (2004)

**Professional Vision:** To make a difference to the profession, institution and nation by balancing contributions within and beyond the boundaries of disciplines and specializations.

**Action Plan:** To synergize all interdisciplinary professional capabilities and convictions to interface with the society, industry or government for a self-reliant, sustainable and ethical development. The main professional capabilities that will be leveraged for this purpose include molecular biology, functional genomics and bioinformatics in plant, microbial and biomedical systems. The intended social interface includes agricultural nitrogen use efficiency in crop plants, prevention of reactive N accumulation in environment and climate change and/or mitigating their impacts. Other capabilities in intellectual property rights, biodiversity, bioethics, scientific writing, journal editorship and science dissemination will be leveraged for public discourse and policy interventions in life sciences, biotechnology and higher education and their impacts on the society.

**Future Research plans:** Functional genomics of nitrate response and G-protein signaling in crop plants like rice and model plants like Arabidopsis, complete sequencing and assembly of the Spirulina genome, validation through microarray for functional genomics and metabolic regulation.

**Future consultancy plans:** R&D based consultancy in molecular biology and functional genomics, microarrays, reactive nitrogen in sustainable development and climate change, ethics training, talent search, networking, scientific writing, IPR.

**Areas of Research, Development and Consultancy:** Cloning, sequencing, microarrays, gene expression studies, real-time PCR, talent search, networking, scientific writing, IPR strategy and some aspects of technology transfer.

**Dr.K.K.Aggarwal**

M.Sc., Ph.D.

**Academic and Research Interest:**

Academics

- Enzyme technology
- Proteomics
- Environmental biotechnology

Research

- Protease-protease Inhibitor interactions (Protein-Protein interactions)
- Metagenomics
- Proteomics based development of biomarkers

**Industry-Society Interface [Projects/Training Programmes already undertaken]**

- "Documentation of Traditional Knowledge of medicinal plants held by Bhotias of Dharchula Himalayas in Uttarakhand state: potential for development of New drugs", from Ministry of Environment and Forest, Govt. of India (2004-2006).
- "Construction of Metagenomic Library for screening of novel hydrolytic enzymes with potential of Industrial Applications", by AICTE (2006-2009).
- "Tolerance to low oxygen: Global gene expression profiling and proteome analysis in response to hypobaric hypoxia" sanctioned by Defence Research and Development Organization (DRDO) (2008-10), jointly with Prof. P.C. Sharma
- Isolation and identification of bioactive and biomodulatory agents from natural sources," sanctioned by UGC in April,2011 for five years under SAP, jointly with four other faculty members.

**Professional Vision:** To establish in-house facilities to impart training to the students in the area of protein sequencing and structure determination.

**Areas of Research, Development and Consultancy:**

- Purification and characterization of bio-molecules.
- Isolation, characterization and regulation of Proteins/Enzymes.
- Proteomics
- Plant-insect interactions
- Metagenomics for novel enzymes

**Future Research Plans:**

- Investigations on protease inhibitors for the control of herbivory.
- Metagenomics for screening of novel enzymes.
- Proteomics based biomarker development.

**Dr. Meenu Kapoor**

B.Sc., M.Sc., Ph.D

**Academic & Research Interests:** Research interests are in the field of Epigenetic and Molecular Biology of crop plants. Specifically, we are focusing on studying the contribution of epigenetic modifications such as DNA methylation and RNA interference (RNAi) on regulation of eukaryotic gene expression during different development stages of rice plants.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken:** Research was undertaken for the Japanese Company Suntory Pvt. Ltd for development of double flowers in Petunia using the floral MADS box gene. Three international patents were granted for this work.

Australian Patent # 766333 Improvement of flower morphology of plants by targeting MADS-box gene (2000)

Inventor: Meenu Kapoor and Hiroshi Takatsuji

European Patent # EP1357188 Improvement of plant flower type targeting MADS box gene (2003)

Inventor : Hiroshi Takatsuji and Meenu Kapoor

United States of America Patent # 7282622\_Plant flower type targeting MADS box gene (2007)

Publication Number: US 2004/0255349 A1

Inventor: Hiroshi Takatsuji and Meenu Kapoor

**Professional Vision:** To develop state of art facilities for conducting research in crop sciences and to be able to contribute towards the understanding of molecular basis of development and gene regulation in fundamental crop plants. This could have implications on crop sciences particularly pertaining to their yield and quality.

**Action Plan:** Besides contributing towards development of a bright scientific work force through teaching undergraduate students in specialized areas of molecular biology and recombinant DNA technology, a functional molecular biology laboratory equipped with the latest instruments has also been setup up in the campus.

**Areas of Research, Development and Consultancy:**

- Techniques in Biotechnology
- Molecular tools of gene analysis
- Functional genomics
- Functional Genomics using techniques like RNA interference
- Epigenetics, DNA/Histone methylation

**Future Research Plans:**

- Pursue research in the fields of crop sciences and contribute towards solving global food crisis.
- To work towards development of industry-academia partnership that would benefit the society as a whole.

**Future Consultancy Plans**

- Consultancy can be undertaken if the following areas:
- Molecular biology
- Cop breeding
- Development of transgenic plants
- Recombinant DNA work

**Dr Promila Gupta**

M Sc (Botany), Ph D (Botany) From University Of Delhi

**Academic and Research Interests:**

- Teaching theory as well as practical for courses such as: Plant tissue culture, Agricultural biotechnology, Cell and developmental biology, Plant Biotechnology, Bioinformatics, Advances in agriculture biotechnology and Biodiversity and biotechnology at B. Tech and M. Tech. in Biotechnology level.
- Research: Initially, the main emphasis had been on teaching graduate and undergraduate courses and guiding small student projects as per the requirements of the course curriculum. However, apart from the student research objectives, personal research interests were also pursued as Principle Investigator for the DST funded Fast Track Scheme Project (2005-2008) sanctioned for Rs 8.82 Lakhs.
- Presently, a UGC funded project under SAP category is being undertaken as one of the participating members for a common area of research (Phytomedicines) sanctioned for Rs 45 lakhs.

**Industry-society interface [projects/consultancy/training programme already undertaken]: Nearly a Dozen**

**Professional Vision:** Exploiting plant reproductive/survival strategies in improvement efforts using conventional and biotechnological approaches.

**Action plan:**

- Completed one DST funded project to analyze constraints in improvement efforts for guggul due to its apomictic method of propagation. Efforts are on to make use of the leads obtained to make an impact on sustainable availability of elite guggul germplasm for medicinal purposes.
- Guiding one PhD student in the area of plant breeding for biotic stress (leaf rust) tolerance in collaboration with Dr K V Prabhu, Division of Genetics, IARI, Delhi.
- Presently, exploring the bioactive potential of some dietary plant sources for better nutrient availability and their sustained use in UGC-SAP project as one of the participating members.

**Future Research Plans:**

- Enquiry into plant reproductive/survival strategies at molecular level for adaptation to biotic/abiotic stresses.
- Oxidative stress responses in plants and methods to alleviate them.
- Role of glucans in human/plant metabolism and defense responses.

**Future Consultancy Plans:**

- Can collaborate with plant tissue culture labs for propagation/multiplication of economically/medicinally important plants
- Development of regeneration/transformation protocols for novel plant systems for exploiting them for food/medicinal/secondary metabolite production purposes

**Areas of Research, Development and Consultancy:**

- Consultancy can be given in the areas mentioned in consultancy plans to organizations involved in producing plant derived products such as herbal medicines/lotions etc. There is a requirement for the regular supply and maintenance of raw material, i.e., plants of desired quality which can be ensured as mentioned above.

Projects can be undertaken in following areas:

- **Protective role of antioxidants in plant and animal systems**
- Exploring role of glucans in plant defense responses

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**ASSISTANT PROFESSORS**

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**Dr Nimisha Sharma**

M.Sc, Ph.D

**Academic and Research Interests:** I am interested in teaching Molecular Biology, Recombinant DNA Technology and Genomics to the undergraduate and post-graduate students of biotechnology. My research interests include gene expression and regulation in eukaryotic cells as well as functional genomics. Temporal and spatial regulation of gene expression is important for all biological processes in cells and any errors in gene expression could result in a disease. I am also interested in understanding the function(s) of the genome using transcriptomic and proteomic approaches. Currently, I am using the yeast, *Schizosaccharomyces pombe*, as a model system to identify conserved and new components of different cellular machineries regulating biological processes in yeasts and other higher eukaryotic organisms.

**Professional Vision:** My vision is to strengthen my current research interests and to explore newer research areas for investigation, introduce new courses, enhancing the competence and capabilities of scientific enquiry and learning among the students, strengthening the teaching-learning process, enhancing my contribution to the corporate life of the university, professional and career development.

**Action Plan:** I will continue to write and submit research proposals to various funding agencies. I will also interact with faculties in other disciplines to initiate new interdisciplinary projects. I will also start new collaborations with other scientists. In consultation with the department, I would like to offer new courses to students. To increase the inquisitiveness of students and their quest for knowledge, I would continue to link theoretical concepts with practical lessons in the laboratory. I would continue to provide intellectual challenges to students and enhance their communication skills by encouraging them to give presentations.

**Areas of Research, Development and Consultancy:**

- I can offer consultancy services in expression and purification of recombinant proteins, yeast two-hybrid library construction and screening, Surface Plasmon Resonance technology as well as membrane protein purification from mammalian cells.
- A training programme can be organized in the area of molecular biology and recombinant DNA technology, where many new developments have taken place over the last few years.
- The programme could offer hands-on-training in various basic techniques, like plasmid DNA isolation, genomic DNA isolation, restriction digestion, ligation and transformation of cells. In addition, advanced training could be offered in other sophisticated techniques, like RNA isolation, Reverse-Transcription assays, PCR, Real-time PCR.
- Projects can be undertaken in the broad area of molecular biology and biotechnology, where transcriptomics, proteomics, yeast-two-hybrid assays can be applied towards understanding the molecular basis of a biological process or disease that is relevant to India.

**Dr. Monika Gandhi**

Ph.D. (Biochem), M. Sc. (Biotech)

**Academic Interests:** Teaching various subjects like Biosensors, Diagnostics, Developmental Biology, Immunology, Biostatistics, Stem cell biology at the undergraduate level both in the form of theory and practical. I have guided various short term research projects of the B.Tech and M.Tech students and our group could publish four papers out of the work carried out by the B.Tech and M.Tech students in reputed national and international journals.

**Research Interests:** Pathophysiology and immunological mechanisms of recurrent spontaneous abortions and development of immuno-modulatory plant based therapeutics for treatment of RSA.

**Industry- Society Interface (Projects already undertaken):** CR1 (Complement receptor 1) in the pathophysiology of malaria (DST- Fast Track project)

**Professional Vision:** I would like to collaborate with scientists working in the field of female fertility disorders, such as recurrent spontaneous abortions at the national as well as international level with the goal of being able to develop some prognostic/diagnostic/therapeutic means for the management of these disorders. My aim would be to develop our laboratory into a full fledged centre working on the various aspects of female fertility disorders.

**Action Plan:** In order to realize my vision, I am in the continuous process of coming up with new and interesting research problems which could be addressed with the aim of finding means to manage RSA, and also in the process of getting more research grants from various funding agencies to be able to carry out fruitful and meaningful research.

**Areas of Research, Development and Consultancy:**

Pathophysiology of inflammatory disorders, complement system and development of prognostic/ diagnostic tools for recurrent spontaneous abortions/ recurrent pregnancy loss cases, Conducting Immunoassays.

**Future Research plans:**

- To carry out clinical studies and trials for novel therapeutic agents for treatment of recurrent spontaneous abortion cases
- To development suitable prognostic/ diagnostic tools for RPL
- To identify the role of complement in cancer progression

**Future Consultancy plans:** Conducting Immunoassays.

**Dr. Ram Singh Purty**

M.Sc. (Biotechnology), Ph. D.

**Academic & Research Interests:** Plants expose to environment generally encounter various abiotic stresses such as drought, high or low temperature, salinity, heavy metals ultimately induce oxidative stress that causes permanent damage to all macromolecules and disturbs the cellular homeostasis and drastically effects the growth and productivity of the plant. In order to understand the molecular mechanism of abiotic stress tolerance and to enhance the crop yield our research team is focused on transcriptome profiling using Serial Analysis of Gene Expression (SAGE) and identification and isolation of genes differentially regulated in response to abiotic stress as well as generating Expressed Sequence Tags (ESTs) database. Characterization and determining the expression patterns of these candidate genes in response to abiotic stress, and an improved understanding of their roles in stress adaptation will provided the basis of effective engineering strategies leading to greater stress tolerance in crops.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Co-PI of the DBT sanctioned project entitled "Trancryptome analysis and identification of cold tolerance genes in Seebuckthorn (*Hippophae* sp.). Duration: Three years i.e., 2009-2012.

**Professional Vision:** To understand the molecular mechanism of abiotic stress tolerance in plants especially crop plants. This will help in developing abiotic stress tolerance plant.

**Action Plan:** In this direction already research project sanctioned by DBT has been undertaken.

**Areas of Research, Development and Consultancy:**

Plant Biotechnology, Abiotic Stress and Plant Physiology, Plant Molecular Biology. Abiotic Stress and Plant Physiology, Plant Molecular Biology.

**Future Research Plans:** To submit research project to various funding agents such as DST, DBT, UGC, AICTE, ICMR, ICAR etc. in order support the funding of research work to be carried out in laboratory.

**Future Consultancy Plans:** In the field of Plant Biotechnology.

**Dr. Rinu Sharma**

Ph.D, M.Sc., B.Sc.

**Academic and Research interests****Academic Interests:**

Academic interests lay in providing high quality education to students and giving them the maximum research exposure in biotechnology.

- Teaching various subjects like Animal Biotechnology, Immunology, Biostatistics and Cancer Biology at under graduate and post graduate levels both in the form of theory and practicals.
- Guiding students in various short term research projects of B.Tech and M.Tech students and giving them hands on experience in Biotechnological techniques. The students acquire expertise in planning and executing the research projects in the field of cancer biology.

**Research Interests:**

- Current research interests lay in the area of microRNA Expression Profiling of Cancer and Development of Biomarker Targeted Non-Invasive Screening Method For Cancer Using Nanotechnology.
  - **Ongoing Research:**
    - DBT funded project: **"Circulating miRNAs in Esophageal Cancer Patients and Healthy Subjects: Potential Blood Based biomarkers for Diagnosis and prognosis" Jan 2010-2013**
    - DST funded project: **"Expression of Cancer Testis Antigens in Periampullary Carcinomas: Potential Noninvasive Biomarkers for Diagnosis/Prognosis"** Approved Sep, 2009, Funds awaited One Ph.D. student has been registered.

**Professional Vision:**

- To develop state-of-art laboratory for Cancer research focusing specifically in the area of early diagnosis.
- Attempt to build an industry interface through collaborative projects in the field of cancer diagnosis and therapy and initiating screening programs for early detection.

**Action Plan:**

In addition to putting my best efforts in teaching and academics the following is the action plan for research development.

- Get more extramural grants from funding agencies.
- Procurement of equipment and further development of lab facility
- Recruitment of more research scholars, PhD students and staff.

**Areas of Research, Development and Consultancy:**

- Multicenteric task force cancer screening programs
- Biomarker based pathological examination of cancer specimens in diagnostic labs.
- Animal tissue culture
- Immunohistochemical analysis of cancer tissue specimens
- Various molecular biology techniques including differential expression gene analysis, real time PCR and RNAi.
- Cancer Research

**Future Research Plans:**

- Future research plan would be to carry out the research in the already funded projects and make contribution to the global research in the proposed area of cancer research by publishing in reputed international journals and presenting data in national and international conferences.
- Enroll one more PhD scholar

**Sayan Chatterjee**

B.Tech, M.E. (Biotechnology)

**Professional Qualifications:** NABCB certified Auditor for Quality Management Systems, Certificate in Food Safety and Standards from Quality Council of India.

**Academic & Research Interests:** Food Safety, Laws and Standards, Bio engineering and Bioinformatics

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]**

- Techno Management consultant for Biotechnology, Healthcare, Food and FMCG sectors from 2009. Have been consultant to various companies individually or as a member of the advisory team. Clients include MPS Food Products Pvt. Ltd., Phyto Biotech Pvt. Ltd., Biophilic, Orange Bioscience Products Pvt. Ltd., etc.
- *Member*, Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES).
- *Member*, International Association of Engineers (IAENG)
- *Fellow*, Society of Applied Biotechnology (SAB) for outstanding achievements and contributions to the field of Bioinformatics and Bio engineering.

**Professional Vision:**

- To develop incubation centre for students and continuing education group in the area of Food and Bio- product development.
- To set up an in-house bioinformatics training and research facility.

**Action Plan:** Attract students, Industry or working personnel for executive training or entrepreneurship development program to make the facility self sustaining.

**Areas of Research, Development and Consultancy:**

- Food Processing Technology, Bio engineering, Quality Management Systems and Standards, Food Safety Management Systems and Standards, Environmental Management Systems and Standards.

- Bioinformatics: Databases and biological software development; Quality Management Systems and Standards; Food Safety Management Systems and Standards, Environmental Management Systems and Standards.

**Future Research Plans:** Product and process development in the areas of Food processing Biotechnology and Healthcare.

**Future Consultancy Plans:** Product, process and manpower development in the areas of Food processing, Biotechnology and Healthcare.

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### **3. UNIVERSITY SCHOOL OF CHEMICAL TECHNOLOGY [USCT]**

## **UNIVERSITY SCHOOL OF CHEMICAL TECHNOLOGY (USCT)**

**OUR MISSION:** *To generate new knowledge by offering graduate and post graduate programmes and provide quality manpower with high employment potential in the present liberalised economic climate in the era of globalisation.*

The **UNIVERSITY SCHOOL OF CHEMICAL TECHNOLOGY recognizes** the importance of chemical industry and the need for trained manpower. The University took the bold and visionary decision to start the School in 1998, the only one of its kind in this part of the country after IIT, Delhi. The education required in chemical industry is based on two broad areas namely Unit Operations and Unit Processes. This framework still holds although it has evolved, expanded and continuously tuned over the last eight decades to progressively include thermodynamics, reaction engineering, process control, process economics, mathematical and numerical methods, computers, process engineering, separation processes, catalysis, hazard and safety etc., each one advancing in its own right with extensive research work both in the academics and in the industry.

The School has been established with the twin objective of generating effective trained professionals and to keep pace with the R&D activities of this fast changing field of Chemical Engineering, B. Tech and M. Tech programmes being offered with intake of 40 and 30 students respectively by the school are based on the pattern of IIT's and other national and international institutions of high repute. The well-structured programme is meant to impart comprehensive knowledge of various core chemical engineering subjects, interdisciplinary courses in Biotechnology, Information Technology, Environment Management and Management Studies through electives and industrial exposure through practical training in R&D laboratories and industrial units.

A strong School of Basic and Applied Sciences with significant strengths mathematics, physics and chemistry is of course essential for chemical engineering education. The fact that School of Basic and Applied Sciences, Schools of Biotechnology, Information Technology, Environmental Management and Management Studies are growing from the same stage as the University School of Chemical Technology, the resources available with these schools are being used to the advantage of our students.

**SCHOOL'S PHILOSOPHY AND PEDAGOGY:** The school has been established to design and implement courses with aim of imparting quality education. The School also emphasizes the need to keep up with the latest developments in the field by constantly upgrading the syllabi. The school believes in close coordination with the industry on perpetual basis, which keeps it abreast with the ever changing scenario of the Chemical industry.

**THRUST AREAS:** Despite the breadth and the divergence of the chemical industry the core discipline of this sector is chemical engineering. The first and foremost effort of the School of Chemical Technology is to put in place a strong programme in Chemical Engineering with a modern syllabi, well equipped laboratories and acquire useful softwares like ASPEN PLUS, MATLAB, gPROM and Fluent and develop meaningful links with industry. After establishing the UG & PG programmes, our faculty is engaged in doing research through Ph.D. programme in the thrust areas of Separation Technology, Energy and Environment, Safety and Hazards so that a continual evolutionary process of reaching out to as wide a sector of Chemical Engineering as possible and relevant is achieved.

## **FACILITIES:**

### **Laboratory Facilities**

The school has state-of-the-art laboratories setup at a cost of roughly Rs. 1.5 crores. The laboratories are well equipped with imported as well as indigenous equipments/instruments. All basic chemical engineering laboratories like Instrumentation and Process control, CAD and Simulation, Heat Transfer, Mass Transfer, Fluid Mechanics, Reaction Engineering and Mechanical Operations are fully equipped with equipment/instruments.

### **Research Facilities**

1. Surface Area Analyzer (Submicron Size)
2. Particle Size Analyzer (2-20 nm)
3. Atomic Absorption Spectrophotometer
4. Double beam UV-VIS Spectrophotometer
5. Fermentor
6. Laminar Air Flow
7. Electronic Turbine/ Coriolis Mass Flow Meter for both liquid and gas flow calibration
8. Sigma Plot, g PROM, Fluent Software, Matlab, Aspen Plus software
9. Autoclave
10. High Temperature (1400° C) tube furnace

The School also has access to the following facilities:

- Opportunities to students to work on various projects both in University and Industry.
- Well equipped library with Books, National/International Journals/Periodicals. Book Bank facility is also available to students.
- Well equipped Computer Centre with latest IBM & ACER Pentium Servers & PC's, Scanners, Printers, CD-Writers etc.
- 1 Mbps Internet Leased Line in the entire campus.
- LAN connecting various academic & administrative sections of the University with Email facility.
- Besides Laboratories of the University School of Chemical Technology, Interdisciplinary laboratories are also available.

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## **PROFESSORS**

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- Prof. S.S.Sambi (Dean)

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## ASSOCIATE PROFESSORS/ READERS

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- Dr. U.K.Mandal
- Dr. Arinjay Kumar
- Dr.(Mrs) Neeru Anand

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## ASSISTANT PROFESSORS

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- Dr. Biswajit Sarkar
- Sh. Tapan Sarkar
- Dr. Surender Kr. Sharma
- Ms. Sanigdha Acharya
- Sh. Azad Singh
- Dr. Hasan Akhtar Zaidi
- Sh. Dinesh Kumar
- Sh. Deepak Garg

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## PROFESSORS

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### **Prof. S.S. Sambi**

B.Tech., M.Tech., Ph.D

**Academic & Research Interests:** Heat & Mass Transfer, Gasification, Pyrolysis & Combustion of Biomass

**Professional Vision:** Acquire and disseminate knowledge to improve the quality of chemical engineering education. Generate resources through consultancy and projects.

**Future Consultancy Plans:** Consultancy can be provided in the following areas:

- Separation Process
- Characterisation of Biomass for its optimum utilization through thermo-chemical conversion route.

### **Areas of Research, Development and Consultancy:**

- Separation Techniques
- Modeling and Simulation

### **Additional Information:**

Ph. D in Chemical Engineering from Indian Institute of Technology, Delhi in Direct Contact Heat Transfer to a Vaporising drop. Obtained M. Tech and B. Tech in Chemical Engineering from the same institution. Post Doctoral experience of over twenty-five years in teaching/ research has resulted in fifteen publications in international /national journals besides several presentations/ publications in conferences/workshops. Has done significant work in the field of biomass combustion, pyrolysis and gasification. Guiding a number of B. Tech, M. Tech and Ph. D students.

Member of the Curriculum committee of Department of Polymer Science and Chemical technology, Delhi College of Engineering, Delhi. Member Board of Studies, Chemical Technology/ Biotechnology/ Oil/ Paint/ Plastic/ Food/ Leather for Uttar Pradesh Technical University, Lucknow. Member Board of Studies, Department of Chemical Engineering and Technology, Punjab University Chandigarh, Life member of Indian Institute of Chemical Engineers and Joint secretary IChE, Northern Region Centre(NRC) and coordinator of its scholarship committee.

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## **ASSOCIATE PROFESSORS / READERS**

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### **Dr. Uttam Kumar Mandal**

B.Tech., M.Tech., PhD

**Academic & Research Interests:** Polymer Technology, Nanotechnology, Separation Technology, Chemical Engineering, Thermodynamics.

