



ज्ञान-विज्ञान विमुक्तये

प्रो. (डॉ.) जसपाल एस. सन्धू
सचिव

Prof. Dr. Jaspal S. Sandhu
MBBS, MS (Ortho), DSM, FAIS, FASM, FAFSM, FEIMS, FAMS
Secretary



सत्यमेव जयते

Recd. 12/09/2016

विश्वविद्यालय अनुदान आयोग
University Grants Commission

(मानव संसाधन विकास मंत्रालय, भारत सरकार)
(Ministry of Human Resource Development, Govt. of India)

बहादुरशाह ज़फ़र मार्ग, नई दिल्ली-110002
Bahadur Shah Zafar Marg, New Delhi-110002

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D.O.No.F.1-1/2016(Secy)

10th August, 2016

Dear Sir/Madam,

The University Grants Commission has drafted and uploaded the Guidelines on Adoption of Choice Based Credit System (CBCS) on its website on 12.11.2014. Subsequently, the University Grants Commission also brought out Templates of 108 Undergraduate courses in which it semesterized the curricula and restructured syllabi in the form of progressive modules. They were also uploaded on the UGC's website. The CBCS provides for inbuilt flexibilities in which the students have a choice of pursuing courses of their choice in the form of electives. This not only broadens their horizons but also intends to make students well rounded in all spheres of development.

It has been more than a year since CBCS was introduced with the aforesaid stipulations. A number of institutions showed lots of enthusiasm in the implementation of the CBCS. So much so that while some universities have introduced CBCS at all the levels, others had done it at certain levels.

The UGC wishes to create a database regarding the effective implementation of CBCS in the institutions of higher learning. It is with that purpose that I have decided to approach you with the request to kindly confirm the implementation of CBCS in your esteemed University and affiliated Colleges by email at ugc.cbcs@gmail.com.

Please treat it as **Most Urgent** as the data is required by the Ministry of HRD for further analysis.

With kind regards,

Yours sincerely,

(Jaspal S. Sandhu)

The Vice-Chancellor
University of Petroleum and Energy Studies,
Bidholi Campus, Energy Acres,
P.O Bidholi (Via Prem Nagar)
Dehradun – 248 006,
Uttarakhand.

J. S. Sandhu 12/09

DATED: 12th September 2016

Dr. Shrihari
Vice Chancellor

Prof. Dr. Jaspal S. Sandhu
Secretary
University Grants Commission
Bahadur Shah Zafar Marg,
New Delhi-110 002

*Sub: Regarding the Effective Implementation of Choice Based Credit System (CBCS)
in the Institutions of Higher Learning.*

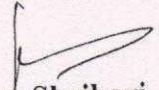
Dear Sir,

This is with reference to your D.O. letter. No. F, 1-1/2016 (Secy) dated 10th August 2016 regarding guidelines on adoption of Choice Based Credit System. (CBCS)

This is to confirm that the constituent colleges of UPES have implemented "CBCS" curriculum for all Programmes with effect from 1st July 2015.

With Kind Regards,

Yours Sincerely


Dr. Shrihari,
Vice Chancellor.



ACADEMIC COUNCIL MEETING

NO.	AC/023/MAY/2015	VENUE:	RAUNAQ HALL (FIRST FLOOR) PHD HOUSE 4/2 SIRI INSTITUTIONAL AREA AUGUST KRANTI MARG, NEW DELHI 110 016
DATE:	SATURDAY, 23 MAY 2015	TIME:	11.00 A.M.

EXTRACT OF MINUTES

[Extract from Approved Minute of Academic Council Meeting held on May 23, 2015]

Item 23.3: TO CONSIDER AND APPROVE CHOICE BASED CREDIT SYSTEM AS PROMULGATED BY UGC

Members were informed that UPES has been following the Elective Course System. However, as promulgated by UGC, the University is planning to introduce Choice based Credit System (CBCS) in all programmes across the university and to make the programmes compatible with all major universities in India and overseas. The CBCS would have Programme Electives (PE) baskets specific to individual programmes or group of programmes and Open Electives (OE) specific to College offering a mix of courses from humanities, social sciences and similar areas. The minimum number of total credits for the electives have been specified, but students can opt for more courses to obtain higher credits as Audit Courses.

After deliberations, the Academic Council approved the Choice Based Credit System with a suggestion that Uniform credits should be followed for open elective in all constituent colleges. Further, it was opined that some of subjects have lesser credits and the desired content cannot be delivered for eg. Mercantile Law, Services Marketing, etc. Such subjects may be shifted to core courses. It was also suggested to include Professional Ethics as a core subject instead of Open elective.

Item 23.4: CONSIDER AND APPROVE REVISION IN THE EXISTING / NEW PROGRAM COURSE SYLLABI OFFERED IN ACADEMIC SESSION 2015-16

The council was informed that with the implementation of CBCS across the Constituent Colleges, a need has arisen to revise the course syllabi of the programs offered (**Appendix 1**). Accordingly, necessary modifications have been carried. A brief presentation highlighting the changes was made by respective Deans of College of Engineering Studies and College of Management & Economics Studies, while Director (CoLS) made a presentation for the College of Legal Studies.

The Council while approving the revision in the course syllabi of the programs being offered in the three constituent Colleges suggested to reduce the total credits of COLS programmes to make it at par to BCI or seek advice of Legal advisory council before implementing the same.

The Council approved and appreciated the introduction of the course on "Design Thinking" across undergraduate (B.Tech) programs and "Physical Fitness and Wellness" program as an Open Elective at undergraduate level of College of Management & Economics Studies.



Dean of College of Engineering Studies briefed the council about the availability of the high-end software tools that are extensively useful in industry and about their limited utilization. For the effective utilization of these available high-end software tools, "Professional Software Training-PST" in every semester for extra duration was proposed. The council appreciated the initiative and advised to treat these hands-on training on various software tools as individual courses from next academic session onwards and can be included as a part of value-added courses and approved the various courses listed below

College of Engineering Studies

Professional Software Training (PST)

Object Oriented Programming & Algorithms	Hands on Experience on COMSOL
Hands on Experience on PHP & MySQL	Hands on Experience on ASPEN PLUS
Statistics for Engineers	Hands on Experience on HTRI
Hands on Experience on MATLAB	Hands on Experience on Xilinx Software
Hands on Experience on Origin 8.0	Hands on Experience on PHAST
Hands on Experience on SOLID WORKS (Level II)	Dynamics and Control using MATLAB and Simulink
Hands on Experience on CATIA	Patch Antenna Design using HFSS
PLC Training	Simsci Pipe Phase Simulation Software
Proteus simulation and ATMEGA/ARDUNIO interfacing	Embedded System solution for machine vision based applications
Hands on Experience on Ansys Meshing and Fluent	

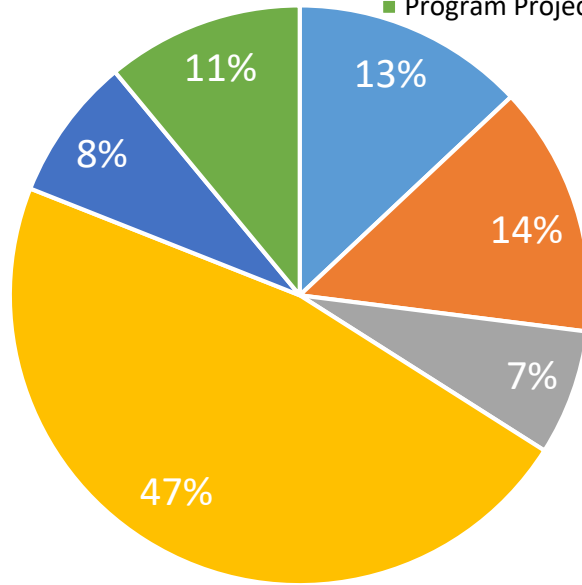
College of Management & Economic Studies

Indian Politics	Medieval History
World Geography	Modern History
Indian Geography	World History
Ancient History	Indian Economy
Environment and Sustainable Development	French
International Affairs and Relations	WHS India Certification Program (Rio+23)
Science and Technology	ICME lean Champion & Six Sigma Certificates



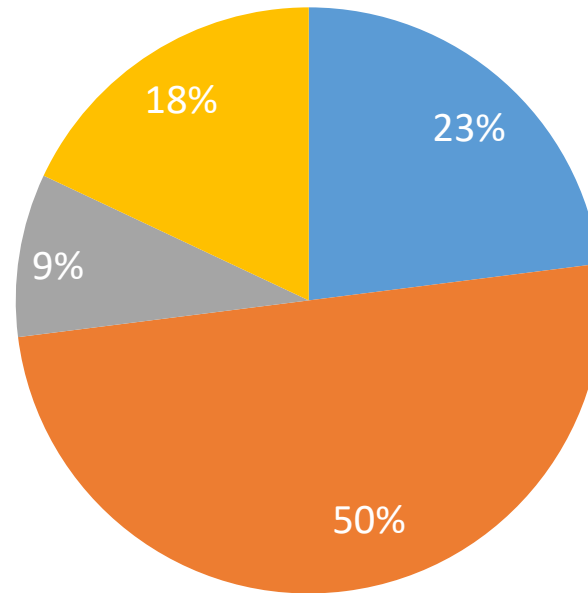
Annexure -1 Percentage of Credits Distribution in CBCS

- Basic Science Core
- Engineering Science Core
- Open Electives & Humanities Social Science
- Program Core Courses
- Program Elective
- Program Projects/Seminar/Intenship



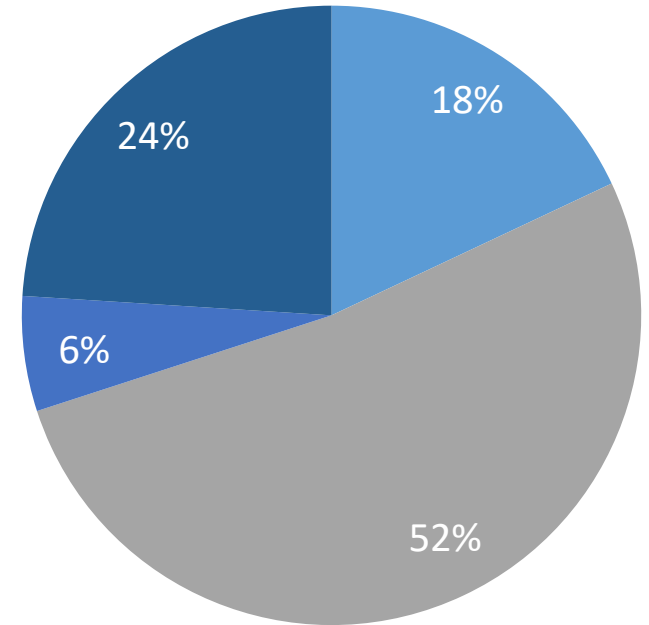
(B.Tech Programs - COES)

(COMES)



- Foundation Courses
- Core Courses
- Open Electives
- Program Elective & Dissertation

- Fundamental Courses
- Core Courses
- Open Elective
- Elective Courses



(COLS)

APPENDIX 1

B.Tech. Automotive Design Engineering 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	GNEG 253	Mechanics of Materials	4
GNEG 234	Engineering Thermodynamics	4	ADEG 227	I. C. Engines	4
ADEG 213	Automotive Electrical & Electronic Systems	3	GNEG 232	Material Science	3
GNEG 225	Applied Fluid Mechanics	4	ADEG 224	Kinematics & Dynamics of Machines	4
ADEG 203	Components of Automotive Chassis	3		Open Elective II	3
	Open Elective I	3	ADEG 206	Metrology & Manufacturing Technology	4
PRACTICAL			PRACTICAL		
GNEG 211	Engineering Graphics Lab II	1	GNEG 239	Material science and Material Testing lab	1
GNEG 224	Fluid Mechanics Lab	1	ADEG 202	Manufacturing & Metrology Lab	1
ADEG 212	Automotive Electrical & Electronic Lab	1	ADEG 321	Engine Testing & Emission Measurement Lab	1
ADEG 204	Automotive Chassis Component Lab	1	GNEG 233	Theory of Machines lab	1
TOTAL		25	TOTAL		26
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ADEG 364	Vehicle Dynamics	4	ADEG 207	Automotive Chassis Components Design	4
ADEG 225	Design of Machine Elements	4	GNEG 351	Heat Transfer	4

ADEG 342	Micro Processor Based Control System	3	MATH 305	Applied Numerical Techniques	3
	Open Elective III	3	ADEG 443	Vehicle Infotronics	3
ADEG 311	Automotive Transmission Systems	3	IMGT 303	Industrial Engineering and Management	3
	Program Elective I	3		Program Elective II	3
PRACTICAL			PRACTICAL		
ADEG 363	CAD Appl. in Automotive Engine Design	1	INDT 301	Industrial Visit	1
MEEL 403	Mechatronics and Control System lab	1	ADEG 362	CAD Appl. for Chassis Components Design	1
ADEG 322	Engine Troubleshooting & Servicing Lab	1	GNEG 352	Heat Transfer Lab	1
PROJ 305	Minor Project I	3	PROJ 306	Minor Project II	3
TOTAL		26	TOTAL		26
PE - I			PE - II		
ADEG 351	Ergonomics & Styling		ADEG 371	Advanced Manufacturing process	
ADEG 352	TQM		ADEG 353	Tribology	
ADEG 333	Fuels and Combustion		ADEG 354	Transportation Design and Development	
			ADEG 355	Automotive HVAC	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ADEG 431	Automotive Engine Component Design	2	ADEG 301	Vehicle Body Engineering	3
ADEG 413	Two & Three Wheelers Technology	2	ADEG 424	CAD/CAM	3
				Program Elective IV	3
	Program Elective III	3		Program Elective V	3
PRACTICAL			PRACTICAL		
ADEG 433	Design and Analysis using Software (CAE)	3	PROJ 402	Major Project II	8
SIIB 101	Summer Internship	2	ADEG 423	CAM and Automation lab	1
VIVA 403	Comprehensive Viva	1			
PROJ 401	Major Project I	4			
TOTAL		17	TOTAL		21
PE - III			PE - IV		
ADEG 434	Advanced Microcontroller for Auto Systems		ADEG 471	Finite Element method	
ADEG 436	Modeling and Simulation		ADEG 461	Operations Research	
IPEG 411	Facilities Planning & Material handling		ADEG 435	Metal Forming - Principles & Design	
			PMEO 401	Economics and life cycle concepts	
			PE - V		
			GNEG 403	Computational Fluid Dynamics	

			ADEG 442	Auto Certification & Homologation	
			MEEL 413	Rapid Prototyping and Tooling	
Total Credits of B.Tech. Automotive Design Engineering 2015					191

B.Tech. Applied Petroleum Engineering with specialization in Gas Stream 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
	TOTAL	27		TOTAL	23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	GNEG 257	Heat Transfer	4
GNEG 223	Fluid Mechanics	4	CHEG 211	Mass Transfer Operations	4
CHEG 222	Chemical Engineering Thermodynamics I	4	CHEG 224	Chemical Engineering Thermodynamics II	4
CHEG 235	Chemical Process Calculations	4	PTEG 211	Drilling Engineering & Well Completion	4
				Open Elective I	3
EASC 105	Introductory Geology	3		Open Elective II	3
PRACTICAL			PRACTICAL		
PTEG 202	Petroleum Product Testing Lab	1	CHEG 312	Mass Transfer Lab	1
GNEG 224	Fluid Mechanics Lab	1			
	TOTAL	21		TOTAL	23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 311	Numerical Methods in Chemical Engineering	4	PTEG 327	Well Logging Analysis & Well Testing	3
PTEG 328	Production Engineering	4	PTEG 373	Unconventional Gas Resources	3
PTEG 335	Reservoir Engineering	4	PTEG 363	Natural Gas Processing	4
PTEG 442	City Gas Distribution & Pipeline Network Analysis	3	GNEG 389	Process Dynamics, Instrumentation & Control	4
	Program Elective I	3		Program Elective II	3
	Open Elective III	3			
PRACTICAL			PRACTICAL		
GNEG 352	Heat Transfer Lab	1	PROJ 305	Minor Project II	3
			INDT 301	Industrial Visit	1

PROJ 305	Minor Project I	3	PTEG 390	PDIC Lab	1
TOTAL		25	TOTAL		22
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CHEG 331	Chemical Reaction Engineering	4	PTEG 372	Air Fractionation & Gas Purification	3
PTEG 465	LNG & Storage of Natural Gas	4	PTEG 466	Understanding Of Natural Gas Business	3
	Program Elective III	3		Program Elective V	3
	Program Elective IV	3	PTEG 467	Oil & Gas Engineering software	1
PRACTICAL			PRACTICAL		
PROJ 401	Major Project I	4	PROJ 402	Major Project II	8
VIVA 403	Comprehensive Viva	1			
SIIB 101	Summer Internship	2			
PTEG 311	Drilling Fluid & Cementation lab	1			
TOTAL		22	TOTAL		18
	Program Electives - I, III, IV			Program Electives - II, V	
PTEG 371	Gasification & Gas to Liquid Technology		CHEG 341	Petroleum Refining & Petrochemical Technology	
PTEG 443	Pipeline Transportation of Oil & Gas		ENVO 405	Safety, Health & Environment Management	
GNEG 227	Strength of Materials		PTEG 427	Enhanced Oil Recovery	
MTEG 365	Corrosion Engineering		PEEO 404	Petroleum Engineering Economics	
PSEG 374	Risk Management in Energy Industries		GNEG 421	Membrane Technology	
PSEG 373	Energy Conservation & Recovery.		CHEG 406	Separation Processes	
PSEG 353	Gas Turbines		MTEG 481	Hydrogen and Fuel Cells	
GSEG 330	Rock & Fluid Properties		ENVO 411	Environmental Regulation of Oil and Gas	
PTEG 424	Petroleum Production System Design		PTEG 436	Reservoir Simulation	
			PTEG 412	Drilling Process design & Optimization.	
Total Credits of B.Tech. Applied Petroleum Engineering with specialization in Gas Stream 2015					181

B. Tech. Applied Petroleum Engineering with specialization in Upstream 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	PTEG 212	Drilling Hydraulics	4
PTEG 231	Elements of Rig Component Design	4	MATH 301	Applied Numerical Methods	4
PTEG 201	Introduction to Petroleum Operation	3	EASC 206	Sedimentary & Petroleum Geology	3
GNEG 241	Thermodynamics & Heat Engines	4	PTEG 211	Drilling Engineering & Well Completion	4
EASC 105	Introductory Geology	3	GNEG 261	Surveying	3
	Open Elective I	3			
PRACTICAL			PRACTICAL		
			GNEG 224	Fluid Mechanics Lab	1
GNEG 222	Material Testing Lab	1	GNEG 262	Surveying Lab	1
EASC 103	Geology Lab I	1		Open Elective II	3
			EASE 202	Geology Lab II	1
TOTAL		23	TOTAL		24
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PTEG 321	Production Engineering I	4	PTEG 422	Production Engineering II	4
PTEG 331	Reservoir Engineering I	4	PTEG 332	Reservoir Engineering II	4
GSEG 323	Petroleum Exploration - Geological & Geophysical Methods	4	PTEG 323	Well Log Analysis & Well Testing	4
PTEG 362	Natural Gas Engineering	3	PTEG 315	Well Stimulation	3
GSEG 312	GeoMechanics	3	GSEG 393	Engineering Material	3
PRACTICAL			PRACTICAL		
PTEG 311	Drilling Fluid & Cementation Lab	1	PROJ 306	Minor Project II	3
PROJ 305	Minor Project I	3	INDT 301	Industrial Visit	1
	Program Elective I	3		Program Elective II	3
TOTAL		25	TOTAL		25
PE - I			PE - II		

PTEG 314	Drilling Process System Design & Optimization		PTEG 316	Oil and Gas Marketing and Resource Management	
CEEG 323	Unconventional Hydrocarbon exploitation		PTEG 325	Deep Sea Production System	
CHEG 323	Chemical Thermodynamics		PTEG 326	Well Intervention	
GSEG 313	Vibronics		GNEG 256	Heat Transfer Process	
			ELEG 346	Electro Dynamics	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PTEG 411	Offshore Drilling & Production Operations	4		Open Elective III	3
PTEG 431	Reservoir Modeling & Simulation	3	ENVO 401	Health, Safety & Environment Management	2
PRACTICAL			PRACTICAL		
PTEG 434	Reservoir & Production Engineering Lab	1	PROJ 402	Major Project II	8
PROJ 401	Major Project I	4		Program Elective IV	3
SIIB 101	Summer Internship	2		Program Elective V	3
VIVA 403	Comprehensive Viva	1			
	Program Elective III	3			
	TOTAL	18		TOTAL	19
PE - III			PE - IV		
			PTEG 427	Enhanced Oil Recovery	
PTEG 424	Petroleum Production System Design		PTEG 444	Transportation and Marketing of Petroleum and Petroleum Products	
PTEG 443	Pipeline Transportation of Oil & Gas		GSEG 412	Thermodynamics	
PTEG 426	Coal Bed Methane Technology		PE - V		
MATH 402	Computational Mathematics		MDSO 344	Oil Field Asset Management	
			GSEG 413	Production Logging	
			PTEG 461	Developing LNG Production & Handling	
Total Credits of B. Tech. Applied Petroleum Engineering with specialization in Upstream 2015					184

B.Tech. Electrical Engineering 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	ELEG 263	Linear Integrated Circuits	3
ELEG 204	Network Theory	3	ELEG 223	Electrical Measurement & Instrumentation	4
ELEG 231	Electromagnetic Field Theory	3	ELEG 257	Synchronous & Asynchronous Machines	4
ELEG 216	Analog & Digital Electronics	4	ELEG 273	Control System Engineering	4
ELEG 252	DC Machines & Transformers	4		Open Elective I	3
PSEG 221	Power Generation Engineering	3		Open Elective II	3
PRACTICAL			PRACTICAL		
PSEG 203	Electrical Machines Lab	1	ELEG 224	Electrical Measurement & Instrumentation Lab	1
TOTAL		22	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PSEG 308	Power Transmission & Distribution	4	PSEG 312	Power System Protection & Switchgear	3
PSEG 324	Power Electronics & Drives	4	PSEG 309	High Voltage Engineering	4
MHEG 374	Thermal & Hydraulic Equipment	4	PSEG 317	Power System Analysis & Stability	4

