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GNIOT
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1.3.1

Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability in transacting the Curriculum

Greater Noida Institute of Technology (Engg. Institute)

Plot No. 7, Knowledge Park II, Greater Noida
Uttar Pradesh 201310 India

GNIOT ENGG. INSTITUTE
Plot No. 7,Knowledge Park II, Greater Noida
Uttar Pradesh (India) 201310
www.gniot.net.in

Criteria – 1

Key indicator – 1.3.1

Institution integrates crosscutting issues relevant to Professional Ethics, Gender Equality, Human Values, Environment and Sustainability in transacting the Curriculum

Session 2017-2018

INDEX

Courses which address the Environment and Sustainability, Gender Equality, Human Values, Professional Ethics, into the Curriculum

Session 2017-2018

Sl. No	Year	Semester	Subject Code	Subject Name	Category
1	SECOND	3rd / 4th	RVE301/ RVE401	Universal Human Values & Professional Ethics	Human Values
2	SECOND (MBA)	3rd	RVE301	Universal Human Values & Professional Ethics	Human Values
3	FIRST (MCA)	2nd	RHU001	Universal Human Values & Professional Ethics	Human Values
4	SECOND	3rd / 4th	RAS302 /RAS402	Environment & Ecology	Environment and Sustainability
5	THIRD (CE)	5th	NCE-503	Environmental Engineering-1	Environment and Sustainability
6	THIRD (CE)	6th	NCE-503	Environmental Engineering-2	Environment and Sustainability
7	FOURTH (CE)	7th	NCE-033	Environmental Geotechnology	Environment and Sustainability
8	FOURTH (CE)	7th	NCE-034	Industrial Pollution Controll & Environmental Audit	Environment and Sustainability
9	FOURTH	8th	NOE-081	Non Conventional Energy Resources	Environment and Sustainability
10	FIRST (MBA)	1st	RMB105	Organisational Behaviour	Professional Ethics
11	FIRST (MBA)	1st	RMB107	Business Communication	Professional Ethics
12	THIRD	5th	NHU501	Engineering Economics	Professional Ethics
13	THIRD	6th	NHU601	Industrial Management	Professional Ethics

Greater Noida Institute of Technology (Engg. Inst.) Director Greater Noida

Session 2017-2018
Session 2018-2019

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Study & Evaluation Scheme with Syllabus

For

B.Tech. Second Year

(Computer Science and Engineering, Computer Engg. & Information Technology)

On

Choice Based Credit System

(Effective from the Session: 2017-18)

2nd Year III-SEMESTER

S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	RAS301/ ROE030, 032 to 037, 039	Mathematics-III/ Science Based OE	3-1-0	70	20	10	100	4
2.	RVE301/ RAS302	Universal Human Values & Professional Ethics / Environment & Ecology	3-0-0	70	20	10	100	3
3.	REC301	Digital Logic Design	3-0-0	70	20	10	100	3
4.	RCS301	Discrete Structures & Theory of Logic	3-0-0	70	20	10	100	3
5.	RCS302	Computer Organization and Architecture	3-0-0	70	20	10	100	3
6.	RCS305	Data Structures	3-1-0	70	20	10	100	4
7.	REC351	Digital Logic Design Lab	0-0-2	50	30	20	100	1
8.	RCS351	Discrete Structure & Logic Lab	0-0-2	50	30	20	100	1
9.	RCS352	Computer Organization Lab	0-0-2	50	30	20	100	1
10.	RCS355	Data Structures Using C/ Java Lab	0-0-2	50	30	20	100	1
11.	RME101*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE151*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
TOTAL							**1000**	**24**

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Science Based Open Electives:

a. ROE030/040 Manufacturing Process
b. ROE032/042 Nano Science
c. ROE033/043 Laser System and Application
d. ROE034/044 Space Science
e. ROE035/045 Polymer Science & Technology
f. ROE036/046 Nuclear Science
g. ROE037/047 Material Science
h. ROE039/049 Applied Linear Algebra

2nd Year IV-SEMESTER

S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	ROE040, 042 to 047, 049/ RAS401	Science Based OE/ Mathematics-III	3-1-0	70	20	10	100	4
2.	RAS402/ RVE401	Environment & Ecology/ Universal Human Values & Professional Ethics	3-0-0	70	20	10	100	3
3.	REC405	Introduction to Microprocessor	3-0-0	70	20	10	100	3
4.	RCS401	Operating Systems	3-0-0	70	20	10	100	3
5.	RCS402	Software Engineering	3-0-0	70	20	10	100	3
6.	RCS403	Theory of Automata and Formal Languages	3-1-0	70	20	10	100	4
7.	RCS451	Operating Systems Lab	0-0-2	50	30	20	100	1
8.	RCS452	Software Engineering Lab	0-0-2	50	30	20	100	1
9.	RCS453	TAFL Lab	0-0-2	50	30	20	100	1
10.	RCS454	Python Language Programming Lab	0-0-2	50	30	20	100	1
11.	RME201*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE251*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
TOTAL							**1000**	**24**

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Science Based Open Electives:

a. ROE030/040 Manufacturing Process
b. ROE032/042 Nano Science
c. ROE033/043 Laser System and Application
d. ROE034/044 Space Science
e. ROE035/045 Polymer Science & Technology
f. ROE036/046 Nuclear Science
g. ROE037/047 Material Science
h. ROE039/049 Applied Linear Algebra

Session 2017-2018

UTTAR PRADESH TECHNICAL UNIVERSITY
LUCKNOW

SYLLABUS

Bachelor of Computer Science & Engineering
&
Bachelor of Computer Science & Information Technology

3rd Year (V & VI Semester)

(Effective from Session: 2015-2016)

U.P. TECHNICAL UNIVERSITY, LUCKNOW

STUDY EVALUATION SCHEME

B. TECH. COMPUTER SCIENCE & ENGINEERING

&

B. TECH. COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

YEAR THIRD, SEMESTER –V

(Effective from the session: 2015-16)

S. No.	Course Code	Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Exam			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NCS 501	Design and Analysis of Algorithm	3	1	0	30	20	50	100	150	4
2	NCS 502	Database Management System	3	1	0	30	20	50	100	150	4
3	NCS 503	Principle of Programming Language	3	1	0	30	20	50	100	150	4
4	NCS 504	Web Technology	3	1	0	30	20	50	100	150	4
5	NCS 505	Computer Architecture	2	1	0	15	10	25	50	75	3
6	NHU5 01	Engineering Economics	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NCS 551	Design and Analysis of Algorithm Lab	0	0	3	10	10	20	30	50	1
8	NCS 552	DBMS Lab	0	0	3	10	10	20	30	50	1
9	NCS 553	Principle of Programming Language	0	0	2	10	10	20	30	50	1
10	NCS 554	Web Technology Lab	0	0	2	10	10	20	30	50	1
11	NGP 501	GP						50		50	
		TOTAL	16	5	10					1000	25

STUDY EVALUATION SCHEME

B. TECH. COMPUTER SCIENCE & ENGINEERING
&
B. TECH. COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

YEAR THIRD, SEMESTER –VI

(Effective from the session : 2015-16)

S. No.	Course Code	Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Exam			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NCS 601	Computer Networks	3	1	0	30	20	50	100	150	4
2	NCS 602	Software Engineering	3	1	0	30	20	50	100	150	4
3	NCS 603	Compiler Design	3	1	0	30	20	50	100	150	4
4		Departmental Elective-I	3	1	0	30	20	50	100	150	4
5		Departmental Elective-II	2	1	0	15	10	25	50	75	3
6	NHU 601	Industrial Management	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NCS 651	Computer Networks Lab	0	0	3	10	10	20	30	50	1
8	NCS 652	Software Engineering Lab	0	0	3	10	10	20	30	50	1
9	NCS 653	Compiler Design Lab	0	0	2	10	10	20	30	50	1
10	NCS 654	SEMINAR	0	0	2		50	50		50	1
11	NGP 601	GP						50		50	
		TOTAL	16	5	10					1000	25

Departmental Elective-I

1. NCS 061: Computational Geometry
2. NCS 062: Complexity Theory
3. NCS 063: Parallel Algorithm
4. NCS 064: Approximation & Randomized Algorithm
5. NCS 065: Concurrent System

Departmental Elective-II

1. NCS 066: Data Warehousing & Data Mining
2. NCS 067: Distributed Database
3. NCS 068: E-Commerce
4. NCS 069: Advance DBMS
5. NCS 070: Human Computer Interface

Session 2017-2018
Session 2018-2019

Dr.A.P.J.Abdulkalam Technical University, UttarPardesh,Lucknow

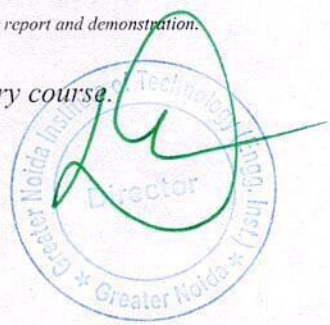
(Formerly Uttar Pradesh Technical University)

STUDY EVALUATION SCHEME
B. TECH. COMPUTER SCIENCE & ENGINEERING
YEAR forth, SEMESTER –VII
(Effective from the session: 2016-17)

S.No.	Subject Code	Subject	Period	Evaluation Scheme				Total	Credit
				Sessional			Exam		
				CT	TA	Total			
1		**Open Elective I**	3-1-0	30	20	50	100	150	4
2	NCS-701	Distributed System	3-1-0	30	20	50	100	150	4
3	NCS-702	Artificial Intelligence	3-1-0	30	20	50	100	150	4
4		**Departmental Elective III**	3-1-0	30	20	50	100	150	4
5		**Departmental Elective IV**	3-1-0	30	20	50	100	150	4
Practical / Training /Projects									
6	NCS-751	Distributed System *	0-0-2	-	20	20	30	50	1
7	NCS-752	Project	0-0-6	-	100	100	-	100	3
8	NCS-753	Industrial Training	0-0-2	-	50	50	-	50	1
9	GP-701	General Proficiency	-	-	-	-	-	50	
		Total	15-5-10					1000	25

1. *Practical Training done after 6th Semester would be evaluated in 7th semester through Report and Viva-voce.*
2. *Project has to be initiated in 7th semester beginning and completed by the end of 8th semester with proper report and demonstration.*

** At least 10 problems are to be considered based on corresponding theory course.*



Dr.A.P.J.Abdul kalam Technical University,UttarPardesh,Lucknow

(Formerly Uttar Pradesh Technical University)

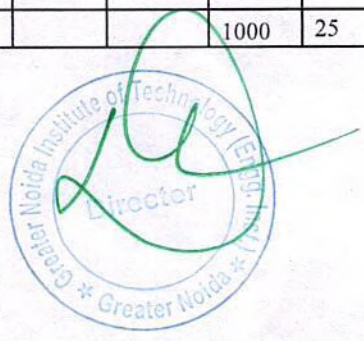
STUDY EVALUATION SCHEME

B. TECH. COMPUTER SCIENCE & ENGINEERING

YEAR forth, SEMESTER –VIII

(Effective from the session: 2016-17)

SNo	Subject Code	Subject	Period	Evaluation Scheme				Total	Credit
				Sessional			Exam		
				CT	TA	Total			
1		**Open Elective II**	3-1-0	30	20	50	100	150	4
2	NCS-801	Digital Image Processing	3-1-0	30	20	50	100	150	4
3		**Departmental Elective V**	3-1-0	30	20	50	100	150	4
4		**Departmental Elective VI**	3-1-0	30	20	50	100	150	4
Practical's / Training /Projects									
5	NCS-851	Seminar	0-0-3	-	50	50	-	50	2
6	NCS-852	Project	0-0-12	-	100	100	200	300	7
7	GP-801	General Proficiency	-	-	-	-	-	50	
		Total	12-4-15					1000	25



Open Elective I

1. NOE-071 Entrepreneurship Development
2. NOE-072 Quality Management
3. NOE-073 Operations Research
4. NOE-074 Introduction to Bio Technology
5. NOE-075 Mobile Application Development
6. NOE-076 Ethical Hacking and Prevention
7. NOE-077 Software Project Management

Open Elective II

1. NOE-081 Non Conventional Energy Resources
2. NOE-082 Non Linear Dynamics Systems
3. NOE-083 Product Development
4. NOE-084 Automation and Robotics

Departmental Elective III

1. NCS-071 Software Testing and Audit
2. NCS-072 Neural Network
3. NCS-073 Computer Vision

Departmental Elective IV

1. NCS-07 4 High Speed Network
2. NCS-075 Android Operating System
3. NCS-076 Service Oriented Architecture
4. NIT-701 Cryptographic & Network Security

Departmental Elective V

1. NCS-080 Pattern Recognition
2. NCS-081 High Performance Computing
3. NCS-082 Real Time System
4. NCS-083 Cluster Computing
5. NCS-084 Grid Computing

Departmental Elective VI

1. NCS-085 Data Compression
2. NCS-086 Quantum Computing
3. NCS-087 Embedded Systems
4. NCS-088 Semantic Web and Web Services

2017-18

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Study & Evaluation Scheme with Syllabus

For

B.Tech. Second Year

Information Technology

On

Choice Based Credit System

(Effective from the Session: 2017-18)

2017-18

2nd Year III-SEMESTER

S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	RAS301/ ROE030, 032 to 037, 039	Mathematics-III/ Science Based OE	3-1-0	70	20	10	100	4
2.	RVE301/ RAS302	Universal Human Values & Professional Ethics / Environment & Ecology	3-0-0	70	20	10	100	3
3.	REC301	Digital Logic Design	3-0-0	70	20	10	100	3
4.	RCS301	Discrete Structures & Theory of Logic	3-0-0	70	20	10	100	3
5.	RCS302	Computer Organization and Architecture	3-0-0	70	20	10	100	3
6.	RCS305	Data Structures	3-1-0	70	20	10	100	4
7.	REC351	Digital Logic Design Lab	0-0-2	50	30	20	100	1
8.	RCS351	Discrete Structure & Logic Lab	0-0-2	50	30	20	100	1
9.	RCS352	Computer Organization Lab	0-0-2	50	30	20	100	1
10.	RCS355	Data Structures Using C/ Java Lab	0-0-2	50	30	20	100	1
11.	RME101*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE151*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
TOTAL							**1000**	**24**

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b. ROE032/042 Nano Science
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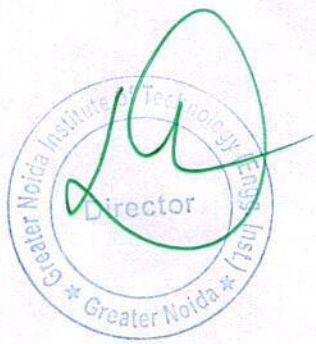
d. ROE034/044 Space Science
e. ROE035/045 Polymer Science & Technology
f. ROE036/046 Nuclear Science
g. ROE037/047 Material Science
h. ROE039/049 Applied Linear Algebra