**Professional Vision:** To provide the quality chemical engineers to the nation.

**Action Plan:** Research effort will be continued for the improvement of teaching.

**Future Research Plans:**

- To develop a separation research lab in the school.
- Development of nanomaterials through microemulsion technology.
- To continue the research in the field of polymer technology like nanopolymer and its composite.

**Future Consultancy Plans:** Consultancy may be provided in the area of:

- Separation Process
- Nanomaterials Design
- Polymer Technology

**Areas of Research, Development and Consultancy:**

- Nanomaterials Design and Development
- Separation Technology
- Polymer Technology (Nanocomposite)

### **Dr. Arinjay Kumar**

PhD (Chemical Engineering)

**Academic & Research Interests:** Biochemical Engineering, Transport Phenomenon, Reaction Engineering, Modelling and Simulation, Adsorption, Biological Remediation.

**Professional Vision:** To develop the department as a Centre of Excellence in the field of Chemical Engineering

**Action Plan:** Development of M.Tech. Curriculum for specialization in the area of energy and environment & research efforts in this promising field.

**Areas of Research, Development and Consultancy:** Industrial Waste Water Treatment, Bioremediation of Recalcitrant Pollutant, biological treatment of dairy waste water.

**Future Research Plans:** Development of the state of the art laboratories & course materials in the Arena of Hazardous Waste Treatment.

**Future Consultancy Plans:** To provide consultancy in the area of Hazardous Waste Water etc.

**Dr. Neeru Anand**

PhD (Chemical Engineering)

**Academic & Research Interests:** Fluid Mechanics, Chemical Process Calculation, Chemical Reaction Engineering, Chemical Process Safety, Adsorption & Ion Exchange, Risk Assessment.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken:**

(1) **Training Programme Conducted** (on behalf of my earlier organization M/S KLG-TNO) as a Faculty Member.

- Training on Industrial Risk Management, Programme at Administrative Staff College of India, Hyderabad, 1994 sponsored by OISD.
- Training on EFFECTS conducted by National Productivity Council, Delhi, 1995.
- Training on HAZOP & Pre-start-up Safety Review at Reliance Industries Ltd., Hazira 2001.
- Training on Consequence Analysis at Guwahati Refinery, IOCL, 2002.

(2) Training on Risk Analysis for IOCL, Refinery Division, New Delhi, 2003 (during my working in GGSIPU along with M/S KLG-TNO).

**Consultancy Projects handled in the past four years.**

- (1) Risk Analysis Study for PX & PTA plant at IOCL Haldia Refinery, 23<sup>rd</sup> Jan – 25 Jan, 2006.
- (2) Risk Analysis Study for RFCCU plant at IOCL Panipat Refinery (11-18 Dec 2002).
- (3) Comprehensive Audit Focusing on Safety, Environment and Occupational Health for Oil & Natural Gas Cooperation Ltd. Onshore Installation, GCS and Drilling Rig at Gamanewala, Rajasthan (April 2007).
- (4) Risk Analysis study and Disaster Management Plan for Vasco POL Terminal, IOCL Marketing Division, Goa (March 2010).

**Professional Vision:** To provide quality technical education and also to facilitate Research & Development.

**Action Plan:** Currently preparing M.Tech. curriculum for specialization in Chemical Process Safety.

**Areas of Research, Development and Consultancy:** Consultancy in the field of Chemical Process Safety. Training in the field of Chemical Process Safety. Development of adsorbents for the removal of heavy metals. Development of software in the field of Chemical Process Safety.

Future Consultancy Plans: Consultancy in the areas of Risk Assessment, HAZOP, Safety Audits and Emerging Response Plans for process industries.

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## ASSISTANT PROFESSORS

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### Mr. Biswajit Sarkar

B.Tech, M.Tech., Ph.D

**Academic & Research Interests:** Separation Technology, Computational Methods in Chemical Engineering.

**Professional Vision:** To provide quality chemical engineers to the society.

**Action Plan:** Research effort will be continued for the development of teaching.

**Future Research Plan:** To develop a membrane separation laboratory in the school.

**Area of Research:** Membrane based separation process.

### Sh. Tapan Sarkar

B.Tech, M.Tech

**Academic & Research Interests:** Bio-chemical Engineering & Separation Processes, Membrane Technology

**Additional Information:** Six years teaching experience and two years industrial experience.

### Dr. S K Sharma

Ph.D (Chemical Engineering)

**Academic & Research Interests:** Design and Modelling, Separation Technology, CAD & Simulation

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken:**

**Consultancy Taken:** (1) Design of Packed bed absorption Nox gases (2) Upgradation of Falling Film Evaporator (3) Development of CO<sub>2</sub> Based Refrigeration System (4) Stearic acid Coating on Mineral Powder (5) Inorganic / Organic Chemical Process Development and Waste / Potable Water Treatment.

**Professional Vision:** To be good teacher / professional trainer to generate effective trained professional with pace with R&D.

**Action Plan:** Guiding PhD Scholars

**Areas of Research, Development and Consultancy:** Modelling Simulation, Separation Technology, Process Development.

**Future Research Plans:** To guide PhD Scholars in the area of Modelling & Simulation and Sep. Technology.

**Future Consultancy Plans:** To provide consultancy to nearby industries.

**Dr. Snigdha Acharya**

B.E., M.Tech. (Chemical Engineering); Pursuing PhD from GGSIPU

**Academic & Research Interests:** Fluid Mechanics, Mass Transfer, Petroleum Engineering, Membrane Separation.

**Professional Vision:** To provide good technical education and generate effective trained professional. To be a part of research and development actively.

**Action Plan:** Pursuing PhD in the field of Pervaporation as a membrane separation process.

**Areas of Research, Development and Consultancy:** Membrane Separation (Pervaporation), Writing Project Proposal for DST in the same field.

**Future Research Plans:** To complete PhD and then take up further research in the same area.

**Mr. Azad Singh**

M.S. (R) Chemical Engineering IIT Delhi; B.Tech. Chemical Engineering HBTI Kanpur

**Academic & Research Interests:** Chemical Process Control & Process Engineering and Multiphase Reactors

**Professional Vision:** To develop the school as a center of excellence in the area of Chemical Process Control & Multiphase Reactors

**Action Plan:** Generation of the Facility of the Multiphase Reactors.

**Areas of Research, Development and Consultancy:** In existing facilities we can offer consultancy in calibration of flow meters. Advances in Chemical Process Control CAD & Simulation, Multiphase Reactors (Trickle Bed Reactors, Bubble Column Reactors etc.)

**Future Research Plans:** Hydrodynamics of Multiphase Reactors at elevated pressure & temperature.

**Future Consultancy Plans:** To provide consultancy in the area of Chemical Process Control.

**Dr. Hasan Akhtar Zaidi**

PhD (Chemical Engineering) IIT Delhi, MTech (Petroleum Processing) and B.Sc. (Chemical Engineering)

**Academic & Research Interests:**

- Petroleum Processing Technologies
- Alternative Fuel Development
- Removal of Pollutants from Drinking / Waste Water

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken:** I am writing some projects on the following topics:

- Catalytic Conversion of Methanol to Hydrocarbons
- Removal of Pollutants from Drinking / Waste Water

**Professional Vision:** To work together and to form a team of experts in various areas so that we can do better research work within short period of time.

**Action Plan:** Finding some expertise in my area as well as in other areas and do collaborative work together.

**Areas of Research, Development and Consultancy:** Consultancy can be offered in the area of industrial pollution and development of alternative energy fuel. Training can be offered in the areas of petroleum refining technologies and industrial catalysis application. Project can be offered in the area of alternative fuel development and catalyst development for the production of alternative fuel.

**Future Research Plans:** To work in the area of alternative fuel development and development of an adsorbent for the removal of pollutant from the waste / drinking water. Try to obtain more funding.

**Mr. Dinesh Kumar**

M.Tech. (Integrated); PhD Part Time Pursuing

**Academic & Research Interests:** Catalysis – Catalysis Reaction & Peace for Design CAD & Simulation.

**Professional Vision:** As energy & environment are the major concerns for the world. I would like to establish an energy centre in the university.

**Action Plan:** Pursuing PhD from IIT Delhi (Part Time) in catalyst design for hydrogen production.

**Areas of Research, Development and Consultancy:** Catalyst Design, Catalyst Development, Catalyst & Reactor Design

**Future Research Plans:** To establish a centre for energy studies in the USS

**Future Consultancy Plans:** Energy Optimization

**Mr. Deepak Garg**

B.E., M.Tech (Chemical Engineering)

**Academic & Research Interests –** Fluid Mechanics, unit operations, safety hazards and environment, essential oils.

**Professional Vision:** To develop the department as a centre of excellence in the field of chemical engineering

**Area of Research, Development and Consultancy: Industrial** Waste Water Treatment, Photocatalytic oxidation, A.O.P.

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#### **4. UNIVERSITY SCHOOL OF EDUCATION [USE]**

## **UNIVERSITY SCHOOL OF EDUCATION (USE)**

### ***Futuristic Approach for School of Education***

Innovations related to teaching –learning approaches & methods of teaching in different subjects and the material development for addressing the plural need of students requires further dissemination. Training and re-training of large no. of teachers in India through Distance Education mode needs to be explored.

USE is in view of exploring new dimensions in teacher education related to societal needs and several short term certificate courses and diplomas in fields of contemporary education can be incorporated, so as to reach the grass root level.

Concepts of Public Private Partnership and Mobile Team Teaching can be adopted. Relation with Industries, NGO's and corporate houses can be developed to promote corporate social responsibility initiatives.

Keeping in view of social responsibility of education, several projects can be conceived in collaboration with UNESCO, UNICEF & UNFPA. USE is in process of speeding up of the placement and consultancy services for prospective teachers in a modern techno-savvy way to cater the societal needs.

These plans forecast educational process moving fast towards appropriating, assimilating, predicting and evaluating the essential educational cores which are going to characterize the new pedagogy.

And thus, we will be moving perennially towards discovery of new planks of sustainability of quality ethos.

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#### **Professor**

- Dr.Saroj Sharma

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#### **Readers**

- Dr. (Mrs.) Sangeeta Chauhan
- Dr. Dhananjay Joshi

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#### **Assistant Professors**

- Dr. (Ms.) Shalini Yadava
- Dr. Amit Ahuja

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## **PROFESSOR**

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### **Dr. Saroj Sharma**

Professor & Dean

M. Sc. (Botany), MA (Sociology), M. Ed., M. Phil. (Edu), Ph. D. (Edu)

**Academic & Research Interests:** Focus on Total Quality Management and Good Governance. Research Emphasis on Inclusive and Educational Administration and Guidance and Counselling in field of Teacher Education.

### **Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken]:**

- As per M. Ed. Curriculum, Several projects are conceived and worked upon in Dissertation form.
- Organised workshops / Seminars and Resource Person in NCERT
- MTT Project of UNESCO

**Professional Vision:** To empower the School with growth of the individual and the collective through creation of open environment which nurtures spirits of progressive teacher education.

### **Action Plan:**

- Impact Studies on Deller commission Report of UNESCO.
- Curriculum Development based on International trends and vocational aspects.

### **Areas of Research, Development and Consultancy:**

- Public Private Partnership in Governance of Higher Education.
- Sarva Siksha Abhiyan (SSA) and RTE.
- Educational Administration and Management.
- ICT in Education and Use of SPSS
- Corporate Social Responsibility and Education.
- Rural Development and Role of Education.
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### **Future Research Plans:**

- Public Private Partnership in field of Teacher Education.
- Corporate Social Responsibility in field of Higher Education.
- Role of ICT in field of Teacher Education

### **Future Consultancy Plans**

- Good Governance of Higher Education
- Quality Assurance and Management in Education
- Guidance and Counselling in field of inclusive education.

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## READERS

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### **Dr. Sangeeta Chauhan**

MA (Eng), M. Ed., M. Phil., Ph. D.

#### **Academic & Research Interests:**

- Focus on Research owned projects
- Projects in the area of Inclusion, Teacher Education, Communication

**Professional Vision:** - Upgrade M. Ed. Curriculum  
- Orient self and students towards Research

**Action Plan:** Write and Publish on Innovative progresses, Teacher Education, Special Education, Time Management action plan

#### **Future Research Plans:**

- Create faculties and academic atmosphere congenial for academic personal.
- Improve upon the innovative teaching methods used / experimented upon in classroom teaching.

#### **Future Consultancy Plans:**

- Placement service for students
- Provide professional consultancy to schools and Tr. Education Colleges
- Communication

### **Dr. Dhananjay Joshi**

M.A. (Pol. Science), M. Ed, Ph.D (Education), NET (Education) UGC

**Academic & Research Interests:** Research interests includes.

- (a) Pedagogy of Social Science.
- (b) Curriculum Studies.
- (c) Sociological issues, Human Rights & Value Education.

#### **Professional Vision:**

- To be able to contribute socially by transmitting the knowledge
- To Keep infusing the latest in curriculum so as to deliver the best

**Action Plan:** To organise Continuous Improvement Programs for student.  
To always encourage research centred approach towards study

### **Areas of Research, Development and Consultancy:**

- In placement services
- Training Programmes for students in life Skills and personality development area
- Cross cultural studies with focus to Education and Environment.
- Curriculum Development issue.

### **Future Research Plans:**

- Publication of research based Articles
- Guiding the Ph.D Scholars
- Writing pedagogical Books with respect to Education.

**Future Consultancy Plans:** To always foresee the emerging trends in the Contemporary society and Education world. Try to prepare the students of teacher. Education to force the upcoming social and technological challenges.

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## **ASSISTANT PROFESSORS**

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### **Dr. Shalini Yadava**

M. Sc. (Botany), B. Ed., M. Ed., M. Phil. (Edu), Ph. D. (Edu), NET and JRF

### **Academic & Research Interests:**

- Education of the Marginalised groups
- Globalisation and Education through RTE
- Curriculum Studies\
- Scientific literacy (Engagements in Meaning, Process and Impact.)

### **Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken]**

- Trained teachers of London Model School, Ladakh as a Consultant at the NGD (GRD)
- Master Trainer Life Skills Education
- Trained teachers of YWCA, Delhi on the dynamics of implementation of RTE

**Professional Vision:** To grow and evolve as a teacher and researcher which engages in lateral thinking and ignites minds to unleash creativity in all spheres of life.

**Areas of Research, Development and Consultancy:**

***Consultancy can be offered***

- Adolescence Education (As am a Master Trainer in Life Skills Education)
- Educational Management (Institutional Resource Building)
- Pedagogy of Teaching learning to create Enriched Learning Environment

***Training Programme can be offered***

- Life Skills Education
- Core Teaching Skills

***Projects can be undertaken***

- Addressing Quality Concerns in Higher Education
- Elementary Education & SSA and UEE and Universalization of Secondary Education and its impact on Higher Education linked to above point
- Inclusive Education (Catering to the needs and expedations of the marginalised groups)

**Future Research Plans:**

- Curriculum studies (Curriculum per se and Transactioned Analysis)
- Scientific Literacy (Meaning, Process and Impact) on the globalised world
- Impact Studies on Globalisation on Internalisation vis a vis Indian Market

**Future Consultancy Plans**

- HIV/AIDS Education
- Inclusive Education to achieve MDGs
- Elementary Education (Creation of Enriched Learning environments to address the issue of wastage and stagnation at elementary & secondary stage.)

**Dr.Amit Ahuja**

M. Sc. (Chemistry),M.Ed, Ph.D(Education), NET(Education)

**Academic & Research Interests:** To impart Qualitative teaching with special focus on interaction with pupils and communication skills. Research areas include Science Education and Education of Disadvantage.

**Professional Vision:** Emphasis on communication skills with reference to knowledge construction among students.

**Action Plan:** Democratic exchange of ideas between students and teachers so that resourcefulness shoots out.

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered in Inclusive Education and Placement Guidance.
- Training programme can be offered in Quality Assurance, Accreditation etc.
- Projects can be undertaken in Science Education, Curriculum Development, Women Education.

**Future Research Plans:** With special emphasis on improvement and quality assurance in Pedagogical practices, being followed , in school system there is burning desire to undertake class oriented teaching dynamics, as a measure, to Probe in depth.

**Future Consultancy Plans:** Regarding placement and guidance.

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**5. UNIVERSITY SCHOOL OF ENVIRONMENT MANAGEMENT [USEM]**

## **UNIVERSITY SCHOOL OF ENVIRONMENT MANAGEMENT (USEM)**

GGSSIP University has the distinction of being the first University in the country to start a Master's programme in Environment Management (M.Sc). The University School of Environment Management has been established to fulfill the above mentioned requirements and offers a two-years Master's degree course in Environment Management which aims to equip the budding environmental managers with a comprehensive understanding of the key environmental issues, and use of a wide range of environmental tools, methods and systems so that they can play leading role in the development and application of environmental policies and management in the public and private sectors. The programme comprises comprehensive lectures on course and topics of current interest and importance, field and laboratory experiments and case studies of special topics related to Environmental Management programmes.

The present intake for the course is of 25 students, from Science/Engineering background, that are selected through a National Level Common Entrance Examination. The curriculum is designed and revised with continuous feedback from various eminent experts from Universities, Research Institutions and Industries. The course lays emphasis on equitable and efficient distribution of natural resources and its management for sustainable development.

### **OBJECTIVES**

- To provide institutionalised quality education and training in environmental studies.
- To pursue and facilitate research and development activities.
- To establish working linkages with industry and undertake collaborative projects which offer long-term interaction opportunities with academia and industry.
- To conduct short-term courses related to various environmental issues.
- To foster environmental awareness and promote the principles and practices of sustainable development.

### **THE COURSES:**

#### **(i) M. Sc. Environment Management**

The four-semester course offered by the school consists of an optimal amalgamation of theory and practice. First three semesters are devoted to course work and the final semester is dedicated to Dissertation that each student is required to accomplish individually. Students are also provided the opportunity to undergo practical training during their summer vacations in various institutions.

#### **(ii) MBA Disaster Management**

The aim of the course is to provide full-time postgraduate education in the principles, procedures and practices of Disaster Management within an international context. This is to enable for reducing disaster risks as well as improve the delivery of post-disaster assistance to promote effective recovery. The other objectives of the programme are:

- To provide adequate theoretical and practical knowledge with focus from traditional response based management to structured skill based management and understanding the whole cycle of disaster management- Prevention, Preparedness, Mitigation, Response, Relief and Rehabilitation.
- Provide for the needs of experienced practitioners in appropriate fields and to enhance their career opportunities through a period of academic study.
- Provide the opportunity for professionals to obtain a specialized qualification, which has a recognition and currency within the international agencies working in health, development and emergency management areas.
- Work as a resource institution for national and State Governments for capacity building in disaster management.
- Filling knowledge gaps by providing a common platform for sharing of information and experiences for professionals working in disaster management.
- Taking up research and development in emerging areas of disaster management.
- Developing liaison with Government, NGOs, Corporate Sectors and International agencies, to synergize disaster mitigation efforts.

### **THRUST AREAS OF RESEARCH**

Economic development and environmental effects are inseparable. The extent of environmental degradation is dependent on the efficient use of resources and effective control of adverse effects. The broad objectives of the research efforts of the faculty at the School of Environment Management, GGS Indraprastha University, are to study how the production distribution and use of resources affect the environment, and to find ways to mitigate the adverse effects in addition to carrying out research on current topical areas such as global warming and climate change. At present USEM is focusing on the following research areas:

1. Climate change and Green House Gases
2. Regional environment and resource planning
3. Air pollution control in urban areas
4. Wetlands and water quality management
5. Hyperspectral Remote Sensing
6. Protected areas management and biodiversity conservation
7. Environmental modelling
8. Urban planning
9. Solid waste management
10. Renewable energy
11. Disaster management

### **INFRASTRUCTURE & LABORATORIES**

The school has well equipped laboratories for air and noise pollution monitoring, water quality analysis, microbial technology and advanced environmental instrumentation systems. The school also has a separate section for remote sensing and geographical information systems. The Laboratory for advanced environmental instrumentation systems was inaugurated by Dr. A.P.J. Abdul Kalam, has equipments such as the atomic absorption spectrophotometer, gas liquid chromatograph etc. for heavy metals and pesticides analysis.

## **TRAINING AND PLACEMENT**

The school has been able to establish working linkages with various government organizations like the Department of Space, Ministry of Environment & Forests, Central Pollution Control Board, Delhi Pollution Control Committee, Delhi Development Authority, Industries, Non-Governmental Organisations and Consultancy Organisations working in the field of environment. Some of the organizations where students from the University School of Environment Management carried out their project works/summer trainings are TERI, CII, FICCI, EIL, NTPC, CSE, DRDO, National Defence College, Delhi, Maruti Udyog Ltd., TetraTech, Institute of Genomic research (CSIR), NPL, Indian Oil Corpn. Ltd., Ranbaxy, Planning Commission, CPCB, CRRI, BHEL, ONGC, Development, Alternatives, IIT Delhi, Delhi University, IARI, Department of Space, Sulabh International, RITES, ESRI-NIIT, Birla Institute of Scientific Research, National Council for Cement and Building Materials etc.

## **THE FACULTY**

Environmental Studies require multidisciplinary skills. The skills and strength of the school is reflected in its highly qualified, experienced and dedicated team of professionals from various disciplines. In addition, the school also invites professionals from various institutions and universities as guest faculty.

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### **Professors**

- Dr..Prodyut Bhattacharya
- Dr. (Mrs.) Amarjeet Kaur
- Dr. Jai Kanwar Garg
- Dr. S.M. Mustafa Ali Khan

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### **Associate Professors**

- Dr. Naresh Chandra Gupta
- Dr. (Ms.) Rita Singh
- Dr. Varun Joshi

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### **Assistant Professors**

- Dr. Kiranmay Sarma
- Dr. (Ms.) Anshu Gupta
- Dr. Deeksha Katyal
- Dr. (Ms.) Pamposh
- Dr. Sanjay Keshari Das
- Dr. Sumit Dookia

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## PROFESSOR

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### **Prodyut Bhattacharya**

Dean and Professor

M.Sc. (Botany Specialization in Forest Economy), Ph.D. in Ethno-Botany

**Academic & Research Interests:** Natural Resource Management special reference to Biodiversity conservation, Urban Forestry and urban Environment, Management of NTFPs and Medicinal Plants, Sustainable Forest Management, Forest Certification, Community Forestry, Forest based livelihood, Agroforestry, Forest Governance.

### **Industry-Society Interface (Project/Consultancy/ Training Programmes already undertaken)**

#### **a. Research project completed and ongoing as Principal Investigator :**

22 externally sponsored Research Projects ongoing / completed.

#### **b. Consultancy work done: Consultancy Project Completed/Ongoing**

**2009-2010 "Monitoring of Integrated Natural Resources Management and Poverty Reduction Project in Haryana" funded by JICA, Sponsored by Haryana Forest Department (Team Member).**

**2008 Consultant for "ToT on Development of Mahua Based Microenterprise and Product Diversification" funded by TRIFED, New Delhi (completed).**

**2007 National Consultant on NTFP and Forest based Microenterprise and Livelihood Operational Strategy for 2<sup>nd</sup> phase of MPRLP funded by DFID associated with Enterplan Ltd., U. K. Completed report submitted (May, 2007)**

**2007 National Consultant for "NTFP Policy and Communication Consultancy" FRR – DFID Forestry Sector Planning Project, Govt. of Orissa.**

**2006 National Consultant on NTFP for the project MP Rural Livelihood, funded by DFID associated with Enterplan Limited, U.K. (Completed, report submitted Sept 2006).**

**2006 Consultancy Project on "Monitoring and Evaluation of Simlipal Biosphere Reserve Programme" sponsored by Directorate, Similipal biosphere Reserve, Orissa forest Department, Baripada, Orissa. (Completed 2007) (Team Member) April- September.**

**2006 Consultancy Project on socio-economic survey of Similipal Biosphere Reserve under Central Plan**, sponsored by Directorate, Similipal biosphere Reserve, Orissa forest Department, Baripada, Orissa. (Completed 2007) (Team Member) April- September.

