Ref: ANITS/Gen-12/Meeting Notice/2014-15   Date: 18-05-2015

MEETING NOTICE

There will be a meeting of the Board of Studies (BOS) of the Departments of ECE, EEE, CSE & IT, Mechanical, Civil, Chemical and Humanities & Sciences on 20-06-2015 (Inauguration: 09:30 AM; Joint BOS meeting: 11:30 AM; BOS meeting in the respective departments: 02:00 PM and concluding Joint Board meeting: 04:00 PM). All the members are requested to attend the meeting without fail. The members are further requested to send proposals (if any) to the Chairman BOS (HoD of the respective department) on or before 30-05-2015.

Agenda of the BOS meeting:

1. Framing, Review and updating the syllabi relating to UG & PG courses of study of the Departments of ECE, EEE, CSE&IT, Mechanical, Civil, Chemical and Humanities & Sciences for the academic year 2015-16.

2. Introduction of choice based credit system (CBCS) from the academic year 2015-16

3. Introduction of new courses of study (if any)

4. Innovative methodologies for Continuous assessment

5. Methodology for innovative teaching and evaluation techniques.

6. Approval of the panel of examiners and paper setters.

7. Methodologies to coordinate Research, Teaching, Extension and other academic activities in the department.

8. Any other item with the permission of the chair

PRINCIPAL

Copy to:

All members of Board of Studies, Departments of ECE, EEE, CSE&IT, Mechanical, Civil, Chemical and Humanities & Sciences

Convener, IQAC
Anil Neerukonda Institute of
Technology & Sciences
Sangivalasa-531 162
Visakhapatnam Dist

Principal
Anil Neerukonda Institute of
Technology & Sciences
Sangivalasa-531 162
Visakhapatnam Dist

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES
(Affiliated to Andhra University, Accredited by NBA, New Delhi)
SANGIVALASA 531 162, BHEEMUNIPATNAM MANDAL, VISAKHAPATNAM DIST

ANITS   DEPARTMENT OF CHEMICAL ENGINEERING & BIOTECHNOLOGY

20-06-2015

Minutes of the meeting of the Board of Studies, Department of Chemical engineering (UG) held on 20th June, 2015 at 2 PM.

Members present:

1.	Prof. S. Subba Rao	Chairman, BOS, Chemical Engineering
2.	Prof. G. Hanumantha Rao	Member
3.	Dr. M. Shiva Naresh	Member
4.	Mr. Ch. Anil	Member
5.	Prof. P.S.T. Sai	Member, Academic council nominee
6.	Dr. K.G. Sudarsan	Member, Industry
7.	Prof. V.S.R.K. Prasad	Member

Resolutions:

1) As per the decision taken in Joint Board of Studies, it is resolved to go in line with other branches for the subject Engineering Chemistry in I/IV B. Tech. II semester.

2) Resolved to offer Physical Chemistry in place of advanced course in I/IV B. Tech. II semester.

3) Resolved to offer Engineering Chemistry Laboratory which is common to all branches in I/IV B. Tech. II semester.

4) Resolved to offer Introduction to Chemical Engineering in place of introductory core engineering course in I/IV B. Tech. II semester and the syllabus is modified as suggested by the experts.

5) Structure for II/IV, III/IV and IV/IV B. Tech. Chemical Engineering and M. Tech. Biotechnology was discussed and the experts felt satisfactory about the same. The experts felt satisfactory with the increase of elective courses in M. Tech. Biotechnology. However, for Chemical Engineering they suggested that Fluid Mechanics course is renamed as Momentum Transfer, Fluid Mechanics laboratory is renamed as Momentum Transfer Laboratory, Mechanical Unit Operations course is

renamed as Mechanical Operations and Mechanical Unit Operations Laboratory is renamed as Mechanical Operations Laboratory.

6) Prof. P.S.T. Sai (IITM, Chennai)felt that one Mass Transfer Laboratory is sufficient instead of two Mass Transfer laboratories I and II. Hence, Mass Transfer Laboratory – 1 of III/IV B. Tech. I semester is combined with Mass Transfer Laboratory – II of III/IV B. Tech. II semester and named as Mass Transfer Laboratory and will be offered in III/IV B. Tech. II semester.

7) Dr. K.G. Sudarsan (Mylan Labs, Hyderabad) suggested that the elective courses relevant to the needs of the industry should be offered.