2017-18

2nd Year IV-SEMESTER

S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	ROE040, 042 to 047, 049/ RAS401	Science Based OE/ Mathematics-III	3-1-0	70	20	10	100	4
2.	RAS402/ RVE401	Environment & Ecology/ Universal Human Values & Professional Ethics	3-0-0	70	20	10	100	3
3.	REC406	Information Theory and Coding	3-0-0	70	20	10	100	3
4.	RCS401	Operating Systems	3-0-0	70	20	10	100	3
5.	RCS402	Software Engineering	3-0-0	70	20	10	100	3
6.	RCS403	Theory of Automata and Formal Languages	3-1-0	70	20	10	100	4
7.	RCS451	Operating Systems Lab	0-0-2	50	30	20	100	1
8.	RCS452	Software Engineering Lab	0-0-2	50	30	20	100	1
9.	RCS453	TAFL Lab	0-0-2	50	30	20	100	1
10.	RCS454	Python Language Programming Lab	0-0-2	50	30	20	100	1
11.	RME201*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE251*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
	TOTAL						**1000**	**24**

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

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b. ROE032/042 Nano Science
c. ROE033/043 Laser System and Application
d. ROE034/044 Space Science
e. ROE035/045 Polymer Science & Technology
f. ROE036/046 Nuclear Science
g. ROE037/047 Material Science
h. ROE039/049 Applied Linear Algebra

2017-18

UTTAR PRADESH TECHNICAL UNIVERSITY
LUCKNOW

SYLLABUS

Bachelor of Information Technology

3rd Year (V & VI Semester)

(Effective from Session 2015-2016)

Director

2017-18

U.P. TECHNICAL UNIVERSITY, LUCKNOW

STUDY EVALUATION SCHEME

B. TECH. INFORMATION TECHNOLOGY

YEAR THIRD, SEMESTER –V

(Effective from the session : 2015-16)

S. No.	Course Code	Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Exam			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NCS 501	Design and Analysis of Algorithm	3	1	0	30	20	50	100	150	4
2	NCS 502	Database Management System	3	1	0	30	20	50	100	150	4
3	NCS 503	Principle of Programming Language	3	1	0	30	20	50	100	150	4
4	NCS 504	Web Technology	3	1	0	30	20	50	100	150	4
5	NIT 501	Management Information System	2	1	0	15	10	25	50	75	3
6	NHU 501	Engineering Economics	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NCS 551	Design and Analysis of Algorithm Lab	0	0	3	10	10	20	30	50	1
8	NCS 552	DBMS Lab	0	0	3	10	10	20	30	50	1
9	NCS 553	Principle of Programming Language Lab	0	0	2	10	10	20	30	50	1
10	NCS 554	Web Technology Lab	0	0	2	10	10	20	30	50	1
11	NGP 501	GP						50		50	
		TOTAL	16	5	10					1000	25

2017-18

U.P. TECHNICAL UNIVERSITY, LUCKNOW

STUDY EVALUATION SCHEME

B. TECH. INFORMATION TECHNOLOGY

YEAR THIRD, SEMESTER –VI

(Effective from the session : 2015-16)

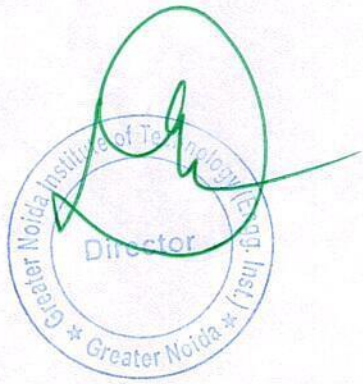
S. No.	Course Code	Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Exam			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NCS 601	Computer Networks	3	1	0	30	20	50	100	150	4
2	NCS 602	Software Engineering	3	1	0	30	20	50	100	150	4
3	NCS 603	Compiler Design	3	1	0	30	20	50	100	150	4
4		Departmental Elective-I	3	1	0	30	20	50	100	150	4
5		Departmental Elective-II	2	1	0	15	10	25	50	75	3
6	NHU 601	Industrial Management	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NCS 651	Computer Networks Lab	0	0	3	10	10	20	30	50	1
8	NCS 652	Software Engineering Lab	0	0	3	10	10	20	30	50	1
9	NCS 653	Compiler Design Lab	0	0	2	10	10	20	30	50	1
10	NIT 654	SEMINAR	0	0	2		50	50		50	1
11	NGP 601	GP						50		50	
		TOTAL	16	5	10					1000	25

Departmental Elective-I

1. NIT 061: Information Retrieval and Management
2. NIT 062: Modeling & Simulation
3. NIT 063: Bioinformatics
4. NIT 064: Knowledge based & decision Support System
5. NIT 065: Geographic Information System

Departmental Elective-II

1. NCS 066: Data Warehousing & Data Mining
2. NCS 070: Human Computer Interface
3. NIT 066: E-Business Strategies
4. NCS 067: Distributed Database
5. NIT 067: Big Data



2017-18

Dr.A.P.J.Abdul
kalam Technical University,UttarPardesh,Lucknow
(Formerly Uttar Pradesh Technical University)

STUDY EVALUATION SCHEME
INFORMATION TECHNOLOGY
YEAR forth, SEMESTER –VII
(Effective from the session: 2016-17)

S.No.	Subject Code	Subject	Period	Evaluation Scheme				Total	Credit
				Sessional			Exam		
				CT	TA	Total			
1		**Open Elective I**	3-1-0	30	20	50	100	150	4
2	NIT-701	Cryptography & Network Security	3-1-0	30	20	50	100	150	4
3	NCS-702	Artificial Intelligence	3-1-0	30	20	50	100	150	4
4		**Departmental Elective III**	3-1-0	30	20	50	100	150	4
5		**Departmental Elective IV**	3-1-0	30	20	50	100	150	4
Practical / Training /Projects									
6	NIT-751	Cryptography & Network Security*	0-0-2	-	20	20	30	50	1
7	NCS-752	Project	0-0-6	-	100	100	-	100	3
8	NCS-753	Industrial Training	0-0-2	-	50	50	-	50	1
9	GP-701	General Proficiency	-	-	-	-	-	50	
		Total	15-5-10					1000	25

1. *Practical Training done after 6th Semester would be evaluated in 7th semester through Report and Viva-voce.*
2. *Project has to be initiated in 7th semester beginning and completed by the end of 8th semester with proper report and demonstration.*

** At least 10 problems are to be considered based on corresponding theory course.*

Director

2017-18

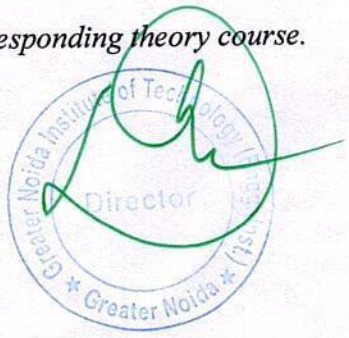
Dr.A.P.J.Abdulkalam Technical University,UttarPardesh,Lucknow

(Formerly Uttar Pradesh Technical University)

STUDY EVALUATION SCHEME
INFORMATION TECHNOLOGY
YEAR forth, SEMESTER –VIII
(Effective from the session: 2016-17)

SNo	Subject Code	Subject	Period	Evaluation Scheme				Total	Credit
				Sessional			Exam		
				CT	TA	Total			
1		**Open Elective II**	3-1-0	30	20	50	100	150	4
2	NIT-801	Mobile Computing	3-1-0	30	20	50	100	150	4
3		**Departmental Elective V**	3-1-0	30	20	50	100	150	4
4		**Departmental Elective VI**	3-1-0	30	20	50	100	150	4
Practicals / Training /Projects									
5	NIT-851	Seminar	0-0-3	-	50	50	-	50	2
6	NCS-852	Project	0-0-12	-	100	100	200	300	7
7	GP-801	General Proficiency	-	-	-	-	-	50	
		Total	12-4-15					1000	25

** At least 10 problems are to be considered based on corresponding theory course.*



2017-18

Open Elective I

NOE-071 Entrepreneurship Development
NOE-072 Quality Management
NOE-073 Operations Research
NOE-074 Introduction to Bio Technology
NOE-075 Mobile Application Development
NOE-076 Ethical Hacking and Prevention
NOE-077 Software Project Management

Open Elective II

1. NOE-081 Non Conventional Energy Resources
2. NOE-082 Non Linear Dynamics Systems
3. NOE-083 Product Development
4. NOE-084 Automation and Robotics

Departmental Elective III

1. NCS-071 Software Testing and Audit
2. NCS-072 Neural Network
3. NIT-071 IT in Forensic Science

Departmental Elective IV

1. NCS-074 High Speed Network
2. NCS-075 Android Operating System
3. NCS-076 Service Oriented Architecture
4. NCS-701 Distributed System
5. NCS-073 Computer Vision

Departmental Elective V

1. NCS-080 Pattern Recognition
2. NCS-082 Real Time System
3. NCS-084 Grid Computing
4. NCS-801 Digital Image Processing
5. NIT-080 Natural Language Processing

Departmental Elective VI

1. NCS-085 Data Compression
2. NCS-087 Embedded Systems
3. NCS-088 Semantic Web and Web Services
4. NIT-081 Software Quality Engineering
5. NIT-082 Software Reliability

Greater Noida Institute of Technology (Engg. Inst.) * Greater Noida * (U.P.)
Director

2017-18

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW

Study & Evaluation Scheme with Syllabus
for
B.Tech. Second Year

Electronics Engineering / Electronics & Communication Engineering / Electronics & Telecommunication Engineering / Electronics & Instrumentation Engineering / Instrumentation & Control Engineering / Applied Electronics & Control Engineering / Biomedical Engineering

On

Choice Based Credit System

(Effective from the Session: 2017-18)

Director

2017-18

2nd Year III-SEMESTER

S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	ROE030 to 039/ RAS301	Science Based Open Elective/ Mathematics-III	3-1-0	70	20	10	100	4
2.	RVE301/ RAS302	Universal Human Values & Professional Ethics/ Environment & Ecology	3-0-0	70	20	10	100	3
3.	REE305	Network Analysis and Synthesis	3-0-0	70	20	10	100	3
4.	REC301	Digital Logic Design	3-0-0	70	20	10	100	3
5.	REC302	Electronic Devices and Circuits	3-1-0	70	20	10	100	4
6.	REC303	Signals & Systems	3-0-0	70	20	10	100	3
7.	REC351	Digital Logic Design Lab	0-0-2	50	30	20	100	1
8.	REC352	Electronic Devices and Circuits Lab	0-0-2	50	30	20	100	1
9.	REC353	Signals & Systems Lab	0-0-2	50	30	20	100	1
10.	REC354	Electronics Workshop & PCB Design Lab	0-0-2	50	30	20	100	1
11.	RME101*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE151*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
Total							1000	24

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Science Based Open Electives:

a. ROE030/ROE040 Manufacturing Process
b. ROE031/ROE041 Introduction to soft computing
c. ROE032/ROE042 Nano Science
d. ROE033/ROE043 Laser System and Application
e. ROE034/ROE044 Space Science
f. ROE035/ROE045 Polymer Science & Technology
g. ROE036/ROE046 Nuclear Science
h. ROE037/ROE047 Material Science
i. ROE038/ROE048 Discrete Mathematics
j. ROE039/ROE049 Applied Linear Algebra

Greater Noida Institute of Technology (132) HOD EC

Greater Noida Institute of Technology (Engg. Inst.) Director Greater Noida

2017-18

2nd Year IV-SEMESTER

S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	RAS401/ ROE040 to 049	Mathematics-III/ Science Based Open Elective	3-1-0	70	20	10	100	4
2.	RAS402/ RVE401	Environment & Ecology/ Universal Human Values & Professional Ethics	3-0-0	70	20	10	100	3
3.	REC401	Microprocessors & Microcontrollers	3-0-0	70	20	10	100	3
4.	REC402	Electromagnetic Field Theory	3-1-0	70	20	10	100	4
5.	REC403	Electronic Measurement & Instrumentation	3-0-0	70	20	10	100	3
6.	RCS406	Data Structure & Algorithms	3-0-0	70	20	10	100	3
7.	REC451	Microprocessors & Microcontrollers Lab	0-0-2	50	30	20	100	1
8.	REC452	Advanced Electronics System Lab	0-0-2	50	30	20	100	1
9.	REC453	Electronic Measurement & Instrumentation Lab	0-0-2	50	30	20	100	1
10.	RCS456	Data Structure & Algorithms Lab	0-0-2	50	30	20	100	1
11.	RME201*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE251*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
Total							1000	24

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Science Based Open Electives:

a. ROE030/ROE040 Manufacturing Process
b. ROE031/ROE041 Introduction to soft computing
c. ROE032/ROE042 Nano Science
d. ROE033/ROE043 Laser System and Application
e. ROE034/ROE044 Space Science
f. ROE035/ROE045 Polymer Science & Technology
g. ROE036/ROE046 Nuclear Science
h. ROE037/ROE047 Material Science
i. ROE038/ROE048 Discrete Mathematics
j. ROE039/ROE049 Applied Linear Algebra

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2017-18

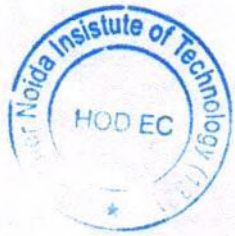
LIST OF ELECTIVES:

Elective – III NEC 03* Departmental Elective III

1. NEC 031 Information Theory & Coding
2. NEC 032 Digital Image Processing
3. NEC 033 Voice Over IP
4. NEC 034 Filter Design
5. NEC 035 Applied Fuzzy Electronic Systems

Elective – IV NEC 04* Departmental Elective IV

1. NEC 041 Electronic Switching
2. NEC 042 Digital System Design using VHDL
3. NEC 043 Speech Processing
4. NEC 044 Advanced Display Technologies & Systems
5. NEC 045 Satellite & RADAR systems



2017-18

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY

UTTAR PRADESH, LUCKNOW

Syllabus

3rd Year

[Effective from Session 2016-17]

1. **B.Tech. Electronics Engineering**
2. **B.Tech. Electronics & Communication Engineering**
3. **B.Tech. Electronics & Telecommunication Engineering**

2017-18

SEMESTER-V

No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECTS											
1	NEC 501R	Integrated Circuits	3	1	0	30	20	50	100	150	4
2	NEC 502	Principles of Communication	3	1	0	30	20	50	100	150	4
3	NEC 503	Microprocessors	3	1	0	30	20	50	100	150	4
4	NIC 501	Control System -I	3	1	0	30	20	50	100	150	4
5	NEC 504	Antenna and Wave Propagation	2	1	0	15	10	25	50	75	3
6	NHU501	Engineering Economics	2	0	0	15	10	25	50	75	2
PRACTICAL/ DESIGN/ DRAWING											
7	NEC 551R	Integrated Circuits Lab	0	0	2	10	10	20	30	50	1
8	NIC 551	Control System Lab	0	0	2	10	10	20	30	50	1
9	NEC 552	Communication Lab - 1	0	0	2	10	10	20	30	50	1
10	NEC 553	Microprocessors Lab	0	0	2	10	10	20	30	50	1
11	NGP 501	GP						50		50	
		TOTAL	16	5	8					1000	25

CT Class Test **AT** Attendance **TA** Tutorial Assignment
ESE End Semester Examination
L/T/P Lecture/ Tutorial/ Practical