	Open Elective III	3		Program Elective II	3
PROJ 305	Minor Project I	3			
	Program Elective I	3			
PRACTICAL			PRACTICAL		
ELEG 272	Control System Engineering Lab	1	PSEG 326	Power Electronics & Drives Lab	1
			PSEG 313	Power System Protection & Switchgear Lab	1
			PROJ 306	Minor Project II	3
			INDT 301	Industrial Visit	1
TOTAL		22	TOTAL		20
PE - I			PE II		
ELEG 308	Electronic Communication		ELEG 323	Microprocessor & Microcontroller	
ELEG 349	Nuclear & Hydro Power Plant		PSEG 402	Substation Design	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ELEG 472	Electrical Machine Design	4	PSEG 415	Advanced Power Transmission Systems	4
ELEG 406	Utilization & Industrial Electronics	4	PSEG 471	Renewable Energy Technology & Co generation	4
ELEG 465	Simulation of Electrical Systems	1			
	Program Elective III	3			
	Program Elective IV	3		Program Elective V	3
PRACTICAL			PRACTICAL		
VIVA 403	Comprehensive Viva	1	PROJ 402	Major Project II	8
SIIB 101	Summer Internship	2			
PROJ 401	Major Project I	4			
TOTAL		22	TOTAL		19
PE - III			PE V		
ELEG 416	Project Management & Contract Administration		PSEG 441	Energy Conservation , Audit & Regulatory Issues	
ELEG 417	Demand Side Management		PSEG 481	HSE for Power Industry	
PE - IV					
PSEG 483	Automation in Power System				
PSEG 415	Power Plant Maintenance Practice				
Total Credits of B. Tech. Electrical Engineering 2015					177

B.Tech. Mechanical Engineering 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical and Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
PHYS 103	Physics I Lab	1	PHYS 104	Physics II Lab	1
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical and Electronics Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	MHEG 244	Kinematics of Machines	4
MHEG 237	Manufacturing Technology I	3	MHEG 232	Manufacturing Technology II	3
GNEG 232	Material Science	3	MHEG 247	Mechanical Measurement & Metrology	3
GNEG 253	Mechanics of Materials	4	GNEG 254	Fluid Mechanics	3
GNEG 234	Engineering Thermodynamics	4	MHEG 221	Steam & Power Generation	4
	Open Elective I	3		Open Elective II	3
PRACTICAL			PRACTICAL		
MHEG 239	Manufacturing Process Lab	1	MHEG 248	Manufacturing & Metrology Lab	1
GNEG 239	Material Science & Material Testing Lab	1	GNEG 255	Fluid Mechanics Lab	1
MHEG 245	Machine Drawing Lab	1	MHEG 222	Thermal Engineering Lab	1
TOTAL		24	TOTAL		23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MHEG 366	Dynamics of Machines	4	MHEG 353	I.C Engines	4
MHEG 367	Turbo Machinery	4	GNEG 356	Heat Transfer	4
MHEG 368	Machine Design-I	4	MHEG 369	Machine Design-II	4
IMGT 304	Industrial Engineering	3	MATH 305	Applied Numerical Techniques	3
	Open Elective III	3		Program Elective II	3
	Program Elective I	3			
PRACTICAL			PRACTICAL		
GNEG 233	Theory of Machines Lab	1	ADEG 321	Engine Testing & Emission Measurement Lab	1
MHEG 364	Fluid Machinery Lab	1	GNEG 352	Heat Transfer Lab	1
PROJ 305	Minor Project I	3	PROJ 306	Minor Project II	3
			INDT 301	Industrial Visit	1
TOTAL		26	TOTAL		24
PE - I			PE - II		

ADEG 353	Tribology		MHEG 372	Product Design and Development	
ADEG 331	Alternate Energy Sources		PSEG 442	Energy Management	
MTEG 371	Quality, Reliability & Safety		MHEG 373	Mechanical Vibration	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MHEG 484	Refrigeration and Air Conditioning	4	MHEG 486	Automatic Control	4
GNEG 363	CAD/CAM	3		Program Elective IV	3
IPEG 452	Operation Research	4		Program Elective V	3
	Program Elective III	3			
PRACTICAL			PRACTICAL		
MHEG 485	Refrigeration and Air Conditioning (RAC) Lab	1	PROJ 402	Major Project II	8
GNEG 364	CAD/CAM lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
VIVA 403	Comprehensive Viva	1			
	TOTAL	23		TOTAL	18
PE - III			PE - IV		
MHEG 451	Solar Thermal Technologies		MHEG 453	Power Plants	
MHEG 452	Production and Operations Management		MHEG 454	Air Conditioning System Design	
ASEG 483	Finite Element Analysis		GNEG 403	Computational Fluid Dynamics	
				PE - V	
			ADEG 436	Modeling and Simulation	
			MHEG 363	Automobile Engineering	
			ADEG 405	Advanced Manufacturing Technology	
Total Credits of B.Tech. Mechanical Engineering 2015					188

B.Tech. Mechatronics Engineering 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
	TOTAL	27		TOTAL	23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	GNEG 286	Materials Technology	3
CSEG 206	OOPs with C++	3	MEEL 211	Embedded System	4
GNEG 234	Engineering Thermodynamics	4	GNEG 215	Mechanics of Solids	4
GNEG 291	Analog and Digital Electronics	4	GNEG 231	Theory of Machine	4
PSEG 209	Electrical Machine	4	GNEG 281	Instrumentation & Control	4
	Open Elective I	3		Open Elective II	3
PRACTICAL			PRACTICAL		
CSEG 207	OOPs Lab	1	GNEG 222	Material Testing Lab	1
GNEG 211	Engineering Graphics Lab II	1	MEEL 212	Embedded System Programming Lab	1
GNEG 285	Electrical Drives and Electronics Lab	1	GNEG 233	Theory Of Machine Lab	1
	TOTAL	25		TOTAL	25
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MHEG 357	Manufacturing Technology	4	ADEG 225	Design of Machine Elements	4
GNEG 321	Fluid Mechanics & Machinery	4	MEEL 324	Program Logic Controller & HMI	4
MEEL 333	Robotics & Control	4	MEEL 313	Hydraulics and Pneumatics	4
	Open Elective III	3	GNEG 365	CAD/CAM	4
	Program Elective I	3		Program Elective II	3
PRACTICAL			PRACTICAL		
MHEG 358	Manufacturing Technology Lab	1	MEEL 314	Hydraulics and Pneumatics Lab	1
GNEG 322	Fluid Mechanics & Machinery Lab	1	GNEG 366	CAD/CAM Lab	1
MEEL 334	Robotics & Control Lab	1	MEEL 325	PLC & HMI Lab	1
PROJ 305	Minor Project I	3	PROJ 306	Minor Project II	3
	Program Elective Lab	1	INDT 301	Industrial Visit	1
	TOTAL	25		TOTAL	26
PE - I			PE - II		
ELEG 341	Power Electronics & Drive		ELEG 312	Signal & System	

CSEG 320	Design & Analysis of Algorithm		MEEL 335	Advanced Robotics	
GNEG 357	Heat Transfer		ADEG 343	Automotive Mechatronics	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ELEG 363	Digital Signal Processing	3	MEEL 415	Theory Of Automation	3
MEEL 404	Mechatronics System Design	3		Program Elective IV	3
MEEL 406	Distributed Control System	4		Program Elective V	3
	Program Elective III	3			
PRACTICAL			PRACTICAL		
MEEL 405	Mechatronics Lab	1	PROJ 402	Major Project II	8
ELEG 364	Digital Signal Processing Lab	1			
VIVA 403	Comprehensive Viva	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
	TOTAL	22		TOTAL	17
PE - III			PE - IV		
MHEG 483	Mechanical Vibrations		CSEG 391	Computer Networks	
MEEL 471	Biomedical Mechatronics		ELEG 338	Analog & Digital communication	
ELEG 204	Network Theory		CSEG 313	Java Programming	
			PE - V		
			ELEG 442	Artificial Intelligence	
			MEEL 441	MEMS	
			MEEL 461	Machine Vision	
Total Credits of B.Tech. Mechatronics Engineering 2015					190

B.Tech. Electronics Engineering - 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	ELEG 231	Electromagnetic Field Theory	3
CSEG 243	Algorithm & Data Structure	3	ELEG 221	Instrumentation & Measurement	3
ELEG 219	Signals & Systems	3	ELEG 213	Digital Electronics	4
ELEG 218	Electronic Devices & Circuit – I	3	ELEG 209	Electronic Devices & Circuits- II	4
ELEG 204	Network Theory	3	MATH 221	Probability & Random variables	3
	Open Elective 1	3		Open Elective 2	3
PRACTICAL			PRACTICAL		
CSEG 244	Algorithm & Data Structure Lab	1	ELEG 222	Instrumentation & Measurement Lab	1
ELEG 210	EDC Lab I	1	ELEG 261	EDC Lab II	1
ELEG 205	Network Lab	1	ELEG 202	Digital Electronics Lab	1
ELEG 206	Electronics Workshop	1			
TOTAL		23	TOTAL		23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ELEG 263	Linear Integrated Circuits	3	ELEG 415	Microwave Engg	3
ELEG 335	Analog Communication	3	ELEG 383	Control System Engineering	3
ELEG 321	Microprocessor & Peripherals	3	ELEG 363	Digital Signal Processing	3
ELEG 361	Antenna & Wave propagation	3	ELEG 333	Digital Communication	4
	Program Elective I	3	ELEG 365	Advanced Microprocessor & Embedded Systems	3

	Open Elective III	3		Program Elective II	3
PRACTICAL			PRACTICAL		
ELEG 336	Analog Communication lab	1	ELEG 325	Advanced Microprocessor & Lab	1
ELEG 303	Microprocessor Lab	1	ELEG 337	Digital Communication Lab	1
ELEG 372	Linear Integrated Circuit Lab	1	ELEG 315	Digital Signal Processing Lab	1
PROJ 305	Minor Project I	3	ELEG 413	Microwave & Antenna Lab	1
			INDT 301	Industrial Visit	1
			PROJ 306	Minor Project II	3
TOTAL		24	TOTAL		27
PE - I			PE - II		
ELEG 339	Digital IC applications		ELEG 404	VLSI Technologies and Process	
ELEG 414	Micro Electro Mechanical Systems		ELEG 411	Nano Electronics technology	
ELEG 444	Data Communication & Networking		ELEG 437	Biomedical Instrumentation	
			ELEG 384	Computer Programming Techniques	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ELEG 407	VLSI Design	3		Program Elective IV	3
MATH 306	Applied Numerical Methods	3		Program Elective V	3
CEEG 313	Java Programming	3			
	Program Elective III	3			
PRACTICAL			PRACTICAL		
ELEG 403	VLSI Lab	1	PROJ 402	Major Project II	8
CSEG 314	Java Programming lab	1			
PROJ 401	Major Project I	4			
VIVA 403	Comprehensive Viva	1			
SIIB 101	Summer Internship	2			
TOTAL		21	TOTAL		14
PE - III			PE - IV		
ELEG 307	Satellite Communication		ELEG 368	Microcontroller & embedded system	
ELEG 341	Power Electronics & Derives		ELEG 442	Artificial Intelligence	
ELEG 432	Solar Cell Technology		ELEG 434	VHDL	
			PE - V		
			ELEG 421	Optical Communications	
			ELEG 422	Wireless Communications	
			ELEG 441	Telecommunication switching Systems & Networks	
			ELEG 435	Radar Systems	
Total Credits of B.Tech. Electronics Engineering 2015					182

B. Tech. Geo Informatics Engineering 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	GSEG 201	Methods of Petroleum Exploration	4
EASC 105	Introductory Geology	3	ELEG 431	Remote Sensing	3
PTEG 212	Drilling Hydraulics	4	GNEG 263	Planning and Surveying	2
GNEG 241	Thermodynamics & Heat Engines	4	GSEG 302	Sedimentology	3
GIEG 201	Introduction to Geoinformatics	2	GSEG 308	Mineral Exploration and Mining Geology	3
	Open Elective I	3	GSEG 321	Exploration Geophysics	4
				Open Elective II (HS)	3
PRACTICAL			PRACTICAL		
GIEG 314	GIS Lab I	1	GNEG 262	Surveying Lab	1
EASC 103	Geology Lab I	1	EASC 203	Geology Lab II	1
GNEG 224	Fluid Mechanics Lab	1	GSEG 322	Geophysics Lab	1
TOTAL		23	TOTAL		25
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PTEG 211	Drilling Engineering & Well Completion	4	GSEG 303	Basin Analysis	4
EASC 205	Applied Geology	3	GSEG 331	Statistical Methods in Geosciences	3
GSEG 391	Rock Mechanics & Geo Technical Engineering	3	GIEG 321	Digital Image Processing	3
	Open elective III	3	GIEG 313	GIS and Satellite Navigation System	4
GSEG 311	Digital Photogrammetry	3	GSEG 312	Geomechanics	3
	Program Elective I	3		Program elective II	3
PRACTICAL			PRACTICAL		
GIEG 315	GIS Lab II	1	PROJ 306	Minor Project II	3
PTEG 311	Drilling Fluids & Cementation Lab	1	ELEG 347	Remote Sensing Lab	1
PROJ 305	Minor Project I	3	INDT 301	Industrial Visit	1

	TOTAL	24		TOTAL	25
	PE - I			PE - II	
GSEG 314	Unconventional Energy Sources		GIEG 322	Spatial Database System	
EASC 311	Petroleum Geology		ELEG 348	Hyperspectral Remote Sensing	
GNEG 388	Instrumentation & Control				
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PTEG 429	Formation Evaluation and Well Logging	4	GSEG 411	Asset Management	3
GSEG 402	Geophysical Data Acquisition: Processing and Interpretation	4	GIEG 403	Advances in Geoinformatics Engg.	3
	Program Elective III	3		Program Elective V	3
	Program Elective IV	3			
PRACTICAL			PRACTICAL		
PROJ 401	Major Project I	4	PROJ 402	Major Project II	8
SIIB 101	Summer Internship	2			
VIVA 403	Comprehensive Viva	1			
	TOTAL	21		TOTAL	17
	PE - III			PE - V	
GIEG 404	Application of Geo Informatics		GIEG 412	Mobile Mapping	
GSEG 413	Production Logging		GIEG 423	Thermal and Microwave Remote Sensing	
	PE - IV				
PTEG 334	Principles of Reservoir Engineering				
GIEG 413	Spatial Data Analysis & Modeling				
Total Credits of B. Tech. Geo Informatics Engineering 2015					185

B.TECH (GEO SCIENCES ENGINEERING) w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
	TOTAL	27		TOTAL	23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	GSEG 201	Methods of Petroleum Exploration	4
EASC 105	Introductory Geology	3	GSEG 212	Photogrammetry and Remote Sensing	4
PTEG 212	Drilling Hydraulics	4	GNEG 263	Planning and Surveying	2
GNEG 241	Thermodynamics & Heat Engines	4	GSEG 302	Sedimentology	3
GSEG 301	Ground water Exploration	2	GSEG 211	Economic Geology	2
	Open Elective I	3	GSEG 321	Exploration Geophysics	4
				Open Elective II	3
PRACTICAL			PRACTICAL		
EASC 103	Geology Lab I	1	GNEG 262	Surveying Lab	1
GNEG 224	Fluid Mechanics Lab	1	EASC 202	Geology Lab II	1
			GSEG 322	Geophysics Lab	1
	TOTAL	22		TOTAL	25
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PTEG 211	Drilling Engineering & Well Completion	4	GSEG 303	Basin Analysis	4
EASC 205	Applied Geology	3	GSEG 331	Statistical Methods in Geosciences	4
GSEG 391	Rock Mechanics & Geo Technical Engineering	3	GSEG 306	Applied Micro Paleontology	3
GSEG 308	Mineral Exploration and Mining Geology	3	GSEG 392	Soil Mechanics & Foundation Engg.	4
	Open Elective III	3		Program Elective II	3
	Program Elective I	3	GSEG 312	Geomechanics	3
GIEG 313	GIS and Satellite Navigation Systems	4			
PRACTICAL			PRACTICAL		
GIEG 312	GIS Lab	1	PROJ 306	Minor Project II	3
PTEG 311	Drilling Fluids & Cementation Lab	1	INDT 301	Industrial Visit	1
PROJ 305	Minor Project I	3			
	TOTAL	28		TOTAL	25

PE - I			PE - II		
GSEG 314	Unconventional Energy Sources		GSEG 315	Analytical Methods In Geoscience	
EASC 311	Petroleum Geology		GSEG 413	Production Logging	
			MATH 306	Applied Numerical Methods	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PTEG 429	Formation Evaluation and Well Logging	4	GSEG 411	Asset Management	3
	Program elective III	3	ENVO 401	Safety, Health & Environment Mgmt.	2
GSEG 402	Geophysical Data Acquisition: Processing & Interpretation	4		Program Elective V	3
	Program elective IV	3			
PRACTICAL			PRACTICAL		
PROJ 401	Major Project I	4	PROJ 402	Major Project II	8
SIIB 101	Summer Internship	2			
VIVA 403	Comprehensive Viva	1			
	TOTAL	21		TOTAL	16
PE - III			PE - V		
GSEG 401	Methods in Structural Geology		PEEO 402	Resource Economics and Risk Management in Exploration	
PTEG 316	Oil and Gas Marketing and Resource Management		MBCG 726	Operational Law & Contract Administration	
PE - IV					
PTEG 402	Principle of Petroleum Production Engineering				
PTEG 334	Principle of Reservoir Engineering				
GSEG 393	Engineering Materials				
Total Credits of B. Tech. Geo - Science Engineering 2015					187

B.Tech. Material Science Engineering with specialization in Nano Technology 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MTEG 213	Physical Metallurgy	4	MTEG 262	Introduction to Nanotechnology	3
MATH 201	Mathematics III	4	MTEG 231	Electrical, Magnetic & Electronic Materials	4
GNEG 227	Strength of Materials	3	MTEG 241	Principles of Metal Extraction & Refining	4
MTEG 202	Thermodynamics and Kinetics of Materials	4	MTEG 204	Polymers and Ceramics	3
MTEG 203	Materials Chemistry	3	MTEG 223	Materials Characterization-I	3
	Open Elective I	3	MTEG 271	Transport Phenomenon for Material Science	3
				Open Elective II	3
PRACTICAL			PRACTICAL		
MTEG 212	Material Science Lab	1	MTEG 263	Nanomaterials Lab I	1
TOTAL		22	TOTAL		24
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MTEG 333	Nano Material Processing	4	MTEG 302	Non-Ferrous Materials Technology	3
MTEG 311	Mechanical Behaviour & Properties of Materials	4	MTEG 363	Corrosion Science & Technology	3
MTEG 342	Material Characterization-II	3	ADEG 302	Manufacturing Technology	4
	Open Elective III	3	MTEG 344	Iron & Steel Making	4
	Program Elective I	3		Program Elective II	3
PRACTICAL			PRACTICAL		
MTEG 334	Nano Materials Lab II	1	MTEG 362	Corrosion Engineering Lab	1
GNEG 222	Material Testing Lab	1	MTEG 322	Manufacturing Lab	1
MTEG 343	Material Characterization Lab	1	PROJ 306	Minor Project II	3
PROJ 305	Minor Project I	3	INDT 301	Industrial Visit	1
TOTAL		23	TOTAL		23
PE - I			PE - II		
MTEG 352	Fuel Furnaces & Refractories		MTEG 303	Biomaterials	

MHEG 452	Production and Operations Management		MTEG 304	Metallurgical Aspects of Metal Forming	
MTEG 353	Quality Inspection & NDT techniques		CHEG 383	Particulate Processing	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MTEG 422	Nano Electronics & Robotics	4	MTEG 421	Advanced Applications of Nano Technology	4
MTEG 402	Introduction to Modelling & Simulation	3		Program Elective IV	3
MTEG 413	Composites and Nano Composites	3		Program Elective V	3
	Program Elective III	3			
PRACTICAL			PRACTICAL		
MTEG 403	Modelling & Simulation Lab	1	PROJ 402	Major Project II	8
MTEG 412	Composite and Nano Composite Fabrication Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
VIVA 403	Comprehensive Viva	1			
	TOTAL	22		TOTAL	18
PE - III			PE - IV		
ASEG 483	Finite element analysis		MTEG 432	Electrochemical Analytical Techniques	
MTEG 423	Corrosion Control Practices in Industries		MTEG 433	Metallurgical Failure Analysis	
MTEG 424	Special Steels and Super alloys		MTEG 434	Foundry Technology and Powder Metallurgy	
			PE - V		
			MTEG 442	Material Selection and Design	
			ADEG 353	Tribology: Friction, Wear & Lubrication	
			MHEG 487	Automatic Control	
Total Credits of B.Tech. Material Science Engineering with specialization in Nano Technology 2015					182

B.Tech. Aerospace Engineering with specialization in Avionics 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
		TOTAL			27
			TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	ELEG 201	Signals & Systems	4
GNEG 217	Strength of Materials	4	ASEG 211	Aerodynamics I	4
GNEG 225	Applied Fluid Mechanics	4	ASEG 321	Propulsion I	4
GNEG 241	Thermodynamics & Heat Engines	4	ELEG 368	Microcontrollers & Embedded Systems	3
ELEG 220	Digital Electronics	3		Open Elective II	3
ASEG 204	Introduction to Aerospace & Avionics Engineering	3		Open Elective I	3
PRACTICAL			PRACTICAL		
GNEG 224	Applied Fluid Mechanics Lab	1	ELEG 369	Microcontrollers & Embedded Systems Lab	1
		TOTAL			23
			TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ASEG 301	Flight Mechanics I	4	ASEG 322	Propulsion II	4
ASEG 335	Aircraft Structures	4	ELEG 311	Digital Signal Processing	4
ASEG 311	Aerodynamics II	4	MATH 301	Applied Numerical Methods	4
	Open Elective III	3		Program Elective II	3
	Program Elective I	3			
PRACTICAL			PRACTICAL		
PROJ 305	Minor Project I	3	ASEG 333	Aircraft Structures Lab	1
			ASEG 323	Propulsion Lab	1
ASEG 312	Aerodynamics Lab	1	INDT 301	Industrial Visit	1
			PROJ 306	Minor Project II	3
		TOTAL			22
		PE - I			PE - II
ELEG 391	Electromagnetic Waves & Antennas		ELEG 415	Microwave Engineering	
ELEG 316	Measurements & Instruments		ASEG 346	Aircraft Systems & Instruments	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits

ASEG 401	Flight Mechanics II	4	ELEG 408	Satellite Systems Engineering	4
AVEG 433	Digital Avionics	4			
ELEG 401	RADAR Technology	4		Program Elective IV	3
	Program Elective III	3		Program Elective V	3
PRACTICAL			PRACTICAL		
			PROJ 402	Major Project II	8
ASEG 202	Aero Modeling & Fabrication Lab	1			
SIIB 101	Summer Internship	2			
VIVA 403	Comprehensive Viva	1			
PROJ 401	Major Project I	4			
	TOTAL	23		TOTAL	18
	PE - III			PE - IV	
ASEG 482	Orbital Mechanics		AVEG 451	Navigation & Guidance	
GIEG 321	Digital Image Processing		AVEG 452	Mathematical Modeling & Simulation	
				PE - V	
			ELEG 271	Control System Engineering	
			ASEG 485	Space Science & Space Environment	
Total Credits of B.Tech. Aerospace Engineering with specialization in Avionics 2015					179

B. Tech. Aerospace Engineering 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	ADEG 225	Design of Machine Element	4
GNEG 217	Strength of Materials	4	ASEG 211	Aerodynamics-I	4
GNEG 225	Applied Fluid Mechanics	4	ASEG 321	Propulsion-I	4
GNEG 241	Thermodynamics & Heat Engines	4	GNEG 256	Heat Transfer Processes	3
GNEG 251	Theory of Machine	3		Open Elective II	3
ASEG 204	Introduction to Aerospace & Avionics Engineering	3		Open Elective I	3
PRACTICAL			PRACTICAL		
GNEG 224	Applied Fluid Mechanics Lab	1	GNEG 222	Material Testing Lab	1
TOTAL		23	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ASEG 301	Flight Mechanics I	4	ASEG 322	Propulsion_II	4
ASEG 335	Aircraft Structures	4	MATH 301	Applied Numerical Methods	4
ASEG 311	Aerodynamics-II	4	ASEG 361	Introduction to Vibration	4
	Open Elective III	3		Program Elective II	3
PRACTICAL			PRACTICAL		
PROJ 305	Minor Project I	3	ASEG 333	Aircraft Structure lab	1
	Program Elective I	3	ASEG 323	Aircraft Propulsion Lab	1
ASEG 312	Aerodynamics lab	1	INDT 301	Industrial Visit	1
			PROJ 306	Minor Project II	3
TOTAL		22	TOTAL		21
PE - I			PE - II		

ASEG 336	Aircraft Materials		ASEG 352	Theory of Plates	
ASEG 344	Aircraft Systems and Maintenance		ASEG 411	Supersonic Aerodynamics	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ASEG 401	Flight Mechanics II	4	ASEG 461	Aircraft design	4
GNEG 401	Computational Fluid Dynamics	4		Program elective IV	3
ASEG 417	Finite element Methods	4		Program elective V	3
	Program Elective III	3			
PRACTICAL			PRACTICAL		
ASEG 202	Aero-Modelling and Fabrication lab	1	PROJ 402	Major Project II	8
VIVA 403	Comprehensive Viva	1			
PROJ 402	Major Project I	4			
SIIB 101	Summer Internship	2			
	TOTAL	23		TOTAL	18
	PE - III			PE - IV	
ASEG 482	Orbital Mechanics		ASEG 485	Space Science and Space Environment	
ASEG 481	Helicopter engineering		MTEG 415	Composite materials	
				PE - V	
			ASEG 451	Aero-Elasticity	
			ASEG 425	Rocket propulsion	
Total Credits of B. Tech. Aerospace Engineering 2015					179

B.Tech. Chemical Engineering with specialization in Refining & Petrochemicals 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Cred Its	Subject Code	Subject	Cred Its
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Cred Its	Subject Code	Subject	Cred Its
MATH 201	Mathematics III	4	CHEG 271	Particulate Technology	4
CHEG 222	Chemical Engineering Thermodynamics I	4	CHEG 223	Chemical Engineering Thermodynamics II	4
CHEG 251	Momentum Transfer	4	GNEG 257	Heat Transfer	4
CHEG 205	Engineering Chemistry	3	CHEG 272	Chemical Technology	3
CHEG 235	Chemical Process Calculations	4		Open Elective I	3
CHEG 261	Introduction to Bio Engineering	3		Open Elective II	3
PRACTICAL			PRACTICAL		
CHEG 252	Momentum Transfer Lab	1	GNEG 258	Heat Transfer Lab	1
TOTAL		23	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Cred Its	Subject Code	Subject	Cred Its
MATH 311	Numerical Methods in Chemical Engineering	4	CHEG 313	Mass Transfer II	4
CHEG 214	Mass Transfer I	4	CHEG 334	Chemical Reaction Engineering II	4
CHEG 333	Chemical Reaction Engineering I	4	GNEG 389	Process Dynamics, Instrumentation & Control	4
	Open Elective III	3		Program Elective II	3/4
PRACTICAL			PRACTICAL		
PROJ 305	Minor Project I	3	PTEG 202	Petroleum Product Testing Lab	1
	Program Elective I	3/4	CHEG 312	Mass Transfer Lab	1
CHEG 372	Particulate Technology Lab	1	CHEG 335	Chemical Reaction Engineering Lab	1
			PROJ 306	Minor Project II	3
			INDT 301	Industrial Visit	1
TOTAL		22/23	TOTAL		22/23
SEMESTER VII			SEMESTER VIII		

Subject Code	Subject	Cred Its	Subject Code	Subject	Cred Its
CHEG 401	Chemical Process Equipment Design & Drawing	4	CHEG 440	Process Modelling & Simulation	4
CHEG 403	Chemical Engineering Software	3		Program Elective IV	3/4
CHEG 452	Chemical Project Economics	4		Program Elective V	3/4
	Program Elective III	3/4			
PRACTICAL			PRACTICAL		
GNEG 390	Process Dynamics, Instrumentation & Control Lab	1	PROJ 402	Major Project II	8
VIVA 403	Comprehensive Viva	1			
SIIB 101	Summer Internship	2			
PROJ 401	Major Project I	4			
	TOTAL	23/24		TOTAL	18/20
	Program Electives - I - V				
CHEG 437	Petroleum Refining Technology	3			
CHEG 384	Polymer Science and Engineering	3			
GNEG 392	Material Science	3			
CHEG 432	Petrochemical Process Technology	3			
CHEG 462	Catalyst design and Catalysis	4			
CHEG 404	Biochemical Engineering	3			
CHEG 324	Chemical Process and Plant Safety	3			
CHEG 473	Fluidization Engineering	4			
CHEG 454	Plant Utilities	3			
MIEG 325	Pollution control in Process Industries	3			
PTEG 404	Petrochemical and Refinery Design	3			
CHEG 453	Understanding of Oil and Natural Gas Business	3			
CHEG 455	Process Optimization	3			
CHEG 481	Chemical Process - Carbon Black	3			
CHEG 445	Gasification Technology	3			
GNEG 405	Intro. to Computational Fluid Dynamics	3			
CHEG 314	Alternate Energy Sources	3			
MTEG 364	Corrosion Engineering	4			
CHEG 405	Novel Separation Process	4			
CHEG 362	Natural Gas Engineering & Processing	3			
PTEG 443	Pipeline Transportation of Oil & Gas	3			
Total Credits of B.Tech. Chemical Engineering with specialization in Refining & Petrochemicals 2015					179/184

**B.TECH (CIVIL ENGINEERING) SPECIALIZATION IN INFRASTRUCTURE DEVELOPMENT
w.e.f 2015**

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 306	Applied Numerical Methods	3	CEEG 241	Soil Mechanics	3
CEEG 201	Mechanics of Solids	4	CEEG 202	Structural Analysis I	4
CEEG 221	Fluid Mechanics I	4	CEEG 222	Fluid Mechanics II	4
CEEG 216	Building Material & Construction	3	CEEG 242	Concrete Technology	3
CEEG 235	Surveying	3	CEEG 251	Geomatics	3
	Open Elective I	3		Open Elective II	3
PRACTICAL			PRACTICAL		
GNEG 262	Surveying Lab	1	CEEG 345	Soil Mechanics Lab	1
GNEG 222	Material Testing Lab	1	CEEG 218	Computer Aided Design & Drawing Lab	2
CEEG 223	Fluid Mechanics Lab I	1	CEEG 244	Concrete Testing lab	1
			CEEG 224	Fluid Mechanics Lab II	1
TOTAL		23	TOTAL		25
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CEEG 311	Design of Concrete Structures	4	CEEG 312	Design of Steel Structure	4
CEEG 307	Structural Analysis II	3	CEEG 321	Water Resources Engineering	4
CEEG 316	Construction Planning & Management	3	CEEG 351	Environmental Engineering I	3
CEEG 342	Foundation Engineering	3	CEEG 332	Transportation Engineering II	3
CEEG 331	Transportation Engineering I	3	CEEG 318	Design of Form Work	3
	Open Elective III	3		Program Elective I	3
PRACTICAL			PRACTICAL		
CEEG 303	Structural Analysis Lab	1	CEEG 333	Transportation Engineering Lab	1
CEEG 317	Construction Planning & Management Lab	1	CEEG 354	Environmental Engineering Lab	1
CEEG 313	Concrete Design Lab	1	PROJ 306	Minor Project II	3
CEEG 336	Survey Camp	1	INDT 301	Industrial Visit	1
PROJ 305	Minor Project I	3	CEEG 308	Project Cost Analysis Lab	2

TOTAL		26	TOTAL		28
			PE I		
			CEEG 347	Rock Mechanics and Engineering Geology	
			CEEG 468	Transport Planning	
			CEEG 319	Building Design and Town Planning	
			CEEG 423	Pre-stressed Concrete	
			PSEG 361	Hydropower Engineering	
			CEEG 362	Infrastructure Safety & Maintenance	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CEEG 352	Environmental Engineering II	3		Program Elective III	3
CEEG 421	Design of Hydraulic Structures	4		Program Elective IV	3
CEEG 408	Modern Construction Techniques	3		Program Elective V	3
	Program Elective II	3			
PRACTICAL			PRACTICAL		
SIIB 401	Summer Internship Project	1	PROJ 402	Major Project II	8
SEMI 403	Seminar	1			
VIVA 404	Comprehensive Viva	3			
PROJ 401	Major Project I	4			
TOTAL		22	TOTAL		17
PE II			PE III, IV, V		
CEEG 461	Advanced Design of Concrete Structures		CEEG 372	Design of Offshore Structures	
CEEG 444	Principles of Accounting		CEEG 462	Advanced Design of Steel Structures	
CEEG 338	Advanced Transportation Engineering		CEEG 418	Finite Element Method	
CEEG 425	Advanced Foundation Design		CEEG 445	Earthquake Engineering and Seismic Design of Structures	
CEEG 371	Construction of Offshore Structures		CEEG 463	Bridge Engineering	
CEEG 453	Disaster Management		CEEG 419	Structural Dynamics	
			CEEG 452	River Mechanics & Flood Control	
			GSEG 309	Ground Water Hydrology	
			CEEG 471	Slope Stability Analysis	
			CEEG 481	Building Bye Law and Professional Ethics	
			CEEG 469	Metro Rail Tunnelling System	
			CEEG 361	Ground Improvement Techniques	
			CEEG 454	Air Pollution, Control and Monitoring	
			CEEG 467	Traffic Engineering	
			ENVO 304	Environmental Impact Assessment	
			CEEG 472	Design of Flexible and Rigid Pavement - IRC Codes	
Total Credits of B.Tech. Civil Engineering with specialization in Infrastructure Development 2015					191

B.TECH (FIRE & SAFETY ENGINEERING)
w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4	GNEG 121	Engineering Mechanics	3
GNEG 113	Engineering Graphics	2	GNEG 101	Workshop Technology	2
GNEG 143	Basic Electrical and Electronics	3	CHEM 107	Chemistry	4
INFO 106	Computer Programming	3			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 283	Electrical and Electronics Lab	1	GNEG 102	Engineering Workshop Lab	1
INFO 107	Computer Programming Lab	1	CHEM 108	Chemistry Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	MATH 301	Applied Numerical Methods	4
CHEG 236	Chemical Engineering I (Thermodynamics & Measuring Analytical Instruments)	3	CHEG 237	Chemical Engineering II (Unit Operations)	3
GNEG 245	Fluid Mechanics & Fluid Flow Machines	4	GNEG 227	Strength of Materials	3
ADEG 226	Elements of Machine Drawing	4	FSEG 201	Fire Engineering I (Basic Concepts)	4
FSEG 232	Principles of Safety Management	2	FSEG 212	Electrical Technology & Safety in Electrical Systems	3
FSEG 222	First Aid and Emergency Procedures	3		Open Elective - II	3
	Open Elective - I	3			
PRACTICAL			PRACTICAL		
GNEG 246	Fluid Mechanics & Machinery Lab	1	GNEG 222	Material Testing Lab	1
			ELEG 262	Electrical Technology Lab	1
TOTAL		24	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CHEG 391	Chemical Engineering III (Process Technology)	3	FSEG 332	Legal Aspects of Safety, Health & Environment	2
CHEG 343	Principles of Engineering Design	3	FSEG 312	Chemical Process Safety	3
FSEG 301	Fire Engineering II (Equipments)	4	GNEG 311	Process Instrumentation and Control Engineering	3
FSEG 321	Occupational Health & Hygiene Management	3	FSEG 302	Fire Engineering III (Materials & Fire Control)	4
FSEG 311	Safety in Construction	2	ENVO 303	Environmental Engineering & Management	4
	Open Elective-III	3			
	Program Elective I	3		Program Elective -II	3

				Program Elective -III	3
PRACTICAL			PRACTICAL		
FSEG 313	Safety Engineering Lab	1	ENVO 302	Environmental Engineering & Management Lab	1
CHEG 234	Chemical Engineering Lab	1	PROJ 306	Minor Project II	4
PROJ 305	Minor Project I	3	INDT 301	Industrial Visit	1
TOTAL		26	TOTAL		28
PE I			PE II		
FSEG 323	Safety in Electrical Design		FSEG 351	TMP and TQM	
FSEG 325	Safety in Petroleum Exploration, Drilling and Storage		FSEG 324	Water Supply, Sanitation and Refugee Health in Emergency Situation	
			PE III		
			FSEG 333	Environmental Management in Power Industry	
			FSEG 344	Reliability Engineering	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
FSEG 423	Hazard Identification & HAZOP	2	FSEG 441	Human Factors Engineering	3
FSEG 414	Safety in Rail and Road Transport	2	FSEG 431	Advanced Safety Engineering & Management	3
FSEG 415	Safety in Engineering Industry	2	FSEG 442	Insurance Claim Settlement	1
FSEG 403	Fire Engineering IV (Risk Assessment & Planning)	3		Program Elective -V	3
	Program Elective-IV	3			
PRACTICAL			PRACTICAL		
FSEG 402	Fire Engineering Lab	1	PROJ 402	Major Project II	8
FSEG 422	Industrial Hygiene Lab	1			
VIVA 403	Comprehensive Viva	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		21	TOTAL		18
PE IV			PE V		
FSEG 417	Behavioral Based Safety		FSEG 433	Fundamental of Sustainable Development	
FSEG 443	Remediation service & Site Restoration		FSEG 451	Global Disaster Scenerion	
Total Credits of B. Tech. Fire & Safety Engineering 2015					189

B.TECH (INSTRUMENTATION & CONTROL ENGINEERING)
w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical and Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical and Electronics Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
	TOTAL	27		TOTAL	23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ELEG 214	Electronic Devices and Circuit	4	ELEG 213	Digital Electronics	4
PSEG 202	Electrical Machines	3	ICEG 211	Measurement & Measuring Instruments	4
ELEG 201	Signals & Systems	4	MATH 301	Applied Numerical Methods	4
ELEG 204	Network Theory	3	ICEG 223	Control Theory	4
	Open Elective 1	3		Open Elective 2	3
PRACTICAL			PRACTICAL		
ELEG 206	Electronic Workshop	1	ICEG 212	Measurement & Measuring Instruments lab	1
ELEG 215	Electronic devices and circuits lab	1	ICEG 222	Control Theory & Simulation Lab	1
PSEG 203	Electrical Machine Lab	1	ELEG 202	Digital Electronics Lab	1
	TOTAL	20		TOTAL	22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ELEG 338	Analog & Digital Communication System	3	ICEG 341	Process Control	4
ICEG 311	Operational Amplifiers and Applications	3	ELEG 233	Electromagnetic Field Theory and Compatibility	4
ELEG 323	Microprocessor & Microcontroller	3	PSEG 327	Power Electronics	3
ICEG 331	Transducers and Applications	3	ICEG 351	Signal Conditioning & Telemetry	3
	Program Elective I	3	CSEG 391	Computer Networks	3
	Open Elective III	3		Program Elective II	3
PRACTICAL			PRACTICAL		
ICEG 332	Transducer and Applications Lab	1	PSEG 315	Power Electronics and Protection Lab	1
ELEG 324	Microprocessor & Microcontroller Lab	1	ICEG 361	Instrumentation Lab	1
ICEG 312	Operational Amplifiers and Application lab	1	INDT 301	Industrial Visit	1

ELEG 339	Analog & Digital Communication System Lab	1	PROJ 306	Minor Project II	3
PROJ 305	Minor Project I	3			
TOTAL		25	TOTAL		26
PE - I			PE - II		
PSEG 314	Power System Protection and Control		ELEG 411	Nano Electronics technology	
ICEG 322	Control System Components		ELEG 432	Solar Cell Technology	
			ELEG 368	Microcontroller & embedded system	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PSEG 424	Industrial Drives	3		Program Elective IV	3
ICEG 411	Computer Control	3		Program Elective V	3
ICEG 421	SCADA & Automation	3			
	Program Elective III	3			
PRACTICAL			PRACTICAL		
ICEG 422	PLC & Automation Lab	1	PROJ 402	Major Project II	8
PROJ 401	Major Project I	4			
VIVA 403	Comprehensive Viva	1			
SIIB 101	Summer Internship	2			
TOTAL		20	TOTAL		14
PE - III			PE - IV		
ELEG 437	Biomedical Instrumentation		ICEG 441	Fuzzy Logic & Neural Network	
MROE 701	Introduction to Robotics		ELEG 464	Embedded System	
ELEG 363	Digital Signal Processing		ICEG 432	Computer Aided Instrumentation	
ICEG 431	Analytical Instrumentation		ICEG 433	Intelligent Instrumentation	
			PE - V		
			ICEG 412	Optimal & Adaptive Control	
			ELEG 404	VLSI technology & Processes	
			ELEG 414	Micro Electro Mechanical Systems	
			ELEG 427	Wireless Sensor Network	
Total Credits of B. Tech. Instrumentation & Control Engineering 2015					177

B.TECH (MINING ENGINEERING)
w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	MIEG 221	Methods of Surface Mining	4
MIEG 201	Mining Geology	3	GSEG 321	Exploration Geophysics	4
EASC 211	Introduction to Geology	4	MIEG 223	Mine Machinery	4
MIEG 222	Mine Development	4	MIEG 236	Mine Planning & Design	3
MIEG 235	Mine Surveying	3	MIEG 252	Mineral Economics & Exploitation Risk	3
	Open Elective I	3	MIEG 225	Mine Ventilation	3
				Open Elective II	3
PRACTICAL			PRACTICAL		
MIEG 234	Mine Surveying Lab	1	MIEG 237	Mine Planning Lab	1
MIEG 202	Mining Geology Lab	1	MIEG 224	Mine Machinery Lab	1
			MIEG 226	Ventilation Lab	1
TOTAL		23	TOTAL		27
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MIEG 321	Methods of Sub-surface Mining	4	MIEG 323	Mine Environmental Engineering	4
GSEG 324	Rock Mechanics	4	MIEG 324	Underground Coal Mining	4
GSEG 316	Mineral Processing Technology	4	GSEG 327	Geostatistics	4
	Open Elective III	3		Program Elective II	3
	Program Elective I	3	GSEG 328	Mineral Exploration & Strategic decision Analysis	
MIEG 312	Application of Remote Sensing in Mining		GSEG 329	Applied Rock Mechanics & Numerical Modelling	
PSEG 316	Solid Fuel & Clean Coal Technology		MIEG 333	Sustainable Mining & Geopolitical Negotiations	
GSEG 326	Rock Slope Technology		MIEG 313	Placer Mining	
MIEG 411	Extra Terrestrial Mining		GSEG 334	Petroleum Exploration	
			MIEG 314	Sand Mining	
PRACTICAL			PRACTICAL		
GSEG 325	Rock Mechanics Lab	1	GSEG 325	Rock Mechanics Lab	1

GSEG 317	Mineral Processing Lab	1	MIEG 322	Mine Ventilation & Engineering Lab	1
PROJ 305	Minor Project I	3	PROJ 306	Minor Project II	3
			INDT 301	Industrial Visit	1
TOTAL		23	TOTAL		21
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MIEG 441	Mining Hazards & Rescuing Operations	4	MIEG 423	Mine Legislation & Safety	4
MIEG 412	Underground Metal Mining	3		Program elective IV	3
MIEG 413	Mine Management	4	MIEG 351	Commercial Polymetallic Mining & Simulation	
	Program elective III	3	MIEG 424	Mining of deep seated deposits	
FSEG 322	Occupational Health & Safety		MIEG 432	Mine Hoisting	
GSEG 421	Material Handling System			Program Elective V	3
ENVO 404	Environmental Impact Assessment		MIEG 433	Mine Plant Design	
MIEG 422	Secondary Mining		MIEG 462	Collaborative Mining & Legal Due Diligence	
GSEG 423	Hydrogeological Management		MIEG 421	Radioactive Mineral Deposits & Valuation	
PRACTICAL			PRACTICAL		
PROJ 401	Major Project I	4	PROJ 402	Major Project II	8
SIIB 101	Summer Internship	2			
VIVA 403	Comprehensive Viva	1			
TOTAL		21	TOTAL		18
Total Credits of B. Tech. Mining Engineering 2015					183

B.TECH (POWER SYSTEM ENGINEERING)
w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	GNEG 283	Electrical & Electronics Lab	1
PHYS 103	Physics Lab I	1	PHYS 104	Physics II Lab	1
CHEM 108	Chemistry Lab	1	INFO 107	Computer Programming Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	PSEG 242	Hydraulic Machines	3
GNEG 214	Fundamentals of Thermodynamics	3	ELEG 257	Synchronous & Asynchronous Machines	4
GNEG 353	Heat and Mass Transfer process	3	PSEG 225	Energy Conversion	4
ELEG 226	Analog & Digital Electronics	4	ELEG 274	Control System Engineering	4
ELEG 252	DC Machines & Transformer	4		Open Elective I	3
GNEG 218	Fundamentals of Fluid mechanics	3		Open Elective II	3
PRACTICAL			PRACTICAL		
PSEG 241	Electronics & Mechanical Engineering Lab	1	PSEG 203	Electrical Machines Lab	1
TOTAL		22	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
PSEG 310	Steam Generator its Auxiliaries & BOP	4	PSEG 312	Power System Protection & Switchgear	3
PSEG 308	Power Transmission & Distribution	4	PSEG 318	Steam Turbine & it's Auxiliaries	4
ELEG 313	Electrical Measurement & Instrumentation	4		Program Elective II	3
	Open Elective III	3	PSEG 324	Power Electronics & Drives	4
PRACTICAL			PRACTICAL		
			PSEG 326	Power Electronics & Drives Lab	1
PROJ 305	Minor Project I	3	PSEG 313	Power System Protection & Switchgear lab	1
	Program Elective I	3	PROJ 306	Minor Project II	3
ELEG 314	Electrical Measurement & Instrumentation Lab	1	INDT 301	Industrial Visit	1
TOTAL		22	TOTAL		20