**2006 Technical Study on Impact Assessment of Gramin Vikas Trust Funded Challenge fund Program for Livelihood Enhancement** June, 2006, through GVT, DFID sponsored Project. (Team Leader)

**2006** The consultancy Projects on the topic **"Monitoring and Evaluation of the Medicinal Plants Projects"** June 2006, Sponsored by National Medicinal Plants Board (NMPB), New Delhi. (Team Leader)

GoI under MoH&FW Department of AYUSH created NMPB in the year 2000 so far they had sanctioned 1200 projects for commercial and promotional schemes, the study developed the mechanism to understand the impact created under these schemes in seven states of India (MP, CG, Orissa, Rajasthan, Gujarat, Jharkhand and Maharashtra).

**2004 Participatory Evaluation of Integrated Rural Project Phase-II**, of CEVA sponsored by Karl Kubel Institute, Germany, 2003-04, (Team Member) Evaluation of rural development activities implemented by NGOs undertaken in a block of Raisen district of Madhya Pradesh

**2000 Curriculum and Training material development on Non Wood Forest Products Management** for The Central Forestry Vocational Technical School no.1 (VOCTECH 1), Lang son Province, Vietnam (December 2000)

12 modules were developed on NWFP for graduate and post graduate level, contact hours, field visits and laboratory activities were given along with detail references with assignment topics.

**2000 Mid-term evaluation of M.P. Forestry Project (World Bank)**, Madhya Pradesh Forest Department 1999-2000. (Team Member)

Process documentation methodology was adopted to understand the impact of MP forestry project, particularly JFM was focused. 16 district about 90 JFMCs were visited and studied.

**1998 Review of TISCOs Efforts of Plantation and Rehabilitation of Wastelands for TISCO**, Jamshedpur, Bihar (1997-98). (Team Leader)

The effort of TISCO's Corporate Social Responsibility was studied. The technical aspects of plantation in the wastelands areas in business location of TISCO were studied in Jharkhand and Orissa state and suitable recommendation were given for further improvement.

**1997 Forestry Development Communication project** for the district Jhabua, M.P. sponsored by ISRO, Ahmedabad 1997. (Project Member)

**1996 Five years Block planning for Badwani Block under Gandhi Block** Scheme sponsored by Department & Rural Development, Govt. of Madhya Pradesh 1996 (Team Member).

**c. Training/Workshop Organized ( International and National)**

- i. International workshop on **"Making small enterprise work better for social justice in forestry"** organized by International Centre for community Forestry Centre (ICCF) and IIED, UK at IIFM during 4-7 December, 2007 under FGLG.
- ii. **3 weeks International training** programme on **Sustainable NTFP Member for Rural Development** from November 6-24, 2000 organized by International Centre for Community Forestry (ICCF) at IIFM in collaboration with Rural Development Centre, IIT, Kharagpur.
- iii. **3 weeks International training** programme on **Sustainable NTFP Member for Rural Development** from November 26-13 December, 2000 organized by International Centre for Community Forestry (IICF) at IIFM in collaboration with Rural Development Centre, IIT, Kharagpur.
- iv. **3 weeks International training** Programme on **Participatory Forest Resource Assessment and Planning (PFRAP)** as Programme Director in the year 1998 and 1999 participated by Participants from 13 countries 46 in Number.
- v. Writing workshop on **"Local Initiatives in Nature Resource Management"** organized in 1997, sponsored by FTTP/FAO at IIFM, Bhopal
- vi. Organised Workshop on **"Sustainable NTFP Management"** at IIFM, Bhopal on Nov. 27-30, 1999, sponsored by FTTP/FAO, MPMFP Federation, Madhya Pradesh State Forest Department
- vii. Organized **67 one week National Training Programme (Management Development Programme) (fee based and sponsored)** on various subjects of for foresters, NGO staff academician and Industry in different subjects related to:

- a. Forestry/sustainable forest management
- b. Participatory methods in NRM
- c. NTFPs and rural livelihoods,
- d. Sustainable NTFP Management and Micro enterprise development
- e. Medicinal plants cultivation, conservation and trade,
- f. Agro- forestry and rural development,
- g. JFM and Micro planning etc.
- h. Eco –restoration of Mangroves and Local livelihood
- i. Bio- Energy Management

**Professional Vision:** Incorporate academic learning into quality teaching and research for societal change through better policy and governance to contribute for the livelihood improvement adopting better decision making at different level.

**Action Plan:**

- a) Develop innovative curriculum for the teaching and professional training
- b) Action research through interdisciplinary team of expertise and translate academic learning through best possible communication tool.
- c) Produce dedicated team of Ph.D scholars for authentic research work to contribute for the gap area in natural resource management.
- d) Linking industry and policy making body with academic organization at national and international level.

**Areas of Research, Development and Consultancy:**

***Area in which consultancy can be offered:***

- a) Forest Certification
- b) Training and Capacity Building in Natural Resource Management Sector
- c) Environmental Impact Assessment - in relation to Biodiversity Conservation.
- d) Urban Forestry and Landscape Planning.

***Areas in which Training Programme can be offered:***

- a) Sustainable management of non-timber forest product management
- b) Management of urban green-space planning
- c) Management of medicinal plant resources
- d) Forest governance, livelihood and policy orientation.

***Areas in which Projects can be undertaken:***

- a) Revival of community based forest management in Central India
- b) Sustainable harvesting of non-timber forest product and certification
- c) Rural migration vs. urban green-space management for Delhi and Jaipur City

**Future Research Plans:**

- a) Develop major project on biodiversity conservation particularly in the area of non-timber forest product management including forest certification.
- b) Research on urban green-space management and livelihood to meet the challenges in urban areas.
- c) Revival of community based common property resource management example forest and pasture land including forest governance policy research.

**Future Consultancy Plans:**

- a) Training and capability building in the field of Natural Resource Management for the senior level NRM professional in Government Sector and for the industry.
- b) Consultancy in reference to Greening India Programme and for Biodiversity Conservation approaches with MoEF and livelihood projects.
- c) Environmental Impact Assessment in relation to Biodiversity Conservation.

**Dr. (Mrs.) Amarjeet Kaur**

M.Sc., Ph.D. (H.A.U.) (Specialisation: Environmental Biotechnology)

**Academic & Research Interests:** Remote Sensing and GIS. Her areas of specialization are application of Remote Sensing Technology in Environmental Management, Disaster Management and Environmental Biotechnology. She has more than 20 years of experience in research and teaching.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** She has worked as Principal/Co-Principal Investigator of various International/National Projects related to Environment Management. She has visited different countries like USA., UK, Thailand and Japan in connection with Study Exchange Programme and Conferences. She is also involved in preparation of Environmental Management Plan of Delhi using Remote Sensing Technology and GIS. Prof. Kaur is also the Director, Centre for Disaster Management Studies.

**PROF. J.K. GARG**Professor; Addl. Charge: Director, Centre for Disaster Management Studies  
Ph.D (specialization: Wetlands), M.Phil (Env. Science), M.Sc (Botany)

**Academic & Research Interests:** Wetland conservation, Environmental applications of Geomatics, Environmental and natural hazards (landslides, forest fire, earthquakes) hazard assessment, Climate change & Ecosystem response, EIA

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]**

**I List of Projects carried out individually as principal investigator at GGSIP University**

S.No.	Project Title	Funding Agency	Year
1	Remote Sensing & GIS based input for regularization of unauthorized colonies in Delhi	Department of Urban Development, Govt. of NCT Delhi	2008 onwards -

**(b) At Space applications Centre, ISRO**

S.No.	Project Title	Funding Agency	Year
2	National Wetland Inventory and Assessment	Ministry of Environment & Forests	2007 to 2008 (Jan.)
3	Wetland Biodiversity Conservation	Department of Space	2004 to 2008
4	Inventory Hotspot - Riverine Wetlands and Coalpit Head	Department of Space	2005 to 2008
5	Wetland Information System - Loktak	Ministry of Environment & Forests	2000 to 2003
6	Wetland Information System - West Bangal	Ministry of Environment & Forests	2000 to 2003
7	Himalaya Ecosystem-Alaknanda Valley Project	Ministry of Environment & Forests	2001 to 2004

8	Nation-wide Wetland Mapping	Ministry of Environment & Forests	1990 to 1995
9	Yamuna Action Plan	Ministry of Environment & Forests	1992 to 1993
10	Inland Aquaculture Site Selection	Ministry of Agriculture	1989 to 1991
11	Environmental Appraisal of Multi Purpose River Vally Projects – TEHRI	Department of Space	1992 t0 1995
12	Environmental Impact of Mining and Thermal Power Generation	Ministry of Environment & Forests	1985 to 1989

**Professional Vision :** Establishment of Centre of Studies in Geomatics & Applications, Natural Resources Management, Climate change, Earth Sciences, Urban studies, Water Resources Management .

**Action Plan: Establishment of**

- Centre for Geomatics Applications
- Centre for Wetland Ecosystems Studies and **strengthening of**
- Centre for Disaster Management Studies

**Areas of Research, Development and Consultancy:** Wetland conservation and Management, Landscape ecology, Disaster Management: natural hazards landslides, Forest fire, Regional EIA,.

**Future Research Plans:** Climate change and ecosystem dynamics, Wetland Biodiversity Conservators, Natural hazards and development, Urban Environment

**Future Consultancy Plans:** Wetland conservation and management, Landscape ecology, Regional EIS, Urban Studies, Natural hazards in mountainous regions

**Prof. S. M. Mustafa Ali Khan**

PhD in Environmental Engineering, Dundee (UK), M.E. (Environmental Engineering), IIT Roorkee, B.Sc. Engineering (Civil) AMU, India

**Academic & Research Interests:**

**Research:** 1. Solid-liquid separation technology for water and wastewater treatment

2. Water quality modeling
3. Wastewater reuse
4. Operation and management of water and wastewater treatment plants

**Teaching:** Course taught at UG and PG level

**PG level:** 1. Water Resources, treatment and supply  
2. Wastewater treatment

- UG level:**
1. Ecology and Environment
  2. Alternate energy resources
  3. Fundamentals of Environmental Engineering

**Industry-Society Interface (Project/Consultancy/ Training Programmes already undertaken):** Undertaken an International Postgraduate training Program of Assessment and Management of Environmental Pollution from Air, Soil, and Water from Center for Environmental Sanitation, State university of Ghent, Belgium. The program was informative which include lectures, seminars, industrial and site visits covering vast curriculum.

In this direction my aim would be to provide the industry interface where students can hone their management skills and bridge the theory - practice gap, by trying to build a broad connection to local industry during their dissertation / project work with full collaboration and corporation.

**Professional Vision:** To prepare students for global society through innovative use of technology, in research and teaching and through curriculum innovation and program development.

**Action Plan:** Research on learning

1. By Organizing workshop
2. By Web resources
3. By Evaluation and research

**Areas of Research, Development and Consultancy:**

***Areas in which consultancy can be offered:***

Evaluation of the performance of effluent treatment plant and emission control systems installed by the industrial enterprises for compliance of environmental laws.

***Areas in which Training Programme can be offered:***

- Water resource and water cycle in the changing environment
- Technology for sustainability

***Areas in which Projects can be undertaken:***

- Use of indigenous material for the treatment of water / wastewater
- Quantification of methane from Delhi wetlands.

### **Future Research Plans:**

- Water resources management
- River linkage
- Irrigation canals
- Rain water harvesting and ground water recharge
- Utilization of seawater

### **Future Consultancy Plans:**

- Wastewater treatment and reuse.
- Environmental Auditing
- Reuse of treated water to achieve zero level discharge
- Water conservation practices
- Air and wastewater monitoring

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## **ASSOCIATE PROFESSOR**

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### **Dr. N. C. Gupta**

M. Sc. (Physics), M. Phil (Energy and Environment), Ph. D (Energy and Environment Systems from JNU)

**Academic & Research Interests:** Instructed various courses for last 12 years to M. Sc (EM), B. Tech & M. Tech (Chemical Technology) & MBA (Disaster Management). Areas of research interest are Environmental Pollution, Energy & Environment Urban Air Pollution & Climate Change

**Industry Society Interface** : Project of Larsen & Toubro of Delhi International Air Port Limited was completed on Efficiency and Efficacy of Air pollution system.

### **Consultancy Projects/Technical Assistance for Industries Undertaken:**

Projects of IPGCL, NTPC and other small scale industries were undertaken to provide technical assistance and adequacy on Emission Control System (ECS) and analysis of boiler water discharge and ash Dyke wastewater from thermal power plants located in Delhi.

Co-ordinator for the workshop on clean production technology on 10<sup>th</sup> April 2004 with school of chemical technology. Workshop was addressed by Director General National Productivity Council and delegates from the industry.

*Institutional consultancy work for Indraprastha Power Generation Company Limited and Pragati Power Generation Co. Limited for water Quality testing, Environmental assessment and monitoring was completed as co-consultant of the project.*

Co-ordinated 3 days exhibition on eco-meet between 27<sup>th</sup> to 29<sup>th</sup> Feb, 2004 at national Bal Bhawan.

Interacting with the industry and social organizations working in the field of environment for the placement of the students in the capacity of placement Co-ordinator for the school for last 10 years

Acted as the co-ordinator for the seminar on Social Auditing of Environmental law in India in collaboration with the school of law and legal studies in Feb 2002.

Co-ordinator for integrated training programme for advanced instrumentation system for the technical staff of the industries in 2001.

Member of organizing committee of International congress on environmental research (ICER-2010) held in Mauritius in 2010.

**Professional Vision:** Although the school is running two masters programmes, but the school can plan to introduce some more professional courses in addition to the M. Sc. M. Tech degree in Geo-informatics can be introduced seeing at the infrastructure available in the department and the competence of the faculty. The school can develop the core areas in energy and global climate change research.

**Action Plan:** The M. Tech Programme in Geo-informatics can be introduced by 2012. The research can be undertaken in the areas of urban air pollution, Impact of climate change on agriculture and role of aerosols in environmental pollution.

#### **Areas of Research, Development and Consultancy:**

- Consultancy can be undertaken for wastewater management and for the emission control system of Industries. The same can be offered for the preparation of technical adequacy reports for small scale industries. Consultancy can also be offered to coal based thermal power plants for the proper management of their effluents.
- Training programmes can be organized in the area of pollution control, issues and systems for the Industry persons. Air pollution management and monitoring in the thermal power stations as a training module for engineers/managers and senior staff of thermal power industry can also be undertaken.
- The projects can be undertaken in the areas of green house gasses emissions from rice cropping system.
- Aerosol and air pollution monitoring in the urban environment and in the areas of impacts of climate change related areas.

#### **Future Research Plans:**

The future research plans are to work in the areas of aerosol and environment, climate change, urban air environment and role of Green house gasses from rice cropping system.

#### **Future Consultancy Plans:**

The plans are to undertake the consultancy work in the areas of Environmental Pollution including air and water pollution from industries, EIA, Risk analysis, and Environmental problems in thermal power stations.

**Dr.Rita Singh**

M. Sc. (Zoology), D.Phil

**Academic and Research Interests:** Teaching; Morphology, Polynology, Palcobotany of Archaegoniatae (Bryophyto, Ptendoplyta, Gymnosпам) and Augioperus Reproductive Biology and Ethonoecology, Phylogenetics.

**Industry-society Interface (Projects/Consultancy/Training Programme already undertaken):**

- Investiation of Indian Gymnoepermus, Cycads & Ephedra in "All India Coordination Project on Texonomy", (under the aegies of CBD, amd GTI funded by MoEF, GOI (2000-conty)
- Independent Project awarded to Investigate, Gymnosperous of North East India Entitled= Status, Survey and Conservation Plans of cycas pectinata complex of North Bank Landscape.

**Professional Vision:** "A small group of thoughtful committed citizens can change the world, Indeed it's the only thing that ever has" (to save the Biodiversity for future generations of human kind).

**Action Plan:** To train world class professionals in the university so that they can address the issues and provide appropriate solutions at National and International Platform.

By critical ecosystem Partnership Fund [CEPF] and Mc Arthur Foundation (USA) and World Bank (2008-2011)

**Areas of Research, Development and Consultancy:**

- Conservation Awareness programmes to school going students/kids, Professionals, Villageers for insites and ex-sites conservation of Flora & Fabua.
- Biodiversity and related Fields

**Future Research Plans:**

To learn the technique for National reputed institutions like Indian Institution of Sciences. This will help me in understanding the process of evolution which works at the molecular level o facilitate and help the conservation professionals in the field.

**Dr Varun Joshi**

M.Sc. (Geology), Ph.D.

**Academic & Research Interests:** Environmental Geology, Climate Change, Watershed and Disaster Management

**Industry-Society Interface (Project/Consultancy/ Training Programmes already undertaken)**

**At GB Pant Institute of Himalayan Environment & Development : 17 in number. Consultancy Undertaken (As team member)**

1. Training for SWAJAL workers about spring recharge. Swajal Project UA Govt.
2. Spring Sanctuary Development. Swajal Project UA Govt.
3. Catchment Area Conservation and Management. Swajal Project UA Govt.

**Professional Vision:** Develop skills in action oriented research like conservation of water, landslide/hazard mitigation, climate change and disaster management

**Areas of Research, Development and Consultancy:**

- Watershed management, Water resources, Environment Impact Assessment, ]Natural Hazard, Land Use Change, Natural Resources,
- Disaster Management; Water Resources Development
- Landslide/Hazard Studies, Climate Change and Glaciology, Land Use Changes

**Future Research Plans:**

- i. Research on landslide hazard, vulnerability and risk assessment using field investigations and modern techniques. Mitigation and management of landslides.
- ii. Monitoring of water resources of in Himalayas with special reference to spring discharge. Rainfall-water resource relation
- iii. Glacial melt hydrometry, sediment loss and relation with climatic parameters.
- iv. Relation of land use changes-water discharge-population  
Water resources development in Delhi

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**ASSISTANT PROFESSORS**

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**Dr. Kiranmay Sarma**

Ph.D.

**Academic & Research Interests:** Application of remote sensing and GIS in natural resources management, forest inventory mapping, wildlife conservation, biodiversity and hazard studies.

**Professional Vision:** To work in selected Biosphere Reserves of India for the management and conservation purposes.

**Future Research Plans:** Assessment of livelihood activities of the fringe villages and its impact on the health of Biosphere Reserve (Panchmari or Rann of Kutchh)

**Areas of Research, Development and Consultancy:**

Geospatial Technology and its applications in the fields of natural resources management and disaster management

**Dr. Anshu Gupta**

M. Sc. (Chemistry), Ph.D. (Biotechnology), IIT

**Academic and research Interests:** Environmental Chemistry and Biotechnology

**Industry-society Interface (Projects/Consultancy/Training Programme already undertaken):**

**At GGSIPU University, Delhi**

Principal Investigator, TRIFED, under the Ministry of Tribal affairs, Govt. of India funded project, "Solid state fermentation processes for utilization of forest by-product: Production of Industrial enzymes", 2008-2011, Amount: 16.62 Lakhs

**At IIT Delhi**

Research Associate (CSIR)

Project: Molecular characterization and biotechnological applications of an organic solvent stable protease from a solvent tolerant bacterium (CSIR funded project); 2007.

**Professional Vision:** To develop students and researchers skilled in the area of environmental biotechnology including water analysis and wastewater treatment, solid waste management, bioremediation and industrial pollution control.

**Action Plan:** Introduction of new courses/ practicals and improvement of existing courses to deal with latest developments and technologies. To develop facilities and generate resources by taking research projects; initiation has been taken by undertaking a TRIFED funded research Project.

**Areas of Research, Development & Consultancy Plans:  
Environmental Biotechnology.**

Consultancy can be given in specific areas related to Environmental Chemistry and microbiology

***Training Programme can be offered***

Isolation/ purification of microbes, Microbial enzyme production and characterization, analysis of physico chemical & biological parameters of water.

**Future Research Plans:**

To conduct research in the field of environmental biotechnology involving

- Bioremediation of industrial pollutants/wastewater.
- Production, characterization and applications of useful enzymes.

**Dr Deeksha Katyal**

Ph.D (Environmental Engineering)

**Academic and Research interests:** Advanced analytical Instrumentation, Environmental modeling, Environmental statistics, Index mapping, Environmental contaminant analysis.

**Industry -society interface:**

Projects undertaken :

1. TITLE OF THE PROJECT: "SPME\_HPLC\_UV ANALYSIS OF ENDOCRINE DISRUPTING USING FIBRES DEVELOED BY SOL-GEL MATRIX".  
Reference no: 80(0063/07/EMR-1), Duration- 3 years, CSIR, India-12 lakhs  
In collaboration with Dr Ashok malik, Punjabi university , Patiala
2. TITLE OF THE PROJECT: "GROUNDWATER VULNERABILITY ASSESSMENT FOR PESTICIDES IN DELHI REGION USING INDEX MAPPING". The project has been submitted to UGC for funding.

**Professional Vision:** The environmental arena shall be the most sought after area in coming years. With the infrastructure available to the department and interdisciplinary expertise available, our department holds the potential of becoming the paramount one.

**Action plan:** I am currently coordinating the research with the rest of my peers and working towards joint project proposals. We discuss the modalities where the basic programs like statistics and environmental modeling can be clubbed with Environmental geology, GIS , Biodiversity etc.

**Areas of Research, Development and Consultancy:**

**Areas in which consultancy can be given:**

- The standard operating procedures and various applications in Analytical studies.
- For quality assessment, the generic index mapping technique along with geostatistical models can be formulated for various zones.
- Trace metal and heavy metal analysis in various matrices including food and water can be offered.

**Proposal for the training program:**

- Two or three weeks training on the working and applications of various instruments can be imparted.

**Proposal for the projects :**

- Effect of fertilizers and pesticides on ground water contamination

**Future research plans:**

The multidisciplinary work can be extended to areas like:

- Standardization of the extraction procedure and instrumental conditions for the analysis of various contaminants content in various matrices
- Groundwater and surface water quality analysis, indexing and assessment.
- Geospatial and modeling analysis of vulnerable areas.

**Future consultancy plan:**

- Various analytical instruments and their usage for dry and wet analysis.
- Techniques for index mapping of water
- Physio- chemical analysis of various contaminants of food and water.

**Dr. Sanjay K Das**

M. Sc. (Zoology), Ph.D. Zoology (Wildlife Biology)

**Academic and Research Interests:** Animal Biosystematics and Conservation

**Professional Vision:** Biosystematics study to understand various problems related to Biodiversity Conservation

**Action Plan:** Systematically research work in the field of Biosystematics.

**Areas of Research, Development and Consultancy:**

- Species Inventory Spiders, Amphibia, Reptilia, Aves and Mammalis) and Threat Value Assessment useful for EIA studies.
- Biosystematics and Biodiversity Conservation.
- Project can be undertaken in the field of species Inventory and biodiversity Assessment, Conservation of Rare, endangered and Threatened Species.

**Future Research Plans:** Biosystematics study and its application in Biodiversity Conservation.

**Future Consultancy Plans:** Species Inventory (Spiders, Amphibia, Reptilia, Aves and Mammalis) useful for EIA Studies.

**Dr. Sumit Dookia**

M. Sc. (Zoology), Ph.D. Zoology (Wildlife Biology)

**Academic and Research Interests:** Teaching and research in the field of large carnivores and herbivores, human- wildlife conflict issues and ecological studies on birds and mammals.

**Professional Vision:** To understand the various problems and issues related to wildlife in India, and conflict resolution measures

**Action Plan:** Systematically research work will be started on endangered species of birds and mammals.

**Areas of Research, Development and Consultancy:**

- Faunal diversity and density studies related to impact assessment studies.
- Training can be offered in the wildlife field data collection and species based research project design and execution.
- Project can be undertaken in the field of biodiversity conservation and human-wildlife interface issues at a landscape level.

**Future Research Plans:** To know the inter and intra-species competition, resource partitioning between sympatric species, Human-wildlife Issues.

**Future Consultancy Plans:** Faunal diversity surveys, useful for EIA studies.

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XXX  
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**6. UNIVERSITY SCHOOL OF HUMANITIES & SOCIAL SCIENCES  
[USH&SS]**

## **UNIVERSITY SCHOOL OF HUMANITIES & SOCIAL SCIENCES (USH&SS)**

An inter-disciplinary school with a difference, USHSS enjoys a unique status within the overall academic scheme of the University. Having a distinct entity as University School of Study, it straddles across other University schools. Through its academic inputs it empowers the learners-scholars-professionals to systematically understand and reflect on social, political, cultural, economic structures and process and hence endeavors to expand their professional vision. The school is committed to provide an interdisciplinary and integrative pedagogical interface to learners so as to nurture them into complete and competent human beings.