Director

Greater Noida Insistute of Technology (132)
HOD EC

2017-18

SEMESTER-VI

No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECTS											
1	NEC 601	Microwave Engineering	3	1	0	30	20	50	100	150	4
2	NEC 602	Digital Communication	3	1	0	30	20	50	100	150	4
3	NEC 603	Integrated Circuit Technology	3	1	0	30	20	50	100	150	4
4	NEC0_	Departmental Elective -I	3	1	0	30	20	50	100	150	4
5	NEC0_	Departmental Elective - II	2	1	0	15	10	25	50	75	3
6	NHU601	Industrial Management	2	0	0	15	10	25	50	75	2
PRACTICAL/ DESIGN/ DRAWING											
7	NEC 651	Antenna and Microwave Lab	0	0	2	10	10	20	30	50	1
8	NEC 652	Communication Lab - II	0	0	2	10	10	20	30	50	1
9	NEC 653	CAD of Electronics Lab	0	0	2	10	10	20	30	50	1
10	NEC 654R	Seminar	0	0	1	10	10	20	-	20	1
11	NEC 655	Microcontrollers for Embedded Systems Lab	0	0	1	6	6	12	18	30	1
12	NGP 601	GP						50		50	
		TOTAL	16	5	8					1000	26

Departmental Elective –I

1. NEC011 Digital Signal Processing
2. NEC 012 Computer Architecture and Organization
3. NEC 013 Artificial Neural Network
4. NEC 014 Advance Semiconductor Devices
5. NEC013R Real Time Systems

Departmental Elective - II

1. NEC 021 Industrial Electronics
2. NEC 022R Microcontroller for Embedded Systems
3. NEC 023 Analog Signal Processing
4. NEC 024R Advance Digital Design using Verilog

Greater Noida Institute of Technology Engg. Inst. Director Greater Noida

Greater Noida Insistute of Technology (132) HOD EC

2017-18

AKTU, LUCKNOW, U.P
Study and Evaluation Scheme B. Tech. in Electronics Engg/Electronics & Communication Engg/Electronics & Telecommunication Engg
[Effective from the session 2016-17]

YEAR 4th, SEMESTER-VII

S. No.	Course Code	SUBJECT	PERIODS			Evaluation Scheme				Subject Total	Credit
						SESSIONAL EXAM.			ESE		
			L	T	P	CT	TA	Total			
THEORY SUBJECTS											
1.	NOE 07*	Open Elective-I**	3	1	0	30	20	50	100	150	4
2.	NEC 03*	Departmental Elective-III	3	1	0	30	20	50	100	150	4
3.	NEC 701	Optical Communication	3	1	0	30	20	50	100	150	4
4.	NEC 702B	Data Communication Networks	3	1	0	30	20	50	100	150	4
5.	NEC 703	VLSI Design	3	1	0	30	20	50	100	150	4
6.	AUC 001	*Human Values & Professional Ethics	2	0	0	15	10	25	50	75	-
PRACTICAL/DESIGN/DRAWING											
7.	NEC 751	Optical Communication & Networking Lab	0	0	2	-	20	20	30	50	1
8.	NEC 752A	Electronics Circuit Design Lab	0	0	3	-	20	20	30	50	2
9.	NEC 753	Industrial Training Viva-Voce	0	0	2	-	50	50	-	50	1
10.	NEC 754	Project	0	0	2	-	50	50	-	50	1
11.	NGP 701	General Proficiency	-	-	-	-	-	50	-	50	1
		Total	**15**	**5**	**9**	**150**	**240**	**440**	**560**	**1000**	**26**

**** Open Electives-I**

NOE-071 Entrepreneurship Development
NOE-072 Quality Management
NOE-073 Operation Research
NOE-074 Introduction to Biotechnology
NOE-075 Micro and smart systems

Greater Noida Institute of Technology (Engg. Inst.) Director Greater Noida

Greater Noida Institute of Technology (132) HOD EC

2017-18

AKTU, LUCKNOW, U.P

Study and Evaluation Scheme B. Tech. in Electronics Engg/Electronics & Communication Engg/Electronics & Telecommunication Engg

[Effective from the session 2016-17]

YEAR 4th, SEMESTER-VIII

S. No.	Course Code	SUBJECT	PERIODS			Evaluation Scheme				Subject Total	Credit
						SESSIONAL EXAM.			ESE		
			L	T	P	CT	TA	Total			
THEORY SUBJECTS											
1.	NOE 08*	Open Elective-II**	3	1	0	30	20	50	100	150	4
2.	NEC 04*	Departmental Elective-IV	3	1	0	30	20	50	100	150	4
3.	NEC 801	Wireless & Mobile Communication	3	1	0	30	20	50	100	150	4
4.	NEC 802	Optical Network	3	1	0	30	20	50	100	150	3
5.	AUC 001	*Human Values & Professional Ethics	2	0	0	15	10	25	50	75	-
PRACTICAL/DESIGN/DRAWING											
6.	NEC 851	Project	0	0	12	-	100	100	250	350	8
7.	NGP 801	General Proficiency	-	-	-	-	-	50	-	50	1
		Total	**12**	**4**	**12**	**120**	**180**	**350**	**650**	**1000**	**24**

**** Open Electives-II**

NOE-081 Non Conventional Energy Resources
NOE-082 Nonlinear Dynamic system
NOE-083 Product Development
NOE-084 Automation and Robotics

Greater Noida Institute of Technology (Engg. Inst.) Director Greater Noida

Greater Noida Insistute of Technology (132) HOD EC

Session : 2017-18

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW

Study & Evaluation Scheme with Syllabus
for
B.Tech. Second Year
Electrical Engineering / Electrical & Electronics Engineering

On
Choice Based Credit System
(Effective from the Session: 2017-18)

Greater Noida Institute of Technology
Director
Greater Noida

2nd Year III-SEMESTER

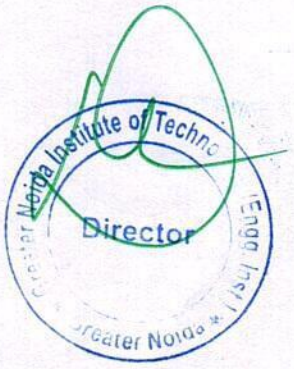
S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	ROE030 to 039/ RAS301	Science Based Open Elective/ Mathematics-III	3-1-0	70	20	10	100	4
2.	RVE301/ RAS302	Universal Human Values & Professional Ethics/ Environment & Ecology	3-0-0	70	20	10	100	3
3.	REC309	Analog & Digital Electronics	3-0-0	70	20	10	100	3
4.	REE301	Electrical & Electronics Engineering Materials	3-0-0	70	20	10	100	3
5.	REE302	Electrical Measurements & Instrumentation	3-0-0	70	20	10	100	3
6.	REE303	Basic Signals & Systems	3-1-0	70	20	10	100	4
7.	REE351	Electrical Workshop	0-0-2	50	30	20	100	1
8.	REE352	Electrical Measurements Lab	0-0-2	50	30	20	100	1
9.	REE353	Simulation Lab – I	0-0-2	50	30	20	100	1
10.	REC359	Electronics Lab	0-0-2	50	30	20	100	1
11.	RME101*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE151*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
Total							1000	24

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Science Based Open Electives:

a. ROE030/ROE040 Manufacturing Process
b. ROE031/ROE041 Introduction to soft computing
c. ROE032/ROE042 Nano Science
d. ROE033/ROE043 Laser System and Application
e. ROE034/ROE044 Space Science
f. ROE035/ROE045 Polymer Science & Technology
g. ROE036/ROE046 Nuclear Science
h. ROE037/ROE047 Material Science
i. ROE038/ROE048 Discrete Mathematics
j. ROE039/ROE049 Applied Linear Algebra



2nd Year IV-SEMESTER

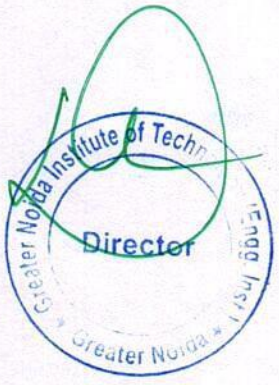
S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	RAS401/ ROE040 to 049	Mathematics-III/ Science Based Open Elective	3-1-0	70	20	10	100	4
2.	RAS402/ RVE401	Environment & Ecology/ Universal Human Values & Professional Ethics	3-0-0	70	20	10	100	3
3.	REC402	Electromagnetic Field Theory	3-1-0	70	20	10	100	4
4.	REE401	Power Plant Engineering	3-0-0	70	20	10	100	3
5.	REE402	Electrical Machines -I	3-0-0	70	20	10	100	3
6.	REE405	Network Analysis and Synthesis	3-0-0	70	20	10	100	3
7.	REE451	Simulation– II Lab	0-0-2	50	30	20	100	1
8.	REE452	Electrical Machines -I Lab	0-0-2	50	30	20	100	1
9.	REE453	Networks Lab	0-0-2	50	30	20	100	1
10.	REE454	Electrical Instrumentation Lab	0-0-2	50	30	20	100	1
11.	RME201*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE251*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
Total							1000	24

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Science Based Open Electives:

a. ROE030/ROE040 Manufacturing Process
b. ROE031/ROE041 Introduction to soft computing
c. ROE032/ROE042 Nano Science
d. ROE033/ROE043 Laser System and Application
e. ROE034/ROE044 Space Science
f. ROE035/ROE045 Polymer Science & Technology
g. ROE036/ROE046 Nuclear Science
h. ROE037/ROE047 Material Science
i. ROE038/ROE048 Discrete Mathematics
j. ROE039/ROE049 Applied Linear Algebra



Session: 2017-18

UTTAR PRADESH TECHNICAL UNIVERSITY
LUCKNOW

SYLLABUS

Bachelor of Electrical Engineering

3rd Year (V & VI Semester)

(Effective from Session 2015-2016)

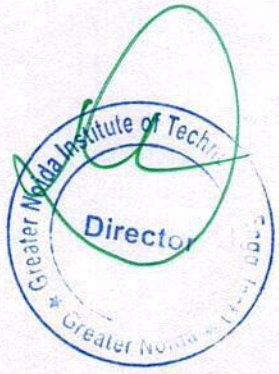
Greater Noida Institute of Technology
Director
Greater Noida

EVELUATION SCHEME OF ELECTRICAL ENGINEERING

Third Year

ELECTRICAL ENGG- Semester-V

S. No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NEE-501	Elements Of Power System	3	1	0	30	20	50	100	150	4
2	NEE 502	Power Electronics	3	1	0	30	20	50	100	150	4
3	NEE-503	Control System	3	1	0	30	20	50	100	150	4
4	NEE-504	Microprocessor & Its Applications	3	1	0	30	20	50	100	150	4
5	NEC-508	Fundamentals of E.M. Theory	2	1	0	15	10	25	50	75	3
6	NHU-501	Engineering Economics	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NEE-551	Power Electronics Lab	0	0	3	10	10	20	30	50	1
8	NEE 552	Control System Lab	0	0	3	10	10	20	30	50	1
9	NEE-553	Microprocessor Lab	0	0	2	10	10	20	30	50	1
10	NEE 554	Simulation Based Minor Project	0	0	2	10	10	20	30	50	1
11	NGP 501	GP						50		50	1
		TOTAL	16	5	10					1000	26

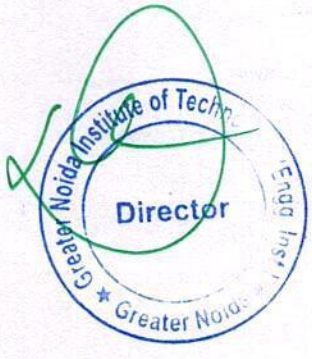


ELECTRICAL ENGG. -Semester-VI

S. No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NEE-601	Power System Analysis	3	1	0	30	20	50	100	150	4
2	NEE 602	Switchgear & Protection	3	1	0	30	20	50	100	150	4
3	NEE-603	Special Electric Machine	3	1	0	30	20	50	100	150	4
4	NEE-011 / NEE-014	Departmental Elective-I	3	1	0	30	20	50	100	150	4
5	NEE-021 / NEE-024	Departmental Elective-II	2	1	0	15	10	25	50	75	3
6	NHU-601	Industrial Management	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NEE-651	Power System Lab	0	0	2	10	10	20	30	50	1
8	NEE-652	Electrical CAD Lab	0	0	3	10	10	20	30	50	1
9	NEE-653	Minor Project	0	0	2	10	10	20	30	50	1
10	NEE 654	Seminar	0	0	3		50	50		50	1
11	NGP 601	GP						50		50	1
		TOTAL	16	5	10					1000	26

Elective-I

NEE – 011: Digital Control System
NEE - 012: Fundamentals of Digital Signal Processing
NEE - 013: Neural Networks and Fuzzy System
NEE - 014: Power Theft and Energy Management



Elective-II

NEE – 021: High Voltage Engineering
NEE -022: Intelligent Instrumentation
NEE -023: Conventional & CAD of Electrical Machines
NEE -024: Smart Energy Delivery Systems

Session: 2017-18

STUDY AND EVELUATION SCHEME OF ELECTRICAL ENGINEERING
VIIth Semester

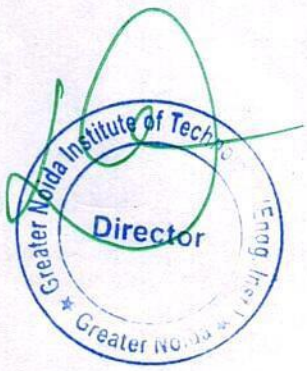
S. NO.	SUBJECT CODE	NAME OF THE SUBJECT	PERIODS			EVALUATION SCHEME				SUBJECT TOTAL	CREDIT
						SESSIONAL ASSESMENT			ESE		
			L	T	P	CT	TA	TOTAL			
THEORY SUBJECT											
1	NEE-701	ELECTRIC DRIVES	3	1	0	30	20	50	100	150	4
2	NEE-702	POWER STATION PRACTICE	3	1	0	30	20	50	100	150	4
3	NEC-702A	ANALOG & DIGITAL COMMUNICATION	3	1	0	30	20	50	100	150	4
4	NEE-031-033, NCS-039	DEPARTMENTAL ELECTIVE-III	3	1	0	30	20	50	100	150	4
5	NOE-071-NOE-074	OPEN ELECTIVE-1	3	1	0	30	20	50	100	150	4
PRACTICAL/DESIGN/DRAWING											
6	NEE-751	ELECTRIC DRIVE LAB	0	0	3	10	10	20	30	50	1
7	NEC-752B	ADC LAB	0	0	3	10	10	20	30	50	1
8	NEE-753	INDUSTRIAL TRAINING	0	0	2	30	20	50	--	50	1
9	NEE-754	PROJECT	0	0	2	30	20	50	--	50	1
10	NGP-701	GP					50	50	--	50	1
		TOTAL	16	5	10					1000	24

LIST OF DEPARTMENTAL ELECTIVE-III

NEE-031 POWER SYSTEM OPERATION AND CONTROL
NEE-032 ADVANCED MICROPROCESSORS AND MICROCONTROLLERS
NEE-033 FLEXIBLE AC TRANSMISSION SYSTEMS
NCS-039 OBJECT ORIENTED SYSTEMS AND C++

LIST OF OPEN ELECTIVE-I

NOE-071 ENTREPRENEURSHIP DEVELOPMENT
NOE-072 QUALITY MANAGEMENT
NOE-073 OPERATION RESEARCH
NOE-074 INTRODUCTION TO BIO TECHNOLOGY