PE - I			PE - II		
ELEG 308	Electronic communication		ELEG 326	Microprocessor & Microcontroller	
ELEG 349	Nuclear & Hydro Power plant		PSEG 402	Substation Design	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ELEG 472	Electrical Machine Design	4	PSEG 471	Renewable Energy Technology & Co-Generation	4
PSEG 317	Power System Analysis & Stability	4	PSEG 416	Power Plant Operation & Control	4
	Program Elective III	3	PROJ 402	Major Project II	8
	Program Elective IV	3		Program Elective V	3
PRACTICAL			PRACTICAL		
ELEG 466	Simulation of Electrical Systems Lab	1			
VIVA 403	Comprehensive Viva	1			
SIIB 101	Summer Internship	2			
PROJ 401	Major Project I	4			
	TOTAL	22		TOTAL	19
PE - III			PE - V		
ELEG 416	Project Management & Contract Administration		PSEG 443	Energy Conservation , Audit & Regulatory Issues	
ELEG 417	Demand Side Management		PSEG 481	HSE for Power Industry	
PE - IV					
PSEG 483	Automation in Power System				
PSEG 415	Power Plant Maintenance Practices				
Total Credits of B.Tech. Power System Engineering 2015					177

B.TECH (PRODUCTION & INDUSTRIAL ENGINEERING)
w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 101	Mathematics I	4	MATH 102	Mathematics II	4
PHYS 101	Physics I	4	PHYS 102	Physics II	4
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
ENVO 102	Environmental Studies	3	GNEG 113	Engineering Graphics	2
GNEG 121	Engineering Mechanics	3	GNEG 143	Basic Electrical & Electronics	3
GNEG 101	Workshop Technology	2	INFO 106	Computer Programming	3
CHEM 107	Chemistry	4			
PRACTICAL			PRACTICAL		
GNEG 102	Engineering Workshop Lab	1	PHYS 104	Physics II Lab	1
PHYS 103	Physics Lab I	1	INFO 107	Computer Programming Lab	1
CHEM 108	Chemistry Lab	1	GNEG 283	Electrical & Electronics Lab	1
TOTAL		27	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 201	Mathematics III	4	MHEG 235	Manufacturing Technology II	3
GNEG 227	Strength of Materials	3	MHEG 247	Mechanical Measurements and Metrology	3
GNEG 234	Engineering Thermodynamics	4	GNEG 223	Fluid Mechanics	4
GNEG 232	Material Science	3	IPEG 341	Production Planning and Control	3
MHEG 233	Manufacturing Technology I	3	GNEG 351	Heat Transfer	4
	Open Elective I	3		Open Elective II	3
PRACTICAL			PRACTICAL		
GNEG 252	Material Science lab	1	MHEG 236	Manufacturing Technology lab II	1
GNEG 222	Material Testing lab	1	MHEG 248	Mechanical Measurement and Metrology lab	1
GNEG 211	Engineering Graphics lab II	1	GNEG 237	Fluid mechanics and heat transfer lab	1
MHEG 234	Manufacturing Technology lab I	1			
TOTAL		24	TOTAL		23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
GNEG 251	Theory of machines	3	IPEG 342	Materials and Operations Management	3
IPEG 311	Work study and Ergonomics	4	IPEG 333	Industrial Automation and Robotics	3
IPEG 325	Design of machine elements	4	ADEG 371	Advanced Manufacturing Process	3
IPEG 321	Industrial Quality control	3	IPEG 362	Metal cutting and Tool design	4
	Open Elective III	3	IPEG 351	Operations Research	4
	Program Elective I	3		Program Elective II	3
PRACTICAL			PRACTICAL		
GNEG 233	Theory of machines lab	1	IPEG 334	Industrial automation and robotics lab	1
IPEG 312	Work study and Ergonomics lab	1	ADEG 372	Advanced Manufacturing Process lab	1

IPEG 322	Quality control lab	1	PROJ 306	Minor Project II	3
PROJ 305	Minor Project I	3	INDT 301	Industrial Visit	1
TOTAL		26	TOTAL		26
PE - I			PE - II		
IPEG 432	Value Engineering		IPEG 453	Product Design and Development	
MATH 305	Applied Numerical Techniques		ADEG 352	TQM	
IPEG 451	Maintenance and Reliability Engineering		IPEG 371	Industrial Safety	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
ADEG 435	Metal forming - Principles and Design	3	IMGT 301	Industrial Management	3
ADEG 367	CAD/CAM and CIM	3	PMEO 401	Engineering Economics life cycle concepts	3
IPEG 411	Facility Planning and Material Handling	3		Program Elective IV	3
	Program Elective III	3		Program Elective V	3
PRACTICAL			PRACTICAL		
GNEG 364	CAD/CAM lab	1	PROJ 402	Major Project II	8
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
VIVA 403	Comprehensive Viva	1			
TOTAL		20	TOTAL		20
PE - III			PE - IV		
IPEG 442	Manufacturing Information system		IPEG 433	Reverse Engineering	
IPEG 462	Advanced Casting Methods		IPEG 472	Design for manufacturability	
IPEG 423	Supply chain management		IPEG 441	Modeling and Simulation	
			PE - V		
			IPEG 424	Financial Management	
			IPEG 463	Advanced Welding methods	
			IPEG 425	Project management	
Total Credits of B.Tech. Production and Industrial Engineering 2015					189

B.Tech. Computer Science & Engineering with specialization in Business Analytics and Optimization 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
COMM 121	English Communication	4	GNEG 273	Basic Electronics Engineering	3
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
			CSIB 109	Introduction to Business Analytics	2
PRACTICAL			PRACTICAL		
CHEM 108	Chemistry Lab	1	INFO 122	Advanced Data Structures-Lab	1
INFO 118	Programming and Data Structures Lab	1	PHYS 106	Physics Lab	1
			CSEG 215	Database Management Systems Lab	1
			GNEG 278	Basic Electronics Engineering Lab	1
TOTAL		24	TOTAL		27
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 225	Applied statistical Analysis	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 281	Business Process Management	3		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 141	Dynamic Paradigm in Business Analytics and Optimization 1	1	CSIB 226	Applied statistical Analysis Lab	1
			CSIB 142	Dynamic Paradigm in Business Analytics & Optimization 2	1
TOTAL		23	TOTAL		23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3

CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSIB 338	Data mining & Prediction Modeling	3	CSIB 387	Business Intelligence	3
CSIB 251	Data Warehousing & Multidimensional Modeling	3	CSEG 389	Operation Research & Optimization	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSIB 339	IBM Subject Lab(Data mining & Prediction Modeling)	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 330	Computer Graphics Lab	1	CSIB 388	IBM Subject Lab(Business Intelligence)	1
CSEG 305	Object Oriented Analysis and Design Lab	1	CSEG 390	Operation Research lab	1
CSIB 254	Data Warehousing & Multidimensional Modeling lab	1	PROJ 302	Minor Project II	4
PROJ 301	Minor Project I	2	INDT 301	Industrial Visit	1
CSIB 143	Dynamic Paradigm in Business Analytics & Optimization 3	1	CSIB 144	Dynamic Paradigm in Business Analytics & Optimization 4	1
TOTAL		25	TOTAL		27
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective IV	3
CSIB 385	Big data analytics/IBM Elective	3	CSIB 391	Enterprise Information Architecture	2
CSIB 477	Web Social Analytics/IBM Elective-3	3	CSIB 483	Business Strategy & Analytics/IBM Elective	2
	Program Elective III	3			
	Open Elective II	3			
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project-2	8
CSIB 386	IBM Subject Lab(Bigdata analytics)	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
CSIB 478	Web Analytics Lab	1			
TOTAL		24	TOTAL		15
PE - III			PE - IV		
CSIB 489	Distributed Computing (Except for where it is as main subject)		CSIB 493	Backup & DR (Except for where it is as main subject)	
CSIB 452	BAO & Cloud		CSIB 480	Social Analytics (Except for where it is as main subject)	

CSIB 496	Expert Systems		LLBL 704	Cyber Forensic (Except for where it is as main subject)	
CSIB 453	ERP & SCM (Except for where it is as main subject)		CSIB 460	Mobile Analytics	
BBCR 173	Retail Analytics (Except for where it is as main subject)		CSIB 430	Banking & Insurance Analytics (Banking & Insurance Analytics)	
CSIB 419	Mobile applications & E-commerce (Except for where it is as main subject)				
Total Credits of B.Tech. Computer Science & Engineering with specialization in Business Analytics and Optimization 2015					18 8

B.Tech Computer Science & Engineering with specialization in Open Source & Open Standard 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
PHYS 105	Physics	4	CHEM 107	Chemistry	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
GNEG 273	Basic Electronics Engineering	3	ENVO 102	Environmental Studies	3
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
			CSIB 112	IT Applications and Open Standards	3
PRACTICAL			PRACTICAL		
GNEG 278	Basic Electronics Engineering Lab	1	INFO 122	Advanced Data Structures-Lab	1
PHYS 106	Physics Lab	1	CHEM 108	Chemistry Lab	1
INFO 118	Programming and Data Structures Lab	1	CSEG 215	Database Management Systems Lab	1
TOTAL		24	TOTAL		28
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 222	Administering Open Source Systems	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 202	OSS Development Methodology	3		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 202	Dynamic Paradigm in Open Source and Open Standards 1	1	CSIB 204	Dynamic Paradigm in Open Source and Open Standards 2	1
			CSIB 223	Administering Open Source Systems Lab	1
TOTAL		23	TOTAL		23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3

CSEG 359	XML Programming	3	CSIB 421	Web 2.0 Technologies	3
CSEG 306	Open Source Mobile Platform	3	CSIB 312	Service Oriented Architecture	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSEG 330	Computer Graphics Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	PROJ 302	Minor Project II	4
CSEG 307	Open Source Mobile platform Lab	1	INDT 301	Industrial Visit	1
CSEG 360	XML Programming Lab	1	CSIB 403	Dynamic Paradigm in Open Source and Open Standards 4	1
PROJ 301	Minor Project I	2	CSIB 422	Web 2.0 Technologies Lab	1
CSIB 302	Dynamic Paradigm in Open Source and Open Standards 3	1			
TOTAL		25	TOTAL		26
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
CSEG 449	Graphics & Animation Tools	3		IBM Subject-11/IBM Elective	3
	Program Elective-3	3	CSEG 447	Healthcare applications & HL7 - I	
	Open Elective-2	3	CSEG 448	Retail Applications & ARTS - I	
				IBM Subject-12/IBM Elective	3
			CSEG 457	Marketing & Services in OSS	
			CSEG 458	Licensing in OSS	
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
CSEG 450	Graphics & Animation Tools Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		20	TOTAL		17
PE - III			PE - IV		
CSIB 489	Distributed Computing		CSIB 493	Backup & DR (Except for where it is as main subject)	
CSIB 274	Introduction to Virtualization & Cloud Computing		CSIB 480	Social Analytics (Except for where it is as main subject)	
CSEG 415	Natural Language Processing		LLBL 704	Cyber Forensic (Except for where it is as main subject)	
CSEG 421	Human Computer Interaction		CSIB 255	Storage Technology Foundation	

Total Credits of B.Tech Computer Science & Engineering with specialization in Open Source & Open Standard 2015	18 6
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B.Tech Computer Science & Engineering with specialization in Cloud Computing & Virtualization Technology 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics -2	4
PHYS 105	Physics	4	CHEM 107	Chemistry	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
GNEG 273	Basic Electronics Engineering	3	ENVO 102	Environmental Studies	3
BTDC 101	Design Thinking	4	CSIB 107	Introduction to IT Infrastructure Landscape	2
PRACTICAL			PRACTICAL		
GNEG 278	Basic Electronics Engineering Lab	1	INFO 122	Advanced Data Structures-Lab	1
PHYS 106	Physics Lab	1	CHEM 108	Chemistry Lab	1
INFO 118	Programming and Data Structures Lab	1	CSEG 215	Database Management Systems Lab	1
COMM 121	English Communication	4			
TOTAL		28	TOTAL		23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 255	Storage Technology Foundation	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 274	Introduction to Virtualization and Cloud Computing	3		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 275	Introduction to Virtualization and Cloud Computing Lab	1	CSIB 132	Dynamic Paradigm in Cloud Computing 2	1
CSIB 131	Dynamic Paradigm in Cloud Computing 1	1			
TOTAL		24	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3

CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSIB 377	Cloud Computing Architecture	3	CSIB 378	Cloud Deployment Model	3
CSIB 313	XML Programming	2	CSIB 312	Service Oriented Architecture	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSIB 314	XML Programming Lab	1	CSIB 379	Cloud Deployment Model Lab	1
CSEG 330	Computer Graphics Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	PROJ 302	Minor Project II	4
PROJ 301	Minor Project I	2	INDT 301	Industrial Visit	1
CSIB 133	Dynamic Paradigm in Cloud Computing 3	1	CSIB 134	Dynamic Paradigm in Cloud Computing 4	1
	TOTAL	23		TOTAL	26
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
CSIB 491	Cloud Performance Tuning	2		Choose Any One	3
	Program Elective - 3	3	CSIB 471	Security in Cloud	
	Open Elective-2	3	CSIB 494	Managing the Cloud (IBM Elective)	
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
CSIB 492	Cloud Performance Tuning Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
	TOTAL	19		TOTAL	14
PE - III			PE - IV		
CSIB 489	Distributed Computing		CSIB 493	Backup & DR (Except for where it is as main subject)	
CSIB 481	Business Process Management 1 (Except for where it is as main subject)		CSIB 482	Business Process Management2 (Except for where it is as main subject)	
			CSIB 480	Social Analytics (Except for where it is as main subject)	
			LLBL 704	Cyber Forensic (Except for where it is as main subject)	

B.Tech. Computer Science & Engineering with specialization in Banking, Financial Services & Insurance 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics -2	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
ENVO 102	Environmental Studies	3	GNEG 273	Basic Electronics Engineering	3
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
			CSIB 135	Introduction to BFSI	2
PRACTICAL			PRACTICAL		
CHEM 108	Chemistry Lab	1	INFO 122	Advanced Data Structures-Lab	1
INFO 118	Programming and Data Structures Lab	1	PHYS 106	Physics Lab	1
			CSEG 215	Database Management Systems Lab	1
			GNEG 278	Basic Electronics Engineering Lab	1
	TOTAL	23		TOTAL	28
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 238	BFSI Products & Process II	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 236	BFSI Products & Process I	3		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 208	Dynamic Paradigm in BFSI 1	1	CSIB 209	Dynamic Paradigm in BFSI 2	1
CSIB 237	BFSI Products & Process I Lab	1	CSIB 239	BFSI Products & Process II Lab	1
	TOTAL	24		TOTAL	23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3

	Choose Any One	3		Choose Any One	3
CSIB 323	Banking Application Architecture		CSIB 332	Banking Database & Structure	
CSIB 324	Insurance Application Architecture		CSIB 333	Insurance Database & Structure	
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
				Choose Any One	3
			CSIB 415	Mobile Technology-Banking	
CSIB 330	Wealth Management & Investment Banking	3	CSIB 417	Mobile Technology-Insurance	
PRACTICAL			PRACTICAL		
CSEG 330	Computer Graphics Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1		Choose Any One Lab	1
PROJ 301	Minor Project I	2	CSIB 396	Banking Database & Structure Lab	
CSIB 308	Dynamic Paradigm in BFSI 3	1	CSIB 397	Insurance Database & Structure Lab	
	Choose Any One Lab	1	CSIB 479	Mobile Apps	1
CSIB 394	Banking Application Architecture Lab		PROJ 302	Minor Project II	4
CSIB 395	Insurance Application Architecture Lab		INDT 301	Industrial Visit	1
			CSIB 318	Dynamic Paradigm in BFSI 4	1
TOTAL		24	TOTAL		27
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
CSIB 335	Payment Technologies	2		Choose Any One	3
	Program Elective-3	3	CSIB 424	Analytics in Banking Industry	
	Open Elective-2	3	CSIB 426	Analytics in Insurance Industry	
CSIB 225	Applied Statistical Analysis	3	CSIB 326	Risk Management & Compliances	3
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project-2	8
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
CSIB 226	Applied Statistical Analysis Lab	1			
TOTAL		22	TOTAL		17
PE - III			PE - IV		
CSIB 489	Distributed Computing (Except for where it is as main subject)		CSIB 493	Backup & DR (Except for where it is as main subject)	

CSIB 420	Testing in BFSI		CSIB 480	Social Analytics (Except for where it is as main subject)	
CSIB 450	Payment Technologies		LLBL 704	Cyber Forensic (Except for where it is as main subject)	
CSIB 453	ERP & SCM(Except for where it is as main subject))		CSIB 385	Big data Analytics(Except for where it is as main subject)	
BBCR 173	Retail Analytics(Except for where it is as main subject)		CSIB 484	Security Environment in BFSI	
CSIB 419	Mobile applications & E-commerce(Except for where it is as main subject)		CSIB 490	Cloud Security in bank/insurance	
			CSIB 387	Business Intelligence	
Total Credits of B.Tech. Computer Science & Engineering with specialization in Banking, Financial Services & Insurance 2015					18 8

B.Tech. Computer Science & Engineering with specialization in Cyber Security & Forensics 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics -2	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards (IBM Subject-1)	2	CSEG 214	Database Management Systems	3
GNEG 273	Basic Electronics Engineering	3	ENVO 102	Environmental Studies	3
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
			CSIB 105	IT Infrastructure Landscape Overview	3
PRACTICAL			PRACTICAL		
GNEG 278	Basic Electronics Engineering Lab	1	INFO 122	Advanced Data Structures-Lab	1
CHEM 108	Chemistry Lab	1	PHYS 106	Physics Lab	1
INFO 118	Programming and Data Structures Lab	1	CSEG 215	Database Management Systems Lab	1
TOTAL		24	TOTAL		28
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 214	IT Data Security	2
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 213	Information Security fundamentals	2		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 216	Dynamic Paradigm in Cyber Security & Digital Forensics 1	1	CSIB 217	Dynamic Paradigm in Cyber Security & Digital Forensics 2	1
			CSIB 215	IT data Security Lab	1
TOTAL		22	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSIB 355	Physical Security	2	CSIB 363	Digital Forensics-I	3

CSIB 356	IT Application Security	2	CSIB 365	Information Security Audit and Monitoring	2
CSEG 345	Formal Languages and Automata Theory	3	CSIB 367	IT Systems Security	2
	Program Elective-1	3		Program Elective-2	3
				Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSIB 357	IT Application and Security Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 330	Computer Graphics Lab	1	CSIB 368	IT System Security Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	CSIB 364	Digital Forensics-I Lab	1
PROJ 301	Minor Project I	2	CSIB 366	Information Security Audit and Monitoring Lab	1
CSIB 316	Dynamic Paradigm in Cyber Security & Digital Forensics 3	1	PROJ 302	Minor Project II	4
			INDT 301	Industrial Visit	1
			CSIB 317	Dynamic Paradigm in Cyber Security & Digital Forensics 4	1
TOTAL		22	TOTAL		29
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Cred its
CSIB 442	IT Network Security	2		Program Elective-4	R
	IBM Elective(Choose Any 1)	3		IBM Elective(choose any 1)	3
CSIB 446	IT Business Continuity & Disaster Recovery Planning		CSIB 449	Information Security Management Practices	
CSIB 447	Information Technology Security Evaluation Criteria (ITSEC)		CSIB 459	Information Security Governance	
	Program Elective-3	3	CSIB 448	Information Security Intelligence and Compliance Analytics	3
	Open Elective-2	3			
CSIB 444	Digital Forensics-II	2			
PRACTICAL			PRACTICAL		
CSIB 443	IT Network Security Lab	1	PROJ 402	Major Project II	8
CSIB 445	Digital Forensics-II Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		21	TOTAL		14
PE-I			PE-II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
PE-III			PE-IV		
CSIB 389	Distributed Computing		CSIB 493	Backup & DR (Except for where it is as main subject)	
CSIB 274	Introduction to Virtualization and Cloud Computing		CSIB 471	Security in Cloud	
CSIB 480	Social Analytics		CSIB 407	Privacy and Security in Social media world	

Total Credits of B.Tech. Computer Science & Engineering with specialization in Cyber Security & Forensics 2015	18 2
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B.Tech Computer Science & Engineering with specialization in Mainframe Technology 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
PHYS 105	Physics	4	CHEM 107	Chemistry	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
GNEG 273	Basic Electronics Engineering	3	ENVO 102	Environmental Studies	3
BTDC 101	Design Thinking	4	CSIB 171	Fundamentals of Mainframe and Skills	3
PRACTICAL			PRACTICAL		
GNEG 278	Basic Electronics Engineering Lab	1	INFO 122	Advanced Data Structures-Lab	1
PHYS 106	Physics Lab	1	CHEM 108	Chemistry Lab	1
INFO 118	Programming and Data Structures Lab	1	CSEG 215	Database Management Systems Lab	1
COMM 121	English Communication	4			
TOTAL		28	TOTAL		24
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 374	Mainframe Application Development using JCL	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 247	Mainframe Operating Systems	3		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 161	Dynamic Paradigm in Mainframe Technology 1	1	CSIB 261	Dynamic Paradigm in Mainframe Technology 2	1
CSIB 246	Mainframe Operating Systems Lab	1	CSIB 375	Mainframe Application Development using JCL Lab	1
TOTAL		24	TOTAL		23
SEMESTER VI					
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3