**VISION:** To foster integrative inquiry, research and creative professional activities, by uniting faculty and students in acquiring and applying knowledge in clinical, community and professional settings.

**MISSION:** USHSS offers intellectually stimulating courses/programmes that reflect the inter-related nature of the individual disciplines as well as the world around us. To this effect, it offers a plethora of courses to professional students that enhances their understanding of the society and culture in which they live, and enable them to obtain skills that can lead to successful and enriching careers. They are exposed to humanities and social sciences' contexts with a view to equip them with holistic values implicit in technological and professional options; to appreciate their social surroundings; and to communicate effectively.

**PROGRAMMES:** USHSS offers Post Graduate programme in M.A. English and Communication Studies. It is two years modular programmes with the provision to exit after one year with PG Diploma in Communication Studies. It also offers need-based courses in communication-skills and social sciences at graduate and post-graduate levels to various University School(s). It also offers doctoral programme in English language, literature and communication skills.

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### **Professor**

- Dr. Anup Singh Beniwal

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### **Associate Professors/ Reader**

- Dr. Vivek Sachdeva
- Dr. (Mrs.) Manpreet Kaur Kang
- Dr. Ashutosh Mohan

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### **Assistant Professors**

- Dr. Naresh Kr. Vats
- Dr. Chetna Tiwari
- Dr. Rajiv Ranjan Dwivedi
- Dr. (Mrs.) Shuchi Sharma
- Sh. Ritesh Kumar Mishra

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## PROFESSOR

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### **Prof. Anup Singh Beniwal**

Professor & Dean

Ph.D.[English]

**Academic & Research Interests :** Dr, Anup Singh Beniwal, currently Professor and Dean, University School of Humanities and Social Sciences, GGSIP University, Delhi has been teaching English Literature and Communication Studies to undergraduate and post-graduate students at GGSIP University since July -1999. Before that he was with the Department of English, M.D. University, Rohtak from January 1991 to July 1999. His areas of academic and research interest include Indian Writing in English Translation, Cultural and Communication Studies. Himself an avid student of literature, he has been supervising M.Phil and Ph.D research projects for the last 21 years. Apart from authoring two books entitle Representing Partition: History, Violence and Narration, Arun Joshi: The Enigima of Existence, and translating one ,i.e., Contemporary Tribal Issues: Appraisal and Intervention, he has regularly contributed research papers, review articles and translations to prestigious international and national refereed journals, newspapers and magazines. He has also edited Critical Practice, a Literary Journal, as Guest Editor, for the year 2009. Presently Dr. Beniwal also holds additional charge of Dean, University school of Mass Communication and of Director, Student's Welfare. In addition he has also been the Dean of University School of Education form August 2007 to March, 2010.

**Professional Vision:** To resurrect Humanities as professional discipline & thus infuse professional education with human core; in short, to usher in a holistic pedagogical interface between Humanities and extant professional education.

**Action Plan:** By introducing innovative academic and research programme in English Language, Communication Skills and Cultural Studies in the PG and UG levels of the University.

#### **Areas of Research, Development and Consultancy:**

##### ***Areas in which consultancy can be offered:***

- Language and Communication skills
- Cultural Studies

##### ***Areas in which Training Programme can be offered***

- Communication Skills
- Media and Language Interface
- Language and Discourse

##### ***Project can be undertaken in the following areas:***

There is an urgent need to look at the changing dynamics of language, i.e. Language behavior and cultural transformation at the personal and social levels. The study of the problematic can be taken up a research project.

**Future Research Plans:** To do socially and academic relevant research in the areas of (i) Indian Languages and English Literature; (ii) Cultural and Communication Studies in the PG and UG levels of the university.

**Future Consultancy Plans:** To organize need based courses in English Language and Communication Skills for Working Professionals.

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## ASSOCIATE PROFESSORS/ READER

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### **Dr. Vivek Sachdeva**

M.A, Ph.D

**Academic & Research Interests:** Culture Studies, Film Studies, Translation Studies.

**Professional Vision:** To inculcate critical hunting among the students. To teach them of art & literature and its relevance in the present age.

**Action Plan:**

- Organising regular seminars.
- Giving them exposure to other forums of art.
- Organising literacy workshops.

**Areas of Research, Development and Consultancy:** Literature and History.

**Future Research Plans:** Indian Cinema, Literature and Contemporary History with reference to Punjab.

### **Dr. Manpreet Kaur Kang**

Ph.D.[English]

**Academic & Research Interests:** Communication studies, Women's Studies, Literature of the Diaspora, Canadian Literature, American Literature.

**Professional Vision:** To make Teaching and syllabi more effective and practical in professional situations.

**Action Plan:** We are revising the Masters syllabi with this view and are introducing innovative tests and activities.

**Areas of Research, Development and Consultancy:**

- To enhance the communication skills and confidence of professionals
- Communication skills, Language enhancement, Confidence & personality development.

**Future Research Plans:** To focus on environmental literature and ecopedagogy in addition to Canadian and American Studies.

**Dr. Ashutosh Mohan**

M.Phil, Ph.D

**Academic & Research Interests:** Translation and Culture Studies.

**Professional Vision:** I wish I could be a good teacher.

**Action Plan:** I devote my academic endeavors to enhance my capabilities to become a good teacher.

**Future Research Plans:** Travel Studies and Films may hold some research openings in future.

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**ASSISTANT PROFESSOR**

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**Dr. Naresh Kr Vats**

M.A, Ph.D., PG. Diploma in Counseling Psychology

**Academic & Research Interests:** Individual Personality and Society, Media and Communication, communication skills, Cultural Studies.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Conducted Workshops on English Speaking, Stress Management and Self Image Management for students as well as professionals.

**Professional Vision:** To be successful teacher, trainer and guide with holistic and multi disciplinary approach.

**Action Plan:**

- Continuous Self improvement.
- Identifying and motivating the people with right aptitude and attitude.
- Working with proper planning and energy.

**Areas of Research, Development and Consultancy:**

- Soft Skill development
- Psychological Counselling
- Personality Development
- Project can be undertaken in the area- Living with the memories of violence: Narratives of dying generation – it s study on partition refugees.

**Future Research Plans:**

- Living with the memories of violence: Narratives of dying generation
- Haryanavi Literature.
- Popular Cinema: A potent agent of myth and hegemony.

**Future Consultancy Plans:**

- Soft Skill development
- Psychological Counselling
- Personality Development

## **Dr. Chetna Tiwari**

M.A, Ph.D

**Academic & Research Interests:** Indian Writinh in English, British Literature, Critical Theory, Communicaiton Studies, ELT.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Edited Magzines and Proofread several Important writeups (Research Papers, Articles, Academic Documents)

**Professional Vision:** Perfect Teaching, Quality Research & Publication, Quality Contribution in all the departmental administrative and academic activities.

**Action Plan:** Working to the best of my capacity for the improvement in my teaching style and methodology, improvement in the quality of my research and sparing more time for departmental activities like organizing seminars, workshops or any other.

**Areas of Research, Development and Consultancy:**

**Areas of consultancy:** Proofreading, Editing, Advanced Writing, Technical/ Business Writing Skills.

**Areas in which Training Programme can be offered:**

1. Oral Communication
2. Writing Skills
3. Personality Development, Creative Writing, Technical Writing

**Areas in which Projects can be undertaken:**

- Modern and Contemporary Literature and Culture.
- Postcolonial Studies

**Future Research Plans:** Working in all the below mentioned areas: Indian Fiction writing in English, Modern British Literature, Post Colonial Literature ELT.

**Future Consultancy Plans:** Working in all the below mentioned areas:

1. Proofreading
2. Editing
3. Creative writing
4. Technical/Business Writing

## **Dr.Rajiv Ranjan Dwivedi**

M.A (English), B.Ed, Ph.D.

**Academic & Research Interests:** English and Hindi Poetry, Sanskrit Literatuere, Communication skills, Translation Studies, specially form English to Hindi and vice-versa.

**Professional Vision:** To harness my potential as a good teacher counselor and trainer. To contribute to the nation as an academician translator and literature.

**Action Plan:**

- Self cognitive enrichment through steady study and intellectual interface.
- Continuous research pursuits.
- Identifying the students area of interest and motivation them to adopt innovative learning methods as per their individual differences.

**Areas of Research, Development and Consultancy:**

- Short term project
- Short term course development
- Soft skills development
- Project can be undertaken in the following area- Diasporic Disorientation and V.S. Naipual: A Critical study: this is a study on the achievement contribution and possibilities of Diaspora writing in general and V.S. Naipaul in particular.

**Future Research Plans:**

- Diasporic Disorientation and V.S. Naipual: A Critical Study.
- Translational Practices
- A book on 'Scansion, Phonetics, Rhetoric and Literary Terms' all integrated into one.

**Future Consultancy Plans:**

- Short term project
- Short term course development
- Soft skills development

**Dr. Shuchi Sharma**

M.A, Ph.D

**Academic & Research Interests:** Contemporary Indian Theatre, Continental Drama, Communication Studies

**Professional Vision:** To foster integrative inquiry, research and crative professional activities.To encourage students in acquiring and applying knowledge in clinical, community and professional setting.

**Action Plan:**

- Organize regular seminars
- Periodically organizing theatre workshops.
- Introducing integrative theme based learning programmes and workshops.

**Areas of Research, Development and Consultancy:** Theatre and Communication Studies.

**Future Research Plans:**

- Translation of Henrik Ibsen's Plays
- Contemporary Indian Hindi Theatre
- Continental Drama.

**Ritesh Kumar Mishra**

M.A (English), UGC NET.

**Academic & Research Interests:** Open Economy Macroeconomics, International trade & finance, Development Economics, Micro Economics.

**Professional Vision:** To be a successful teacher and trainer. To achieve some understanding of environmental Economics and good command over research tools and techniques in the area of economics.

**Action Plan:**

- Focus on self improvement and discipline
- Emphasis on research and new teaching methods..
- To encourage students to adopt the innovative learning methods.

**Areas of Research, Development and Consultancy:**

- Consulting on Economics development issues. Consulting on financial research involving economic techniques.
- Project can be undertaken in the area of- Chaotic structure and long memory in the capital market and returns predictability.

**Future Research Plans:**

- To carry out research in the area of finance and development economics.
- To publish the research outcome in leading journals.

**Future Consultancy Plans:** Consulting on Economics development issues. Consulting on financial research involving economic techniques.

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**7. UNIVERSITY SCHOOL OF INFORMATION  
TECHNOLOGY [USIT]**

## **UNIVERSITY SCHOOL OF INFORMATION TECHNOLOGY (USIT)**

The university has state of the art labs having in summation more than 100 Pentium machines working on Windows NT/Linux platform. Each lab is fully equipped with requisite software and ideally complements the needs of students and teachers alike. The labs are exemplary in terms of maintenance and upgradability. The labs are categorized as follows:

### **COMPUTER CENTER**

It is the central lab of the School. It is equipped with three distinct domains in order to cater to the needs of not only the students but also the faculty. It comprises of two student domains of 25 nodes each and a separate faculty lab of 10 nodes. This lab has two servers Netfinity 5000 & X200 of IBM. Netfinity 5000 server acts as an IBM DB2 server whereas X200 acts as an Oracle 8i server.

The center is also equipped with a networked high speed line printer and an A3 size laser printer for the relevant need of documentation. A Sun Ultra 60 Machine has been added for high speed computing needs

### **NETWORKING LAB**

Networking Lab has been developed in collaboration with CISCO. This lab is equipped with 20 nodes, 5 routers, 2 switches and hubs. This lab is devoted to router and other network based programming. The Networking lab also has LAN Trainer Kit to simulate implementation of network. This lab also serves the purpose of enabling students to obtain CISCO certification.

### **SOFTWARE ENGINEERING LAB**

This lab was set up to provide practical exposure to software engineering activities. The lab uses Rational Suite Enterprise to conduct design practicals, a 10 license pack of Rational Suite being available for this purpose. Rational Clearcase LT Client, Rational ClearQuest, Rational Pure Coverage, Rational Purify, Rational Quantify, Rational Requisite Pro, Rational Rose Enterprise Edition are available in the lab.

### **SIGNAL PROCESSING LAB**

The Lab has been setup to provide the students with facilities for Advanced Digital Signal Processing.

The lab has 20 nodes which are networked by LAN and has two servers from IBM, xSeries235. Lab has acquired Digital Signal Trainer Kits and DSP Starter Kits from Texas Instruments with the TMS 320C6000 DS Processor. MATLAB software has been provided with various toolboxes for the purpose of design. The main aim of this infrastructure is for design and implementation of Digital Filters.

### **SERVER ROOM & WEB LAB**

The Lab was setup with the aim of integrating the creative and technical skills of the students and to provide the facilities of Internet, Intranet, updation of University Website in the University Campus. The lab is fully equipped with the requisite animation and graphic development tools needed to enhance web interactivity & aesthetics. This lab has in excess of 15 nodes, 6 IBM Netfinity Server, Modems, Routers, Switches, Hubs, CD Writers to facilitate the above mentioned tasks.

### **MULTIMEDIA LAB**

It is a sophisticated lab with two user areas. This lab contains seven high end SGI 330 workstations. It is also equipped with scanners, digital cameras etc. This lab has been setup to train the students in multimedia applications like advertising, 2D and 3D animations, VR etc. This lab is equipped with advanced softwares like MAYA 4 , ANIMO , Combustion.

### **MICROPROCESSOR LAB**

The lab is devoted to study of microprocessors. The lab has 10 nodes used for asm programming and interfacing experiments. The lab is equipped with 8086 microprocessor training kits, 8051 microcontroller kit, bus extension units, Multifunction PCI interface cards and various study modules like 8251, 8253, 8255, 8257. In addition to this EPROM programmers are also available to the students

### **VLSI & EMBEDDED SYSTEM DESIGN LAB**

This Lab has 10 nodes providing excellent facilities for VHDL programming. Softwares include XILINIX 4.1i, Alteras MAX+10.1, Alteras Quartus II ver 1.1, ORCAD Tools, design bundles for CADENCE VHDL Compiler .The Lab has four FPGA programmers. VLSI Lab provides simulators such as ModelSim XE/Starter 5.5b, T-Spice & ModelSim-Altera 5.5b. Facilities of Synthesis tools are also available through Leonardo Spectrum for Altera.

### **ELECTRONICS LAB**

Lab is meant for experiments in Computer Architecture, Switching Theory and Logic Design Electronic Devices & Circuits, Communication Systems and Digital Communication. The lab is fully equipped with CROs, Bread Boards, relevant ICs and different Trainer kits which include Antenna trainer Kit, Digital signal trainer kit among others.

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#### **Professors**

- Dr. B. V. R. Reddy
- Dr. Yogesh Singh
- Dr. Nupur Prakash
- Dr. Navin Rajpal
- Dr. Chandra Shekhar Rai
- Dr. Pravin Chandra

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#### **Associate Professors**

- Dr. (Mrs.) Arvinder Kaur
- Dr. (Ms.) Anjana Gosain

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#### **Assistant Professors**

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- Dr. Bindu Goel
- Dr. R. Rama Kishore
- Sh. Pushpendra Kr. Bharti
- Dr. Amit Prakash Singh
- Sh. Udayan Ghose
- Ms. Anju Saha
- Sh. Anurag Jain
- Sh. Sanjay Kr. Malik
- Dr. Bharti Suri
- Sh. Sartaj Singh Sodhi
- Sh. Rinkaj Goyal

- Sh. Parijat Mathur
- Dr. Ravindra Kr. Purwar
- Sh. Ashish Payal
- Ms. Jyotsna
- Sh. Rameshwar Lal Ujjwal
- Ms. Reena Gupta
- Sh. Maddali Bala Krishna
- Ms. Anuradha Chug
- Shri Rahul Johari
- Ms. Priyanka Bhutani
- Ms. Kamaldeep Kaur
- Dr. Vandana Nath
- Ms. Mansi Jhamb
- Ms. Jaspreeti Singh
- Ms. Ruchi Sehrawat
- Ms. Asna Furqan

**Dr. Navin Rajpal**

Dean, USIT

B.Sc. (Engg.) Electronics & Communication from R.E.C.K., M.tech (CSE) from IIT Delhi, Ph.D. from IIT Delhi

**Academic & Research Interests:** Computer Graphics, Image Processing, Computer Vision Neural Networks, Data Structures, Algorithm Design, Digital Hardware Design, Digital Signal Processing, GIS.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :** I have worked on seven sponsored and two consultancy projects in area of signal processing, Image Processing & GIS at IIT Delhi. Total Research experience in more than eight years at IIT Delhi.

**Professional Vision:** I want to bring USIT to the level of institutes like IIT.

**Action Plan:** To bring USIT to level of Institute like IIT. We have to ensure Academic discipline & Academic standards like that of IIT.

**Areas of Research, Development and Consultancy:** GIS, Computer Graphics & Image Processing.

**Future Research Plans:** I have taken on research scholar recently who will work on area of computer Graphics, Image Processing, Video data compressor, Cryptography etc.

**Future Consultancy Plans:** I want to offer consultancy in area of GIS especially in digitalization of spatial dots like road map etc.

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## PROFESSORS

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### **Prof. B.V. R. Reddy**

B.E , M.Tech, Ph.D. (ECE)

**Academic & Research Interests:** Complete Networks, Mobile & Adhoc Networks, Devices & Circuits.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken]:**

AICTE sponsored two week FDP on “Mobile Wireless Networks”.

**Professional Vision:** To promote technical Education in the field of ICT. Cater to large student Population of NCR Delhi.

**Action Plan:** Already initiated courses on ECE, CSE,IT, MCA. Looking forward to start courses on EEE, Civil, Mechanical Engg. Fields and to start courses on Design, CAD/CAM create centre of Excellence on gaming & Multimedia.

**Areas of Research, Development and Consultancy:**

- Mobile & Adhoc Networking.
- Areas of Mobile & Adhoc Networking.

**Future Research Plans:** In the areas of ECE, Networks both Mobile & Adhoc Networks.

### **Prof. Yogesh Singh**

Ph.D (Computer Engineering) from NIT, Kurukshetra

**Academic & Research Interests:** Software engineering with a special focus on testing, metrics and estimation models.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:**

- Conducted workshop on “Learn how to find software faults before our customers find them”.
- AICTE funded project “Experimentation and development of S/W rel. & complaints measurement techniques (Duration 1993-1996).
- UG funded project “Design & Development of new techniques for software testing ” (2006-2009).

**Professional Vision:**

- To establish software engineering as a discipline at post graduate and undergraduate level.
- To help software industry to produce good quality maintainable software.

**Action Plan:**

- To write books, articles in the emerging field of software engineering.
- To train software developers through workshops on various techniques, models and practices of software engineering.

**Areas of Research, Development and Consultancy:** Software testing, Software metrics, Estimation models.

**Future Research Plans:** To develop models for fault prediction, testability and maintainability, to design techniques for prioritization of test cases, to design techniques for the generation of program slices.

**Future Consultancy Plans:** To organize workshops and training programs for the industry.

**Dr. Nupur Prakash**

B.E (Electronics & Communication), M.Tech (Electronics & Communication), Ph.D (Computer Engg.)

**Academic & Research Interests:** Mobile communication, Artificial Neural Networks and Natural Language Processing, Wireless Networks, Secure Wireless Communications.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken]:**

Nokia University Relations training program to train students in "Mobile Architecture and programming,

MOU with Ericsson India Ltd for web based training of students in Telecom Networks.

**Professional Vision:** IGIT is envisioned to emerge as worldclass Engineering college for girls. The college is envisioned to become a centre of excellence and women's Technical University empowering women of the country with technical knowledge and skills.

**Action Plan:**

- State of art campus, labs and classrooms to be created for importing world class knowledge with modern teaching learning aids
- The teachers are to be encouraged to conduct industry relevant research and follow best practices prevalent in IIT's and IIM's.
- The teachers be allowed to upgrade their knowledge and skills through refresher courses and higher education prestigious institutes.
- To undertake live projects from industry and increase industry institute interaction.
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**Areas of Research, Development and Consultancy:**

- In the area of Mobile application Development
- E-Content development for digital lectures.
- Mobile computing, E-learning tools and portals, Design of multilingual Interfaces.

**Future Research Plans:** To carry out research in the area of M-commerce security issues in wireless networks, Qos in Mobile networks.

**Future Consultancy Plans:**

- In the area of "Mobile Computing' in collaboration with Nokia
- In the area of "E content Development' in collaboration with Adobe India Ltd.

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**PROFESSOR**

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**Dr. C S Rai**

B.E , M.Tech, Ph.D (IT)

**Academic & Research Interests:** Artificial Neural Networks, Signal Processing.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :** Organized Instructor training programmes for CISCO Regional Academy at USIT.

**Professional Vision:** To do research work in the area of Interest.

**Action Plan:** Establishing a state of art, Signal processing and neural Network Lab. Doing and Promoting Research in these areas.

**Areas of Research, Development and Consultancy:**

- Training programmes in CISCO Academy.
- Networking, Signal Processing, Soft computing.

**Future Research Plans:** Adaptive signal Processing, Neural Networks,

**Future Consultancy Plans:** In the area of ‘E content Development’ in collaboration with Adobe India Ltd.

**Dr. Pravin Chandra**

M. Tech, Ph.D

**Academic & Research Interests:** Neural Networks, Information Theory, Systems Theory, DBMS.

**Professional Vision:** Be an applied mathematician.

**Action Plan:** Development of knowledge net of abstract mathematics & its application to real life problems.

**Areas of Research, Development and Consultancy:** System design & optimization, Scientific Computing, Supervised neural networks, Information Theory, Linux, Advanced DBMS, Software development and Neural networks.

**Future Research Plans:** Completion of the work of supervised neural networks, Development of new entropy models & its usage in EM techniques, Biometric (specifically fingerprint analysis/identification)

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## ASSOCIATE PROFESSORS

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### **Dr. Arvinder Kaur**

M.Tech – CSE, Ph.D. (Software Engg.)

**Academic & Research Interests:** Software Engineering, Software Testing, Software Metrics, Software Project Management, Software Requirements & Estimation.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

- Completed 3 years Project on 'Experimentation and Evaluation of Impact of Software Metrics in Object – oriented software on Software quality'.
- Conducted workshop on 'Software Testing'.

**Professional Vision:** To write book on Software Project Management.

**Action Plan:** Content layout is being finalised.

**Areas of Research, Development and Consultancy:**

- Software estimations. Software Testing.
- Software testing, Software Metrics, Empirical work in software Engineering.
- Applied to UGC – Application of machine learning techniques to software engineering.

**Future Research Plans:** Application of Machine learning techniques to software Engg., Application of ACO, BCO in software test case generation.

**Future Consultancy Plans:** Software estimations. Software Testing.

### **Dr. Anjana Gosain**

B.E (Comp Sc. & Engg.), M.Tech (IE),Ph.D. (IT)

**Academic & Research Interests :** Academic Interests include teaching in the area of Data warehousing and Data mining, Software Engg, Software Testing, Databases, Conceptual Modelling, Requirements Engineering, Object-orientation, Programming language like C. My research areas includes Data warehousing and Data mining, Software Engg, Software Testing,

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken]:**

- Delivered a lecture in Police Training Programme on Cyber Crime at USIT in Jul-Aug 2009.
- Invited Talk on soft computing in One day National Seminar at Maharaja Agarsen College of Technology.
- Acted as a University representative for a consultancy assignment to Delhi Govt. for their e-governance Project 2003.

**Professional Vision:** To improve and innovate new teaching methods, further the cause of academic research in the areas of software engineering and look for opportunities for industry collaborations.

**Action Plan:** To incorporate research trends in the course.

**Areas of Research, Development and Consultancy:**

- Consultancy can be provided on the projects in the area of data warehousing, data mining and software projects.
- Training can be given in the area of Data Warehousing & Data Mining, Software Engineering, Software Testing, requirements Engineering.

**Future Research Plans:** Guiding five Ph.D students and four M.Tech students for their thesis work. I plan to publish good research papers in reputed international journals.