STUDY AND EVELUATION SCHEME OF ELECTRICAL ENGINEERING
VIIIth Semester

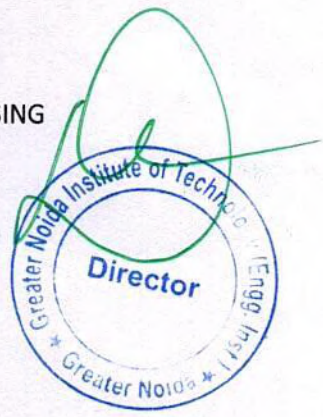
S. NO.	SUBJECT CODE	NAME OF THE SUBJECT	PERIODS			EVALUATION SCHEME				SUBJECT TOTAL	CREDIT
						SESSIONAL ASSESMENT			ESE		
			L	T	P	CT	TA	TOTAL			
THEORY SUBJECT											
1	NEE-801	ELECTRICAL & ELECTRONICS ENGINEERING MATERIALS	3	1	0	30	20	50	100	150	4
2	NEE-802	UTILIZATION OF ELECTRICAL ENERGY AND TRACTION	3	1	0	30	20	50	100	150	3
3	NEE-041 - NEE-044	DEPARTMENTAL ELECTIVE-IV	3	1	0	30	20	50	100	150	4
4	NOE-081 - NOE-084	OPEN ELECTIVE-2	3	1	0	30	20	50	100	150	4
PRACTICAL/DESIGN/DRAWING											
5	NEE-851	PROJECT	0	0	12	0	100	100	250	350	8
6	NGP-801	GP					50	50	-	50	1
		TOTAL	14	5	12		180	350	650	1000	24

LIST OF DEPARTMENTAL ELECTIVE IV

NEE-041 EHVAC&DC TRANSMISSION
NEE-042 POWER QUALITY
NEE-043 EMBEDDED SYSTEM
NEE-044 SCADA

LIST OF OPEN ELECTIVE 2

NOE-081 NON-CONVENTIONAL ENERGY RESOURCES
NOE-082 NON LINEAR DYNAMIC SYSTEMS
NOE-083 DATA BASE MANAGEMENT SYSTEM AND DATA MINING AND WAREHOUSING
NOE-084 AUTOMATION & ROBOTICS



DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY LUCKNOW

Study & Evaluation Scheme with Syllabus
For
B.Tech. Second Year
(Mechanical Engineering/ Production Engineering, Industrial & Production Engineering, Mechanical & Industrial Engineering, Manufacturing Technology, Automobile Engineering, Aeronautical Engineering)
On
Choice Based Credit System

(Effective from the Session: 2017-18)

Greater Noida Institute of Technology (Engg. Inst.) HoD-ME Greater Noida

Greater Noida Institute of Technology Director Greater Noida

Department of Mechanical Engineering

Evaluation Scheme 2017-18

2nd Year (ODD)

S. No.	Subject Code	Subject Name	L-T-P	Th/Lab ESE	Sessional		Total	Credit
					CT	TA		
1.	RAS301/ ROE031 to 036, 038, 039	Mathematics-III/ Science Based OE	3-1-0	70	20	10	100	4
2.	RVE301/ RAS302	Universal Human Values & Professional Ethics / Environment & Ecology	3-0-0	70	20	10	100	3
3.	RCE303	Fluid Mechanics	3-0-0	70	20	10	100	3
4.	RME301	Material Science	3-0-0	70	20	10	100	3
5.	RME302	Thermodynamics	3-1-0	70	20	10	100	4
6.	RME303	Mechanics of Solids	3-0-0	70	20	10	100	3
7.	RCE353	Fluid Mechanics Lab	0-0-2	50	30	20	100	1
8.	RME351	Material Science & Testing Lab	0-0-2	50	30	20	100	1
9.	RME352	Thermodynamics Lab	0-0-2	50	30	20	100	1
10.	RME353	Computer Aided Machine Drawing–I Lab	0-0-2	50	30	20	100	1
11.	RME101*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE151*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
TOTAL							1000	24

2nd Year (EVEN)

S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	ROE041 to 046, 048, 049/ RAS401	Science Based OE/ Mathematics-III	3-1-0	70	20	10	100	4
2.	RAS402/ RVE401	Environment & Ecology/ Universal Human Values & Professional Ethics	3-0-0	70	20	10	100	3
3.	REE409	Electrical Machines & Controls	3-0-0	70	20	10	100	3
4.	RME401	Measurement and Metrology	3-0-0	70	20	10	100	3
5.	RME402	Manufacturing Science & Technology-I	3-0-0	70	20	10	100	3
6.	RME403	Applied Thermodynamics	3-1-0	70	20	10	100	4
7.	REE459	Electrical Machines and Controls Lab	0-0-2	50	30	20	100	1
8.	RME451	Measurement and Metrology Lab	0-0-2	50	30	20	100	1
9.	RME452	Manufacturing Science & Technology–I Lab	0-0-2	50	30	20	100	1
10.	RME453	Computer Aided Machine Drawing-II Lab	0-0-2	50	30	20	100	1
11.	RME201*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE251*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
TOTAL							1000	24

Director Engg. Greater Noida Institute of Technology

HoD-ME Greater Noida Institute of Technology (Engg. Inst.) Greater Noida

3rd Year (ODD)

S. No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NME-501	Machine Design-I	2	1	0	15	10	25	50	75	3
2	NME-502	Kinematics of Machines	3	1	0	30	20	50	100	150	4
3	NME-503	Manufacturing Science& Technology-II	3	1	0	30	20	50	100	150	4
4	NME-504	Heat & Mass Transfer	3	1	0	30	20	50	100	150	4
5	NME-505	I.C. Engines & Compressors	3	1	0	30	20	50	100	150	4
6	NHU-501	Engineering Economics	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NME-551	Machine Design-I Lab	0	0	2	10	10	20	30	50	1
8	NME-552	Seminar	0	0	2	--	--	50	--	50	1
9	NME-553	Manufacturing Technology-II Lab	0	0	3	10	10	20	30	50	1
10	NME-554	Heat & Mass Transfer Lab	0	0	3	10	10	20	30	50	1
11	NGP-501	General Proficiency	--	--	--	--	--	50	--	50	
		TOTAL	16	5	10					1000	25

3rd Year (EVEN)

S. No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NME-602	Machine Design-II	3	1	0	30	20	50	100	150	4
2	NME-603	Dynamics of Machines	3	1	0	30	20	50	100	150	4
3	NME-604	Refrigeration & Air-conditioning	3	1	0	30	20	50	100	150	4
4	NME-011 to NME-014	Departmental Elective - I	3	1	0	30	20	50	100	150	4
5	NME-021 to NME-024	Departmental Elective - II	2	1	0	15	10	25	50	75	3
6	NHU-601	Industrial Management	2	0	0	15	10	25	50	75	2
PRACTICAL/DESIGN/DRAWING											
7	NME-651	Fluid Machinery Lab	0	0	3	10	10	20	30	50	1
8	NME-652	Machine Design-II Lab	0	0	2	10	10	20	30	50	1
9	NME-653	Theory of Machines Lab	0	0	2	10	10	20	30	50	1
10	NME-654	Refrigeration & Air Conditioning Lab	0	0	3	10	10	20	30	50	1
11	NGP-601	General Proficiency	--	--	--	--	--	50	--	50	
		TOTAL	16	5	10					1000	25

Director
Greater Noida Institute of Technology (Engg. Inst.) Greater Noida

HoD-ME
Greater Noida Institute of Technology (Engg. Inst.) Greater Noida

4th Year (ODD)

S. No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NOE-071 to 074	Open Elective -I (OR -NOE-073)	3	1	0	30	20	50	100	150	4
2	NME-701	CAD	3	1	0	30	20	50	100	150	4
3	NME-702	Automobile Engineering	3	1	0	30	20	50	100	150	4
4	NME-031 to NME-034	Departmental Elective – III CIM - (NME-031)	3	1	0	30	20	50	100	150	4
5	NME-041 to NME-044	Departmental Elective – IV TQM-(NME-041)	3	1	0	30	20	50	100	150	4
PRACTICAL/DESIGN/DRAWING											
5	NME-751	CAD/CAM Lab	0	0	2	10	10	20	30	50	1
6	NME-752	I. C. Engine and Automobile Lab.	0	0	2	10	10	20	30	50	1
7	NME-753	INDUSTRIAL TRG.	0	0	2	-	50	50	-	50	1
8	NME-754	PROJECT	0	0	3	-	50	50	-	50	2
	GP-701	GP	-	-	-	-	-	50	-	50	-
		TOTAL	15	5	9					1000	25

4th Year (EVEN)

S. No.	Subject Code	Name of the Subject	Periods			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Assessment			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NOE-081 to 084	Open Elective -II (NCER)	3	1	0	30	20	50	100	150	4
2	NPI-801	Quality Control	3	1	0	30	20	50	100	150	4
3	NME-051 to NME-055	Departmental Elective –V AWT-(NME-055)	3	1	0	30	20	50	100	150	4
4	NME-061 to NME-065	Departmental Elective -VI NDT - (NME-065)	3	1	0	30	20	50	100	150	4
PRACTICAL/DESIGN/DRAWING											
5	NME-851	SEMINAR	0	0	3	-	50	50	-	50	2
6	NME-852	PROJECT	0	0	12	-	100	100	200	300	7
7	GP-801	GP	-	-	-	-	-	50	-	50	-
		TOTAL	12	4	15					1000	25

Director
HoD-ME

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW

Study & Evaluation Scheme with Syllabus
for
B.Tech. Second Year
Civil Engineering
On
Choice Based Credit System
(Effective from the Session: 2017-18)

2nd Year III-SEMESTER

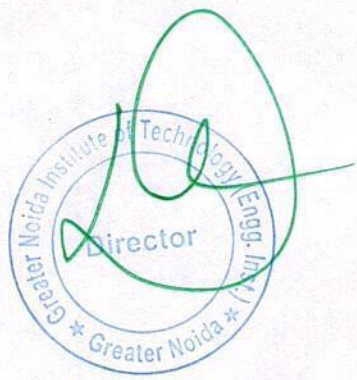
S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	ROE030 to 039/ RAS301	Science Based Open Elective/ Mathematics-III	3-1-0	70	20	10	100	4
2.	RVE301/ RAS302	Universal Human Values & Professional Ethics/ Environment & Ecology	3-0-0	70	20	10	100	3
3.	RME303	Mechanics of Solids	3-0-0	70	20	10	100	3
4.	RCE301	Building Materials & Construction	3-1-0	70	20	10	100	4
5.	RCE302	Surveying	3-0-0	70	20	10	100	3
6.	RCE303	Fluid Mechanics	3-0-0	70	20	10	100	3
7.	RCE351	Building Materials Lab	0-0-2	50	30	20	100	1
8.	RCE352	Surveying Lab	0-0-2	50	30	20	100	1
9.	RCE353	Fluid Mechanics Lab	0-0-2	50	30	20	100	1
10.	RCE354	Computer Based Statistical & Numerical Techniques Lab	0-0-2	50	30	20	100	1
11.	RME101*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE151*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
Total							1000	24

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Science Based Open Electives:

a. ROE030/ROE040 Manufacturing Process
b. ROE031/ROE041 Introduction to soft computing
c. ROE032/ROE042 Nano Science
d. ROE033/ROE043 Laser System and Application
e. ROE034/ROE044 Space Science
f. ROE035/ROE045 Polymer Science & Technology
g. ROE036/ROE046 Nuclear Science
h. ROE037/ROE047 Material Science
i. ROE038/ROE048 Discrete Mathematics
j. ROE039/ROE049 Applied Linear Algebra



2nd Year IV-SEMESTER

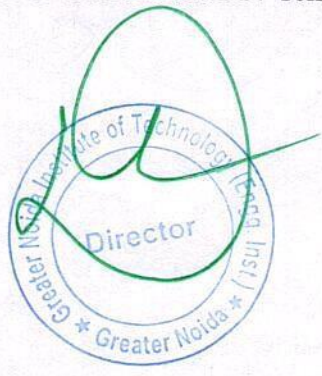
S. No.	Subject Code	Subject Name	L-T-P	ESE Marks	Sessional		Total	Credit
					CT	TA		
1.	RAS401/ ROE040 to 049	Mathematics-III/ Science Based Open Elective	3-1-0	70	20	10	100	4
2.	RAS402/ RVE401	Environment & Ecology/ Universal Human Values & Professional Ethics	3-0-0	70	20	10	100	3
3.	RCS405	Data Structures	3-0-0	70	20	10	100	3
4.	RCE401	Hydraulics & Hydraulic Machines	3-0-0	70	20	10	100	3
5.	RCE402	Geoinformatics	3-0-0	70	20	10	100	3
6.	RCE403	Structural Analysis	3-1-0	70	20	10	100	4
7.	RCE452	Geoinformatics Lab	0-0-2	50	30	20	100	1
8.	RCE453	Structural Analysis Lab	0-0-2	50	30	20	100	1
9.	RCE454	Building Planning & Drawing Lab	0-0-2	50	30	20	100	1
10.	RCE455	Hydraulics & Machine Lab	0-0-2	50	30	20	100	1
11.	RME201*	Elements of Mechanical Engineering*	3-1-0	70	20	10	100*	--
12.	RCE251*	Computer Aided Engineering Graphics*	0-0-3	50	30	20	100*	--
Total							1000	24

CT: Class Test **TA**: Teacher Assessment **L/T/P**: Lecture/ Tutorial/ Practical

***B.Tech. IInd year lateral entry students belonging to B.Sc. Stream, shall clear the subjects RCE151/RCE251 and RME101/201 of the first year Engineering Programme along with the second year subjects.**

Industrial Training:
Students will go for Industrial Training of 8-10 weeks in total in two parts (Industrial Training-1 & Industrial Training-2) which is to be evaluated in VII semester after submission of separate training report for each part.
Industrial Training-1: Students will go to Industrial Training-1 of 4 weeks after IV semester which will be evaluated in VII semester.