8) Discussed about the electives offered at various levels and the committee felt satisfactory about the same. However, the Catalysis subject in elective – I will be offered in elective – II and the Pharmaceutical Technology of elective – II will be offered as elective – I. The Biochemical Engineering – I (under elective – III) will be renamed as Fundamentals of Biological Sciences and Biochemical Engineering – II (under elective – IV) will be renamed as Biochemical Engineering.

(Prof. S. Subba Rao)

Chairman, BOS
HEAD,
DEPARTMENT OF CHEMICAL
ENGINEERING & BIOTECHNOLOGY,
ANITS, VISAKHAPATNAM.
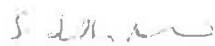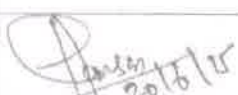
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Principal
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Visakhapatnam

Dept. of Chemical Engineering:

S. No	Name	Designation	Category	Signature of the member
1	Prof. S. Subba Rao	Head, Chemical, ANITS	Chairman, BOS, Chemical	S.A.Rao
2	Dr. G. Hanumantha Rao	Professor, Chemical, ANITS	Member	
3	Dr. M. Shiva Naresh	Asst. Prof., Chemical, ANITS	Member	
4	Mr. Ch. Anil	Asst. Prof., Chemical, ANITS	Member	Ch. Anil
5	Prof. P.S.T. Sai	Professor, Dept. of Chemical Engineering, IIT, Chennai	Academic council nominee	
6	Prof. V. Sujatha	Professor & HoD, Chemical Engg., AUCE (A), VSP	Academic council nominee	
7	Prof. S.V.Naidu	Professor, Dept. of Chemical Engineering, AUCE (A), VSP	University Nominee	
8	Dr. G. Sudarshan	AGM, Mylan Labs, Hyderabad	Industry	20/6/15
9	D. G. Mahesh	Asst.prof, chemical, ANITS	Member	D. G. L

CURRICULUM
First Year I – Semester

CODE	SUBJECT NAME	Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	Credits
CHE111	English	HS	3	1	-	4	40	60	100	3
CHE 112	Engineering Mathematics I	BS	3	1	-	4	40	60	100	3
CHE 113	Engineering Physics	BS	3	1	-	4	40	60	100	3
CHE 114	Engineering Drawing	ES	1	-	3	4	40	60	100	3
CHE115	Environmental Sciences	BS	3	1	-	4	40	60	100	3
CHE116	Engineering Physics Lab	BS	-	-	3	3	50	50	100	2
CHE117	Programming with C Lab	ES	2	-	3	5	50	50	100	3
CHE118	Work Shop	ES	-	-	3	3	50	50	100	2
CHE AC1	NCC/NSS/Sports	AC	-	-	3	3	-	-	-	-
	Total		*15*	*4*	*15*	*34*	*350*	*450*	*800*	*22*

First Year II – Semester

CODE	SUBJECT NAME	Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	Credits
CHE121	Engineering Mathematics II	BS	3	1	-	4	40	60	100	3
CHE122	Engineering Chemistry	BS	3	1	-	4	40	60	100	3
CHE123	Professional Ethics & Human Values	HS	2	1	-	3	100	-	100	2
CHE124	Physical Chemistry	BS	3	1	-	4	40	60	100	3
CHE125	Introduction to Chemical Engineering	PC	3	1	-	4	40	60	100	3
CHE126	Engineering Chemistry Lab	BS	-	-	3	3	50	50	100	2
CHE127	Language Lab	HS	-		3	3	50	50	100	2
CHEAC2	NCC/NSS / Sports	AC	-	-	3	3	-	-	-	-
	Total		*14*	*5*	*9*	*28*	*360*	*340*	*700*	*18*

BS : Basic Sciences; ES : Engineering Sciences; HS : Humanities and Social Sciences; PC : Professional Core;
P.E : Professional Elective; OE : Open Elective; PW : Project Work; IT : Industrial Training; AC : Audit Course

Second Year I – Semester

CODE	SUBJECT NAME	Category	Instruction periods per week				Max.Marks			Credits
			Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	
CHE 211	Engineering Mathematics – III	BS	3	1	-	4	40	60	100	3
CHE 212	Organic Chemistry	BS	3	1	-	4	40	60	100	3
CHE 213	Mechanical Engineering and Strength of Materials	ES	3	1	-	4	40	60	100	3
CHE 214	Basic Electrical & Electronics Engineering	ES	3	1	-	4	40	60	100	3
CHE 215	Chemical Process Calculations	PC	4	1	-	5	40	60	100	4
CHE 216	Organic Chemistry Laboratory	BS	-	-	3	3	50	50	100	2
CHE 217	Mechanical Engineering Laboratory	ES	-	-	3	3	50	50	100	2
Total			16	5	6	27	300	400	700	20