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**ASSISTANT PROFESSORS**

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**Dr. Bindu Goel**

B.Tech (Electronics), M.Tech (CTA), Ph.D (IT),

**Academic & Research Interests :** Academic Interests include teaching various subjects Software Engineering subjects, Databases Computer Networks, Network security Programming Language like C++, Introduction to Information Technology to Graduate & Post Graduate students.

My research interests include guiding post graduate and under graduate students for major/minor projects and doctorate students in the area of software engineering another IT Topics of my expertise.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :** Acted as a University Representative for a consultancy assignment of Delhi Govt. for their E-governance Project 2003.

**Professional Vision:** To improve and innovate new teaching methods, further the cause of academic research in the areas of software engineering and look for opportunities for industry collaborations.

**Action Plan:** To work on my vision.

**Areas of Research, Development and Consultancy:**

- The consultancy can be provided on the software projects.
- The training can be given on various IT related topics
- The university projects can be undertaken.

**Future Research Plans:** To guide post graduate and under graduate students for their minor/major projects. Guide doctorate students for the Ph.D.

**Future Consultancy Plans:** Act as a university consultant for IT projects for the USIT.

**Dr. R Rama Kishore**

Ph.D in IT

**Academic & Research Interests:** Exploring in the area of compute graphics and computer animation.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Conducted a one week workshop on “animation through high end 3D MAYA” in 2009 Dec for the faculty who are working in the area of CG.

**Professional Vision:** Imparting the student’s latest research knowledge in the field of computer graphics and animation.

**Action Plan:** Trying to be in touch with industry/workshops to get updated and impart the same to the students.

**Areas of Research, Development and Consultancy:** Training programme of one week on Animation will be planned soon.

Future Research Plans: Continue the research activity in the area of compute graphics (3D polygourd Modelling).

**Pushpendra Singh Bharti**

B.E. (Mechanical Engg.), M.E. (Production Engg.) Ph.D (Mechanical): Thesis submitted

**Academic & Research Interests:** Digital System Design, Embedded System Design, Artificial Neural Network.

**Professional Vision:** To improve and Innovate new teaching methods, further the cause of academic research in the areas of optimization and advanced manufacturing processes and look for opportunities for industry collaborations and sponsored projects.

**Areas of Research, Development and Consultancy:**

- The consultancy can be provided in the area of Electric Discharge machining and optimization.
- Advance manufacturing processes.
- Optimization of advanced manufacturing processes.

**Future Research Plans:** To take some research projects related to my area of interest

**Future Consultancy Plans:** To provide consultancy in the area of Electric Discharge Machining.

**Dr. Amit Prakash Singh**

Ph.D (IT)

**Academic & Research Interests:** Digital System Design, Embedded System Design, Artificial Neural Network.

**Professional Vision:**

- To start a short-term training program on Embedded System Design.
- To take a research project in the area of neural Networks.
- To conduct workshop on Numerical techniques using MATLAB.
- To conduct a National/International Conference/Seminar in the area of Computer science/Information Technology.

**Action Plan:** Planning to conduct short-term course during weekend for professional in the area of Embedded System Design.

**Areas of Research, Development and Consultancy:**

- Consultancy work can be started in the area of Embedded System Design.
- Six months short-term courses can be started in the area of Embedded System Design for young Professional during Weekends
- Two weeks Continuing Education Program can be started in university in Embedded system Design, FPGA based System Design and Neural Networks.
- Artificial Neural Networks
- Embedded System Design
- FPGA based System Design.

**Future Research Plans:** Planning to submit a research project proposal in DST, UGC and AICTE in the area of Neural Networks.

**Dr. Udayan Ghose**

Ph.D, M.Tech (Comp. Sci.)

**Academic & Research Interests:** Soft Computing, Data Mining, Distributed Computing.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

- Attended workshop in National Mission on Education, ERP-ICT at Amritha University.
- Attended Training Programme by Intel at IISC, Bangalore
- Conducted various lectures under USIT-IEEE student branch.

**Professional Vision:** To Impart research based latest knowledge to the students.

**Action Plan:** Maximum interaction with Researchers, Academia & Industry to keep upto date on my field.

**Areas of Research, Development and Consultancy:** Distributed System, Several Information Retrieval.

**Future Research Plans:** To work on secured information retrieval from unstructured data based on information theoretic approach.

**Dr. Anju Saha**

B.E (Comp Sc. & Engg.) , M.Tech (IS), Ph.D.

**Academic & Research Interests:** Software Engineering, Object oriented Software Engineering, Object oriented programming, Software testing.

**Professional Vision:** To incorporate research methodologies in the curriculum.

**Action Plan:** To incorporate current research trends in the curriculum.

**Areas of Research, Development and Consultancy:** Object Oriented Testing

**Future Research Plans:** To guide M.Tech & Ph.D students in the above mentioned areas.

**Mr. Anurag Jain**

M.Tech (IT), Ph.D Pursuing

**Academic & Research Interests:** Cyber Crime, Speech Processing, Operating System

**Professional Vision:** Complete Ph.D (one Year time), Give innovative & inventional knowledge to students.

**Areas of Research, Development and Consultancy:** One week cyber crime training programme, One week Linux administrative training, Speech Processing.

**Future Research Plans:** To complete Ph.D and then carry the same research in future to resolve the shortcomings of recent research in speech processing.

**Future Consultancy Plans:** Live speech processing projects may be taken up from various organisation & agencies.

### **Sanjay Kr Malik**

M.tech (IT)

**Academic & Research Interests:** Academic – Teach subjects like web technologies, DBMS, Introduction to computers etc.

Research: To pursue and extend research in semantic web by publishing research papers in reputed conferences & Journals.

**Professional Vision:** To pursue quality research in semantic web.

**Action Plan:** To publish good research papers in reputed journals like Springer and conferences like IEEE.

**Areas of Research, Development and Consultancy:** Web Technologies.

**Future Research Plans:** To complete Ph.D.

**Future Consultancy Plans:** To get some projects from organisations like DRDO etc after Ph.D Completion.

### **Dr. Bharti Suri**

Ph.D (IT), M.Tech (IT), M.Sc. (Comp. Science)

**Academic & Research Interests:** Academic Interest : Soft Engineering, Software Testing, Software Metrics, Software Project Management, Software Quality Management

Research Interest: Software Testing, Software Quality, Software Metrics.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Co-Investigator of Major Research Project of University Grants Commission entitles "Design and Development of New Method and Techniques for Software Testing" 2006-2009.

**Professional Vision :** To set up collaboration with industries in the fields of software testing as there is a large gap in the theoretical and practical aspects. Both the academics and the industry should work together to improve the quality; reduce the effort an time involved in software maintenance.

**Action Plan:**

- To identify the industries that specifically deals with software testing.
- Set up the meetings at university level and reach at some memorandum.
- Training from both sides (By the faculty to the industry and by the industry to the faculty)
- Involvement of students for on-site research.

**Areas of Research, Development and Consultancy:**

- The areas include software testing, Software Quality and Software Metrics.
- The areas in which training programme can be offered are software testing, software, Project Management and Software Quality.
- The areas in which projects can be undertaken are bio-derived methods in Software testing.

**Future Research Plans:** Applicability of Bio-derived Algorithms in Software Testing Cloud computing in Software Testing.

**Future Consultancy Plans:** Efforts will be made to get consultancy in the field of software testing.

**Sartaj Singh Sodhi**

M.tech (IT)

**Academic & Research Interests:** Neural Networks

**Professional Vision:** To pursue Ph.D & complete it as soon as possible.

**Rinkaj Goyal**

B.E, M.Tech, Pursuing Ph.D.

**Academic & Research Interests:** Applied Artificial intelligence, Multiagent systems, complex and adaptive systems.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

- Coordinator tripartite agreement of TSSATE sun Micro Systems and AICTE.
- Conducted Delhi Police officials training program.
- Coordinator DB2 Training Program.

**Professional Vision:** To impart research based and industry oriented knowledge to participants/audience.

**Action Plan:** Interaction with the scholars working in the area worldwide to get better insight and relevance of subjects delivered.

**Areas of Research, Development and Consultancy:** Multi agent systems Engineering and simulation of complex systems.

**Future Research Plans:** To establish a laboratory to simulate complex and adaptive systems.

**Future Consultancy Plans:** Consultancy to make agent based computing as mainstream commercially viable technology.

**Dr. Ravindra Kr Purwar**

Ph.D (IT)

**Academic & Research Interests:** Image/Video Processing, Pattern Recognition, Database Management System and soft computing.

**Professional Vision:** Pursue research in the domain of image/video processing, Pattern Recognition & Soft computing.

**Action Plan:** Actively involved in research activities in above mentioned areas.

**Areas of Research, Development and Consultancy:**

- Video segmentation and enhancement.
- Video compression and object tracking.
- Video Processing
- Pattern recognition
- Image/Video Processing, Pattern Recognition, Image Indexing.

**Future Research Plans:** Working for post doc fellowships to further carry research in my domain of interest.

**Future Consultancy Plans:** Preparing for getting some research projects with industry, research institutions in collaboration with University.

**Ashish payal**

M.Tech – CSE, MBA-HR, M.Sc.- Applied Physics.

**Academic & Research Interests:** Teaching subjects related to Ad Hoc networks, Sensor Networks, Computer Networks, Research related to Wireless sensor Networks (WSN) & Disaster Management.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :** Three training workshops attended in IIIT Allahabad, IIITM-Gwalior, IIT Delhi

**Professional Vision:** To undertake National & International projects related to WSN & Disaster Management.

**Action Plan:** Submitted one project in UGC.

**Areas of Research, Development and Consultancy:**

- To design & develop WSN for efficient disaster Management.
- To develop MIS for e-governance & HRM, WSN, Ad-Hoc Networks, MIS.
- Application of MIS for e-governance. Application of WSN for disaster management. Application of Neural network in HRM.

**Future Research Plans:** To complete Ph.D in WSN. To make projects for USIT.

**Future Consultancy Plans:** To undertake some WSN, E-governance & disaster Mgt. projects.

**Ms. Jyotsna**

B.E (Comp Sc. & Engg.), M.Tech (IT)

**Academic & Research Interests:** Computer Networking, Video & Image Processing, Algorithms, Soft Computing, Embedded System Designing.

**Professional Vision:** To emerge as an able faculty in the field of information Technology.

**Action Plan:** To impart quality knowledge and do quality work in the field of networking, image and video processing, Algorithm and soft computing.

**Areas of Research, Development and Consultancy:** In the field of Algorithm, Soft computing & Algorithm, In the field of Video & Image processing computer networking, Soft computing & Algorithm.

**Future Research Plans:** In the field of Video & Image processing computer networking, Soft computing & Algorithm.

**Future Consultancy Plans:** In the field of Video & Image processing computer networking, Soft computing & Algorithm.

**R L Ujjwal**

B.Tech, M.Tech, Ph.D Pursuing

**Academic & Research Interests:** Wireless mobile communication Computer Networks, Computer Architecture, Data Structure.

**Professional Vision:** Emphasis on research in area of cellular network and improve the quality of service and utilised the resources efficiently.

**Action Plan:** The design work has completed and will try to find out experimental results and compare with existing system.

**Future Research Plans:** Work on Quality and service in wireless mobile communication.

**Reena Gupta**

B.Tech (CSE), M.Tech (IT),

**Academic & Research Interests:** Networking, Data Structures & Computer Architecture.

**Professional Vision:** To impart quality education.

**Action Plan:** To explain subjects practically.

**Areas of Research, Development and Consultancy:** To give consultancy in the field of Data Structures & Networking.

**Future Research Plans:** To pursue Ph.D in the field of Networking.

**Future Consultancy Plans:** To give consultancy in the field of Data Structures & Networking.

**Ms. Anuradha Chug**

B.Sc. Comp Sci., M.Sc. Comp. Sci., M.Tech (IT), PGDMM

**Academic & Research Interests:** Algorithms, Networks, Software engineering. Data Structure, Architecture, Operating systems.

**Professional Vision:** To contribute in the field of research and Development in computer Science.

**Action Plan:** Trying to get myself registered in Ph.D to pursue my vision.

**Areas of Research, Development and Consultancy:**

- Algorithms, Data Structures, Networks, Architecture, Software Engg.
- All fields relate to computer science and information Technology.
- The various fields of computer science such as algorithms, Networks, Data Structures, Software Engg etc.

**Future Research Plans:** After registering I would continue in the concerned field of computer science.

**Rahul Johari**

M.Tech (IT), MCA, Ph.D Pursuing from Delhi University

**Academic & Research Interests:** Wireless communication, Mobile Computing, Programming Languages.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Attended training programme on Internet & Network Security at AIT Delhi- two week Refresher Course.

**Professional Vision:** To impart training on the latest tools & technologies to B.Tech & M.Tech students.

**Action Plan:** By conducting training programme for them, By providing them exposure to undertake real time projects.

**Areas of Research, Development and Consultancy:** Wireless Communication

**Future Research Plans:** To publish research papers in IEEE and to publish research papers in Journals.

**Future Consultancy Plans:** To try to bring DIT/DST research project.

**Priyanka Bhutani**

B.Tech (IT), M.Tech (IT),

**Academic & Research Interests:** Software Engg. DBMS, Semantic Web, Data Ware housing and Data Mining.

**Professional Vision:** To Contribute to emerging areas of IT.

**Action Plan:** Gaining Knowledge about latest research and applications (Planning) Execution of Research Plans.

**Areas of Research, Development and Consultancy:**

- Applications of Data Mining in Government Sector and health Sector.
- SPSS and SAS Applications
- Building Data Warehouses of Various fields in Society e.g. Health Sector.

**Future Research Plans:** Exploring areas of Data Mining with Applicability of Bio-derived Algorithms in Software Testing Cloud computing in Software Testing.

**Future Consultancy Plans:** Applications of Data Mining in Government Sector and health Sector.

**Kamaldeep Kaur**

B.Tech (Electronics), M.Tech (IT),

**Academic & Research Interests:** Software Quality, Software Engg., Soft computing microprocessors, Computer Architecture.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Putting efforts to obtain a UGC major project

**Professional Vision:**

- To Complete Ph.D in next 3 years
- To publish papers in reputed international journals.
- To improve understand ability of students I my subjects.

**Action Plan:**

- I have applied for a UGC major projects
- Employment of novel teaching aids and techniques.

**Areas of Research, Development and Consultancy:** Projects can be taken in the area of software Quality Improvement.

**Future Research Plans:** To undertake research in "Application of Soft computing techniques to software quality".

**Dr. Vandana Nath**

Ph.D (Electronics), M.Tech (ECE), M.Sc. (Electronics)

**Academic & Research Interests:** Electronic devices & circuits, optical communication, Microwave devices & Circuits, Information theory & Coding.

**Professional Vision:** To become eminent faculty & researcher in the field of Electronics.

**Action Plan:**

- To publish quality research papers in reputed journals.
- To improve teaching methodology by incorporating IT aids.

**Areas of Research, Development and Consultancy:** Project can taken in the area of device & circuit modulation & simulation.

**Future Research Plans:** To guide M.Tech & Ph.D students.

**Ms. Mansi Jhamb**

B.Tech, M.Tech (ECE), Ph.D Pursuing

**Academic & Research Interests:** Low Power Asynchronous Systems VLSI Design, Digital Systems.

**Professional Vision:** To improve Education through Projects and Research.

**Action Plan:** Research through Learning FDP, Workshops, Symposium.

**Areas of Research, Development and Consultancy:**

- Low Power VLSI, Embedded System Design.
- Establishment of Design Centres for merging corporate Academic Interface.

**Future Research Plans:** To develop new Technique for self timed low power systems.

**Future Consultancy Plans:** Collaboration with RND Departments of IC Industry, Setup for Excellence Centres.

**Jaspreeti Singh**

B.Tech (CSE), M.Tech (CSE),

**Academic & Research Interests:** Data warehousing – Quality related concepts in DW.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Projects on contact Management System in InfoPath – 07 and Moss – 2007/03 TCS.

**Professional Vision:** To achieve excellence in the field of Data Warehousing by doing quality research work in this field.

**Action Plan:** I have done research in Data Warehousing by doing M.Tech thesis and I have plans to pursue Ph.D in the same field.

**Areas of Research, Development and Consultancy:** In the field of Data warehousing (Quality & Data warehousing Metrics) and software Testing.

**Future Research Plans:** I have plans to pursue Ph.D in the field of Data Warehousing.

**Future Consultancy Plans:** To give consultancy in the field of data warehousing and software testing.

### **Ruchi Sehrawat**

B.Tech (IT), M.Tech (Software Engg.)

**Academic & Research Interests:** Artificial Intelligence, Neural Networks, Fuzzy Logic and Software Engg.

**Industry – Society Interface [Projects / Consultancy / Training Programmes already undertaken] :**

Human computer Interface [Pattern Matching] with Software development lifecycle model.

**Professional Vision:** To achieve big in the field of Information Technology.

**Action Plan:** To pursue my Ph.D in the field of Artificial Intelligence.

**Areas of Research, Development and Consultancy:**

- To consult students to merge area of neural network with other areas.
- Cryptography, Artificial Intelligence, Neural Networks, Fuzzy Logic.

**Future Research Plans:** To work in the area of Artificial Intelligence and Software Engg.

**Future Consultancy Plans:** To consult in the area of Artificial Intelligence and Neural Networks.

### **Asna Furqan**

B.Tech JMI, M.Tech (ECE), IIT Delhi

**Academic & Research Interests:** Biomedical Image Processing. Study of Non ionizing radiation hazards.

**Professional Vision:** To study and develop biocompatible Engineering systems. To develop technologies which are environment friendly.

**Action Plan:** To form group of students from relevant field and motivate them to do research in the above fields and publish at least one research paper in their area of interest.

**Areas of Research, Development and Consultancy:**

- Training Programme can be offered to telecom professionals for 3G technologies.
- Study of Biohazard caused due to low frequency & high frequency non ionizing radiation.

**Future Research Plans:** Alternate diagnostic techniques in medical imaging. Image Reconstruction techniques.

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**8. UNIVERSITY SCHOOL OF LAW & LEGAL STUDIES [USL&LS]**

## **UNIVERSITY SCHOOL OF LAW AND LEGAL STUDIES (USL&LS)**

**Vision:** University School of Law and Legal Studies envisages advancement of institutional expertise in the area of legal research and education by augmenting academic and professional excellence, developing critical and relentless engagement with legal theory and practice, synergizing law, legal research, legal education and action to further the quest for justice.

**Mission:** University School of Law and Legal Studies aspires to open new vistas in the arena of law, legal studies, theoretical and clinical legal education through an incessant endeavour towards developing academic potential, critical analytical ability, advocacy, counseling and mediation skills so as to fully equip the students with learning which is intellectually stimulating, socially vital and professionally enriching.

**Quality Policy:** To realize its mission, the school finds adherence to the following standards absolutely essential:

- Adoption of multi-disciplinary approach towards law and legal studies so as to develop greater synergy between classroom lectures, conventional professional and alternative practices in law.
- Encourage continuous engagement with and adoption of innovative approaches towards law, legal education, training and legal processes through capacity building of the faculty and facilitating access to advanced academic courses.
- Constant involvement with processes and practice of law in the professional, social and economic arenas of life by encouraging interaction between the institution and those involved in these processes.
- Development of technical, advocacy, communication and research skills not only through taught courses but also through practical training and engagement with the industry, community and the state.
- Expansion of facilities for advanced research in law, introduction of new and vibrant courses and for augmenting the capacity to undertake consultancies and projects with state, national and international agencies, industry etc.

**Distinctiveness:** Established in 2001, USLLS's objective was primarily to run Five Year Integrated Professional Law Course and to serve as an institution of advanced legal studies. It was the first such University Law School established in the vicinity of the Supreme Court, Delhi High Court, various subordinate courts, commissions, tribunals and various monitoring offices of national and international voluntary organizations. Faculty is selected prescribing higher qualification than the University Grants Commission (UGC). Admissions are made on the basis of Common Entrance Test; the intake every year is 60. The school offers LL.M and Ph.D. in law to the students of law as well as those of allied disciplines.

We intend to develop a positive attitude in students and make them realize that the lawyers are an integral part of the system of adjudication, determination of policies and setting up of standards for regulation of various activities through relevant institutions. We, therefore, train them for placements in judiciary, quasi-judicial bodies, regulatory authorities, commissions, voluntary organizations and other sectors, Keeping in view the status of litigation in court system, we offer courses in Alternative Dispute Resolution (ADRs) and Client Counselling and Interviewing. These courses train a lawyer to offer alternative ways of dispute resolution outside the court system.

**Interdisciplinary approach:** The University School of Law and Legal Studies has been enjoying the privilege of genuine academic leadership and interdisciplinary approach getting colour and functional orientation from the activities of the other schools of study at the University Campus: (1) School of Information Technology, (2) School of Biotechnology, (3) School of Environment Management, (4) School of Management Studies, (5) School of Chemical Technology, (6) School of Basic and Applied Science and School of Humanities and Social Sciences.

#### **Important Centres:**

- Legal Aid Centre
- Children and Family Counseling Centre
- Documentation and Internet Connectivity Centre

#### **Community Development Programmes**

- Jail Awareness Programme
- Legal Literacy Campaigns
- Lok Adalats
- Street Plays

Attempt is made to make the thought process not individualistic but oriented to national development. Students are, therefore, encouraged to work on projects like:

- Settlement of Water Disputes
- Law and Coastal Management
- Law and Forests
- Law and the Migrant Populations
- Law and Disaster Management
- Human Rights of Indigenous People
- Petroleum Law
- Law and Mining
- Law on Inter-state Movement of Goods
- Consumer Protection
- Control of Foreign Trade

International understanding is being developed through special courses and programmes on global trends in the areas of:

- Intellectual Property Rights
- International Trade Law

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## **PROFESSORS**

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- Prof. (Mrs.) Suman Gupta (Dean)
- Prof. M. Afzal Wani

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## **ASSOCIATE PROFESSOR**

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- Dr. T.N. Arora

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## **ASSISTANT PROFESSORS**

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- Dr. Deepshikha Aggarwal
- Dr. Queeny Pradhan Singh
- Sh. Anuj Kumar Vaksha
- Dr. Shivani Goswani
- Ms. Upma Gautam
- Dr. Ravindra Pratap
- Dr. Ritu Gupta
- Sh. Rakesh Kumar
- Sh. Ravinder Kumar
- Dr. Kavita Solanki
- Ms. Vandana Singh
- Sh. Gurujit Singh
- Ms. Neelu Mehra
- Dr. Anuradha Hooda (Jha)
- Dr. Aprajita Kashyap

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## **PROFESSOR**

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### **Prof. Suman Gupta**

Dean and Professor  
B.A., LL.B., LLM, Ph.D.

**Academic and Research Interests:** Areas related to Corporate Law, Intellectual Property Law

**Industry – Society interface [Projects/Consultancy/Training Programme already undertaken]:**

- Coordinator, 3-month Basic Legal Education Training Programme for 634 Sub-Inspectors (Prob.) of Delhi Police between August – November 2008
- Coordinator, 3-month Basic Legal Education Training Programme for 385 Sub-Inspectors (Prob.) of Delhi Police between February – May 2010
- Coordinator for ongoing 6-month Basic Legal Education Training Programme for 415 Sub-Inspectors (Prob.) of Delhi Police between March – September 2011.
- Coordinator for Coaching Classes for Judicial / Civil Services Examination for SC / ST / OBC / Minorities etc. since April 2010.

**Professional Vision:** Promote inter disciplinary approach

- To combine theory and practical application of law
- To inculcate an inquiring and critical methodology approach amongst the students
- Linking the legal concerns to technological and socio-economic developments

**Action Plan:** Encourage active participation of students in moot courts, client counseling, lok adalats, quizzes and debates.

- To invite eminent scholars and practitioners of law from the national and international arena.
- To organize conference, workshops and seminars on legal issues
- To facilitate summer internships
- To identify and disseminate avenues for placement of students

**Areas of Research, Development and Consultancy:**

- Corporate Law
- Intellectual Property Law
- Continue imparting Basic Legal Education Training Programme for Sub-Inspectors (Prob.) of Delhi Police.
- Continue holding Coaching Classes for Judicial / Civil Services Examination for SC / ST / OBC / Minorities etc.