Science Based Open Electives:
a. ROE030/ROE040 Manufacturing Process
b. ROE031/ROE041 Introduction to soft computing
c. ROE032/ROE042 Nano Science
d. ROE033/ROE043 Laser System and Application
e. ROE034/ROE044 Space Science
f. ROE035/ROE045 Polymer Science & Technology
g. ROE036/ROE046 Nuclear Science
h. ROE037/ROE047 Material Science
i. ROE038/ROE048 Discrete Mathematics
j. ROE039/ROE049 Applied Linear Algebra



U. P. TECHNICAL UNIVERSITY,
IET CAMPUS, SITAPUR ROAD, LUCKNOW- 226 021

COURSE STRUCTURE AND SYLLABUS
(EFFECTIVE FROM Session: 2015-16)

B.Tech. (Civil Engineering)

Third Year (5th & 6th Semester)

JULY 10, 2015

Director

U.P. TECHNICAL UNIVERSITY, LUCKNOW
STUDY & EVALUATION SCHEME
B. Tech. Civil Engineering
(Effective from the session – 2015-16)

Third Year, 5th Semester

S.No	Course Code	Subject	Period			Evaluation Scheme				Subject Total	Credit
						Sessional Exam					
			L	T	P	CT	TA	Total	ESE		
THEORY SUBJECTS											
1	NHU 501	Engineering Economics	2	0	0	15	10	25	50	75	2
2	NCE 501	Geotechnical Engineering	3	1	0	30	20	50	100	150	4
3	NCE 502	Transportation Engineering-1	3	1	0	30	20	50	100	150	4
4	NCE 503	Environmental Engineering-1	2	1	0	15	10	25	50	75	3
5	NCE 504	Structural Analysis-2	3	1	0	30	20	50	100	150	4
6	NCE 505	Design of Concrete Structure-1	3	1	0	30	20	50	100	150	4
PRACTICAL/DRAWING/DESIGN											
7	NCE 551	Geotechnical Engineering Lab	-	-	3	10	10	20	30	50	1
8	NCE 552	Transportation Engineering Lab	-	-	3	10	10	20	30	50	1
9	NCE 553	CAD Lab-1	-	-	3	10	10	20	30	50	1
10	NCE 554	Estimation Costing & Valuation			3	10	10	20	30	50	1
11	NGP 501	General Proficiency	-	-	-	-	-	50	-	50	
		TOTAL	16	5	12					1000	25

U.P. TECHNICAL UNIVERSITY, LUCKNOW
STUDY & EVALUATION SCHEME
B. Tech. Civil Engineering
(Effective from the session – 2015-16)

Third Year, 6th Semester

S. No	Course Code	Subject	Period			Evaluation Scheme				Subject Total	Credit
						Sessional Exam					
			L	T	P	CT	TA	Total	ESE		
THEORY SUBJECTS											
1	NHU 601	Industrial Management	2	0	0	15	10	25	50	75	2
2	NCE 601	Design of Concrete Structure-2	3	1	0	30	20	50	100	150	4
3	NCE 602	Environmental Engineering-2	3	1	0	30	20	50	100	150	4
4	NCE 603	Construction Technology & Management	3	1	0	30	20	50	100	150	4
5	NCE 011 -014	Departmental Elective-1	3	1	0	30	20	50	100	150	4
6	NCE 021-024	Departmental Elective-2	2	1	0	15	10	25	50	75	3
PRACTICAL/DRAWING/DESIGN											
7	NCE 651	Structural Detailing Lab	0	0	3	10	10	20	30	50	1
8	NCE 652	Environmental Engineering Lab	0	0	3	10	10	20	30	50	1
9	NCE 653	CAD Lab-2	0	0	3	10	10	20	30	50	1
10	NCE 654	Survey Camp*	0	0	0	0	0	50		50	1
11	NGP 601	General Proficiency	0	0	0	0	0	50	-	50	
		TOTAL	16	5	9					1000	25

Note:*The teaching load of survey camp will be counted as equivalent to 0-0-3.

Departmental Elective -1 (Full Unit Course with Credit: 4)

Sl.No.	Code and Course
5 (A)	NCE 011 – Advanced Foundation Design
5 (B)	NCE 012 – Matrix Analysis of Structures
5 (C)	NCE 013 – Environmental Management for Industries
5 (D)	NCE 014 – Principals of Town Planning and Architecture

Departmental Elective – 2 (Half Unit Course with Credit: 3)

Sl.No.	Code and Course
6 (A)	NCE 021 – Advanced Concrete Design
6 (B)	NCE 022 – Earth and Earth Retaining Structure
6 (C)	NCE 023 – Transportation System and Planning
6 (D)	NCE 024 – Rural Water supply and Sanitation

Dr. A.P. J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

Syllabus

4th Year

[Effective from session 2016-17]

B. Tech. Civil Engineering

Dr. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

Study & Evaluation Scheme

B Tech Civil Engineering

Effective from session 2016-17

Final Year, VII Semester

S No	Course Code	SUBJECT	PERIODS			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Exam			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NOE071-NOE074	Open Elective – I	3	1	0	30	20	50	100	150	4
2	NCE031-NCE035	Department Elective-III	3	1	0	30	20	50	100	150	4
3	NCE041-NCE044	Department Elective-IV	3	1	0	30	20	50	100	150	4
4	NCE701	Design of Steel Structures	3	1	0	30	20	50	100	150	4
5	NCE702	Water Resources Engg	3	1	0	30	20	50	100	150	4
PRACTICAL / DESIGN / DRAWING											
6	NCE751	Seminar	0	0	4		-	50	-	50	1
7	NCE752	Industrial Training**					-	50	-	50	1
8	NCE753	Project#	0	0	4		-	100	-	100	3
9	NGP 701	General Proficiency	-	-	-	-	-	50	-	50	1
		Total	15	5	8					1000	26

** 4 weeks Industrial Training after VI semester to be evaluated in VII semester.

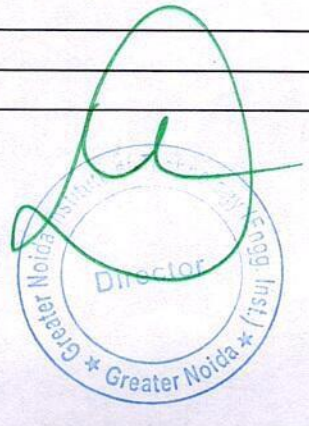
Project should be initiated in VII semester beginning and should be completed by the end of VIII semester.

Departmental Elective-3 (Full Unit Course with Credit: 4)

S. No.	Code and Course
2 (A)	NCE 031 - Bridge Engineering
2 (B)	NCE 032 - Finite Element Methods
2(C)	NCE 033 - Environmental Geo-technology
2(D)	NCE 034 - Industrial Pollution Control & Env. Audit
2 (E)	NCE 035 – Engineering Hydrology

Departmental Elective-4 (Full Unit Course with Credit: 4)

S. No.	Code and Course
3 (A)	NCE 041 - Precast and Modular Construction Practices
3 (B)	NCE 042 - Plastic Analysis of Structures
3 (C)	NCE 043 - Open Channel Flow
3 (D)	NCE 044 – Tunnel Engineering



Dr. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

Study & Evaluation Scheme

B Tech Civil Engineering

Effective from session 2016-17

Final Year, VIII Semester

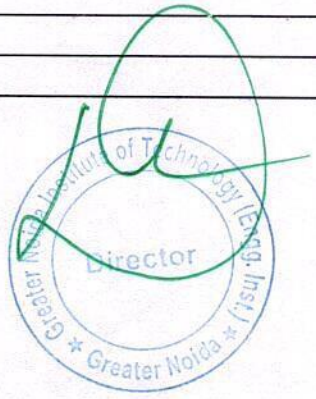
S No	Course Code	SUBJECT	PERIODS			Evaluation Scheme				Subject Total	Credit
			L	T	P	Sessional Exam			ESE		
						CT	TA	Total			
THEORY SUBJECT											
1	NOE081-NOE084	Open Elective – II	3	1	0	30	20	50	100	150	4
2	NCE051-NCE054	Departmental Elective-V	3	1	0	30	20	50	100	150	4
3	NCE061-NCE064	Departmental Elective-VI	3	1	0	30	20	50	100	150	4
4	NCE801	Transportation Engineering -II	3	1	0	30	20	50	100	150	3
PRACTICAL / DESIGN / DRAWING											
5	NCE851	Project	0	0	12		100	100	250	350	8
6	NGP 801	General Proficiency	-	-	-	-	-	50	-	50	1
		Total	12	4	12					1000	24

Departmental Elective-5 (Full Unit Course with Credit: 4)

S. No.	Code and Course
2 (A)	NCE 051 - Computer Aided Design
2 (B)	NCE 052 - Analysis and Design of Hydraulic Structures
2 (C)	NCE 053 - Water Resources Systems
2 (D)	NCE 054 - Machine Foundation Design

Departmental Elective-6 (Full Unit Course with Credit: 4)

S. No.	Code and Course
3 (A)	NCE061 - Ground Improvement Techniques
3 (B)	NCE 062 - River Engineering
3 (C)	NCE 063 – Groundwater Management
3 (D)	NCE 064 - Earthquake Resistant Design of Structures



17-18

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW

Evaluation Scheme & Syllabus

for

MCA First Year

On

Choice Based Credit System

(Effective from the Session: 2016-17)

Greater Noida Institute of Technology (Engg. Inst.) * Greater Noida *
Director

Dr. APJ Abdul Kalam Technical University, Lucknow

Study and Evaluation Scheme

MCA (Master of Computer Applications)

(Effective From Session 2016-17)

Year – I Semester - I

Sl. No.	Subject Code	Subject Name	Periods			Evaluation Scheme					Credit
			L	T	P	Session Exams			ESE	Subject Total	
						CT	TA	Total			
1	RCA105	Professional Communication	3	1	0	20	10	30	70	100	04
2	RCA101	Computer Concepts & Principals of Programming	3	1	0	20	10	30	70	100	04
3	RCA102	Accounting & Financial Management	3	1	0	20	10	30	70	100	04
4	RCA103	Discrete Mathematics	3	1	0	20	10	30	70	100	04
5	RCA104	Computer Organization & Architecture	3	1	0	20	10	30	70	100	04
Practical											
6	RCA151	Professional Communication Lab	0	0	3	30	20	50	50	100	02
7	RCA152	Programming Lab	0	0	3	30	20	50	50	100	02
		Total	15	4	5					700	24

Year – I Semester - II

Sl. No.	Subject Code	Subject Name	Periods			Evaluation Scheme					Credit
			L	T	P	Session Exams			ESE	Subject Total	
						CT	TA	Total			
1	RCA201	Computer Based Numerical & Statistical Techniques	3	1	0	20	10	30	70	100	04
2	RCA202	Data Structures	3	1	0	20	10	30	70	100	04
3	RCA203	Introduction to Automata Theory & Languages	3	1	0	20	10	30	70	100	04
4	RCA204	Innovation & Entrepreneurship	3	1	0	20	10	30	70	100	04
5	RHU001	Human Values & Professional Ethics	3	0	0	20	10	30	70	100	03
Practical											
6	RCA251	Computer Based Numerical & Statistical Techniques Lab	0	0	3	30	20	50	50	100	02
7	RCA252	Data Structure Lab	0	0	6	30	20	50	50	100	03
		Total	14	4	6					700	24

Session. 2017-2018

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW

Evaluation Scheme & Syllabus

for

MBA First Year

On

Choice Based Credit System

(Effective from the Session: 2016-17)

Greater Noida Institute of Technology (Engg. Inst.) Director Greater Noida

Dr. APJ Abdul Kalam Technical University, Lucknow

Study and Evaluation Scheme

MBA Evaluation Scheme For Session 2016-17

Semester I

S. No.		Course Title	Credit	Evaluation Scheme				
				Sessional Exams			ESE	Total
				CT	TA	Total		
1	RMB101	Management Concepts and Applications	3	20	10	30	70	100
2	RMB102	Managerial Economics	3	20	10	30	70	100
3	RMB103	Financial Accounting for Managers	4	20	10	30	70	100
4	RMB104	Business Statistics	4	20	10	30	70	100
5	RMB105	Organisational Behaviour	3	20	10	30	70	100
6	RMB106	Marketing Management	4	20	10	30	70	100
7	RMB107	Business Communication	3	20	10	30	70	100
8	RMB108	Computer Application & Management Information System	3	20	10	30	70	100
		TOTAL	**27**					**800**

*** Non credit but qualifying**

Semester II

S. No.		Course Title	Credit	Evaluation Scheme				
				Sessional Exams			ESE	Total
				CT	TA	Total		
1	RMB201	Business Environment	3	20	10	30	70	100
2	RMB202	Human Resource Management	3	20	10	30	70	100
3	RMB203	Business Research Methods	3	20	10	30	70	100
4	RMB204	Financial Management	3	20	10	30	70	100
5	RMB205	Management Accounting & Control	3	20	10	30	70	100
6	RMB206	Production Operation & Supply Chain Management	3	20	10	30	70	100
7	RMB207	Quantitative Techniques for Managers	4	20	10	30	70	100
8	RMB208	Legal Aspects for Business	3	20	10	30	70	100
9	RMB209	Comprehaensive Viva	2					100
		TOTAL	**27**					**900**

Session 2017-18

Evaluation Scheme & Syllabus for

MBA Second Year

On

Choice Based Credit System

(Effective from the Session: 2017-18)

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW

MBA Evaluation Scheme for Session 2017 - 2018
Semester III

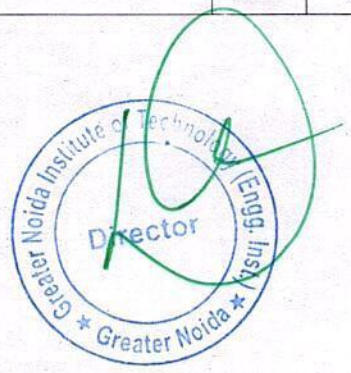
S. No.	Subject Code	Subject Title	Periods			Evaluation Scheme					Credit
						Sessional			ESE	Total	
			L	T	P	CT	TA	Total			
1	RMB301	Strategic Management	3	0	0	20	10	30	70	100	3
2	RMB302	International Business Management	3	0	0	20	10	30	70	100	3
3		Major Specialization Group Elective 1	3	0	0	20	10	30	70	100	3
4		Major Specialization Group Elective 2	3	0	0	20	10	30	70	100	3
5		Major Specialization Group Elective 3	3	0	0	20	10	30	70	100	3
6		Minor Specialization Group Elective 1	3	0	0	20	10	30	70	100	3
7		Minor Specialization Group Elective 2	3	0	0	20	10	30	70	100	3
8	RVE301	Universal Human Values and Professional Ethics	3	0	0	20	10	30	70	100	3
9	RMB351	Summer Training Project Report & Viva Voce	0	0	6		30	30	70	100	3
TOTAL										**900**	**27**

ESE- End Semester Examination
CA - Class Test
TA - Teacher Assessment

Semester IV

S. No.	Subject Code	Course Title	Periods			Evaluation Scheme					Credit
						Sessional			ESE	Total	
			L	T	P	CT	TA	Total			
1	RMB401	Corporate Governance : Values and Ethics	4	0	0	20	10	30	70	100	4
2	RMB402	Entrepreneurship Development	4	0	0	20	10	30	70	100	4
3		Major Specialization Group Elective 4	3	0	0	20	10	30	70	100	3
4		Major Specialization Group Elective 5	3	0	0	20	10	30	70	100	3
5		Minor Specialization Group Elective 3	3	0	0	20	10	30	70	100	3
6	RCA405	Cyber Security	3	0	0	20	10	30	70	100	3
7	RMB 451	Research Project Report and Viva Voce	0	0	12		60	60	140	200	7
TOTAL										**800**	**27**

ESE- End Semester Examination
CA - Class Test
TA - Teacher Assessment



Electives for MBA III Semester (2017-18)

For major specialization, student will select all three (03) elective subjects from that group and for minor specialization, student will select any two (02) elective subjects from that group.

Specialization Group: Human Resource

S. No.	Subject Code	Subject Title
1	RMBHR01	Talent Management
2	RMBHR02	Performance and Reward Management
3	RMBHR03	Industrial Relations and Labour Laws

Specialization Group: Marketing

S. No.	Subject Code	Subject Title
1	RMBMK01	Sales & Distribution Management
2	RMBMK02	Consumer Behaviour
3	RMBMK03	Digital Marketing

Specialization Group: Finance

S. No.	Subject Code	Subject Title
1	RMBFM01	Security Analysis & Portfolio Management
2	RMBFM02	Tax Planning & Management
3	RMBFM03	Financial Market & Commercial Banking

Specialization Group: International Business

S. No.	Subject Code	Subject Title
1	RMBIB01	International Marketing
2	RMBIB02	International Logistics
3	RMBIB03	Export Import Documentation

Specialization Group: Information Technology

S. No.	Subject Code	Subject Title
1	RMBIT01	Enterprise Resource Planning
2	RMBIT02	Web Technology & E- Commerce
3	RMBIT03	Cloud Computing for Business

Specialization Group: Operations

S. No.	Subject Code	Subject Title
1	RMBOP01	Supply Chain Management
2	RMBOP02	Materials Management
3	RMBOP03	Production Planning & Control

Electives for MBA IV Semester (2017-18)

For major specialization, student will select all two (02) elective subjects from that group and for minor specialization, student will select any one (01) elective subjects from that group.