CSIB 380	Mainframe Application Development using COBOL	3	CSIB 353	Mainframe DBMS	3
CSIB 242	Linux on Mainframes	3	CSIB 359	Advance Scripting, Rexx	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSIB 389	Mainframe Application Development using COBOL	1	CSIB 429	Advance Scripting Lab, Rexx	1
CSEG 330	Computer Graphics Lab	1	CSIB 244	Mainframe DBMS Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
PROJ 301	Minor Project I	2	PROJ 302	Minor Project II	4
CSIB 361	Dynamic Paradigm in Mainframe Technology 3	1	INDT 301	Industrial Visit	1
			CSIB 461	DYNAMIC Paradigm in Mainframe Technology 4	1
TOTAL		24	TOTAL		27
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
CSEG 439	Mainframe Transaction Management, CICS	3		IBM Subject-11(IBM Elective)	3
	Program Elective-3	3	CSIB 354	Mainframe Clustering	
	Open Elective-2	3	CSIB 466	System management on Mainframes	
				IBM Subject-12(IBM Elective)	3
			CSIB 352	Virtualization on Mainframe	
			CSIB 462	Resource Allocation on Mainframe	
			CSIB 474	Networking on Mainframe	
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
CSEG 440	Mainframe Transaction Management, CICS Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		20	TOTAL		17
PE - III			PE - IV		
CSIB 489	Distributed Computing		CSIB 493	Backup & DR (Except for where it is as main subject)	
CSIB 274	Introduction to Virtualization & Cloud Computing		CSIB 480	Social Analytics (Except for where it is as main subject)	
CSEG 415	Natural Language Processing		LLBL 704	Cyber Forensic (Except for where it is as main subject)	

CSEG 421	Human Computer Interaction		CSIB 255	Storage Technology Foundation	
Total Credits of B.Tech Computer Science & Engineering with specialization in Mainframe Technology 2015					18 7

B.Tech Computer Science & Engineering with specialization in IT Infrastructure 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics -2	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards .	2	CSEG 214	Database Management Systems	3
COMM 121	English Communication	4	GNEG 273	Basic Electronics Engineering	3
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
			CSIB 105	IT infrastructure Landscape overview	3
PRACTICAL			PRACTICAL		
CHEM 108	Chemistry Lab	1	PHYS 106	Physics Lab	1
INFO 118	Programming and Data Structures Lab	1	INFO 122	Advanced Data Structures-Lab	1
			CSEG 215	Database Management Systems Lab	1
			GNEG 278	Basic Electronics Engineering Lab	1
TOTAL		24	TOTAL		28
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 218	IT Service Management	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 211	Information Technology Infrastructure Library	3		Open Elective-1	3
			CSIB 255	Storage Technology Foundation	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 106	Dynamic Paradigm in IT Infrastructure Management 1	1	CSIB 206	Dynamic Paradigm in IT Infrastructure Management 2	1
TOTAL		23	TOTAL		25
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3

CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSIB 309	IT infrastructure Management Service Models and Benefits	3	CSIB 328	IT service delivery	2
CSIB 320	IT Infrastructure Management operations.	2	CSIB 319	IT Infrastructure Management Frameworks	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSIB 307	IT infrastructure management service models and benefits Lab	1	CSIB 329	IT service delivery Lab	1
CSEG 330	Computer Graphics Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	PROJ 302	Minor Project II	4
PROJ 301	Minor Project I	2	INDT 301	Industrial Visit	1
CSIB 306	Dynamic Paradigm in IT Infrastructure Management 3	1	CSIB 406	Dynamic Paradigm in IT Infrastructure Management 4	1
TOTAL		23	TOTAL		25
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
CSIB 434	Data center transformation-1	3	CSIB 439	Data center transformation-2	3
	Program Elective-3	3	CSIB 440	Technology and tools for infrastructure management	3
	Open Elective-2	3			
CSIB 432	IT Application discovery & Dependency Management	3			
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
CSIB 433	IT Application discovery & Dependency management Lab	1			
CSIB 438	Data center transformation I Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		24	TOTAL		17
PE - III			PE - IV		
CSIB 489	Distributed Computing		CSIB 274	Introduction to Virtualization and Cloud Computing	
CSIB 387	Business Intelligence		CSIB 498	Cloud Computing platforms	
CSIB 342	Wireless & AD Hoc Network		CSIB 497	Cloud Performance tuning	

Total Credits of B.Tech Computer Science & Engineering with specialization in IT Infrastructure 2015	18
	9

B.Tech Computer Science & Engineering with Specialization in Telecom Informatics 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
PHYS 105	Physics	4	CHEM 107	Chemistry	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
GNEG 273	Basic Electronics Engineering	3	ENVO 102	Environmental Studies	3
BTDC 101	Design Thinking	4	COMM 121	English Communication	4
			CSIB 291	Fundamentals of Telecom Business	2
PRACTICAL			PRACTICAL		
GNEG 278	Basic Electronics Engineering Lab	1	INFO 122	Advanced Data Structures-Lab	1
PHYS 106	Physics Lab	1	CHEM 108	Chemistry Lab	1
INFO 118	Programming and Data Structures Lab	1	CSEG 215	Database Management Systems Lab	1
TOTAL		24	TOTAL		27
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 345	Global Telecom Policies and trends	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 292	Advanced Concepts in Telecom Business	2		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 151	Dynamic Paradigm in Telecom Informatics 1	1	CSIB 152	Dynamic Paradigm in Telecom Informatics 2	1
TOTAL		22	TOTAL		22
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSIB 344	Mobile Communication Standards	3	CSIB 350	Mobile Communication Network Design	3

CSIB 476	Mobile Apps Using Android	3	CSIB 342	Wireless and Ad-hoc Network	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSIB 479	Mobile Apps Lab	1	CSIB 348	Mobile Communication Network Design Lab	1
CSEG 330	Computer Graphics Lab	1	CSIB 343	Wireless and Ad-hoc Network Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
PROJ 301	Minor Project I	2	PROJ 302	Minor Project II	4
CSIB 153	Dynamic Paradigm in Telecom Informatics 3	1	INDT 301	Industrial Visit	1
			CSIB 154	Dynamic Paradigm in Telecom Informatics 4	1
TOTAL		24	TOTAL		27
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
	IBM Subject-10/IBM Elective	3	CSIB 475	Real Time Operating System Internals	3
CSIB 408	Operation Support System			IBM Subject-13/IBM Elective	3
CSIB 383	Business Intelligence		CSIB 487	Telecom Analytics	
	Program Elective-3	3	CSIB 488	Business Support System	
	Open Elective-2	3			
CSIB 486	Machine to machine Communication	3			
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		22	TOTAL		17
PE - III			PE - IV		
CSIB 489	Distributed Computing (Except for where it is as main subject)		CSIB 493	Backup & DR (Except for where it is as main subject)	
CSIB 409	IT Infrastructure Landscape		CSIB 480	Social Analytics (Except for where it is as main subject)	
CSIB 378	Cloud Deployment Model		LLBL 704	Cyber Forensic (Except for where it is as main subject)	
Total Credits of B.Tech Computer Science & Engineering with Specialization in Telecom Informatics 2015					185

B.Tech Computer Science & Engineering with Specialization in Oil & Gas Informatics 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
PHYS 105	Physics	4	CHEM 107	Chemistry	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards.	2	CSEG 214	Database Management Systems	3
GNEG 273	Basic Electronics Engineering	3	ENVO 102	Environmental Studies	3
BTDC 101	Design Thinking	4	CSIB 172	IT application in oil & Gas Informatics	3
			COMM 121	English Communication	4
PRACTICAL			PRACTICAL		
GNEG 278	Basic Electronics Engineering Lab	1	INFO 122	Advanced Data Structures-Lab	1
PHYS 106	Physics Lab	1	CHEM 108	Chemistry Lab	1
INFO 118	Programming and Data Structures Lab	1	CSEG 215	Database Management Systems Lab	1
TOTAL		24	TOTAL		28
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	BDSM 105	Basics of Petroleum Exploration	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
PTEG 222	Introduction to Refinery	3		Open Elective-1	3
			CSIB 255	Storage Technology Foundation	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 111	Dynamic Paradigm in Oil & Gas Informatics 1	1	CSIB 221	Dynamic Paradigm in Oil & Gas Informatics 2	1
TOTAL		23	TOTAL		25
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSEG 302	Telemetry and SCADA	3	GIEG 324	Spatial data analysis and modeling	3
CSEG 335	Data-warehousing and Data-Mining in Energy Sector	3	PTEG 317	Introduction to Drilling	3

CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSEG 336	Data-warehousing and Data-Mining in Energy Sector Lab	1	GIEG 325	Spatial data analysis and modeling Lab	1
CSEG 330	Computer Graphics Lab	1	GIEG 331	Geophysical and Geology Lab (Drilling and GNG Lab)	1
CSEG 305	Object Oriented Analysis and Design Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
PROJ 301	Minor Project I	2	PROJ 302	Minor Project II	4
CSIB 331	Dynamic Paradigm in Oil & Gas Informatics 3	1	INDT 301	Industrial Visit	1
			CSIB 341	DYNAMIC Paradigm in Oil & Gas Informatics 4	1
TOTAL		24	TOTAL		27
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
GSEG 403	Geophysical Data Acquisition: Processing & Interpretation	3	CSIB 385	Big Data Analytics	3
	Program Elective-3	3	CSIB 383	Business Intelligence	3
	Open Elective-2	3			
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
GSEG 405	Geophysical Data Acquisition: Processing & Interpretation Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		20	TOTAL		17
PE - III			PE - IV		
PTEG 324	Production engineering		CSIB 493	Backup & Data Recovery	
ENVO 406	Health, Safety and Environmental Issues		CSIB 480	Social Analytics	
CSIB 489	Distributed Computing		CSIB 499	Cloud Applications In Petroleum Sector	
GSEG 431	Photogrammetry: Remote Sensing, GIS and GPS.		PTEG 435	Reservoir Engineering	
Total Credits of B.Tech Computer Science & Engineering with Specialization in Oil & Gas Informatics 2015					188

B.Tech Computer Science & Engineering with specialization in E-Commerce, Retail and Automation 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures.	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
COMM 121	English Communication	4	GNEG 273	Basic Electronics Engineering	3
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
			BBCR 165	Introduction to Retail Business	2
PRACTICAL			PRACTICAL		
CHEM 108	Chemistry Lab	1	INFO 122	Advanced Data Structures-Lab	1
INFO 118	Programming and Data Structures Lab	1	PHYS 106	Physics Lab	1
			CSEG 215	Database Management Systems Lab	1
			GNEG 278	Basic Electronics Engineering Lab	1
TOTAL		24	TOTAL		27
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 283	Digital Marketing	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 224	IT Applications in Retail Business	3		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 162	Dynamic Paradigm in Retail 1	1	CSIB 284	Digital marketing Lab	1
			CSIB 262	Dynamic Paradigm in Retail 2	1
TOTAL		23	TOTAL		23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3

CSEG 347	Retail ERP & Supply Chain	3	CSIB 225	Applied statistical Analysis	3
CSEG 337	CRM & E-Commerce	3	CSIB 419	Mobile Applications & E-Commerce	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSEG 348	ERP-SAP Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 330	Computer Graphics Lab	1	CSIB 226	Applies statistical Analysis Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	CSEG 346	M-Com Lab Android	1
PROJ 301	Minor Project I	2	PROJ 302	Minor Project II	4
CSIB 362	Dynamic Paradigm in Retail 3	1	INDT 301	Industrial Visit	1
			CSIB 405	Dynamic Paradigm in Retail 4	1
TOTAL		24	TOTAL		27
PE - I			PE - II		
CSEG 392	.NET Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
BBCR 170	Category Managemet	3	BBCR 169	Store Design and visual Merchandising	3
BBCR 173	Retail Analytics/IBM Elective	3			
	Program Elective-3	3	CSEG 438	Business Strategy & Market Analysis/IBM Elective	3
	Open Elective-2	3			
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
BBCR 186	IBM Subject Lab(Retail Analytics)	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		23	TOTAL		17
PE - III			PE -IV		
CSIB 489	Distributed Computing (Except for where it is as main subject)		CSIB 493	Backup & DR (Except for where it is as main subject)	
BBCF 135	E-Payment system		CSIB 480	Social Analytics (Except for where it is as main subject)	
CSIB 385	Big Data analytics(Except for where it is as main subject)		LLBL 704	Cyber Forensic (Except for where it is as main subject)	
CSEG 434	Cloud Computing & E-Commerce		CSIB 460	Mobile Analytics	
CSEG 437	BFSI Product & Process (Except for where it is as main subject)		CSIB 383	Business Intelligence	
CSIB 338	Data mining & Prediction Modeling				

Total Credits of B.Tech Computer Science & Engineering with specialization in E-Commerce, Retail and Automation 2015	18 8
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B.Tech Computer Science Engineering with specialization in Graphics & Gaming 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSEG 214	Database Management Systems	3
ENVO 102	Environmental Studies	3	GNEG 273	Basic Electronics Engineering	3
BTDC 101	Design Thinking	4	CSIB 112	IT Applications and Open Standards	3
COMM 121	English Communication	4			
PRACTICAL			PRACTICAL		
CHEM 108	Chemistry Lab	1	INFO 122	Advanced Data Structures-Lab	1
INFO 118	Programming and Data Structures-Lab	1	PHYS 106	Physics Lab	1
			CSEG 215	Database Management Systems Lab	1
			GNEG 278	Basic Electronics Engineering Lab	1
TOTAL		27	TOTAL		25
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3		XML Programming	3
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 285	Introduction to Graphics and Animation Tools using Open Source Software	2		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 265	Dynamic Paradigm in Graphics & Gaming 1	1	CSEG 314	XML Programming Lab	1
			CSIB 266	Dynamic Paradigm in Graphics & Gaming 2	1
TOTAL		22	TOTAL		23
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits

CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSIB 476	Mobile Apps using Android	3	CSEG 349	Introduction to Game Programming	3
CSEG 338	Web Programming for Graphics & Gaming (HTML 5 & Web GL)	3	CSEG 340	Computer Animation Algorithm and Techniques	2
CSEG 345	Formal Languages and Automata Theory	3	GIEG 323	Digital Image Processing	3
	Program Elective-1	3		Program Elective-2	3
				Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSEG 339	Web Programming for Graphics & Gaming (HTML 5 & Web GL) Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 330	Computer Graphics Lab	1	CSEG 350	Introduction to Game Programming Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	GIEG 326	Digital Image Processing Lab	1
CSIB 479	Mobile Apps Lab	1	PROJ 302	Minor Project II	4
PROJ 301	Minor Project I	2	INDT 301	Industrial Visit	1
CSIB 398	Dynamic Paradigm in Graphics & Gaming-3	1	CSIB 399	Dynamic Paradigm in Graphics & Gaming-4	1
	TOTAL	25		TOTAL	29
PE - I			PE - II		
CSEG 392	.Net Technologies		CSEG 363	Software Quality Management	
ELEG 317	Digital Signal Processing		CSEG 326	Compiler Design	
CSEG 393	Information Retrieval and Search Engines		CSEG 317	Enterprise Java	
IPEG 381	Modeling and Simulation		CSEG 364	OpenGL	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 459	Advanced Computer Graphics	3		Program Elective-4	3
CSEG 469	3D Complexity Techniques for Graphics Modeling and Animation	2	CSEG 473	Gaming & Simulation (Concepts, Methodology, Tools & Application)	3
CSEG 471	Advanced Game Programming	3			
	Program Elective-3	3			
	Open Elective-2	3			
PRACTICAL			PRACTICAL		
CSEG 460	Advanced Computer Graphics Lab	1	PROJ 402	Major Project II	8
CSEG 470	3D Complexity Techniques for Graphics Modeling and Animation Lab	1	CSEG 474	Gaming & Simulation (Concepts, Methodology, Tools & Application) Lab	1
CSEG 472	Advanced Game Programming Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
	TOTAL	23		TOTAL	15
PE - III			PE -IV		
CSIB 489	Distributed Computing		CSIB 493	Backup & DR (Except for where it is as main subject)	

CSIB 274	Introduction to Virtualization and Cloud Computing		CSIB 471	Security in Cloud	
CSIB 480	Social Analytics		CSIB 407	Privacy and Security in Social media world	
CSEG 497	Virtual Reality				
Total Credits of B.Tech Computer Science Engineering with specialization in Graphics & Gaming 2015					18 9

B.Tech Computer Science Engineering with specialization in Healthcare Informatics 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	CSIB 112	IT Applications and Open Standards	3
GNEG 273	Basic Electronics Engineering	3	CSEG 214	Database Management Systems	3
BTDC 101	Design Thinking	4	ENVO 102	Environmental Studies	3
COMM 121	English Communication	4			
PRACTICAL			PRACTICAL		
CHEM 108	Chemistry Lab	1	INFO 122	Advanced Data Structures-Lab	1
INFO 118	Programming and Data Structures-Lab	1	PHYS 106	Physics Lab	1
GNEG 278	Basic Electronics Engineering Lab	1	CSEG 215	Database Management Systems Lab	1
TOTAL		28	TOTAL		24
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
8CSEG 235	Advanced Database Management Systems	3	CSIB 294	Healthcare Delivery Models and Processes	2
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSIB 293	Fundamentals of Healthcare Informatics	2	CSIB 281	Business Process Management	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
				Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 263	Dynamic Paradigm in Healthcare Informatics 1	1	CSIB 282	Business Process Management Lab	1
			CSIB 264	Dynamic Paradigm in Healthcare Informatics-2	1
TOTAL		22	TOTAL		25
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3

CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3
CSEG 355	IT Adoption for Healthcare Operations & Processes	3	CSEG 357	Emerging Technology - Healthcare Mobility	3
CSEG 374	Healthcare Standards & Quality Assurance	2	CSEG 375	Descriptive Analytics for Healthcare	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSEG 356	IT Adoption for Healthcare Operations & Processes Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 330	Computer Graphics Lab	1	CSEG 358	Emerging Technology - Healthcare Mobility Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	CSEG 376	Descriptive Analytics for Healthcare Lab	1
PROJ 301	Minor Project I	2	PROJ 302	Minor Project II	4
CSIB 369	Dynamic Paradigm in Healthcare Informatics 3	1	INDT 301	Industrial Visit	1
			CSIB 370	Dynamic Paradigm in Healthcare Informatics 4	1
TOTAL		23	TOTAL		27
PE - I			PE - II		
CSIB 255	Storage Technology Foundation		CSEG 393	Information Retrieval and Search Engines	
CSIB 274	Introduction to Virtualization and Cloud Computing		GIEG 323	Digital Image Processing	
IPEG 381	Modeling and simulation		CSEG 326	Compiler Design	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
	Program Elective-3	3	CSEG 435	Medico Ethics & Legal issues in Healthcare	2
	Open Elective-2	3	CSEG 436	Tele-Health Principles & Practices	2
CSEG 491	Advanced and Predictive Analytics for Healthcare	3			
CSEG 493	IOT For Healthcare	3			
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
CSEG 492	Advanced and Predictive Analytics for Healthcare Lab	1			
CSEG 494	IOT For Healthcare Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		24	TOTAL		15
PE - III			PE - IV		
CSEG 444	Knowledge Management in Healthcare Informatics		CSEG 495	Health work flow process analysis	
CSEG 445	Healthcare Research methods and Professional issues		CSEG 496	Maintenance of Health IT Systems	

CSEG 446	Healthcare Informatics Usability Engineering		CSIB 493	Backup and Data Recovery	
Total Credits of B.Tech Computer Science Engineering with specialization in Healthcare Informatics 2015					18 8

B.Tech Computer Science Engineering with specialization in Manufacturing Informatics 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Cred its
MATH 103	Mathematics I	4	MATH 104	Mathematics II	4
CHEM 107	Chemistry	4	PHYS 105	Physics	4
INFO 117	Programming and Data structures	4	INFO 121	Advanced Data Structures	4
CSIB 108	Open Source and Open Standards	2	ENVO 102	Environmental Studies	3
GNEG 273	Basic Electronics Engineering	3	CSEG 214	Database Management Systems	3
BTDC 101	Design Thinking	4	CSIB 112	IT Applications and Open Standards	3
COMM 121	English Communication	4			
PRACTICAL			PRACTICAL		
CHEM 108	Chemistry Lab	1	INFO 122	Advanced Data Structures-Lab	1
INFO 118	Programming and Data Structures-Lab	1	PHYS 106	Physics Lab	1
GNEG 278	Basic Electronics Engineering Lab	1	CSEG 215	Database Management Systems Lab	1
TOTAL		28	TOTAL		24
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Cred its
CSEG 242	Design and Analysis of Algorithms	4	CSEG 361	Software Engineering & Project management	3
INFO 119	Computer System Architecture	3	CSEG 226	Data Communication and Computer Networks	3
CSEG 235	Advanced Database Management Systems	3	CSIB 287	Manufacturing Process and Systems (Discrete and Process)	2
MATH 231	Discrete Mathematical Structures	3	CSEG 237	Advanced Programming using Java	3
CSEG 228	Operating Systems	3	CSIB 125	Web Technologies through PHP	3
CSIB 286	Introduction to Manufacturing Informatics	3		Open Elective-1	3
PRACTICAL			PRACTICAL		
CSEG 245	Design and Analysis of Algorithms Lab	1	CSEG 227	Data Communication and Computer Networks Lab	1
CSEG 236	Advanced Database Management Systems Lab	1	CSEG 238	Advanced Programming using Java Lab	1
CSEG 229	Operating Systems Lab	1	CSIB 126	Web Technologies through PHP-Lab	1
CSIB 267	Dynamic Paradigm in Manufacturing Informatics 1	1	CSIB 268	Dynamic Paradigm in Manufacturing Informatics 2	1
TOTAL		23	TOTAL		21
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Cred its
CSEG 304	Object Oriented Analysis and Design	3	CSEG 344	Artificial Intelligence	3
CSEG 329	Computer Graphics	3	CSEG 372	Micro Processor & Embedded Systems	3