**Future Research Plans:** To keep in tune with globalization, expand research in subjects like IPR, Corporate Laws and IT Laws

- Integrate legal research with burning societal and scientific issues

**Future Consultancy Plans:** Develop networks with govt. agencies, Provide inputs to social organizations.

**Prof. M. Afzal Wani**

B.Sc, LL.M, PhD.

**Academic & Research Interests:** (i) Comparative Jurisprudence (ii) Constitutionalism (iii) Law, Society and Development (iv) Justice Delivery System (v) Human Rights.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Conducting Training programme for law teachers, Judicial officers, police officers etc.

**Professional Vision:** To work towards access to justice for all and train law teachers and students for the same.

**Action Plan:** Establishing Documentation and Assistance Centres on Legal Aid at various places in the country, University should assist in establishing at least four Centres.

**Areas of Research, Development and Consultancy:**

- Law & Development
- Indigenous People
- Law Enforcement
- Justice Delivery System

**Future Research Plans:** To conduct Research on comparative legal systems, problems of Minorities and other Human Rights Issues etc.

**Future Consultancy Plans:** Counseling to members of broken families, workers, suffering minorities and underprivileged people.

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## ASSOCIATE PROFESSORS

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**Dr. Tirlok Nath Arora**

LL.M, Ph.D.

**Academic & Research Interests:** Constitutional Law, Administrative Law, Judicial Discipline, Judicial Process

**Additional Information:** With research experience of over two decades, authored a book: *Judicial Strictures Liberty of Judicial Expression and Restraint (2001)* and has published 12 articles. His areas of Interest are: Constitutional Law, Administrative Law and Judicial Process. He has prepared about 2000 research notes for Supreme Court Reporter on various subjects.

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## ASSISTANT PROFESSORS

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**Dr. Deepshikha Agarwal**

M. Sc., M.Phil., Ph. D.

**Academic & Research Interests:** Research in tribal areas, ethnomedical practices (alternative healing systems), study of women, social aspect of crime, law and society.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Orientation programme held at CPDHE in Dec 2006- Jan.2007

**Professional Vision:** Creating an interface between society and professional institutions and managing the friction between technology and society.

**Action Plan:** Take up research projects / conduct empirical studies on relevant social issues and doing impact analyses of certain government policies.

**Areas of Research, Development and Consultancy:** Women studies, impact analysis of education and reservation, customary law, & Law and social change.

**Future Research Plans:** Research in areas of customary law, studying relationship between law and society, juvenile delinquency, tribal studies.

**Dr. Queeny Pradhan**

M.A / M.Phil / PhD

**Academic & Research Interests:** Social and Cultural History in modern India.

**Professional Vision:** To connect the present historical development with the past activities. Need to explore contemporary concerns which have deep roots in the past.

**Action Plan:** Current affairs and discussion around them from a historical perspective.

**Areas of Research, Development and Consultancy:** Heritage, Ecology & habitat-tourism, Eco-tourism and Cultural history with thrust upon environment and urban development.

**Future Research Plans:** Comparative trends in developmental histories of the world with focus on urban-ecological concerns.

**Future Consultancy Plans:** Ecological environmental concerns with orientation towards heritage & habitat management, Eco-tourism.

**Mr. Anuj kumar Vaksha**

BA / LLB / LLM

**Academic & Research Interests:** International Investment Law, Constitutional Law of India and Corporate Law.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Disaster Management Law and Policy, Right to Information Act.

**Professional Vision:** To be established as a teacher with skills to deliver seamlessly in the class and to undertake research in the areas of academic interest.

**Action Plan:** Classes to be undertaken with highest goal and commitment and research towards Ph.D.

**Areas of Research, Development and Consultancy:** Consultancy can be offered in the area of International Investment Law, Disaster Management Law and Policy, Right to Information Act.

**Future Research Plans:** Completion of Ph.D and taking up research in the areas of academic interests.

**Dr. Shivani Goswami**

LL.M., PhD

**Academic & Research Interests:** Family Law, Law of Evidence, Poverty & Development.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Orientation course conducted by CPDHE, Delhi University

**Professional Vision:** Justice to be provided to all, & Legal awareness amongst masses, to attend seminars and conferences for enhancement of knowledge and publication of articles.

**Action Plan:** Establishment of proper counseling and legal aid centre and to visit different libraries for research purposes

**Future Research Plans:** Research in areas other than family law.

**Future Consultancy Plans:** Proper counseling to be done so that less homes are broken.

**Ms. Upma Gautam**  
LLB / LLM

**Academic & Research Interests:** Criminal law, human rights, environmental law

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Orientation course conducted by CPDHE Delhi University

**Professional Vision:** To publish research articles in national and international journals as well as present papers in national and international conferences.

**Action Plan:** To go to different libraries, explore the possibility of faculty interaction and exchange programmes in different national schools for more exposure and work more constructively towards the betterment of department.

**Areas of Research, Development and Consultancy:** Criminal Law-Juvenile Delinquency, crimes related to women, Criminology.

**Future Research Plans:** Visit different libraries, write articles and present papers in conferences.

**Future Consultancy Plans:** work with different NGO's and Commissions.

**Dr. Ravindra Pratap**

M.A., L.L.B, L.L.M, M.Phil, PGDA (International Trade Law), Ph.D.

**Academic & Research Interests:** International Trade and Law (WTO Law and Litigation), WTO Law and Litigation.

**Areas of Research, Development and Consultancy:** Public International Law, WTO law and Litigation

**Additional Information:** His areas of interest include Public International law, International Trade Law and Interpretation of Statutes, Intellectual Property Law, International Humanitarian Law, and Land Law.

**Dr. Ritu Gupta**

LL.B, LL.M, Ph.D

**Academic & Research Interests:** Commercial and Corporate Laws, Competition Law, Women related issues, Legal Research and Education, Moot Court etc.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Worked for some time with Ms. Indira Jaisingh, Senior Advocate for drafting rules on Domestic Violence Act.

**Professional Vision:** To attain academic excellence as a law teacher

**Action Plan:** To devote more time to legal research and writing

**Areas of Research, Development and Consultancy:** Competition Law, Women Laws, Banking Laws specially SARFAESI Act (Securitization Act), Commercial Laws, Competition Law, Right to Information (RTI) etc.

**Future Research Plans:** I wish to work on some project related to current issues and scenario of legal education in India and practical legal training. Presently I am working on a paper on the theme of Bhopal Disaster and Law to be presented in an international Conference to be held at National Law Institute University of Bhopal in December, 2009

**Future Consultancy Plans:** I look forward to help corporates with the research work on the areas of my interest and also ready to provide consultancy to government departments and commissions like National Commission for Women, Competition Commission of India etc.

**Mr. Rakesh Kumar**

B.Sc, LLB, LLM

**Academic & Research Interests:** Constitution Law, Administrative Law, Income Tax, Indirect Tax, Election Law. Fiscal Federalism and VAT, Critical Appraisal of Delhi VAT.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Family & child counselling and Legal literacy campaign, Legal Training Programme for Delhi Police Officials.

**Areas of Research, Development and Consultancy:** Income tax and Indirect tax matters- legal advice and strategy, how to do tax planning and minimize tax liability.

**Future Research Plans:** To publish atleast 5 articles on taxation and constitutional law and write a book.

**Future Consultancy Plans:** Legal advice can be offered to public on taxation and legal matters.

**Mr. Ravinder Kumar**

B.Sc, LLM, DCL&M

**Academic & Research Interests:** Interpretation of Statutes, Constitutional Law, Civil Procedure, Evidence Law and Contract Law.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Legal Training programme for Delhi police officers.

**Professional Vision:** Want to conduct legal training in future for training groups.

**Areas of Research, Development and Consultancy:** Legal consultancy – Criminal & family laws, Human Right, Legal Aid; Legal awareness – family and Human Right issues.

**Future Research Plans:** Exploring the status and empowerment for vulnerable groups (especially women, children and SC/ ST), Publish papers on Constitutional Law and Interpretation of Statutes.

**Future Consultancy Plans:** Willing to provide legal consultancy in criminal and family matters.

**Dr. Kavita Solanki**

LL.M. Ph.D

**Academic & Research Interests:** Socio - Legal Study

**Areas of Research, Development and Consultancy:** Environmental Protection and Population Control in India

**Ms. Vandana Singh**

B.sc, LLB, LLM

**Academic & Research Interests:** IPR, Private international law, arbitration, Limitation, Consumer Laws.

**Professional Vision:** Work for legal awareness for all persons accessible to IP University

**Action Plan:** To take classes with highest zeal, search and commitment. To complete my Ph.D.

**Areas of Research, Development and Consultancy:** Consultancy can be offered in the area of IPR and arbitration. International Commercial Arbitration, Geographical Indication.

**Future Research Plans:** I have research plan in the area of IPR and international commercial arbitration but presently my priority is to complete my Ph.D thesis from DU.

**Mr.Gurujit Singh**

LLB / LLM / Pursuing Ph.D from University of Delhi

**Academic & Research Interests:** Intellectual Property Rights, Private International Law, Law & Technology, Competition Laws, Commercial Laws.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Coordinated legal training programme for Delhi Police Officers

**Areas of Research, Development and Consultancy:** International Trade Law, Private International Law, Cyber Laws and Human Rights issues.

**Future Research Plans:** Want to operate specialised cell in collaboration with students to enhance their research capabilities like-cell on intellectual property right laws, etc. And wants to initiate PG Diploma Programme in Cyber Law, Competition Law, IPR Laws and Media Laws.

**Ms. Neelu Mehra**

LLM, Pursuing Ph.D. from Kurukshetra University, Kurukshetra.

**Academic & Research Interests:** Law of Contract, Human Right Law, Environment Law, Law of Torts and Property Law

**Areas of Research, Development and Consultancy:** Right to Pollution-free Environment under Indian Constitution

**Dr. Anuradha Hooda Jha**

Ph. D

**Academic & Research Interests:** Rural Development and Micro Economics.

**Professional Vision:** To work in the area of Micro and Rural Development.

**Action Plan:** For inclusive growth of society in general and rural development in particular.

**Areas of Research, Development and Consultancy:** In the area of Micro-Economics for Inclusive Growth, Infrastructure Development in Rural Area, Micro Economics, Assessment of Demand and Supply, Forecasting Technique, System Planning.

**Future Research Plans:** Micro- economics, Rural Development and projects related to Rural restructuring in SAARC countries.

**Future Consultancy Plans:** Based on demand and supply of the skilled manpower training in the area of rural development techniques/ microeconomic application of different tools for manpower assessment.

**Dr. Aprajita Kashyap**

M.A, M.Phil, Ph.D

**Academic & Research Interests:** Environmental Politics, Federalism, International Relations – Theory and Problems, Indian Government and Politics.

**Professional Vision:** To incorporate the concepts and theories of Political Science into policy making and legal activities.

**Action Plan:** Case - based lectures in contemporary areas.

**Areas of Research, Development and Consultancy:** Relevance of Political system to students of Law; IT & Management; and Mass Communication.

**Future Research Plans:** To pursue Post-Doctoral Research, to suggest more areas of Political Science which have bearing on the legal framework and to acquire projects which are relevant in the interdisciplinary areas of Law and Political Science.

**Future Consultancy Plans:** Consultancy for interest groups and think tanks on public policy initiatives and governance.

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**9. UNIVERSITY SCHOOL OF MANAGEMENT STUDIES  
[USMS]**

## **UNIVERSITY SCHOOL OF MANAGEMENT STUDIES (USMS)**

University School of Management Studies (USMS) is an on-campus school of Guru Gobind Singh Indraprastha University. The school, within a short span of time, has developed itself as a unique and progressive school with its distinct curriculum and innovative teaching methodology. The intellectually stimulating environment at the school provides a nurturing ground for developing competent management professionals in tune with the changing business environment and emerging managerial needs. The school encourages individual growth, team building, extra-curricular activities, industry interaction and a multi-disciplinary study culture. The School is rated A+ in Best B-Schools Survey, 2006 conducted by Business India.

### **School Mission**

"To develop managers with the capability to understand and analyze the dynamic business environment for effective decision-making while maintaining higher domains of professionalism."

Our Driving Values are Innovation, Excellence, Integrity and Transparency.

### **PROFESSORS**

- Prof. Anu Singh Lather (Dean)
- Prof. R.K. Mittal
- Prof. Sanjeev Mittal
- Prof. A.K. Saini
- Prof. Neena Sinha

### **ASSOCIATE PROFESSORS**

- Dr Udita Taneja
- Dr. Vijita S. Aggarwal
- Dr. Meenakshi Handa
- Dr. Shalini Garg
- Dr .Puja Khatri

### **ASSISTANT PROFESSORS**

- Mr. V.K. Wadhwa
- Mr. Sanjay Dhingra
- Mr.Amit Sharma
- Dr. Sanjay Kumar S.
- Dr. Divya Verma Gakhar
- Ms. Deepti Bhaskar
- Dr. Shilpa Jain

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## PROFESSORS

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### **Prof. Anu Singh Lather**

Dean, University School of Management Studies &  
Director, International Affairs

#### **Additional Assignments**

- Chairperson, University Complaints Committee
- Chairperson, Committee Indraprastha Centre for Women Studies
- Director, Indraprastha Colloquium
- Editor, U-Focus (A Tri-annual Newsletter of the University)

#### **Academic Qualification:**

MBA, PG Diploma in Human Resource Management, M.A. (Psychology), Ph.D.

**Areas of Academic and Research Interests:** Organizational Behavior, Human Resource Management, Management of Technology Innovation and Change, Business Communication, Organizational Development, Research Methodology and Statistics and Women Issues.

#### **Industry – Society Interface [Projects / Consultancy / Training Programme already undertaken]:**

- Project undertaken and completed on Indian Innovators funded by Ministry of Science & Technology under Technopreneur Promotion Programme (TePP) (2008).
- Presently doing another project on Indian Innovators funded by Ministry of Science & Technology under Technopreneur Promotion Programme (TePP).

#### **Training Programmes Conducted in India and Abroad**

- Conducted Training Programmes at various Public Sector Undertakings, MNCs and Govt. undertakings

#### **Areas of Focus of Training Programmes**

Team Building, Transactional Analysis, Leadership Training, Managing Talent, High Potential and High Leadership, Issues of Strategic HRM, Discovering Hidden Potential for Organizational Effectiveness, Developing Communication Skills, Learning to Negotiation, Developing Presentation Skills, Grooming Future Managers, Performance Management, Roadmap to Success, Behavioural Testing and Counseling workshops, Developing Organizational Effectiveness through Personal Effectiveness, Developing Interpersonal Relationships for Raising Effective Teams, Stress Management, Time Management etc. in the following companies.

**Professional Vision:** To establish myself as a professional in the area of Human Resource Management and Organizational Development by promoting focus on research and development activities, consultancy, community outreach initiatives using innovating techniques, supporting research based teaching and aligning with industry for better industry academia movement and interaction for academic growth.

**Action Plan:**

- To develop Centre of Excellence for Organizational Development (O.D.) in University School of Management Studies in partnership with the Industry.
- Have already started Basic and Advance Certificate Course in Behavioural Testing and Counseling for working professionals on weekend basis in University School of Management Studies.
- To start Post Graduate Diploma in Behavioural Testing and Training for Industry Professionals.
- Extend O.D. activities and expertise of Behavioural Testing for the purpose of recruitment, selection, placements, promotions and activities related to Human Resource Development.
- To undertake relevant research projects in collaboration with Public Sector Undertakings, Government Undertakings and Business Houses.

**Future Research Plan:**

- To complete the TePP project undertaken from Ministry of Science & Technology.
- Have already applied for Sponsored Projects from University Grants Commission (UGC) in the area of Sustainability and Organizational Development.
- Supervising Ph.D. Scholars in the area of my specialization
- Taking up research projects in the area of Women Issues: Empowerment, Gender Sensitization and creating equal opportunities

**Future Consultancy Plan:*****Consultancy can be offered in the following areas***

- Initiating Change and Helping the Organization to become Learning Organizations
- How to Retain the Best Employee
- How to Engage Employees by Developing Psychological Contract
- Handling Employee Absenteeism
- Handling Erroneous Employees
- Encashing on Workforce Diversity
- Handling Creativity and Innovation
- Human Resource Issues in Real Estate Sector
- Women Empowerment and Gender Sensitization
- Developing Gender Sensitization
- Empowering Women at Workplace

**Prof. R. K. Mittal**

M.A.(Economics), M.Phil., MBA, Ph.D

Areas of Academic and Research Interests: Managerial Economics, Banking and Financial Institutions and Economic Environment of Business are some of the areas of his interest in teaching and research.

Additional Information: Dr Mittal is an educationist and an economist to the core. He brings with him the rich 19 years of experience in teaching, research and administration. He has held numerous academic and administrative positions in prestigious educational institutions. He had been Head of Department of Business Economics at Guru Jambheshwar University, Hissar and Dean of School of Management Studies, School of Humanities and Social Sciences, School of Education of Guru Gobind Singh Indraprastha University, Delhi. He has initiated reforms at every level he has worked. He has been responsible for organizing many National Level Conferences, Seminars and Faculty Development Programmes.

Professor Mittal holds a Master's degree in Economics and Business Administration and a Doctorate from Kurukshetra University. He has published scores of articles in many research journals of national and international repute and has guided five PhD theses. He has been a member of various academic bodies of Universities and Educational Institutions. He is also a member of The Editorial Board of Management and Research Journals. He has been recognized for his effort and achievement time and again with honours and kudos. In 2002 he was awarded with the 'Best Teacher Award' by Guru Gobind Singh Indraprastha University.

**Prof. Sanjiv Mittal**

MBA, NCFM, DEM, Ph.D.

**Academic & Research Interests:** Marketing and Finance

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]**

- Completed UGC sponsored major research project titled "Measuring Marketing Productivity in Consumer goods industry" submitted in March 2011.
- Another project applied to UGC in the area of finance titled impact of micro-financing on poverty alleviation in NCR Region.
- Training programmes conducted in the area of Entrepreneurship Development namely One Month Business Skill Development Programme;
- Training programmes for trainers in the area of Entrepreneurship Development sponsored by Department of Science & Technology (DST) and Ministry of MSME.

**Professional Vision:** To make the university a truly global university by carrying out academic activities, research and consultancy in the area of management and developing expertise to help the students manage the organizations in the globe.

**Action Plan:** To conduct research projects, participate in important international conferences, seminars; update oneself by involving in research training, consultancy and teaching.

**Areas of Research, Development and Consultancy:**

- Areas are Entrepreneurship Development, Marketing, Export – Import.
- Training programmes in the area of Entrepreneurship Development, Export – Import Procedures and Documentation and in the area of marketing and sales.
- Projects can be undertaken in the area of Marketing and Finance.

**Future Research Plans:**

- Applied to UGC for sponsoring major research project in the area of Finance titled “Impact of Micro-finance on poverty alleviation in NCR Region”
- Also working on project “Use an application of Social Networking Sites by its users and the help marketers can help in marketing their product on these social networking sites”

**Future Consultancy Plans:**

Planning to offer consultancy in the field of Export Import, Marketing area to exporters in Delhi

Conduct more training programmes in the area of Entrepreneurship Development Programmes and also provide consultancy to entrepreneurs for their problems.

**Prof. A K Saini**

M.Phil (Physics), MCA, MBA, Ph.D

**Academic & Research Interests:** Knowledge Management, Information System & IT systems, Technology & Innovation Management, Health Care Management

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** TEPP Case Studies from DST, Government of India and IT for Medical Professionals

**Professional Vision:** To be a Management Practitioner and Researcher in the field of Information Technology and Management of Technology.

**Action Plan:** Conduct/ Attend Research/FDP/MDP in the field of Interest as stated above

**Areas of Research, Development and Consultancy:** IT training for Health Care Professionals, ECRM in organization, Innovation Culture & Climate of Enterprises. Technology Intelligence, IT Infrastructure Management.

**Future Research Plans:** Technology & Management aspects of Knowledge Management, Green Computing, Information System.

**Future Consultancy Plans:** Innovation Management at Enterprise level, MDP for Health Care Professional in IT area.

**Prof. Neena Sinha**

**Ph.D.**, 1995 (Topic: Impact of Japanese Technology and Capital on Indian Automotive Industry) Faculty of Management Studies, M.L.S. University, Udaipur, India

**M.B.A.**, 1988, First Division, Faculty of Management Studies, M.L.S. University, Udaipur, India (**Second Position in the University**)

**B.Sc.** (PCM), 1985, First Division, Rajasthan University, Jaipur, India.

**Academic & Research Interests:** Strategy, International Business, Sustainability

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:**

- Chief coordinator, Industry-Institute Partnership Cell, an AICTE sponsored Project, 2008-2010 (IN PROCESS).
- Principal investigator Major Research Project by UGC titled - Developing a Frame Work for Learning and Innovation in Higher Education: A Corporate University Perspective with the financial grant of Rs. 4, 49,200/ . May 2009 – onwards (IN PROCESS).
- Member, Corporate Relations Center, University School of Management Studies, 2005- till date.
- Consultancy on Strengthening Institutional R&D- Industry Interface to TIFAC CORE in the area of Fiber Optics and Optical Communication System at Delhi College of Engineering.
- Resource Person for EDP for Dy. GMs TRANSCO, Delhi at NTPI, Faridabad-delivered lecture on Strategic Thinking.
- Resource Person for National Workshop on Global Competitiveness, IIT Delhi, December 2005.
- A series of lectures on "Strategic Planning" Contact Program for M.Phil. (Hospital & Health Systems Management) at BITS Pilani September 1994.

**Professional Vision:** To establish as a professional providing education in the area of Strategy and International Business to promote research and development leading to innovative applications , fostering institute – industry linkages encompassing all aspects of interaction of business and education for the betterment of the society.

**Action Plan:** To complete existing projects and explore new horizons of institute – industry linkages by conducting Management Development Programmes and Consultancy Services.

**Areas of Research, Development and Consultancy:**

- New Product Development
- Innovation
- Strategic Audit
- Energy Management
- Interview and Group Discussion based Training for students
- Development of Case Studies on Innovation and New Product Development

**Future Research Plans:** To complete following research Projects:

- **To understand the dynamics of Merger and Acquisition in select Indian Organization**
- **An investigation of relationship between organizational culture and quality in SMEs with specific reference to Auto component sector**
- **To analyze the factors affecting FDI(Foreign Direct Investment) in Power Sector**

**Future Consultancy Plans:**

- Quality Management System and Accreditation in the area of Higher Education
- Consultancy to Strengthening Industry Institute Partnership for mutual benefit in the emerging fields such Nanotechnology, Renewables and Photonics

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## **ASSOCIATE PROFESSORS**

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**Dr. Udita Taneja**

BTech and MBA (IIT Delhi), MS and PhD (Tulane, USA)

**Academic & Research Interests:** Healthcare Management and Quantitative Methods.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** AICTE sponsored project on "EHealthcare in India: Evaluating Critical Success Factors" for Rs. 9.8 lakhs (2008-11).

**Professional Vision:** To be a globally recognized researcher in the area of Healthcare Management.

**Action Plan:**

- Publish research in international and national refereed journals.
- Present research at international and national conferences.

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered in the areas of eHealthcare delivery and PPPs in providing primary healthcare services to underserved populations.
- Training programs can be provided in applying quantitative techniques in the area of Healthcare management.
- Projects can be undertaken in the areas of eHealthcare delivery and PPPs.

**Future Research Plans:** Publish research in international and national refereed journals and apply for grants for further research.

**Future Consultancy Plans:** Provide expertise to organizations desiring to start eHealthcare services and Public Private Partnerships (PPPs) in the primary healthcare space.

**Dr. Meenakshi Handa**

B. A. (Hons.), M.B.A. (MONIRBA), Ph.D. (FMS)

**Academic & Research Interests:** Consumer Behaviour, Services Management, Retail Management, Management of Non-Profits, Green Marketing

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]**

- Completed a project on "Consumer Use of Ingredient and Nutritional Information on Packaged Food Products" for which grant-in-aid provided by the Indian Council of Social Science Research.
- Conducted training sessions for the Postal Staff College India.
- Designed and conducted a short-term Certificate Course in Retail. The course aimed at acquainting participants with the basics of retail store operations and developing practical retail selling skills. The course was conducted in partnership with NIS Academy (A Division of NIS Sparta).