Specialization Group: Human Resource

S. No.	Subject Code	Subject Title
1	RMBHR04	Training & Development
2	RMBHR05	Negotiation & Conflict Management

Specialization Group: Marketing

S. No.	Subject Code	Subject Title
1	RMBMK04	Marketing of Services
2	RMBMK05	Integrated Marketing Communication

Specialization Group: Finance

S. No.	Subject Code	Subject Title
1	RMBFM04	Working Capital Management
2	RMBFM05	Financial Derivatives

Specialization Group: International Business

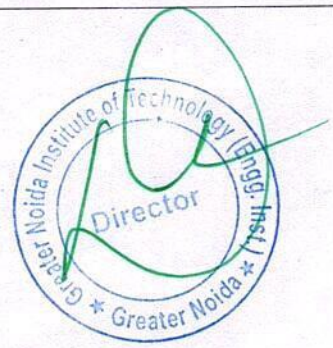
S. No.	Subject Code	Subject Title
1	RMBIB04	Trading Blocks & Foreign Trade Frame Work
2	RMBIB05	Cross Cultural Management

Specialization Group: Information Technology

S. No.	Subject Code	Subject Title
1	RMBIT04	Database Management System
2	RMBIT05	System Analysis & Design

Specialization Group: Operations

S. No.	Subject Code	Subject Title
1	RMBOP04	World Class Manufacturing & Maintenance Management
2	RMBOP05	Contract and Project Management



A Foundation course
In
Universal Human Values and Professional Ethics

Universal Human Values and Professional Ethics **[L-T-P: 3-0-0]**

Course Objectives

This introductory course input is intended

1. To help the students appreciate the essential complementarily between 'VALUES' and 'SKILLS' to ensure sustained happiness and prosperity, which are the core aspirations of all human beings

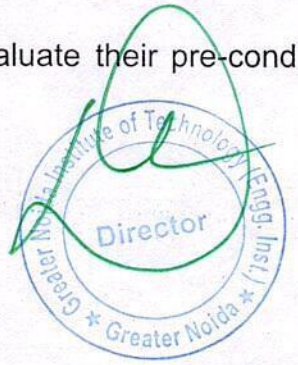
2. To facilitate the development of a Holistic perspective among students towards life and profession as well as towards happiness and prosperity based on a correct understanding of the Human reality and the rest of Existence. Such a holistic perspective forms the basis of Universal Human Values and movement towards value-based living in a natural way

3. To highlight plausible implications of such a Holistic understanding in terms of ethical human conduct, trustful and mutually fulfilling human behavior and mutually enriching interaction with Nature

Thus, this course is intended to provide a much needed orientational input in value education to the young enquiring minds.

Course Methodology

1. The methodology of this course is explorational and thus universally adaptable. It involves a systematic and rational study of the human being vis-à-vis the rest of existence.
2. It is free from any dogma or value prescriptions.
3. It is a process of self-investigation and self-exploration, and not of giving sermons. Whatever is found as truth or reality is stated as a proposal and the students are facilitated to verify it in their own right, based on their Natural Acceptance and subsequent Experiential Validation.
4. This process of self-exploration takes the form of a dialogue between the teacher and the students to begin with, and then to continue within the student leading to continuous self-evolution.
5. This self-exploration also enables them to critically evaluate their pre-conditionings and present beliefs.



Course Syllabus: Universal Human Values and Professional Ethics [L-T-P: 3-0-0]

The whole course is divided into 5 modules.

After every two lectures of one hour each, there is a 2 hour practice session.

The teachers are oriented to the inputs through an eight to ten day workshop (Teachers' Orientation Program).

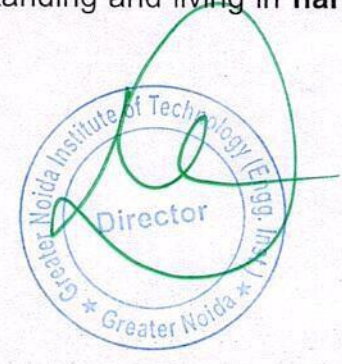
The Teacher's Manual provides them the lecture outline. The outline has also been elaborated into presentations and provided in a DVD with this book to facilitate sharing.

The teacher is expected to present the issues to be discussed as propositions and encourage the students to have a dialogue. The process of dialogue is enriching for both, the teacher as well as the students.

The syllabus for the lectures is given below:

UNIT 1: Course Introduction - Need, Basic Guidelines, Content and Process for Value Education

1. Understanding the need, basic guidelines, content and process for Value Education
2. Self Exploration–what is it? - its content and process; 'Natural Acceptance' and Experiential Validation- as the mechanism for self exploration
3. Continuous Happiness and Prosperity- A look at basic Human Aspirations
4. Right understanding, Relationship and Physical Facilities- the basic requirements for fulfillment of aspirations of every human being with their correct priority
5. Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario
6. Method to fulfill the above human aspirations: understanding and living in **harmony** at various levels



UNIT 2: Understanding Harmony in the Human Being - Harmony in Myself!

7. Understanding human being as a co-existence of the sentient 'I' and the material 'Body'
8. Understanding the needs of Self ('I') and 'Body' - *Sukh* and *Suvidha*
9. Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer)
10. Understanding the characteristics and activities of 'I' and harmony in 'I'
11. Understanding the harmony of I with the Body: *Sanyam* and *Swasthya*; correct appraisal of Physical needs, meaning of Prosperity in detail
12. Programs to ensure *Sanyam* and *Swasthya*

    - Practice Exercises and Case Studies will be taken up in Practice Sessions.

UNIT 3: Understanding Harmony in the Family and Society- Harmony in Human-Human Relationship

13. *Understanding Harmony in the family – the basic unit of human interaction*
14. Understanding values in human-human relationship; meaning of *Nyaya* and program for its fulfillment to ensure *Ubhay-tripti*;
    Trust (*Vishwas)* and Respect (*Samman)* as the foundational values of relationship
15. Understanding the meaning of *Vishwas*; Difference between intention and competence
16. Understanding the meaning of *Samman*, Difference between respect and differentiation; the other salient values in relationship
17. Understanding the harmony in the society (society being an extension of family): *Samadhan, Samridhi, Abhay, Sah-astitva* as comprehensive Human Goals
18. Visualizing a universal harmonious order in society- Undivided Society (*Akhand Samaj),* Universal Order (*Sarvabhaum Vyawastha)*- from family to world family!

    - Practice Exercises and Case Studies will be taken up in Practice Sessions.

UNIT 4: Understanding Harmony in the Nature and Existence - Whole existence as Co-existence

19. Understanding the harmony in the Nature
20. Interconnectedness and mutual fulfillment among the four orders of nature-recyclability and self-regulation in nature
21. Understanding Existence as Co-existence (*Sah-astitva*) of mutually interacting units in all-pervasive space
22. Holistic perception of harmony at all levels of existence

    - Practice Exercises and Case Studies will be taken up in Practice Sessions.

Director

UNIT 5: Implications of the above Holistic Understanding of Harmony on Professional Ethics

23. Natural acceptance of human values
24. Definitiveness of Ethical Human Conduct
25. Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order
26. Competence in professional ethics:
    a) Ability to utilize the professional competence for augmenting universal human order
    b) Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems,
    c) Ability to identify and develop appropriate technologies and management patterns for above production systems.
27. Case studies of typical holistic technologies, management models and production systems
28. Strategy for transition from the present state to Universal Human Order:
    a) At the level of individual: as socially and ecologically responsible engineers, technologists and managers
    b) At the level of society: as mutually enriching institutions and organizations

Guidelines and Content for Practice Sessions

UNIT 1: Course Introduction - Need, Basic Guidelines, Content and Process for Value Education

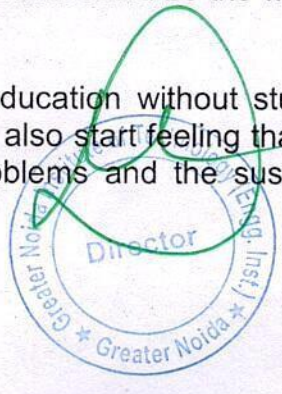
PS 1: Introduce yourself in detail. What are the goals in your life? How do you set your goals in your life? How do you differentiate between right and wrong? What have been your achievements and shortcomings in your life? Observe and analyze them.

Expected outcome: the students start exploring themselves; get comfortable to each other and to the teacher and start finding the need and relevance for the course.

PS 2: Now-a-days, there is a lot of voice about many techno-genic maladies such as energy and natural resource depletion, environmental pollution, global warming, ozone depletion, deforestation, soil degradation, etc. – all these seem to be man-made problems threatening the survival of life on Earth – What is the root cause of these maladies & what is the way out in your opinion?

On the other hand, there is rapidly growing danger because of nuclear proliferation, arms race, terrorism, criminalization of politics, large scale corruption, scams, breakdown of relationships, generation gap, depression & suicidal attempts, etc – what do you think, is the root cause of these threats to human happiness and peace – what could be the way out in your opinion?

Expected outcome: the students start finding that technical education without study of human values can generate more problems than solutions. They also start feeling that lack of understanding of human values is the root cause of all problems and the sustained



solution could emerge only through understanding of human values and value based living. Any solution brought out through fear, temptation or dogma will not be sustainable.

PS 3:

1. Observe that each one of us has Natural Acceptance, based on which one can verify right or not right for him. Verify this in case of

i) What is Naturally Acceptable to you in relationship- Feeling of respect or disrespect?

ii) What is Naturally Acceptable to you – to nurture or to exploit others?

Is your living the same as your natural acceptance or different?

2. Out of the three basic requirements for fulfillment of your aspirations- right understanding, relationship and physical facilities, observe how the problems in your family are related to each. Also observe how much time & effort you devote for each in your daily routine.

Expected outcome:

1. The students are able to see that verification on the basis of natural acceptance and experiential validation through living is the only way to verify right or wrong, and referring to any external source like text or instrument or any other person cannot enable them to verify with authenticity; it will only develop assumptions.
2. The students are able to see that their practice in living is not in harmony with their natural acceptance most of the time, and all they need to do is to refer to their natural acceptance to remove this disharmony.
3. The students are able to see that lack of right understanding leading to lack of relationship is the major cause of problems in their family and not the lack of physical facilities in most of the cases, while they have given higher priority to earning of physical facilities in their life ignoring relationships and not being aware that right understanding is the most important requirement for any human being.

UNIT 2: Understanding Harmony in the Human Being - Harmony in Myself!

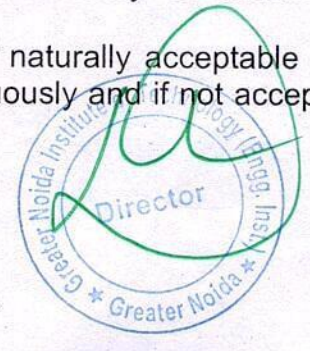
PS 4: List down all your desires. Observe whether the desire is related to Self (I) or Body. If it appears to be related to both, see which part of it is related to Self (I) and which part is related to Body.

Expected outcome: the students are able to see that they can enlist their desires and the desires are not vague. Also they are able to relate their desires to 'I' and 'Body' distinctly. If any desire appears related to both, they are able to see that the feeling is related to I while the physical facility is related to the body. They are also able to see that 'I' and 'Body' are two realities, and most of their desires are related to 'I' and not body, while their efforts are mostly centered on the fulfillment of the needs of the body assuming that it will meet the needs of 'I' too.

PS 5:

1. a. Observe that any physical facility you use, follows the given sequence with time : Necessary & tasteful→ unnecessary & tasteful → unnecessary & tasteless → intolerable

   b. In contrast, observe that any feeling in you is either naturally acceptable or not acceptable at all. If naturally acceptable, you want it continuously and if not acceptable, you do not want it any moment!



2. List down all your activities. Observe whether the activity is of 'I' or of Body or with the participation of both 'I' and Body.
3. Observe the activities within 'I'. Identify the object of your attention for different moments (over a period of say 5 to 10 minutes) and draw a line diagram connecting these points. Try to observe the link between any two nodes.

Expected outcome:

1. The students are able to see that all physical facilities they use are required for a limited time in a limited quantity. Also they are able to see that in case of feelings, they want continuity of the naturally acceptable feelings and they do not want feelings which are not naturally acceptable even for a single moment.
2. the students are able to see that activities like understanding, desire, thought and selection are the activities of 'I' only, the activities like breathing, palpitation of different parts of the body are fully the activities of the body with the acceptance of 'I' while the activities they do with their sense organs like hearing through ears, seeing through eyes, sensing through touch, tasting through tongue and smelling through nose or the activities they do with their work organs like hands, legs etc. are such activities that require the participation of both 'I' and body.
3. The students become aware of their activities of 'I' and start finding their focus of attention at different moments. Also they are able to see that most of their desires are coming from outside (through preconditioning or sensation) and are not based on their natural acceptance.

PS 6:

1. Chalk out programs to ensure that you are responsible to your body- for the nurturing, protection and right utilisation of the body.
2. Find out the plants and shrubs growing in and around your campus. Find out their use for curing different diseases.

Expected outcome: The students are able to list down activities related to proper upkeep of the body and practice them in their daily routine. They are also able to appreciate the plants wildly growing in and around the campus which can be beneficial in curing different diseases.

UNIT 3: Understanding Harmony in the Family and Society- Harmony in Human-Human Relationship

PS 7: Form small groups in the class and in that group initiate dialogue and ask the eight questions related to trust. The eight questions are :

1a. Do I want to make myself happy?
2a. Do I want to make the other happy?
3a. Does the other want to make him happy?
4a. Does the other want to make me happy?

What is the answer?
Intention (Natural Acceptance)

1b. Am I able to make myself always happy?
2b. Am I able to make the other always happy?
3b. Is the other able to make him always happy?
4b. Is the other able to make me always happy?

What is the answer?
Competence

Let each student answer the questions for himself and everyone else. Discuss the difference between intention and competence. Observe whether you evaluate your intention & competence as well as the others' intention & competence.

Expected outcome: The students are able to see that the first four questions are related to our Natural Acceptance i.e. Intention and the next four to our Competence. They are able to note that the intention is always correct, only competence is lacking! We generally evaluate ourselves on the basis of our intention and others on the basis of their competence! We seldom look at our competence and others' intention as a result we conclude that I am a good person and other is a bad person.

PS 8:

1. Observe on how many occasions you are respecting your related ones (by doing the right evaluation) and on how many occasions you are disrespecting by way of under-evaluation, over-evaluation or otherwise evaluation.
2. Also observe whether your feeling of respect is based on treating the other as yourself or on differentiations based on body, physical facilities or beliefs.

Expected outcome: The students are able to see that respect is right evaluation, and only right evaluation leads to fulfillment in relationship. Many present problems in the society are an outcome of differentiation (lack of understanding of respect), like gender biasness, generation gap, caste conflicts, class struggle, dominations through power play, communal violence, clash of isms, and so on so forth. All these problems can be solved by realizing that the other is like me as he has the same natural acceptance, potential and program to ensure a happy and prosperous life for him and for others though he may have different body, physical facilities or beliefs.