CSEG 308	IT Adoption for Manufacturing - Enterprise Resource Planning	2	CSEG 366	Supplier Relation Management	2
CSEG 365	Customer Relationship Management	3	CSEG 367	Product Life Cycle Management	3
CSEG 377	Business Process Management	3	CSEG 394	Mobile Apps Development - Android	3
CSEG 345	Formal Languages and Automata Theory	3		Program Elective-2	3
	Program Elective-1	3		Open Elective- HSS	3
PRACTICAL			PRACTICAL		
CSEG 378	Business Process Management Lab	1	CSEG 373	Micro Processor & Embedded Systems Lab	1
CSEG 330	Computer Graphics Lab	1	CSEG 395	Mobile Apps Development - Android (Manufacturing) Lab	1
CSEG 305	Object Oriented Analysis and Design Lab	1	PROJ 302	Minor Project II	4
PROJ 301	Minor Project I	2	INDT 301	Industrial Visit	1
CSIB 340	Dynamic Paradigm in Manufacturing Systems-3	1	CSIB 360	Dynamic Paradigm in Manufacturing Informatics 4	1
TOTAL		26	TOTAL		28
PE - I			PE - II		
CSEG 392	.Net Technologies		GIEG 323	Digital Image Processing	
ELEG 317	Digital Signal Processing		CSEG 363	Software Quality Management	
CSEG 393	Information Retrieval and Search Engines		CSEG 326	Compiler Design	
IPEG 381	Modeling and Simulation		CSEG 317	Enterprise Java	
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
CSEG 423	Cryptography and Network Security	3		Program Elective-4	3
CSIB 486	M2M Communication	3	CSEG 433	Computer Aided Manufacturing - Robotics Engineering	3
CSEG 475	Descriptive Analytics for Manufacturing	3			
	Program Elective-3	3			
	Open Elective-2	3			
PRACTICAL			PRACTICAL		
CSEG 428	Cryptography and Network Security Lab	1	PROJ 402	Major Project II	8
CSIB 410	M2M Communication Lab	1			
CSEG 476	Descriptive Analytics for Manufacturing Lab	1			
PROJ 401	Major Project I	4			
SIIB 101	Summer Internship	2			
TOTAL		24	TOTAL		14
PE - III			PE - IV		
CSIB 489	Distributed Computing		CSIB 493	Backup & DR (Except for where it is as main subject)	
CSIB 274	Introduction to Virtualization and Cloud Computing		CSIB 471	Security in Cloud	
CSIB 480	Social Analytics		CSIB 407	Privacy and Security in Social media world	

CSEG 333	Storage Technology Foundations				
Total Credits of B.Tech Computer Science Engineering with specialization in Manufacturing Informatics 2015					18 8

B.Com, LLB (Hons) with emphasis on Taxation Laws-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBG 101	General English	3	LLBG 105	Legal Language & Legal Writing	4
LLBL 101	Law of Contracts I	4	LLBG 122	History II (History of Courts, Legislature & Legal Profession of India)	4
LLBG 102	Legal Method & Legal Reasoning	4	LLBL 102	Law of Contracts II	4
INFO 108	Computer Fundamentals & its Applications	3	BBCE 111	Business Economics I (Micro)	3
BBCQ 121	Business Mathematics	3	LLBL 241	Torts & Consumer protection Act	4
BBCH 101	Business Organization	3	BBCQ 124	Quantitative Techniques for Decision Making	3
LLBG 104 Clinical-1	Fundamentals of Moot Court	1	COMM 113 Clinical-2	Language Lab	1
			LLBP 101 Clinical-3	Trial Advocacy	1
TOTAL		21	TOTAL		24
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 201	Family Law I	4	LLBL 203	Jurisprudence	4
LLBL 221	Constitutional Law I	4	LLBL 202	Family Law II	4
BBCE 112	Business Economics II (Macro)	3	LLBL 131	Civil Procedure Code & Law of Limitation	4
BBCF 235	Financial Accounting	3	BBCF 231	Corporate Accounting	3
BBCH 102	Organizational Behavior	3	BBCM 151	Marketing Management	3
LLBP 204 Clinical-4	Client counseling	1	LLBL 222	Constitutional Law II	4
	Open Elective-1 (Any Two)	3+3		Open Elective-2: (Any one)	2
BBCM 152	Consumer Behavior & Market Research		LLBG 204	French	
BBCG 104	Operations & Materials Management		LLBG 205	Arabic	
BBCF 233	International Finance & Risk Management		LLBG 206	Spanish	
BBCG 107	Business Policy & Strategy		LLBG 207	Mandarin	
BBCF 234	Project Finance		ENVO 102	Environmental Studies	3
			LLBG 212	Advance Skillset Development Pro	1
TOTAL		24	TOTAL		28
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 211	Law of Crimes (IPC)	4	LLBL 121	Law of Evidence	4
LLBL 421	Company Law I	4	LLBL 422	Company Law-II	4
LLBL 141	Administrative Law	4	LLBL 432	Human Rights & International Law	4
LLBL 402	Property Law including Transfer of Property Act & Easement Act	4	LLBL 212	Criminal Procedure Court, JJ Act & Prohibition of Offenders Act	4

LLBL 443	Taxation Law	4	BBCF 332	Cost Accounting	3
BBCF 331	Principles of Auditing	4	INDT 301 Clinical-6	Industrial Visit	1
BBCF 232	Fundamentals of Investment Management	3	LLBP 312 Clinical-7	Drafting of Criminal Instruments	2
LLBP 311 Clinical-5	Drafting of Civil Instruments	2		Open elective 3: (Any one)	3
			LLBL 444	Banking & Negotiable Instruments Law	
			LLBL 445	Insurance Law	
			LLBD 311	Maritime Law	
TOTAL		29	TOTAL		25
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 511	Interpretation of Statutes	4	LLBL 401	Intellectual Property Law	4
LLBL 251	Labour Law I	4	LLBL 252	Labour Law II	4
LLBL 431	Environmental Law	3	LLBL 483	Custom and GST II (Hons 3)	3
LLBL 481	Income Tax, Wealth Tax and Tax Planning (Hons 1)	3	LLBL 484	GST III (State) (Hons 4)	3
LLBL 482	GST I (Central) (Hons 2)	3	LLBL 485	Corporate Tax and Planning (Hons 5)	3
LLBL 433	Private International Law	4	LLBL 461	Arbitration, Conciliation & ADR Mechanisms	4
	Workshop on Any One of the Following: Open Elective 4	1	Clinical-9 LLBP 411	Drafting of Writs & Conveyance	2
LLBP 406	Workshop on Mediation			Open Elective 6 (Any one) Seminar II Clinical 10	2
LLBP 466	Workshop on International Arbitration		LLBP 431	Seminar on Law and Economics	
LLBP 425	Workshop on Negotiation and Drafting International Commercial Contracts		LLBP 432	Seminar on Climate Change & Law	
	Open Elective 5 (Any one) Seminar I Clinical 8	2	LLBP 433	Seminar on Water Law	
LLBP 481	Seminar on Law Relating to Women & Children		LLBP 434	Seminar on Housing Law	
LLBP 482	Seminar on Media Law		LLBP 435	Seminar on Law of the Global Commons (Antarctic, High Seas, Outer Space)	
LLBP 483	Seminar on Medical Law		LLBP 436	Seminar on Internet Security Law	
LLBP 484	Seminar on Artificial Intelligence & Law		LLBP 437	Seminar on Patenting of Life forms	
LLBP 485	Seminar on International Humanitarian Law		LLBP 438	Seminar on WTO and Law	
LLBP 486	Seminar on Comparative Public Law		LLBP 439	Seminar on Corporate Crimes	
LLBP 487	Seminar on Infrastructure Law		LLBP 440	Seminar on Victimology	
LLBP 488	Seminar on Law and Governance				
LLBP 489	Seminar on Minorities Law				
LLBP 490	Seminar on Criminology and Criminal Justice Administration				
LLBG 401	Books to Courtroom	1			
TOTAL		25	TOTAL		25

SEMESTER IX			SEMESTER X		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 531	Professional Ethics, Accountancy for lawyers & Bar Bench Relation	4	LLBL 554	International Trade Law	4
LLBL 503	Right to Information	2	LLBL 488	Adjudication of Tax Related Disputes (Hons 8)	4
LLBL 556	Competition Law	3	LLBP 509	Moot Court & Internship	3
LLBL 521	Pleading, Drafting and Conveyance	4	LLBP 502	Dissertation II	6
LLBL 486	International Taxation (Hons 6)	3		Program Elective 6 (Any One) Seminar III (Practical Course) (Hons 9)	2
LLBL 487	Tax Practice and Filing of Returns (Hons 7)	3	LLBL 489	Seminar on Comparative Tax Law	
LLBL 512	Information Technology Law	4	LLBL 490	Seminar on General Anti Avoidance Rule	
LLBP 501	Dissertation I	2	LLBL 491	Seminar on Taxation of Corporate Entities	
			LLBL 492	Seminar on the role of Taxation in Good Governance and Policy	
			LLBL 493	Seminar on International Banking and Finance	
			LLBL 494	Seminar on Equity and Trust	
			LLBL 495	Seminar on Tax ; Constitutional Provisions and Fiscal Relations between Centre and State	
				Program Elective 7 (Any One) Seminar IV (Practical Course) (Hons 10)	2
			LLBL 475	Seminar on Advance Ruling Settlement Commission and Appellate Procedure; Direct and Indirect Taxes	
			LLBL 476	Seminar on Promissory Estoppel in Fiscal Laws	
			LLBL 477	Seminar on Double Taxation Avoidance Agreement	
			LLBL 478	Seminar on Transfer Pricing	
			LLBL 479	Seminar on Taxation of Non Resident Entities	
TOTAL		25	TOTAL		21
Total Credit B.Com., LL.B.(Hons.) Taxation Laws					247

BA LL.B. (HONS.) WITH EMPHASIS ON ENERGY LAW

w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBG 107	General English	3	LLBG 105	Legal Language & Legal Writing	4
LLBG 111	Political Science I	4	LLBG 112	Political Science II	4
INFO 108	Computer Fundamentals & Its Applications	3	BBCE 111	Business Economics - I (Micro)	3
LLBG 121	History-I	4	LLBG 122	History II (History of Court, Legislation & Legal Profession in India)	4
LLBL 101	Law of Contracts I	4	LLBL 102	Law of Contracts II	4
LLBG 102	Legal Method & Legal Reasoning	4	LLBL 241	Torts & Consumer Protection Law	4
LLBG 104 (Clinical 1)	Fundamentals of Moot Court	1	Clinical-3 LLBP 101	Trial Advocacy	1
COMM 113 (Clinical-2)	Language Lab	1			
TOTAL		24	TOTAL		24
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 201	Family Law I	4	LLBL 202	Family Law II	4
BBCE 112	Business Economics - II (Macro)	3	LLBL 222	Constitutional Law II	4
LLBL 421	Company Law-I	4	LLBL 131	Civil Procedure Code & Law of Limitation	4
LLBD 212	Economics of Oil & Gas Sector	3	LLBL 211	Law of Crimes (IPC)	4
LLBG 113	Political Science III	4	LLBL 422	Company Law-II	4
LLBL 221	Constitutional Law I	4	LLBL 511	Interpretation of Statutes	4
Clinical-4 LLBP 204	Client Counselling	1		Open elective-1: (Any one)	2
	Program Elective-1: (Any two)	3+3	LLBG 204	French	
LLBG 137	Sociology		LLBG 205	Arabic	
LLBG 135	Philosophy		LLBG 206	Spanish	
LLBG 136	Psychology		LLBG 207	Mandarin	
LLBG 126	World History		LLBG 212	Advance Skillset Development Pro	1
TOTAL		29	TOTAL		27
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
Clinical-5 LLBP 311	Drafting of Civil Instruments	2	LLBL 406	Air & Space Law	2
LLBL 402	Property law including Transfer of Property Act & Easement Act	4	LLBL 407	Aviation Law	2
LLBL 212	Criminal Procedure Code, Juvenile Justice Act & Probation of Offenders Act	4	LLBL 432	Human Rights & International Law	4
LLBL 141	Administrative Law	4	LLBL 121	Law of Evidence	4

LLBL 203	Jurisprudence	4	LLBD 312	Mining Law Relating to Coal (Hons-1)	4
Clinical-6 INDT 301	Industrial Visit	1	LLBL 251	Labour Law I	4
	Program Elective-2 (Any Two)	3+3		Open elective 2: (Any one)	3
LLBD 313	Economics of Surface & Maritime Transportation		LLBL 444	Banking & Negotiable Instruments Law	
LLBD 314	Economics of Power Sector		LLBL 445	Insurance Law	
LLBD 414	Airport Economics & Law		LLBD 311	Maritime Law	
LLBD 507	Energy Economics		Clinical-7 LLBP 312	Drafting of Criminal Instruments	2
ENVO 102	Environmental Studies	3			
TOTAL		28	TOTAL		25
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 443	Taxation Law	4	LLBL 521 Clinical 11	Drafting, Pleading & Conveyance	4
LLBL 433	Private International Law	4	LLBL 462	Information Technology Law	3
LLBD 421	Nuclear Energy Law (Hons-2)	3	LLBL 401	Intellectual Property Law	4
LLBL 252	Labour Law II	4	LLBD 412	Mid & Downstream Oil & Gas Law (Hons-4)	4
LLBL 431	Environmental Law	3	LLBL 501	International Economic Law	4
LLBD 411	Upstream Oil & Gas Law (Hons-3)	4	Clinical-12 LLBP 411	Drafting of Writs & Conveyance	2
	Workshop Any one from the following: Clinical-8	1	LLBD 431	Law Relating to Power Sector (Hons-5)	3
LLBP 406	Workshop on Mediation				
LLBP 466	Workshop on International Arbitration				
LLBP 425	Workshop on Negotiation & Drafting of International Commercial Contracts				
Clinical-9 LLBP 411	Drafting of Writs & Conveyance	2			
	Open Elective - 3 (Any one) Seminar I Clinical 10	2		Open Elective - 4 (Any one) Seminar II Clinical 13	2
LLBP 481	Seminar on Law Relating to Women & Children		LLBP 431	Seminar on Law and Economics	
LLBP 482	Seminar on Media Law		LLBP 432	Seminar on Climate Change & Law	
LLBP 483	Seminar on Medical Law		LLBP 433	Seminar on Water Law	
LLBP 484	Seminar on Artificial Intelligence & Law		LLBP 434	Seminar on Housing Law	
LLBP 485	Seminar on International Humanitarian Law		LLBP 435	Seminar on Law of the Global Commons (Antarctic, High Seas, Outer Space)	

LLBP 486	Seminar on Comparative Public Law		LLBP 436	Seminar on Internet Security Law	
LLBP 487	Seminar on Infrastructure Law		LLBP 437	Seminar on Patenting of Life forms	
LLBP 488	Seminar on Law and Governance		LLBP 438	Seminar on WTO and Law	
LLBP 489	Seminar on Minorities Law		LLBP 439	Seminar on Corporate Crimes	
LLBP 490	Seminar on Criminology and Criminal Justice Administration		LLBP 440	Seminar on Victimology	
LLBG 401	Books to Courtroom	1			
TOTAL		28	TOTAL		26
SEMESTER IX			SEMESTER X		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 556	Competition Law	3	LLBL 531	Professional Ethics, Accountancy for Lawyers & Bar Bench Relation	4
MBEF 931	Health, Safety and Environmental Regulations in International Energy Sector (Hons-6)	4	LLBL 151	Arbitration and Conciliation & Alternative Dispute Resolution Mechanism	3
LLBD 522	Energy Transaction (Hons-7)	3	LLBP 521 Clinical-12	Internship (Minimum 20 weeks spread across 2 nd , 3 rd & 4 th Year)	4
LLBD 523	Energy Litigation (Hons-8)	3	LLBP 507 Clinical-13	Dissertation II	6
LLBL 503	Right to Information	2			
LLBP 501	Dissertation I	2			
	Program Elective 3 (Any One) Clinical-11 Seminar III Hons-9	3		Program Elective 4 (Any One) Clinical-14 Seminar IV Hons-10	3
LLBP 571	Seminar on Law relating to new and renewable Energy		LLBP 581	Seminar on Energy Efficiency & Law	
LLBP 572	Seminar on Shale Gas Development		LLBP 582	Seminar on LNG Terminals & Law	
LLBP 573	Seminar on Comparative energy Law		LLBP 583	Seminar on Energy Innovation and Law	
LLBP 574	Seminar on Disposal of Energy Waste		LLBP 584	Seminar on Energy Production & Sustainable development	
TOTAL		20	TOTAL		20
Total Credit BA, LL.B.(Hons.) Energy Laws 2015		251			

**BBA LL.B. (HONS.) WITH EMPHASIS ON CORPORATE LAW
w.e.f 2015**

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBG 101	General English	3	LLBG 105	Legal Language & Legal Writing	4
LLBL 101	Law of Contracts I	4	LLBG 122	History II (History of Courts, Legislature & Legal Profession of India)	4
LLBG 102	Legal Method & Legal Reasoning	4	LLBL 102	Law of Contracts II	4
INFO 108	Computer Fundamentals & its Applications	3	BBCE 111	Business Economics I (Micro)	3
BBCQ 121	Business Mathematics	3	LLBL 241	Torts & Consumer protection Act	4
BBCH 101	Business Organization	3	BBCQ 124	Quantitative Techniques for Decision Making	3
LLBG 104 (Clinical-1)	Fundamentals of Moot Court-	1	COMM 113 Clinical-2	Language Lab	1
BBCH 102	Organizational Behavior	3	LLBP 101 Clinical-3	Trial Advocacy	1
TOTAL		24	TOTAL		24
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 201	Family Law I	4	LLBL 222	Constitutional Law II	4
LLBL 221	Constitutional Law I	4	LLBL 202	Family Law II	4
LLBL 211	Law of Crimes (IPC)	4	LLBL 131	Civil Procedure Code & Law of Limitation	4
BBCE 112	Business Economics II (Macro)	3	BBCH 103	Human Resource Mgmt.	3
LLBL 421	Company Law I	4	BBCM 151	Marketing Management	3
LLBP 204 Clinical-4	Client counseling	1	BBCF 132	Financial Management	3
	Open Elective-1 (Any Two)	3+3	LLBL 422	Company Law II	4
BBCM 152	Consumer Behavior & Market Research			Open Elective-2 (Any one)	2
BBCG 104	Operations & Materials Management		LLBG 204	French	
BBCF 233	International Finance & Risk Management		LLBG 205	Arabic	
BBCG 107	Business Policy & Strategy		LLBG 206	Spanish	
BBCF 234	Project Finance		LLBG 207	Mandarin	
			LLBG 212	Advance Skillset Development Pro	1
TOTAL		26	TOTAL		28
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 121	Law of Evidence	4	LLBL 424	Mergers & Acquisition (Hons-3)	4
LLBL 203	Jurisprudence	4	LLBL 432	Human Rights & International Law	4
LLBL 141	Administrative Law	4	LLBL 212	Criminal Procedure Court, JJ Act & Prohibition of Offenders Act	4

LLBL 402	Property Law including Transfer of Property Act & Easement Act	4		Open elective-3 (Any one)	3
LLBP 311 Clinical-5	Drafting of Civil Instruments	2	LLBL 444	Banking & Negotiable Instruments Law	
LLBL 423	Commercial Transaction (Hons-1)	4	LLBL 445	Insurance Law	
BBCF 131	Business Accounting	3	LLBD 311	Maritime Law	
			LLBP 312 Clinical-6	Drafting of Criminal Instruments	2
			LLBL 451	Corporate Governance (Hons- 2)	4
			INDT 301 Clinical-7	Industrial Visit	1
			ENVO 102	Environmental Studies	3
TOTAL		25	TOTAL		25
SEMESTER VII			SEMESTER VIII		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
LLBL 511	Interpretation of Statutes	4	LLBL 401	Intellectual Property Law	4
LLBL 251	Labour Law I	4	LLBL 252	Labour Law II	4
LLBD 441	International Investment Law (Hons.4)	4	LLBL 554	International Trade Law (Hons-5)	4
	Workshop on Any One of the Following: Open Elective 4	1	LLBL 453	Corporate Finance & Investment Regulations (Hons-6)	4
LLBP 406	Workshop on Mediation		Clinical-9 LLBP 411	Drafting of Writs & Conveyance	2
LLBP 466	Workshop on International Arbitration		LLBL 443	Taxation Law	4
LLBP 425	Workshop on Negotiation and Drafting International Commercial Contracts			Open Elective-6 (Any One) Seminar II Clinical 10	2
	Open Elective-5 (Any One) Seminar I Clinical 8	2	LLBP 431	Seminar on Law and Economics	
LLBP 481	Seminar on Law Relating to Women & Children		LLBP 432	Seminar on Climate Change & Law	
LLBP 482	Seminar on Media Law		LLBP 433	Seminar on Water Law	
LLBP 483	Seminar on Medical Law		LLBP 434	Seminar on Housing Law	
LLBP 484	Seminar on Artificial Intelligence & Law		LLBP 435	Seminar on Law of the Global Commons (Antarctic, High Seas, Outer Space)	
LLBP 485	Seminar on International Humanitarian Law		LLBP 436	Seminar on Internet Security Law	
LLBP 486	Seminar on Comparative Public Law		LLBP 437	Seminar on Patenting of Life forms	
LLBP 487	Seminar on Infrastructure Law		LLBP 438	Seminar on WTO and Law	
LLBP 488	Seminar on Law and Governance		LLBP 439	Seminar on Corporate Crimes	
LLBP 489	Seminar on Minorities Law		LLBP 440	Seminar on Victimology	
LLBP 490	Seminar on Criminology and Criminal Justice Administration				
LLBL 433	Private International Law	4			
LLBG 401	Books to Courtroom	1			
TOTAL		20	TOTAL		24
SEMESTER IX			SEMESTER X		
Subject Code	Subject	Credits	Subject Code	Subject	Credits

LLBL 152	International Commercial Arbitration (Hons-8)	4	LLBP 521 Clinical-12	Internship (Minimum 20 weeks Spread across 2nd, 3rd & 4th Year)	4
LLBL 503	Right to Information	2			
LLBL 431	Environmental Law	3	LLBL 461	Arbitration, Conciliation & ADR Mechanisms	4
LLBL 556	Competition Law (Hons-7)	3	LLBL 531	Professional Ethics, Accountancy for lawyers & Bar Bench Relation	4
LLBP 501 Clinical -11	Dissertation I	2	LLBP 507 Clinical-13	Dissertation II	6
LLBL 512	Information Technology Law	4			
	Program Elective-I Seminar III Hons-9	2		Program Elective-II Seminar IV Hons-10	2
LLBP 551	Seminar on International Taxation		LLBP 561	Seminar on International Sale of goods	
LLBP 552	Seminar on Security Limitation Act		LLBP 562	Seminar on Technology transfer & Law	
LLBP 553	Seminar on Trust Act		LLBP 563	Seminar on Sustainable Development	
LLBP 554	Seminar on Commercial borrowing and Law		LLBP 564	Seminar on Commodity Exchange	
LLBP 555	Seminar on GDR-Global Deposits Receipts		LLBP 565	Seminar on Bank Frauds	
LLBP 556	Seminar on Money market currency & exchange rate		LLBP 566	Seminar on Futures & Options	
LLBP 557	Seminar on Indirect Taxation		LLBP 567	Seminar on Choice of Forum & Choice of Law in International Contracts	
LLBP 558	Seminar on Tendering process & Law		LLBP 568	Seminar on Hedging & Law	