**Professional Vision:** To continuously develop teaching skills and research capabilities in my areas of interest.

**Action Plan:** To undertake research in the area of social media as a marketing tool, internet marketing and marketing for non profits and to develop cases in these areas for class room teaching

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered in areas of Services Marketing and Retail Management, Marketing for Non-Profit Organizations
- Training programmes for employees in the service industry, Workshops on Services Marketing.
- Projects can be undertaken in areas of Consumer Behaviour, Services Management, Retail Management, Marketing for Non-Profits

**Future Research Plans:** To continue with in-depth research and analysis in the areas of consumer behavior, services management and marketing for nonprofits. Focus will be on the application and impact of new technologies on marketing strategies.

**Future Consultancy Plans:** Undertaking consultancy in the areas of Services Marketing, Retail Management, Marketing for Non-Profit Organizations and related areas.

**Dr. Vijita S Aggarwal**

MPIB(IIFT), Phd, European Masters in Life Long Learning from University of London.

**Academic & Research Interests:** Brand Management, Marketing Management, Education Policy and Management.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** UGC Project of 5 Lakhs on Compatibility between Indian Higher Education System and ECTS.

**Professional Vision:** I want to work in the area of Education Policy and Management.

**Action Plan:** I want to work in the area of competence requirement and development.

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered in "Competence requirement by the industry and curricula development".
- Training Programme can be offered in how to identify the emerging areas for short term courses and how to collaborate with other stakeholders to launch these courses.
- Mainly government projects in the areas of competences requirement and development.

**Future Consultancy Plans:** I want to develop consultancy in the area of competence requirement by the industry and curricula development.

**Dr. Shalini Garg**

MBA, Ph.D

**Academic & Research Interests:** Human Resource Management in National & International contexts. Organisation Behavior, Organisation Development, Training & Development, Issues pertaining to Higher Education, Corporate Governance & Behavior Testing.

**Professional Vision:** To contribute to the society at large through quality education and building true managers.

**Action Plan:** Planning to take up research work in the Management related field and offering consultancy & Training..

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered in Training & Development related issues and leadership Development.
- Training Programme can be offered in capacity Building of various types of Managers depending upon level & the area of working.
- Taking up UGC Project in the HR Issues pertaining to upcoming sectors such a rural sector, Tourism & also Higher Education.

**Future Research Plans:** Taking up UGC Project in the HR Issues pertaining to upcoming sectors such a rural sector, Tourism & also Higher Education.

**Future Consultancy Plans:** Offering consultancy in the core research interests mentioned above.

**Dr. Puja Khatri**

Ph.D( Organizational Behavior and Higher Education)

**Topic :** Impact of Cost, quality and support, services on students perception in self financed institute., Master in International Business, Bachelors in Sciences (Computer Application)

**Academic & Research Interests:** Higher Education problems & Prospects, Behavioral Psychology, Social Networking, Service quality of Higher Education, Performance Appraisal, Conflict Management, Human Recourse.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:**

- Coordinator of International Conference on Strategies and Innovation for sustainable Organisation
- Organized an MDP on Customer Relationship Management in 2004
- Coordination for National Conference on Retail, "Unpleasing the power of retail" in 2008.

**Professional Vision:** To leverage my potential so as to create a differential advantage through quality research and innovative pedagogy thereby ensuring sustained academic and professional excellence.

**Action Plan:**

- Work towards participation in global education system through research & consultancy
- Introduce new pedagogical tools in form of role plays and research based learning exercise for aligning theory with practical insights

**Areas of Research, Development and Consultancy:**

- Employee Behaviors : Employee perceptions and interplay of psychological forces impacting behavior patterns
- Employee Engagement.
- Leadership
- Higher education and future prospects
- Social Networking
- Behavior Assessment & Analysis
- Staff Development Programme to enhance professional Capabilities and soft skill of administrative staff
- Behavior Interpersonal & Consumer patterns of performance

**Future Research Plans**

- Organizational Citizenship
- Service Quality in Higher Education
- Leadership & Innovation
- Professionalisation & ethics in Higher Education
- Professionalisation of higher education.
- Globalization of Higher Education

### **Future Consultancy Plans**

- Professionalisation & ethics in Higher Education.
- Behavior assessment and implication for soft skills enhancement in students.
- Soft skills for business Managers winning through attitude.
  
- Behavioral Interpersonal & Communication patterns of performer in organization.

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## **ASSISTANT PROFESSORS**

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### **Mr. Sanjay Dhingra**

B.E. (Computer Engineering), M.M.S

**Academic & Research Interests:** Database Management system, Business Intelligence IT in Banks, Computer Networks, Knowledge Management

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:**

- Organized training to faculty and students on CISCO Network academy programmes
- Coordinator, Industry Institute Partnership Cell.

**Professional Vision:** Continuous improvement in teaching through research.

**Action Plan:** Organising Conference on research areas, pursuing Ph.D on the topic "Impact of IT on Banks"

**Areas of Research, Development and Consultancy:** To take consultancy on the topics "IT success factors", "IT measurement", "IT Audit", CISCO Networking programme, Database Management System, Knowledge Management.

**Future Research Plans:** To take up projects on IT in Banks.

**Future Consultancy Plans:** To take consultancy on the topics "IT success factors", "IT measurement", "IT Audit".

### **Dr. S Sanjay Kumar**

BTech and MBA, Ph.D

**Academic & Research Interests:** Business Environment & Laws, Operations Management, Non profit/Third Sector Research, Social Entrepreneurship. Civil Society & Development; Financial Inclusion.

**Professional Vision:** To become a catalyst in societal transformation through creation and dissemination of knowledge and practices that enables empowerment and amelioration of underprivileged.

**Action Plan:** To under take studies encompassing development polices and practices from comparative perspective and evaluate their impact on the lives of beneficiaries.

**Future Research Plans:** Exploring funding sources to conduct a study on financial inclusion polices and practices of public sector books in Indian context.

## **Dr. Divya Verma Gakhar**

Ph.D, MBA, DOEACC 'A' Level

### **Academic & Research Interests:**

- Financial Management, Security Analysis and Portfolio Management, Management of Financial Services, Accounting, Management Principles and Organisation Behaviour, Business Research, Managerial Economics, Indian Management, E-Commerce,
- Internet and web reporting, Corporate reporting and Communication, E-governance, E-commerce, Online Banking.
- Accounting Standards, Convergence to IFRS, Human Resource Accounting, Economic Value Added, Creative Accounting
- Microfinance and Micro-Insurance, Corporate Social Responsibility, Technical and Higher Education, Public Policy and Administration.
- Risk analysis and Project Evaluation, Security Analysis- Risk and Return, Portfolio Management, Mutual Funds, Business Valuation, Financial Derivatives.

### **Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:**

"*Diagonal Inverter for Operation Microscope – A Case Study on Innovators*", on Innovator-Dr. S.C. Gupta, submitted as a part of project sanctioned University School of Management Studies, under Technopreneur Promotion Programme (TePP) by Department of Scientific and Industrial Research, Ministry of Science and Technology.

**Professional Vision:** To achieve excellence at workplace. To establish myself as an academican with quality work in terms of teaching, research and publications as per the world standards.

### **Action Plan:**

- To give my best in classroom teaching.
- To author some good books so that students and society are benefited.
- To make quality research publications.
- To give consultancy to industry on my areas of core competency.

**Areas of Research, Development and Consultancy:** Keeping in view my areas of core competency, I would take up consultancy for industry in the following areas:

- Corporate Reporting and Communication Practices
- Financial Management
- Revival of Financial Health of Small Scale Units and Companies
- Business Valuation
- Financial Engineering
- Project Evaluation and Implementation

I can offer training to Industry on the following areas:

- Finance for Non-Finance Managers / Finance for Beginners
- Stock Market Investment and Analysis
- Software Applications in Business Research
- Analysis of Financial Statements
- Corporate Reporting and Communication

I can undertake projects in the following areas:

- Internet and Web reporting, Corporate reporting and Communication
- E-governance
- Stock Market Investment and Analysis, Derivatives Market
- Accounting Standards, Convergence to IFRS, Human Resource Accounting
- Microfinance and Micro-Insurance, Corporate Social Responsibility
- Technical and Higher Education

**Future Research Plans:** I would like to take up research projects in the following areas: Financial Engineering and Innovations, Derivatives Market in India, Corporate Social Responsibility, E-Governance, Financial Market Volatility, Financial Risk Management, Micro Finance, Financial Regulation and Corporate Governance.

**Future Consultancy Plans:** I would like to take up consultancy projects with Small Scale Units, NGOs, Government agencies and corporates.

**Ms. Deepti Prakash**

Bachelors in Mass Media & Mass Communication[DU], MBA [Jamia Millia Islamia], UGC NET [Management]

**Academic & Research Interests:** Organizational Behavior, Human Resource Management, Business Communication, Entrepreneurship.

**Professional Vision:** To gain knowledge about people skills in an organizational set up for academic as well as personal growth

**Action Plan:** Accomplish Ph.D in Management. Writing research papers

**Areas of Research, Development and Consultancy:**

- Sustaining motivation at work
- Work/Life Balance.
- Business Communication
- Interpersonal Relations at work
- Organizational Communication
- Interpersonal Relation at work

**Future Research Plans:** Organizational Behavior Issues like stress at work, Communication with different levels in organization, emotions at work relationship building etc.

**Future Consultancy Plans:** In the area of Organizational Behavior, Entrepreneurship.

**Dr. Shilpa Jain**

MSc. Applied Psychology, Ph.D [Organizational Behavior]

**Academic & Research Interests:** Organizational Behavior, HRM, Organizational Development, Behavior Testing, Business Research, HRI OB in Academics, Interpersonal Skills.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]**

- Training Program for scientists [CSIR, HRD] on Building interpersonal skills through Transactional Analysis
- Training for corporate on Hidden potential
- Behavior Testing Lab [Twodays] for corporates/academia and students.

**Professional Vision:** To be recognized as a great teacher and veteran Researcher. Bringing laurels to my University through my teaching and research ethically.

**Action Plan:**

- Implementing innovative techniques in teaching to improve everyday.
- Lot of good research in terms of research papers, research projects etc.
- Consultancy in areas of OB/HRM/OD/Behavior Testing Interpersonal skills.

**Areas of Research, Development and Consultancy:**

- Interpersonal skills, Personality Development, Organizational Development, Behavior Testing, Business Research, Developing tests for organisations
- Projects can be undertaken in the areas of OB/OD/HRM/Behavior testing/Capacity Building/Capability Profiling/Business Research.

**Future Research Plans**

- Behavior testing and identifying traits required for being successful and good managers.
- OB/OD/HRM/Interpersonal skills/Business Research..

**Future Consultancy Plans:** Interpersonal skills training, transactional analysis training, Personality development, Motivation, Organizational Development, Behavior Testing, Developing specialized test batteries for organizations capability profiling.

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## **10. UNIVERSITY SCHOOL OF MASS COMMUNICATION [USMC]**

## **UNIVERSITY SCHOOL OF MASS COMMUNICATION (USMC)**

University School of Mass Communication put up in 2006 has opened new doors for media students who want to pursue a master's degree with specialisation in their preferred discipline. By launching a weekend programme, it has also provided an excellent opportunity to professionals who wish to enrich their knowledge and skills in media.

### **Master of Mass Media (MMM)**

GGSSIP University has clarity in its vision of mass communication education - generalisation and exposure to all branches of mass communication at the undergraduate level and specialisation with focus on any particular branch or discipline at the postgraduate level. In line with this vision Bachelor of Journalism & Mass Communication-BJ (MC) programme was launched in the year 2000 and currently it is being offered by many affiliated institutes. At the post graduate level Master of Mass Media (MMM) programme was conceived, designed and launched in 2007.

MMM is the most exclusive programme offered by GGSIP University. It prescribes common papers in the first year for the purpose of grounding and special papers in the second year with focus on the targeted area. Specialisations are offered in four major areas - Journalism & News Media, Corporate Communication, TV Production and New Media & Convergence. The emphasis on theory and practical in terms of teaching and training hours is almost equal.

### **Master of Journalism & Mass Communication (MJMC)**

Master of Journalism & Mass Communication (MJMC) is a two-year weekend programme designed specially for working professionals who wish to enhance their academic qualifications and update and enrich themselves by sparing some time from their heavy routine. MJMC has replaced Post Graduate Diploma in Electronic Media (PGDEM) that was launched in 2006. CMS has conducted with success three batches of PGDEM with enrollment of number of media practitioners.

### **Production of feature film**

Students of PGDEM enrolled at CMS along with BJ (MC) students of VIPS have succeeded in making a 105-minute feature film HANTAA on digital mode. About 60 undergraduate and postgraduate students with an average age of 19 years joined hands to make this film. Set in the backdrop of the farmers' plight in Maharashtra and elsewhere, the film reflects the mindset of students studying in IP University and their concern for society. The premiere and formal release of HANTAA took place in the auditorium of the university in November 2007.

### **Infrastructure and facilities**

Centre for Media Studies has its own independent premises on the university campus. It can boast of having a splendid studio attached to Production Control Room (PCR) with state-of-the-art facilities. The studio is equipped with multi-cam set up and online editing facility. The Non-Linear Editing Lab (NLE) is equipped with Avid and FCP editing machines. Other labs include Traditional Media Lab, Print Media Lab and Cyber Media Lab. A separate Audio Studio with TCR is the latest addition to CMS.

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## Professor

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- Dr. C.P. Singh

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## Assistant Professors

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- Dr. Durgesh Tripathi
- Dr. Sarvesh Dutt Tripathi
- Ms. Kulveen Trehan
- Ms. Sweta Singh
- Sh. Vinay Shankar
- Shri Sachin Bharti

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## PROFESSOR

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### Dr. C P Singh

M.Sc. (Media Management), Ph.D, Journalism

**Academic & Research Interests:** Media Education, News Content and Language, Media Economics & Business.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:**

- Communication of Innovation for Freedom' a project undertaken in collaboration with a team of industry professionals 2009 onwards.
- UNESCO Consultancy on Model Journalism Curriculum in Soth Asia, 2008.
- World Bank Consultancy of India Development Markets Proposals 2006.

**Professional Vision:** To groom our students to emerge as strategic decision makers for tomorrow's media business that wouldn't be bereft of ethical and moral values in its quest for profits.

**Action Plan:** Introduced Social Sciences, Indian Literature, Indian Cinema & Media Economics and Management as compulsory subjects at the Masters level; applying Case Method (live case studies) to the teaching of media specializations (Journalism etc.); and encouraging industry veterans to take up academic assignments provided by the USMC.

**Areas of Research, Development and Consultancy:**

*Consultancy and trainings can be offered in the areas of*

- Impact studies of various campaigns (through media) on the attitude and values of target audiences, CSR campaigns by corporates & NGO's against corruption.
- Helping Schools (+2) and Universities set up media studies departments in view of introduction of the subject at +2 level in India.

**Projects can be undertaken in following areas**

- Devising a dynamic format of Journalism syllabus capable of responding to the emerging needs of the economy and society in the next two decades.
- Applicability and limits of traditional economic tools in respect of media organisations with special reference to India.
- Emerging trends in media language (esp. new) in view of media convergence.
- Include more themes in the communication of Innovations for freedom projects.

**Future Research Plans:**

- Devising a dynamic format of Journalism syllabus capable of responding to the emerging needs of the economy and society in the next two decades.
- Applicability and limits of traditional economic tools in respect of media organisations with special reference to India.
- Emerging trends in media language (esp. new) in view of media convergence.
- Include more themes in the communication of Innovations for freedom projects.

**Future Consultancy Plans:**

- Impact studies of various campaigns (through media) on the attitude and values of target audiences, CSR campaigns by corporates & NGO's against corruption.
- Helping Schools (+2) and Universities set up media studies departments in view of introduction of the subject at +2 level in India.

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**ASSISTANT PROFESSORS**

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**Dr. Durgesh Tripathi**

D.H.Tech, MJ, Ph.D [Journalism]

**Academic & Research Interests:** Wish to join D.Litt in Mass Communication and Research projects of various departments/Ministries/ Nodal agencies.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** UGC Major Project near to complete (2009-2011) Mid term evaluation with Good remarks with 20,000/- extra amount sanctioned.

**Professional Vision:** Research is the backbone of development of any subject or Institution.

**Action Plan:** Interacting with resource persons of deptts/Ministries/Nodal agency do believe worthwhile will come out in the next month.

**Areas of Research, Development and Consultancy:** Impact/Effect/Development of Mass Comm/Journalism on Society.

### **Dr. Sarvesh Dutt Tripathi**

MA English, M.J. Ph.D.

**Academic & Research Interests:** Post Doctoral degree in specialized journalism sponsored research in Development Communication.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Writing as proposals to start training programme on tools and techniques of media writing. Already conducted two training programmes for officials of U.P. Police.

**Professional Vision:** To narrow the gap between media education & Industry.

**Action Plan:** To develop live case studies and direct industry based exercises in reporting writing and editing to prepare the students for professionals tasks/assignments in the industry.

**Areas of Research, Development and Consultancy:**

- Tools & Techniques of Journalistic writings.
- Development Communications.

**Future Research Plans:** Major Research Project on Development Communication Initiatives undertaken by Govt. and Corporate organization: A comparative study.

**Future Consultancy Plans:** To provide consultancy to Journalism departments and schools on pedagogy and curriculum.

### **Kulveen Trehan**

Ph.D (Pursuing), PBI University, Patiala, MMC, Punjab University, Chandigarh, BA (Hons) Economics, P.U. Chandigarh UGC, NET & JRF Qualified.

**Academic & Research Interests:**

- To study the creative execution & formats in advertising & PR through Post Doctoral Research.
- To apply for Major Research Project in Mass Communication.
- To conduct product/Idea Research through Behavioral testing.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:**

- Conducted a workshop for CAMS, Pbi University Patiala
- Conducted a ½ day workshop for GAIL corporate communication managers at GAIL training Centre, Noida.

**Professional Vision:** Intensive research & up gradation of applied skills vis-à-vis advertising, print journalism & new media.

**Action Plan:** Attend workshops, seminars & short duration programmes to equip myself with the latest applications & technological skills.

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered in the area of Rolodex models in advertising agencies, PR departments in PSU's.
- Training Programmes can be offered to trainees in Advertising for social causes, Corporate PR, Events: Marketing Communication, Ad Vs PR for media organization.

**Projects can be undertaken in the following areas:**

- Healthcare advertising: Exploratory Studies
- Advertising through new media
- Public service Advertising & execution strategies
- Impact Analysis of Use of advertising appeals
- Celebrity brand creation & management: Use of IMC tools & techniques.

**Future Research Plans:** Traditional & new media integration in revival of industry in Punjab in collaboration with Punjab Government.

**Future Consultancy Plans:**

- Provide consultancy to various Journalism & Mass Communication Departments in India. Syllabus course conduct, Practical training
- Work in collaboration with semi Governmental or private Corporation.

**Ms. Sweta Singh**

Three years Honours course in Communicative English (with media studies) as vocational subject from Patna University, Pursuing Ph.D (part time) from the USHSS.

**Academic & Research Interests:** Post Doctoral degree in specialized journalism sponsored research in Development Communication.

**Industry - Society Interface:**

- Paper Presentation entitled "Globalization and Television [news:Coverage](#) of International news in India", 32<sup>nd</sup> Indian Social Science Congress, 17-22 Dec, 2008, Jamia Milia Islamia, New Delhi.
- To Present paper presentation entitled "New Media's Impact on Journalism in India with special reference to "Radiagate", National Media Seminar" Media and New World Order", 04-05 Feb 2010, National Media Seminar " Media and New world Order"
- To Enhance Knowledge & skills, Training workshop on Web 2.0 Multimedia, 14-25 th June, 2010, SOJNMS, IGNOU, New Delhi

**Vinay Shankar**

M.A. (Mass Communication)

**Academic & Research Interests:** Cinema. Popular Culture, Urban Life, Space and marginalized in cinema East European Cinema.

**Professional Vision:** To acquire a suitable qualification for further development in profession.

**Action Plan:** Enrolled in Ph.D Programme.

**Areas of Research, Development and Consultancy:**

- All aspects of Film production and Film appreciation.
- Film production for educational and developmental purposes.

**Future Research Plans:** To complete my Ph.D research on "Mainstream Cinema and urban Space.'.

**Future Consultancy Plans:** In areas related to research in texts of various cinemas, Development of video programmes for educational and developmental purposes.

**Sachin Bharti**

MA (Mass Communication), UGC-NET, Ph.D Submitted

**Academic & Research Interests:** Changing aspects of Hindi Cinema. How Hindi Cinema affecting our life style, our cultural values etc. Researching the our life style, our cultural values etc. Researching the emerging new face of hindi cinema in the form of double meaning songs & Dialogues and also analyzing their effects on society.

**Industry - Society Interface [Projects/ Consultancy / Training Programmes already undertaken]:** Actively attended a five days orientation programme on the topic "Scope and future in fashion communication & Fashion industry organized by National instt of Fashion communication & Fashion Industry organized by National instt of fashion technology, Ministry of textiles, Govt. of India t Sri Mohan Khera [M.P.] in July 2008.

**Professional Vision:** Media studies should not only be job providing courses but also be capable to create media-thinkers, media entrepreneurs who don't depend on others for work but should be able to give work to others.

**Action Plan:** Preparing a student in such a way that he/she should be in a position to start as an entrepreneur as he may do media consultancy or to start a production house etc as well as should be in a position to get the job at the same time. Preparing students according to the need of the market.

**Areas of Research, Development and Consultancy:**

- Consultancy can be offered in Media Studies (Film Studies especially Hindi Cinema) for those who choose media courses after XII or graduation.
- Training programmes may be offered in still Photography and Art & Craft of Hindi Cinema to graduate & post graduate level students.

*Projects may be undertaken in the following areas:-*

- Short term courses in Basic of still photography
- Short term courses in Art & Craft of Hindi Cinema.

**Future Research Plans:** Wanted to do UGC- major Research Project/ D.Litt on the topic. - Impact of sexual content in Hindi Films screened on Television on School children.

**Future Consultancy Plans:** Consultancy may be given to the aspiring candidates nr helping them in choosing right media career.

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**APPENDIX: XV**

***MASTER PLAN OF THE MAIN CAMPUS***

*[SECTOR 16-C, DWARKA, NEW DELHI-110075]*

**APPENDIX: XVI**  
***ENTREPRENEURSHIP DEVELOPMENT CELL***

## **ENTREPRENEURSHIP DEVELOPMENT CELL (EDC)**

The University School of Management Studies started Entrepreneurship Development Cell in 2006 with the assistance of AICTE. The AICTE provided a recurring and non-recurring grant to set up Entrepreneurship Development Cell in the University School of Management Studies with its Coordinator Prof. Sanjiv Mittal.

The non-recurring grant was for Rs. 5,40,000/- (Rs. Five Lac Forty Thousand Only) out of which various equipments were purchased to facilitate the conduct of activities as a part of Entrepreneurship Development among the student of the University and the School of Management in particular. It was one time grant given by AICTE. Since 2006 various activities are regularly conducted as a part of Entrepreneurship Development by the Cell.

The Entrepreneurship Development Cell signed MoU with Ministry of MSME and in particular with MSME Development Institute, Okhla, Govt. of India, New Delhi to conduct various Entrepreneurship programmes in the University with the assistance from MSME – DI. The various programmes conducted with their assistance are as follows:

- 1. Intensive Entrepreneurship Motivation Programme (IEMP) - One Day Duration**
- 2. Business Skill Development Programme (BSDP) – One Month Duration.**
- 3. Entrepreneurship Development Programme / Management Development Programme - One Week Programme**

Besides these activities the Entrepreneurship Development Cell of USMS also entered in to MoU with Ministry of MSME through their office MSME – Development Institute, Govt. of India, Okhla, New Delhi to set up Entrepreneurship Clubs throughout North India numbering around 200. For setting up of these clubs and conducting various seminars and activities as a part of the club activities, the Ministry of MSME provided a grant of Rs. 17.5 lacs to be spent with the prior sanction of the Competent Authority designated as Director, MSME – DI after sending a proposal of activities to be done by the E-clubs once they are formed and activities allowed out of this particular fund.