PS 9:

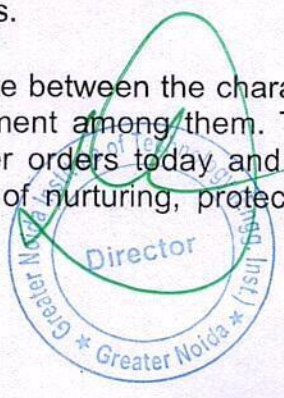
1. Write a note in the form of story, poem, skit, essay, narration, dialogue to educate a child. Evaluate it in a group.
2. Develop three chapters to introduce 'social science- its need, scope and content' in the primary education of children

Expected outcome: The students are able to use their creativity for educating children. The students are able to see that they can play a role in providing value education for children. They are able to put in simple words the issues that are essential to understand for children and comprehensible to them. The students are able to develop an outline of holistic model for social science and compare it with the existing model.

Module 4: Understanding Harmony in the Nature and Existence - Whole existence as Co-existence

PS 10: List down units (things) around you. Classify them in four orders. Observe and explain the mutual fulfillment of each unit with other orders.

Expected outcome: The students are able to differentiate between the characteristics and activities of different orders and study the mutual fulfillment among them. They are also able to see that human beings are not fulfilling to other orders today and need to take appropriate steps to ensure right participation(in terms of nurturing, protection and right utilization) in the nature.



PS 11:

1. Make a chart for the whole existence. List down different courses of studies and relate them to different units or levels in the existence.
2. Choose any one subject being taught today. Evaluate it and suggest suitable modifications to make it appropriate and holistic.

Expected outcome: The students feel confident that they can understand the whole existence; nothing is a mystery in this existence. They are also able to see the interconnectedness in the nature, and point out how different courses of study relate to the different units and levels. Also they are able to make out how these courses can be made appropriate and holistic.

UNIT 5: Implications of the above Holistic Understanding of Harmony at all Levels of Existence

PS 12: Choose any two current problems of different kind in the society and suggest how they can be solved on the basis of natural acceptance of human values. Suggest steps you will take in present conditions.

Expected outcome: The students are able to present sustainable solutions to the problems in society and nature. They are also able to see that these solutions are practicable and draw roadmaps to achieve them.

PS 13:

1. Suggest ways in which you can use your knowledge of Technology/Engineering/ Management for universal human order, from your family to the world family.
2. Suggest one format of humanistic constitution at the level of nation from your side.

Expected outcome: The students are able to grasp the right utilization of their knowledge in their streams of Technology/Engineering/ Management to ensure mutually enriching and recyclable productions systems.

PS 14: The course is going to be over now. Evaluate your state before and after the course in terms of

a. Thought b. Behavior and c. Work d. Realization

Do you have any plan to participate in the transition of the society after graduating from the institute? Write a brief note on it.

Expected outcome: The students are able to sincerely evaluate the course and share with their friends. They are also able to suggest measures to make the course more effective and relevant. They are also able to make use of their understanding in the course for a happy and prosperous society.

Greater Noida Institute of Technology (Engg. Inst.) Director Greater Noida

Reference Material

The primary resource material for teaching this course consists of

a. The text book

R.R Gaur, R Sangal, G P Bagaria, A foundation course in Human Values and professional Ethics, Excel books, New Delhi, 2010, ISBN 978-8-174-46781-2

b. The teacher's manual

R.R Gaur, R Sangal, G P Bagaria, A foundation course in Human Values and professional Ethics – Teachers Manual, Excel books, New Delhi, 2010

c. A set of DVDs containing

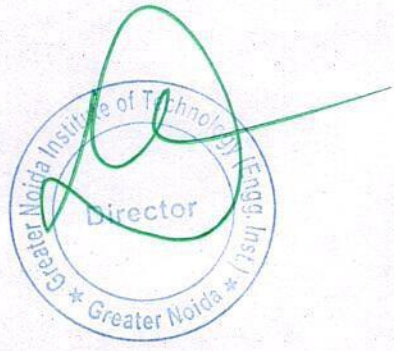
- Video of Teachers' Orientation Program
- PPTs of Lectures and Practice Sessions
- Audio-visual material for use in the practice sessions

In addition, the following reference books may be found useful for supplementary reading in connection with different parts of the course:

1. B L Bajpai, 2004, *Indian Ethos and Modern Management*, New Royal Book Co., Lucknow. Reprinted 2008.
2. PL Dhar, RR Gaur, 1990, *Science and Humanism*, Commonwealth Purblishers.
3. Sussan George, 1976, *How the Other Half Dies,* Penguin Press. Reprinted 1986, 1991
4. Ivan Illich, 1974, *Energy & Equity,* The Trinity Press, Worcester, and HarperCollins, USA
5. Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, William W. Behrens III, 1972, limits to Growth, Club of Rome's Report, Universe Books.
6. Subhas Palekar, 2000, *How to practice Natural Farming,* Pracheen(Vaidik) Krishi Tantra Shodh, Amravati.
7. A Nagraj, 1998, *Jeevan Vidya ek Parichay,* Divya Path Sansthan, Amarkantak.
8. E.F. Schumacher, 1973, *Small is Beautiful: a study of economics as if people mattered*, Blond & Briggs, Britain.
9. A.N. Tripathy, 2003, *Human Values*, New Age International Publishers.

Relevant websites, movies and documentaries

1. Value Education websites, http://uhv.ac.in, *http://www.uptu.ac.in*
2. Story of Stuff, *http://www.storyofstuff.com*
3. Al Gore, *An Inconvenient Truth*, Paramount Classics, USA
4. Charlie Chaplin, *Modern Times*, United Artists, USA
5. IIT Delhi, *Modern Technology – the Untold Story*
6. *Gandhi A., Right Here Right Now, Cyclewala Productions*



9. IRC: SP:68-2005, "Guidelines for Construction of Roller Compacted Concrete Pavements", Indian Roads Congress, New Delhi.
10. IRC: 58-2011, "Guidelines for The design of Plain Jointed Rigid Pavements for Highways", Indian Roads Congress, New Delhi.
11. IRC: 15-2002, "Standard Specifications and Code of Practice for construction of Concrete Roads" Indian Roads Congress, New Delhi.
12. MORTH, "Specifications for Road and Bridge Works", Ministry of Shipping, Road Transport & Highways, Published by Indian Roads Congress, New Delhi.

5.4 NCE – 503 ENVIRONMENTAL ENGINEERING – I

L – 2, T – 1, P -0
CT – 15, TA – 10, ESE – 50

Unit-1

Water supply: Water demands and domestic use, variation in demands; population forecasting by various methods using logistic curve method; basic needs and factors affecting consumption; design period. Sources of water and their characteristics, quality of surface and ground waters; factors governing the selection of a source of water supply; intakes structures and their design, determination of the capacity of impounding reservoir.

Unit-2

Transmission of water: Various types of conduits, capacity and sizes including economical sizes of rising main, structural requirements; laying and testing of water supply pipelines; pipe materials, joints, appurtenances and valves; leakages and control.
Storage and distribution of water: Methods of distribution, pressure and gravity distribution systems, Concept of service and balancing reservoirs.

Unit-3

Capacity of distribution reservoirs; general design guidelines for distribution system, Hardy - Cross method, equivalent pipe method of pipe network analysis. Plumbing systems in buildings and houses: water connections, different cocks and pipe fittings. Wastewater collection: Systems of sanitation and wastewater collection, estimation of wastewater flows and variations in wastewater flows.
Storm water: Collection and estimation of storm water by different formulae.

Unit-4

Flow in sewers: Flow in full and partially full sewers and design of sewers; types of sewers, materials and construction of sewers, joints and sewer appurtenances, layout and construction of sewer lines, small bore sewer systems, Planning of sewerage systems.
Air Pollution: Definition, Sources, Classification of air Pollutants, National ambient

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air quality standards, Lapse rate, Inversion, Plume behavior, Acid rain, Vehicular emission and its standards.

Note: The students should be given a comprehensive problem at the end which requires inputs/ knowledge/ application from all the units of the syllabus. It may be evaluated as a part of TAQ.

Text Books:

1. Peavy, Howard S., Rowe, Donald R and Tchobanoglous, George, "Environmental Engineering" McGraw Hill Education (India) Pvt. Ltd., New Delhi.
2. Metcalf & Eddy "Wastewater Engineering: Treatment & Reuse", Tata Mc-Graw Hill.
3. Garg, S.K.: Water Supply Engineering (Environmental Engineering Vol. – I)
4. Garg, S.K.: Sewage Disposal and Air Pollution Engineering (Environmental Engineering Vol.–II).
5. Seinfeld, J.H. and Pandis, S.N. "Atmospheric Chemistry and Physics: From Air Pollution to Climate Change", John Wiley
6. http://cpcb.nic.in/, National ambient air quality standards, Central Pollution Control Board, Ministry of Environment and Forest, Government of India.

References:

1. Manual on Water Supply and Treatment, C. P. H. E. E. O., Ministry of Urban Development, Government of India, New Delhi
2. Manual on Sewerage and Sewage Treatment, C. P. H. E. E. O., Ministry of Urban Development, Government of India, New Delhi
3. Steel and McGhee: Water Supply and Sewerage
4. Fair and Geyer: Water Supply and Wastewater Disposal
5. Hammer and Hammer Jr.: Water and Wastewater Technology
6. Raju: Water Supply and Wastewater Engineering
7. Rao: Textbook of Environmental Engineering
8. Davis and Cornwell: Introduction to Environmental Engineering
9. Kshirsagar: Water Supply and Treatment and Sewage Treatment Vol. I and II
10. Punmia: Water Supply and Wastewater Engineering Vol. I and II
11. Birdie: Water Supply and Sanitary Engineering
12. Ramalho: Introduction to Wastewater Treatment Processes
13. Davis Mackenzie L., Cornwell, David A., "Introduction to Environmental Engineering" McGraw Hill Education (India) Pvt. Ltd., New Delhi.

6.3 NCE-602: ENVIRONMENTAL ENGINEERING – 2

L – 3, T –1, P-0

CT – 30, TA – 20, ESE - 100

Unit-1

Introduction: Beneficial uses of water and quality requirements, standards. Concepts of water and wastewater quality: physical, chemical and bacteriological examination of water and wastewater, Water borne diseases and their control.

Wastewater characteristics: Temperature, pH, colour and odour, solids, nitrogen and phosphorus, chlorides, toxic metals and compounds, BOD, COD etc. Objectives of treatment: Water and wastewater treatment, unit operations and processes and flow sheets.

Disposal of wastewater on land and in water bodies, Recycling and Reuse of wastewater.

Unit-2

Screen, Sedimentation: Determination of settling velocity, efficiency of ideal sedimentation tank, short circuiting; different classes of settling; design of settling tanks; removal efficiency for discrete and flocculent settling.

Coagulation: Mechanisms of coagulation, coagulants and their reactions, coagulant aids; design of flocculators and clariflocculators.

Adsorption.

Unit-3

Filtration: Theory of filtration; hydraulics of filtration; Carmen - Kozeny and other equations, slow sand, rapid sand and pressure filters, backwashing; design of slow and rapid sand filters.

Disinfection: Requirements of an ideal disinfectant; kinetics of disinfection, various disinfectants, chlorination and practices of chlorination. Water softening and ion exchange: calculation of dose of chemicals.

Unit-4

Wastewater Treatment: Preliminary, primary, secondary and tertiary treatment processes. Primary Treatment: Screens, grit chamber and their design.

Secondary Treatment: Theory of organic matter removal; activated sludge process, design of different units and modifications, extended aeration systems; trickling filters; aerated lagoons, waste stabilization ponds, oxidation ditches, R.B.C. etc.

Anaerobic digestion of sludge.

Unit-5

Design of low and high rate anaerobic digesters and septic tank. Basic concepts of anaerobic contact process, anaerobic filter, anaerobic fixed film reactor, fluidized bed and expanded bed reactors and upflow anaerobic sludge blanket (UASB) reactor.

Other emerging technologies for wastewater treatment: Duckweed pond,

vermiculture, root zone technologies, sequential batch reactor (SBR) etc. Solid waste Management: Definition of solid waste and its classification, Hazardous waste, Prevailing regulations of solid waste management in India. Noise Pollution: Definition, Sources, Prevailing noise standards in India.

Note: The students should be given a comprehensive problem at the end which requires inputs/ knowledge/ application from all the units of the syllabus. It may be evaluated as a part of TAQ.

References:

Text books:

1. Peavy, Rowe and Tchobanoglous: Environmental Engineering, Mc-Graw Hill.
2. Metcalf and Eddy Inc.: Wastewater Engineering
3. Garg: Water Supply Engineering (Environmental Engineering Vol. – I)
4. Garg: Sewage Disposal and Air Pollution Engineering (Environmental Engineering Vol. – II).
5. Davis, M.L. & Cornwell, D.A.: Introduction to Environmental Engineering, Mc-Graw Hill.

Reference books:

1. Manual on Water Supply and Treatment, C. P. H. E. E. O., Ministry of Urban
2. Development, Government of India, New Delhi
3. Manual on Sewerage and Sewage Treatment, C. P. H. E. E. O., Ministry of Urban Development, Government of India, New Delhi
4. Fair and Geyer: Water Supply and Wastewater Disposal
5. Arceivala: Wastewater Treatment for Pollution Control
6. Hammer and Hammer Jr.: Water and Wastewater Technology
7. Raju: Water Supply and Wastewater Engineering
8. Sincero and Sincero: Environmental Engineering: A Design Approach
9. Pandey and Carney: Environmental Engineering
10. Rao: Textbook of Environmental Engineering
11. Davis and Cornwell: Introduction to Environmental Engineering
12. Kshirsagar: Water Supply and Treatment and Sewage Treatment Vol. I and II
13. Punmia: Water Supply and Wastewater Engineering Vol. I and II
14. Birdie: Water Supply and Sanitary Engineering
15. Ramalho: Introduction to Wastewater Treatment Processes
16. Parker: Wastewater Systems Engineering

6.4 NCE-603: CONSTRUCTION TECHNOLOGY & MANAGEMENT

L – 3, T –1, P-0

CT – 30, TA – 20, ESE - 100

Unit-1

Elements of Management and Network Techniques: Project Cycle, Organisation, Planning, Scheduling, Monitoring, updating and Management System in Construction.