BBA (AUTO MARKETING) -w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCE 111	Business Economics I	3	BBCG 122	Introduction to Management & Leadership (Online)	3
BBCQ 121	Business Mathematics	3	BBCE 112	Business Economics II	3
BBCF 131	Business Accounting	3	BBCQ 122	Business Statistics	3
BBCI 141	Business Computing	3	BBCF 132	Financial Management	3
BBCG 101	Business Communication I	3	BBCG 102	Business Communication II	3
BBCG 131	Community Service 1	1	BBCM 151	Marketing Management	3
			BBCG 132	Community Service 2	1
		16			19
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCH 102	Organizational Behavior	3	BBCH 103	Human Resource Management	3
BBCG 104	Operations and Materials Management	3	BBCM 156	Marketing of Services	3

BBCM 152	Consumer Behavior & Market Research	3	BBCQ 123	Research Methodology & Report Writing	3
BBDA 101	Introduction to Automotive Industry	3	BBCM 154	Customer Relationship Management	3
	Open Elective 1	3	BDSM 171	Industry Visit	1
				Open Elective 2	3
TOTAL		15			16
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCG 107	Business Policy & Strategy	3	BBCG 109	Entrepreneurship & Venture Management	3
BBCM 159	Brand Management	3	BBCG 117	Total Quality Management	3
BBDA 104	Sales & Distribution Management	3	BDSM 162	Dissertation II	4
BDSM 163	Summer Internship	2		Program Elective 3	3
BDSM 161	Dissertation I	4	ENVO 102	Environmental Studies	3
	Program Elective 1	3			
	Program Elective 2	3			
TOTAL		21			16
TOTAL CREDIT POINTS FOR BBA (AM) IS			103		

➤ **LIST OF PROGRAM ELECTIVES**

Subject Code	Subject	Credits
BBDA 103	Automotive Internet Marketing	3
BBDA 105	B2B Auto Retailing	3
BBDA 111	Auto Financing	3
BBDA 106	Auto Insurance	3
BBCR 192	Visual Merchandising	3
BBDA 121	Pre-owned Vehicle Marketing	3
BBCI 146	Marketing Information System	3
BBCM 176	Global Marketing	3
BBCM 158	Integrated Marketing Communication	3

➤ **LIST OF OPEN ELECTIVES**

OPEN ELECTIVES		
Subject Code	Subject	Credits
OPEL 251	Physical Fitness & Wellness	3
BBOE 102	Personal Selling	3
BBOE 103	Mercantile Law	3
BBOE 104	Competitive Intelligence	3

BBOE 105	Introduction to Psychology	3
BBOE 106	Introduction to Sociology	3
BBOE 107	Corporate Social Responsibility	3
BBOE 108	Introduction to Philosophy	3

BBA (AVIATION OPERATIONS)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BDSA 101	Introduction to Aviation Industry	3	BBCG 122	Introduction to Management & Leadership (Online)	3
BBCQ 121	Business Mathematics	3	BBCE 111	Business Economics I	3
BBCF 131	Business Accounting	3	BBCQ 122	Business Statistics	3
BBCG 101	Business Communication I	3	BBTT 101	IATA Travel & Tourism(Foundation)	6
BBCI 141	Business Computing	3	BBCG 132	Community Service 2	1
BBCG 131	Community Service 1	1			
TOTAL		16	TOTAL		16
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCM 151	Marketing Management	3	BBCH 102	Organizational Behavior	3
BBCQ 123	Research Methodology and Report Writing	3	BBCG 102	Business Communication II	3
BDSA 103	Airport Functions of Airlines	3	BBCM 152	Consumer Behavior & Market Research	3
BBCF 132	Financial Management	3	BDSA 104	Cargo Handling	3
BBCE 112	Business Economics II	3		Program Elective 1	3
	Open Elective 1	3		Open Elective 2	3
TOTAL		18	TOTAL		18
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCG 111	Essentials of Strategic Management	3	BDSA 131	Airport Customer Services	3
BBCG 106	International Business	3	BDSA 121	Aviation Marketing	3
BDSA 105	Understanding of Aviation Business	3	BBCH 103	Human Resource Management	3
BDSM 161	Dissertation I	4	BDSM 162	Dissertation II	4
BDSM 163	Summer Internship	2	ENVO 102	Environmental Studies	3
BDSA 164	Industrial Tour Report	1			
	Program Elective 2	3			
	Program Elective 3	3			
TOTAL		22	TOTAL		16
TOTAL CREDIT POINTS FOR BBA(AO) IS			106		

➤ LIST OF PROGRAM ELECTIVES

PROGRAM ELECTIVES		
Subject Code	Subject	Credits
BDSA 113	Travel Agency & Tour Operations	3
BDSA 114	Tourism Enterprise Planning	3
BBCG 140	Ground Handling Operations	3

BDSA 115	Aircraft Navigational Services	3
BDSA 106	Aviation Demand Forecasting	3
BDSA 142	Airport Capacity Management	3

➤ **LIST OF OPEN ELECTIVES**

OPEN ELECTIVES		
Subject Code	Subject	Credits
OPEL 251	Physical Fitness & Wellness	3
BBOE 102	Personal Selling	3
BBOE 103	Mercantile Law	3
BBOE 104	Competitive Intelligence	3
BBOE 105	Introduction to Psychology	3
BBOE 106	Introduction to Sociology	3
BBOE 107	Corporate Social Responsibility	3
BBOE 108	Introduction to Philosophy	3

BBA (DIGITAL MARKETING) w.e.f. 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCG 122	Introduction to Management & Leadership (Online)	3	B BCE 112	Business Economics II	3
B BCE 111	Business Economics I	3	B BCQ122	Business Statistics	3
B BCQ 121	Business Mathematics	3	B BCF132	Financial Management	3
B BCF 131	Business Accounting	3	B BCG 102	Business Communication II	3
B BCI 141	Business Computing	3	B BCM 151	Marketing Management	3
B BCG 101	Business Communication I	3	BBCG 132	Community Service 2	1
BBCG 131	Community Service 1	1			
	TOTAL	19		TOTAL	16
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
B BCM 182	Sales & Marketing in Digital Age	2	B BCH 103	Human Resource Management	3
B BCH 102	Organizational Behavior	3	B BCM 153	Advertising & Sales Promotion	3
B BCG 105	Logistics and Supply Chain Management	3	B BCQ 123	Research Methodology & Report Writing	3
B BDM 101	Understanding Digital Marketing	3	B DSM 171	Industry Visit	1
B BDM 102	Internet and Related Technologies	2	B BDM 103	Social Media Marketing	3
	Open Elective 1	3		Open Elective 2	3
				Program Elective 1	3
	TOTAL	16		TOTAL	19
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
B BCM 154	Customer Relationship Management	3	BBCG 108	Project Management	3
BBCG 107	Business Policy & Strategy	3	BBCG 109	Entrepreneurship & Venture Management	3
BDSM 163	Summer Internship	2	BDSM 162	Dissertation II	4
BDSM 161	Dissertation I	4		Program Elective 3	3
B BDM 104	Digital Media Laws	3	ENVO 102	Environmental Studies	3
B BDM 105	Data Mining and Business Intelligence	3			
	Program Elective 2	3			
	TOTAL	21			16
TOTAL CREDIT POINTS FOR BBA (DM) IS			107		

➤ LIST OF PROGRAM ELECTIVES

PROGRAM ELECTIVES		
Subject Code	Subject	Credits
B BCM 177	Mobile & e-mail marketing	3

BBCM 179	Content Marketing	3
BBCT 175	Search Engine Optimization	3
BBCG 139	Web Design & Development	3
BBCI 145	Social and Web Analytics	3
BBCH 105	Enterprise Business Systems	3

➤ **LIST OF OPEN ELECTIVES**

Physical Fitness & Wellness	3
Personal Selling	3
Mercantile Law	3
Competitive Intelligence	3
Introduction to Psychology	3
Introduction to Sociology	3
Corporate Social Responsibility	3
Introduction to Philosophy	3

BBA (FINANCIAL SERVICES & MARKETING)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
B BCE 111	Business Economics I	3	B BCG 122	Introduction to Management & Leadership (Online)	3
B BCQ 121	Business Mathematics	3	B BCE 112	Business Economics II	3
B BCF 131	Business Accounting	3	B BCQ 122	Business Statistics	3
B BCI 141	Business Computing	3	B BCF 132	Financial Management	3
B BCG 101	Business Communication I	3	B BCG 102	Business Communication II	3
B BCG 131	Community Service 1	1	B BCM 151	Marketing Management	3
			B BCG 132	Community Service 2	1
TOTAL		16	TOTAL		19
SEMESTER - III			SEMESTER - IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
B BCH 102	Organizational Behavior	3	B BCM 152	Consumer Behavior & Market Research	3
B BCG 104	Operations and Materials Management	3	B BCQ 123	Research Methodology & Report Writing	3
B BCG 105	Logistics and Supply Chain Management	3	B BCM 163	Bank Marketing	4
B BCF 136	Indian Financial System	4	B BCM 164	Marketing of Mutual Funds	4
B BCM 162	Marketing of Financial Services	3	B DSM 171	Industry Visit	1
	Open Elective 1	3		Program Elective 1	3
				Program Elective 2	3
TOTAL		19	TOTAL		21
SEMESTER - V			SEMESTER - VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
B BCM 154	Customer Relationship Management	3	B BCH 103	Human Resource Management	3
B BCF 139	Commodities	4	B BCF 137	Infrastructure Project Management & Control	4
B BCG 103	Negotiating Skills	3	B BCG 107	Business Policy & Strategy	3
B BCF 138	Fixed Income securities	4	B DSM 162	Dissertation II	4
B DSM 163	Summer Internship	2		Open Elective 2	3
B DSM 161	Dissertation I	4	B ENVO 102	Environmental Studies	3
	Program Elective 3	3			
TOTAL		23	TOTAL		20
TOTAL CREDIT POINT FOR BBA (FSM) IS			118		

➤ LIST OF PROGRAM ELECTIVES

Subject Code	Subject	Credits
BBCM 166	Marketing of Non-Fund Based Products	3
BBCM 165	Insurance Marketing	3
BBCF 140	International Financial Management	3
BBCG 142	Valuation of Firms	3
BBCG 141	Merger Acquisition & Corporate Restructuring	3
BBCF 141	Merchant Banking / Investment Banking	3
BBCG 124	Security Analysis & Portfolio Management	3

➤ **LIST OF OPEN ELECTIVES**

OPEN ELECTIVES		
Subject Code	Subject	Credits
OPEL 251	Physical Fitness & Wellness	3
BBOE 102	Personal Selling	3
BBOE 103	Mercantile Law	3
BBOE 104	Competitive Intelligence	3
BBOE 105	Introduction to Psychology	3
BBOE 106	Introduction to Sociology	3
BBOE 107	Corporate Social Responsibility	3
BBOE 108	Introduction to Philosophy	3

BBA (FOREIGN TRADE)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCI 111	Business Economics - I	3	BBCG 122	Introduction to Management & Leadership (Online)	3
BBCQ 121	Business Mathematics	3	BBCE 112	Business Economics – II	3
BBCF 131	Business Accounting	3	BBCQ 122	Business Statistics	3
BBCI 141	Business Computing	3	BBCF 132	Financial Management	3
BBCG 101	Business Communication- I	3	BBCM 151	Marketing Management	3
BBCG 131	Community Service 1	1	BBCG 102	Business Communication- II	3
			BBCG 132	Community Service 2	1
	TOTAL	16		TOTAL	19
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCH 102	Organizational behavior	3	BBFT 106	WTO Agreements	3
BBCG 106	International Business	3	BBFT 105	Indian Economy and EXIM Policy	3
BBFT 101	Global Business Environment	3	BBFT 109	World Geography and Major Trade Routes	3
BBFT 102	Managing Trade and Risk in International Business	3	BBFT 110	Introduction to Multi-Modal Transport	3
BBFT 103	Trade Documentation	3	BBCQ123	Research Methodology & Report Writing	3
BBFT 104	Introduction to Trade Logistics	3	BDSM 171	Industry Visit	1
	Overseas Industry Visit (non credit, paid visit)			Program Elective 1	3
	Open Elective 1	3			
	TOTAL	21		TOTAL	19
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBFT 111	Contracts in International Trade and Business	3	BBCG 110	Business Law	3
BBFT 112	International Trade and Finance	3	BDSM 162	Dissertation-II	4
BBFT 114	Custom Clearance Procedures	3		Open Elective 2	3
BDSM 163	Summer Internship	2		Program Elective 3	3
BDSM 161	Dissertation I	4	ENVO 102	Environmental Studies	3
	Program Elective 2	3			
	TOTAL	18		TOTAL	16
TOTAL CREDIT POINTS FOR BBA (FT) IS		109			

➤ **LIST OF PROGRAM ELECTIVES**

Subject Code	Subject	Credits
BBFT 107	Role of Multilateral Agencies-IMF & World Bank	3
BBFT 115	Introduction to International Trade Negotiations	3
BBFT 108	Regional Economic Integration	3
BBCM 165	International Marketing	3
BBFT 116	Multilateralism vs Regionalism: Root to globalization	3
BBCG 143	Introduction to Mergers & Acquisitions	3

➤ **LIST OF OPEN ELECTIVES**

Physical Fitness & Wellness	3
Personal Selling	3
Mercantile Law	3
Competitive Intelligence	3
Introduction to Psychology	3
Introduction to Sociology	3
Corporate Social Responsibility	3
Introduction to Philosophy	3

BBA (LOGISTICS)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCI 111	Business Economics I	3	BBCG 122	Introduction to Management & Leadership (Online)	3
BBCQ 121	Business Mathematics	3	BBCI 112	Business Economics II	3
BBCF 131	Business Accounting	3	BBCQ 122	Business Statistics	3
BBCI 141	Business Computing	3	BBCF 132	Financial Management	3
BBCG 101	Business Communication I	3	BBCG 102	Business Communication II	3
BBCG 131	Community Service 1	1	BBDL 100	Understanding Logistics	4
			BBCG 132	Community Service 2	1
		16			20
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCI 102	Organizational Behavior	3	BBDL 101	Introduction to Multimodal transportation	4
BBCG 104	Operations and Materials Management	3	BBCQ 123	Research Methodology & Report Writing	3
BBCG 105	Logistics and Supply Chain Management	3	BBDL 121	Decision Modeling using Spreadsheet	4
BBCM 151	Marketing Management	3	BBDL 104	Logistics Information system	4
	Open Elective 1	3	BBDL 108	Supplier Relationship Management	4
	Program Elective 1	3	BDSM 171	Industry Visit	1
				Open Elective 2	3
				Program Elective 2	3
	TOTAL	18			26
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCM 154	Customer Relationship Management	3	BBCI 103	Human Resource Management	3
BBDL 105	Logistics Planning & Strategy	4	BBDL 112	Retail Logistics	4
BBCG 107	Business policy & strategy	3	BBCG 117	Total Quality Management	3
BDSM 163	Summer Internship	2	BDSM 162	Dissertation II	4
BDSM 161	Dissertation I	4	ENVO 102	Environmental Studies	3
	Program Elective 3	3			
	TOTAL	19			17
TOTAL CREDIT POINTS FOR BBA (LM) IS			116		

➤ LIST OF PROGRAM ELECTIVES

PROGRAM ELECTIVES		
Subject Code	Subject	Credits
BBDL 114	Logistics in Manufacturing Sector	3

BBCG 136	Warehouse Management	3
BBDL 115	International Logistics	3
BBDL 141	Distribution & Outbound Logistics	3
BBDL 133	Freight Forwarding & Port Operations	3
BBCG 135	Materials Management	3

➤ **LIST OF OPEN ELECTIVES**

OPEN ELECTIVES		
Subject Code	Subject	Credits
OPEL 251	Physical Fitness & Wellness	3
BBOE 102	Personal Selling	3
BBOE 103	Mercantile Law	3
BBOE 104	Competitive Intelligence	3
BBOE 105	Introduction to Psychology	3
BBOE 106	Introduction to Sociology	3
BBOE 107	Corporate Social Responsibility	3
BBOE 108	Introduction to Philosophy	3

BBA (OIL & GAS MARKETING)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCI 111	Business Economics I	3	BBCG 122	Introduction to Management & Leadership (Online)	3
BBCQ 121	Business Mathematics	3	BBCI 112	Business Economics II	3
BBCF 131	Business Accounting	3	BBCQ 122	Business Statistics	3
BBCI 141	Business Computing	3	BBCF 132	Financial Management	3
BBCG 101	Business Communication I	3	BBCG 102	Business Communication II	3
BBCG 131	Community Service 1	1	BBCM 151	Marketing Management	3
			BBCM 161	Distribution and Channel Management	2
			BBDO 101	Understanding Oil & Gas Business	3
			BBCG 132	Community Service 2	1
		16			23
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCH 102	Organizational Behavior	3	BBCH 103	Human Resource Management	3
BBCG 104	Operations and Materials Management	3	BBCG 106	International Business	3
BBCG 105	Logistics and Supply Chain Management	3	BBCQ 123	Research Methodology & Report Writing	3
BBCM 152	Consumer Behavior & Market Research	3	BDSM 103	Lubricant Marketing	4
BDSM 141	Oil / Gas Storage & Transportation	4	BDSM 122	Petroleum Law & Policy	4
BDSM 101	Petroleum Retail Development	4	BDSM 171	Industry Visit	1
	Open Elective 1	3		Program Elective 1	3
	TOTAL	23			21
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCM 154	Customer Relationship Management	3	BBCG 108	Project Management	3
BBCG 107	Business Policy & Strategy	3	ENVO 102	Environmental Studies	3
BBCG 103	Negotiating Skills	3	BDSM 162	Dissertation II	4
BDSM 163	Summer Internship	2		Open Elective 2	3
BDSM 161	Dissertation I	4		Program Elective 3	3
	Program Elective 2	3			
	TOTAL	18			16
TOTAL CREDIT POINTS FOR BBA (O&G M) IS			121		

➤ LIST OF PROGRAM ELECTIVES

PROGRAM ELECTIVES		
Subject Code	Subject	Credits
BDSM 181	Understanding New Energy Resources	3
BDSM 112	Internet & Petroleum E-Commerce	3
BDSM 152	HSE in Petroleum Industry	3
BDSM 108	Gas Fundamentals & Marketing	3
BDSM 184	Energy Economics	3
BDSM 132	Basics of Petro Economics	3

➤ **LIST OF OPEN ELECTIVES**

OPEN ELECTIVES		
Subject Code	Subject	Credits
OPEL 251	Physical Fitness & Wellness	3
BBOE 102	Personal Selling	3
BBOE 103	Mercantile Law	3
BBOE 104	Competitive Intelligence	3
BBOE 105	Introduction to Psychology	3
BBOE 106	Introduction to Sociology	3
BBOE 107	Corporate Social Responsibility	3
BBOE 108	Introduction to Philosophy	3

BBA (RETAIL MANAGEMENT)-w.e.f. 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCI 111	Business Economics I	3	BBCG 122	Introduction to Management & Leadership (Online)	3
BBCQ 121	Business Mathematics	3	BBCI 112	Business Economics II	3
BBCF 131	Business Accounting	3	BBCQ122	Business Statistics	3
BBCI 141	Business Computing	3	BBCF132	Financial Management	3
BBCG 101	Business Communication I	3	BBCG 102	Business Communication II	3
BBCG 131	Community Service 1	1	BBCM 151	Marketing Management	3
			BBCR 175	Introduction to Retail	3
			BBCG 132	Community Service 2	1
	TOTAL	16		TOTAL	22
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCI 102	Organizational Behavior	3	BBCI 103	Human Resource Management	3
BBCG 104	Operations and Materials Management	3	BBCR 178	International Retailing	3
BBCG 105	Logistics and Supply Chain Management	3	BBCR 179	Retail Business Analytics	3
BBCR 176	Retail Strategy & Formats	4	BBCQ 123	Research Methodology & Report Writing	3
	Open Elective 1	3	BBCR 169	Store Design and Visual Merchandising	3
	Program Elective 1	3	BDSM 171	Industry Visit	1
				Program Elective 2	3
	TOTAL	19		TOTAL	19
SEMESTER V			SEMESTER VI		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
BBCM 154	Customer Relationship Management	3	BBCR 183	Location Strategy	4
BBCG 107	Business Policy & Strategy	3	BBCR 184	Retail Logistics & Warehousing	4
BBCR 182	Category Management & ECR	4	BBCR 185	Retail Operations	3
BDSM 163	Summer Internship	2	BDSM 162	Dissertation II	4
BDSM161	Dissertation I	4		Open Elective 2	3
	Program Elective 3	3	ENVO 102	Environmental Studies	3
	TOTAL	19		TOTAL	21
TOTAL CREDIT POINTS FOR BBA (RM) IS		116			

➤ **LIST OF PROGRAM ELECTIVES**

Subject Code	Subject	Credits
BBCR 188	Mall Management	3
BBCR 189	Retail Buying	3
BBCR 193	Retail Marketing	3
BBCR 187	Online Retailing	3
BBCR 194	Food Retailing	3
BBCR 195	Fashion Retailing	3
BBCR 196	Luxury Retailing	3
BBCM 176	Global Marketing	3
BBCR 190	Customer Service in Retailing	3
BBCR 191	Rural Retail	3
BDSM 113	E-Commerce	3
BBCM 178	Retail Branding	3
BBCM 158	Integrated Marketing Communication	3

➤ **LIST OF OPEN ELECTIVES**

Physical Fitness & Wellness	3
Personal Selling	3
Mercantile Law	3
Competitive Intelligence	3
Introduction to Psychology	3
Introduction to Sociology	3
Corporate Social Responsibility	3
Introduction to Philosophy	3

MASTERS IN ENERGY ECONOMICS-w.e.f 2014

SEMESTER I			SEMESTER II		
Code	Name	Credits	Code	Name	Credits
MECE 701	Microeconomics	4	MECE 702	Macroeconomics	4
MECQ 721	Quantitative Methods in Economics	4	MECE 731	Econometrics Modeling	4
MECQ 722	Research Methodology and Advanced Statistics	4	MECE 711	International Economics	4
MECF 721	Financial Statement Analysis	3	MECF 722	Public Finance	3
MEDE 801	Understanding Energy Sector	3	MEDE 802	Oil & Gas Economics	3
			MEDI 851	Industrial Visit	1
TOTAL		18	TOTAL		19
SEMESTER III			SEMESTER IV		
Code	Name	Credits	Code	Name	Credits
MEDE 811	International Energy Markets and Commercial Framework of Energy Industry	3	MEDE 805	Renewable Energy and Energy Efficiency Economics	4
MEDE 803	Power Economics	3	MECE 801	Advanced Strategic Analysis	4
MEDE 821	Energy Sector Project Financing	3	MEDE 823	Business Modelling in Energy Sector	3
MEDE 822	Energy Trading Markets and Risk Management	4	MEDE 832	Energy Laws	3
MEDE 831	Regulation and Governance of Energy Sector	3		Program Elective II	3
MEDE 804	Economics of Energy and Environmental Interaction	3		Open Elective II	2
	Program Elective I	3	MEDP 854	Dissertation-II	6
	Open Elective I	2			
MEDS 852	Summer Internship	2			
MEDP 853	Dissertation I	2			
Program Elective I			Program Elective II		
MEDE 833	Techno-economics of Energy System		MEDE 807	Green Economics	
MEDE 812	Energy Pricing		MEDE 824	Geo-Politics of Energy	
TOTAL		28	TOTAL		25
Total credit point for Masters In Energy Economics is			90		