So far almost 35 E-clubs have been formed and various activities relating to Entrepreneurship Development have been conducted with the assistance of the fund provided by Ministry of MSME.

The Entrepreneurship Development Cell of USMS is very instrumental in helping and guiding the students to look in for an alternative career of starting their own enterprise rather than looking in for job once they have completed their respective course if not immediately may be after few years. The best part of the Entrepreneurship Cell is that through training programmes which are conducted round the year the students are given adequate knowledge of what is business, how to set up business, how to raise firm, how to identify business opportunity, how to raise funds from the banks, how to obtain NOC from Pollution Control Board and other aspects relating to enterprise promotion and management. Many students who have attended this training programme have been benefited a lot and almost 10 % of these have converted themselves to be entrepreneurs in this own self. They have started their own enterprise either of trading, manufacturing, franchising, study center and the like. When the NAAC Accreditation was done in March 2007, the expert team was also happy with the setting up of Entrepreneurship Development Cell in the School and the activities that were done by the Cell to promote Entrepreneurship Culture among the students of the School and the university at a large.

Now it is almost five years since 2006 that the Entrepreneurship Development Cell has promoted the entrepreneurship culture among the students of the school and the university at a large. In the new Campus separate space and a room for Coordinator, Entrepreneurship Development Cell has been allotted from where the activities will be continued in times to come. The space was reserved for the Entrepreneurship Development Cell in the space allocation plan of the University.

Additional space will be asked for in the second phase of construction so that we can create additional facilities as a part of Entrepreneurship Development in terms of establishing Entrepreneurship Motivation Lab where Behavioural Testing of the students can be done, seminar room where the seminars relating to Entrepreneurship Development can be conducted on regular basis as well as incubation center can be created on the lines it exists in IIT, Delhi, Department of Management Studies.

We have formalized the Entrepreneurship Development Cell as an integral part of the University School of Management Studies by getting it approved from the SRC and BOS of the School. We are in the process of creating a separate budget for the same so that funding is available from the University to conduct various activities year round as follows.

1. **Entrepreneurship Motivation Lab**, where the students who will have the inclination for Entrepreneurship will be tested using various entrepreneurship skills and a creating enthusiasm and motivation in them using entrepreneurship motivation kits which are available for the same purpose.
2. **Entrepreneurship Development Programmes**, which will be for one week duration in which the elementary knowledge will be given to the students covering the various aspects like what is business, how to set up business, how to raise firm, how to identify business opportunity, how to raise funds from the banks, how to obtain NOC from Pollution Control Board and other aspects relating to enterprise promotion and management.
3. **Advanced Entrepreneurship Development Programmes**, which will be of one month duration in which the practical training will be given to the students how to fill various documents required at the time of raising the firm, how to write a project report to be submitted for applying a bank loan, how to conduct a market survey to assess the demand, meetings with successful entrepreneurs to share their experiences and to understand the advantages and disadvantages of being entrepreneur and many other interactions with the official, experts of the institutions directly related with the promotion of entrepreneurship in India like NSIC, SIDBI, SME branches of banks, DPCC, NISBURD and the like.
4. **Business Skill Development Programmes**: The students will be given hand-on knowledge how to set up business, apply for loan from a bank, conduct market research and all other activities relating to conceptualizing to formalizing to implementation.
5. **Management Development Programmes (MDPs) on Product Skill Training**: MDPs on mobile repair, computer hardware, computer software, perfumery making, readymade garments etc. can be conducted.

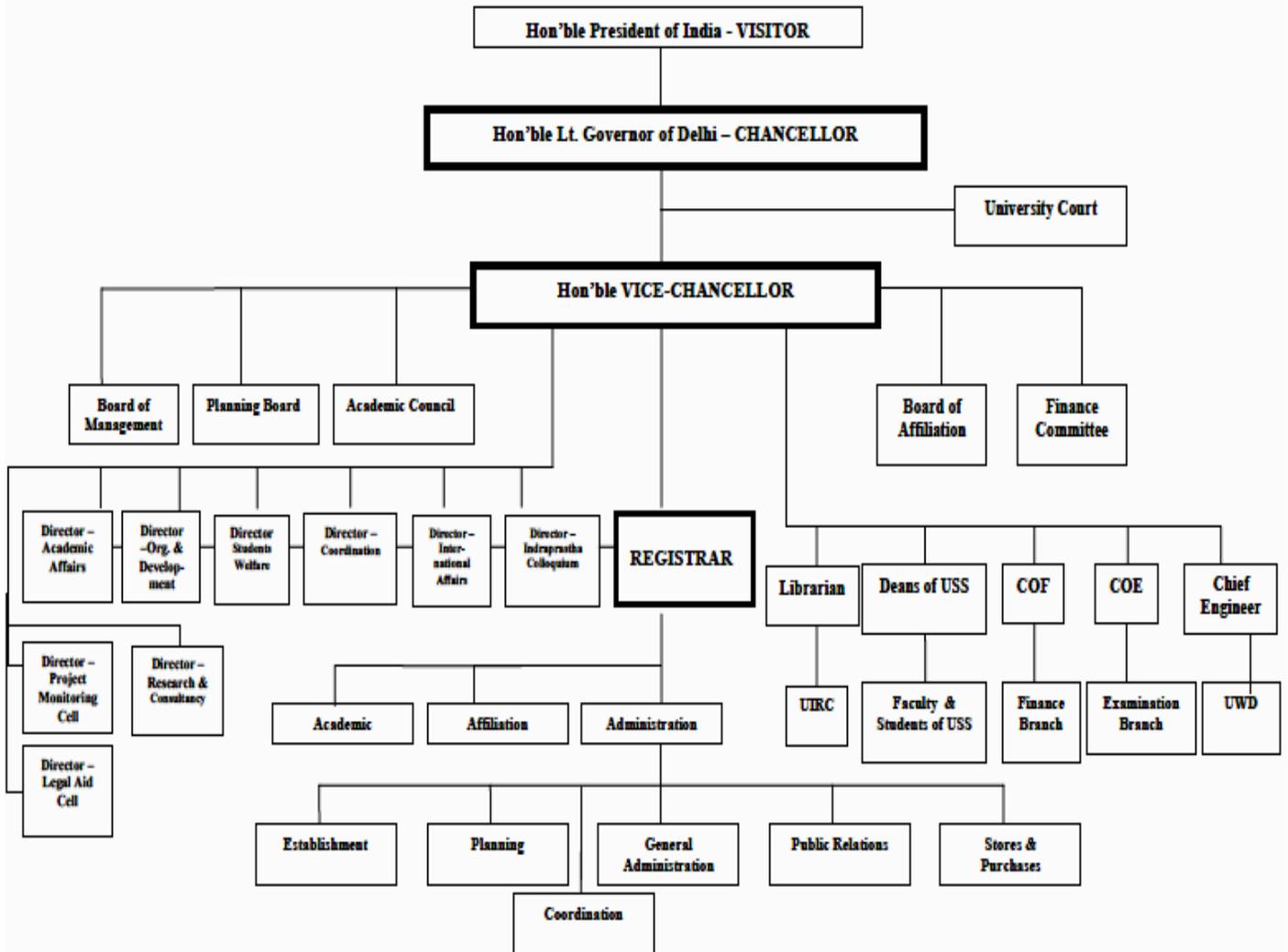
This is the beginning of setting up of Entrepreneurship Development Cell which has completed five years of its existence since 2006 and it is proposed to upgrade this Cell in the form of setting up of Entrepreneurship Development Institute as a part of the University with the assistance of various agencies involved in promotion of Entrepreneurship Culture in India like NSIC, Ministry of MSME, Ministry of Science & Technology etc. It is a dream vision of the Hon'ble Prime Minister of India to create 50 lacs Entrepreneurs every year and it is right that once we have a strong pool of entrepreneur's time will not be far off that India will become a developed country.

So far in five years the EDC has conducted almost 15 EDPs and BSDPs taken together; 6 seminars on topics relating to Quality in Organizations, IPR issues; LLP a new form of organization etc. and invited almost 15 Entrepreneurs on this platform to name few – Kumar Sachdev (Sukam), Mr. Manoj Jain (Modeline Finvest Pvt. Ltd.), Ms. Vanni Gandha (Computer Institute) etc. Almost 30 students from University School of Management and overall University have been motivated to become entrepreneurs.

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**APPENDIX : XVII**  
***ORGANIZATIONAL CHART***

## ORGANIZATIONAL CHART



**APPENDIX: XVIII**

***CURRENT COMPOSITION OF THE  
DIFFERENT STATUTORY BODIES***

## CURRENT COMPOSITION OF THE STATUTORY BODIES OF THE UNIVERSITY

### CONSTITUTION OF THE COURT

Required Constitution	Present constitution
(I) <b>Chancellor</b>	<b>Lt. Governor, Govt. of NCT OF Delhi Chairman</b>
(II) Vice Chancellor	Prof. D.K. Bandyopadhyay
(III) Pro-Vice Chancellor	--
(IV) Two Deans of School of Studies (Term -1 Year)	1. Prof. R.K. Gupta, Dean, University School of Biotechnology, Guru Gobind Singh Indraprastha University, 2. Prof. Nupur Prakash, Dean, University School of Engineering & Technology & Principal, IGIT, Kashmere Gate, Delhi-110006.
(V) One member of the Alumni	Sh.Arun Kumar Kellong Brown and Root, Gurgaon
(VI) One Ex-Vice-Chancellor of the University	Prof. K.N. Pathak, Former Vice-Chancellor, Punjab University House No. 382, Sector-38A, Chandigarh-160014
(VII) Govt. Representative (Secretary In-charge Dept. of Education, Govt. of NCT of Delhi)	Shri Anand Prakash, Secretary (Higher Education & TTE)
(VIII) Representatives of Affiliated Institutions- (Principal/Chairman/ Secretaries of the Trust of Affiliated Colleges not more than two) Term one year by rotation	1. Dr. A. K. Tandon, Principal, Bhagwan Parshuram Institute of Technology, PSP-4, Sector-17, Rohini, Delhi-85 2. Shri S. P. Singh, Chairman, Maharaja Surajmal Institute of Technology, C-4, Janak Puri, New Delhi
(IX) Five eminent persons representing Industry/Commerce/Public Service, to be nominated by Chancellor in consultation with Govt. of NCT Delhi (Tenure for 03 Years)	1. Dr. P.K. Dave, Former Director AIIMS, Chairman-Advisory Board, Rockland Hospital, B-33/34, Qutab Institutional Area, New Delhi-110016. 2. Dr. Y.S. Rajan, Principal Advisor, Confederation of Indian Industries, Plot No. 249-F, Sector-18, Phase-4, Udyog Vihar, Gurgaon-122015. 3. Sh. Abid Hussain, IAS (Retd.) Former Ambassador of India to USA 237, Sector 15-A, Noida- 201301 (UP) 4. Dr. Nirmal Kumar Ganguly, Former DG, ICMR 5. Prof. Pritam Singh, Director, Management Development Institute, Post Box No. 60, Mehrauli Gurgaon Road, Sukhrali, Gurgaon-122001 (Term w.e.f 27.11.2009)

<p>(X) Five eminent Academicians / Professionals (Co-opted members by the Court in consultation with Chancellor who may consult Govt. of NCT Delhi) (Tenure for 03 years)</p>	<ol style="list-style-type: none"> <li>1. Prof. S. K. Khanna, Former Director, IIT, Roorkee &amp; Former Chairman, AICTE &amp; Vice Chairman, UGC, Jaypee Institute of Information Technology, A-10, Sector-62, Noida-201307</li> <li>2. Sh. Sushil Tripathi, Former Secretary, Ministry of HRD, H. No. 27, Sector 15A, Noida-201307</li> <li>3. Sh. T. N. Kapoor, EX-Vice Chancellor, Former VC Punjab University, H. No. 1372, Sector A &amp; B, Vasant Kunj, New Delhi.</li> <li>4. Dr. Rita Sharma, Secretary, National Advisory Council, Govt. of India, 113, New Moti Bagh, Delhi-110023</li> <li>5. Dr. R. C. Bhargava, Former CMD, Maruti Udyog Limited, H No. 220, Sector 15A, Noida-201301 (Term w.e.f. 18.06.2010)</li> </ol>
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### CONSTITUTION OF THE BOARD OF MANAGEMENT

Required Constitution	Present constitution
(I) Vice-Chancellor	Prof. D.K. Bandyopadhyay
(II) Two Deans (USS) (Term One year) By seniority in rotation	<ol style="list-style-type: none"> <li>1. Prof. R.K. Gupta, Dean, University School of Biotechnology, Guru Gobind Singh Indraprastha University,</li> <li>2. Prof. Nupur Prakash, Dean, University School of Engineering &amp; Technology &amp; Principal, IGIT, Kashmere Gate, Delhi-110006</li> </ol>
(III) Two Principals of Affiliated Institutions (According to seniority of the college bases on the date of their affiliation and where the affiliation is on the same date, than by draw of lots)	<ol style="list-style-type: none"> <li>1. Prof. O.P. Sharma, Principal, G. B. Pant Govt. Engineering College, Okhla Industrial Estate, Phase-III, Okhla, New Delhi</li> <li>2. Prof. M. N. Hoda, Principal, Bharati Vidyapeeth's Institute of Computer Applications and Management A-4, Paschim Vihar, New Delhi-110063</li> </ol>
(IV) Secretary In charge (Department of Finance)	Shri D. M. Sapolia, Principal Secretary (Finance) A' Wing, 4th Level, Delhi Sectt. , Department of Finance, New Delhi-110002.
(V) Secretary In charge (Department of Education)	Shri Rakesh Mohan, IAS, Principal Secretary (Education) Department Of Education, Govt. of NCT of Delhi, New Delhi
(VI) Secretary In charge (Department of Technical Education)	Sh. Anand Prakash, IAS Secretary (Higher Education & Technical Education), Munimaya Ram Marg, Pitampura, Delhi

<p>(VII) Two persons out of the following</p> <p>(a) Principal / Director of an Engineering Institute, Medical College, Pharmacy College, not affiliated with Guru Gobind Singh Indraprastha University.</p> <p>(b) Medical Superintendent of a Delhi Govt. Hospital or Dean of a Medical College.</p> <p>(c) A person of the rank of Chief Engineer or Chief Architect of any Government Department. (Term three years)</p>	<ol style="list-style-type: none"> <li>1. Prof. A. K. Agarwal, Dean, Ram Manohar Lohia Hospital, New Delhi-110001</li> <li>2. Sh. Rakesh Mishra, Engineer-in-Chief, Public Works Division, MSO Building IP Estate, New Delhi</li> </ol>
<p>(VIII) Two persons representing Industry/industrial confederations or federations, to be nominated by the Chancellor. (Term three years)</p>	<ol style="list-style-type: none"> <li>1. Major Gen. D. N. Khurana, Former Director General, All India Management Association, 288, Vasant Enclave, New Delhi-110057</li> <li>2. Shri Sunil Kant Munjal, Joint Managing Director, Hero Corp Ltd. E-1, Apartments, Qutab Hotel Complex, Shaheed Jeet Singh Marg, New Delhi- 110016</li> </ol>
<p>(IX) Five persons who are eminent professionals / academicians / educationists, to be nominated by the chancellor, provided they are not University employees of employees/ office bearers of affiliated colleges. (Term three years)</p>	<ol style="list-style-type: none"> <li>1. Dr. V. K. Bhasin, Department of Commerce, C-5, Teacher Flats, Hans Raj College, University of Delhi, Delhi-110007</li> <li>2. Dr. S. C. Saxena, Vice-Chancellor, JP Institute of Information Technology (A deemed to be University) Sector-62, Noida</li> <li>3. Prof. V.S. Ramamurthy, Director, National Institute of Advances Studies, National Institute of Science Campus, Bangalore-560012</li> <li>4. Dr. Nirmal Kumar Ganguly, Former Advisor, Union Minister of Health and Family Welfare, Former DG, ICMR &amp; Distinguished Biotechnology Fellow &amp; Advisor Translational Health Science &amp; Technology Institute, National Institute of Immunology, Aruna Asaf Ali Marg, New Delhi-67</li> <li>5. Shri Chandra Mohan, Chairman, Board of Governors, Punjab Engineering College, House No. 202, Sector 36 A, Chandigarh</li> </ol>
<p>(X) Secretary, Ex-Officio</p>	<p>Dr. B. P. Joshi, Registrar, GGSIPU</p>

### CONSTITUTION OF THE ACADEMIC COUNCIL

Required Constitution	Present constitution
(I) Vice-Chancellor <b>Ex-Officio Member</b>	Prof. D.K. Bandyopadhyay
(II) Deans of University School of Studies	All Deans of the University School of Studies
(III) Four Principals of University maintained colleges	Prof. Nupur Prakash, Principal, IGIT Only one maintained college of the University
<p>(IV) (Eight Principals two each from the following groups of colleges other than the University maintained conducting :</p> <p>(a) Engineering Technology and architecture programmes                      (b) Management programmes                      (c) Computer programmes                      (d) Education and other specialized programmes.</p> <p>This is subject to the condition that:-</p> <p>(i) Principal of the College should be a recognized teacher of the University as per Statute 18(1).                      (ii) Appointment of Principals shall be rotation according the seniority of the college based on the date of its affiliation and where the affiliation is on the same date; nomination shall be done by draw of lots.</p>	<ol style="list-style-type: none"> <li>1. Prof. Ashok De Principal, Ambedkar Institute of Technology, Geeta Colony, Delhi-110031</li> <li>2. Dr. M.L. Goyal Principal, Maharaja Agrasen Institute of Technology PSP Area, Plot No.1, Sector - 22, Rohini, Delhi -86</li> <li>3. Prof. Rekha Aggarwal, Principal, Amity School of Engg. &amp; Technology 580, Delhi Palam Vihar Road, Bijwasan, New Delhi -110061</li> <li>4. Dr. J. K. Goyal, Principal, Jagan Institute of Management Studies JIMS, 3, Institutional Area, Sector 5, Rohini, Delhi</li> <li>5. Dr. D. Srivastava, Principal, Employee State Insurance Corporation, Dental College Sector-15, Rohini, New Delhi-85</li> <li>6. Prof. M. N. Hoda, Principal, Bharati Vidyapeeth's Institute of Computer Applications and Management A-4, Paschim Vihar, New Delhi-110063</li> <li>7. Dr. Suman Nehra, Principal, R.C. Institute of Technology Gopal Nagar, Najafgarh,</li> <li>8. Dr. T. P. S. Rathore, Principal, Ideal Institute of Management and Technology Plot no. 16 X, Karkardooma, Institutional Area, Near Telephone Exchange, Delhi</li> </ol>

Required Constitution	Present constitution
(V) Directors of the University	All Directors of the University
(VI) Librarian	Librarian of the University
(VII) Not more than Five persons, from amongst recognized and/or the University	<ol style="list-style-type: none"> <li>1. Prof. C. S. Rai University School of Information Technology GGSSIP University,</li> <li>2. Dr. Kamal K. Aggarwal Associate Professor University School of Biotechnology GGSIP University,</li> <li>3. Dr. Pooja Khatri, Associate Professor, University School of Management Studies GGSSIP University,</li> <li>4. Dr. A. P. Singh Associate Professor, University School of Law &amp; Legal Studies GGSSIP University,</li> </ol>
(VIII) Not more than ten persons, who are not employees of the University, colleges of institutions, co-opted by the Academic Council for their special knowledge including representatives of employer's organizations, industries, trade and commerce, academic and professional organizations, and communication fields.	<ol style="list-style-type: none"> <li>1. Prof. Dutta Roy, Emeritus Professor, IIT Delhi</li> <li>2. Prof. P.K. Julka, Professor-AIIMS</li> <li>3. Prof. Furqan Qamar, Vice-Chancellor HP Central University.</li> <li>4. Prof. M.C. Sharma, IGNOU</li> <li>5. Prof. Uppeandra Dhar, Hamdard University, Delhi</li> <li>6. Prof. M. P. Gupta, IIT Delhi.</li> <li>7. Dr. N.K. Chaturvedi, Former Director, PGIMER, RML Hospital, New Delhi</li> <li>8. Prof. A. K. Mitra, Former Director, School of Planning and Architecture.</li> </ol>

### CONSTITUTION OF PLANNING BOARD

Required Constitution	Present constitution
(I) Vice Chancellor – Ex-Officio Member	Prof. D.K. Bandyopadhyay
(II) Nine nominated members (Term – 03 years)	<ul style="list-style-type: none"> <li>(i) Shri P. Rajendran, Chief Operating Officer, NIIT Ltd., New Delhi.</li> <li>(ii) Shri S.Y. Siddiqui-Managing Executive Officer, Maruti Suzuki, New Delhi.</li> <li>(iii) Shri Sanjeev Govil, Chief Operating Officer, Idea Cellular, New Delhi.</li> <li>(iv) Shri Aquil Busrai, CEO, Consulting &amp; Former Group Head HR IBM, New Delhi.</li> <li>(v) Shri Ashok Khurana, Engineer Member, Delhi Development Authority, New Delhi.</li> <li>(vi) Prof. Ranbir Singh, Vice Chancellor, National Law University, New Delhi.</li> <li>(vii) Dr. K.K. Chakraborty, Former Chancellor NUEPA, Vice Chairman, Delhi Institute of Heritage Research and Management, New Delhi.</li> <li>(viii) Prof. Anand Kumar, Management Development Instt, Gurgoan, Haryana.</li> <li>(ix) Prof. Ishwar Dayal, Former Director, IIM, Lucknow,</li> </ul>
(III) Secretary, Ex-Officio	Dr. B.P. Joshi, Registrar, GGSIPU

### CONSTITUTION OF BOARD OF AFFILIATION

Required Constitution	Present constitution
(I) Vice Chancellor – Ex-Officio Member	Prof. D.K. Bandyopadhyay
(II) Seven members to be nominated by the Board of Management (Term – 03 years)	(i) Shri P.K. Tripathi, Chief Secretary, Govt. of NCT, Delhi.. (ii) Prof. D.K. Banwet, Indian Institute of Technology, Delhi. (iii) Prof. J.P. Gupta, former VC, JP Instt. of Technology, Noida (U.P.). (iv) Prof. Jagdish Kapoor, Former Sr. Faculty, Indian Instt. Of Public Administration, New Delhi. (v) Prof. B.P. Khandelwal, Former Chairman, NUEPA & CBSE, New Delhi. (vi) Prof. A.K. Agarwal, Dean, Maulana Azad Medical College, New Delhi, (vii) Dr. Ashok De, Principal, Ambedkar Institute of Technology, Delhi.
(III) Secretary, Ex-Officio	Dr. B.P. Joshi, Registrar, GGSIPU

- Shri M.M. Kutty, Principal Secretary to Chief Minister, Govt of NCT, Delhi and Shri Anand Prakash, Principal Secretary, TTE, Govt. of NCT, Delhi shall be the special invitees in the Board of Affiliation.

### CONSTITUTION OF FINANCE COMMITTEE

Required Constitution	Present constitution
(I) Vice Chancellor – Ex-Officio Member	Prof. D.K. Bandyopadhyay
(II) Secretary Dept. of Finance or his nominee not below the rank of Addl. Secretary	Shri D.M . Spolia, Principal Secretary (Finance), Govt. of NCT Delhi
(III) Secretary Dept. of Education or his nominee not below the rank of Addl. Secretary	Shri Anand Prakash, IAS, Principal Secretary (Higher Education & Tech. Edu.), Govt. of NCT Delhi
(IV) One member of BOM to be nominated from among its members other than employee of the University or Institute (Term of three years)	Major Gen. D.N. Khurana, Former Dir. Gen., All India Management Association, New Delhi.
(V) Two persons to nominated by Chancellor (Term of three years)	(i). Shri. A.M. Sehgal, Former Controller General of Accounts, Govt. of India, New Delhi (ii).Dr. K.B.L. Mathur, Former Economic Advisor, Ministry Finance and Agriculture, Govt. of India, New Delhi
(VI) Controller of Finance (Secretary of FC)	

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