Analysis of structures: Truss elements, Analysis of truss problems by direct stiffness method. Analysis of frames and different problems, Different axi-symmetric truss problems. 6

Text Book:

1. The Finite Element method -ZIENKIEWICZ.O.C.Tata McGraw Hill Pub. New Delhi, 2000
2. Finite Element Methods by C R Alaval , PHI
3. Finite Elements in Engineering:- Chandrupatta, et. Al. Prentice Hall of India Pvt. Ltd.,
4. Finite element method with application in engineering by Chandrupatla & Belegundu, Pearson Publication.
5. Finite Element Method Basics concept & Applications by Alawala
6. Fundamental of Finite element Analysis by Devid V. hutton
7. Finite element Methods is fundamentals an application in engineering by Chen Z

Reference Books:

1. Concepts and Applications of Finite Element Analysis: COOK. D. Robert. Malus.S.David, Plesha E. Michel, John wilely & sons 3rd Edn. New York, 2000
2. Finite Element Analysis -C.S. Krishnanmoorthy, Tata McGraw Hill Publishing Co. Ltd, New Delhi,
3. Introduction to the Finite Element method -Desai / ABEL-C.B.S. Publishers & Distributors, New

NCE 033 Environmental Geotechnology

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Unit -1

Introduction, Development of Environmental Geotechnology, Aims, Environmental Cycle and their interaction with geotechnology, Natural environment, cycles of nature, environmental geotechnical problems. 8

Unit -2

Identification and characteristics of contaminated soil, classification, Characteristics of dust, dust in environment, ion-exchange reaction and ion exchange capacity, ion exchange reaction in contaminated soil-water system, Site Investigation for detection of sub-surface contamination 8

Unit -3

Load-environment factor design criteria, soil-structure vs structure soil interaction, load and environmental loads, Bearing capacity based on load footing interaction, lateral earth pressure, pile foundations, environmental factors affecting pile capacity, under-water foundation problems. 8

Unit – 4

Ash Pond and Mine Tailing Impoundments, Geotechnical re-use of waste materials and fills, Grouting and injection process, Grout used for controlling hazardous wastes, Sinkhole: interaction with environment , remedial action 8

Unit -5

Sanitary landfills: Selection of waste disposal sites, Landfills for Municipal and Hazardous wastes, Design of liners: clay and synthetic clay liners, Bearing capacity of foundation on sanitary landfills. 8

Recommended Books:

1. Fang, H. – Introduction to Environmental Geotechnology.
2. Sharma, H. D. and Sangeeta, P.L. - waste containment systems, waste stabilization and landfills: design and evaluation.
3. Koerner, R. M. - Designing with geosynthetics
4. Environmental & Geotechniques by Robert W. Sarsby
5. Geostatics for Environmental & geotechnical Publication Shahrukh Rouhanvy

NCE – 034 Industrial Pollution Control and Environmental Audit

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Unit-1

Industrial wastes & their sources: various industrial processes, sources and types of wastes-solid, liquid, gaseous, noise & radiation emissions. Sources for industrial water usages and various industrial

processes requiring water use and water quality. 8

Unit-2

Processes responsible for deterioration in water quality, Various waste water streams, Control and removal of specific pollutants in industrial wastewaters, e.g., oil and grease, bio-degradable organics, chemicals such as cyanide, fluoride, toxic organics, heavy metals, radioactivity etc. Wastewater re-uses & recycling, concept of zero discharge effluent. 8

Unit-3

Control of gaseous emissions: hood and ducts, tall stacks, particulate and gaseous pollutant control; Solid waste generation and disposal management; Hazardous wastes: definitions, concepts and management aspects; Noise & radiation: generation, control and management. 8

Unit-4

Recent trends in industrial waste management, cradle to grave concept, life cycle analysis, clean technologies; Case studies of various industries, e.g., dairy, fertilizer, distillery, sugar, pulp and paper, iron and steel, metal plating, thermal power plants, etc. 8

Unit-5

Environmental audit: definitions and concepts, environmental audit versus accounts audit, compliance audit, relevant methodologies, various pollution regulations, Introduction to ISO and ISO 14000. 8

Recommended References:

1. *Industrial Wastewater Management Handbook*, Azad, Hardom Singh, Editor-in-Chief, McGraw Hill, New York.
2. *Wastewater Reuse and Recycling Technology-Pollution Technology Review-72*, Culp, Gordan, George Wasner, Robert Williams and Mark , V.Hughes Jr., Noyes Data Corporation, New Jersey.
3. *The Treatment of Industrial wastes.* Edmund, B. Besselieve P.E., McGraw Hill, New York.
4. *Industrial Pollution Control –Issues and Techniques*. Nancy, J. Sell, Van Nostrand Reinhold Co, NY.
5. *Wastewater Engineering: Treatment & Re-use.* Metcalf & Eddy, Tata Mc Graw-Hill.
6. *Industrial Pollution Prevention Handbook.* Shen, T.T., Springer-Verlag, Berlin.
7. *Environmental Engineering.* Pandey, G.N. and Corney, G.C., Tata McGraw Hill, New Delhi
8. *Environment (protection) Act- 1986.* Any authorized & recent publication on Government Acts.
9. Industrial Pollution Control and Environmental Audit by Sanjay Gupta

NCE-035 : Engineering Hydrology

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Unit-1

Introduction: hydrologic cycle, water budget equations, world water balance, Precipitation: Forms of precipitation, measurement, depth-area-duration & intensity- duration- frequency relationships, probable maximum precipitation. 8

Unit-2

Abstraction from Precipitation: Evaporation – process, measurement and estimation; Evapo-transpiration-measurement and estimation; Initial Losses- Interception & Depression storage; Infiltration- process, capacities indices, measurement & estimation 8

Unit-3

Runoff and Hydrographs : Hydrograph, runoff characteristics of stream, Yield, Rainfall-runoff correlations, flow duration curve, mass curve, droughts and floods. Factors affecting flood hydrographs, unit hydrograph and its analysis, s-curve hydrograph, synthetic and instantaneous unit hydrographs. 8

Unit-4

Flood: Rational method, empirical formulae, unit hydrograph method, flood frequency studies, statistical analysis, regional flood frequency analysis, design storm & design flood, risk/reliability and safety factor; Flood Routing: Basic equation, hydrologic storage routing & attenuation, hydrologic channel routing, flood forecasting & control, hydraulic method of flood routing. 8

Unit-5

Text Book

1. Chandrasekaran & Umaparvathi-Statistics for Managers, 1st edition, PHI Learning
2. G C Beri – Business Statistics, 3rd ed, TATA McGrawHill

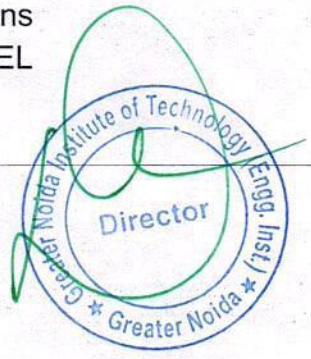
Reference Book

1. Davis , Pecar – Business Statistics using Excel, Oxford
2. Ken Black – Business Statistics, 5th ed., Wiley India
3. Levin and Rubin – statistics for Management, 7th ed., Pearson
4. Lind, Marchal, Wathen – Staistical techniques in business and economics, 13th ed, McGrawHill
5. Newbold, Carlson, Thorne – Statistics for Business and Economics, 6th ed., Pearson
6. S. C.Gupta – Fundamentals of Statistics, Himalaya Publishing
7. Walpole – Probability and Statistics for Scientists and Engineers, 8th ed., Pearson

Course Outcome

1. Students should be able to calculate and interpret measures of central tendency, symmetrical and asymmetrical distribution, patterns.
2. To estimate the time series analysis by least square method and to calculate, understand the significance and usage of index number.
3. To calculate and interpret correlation coefficients & Formulate regression line by identifying dependent and independent variables.
4. Students should understand basic concepts of probability and perform probability theoretical distributions.
5. Understand Estimation Theory and to develop understanding of hypothesis testing concepts & perform various parametric and non parametric tests.

Employable Skills	Measuring Tools
Ability to identify and apply the knowledge of subject practically in real life situations	Exercise Workshop Quiz Classroom Discussions SPSS AND MS EXCEL



ORGANIZATIONAL BEHAVIOR

RMB105

Course Objectives:

To enhance the understanding of the dynamics of interactions between individual and the organization. –

To facilitate a clear perspective to diagnose and effectively handle human behavior issues in Organizations. –

To develop greater insight into their own behavior in interpersonal and group, team, situations.

Course Credit: 36 Hrs

Unit I: (8 Hours)

Introduction to OB: The meaning of OB, Why study organizational behaviour, Fundamentals of individual behaviour. Determinants of Personality, types of personality. Personal effectiveness. Attitudes: Meaning, Types, Components, Theory of attitude formation and attitude change.

Unit II: (8 Hours)

Foundation of Group Behaviour: Group: Meaning, types, group dynamics, group cohesiveness, Meaning of Interpersonal Behaviour & Interpersonal skills, Transactional Analysis, Johari Window, FIRO – B, MBTI

Unit III: (8 Hours)

Motivation: Meaning & definition, Traditional theory of Motivation: Maslow's, Herzberg's, Mc Clelland, Contemporary theories of Motivation: Self Determination Theory, Self Efficacy Theory, Vroom's Expectancy Theory, Equity Theory, Reinforcement Theory, OB MOD. **Perception:** Meaning, process, principles and errors of perception, managerial & behavioural applications of perception.

Unit IV: (8 Hours)

Leadership: What is leadership, types of leaders and leadership styles, traits and qualities of effective leader, trait theory, LSM – Leadership Situational Model, Team Building, Tuckman Model of Team Development.

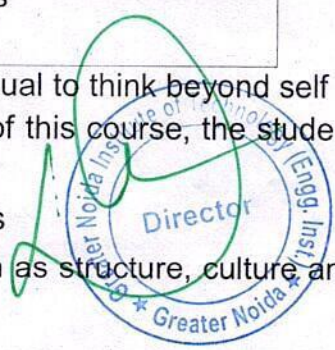
Unit V: (4 Hours)

Organizational Change: Meaning of organizational change, approaches to managing organizational change, creating a culture for change, implementing the change, Kurt Lewin Model of change.

Employable Skills	Measuring Tools
Ability to identify and apply the knowledge of subject practically in real life situations	Exercise Workshop Quiz Classroom Discussions

Course Outcomes: The degree to which one can make an individual to think beyond self is the real outcome of the course. Upon the successful completion of this course, the student will be able to:

1. Analyse the behaviour of individuals and groups in organisations
2. Assess the potential effects of organisational-level factors (such as structure, culture and change) on organisational behaviour.

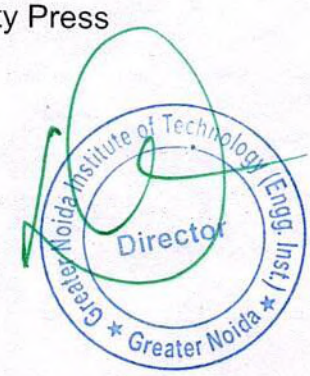


3.Critically evaluate the potential effects of important developments in the external environment (such as globalisation and advances in technology) on organisational behaviour.

4. Analyse organisational behavioural issues in the context of organisational behaviour theories, **Refrences:**

Books:

1. Fred Luthans, —Organizational Behaviourǁ, 12th Edition, McGraw Hill International Edition
2. Stephen P. Robbins, —Organizational Behaviourǁ, 12th Edition, Prentice Hall
3. Aswathappa K, —Organizational Behaviour (Text, Cases and Games)ǁ, Himalaya Publication
4. UdaiPareek, —Organizational Behaviorǁ, Oxford University Press



Business Communication

RMB107

Course Objectives

1: To understand business communication strategies and principles for effective communication in domestic and international business situations.

2: To understand and appropriately apply modes of expression, i.e., descriptive, expositive, narrative, scientific, and self-expressive, in written, visual, and oral communication.

3: To develop the ability to research and write a documented paper and/or to give an oral presentation.

4 : To develop the ability to communicate via electronic mail, Internet, and other technologies for presenting business messages.

5: To understand and apply basic principles of critical thinking, problem solving, and technical proficiency in the development of exposition and argument.

Course Credits 3 **Hours 36 Hrs**

UNIT 1: (8 hrs)

Introduction: Role of communication – defining and classifying communication – purpose of communication – process of communication –characteristics of successful communication – importance of communication in management – communication structure in organization – communication in crisis - barriers to communication. **Unit 2: (7 hrs)**

Oral communication: What is oral Communication – principles of successful oral

communication –what is conversation control – reflection and empathy: two sides of effective oral communication – effective listening – non – verbal communication. Written communication: Purpose of writing – clarity in writing – principles of effective writing – approaching the writing process systematically: The 3X3 writing process for business communication: Pre writing – Writing – Revising – Specific writing features – coherence – electronic writing process.

Unit 3: (7 hrs)

Business letters and reports: Introduction to business letters – writing routine and persuasive letters – positive and negative messages- writing memos – what is a report purpose, kinds and objectives of report writing. Presentation skills: What is a presentation – elements of presentation – designing a presentation. Advanced visual support for business presentation types of visual aid **Unit 4: (7 hrs)**

Employment communication: Introduction – writing CVs – Group discussions – interview skills Impact of Technological Advancement on Business Communication Communication networks – Intranet – Internet – e mails – SMS – teleconferencing – video conferencing .

Unit 5: (7 hrs)

Group communication: Meetings – Planning meetings – objectives – participants – timing – venue of meetings – leading meetings. Media management – the press release press conference – media interviews Seminars – workshop – conferences. Business etiquettes.

Suggested Readings:

1. Bovee & Thill – Business Communication Essentials A Skill – Based Approach to Vital Business English. Pearson.
2. Bisen & Priya – Business Communication (New Age International Publication)
3. Kalkar, Suryavanshi, Sengupta-Business Communication(Orient Blackswan) 4. Business Communication : Skill, Concepts And Applications – P D Chaturvedi, Mukesh Chaturvedi Pearson Education.
5. Asha Kaul, Business Communication, Prentice Hall of India.

EMPLOYABLE SKILLS

Skill	Measurement tool
Understanding of fundamentals of business communication strategies.	Presentations, Quiz
Apply suitable modes of expression.	Role Play followed by discussion
Compose accurate business documents	Group assignment/ Workshop/ Exercise.
Develop skills to use latest technology used for communication	Group project, presentations
Develop group communication skills.	Role play, Debate, Case study analysis

Course Outcomes

Upon successful completion of this course, the student should be able to:

1. Apply business communication strategies and principles to prepare effective communication for domestic and international business situations.
2. Identify ethical, legal, cultural, and global issues affecting business communication. 3. Utilize analytical and problem solving skills appropriate to business communication.
4. Participate in team activities that lead to the development of collaborative work skills. 5. Select appropriate organizational formats and channels used in developing and presenting business messages.
6. Compose and revise accurate business documents using computer technology.
7. Communicate via electronic mail, Internet, and other technologies.
8. Deliver an effective oral business presentation.

NHU-501: Engineering Economics

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Unit-1 Introduction to Engineering Economics and Managerial Economics

Concept of Efficiency, Theory of Demand , Elasticity of Demand, Supply and Law of Supply indifference Curves, Budget Line, Welfare Analysis, Scope of Managerial Economics, Techniques and Applications of Managerial Economics.

Unit-2 Market Structure

Perfect Competitions Imperfect- Monopolistic, Oligopoly, duopoly sorbent features of price determination and various market conditions.

Unit-3 Demand Forecasting and cost Estimation

Characteristics of Forecasts, Forecasting Horizons, Steps to Forecasting, Forecasting Methods, Seasonal Adjustments, Forecasting Performance Measures, Cost Estimation, Elements of cost, Computation of Material Variances Break-Even Analysis.

Unit-4 Management Aspects

Functions of Management, Project Management, Value Engineering, Project Evaluation, Decision Making.

NHU-601: INDUSTRIAL MANAGEMENT

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Unit-I

Introduction: Concept, Development, application and scope of Industrial Management.

Productivity: Definition, measurement, productivity index, types of production system, Industrial Ownership.

Unit-II

Management Function: Principle of Management – Time and motion study, work simplification – process charts and flow diagrams, Production Planning.

Unit-III

Inventory Control: Inventory, Cost, Deterministic Models, Introduction to supply chain management.

Unit-IV

Quality Control: Process control, SQC, Control charts, Single, Double and Sequential Sampling, Introduction to TQM.