MBA (AVIATION MANAGEMENT)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCE 701	Economics & Management Decisions	3	MBCE 702	Econometrics	3
MBCQ 721	Quantitative Techniques	3	MBCM 771	Marketing Management	3
MBCG 714	Business Communication	3	MBCQ 723	Research Methodology and App Statistics	3
MBCH 731	Organizational Behavior	3	MBCQ 722	Operations & Material Management	3
Domain Course			MBCH 732	Human Resource Management	3
MDSA 805	Fundamental of Airline Operations	3	Domain Course		
MDSA 806	Airport Planning & Management	3	MDSA 813	Aviation Security & safety Management	3
Domain Tailored Course			MDSA 815	Air Cargo Management	2
MBAF 911	Aviation Industry Accounting	4	Domain Tailored Course		
MDAI 904	IT Application in aviation sector	3	MBAF 912	Aviation Financial Management	4
			MDSA 823	Airport Economics	3
				Program Elective I	3
				Open Elective I	2
PRACTICAL			PRACTICAL		
			MDSA 851	Industrial Visit	1
TOTAL		25	TOTAL		33
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCG 747	Strategic Management	3	MBCM 772	Customer Relationship Management	3
Domain Course			MBCG 752	Competitive Intelligence	3
MDSA 835	Airline Revenue Management	2	Domain Course		
MDSA 841	Contemporary Issues in aviation industry	3	MDSA 836	Aviation Regulatory Management	3
Domain Tailored Course					
MDSA 822	Airline Economics	4			

MDSA 818	Aviation Law & Insurance	3			
MDSA 331	Aviation Forecasting Techniques	2			
MBAM 932	Aviation Marketing Management	3			
	Open Elective II	2			
	Program Elective II	3			
PRACTICAL			PRACTICAL		
MDSA 852	Summer Internship	2			
MDSA 853	Dissertation – I	2	MDSA 854	Dissertation – II	6
TOTAL		29	TOTAL		15
Program Electives I, II					
MDSA 819	Aviation Refueling	Se m II			
MDSA 832	Annex 14	Se m II			
MBAP 922	Supply Chain Management & Logistics for Aviation	Se m III			
MBAI 905	Aviation Enterprise Management	Se m III			
Total Credits of MBA Aviation Management 2015					10 2

MBA (BUSINESS ANALYTICS)-w.e.f. 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCH 731	Organizational Behavior	3	MBCQ 725	Operations Research	3
MBCG 714	Business Communication	3	MBCQ 729	Marketing Research	3
MBCF 767	Accounting for Managers	4	MBCH 732	Human Resource Management	3
MBCE 707	Economics & Management Decisions	3	MBCE 702	Econometrics	3
MBCM 771	Marketing Management	3	MBCF 765	Financial Management	4
MBCQ 727	Applied Statistics	3	Domain Course		
Domain Course			MBBA 803	Big Data Analytics + NoSQL Lab	4
MBBA 816	Data Analytics Lab	3	MBBA 814	Data Cleaning, Normalization & Data Mining	4
MBBA 821	Spreadsheet Modeling and Analysis	4	MBBA 843	Applied Business Intelligence	3
MBCQ 728	Applied Statistics Lab	2		Program Elective I	3
MBBA 832	Database and Query Languages	3		Open Elective I	2
PRACTICAL			PRACTICAL		
			MBBA 851	Industrial Visit	1
TOTAL		31	TOTAL		33
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCG 757	Strategic Management	3	MBCG 756	Enterprise Risk Management	3
			MBIS 713	Legal Aspects of Business	3
Domain Course			Domain Course		
MBBA 815	Data Visualization	4	MBBA 845	Business Analytics Project	3
MBBA 805	Applied Big Data Analytics	3			

MBBA 863	Marketing and Retail Analytics	3			
MBBA 864	Financial Risk and Fraud Analytics	2			
	Open Elective II	2			
	Program Elective II	3			
MBBA 825	Social & Web Analytics	3			
PRACTICAL			PRACTICAL		
MBBA 852	Summer Internship	2	MBBA 854	Dissertation-II	6
MBBA 853	Dissertation-I	2			
TOTAL		27	TOTAL		15
Program Electives I, II					
MBBA 871	Business Process Management	Sem II			
MBBA 818	Data Security	Sem II			
MBBA 865	Supply Chain Analytics	Sem III			
MBBA 844	Project Management	Sem III			
Total Credits of MBA Business Analytics 2015					106

MBA (ENERGY TRADING) -w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCE 703	Managerial Economics	3	MBCE 702	Econometrics	3
MBCM 771	Marketing Management	3	MBCH 732	Human Resource Management	3
MBCG 714	Business Communication	3	MBCG 745	Trade Procedures And Documentation	3
MBCQ 721	Quantitative Techniques	3	MBCQ 723	Research Methodology & App. Statistics	3
MBCH 731	Organizational Behavior	3			
Domain Course			Domain Course		
MDSE 811	Overview Of Maritime Logistics	4	MDSE 836	Energy Trading I (Oil & Gas Market)	4
MDSE 806	Understanding Energy Value Chain – 1 (Oil & Gas)	3	MBEF 916	Energy Derivatives & Risk Management I	3
MDSE 807	Understanding Energy Value Chain Ii (Power & Coal)	3	Domain Tailored Course		
Domain Tailored Course			MBEF 921	Financial Management In Energy Sector	4
MDEI 902	IT Applications In Energy Sector	3		Program Elective I	3
MBEF 915	Energy Industry Accounting	4		Open Elective I	2
PRACTICAL			PRACTICAL		
			MDSE 838	Energy Trading Lab I	2
			MDSE 851	Industrial Visit	1
	TOTAL	32		TOTAL	31
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCF 761	International Finance Management	3	Domain Course		
MBCG 747	Strategic Management	3	MDSO 843	Oil Equity Acquisition & Asset Allocation	4
Domain Course					
MDSE 841	Energy Law & Policy I	4			
MDSE 843	Energy Contracting & Negotiations	4			
MDSE 837	Energy Trading II (Power & Emissions)	4			

MDSE 824	Energy Economics (Petro & Power)	3			
Domain Tailored Course					
MBEF 917	Energy Derivatives & Risk Management II	2			
	Program Elective II	3			
	Open Elective II	2			
PRACTICAL			PRACTICAL		
MDSE 852	Summer Internship	2	MDSE 854	Dissertation II	6
MDSE 853	Dissertation- I	2			
MDSE 835	Energy Trading Lab II	2			
	TOTAL	34		TOTAL	10
	Program Electives I			Program Electives II	
MBEF 933	HSE Challenges In Energy Sector		MDSO 823	Refinery Financial Economics	
MBCQ 722	Operations & Material Management		MBCQ 748	Comparative International Management	
MDSO 861	Energy & Utilities		MDSE 845	Energy Law & Policy	
Total Credits of MBA Energy Trading 2015					107

MBA (INFRASTRUCTURE MANAGEMENT) -w.e.f. 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCQ 721	Quantitative Techniques	3	MBCQ 722	Operations & Materials Management	3
MBCG 714	Business Communication	3		Open Elective I	2
MBCM 771	Marketing Management	3	MBCQ 723	Research Methodology and App. Statistics	3
MBCH 731	Organizational Behavior	3	MBCH 732	Human Resource Management	3
Domain Course			MBCQ 724	Project Mgmt. & Contract Administration	3
MDSI 806	Basics of Reality & Construction Management	3	Domain Course		
MDSI 816	Infrastructure Sector Understanding & Planning	4	MDSI 821	Urban Infrastructure Mgmt & Regulation	4
MDSI 881	Sector Study I- Energy Sector	3		Program Elective I	3
Domain Tailored Course			MDSI 812	Transport Economics & Mgmt.	3
MBII 902	IT Applications in Infrastructure Sector	3	MBII 912	Financial Management in Infrastructure Industry	4
MBII 941	Infrastructure Economics	3			
MBII 911	Accounting in Infrastructure Sector	4			
PRACTICAL			PRACTICAL		
			MDSI 851	Industrial Visit	1
			MBCQ 726	Project Management Lab	1
TOTAL		32	TOTAL		30
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCG 747	Strategic Management	3	Domain Course		
	Program Elective II	3	MDSI 884	Sector Study-4 (Telecom, Tourism & other Soft Infra)	3
Domain Course			MDSI 810	Infrastructure for Rural & Social Sector & E Governance	3

MDSI 817	Land Acquisition, R&R, CSR and Sustainability Management	3	MDSI 825	Infrastructure Law & Policy	3
MDSI 826	Concessionaire Agreements	3	Domain Tailored Course		
MDSI 883	Sector Study-III (Infra Management-Utilities)	3	MBII 932	HSE for Infrastructure Industry	3
MDSI 862	Township Planning for Smart City	3			
MDSI 863	Metro and High Speed Railway Planning & management	3			
MBIF 913	Financing Infrastructure Sector Projects	4			
	Open Elective II	2			
PRACTICAL			PRACTICAL		
MDSI 852	Summer Internship	2	MDSI 854	Dissertation II	6
MDSI 853	Dissertation- I	2			
	TOTAL	31		TOTAL	18
	Program Electives I, II				
MDSI 882	Sector Study II (Aviation, Port and Shipping Management)				
MBCE 702	Econometrics				
MBCF 771	Risk Management & Insurance				
MDSI 842	Non Conventional Methods of Infrastructure Creations				
Total Credits of MBA Infrastructure Management 2015					111

MBA (INTERNATIONAL BUSINESS)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCE 701	Economics & Management Decisions	3	MBCQ 723	Research Methodology and App Statistics	3
MBCQ 721	Quantitative Technique	3	MBCH 732	Human Resource Management	3
MBCG 714	Business Communication	3	MBCF 765	Financial Management	4
MBCH 731	Organizational Behavior	3	Domain Tailored Course		
MBCM 771	Marketing Management	3	MBCE 704	Indian Economy & Trade Policies	4
MBCI 752	IT for Managers	4	MBCE 705	Global Economic Environment	4
MBCF 764	Financial Accounting	4	MBCG 812	International Trade operations & Documentation	4
			MBCG 753	International Logistics & Supply Chain Management	3
				Program Elective I	3
				Open Elective I	2
PRACTICAL			PRACTICAL		
			MBCG 851	Industrial Visits	1
	TOTAL	23		TOTAL	31
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCE 702	Econometrics	3	Domain Course		
Domain Course			MBCH 734	Cross Cultural Management	3
MBCF 760	International Finance Management	3	MBCG 802	International Business Negotiations	3
MBCM 774	International Marketing Management	4	MBCG 821	Mergers, Acquisition, Corporate Regulation	3
MBCG 811	Commodity Trading & Price Risk Management	4	MBCG801	International Business Strategy	4
MBCG 815	WTO & its impact on International Business	3	MBCG 742	International Business Management	3
Domain Tailored Course					
MBCI 753	E- Business & E Commerce	4			
	Program Elective II	3			
	Open Elective II	2			

PRACTICAL			PRACTICAL		
MBCG 852	Summer Internship	2	MBCG 854	Dissertation II	6
MBCG 853	Dissertation I	2			
	TOTAL	30		TOTAL	22
	Program Electives I, II				
MBCF 769	Foreign Investment & Trade				
MBCE 709	Economics of Micro, Small and Medium Scales Industries				
MBCE 710	Economics of Regional Trading Blocks				
MBCM 762	International Buying and Merchandising				
Total Credits of MBA International Business 2015					10 6

MBA (LOGISTICS & SUPPLY CHAIN MANAGEMENT)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCE 701	Economics & Management Decisions	3	MBCQ 723	Research Methodology and App. Statistics	3
MBCQ 721	Quantitative Techniques	3	MBCH 732	Human Resource Management	3
MBCH 731	Organizational Behavior	3	MBCM 771	Marketing Management	3
MBCG 714	Business Communication	3	Domain Course		
MBCQ 722	Operations & Materials Management	3	MDSL 835	Logistics Planning & Strategy	3
Domain Course			MDSL 807	Lean Supply Chain Management	3
MDSL 805	Introduction to Logistics & Supply Chain Management	4	MDSL 806	Retail Supply Chain Management	3
MBLF 911	Accounting in Logistics & Supply Chain Sector	4	Domain Tailored Course		
			MBLF 912	Financial Management in Supply Chain Industry	4
MBLI 902	IT Application in Supply Chain Management	3		Program Elective I	3
				Open Elective I	2
PRACTICAL			PRACTICAL		
			MDSL 851	Industrial Visits	1
TOTAL		26	TOTAL		28
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCG 747	Strategic Management	3	MDSL 823	Supply Chain Modeling, Design & Simulation	4
MBCQ 724	Project Mgmt. & Contract Administration	3	MDSL 813	Legal Issues in Supply Chain Sector	3
MBCG 759	Business Process Re-Engineering	3	MBCM 772	Customer Relationship Management	3
MBCE 702	Econometrics	3			
Domain Course			Domain Tailored Course		
MDSL 834	Global Supply Chain & Logistics Mgmt	4			
MDSL 837	Multi Modal Transportation	4			
MDSL 825	Supplier Relationship Management	3			
	Program Elective II	3			

	Open Elective II	2			
PRACTICAL			PRACTICAL		
MDSL 852	Summer Internship	2	MDSL 854	Dissertation II	6
MDSL 853	Dissertation- I	2			
TOTAL		32	TOTAL		16
Program Electives I, II					
MDSL 841	Manufacturing Logistics	Se m II			
MDSL 836	Strategic Sourcing	Se m II			
MBCF 770	Business Continuity & Risk Management	Se m III			
MBCG 746	Total Quality Management	Se m III			
Total Credits of MBA Logistics & Supply Chain Management 2015					10 2

MBA (OIL & GAS MANAGEMENT)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCE 701	Economics & Management Decisions	3	MBCM 771	Marketing Management	3
MBCQ721	Quantitative Techniques	3	MBCQ 723	Research Methodology And App. Statistics	3
MBCG 714	Business Communication	3	MBCH 732	Human Resource Mgmt	3
MBCH 731	Organizational Behavior	3	Domain Course		
MBCQ 722	Operations & Materials Management	3	MDSO 803	Understanding Of Natural Gas Business	4
Domain Course			MDSO 804	Fundamental Of Refining	4
MDSO 801	Fundamentals Of Oil & Gas Business	4	Domain Tailored Course		
MDSO 802	Fundamentals Of Petroleum Exploration	4	MBOF 912	Petroleum Financial Management	4
Domain Tailored Course			MBOP 922	Supply Chain & Logistics For Petroleum Industry	3
MBOI 902	IT Application In Petroleum Sector	3		Program Elective I	3
MBOF 911	Petroleum Industry Accounting	4		Open Elective I	2
PRACTICAL			PRACTICAL		
			MDSO 851	Industrial Visit	1
TOTAL		30	TOTAL		30
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCQ 724	Project Mgmt. & Contract Administration	3	MBCI 751	E- Enterprise Management	3
MBCG 742	International Business Management	3	Domain Tailored Course		
MBCG 747	Strategic Management	3	MBOG 932	HSE for Petroleum Sector	3
MBCE 702	Econometrics	3			
Domain Course					
MDSO 831	Pol: Retailing	4			
MDSO 822	Petro Economics	3			

Domain Tailored Course					
MBOF 913	Financing Petroleum Sector Projects	4			
	Program Elective II	3			
	Open Elective II	2			
PRACTICAL			PRACTICAL		
MDSO 852	Summer Internship	2	MDSO 854	Dissertation II	6
MDSO 853	Dissertation- I	2			
	TOTAL	32		TOTAL	12
	Program Elective I			Program Elective II	
MBOI 903	Advanced It Applications For Oil & Gas Industry		MDSO 832	Advanced Petroleum Marketing	
MDSO 813	Oil & Gas Law & Policy		MDSO 823	Refinery Financial Economics	
MDSO 861	Energy & Utilities		MDSO 807	Understanding Petrochemical Business	
Total Credits of MBA Oil & Gas Management 2015					104

MBA (OPEN ELECTIVES)-w.e.f. 2015

MBA OPEN ELECTIVES			
Accounts & Finance			
Code	Subject Name	Credit	Semester
MBCF 768	Financial Institutions & Markets	2	II
MBCF 772	Security Analysis & Portfolio Management	2	III
Department of HR/OB			
Code	Subject Name	Credit	Semester
MBCH 735	INDUSTRIAL PSYCHOLOGY	2	II
MBCG 711	NEGOTIATION SKILLS	2	II
MBCH 736	—POLITICAL BEHAVIOUR & IMPRESSION MANAGEMENT	2	II
MBCH 737	INTERPERSONAL CRISIS MANAGEMENT	2	III
MBCG 701	LEADERSHIP THROUGH LITERATURE	2	III
MBCH 738	—INDUSTRIAL RELATIONS	2	III
Department of Marketing			
Code	Subject Name	Credit	Semester
MBCM 778	Services Marketing	2	II
MBCM 761	Integrated Marketing Communication	2	II
MBCM 781	Digital Marketing	2	III
MBCM 782	Consumer Behavior & Market Research	2	III
Department of QT/RM			
Code	Subject Name	Credit	Semester
MBBA 823	Excel Modeling	2	II
MBBA 824	SAP	2	II
MBBA 819	Business Analytics	2	III
Strategy Management			
Code	Subject Name	Credit	Semester
MBCG 761	Strategic Management Consulting	2	III

MBCG 758	Strategies for Sustainable Business	2	II
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MBA (PORT & SHIPPING MANAGEMENT)-w.e.f 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCE 701	Economics & Management Decisions	3	MBCQ 722	Operations & Materials Management	3
MBCQ 721	Quantitative Techniques	3	MBCM 771	Marketing Management	3
MBCG 714	Business Communication	3	MBCQ 723	Research Methodology and App Statistics	3
MBCH 731	Organizational Behavior	3	MBCH 732	Human Resource Management	3
Domain Course			Domain Course		
MDSS 810	Port & Terminal Management	3	MDSS 815	Maritime Economics	3
MDSS 841	International Maritime Transport	3	MDSS 832	Liner & Multimodal Transport Management	4
Domain Tailored Course			MDSS 809	Ship Brokering & Chartering	4
MBSI 903	IT Applications in Port & Shipping	3	Domain Tailored Course		
MBSF 911	Port & Shipping Industry Accounting	4	MBSF 912	Port & Shipping Financial Management	4
				Program Elective I	3
				Open Elective I	2
PRACTICAL			PRACTICAL		
			MDSS 851	Industrial Visit	1
TOTAL		25	TOTAL		33
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCM 757	Strategic Management	3	MBCM 772	Customer Relationship Management	3
MBCE 702	Econometrics	3	Domain Course		
Domain Course			MDSS 824	Marine Insurance and Law	3
MDSS 808	Port Planning	4			
MDSS 817	Ship Agency Management	3			
MDSS 833	Bunkering Management	2			
MDSS 852	Summer Internship	2			
	Open Elective II	2			
	Program Elective II	3			

PRACTICAL			PRACTICAL		
MDSS 853	Dissertation I	2	MDSS 854	Dissertation – II	6
TOTAL		24	TOTAL		12
Program Electives I, II					
MBSG 944	Maritime HSE Management				
MBSM 932	Marketing Of Shipping Services				
Mbsp 922	Supply Chain & Logistics For Port & Ship				
MBSI 904	Maritime Enterprise Management				
Total Credits of MBA Port & Shipping Management 2015					94

MBA (POWER MANAGEMENT)-w.e.f. 2015

SEMESTER I			SEMESTER II		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MEDE 803	Power Economics	3	MBCQ 722	Operations & Materials Management	3
MBCG 714	Business Communication	3	MBCQ 723	Research Methodology and App. Statistics	3
MBCH 731	Organizational Behavior	3	MBCH 732	Human Resource Management	3
MBCM 771	Marketing Management	3	MBCQ 724	Project Mgmt. & Contract Administration	3
MBCQ 721	Quantative Techniques	3			
Domain Course					
MDSP 806	Power Generation & PSM	3	Domain Course		
MDSP 861	Fuel Resources & Technology & Mgt.	3	MDSP 843	Energy Power Trading & Network Administration	4
MDSP 813	Power Sector Structure & Functioning	3		Program Elective I	3
MDSP 807	Power Transmission & Distribution	3	MDSP 824	Regulatory Framework in Power Sector	3
Domain Tailored Course			MDSP 826	Solar Energy-Economics, Technologies & Regulation	3
MBPI 902	IT Applications in Power Sector	3	Domain Tailored Course		
MBPF 911	Power Industry Accounting	4	MBPF 912	Power Financial Management	4
				Open Elective I	2
PRACTICAL			PRACTICAL		
			MDSP 851	Industrial Visits	1
			MBCQ 726	Project Management Lab	1
TOTAL		34	TOTAL		32
SEMESTER III			SEMESTER IV		
Subject Code	Subject	Credits	Subject Code	Subject	Credits
MBCG 747	Strategic Management	3	Domain Course		
	Program Elective II	3	MDSP 825	Energy Law & Policy	3
Domain Course			MDSP 865	Integrated Power Resources Management	3
MDSP 872	Wind & Alternative sources of Energy	3	MDSP 842	Global Power Business	3

MDSP 814	Power Pricing & Purchase Agreements	3	Domain Tailored Course		
MDSP 823	Energy Conservation & Audit.	3	MBPG 932	HSE for Power Industry	3
Domain Tailored Course					
MBPP 922	Supply Chain & Logistics for Power Industry	3			
MBPF 913	Financing Energy Sector Projects	4			
	Open Elective II	2			
PRACTICAL			PRACTICAL		
MDSP 852	Summer Internship	2	MDSP 854	Dissertation II	6
MDSP 853	Dissertation I	2			
	TOTAL	28		TOTAL	18
	Program Electives I, II				
MDSP 862	Hydro & Nuclear Power Resources management				
MDSP 864	Distribution Automation and Smart Grid				
MBCE 702	Econometrics				
MBCF 771	Risk Management & Insurance				
Total Credits of MBA Power Management 2015					11 2