Second Year II – Semester

CODE	SUBJECT NAME	Category	Instruction periods per week				Max.Marks			Credits
			Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	
CHE 221	Engineering Mathematics – IV	BS	3	1	-	4	40	60	100	3
CHE 222	Momentum transfer	PC	4	1	-	5	40	60	100	4
CHE 223	Mechanical Operations	PC	4	1	-	5	40	60	100	4
CHE 224	Process Instrumentation	PC	4	1	-	5	40	60	100	4
CHE 225	Chemical Engineering Thermodynamics - I	PC	4	1	-	5	40	60	100	4
CHE 226	Momentum Transfer Laboratory	PC	-	-	3	3	50	50	100	2
CHE 227	Mechanical Operations Laboratory	PC	-	-	3	3	50	50	100	2
Total			19	5	6	30	300	400	700	23

Third Year I – Semester

CODE	SUBJECT NAME	Category	Instruction periods per week				Max.Marks			Credits
			Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	
CHE 311	Open Elective – I	OE	3	1	-	4	40	60	100	3
CHE 312	Chemical Engineering Thermodynamics – II	PC	4	1	-	5	40	60	100	4
CHE 313	Heat Transfer	PC	4	1	-	5	40	60	100	4
CHE 314	Mass Transfer – I	PC	4	1	-	5	40	60	100	4
CHE 315	Chemical Reaction Engineering – I	PC	4	1	-	5	40	60	100	4
CHE 316	Elective – I	PE	4	1	-	5	40	60	100	4
CHE 317	Heat Transfer Laboratory	PC	-	-	3	3	50	50	100	2
CHE 318	Soft Skills Laboratory	HS	-	-	3	3	100	-	100	2
CHE 319	Quantitative and Verbal Aptitude – I	HS	4	-	-	4	100	-	100	2
Total			27	6	6	39	490	410	900	29

Third Year II - Semester

CODE	SUBJECT NAME	Category	Instruction periods per week				Max.Marks			Credits
			Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	
CHE 321	Mass Transfer – II	PC	4	1	-	5	40	60	100	4
CHE 322	Chemical Reaction Engineering – II	PC	4	1	-	5	40	60	100	4
CHE 323	Material Science and Engineering	PC	4	1	-	5	40	60	100	4
CHE 324	Chemical Technology	PC	4	1	-	5	40	60	100	4
CHE 325	Elective - II	PE	4	1	-	5	40	60	100	4
CHE 326	Mass Transfer Laboratory	PC	-	-	3	3	50	50	100	2
CHE 327	Chemical Reaction Engineering Laboratory	PC	-	-	3	3	50	50	100	2
CHE 328	Chemical Technology Laboratory	PC	-	-	3	3	50	50	100	2
CHE 329	Quantitative and Verbal Aptitude – II	HS	4	-	-	4	100	-	100	2
Total			24	5	9	38	450	450	900	28

Fourth Year I - Semester

CODE	SUBJECT NAME	Category	Instruction periods per week				Max.Marks			Credits
			Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	
CHE 411	Open Elective - II	OE	3	1	-	4	40	60	100	3
CHE 412	Transport Phenomena	PC	4	1	-	5	40	60	100	4
CHE 413	Process Dynamics and Control	PC	4	1	-	5	40	60	100	4
CHE 414	Process Modeling and Simulation	PC	4	1	-	5	40	60	100	4
CHE 415	Elective – III	PE	4	1	-	5	40	60	100	4
CHE 416	Process Dynamics and Control Laboratory	PC	-	-	3	3	50	50	100	2
CHE 417	Process Modeling and Simulation Laboratory	PC	-	-	3	3	50	50	100	2
CHE 418	Seminar	PW	-	-	3	3	100	-	100	4
CHE 419	Industrial Training*	IT	-	-	-	-		100	100	2
	Total		19	5	9	33	400	500	900	29

*There is Industrial Training at the end of III year II Semester for a minimum of three weeks during summer vacation.

Assessment for the Industrial Training is made during IV year I Semester.

Fourth Year II - Semester

CODE	SUBJECT NAME	Category	Instruction periods per week				Max.Marks			Credits
			Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Total Marks	
CHE 421	Chemical Process Economics and Equipment Design	PC	4	1	-	5	40	60	100	4
CHE 422	Elective – IV	PE	4	1	-	5	40	60	100	4
CHE 423	Chemical Process Equipment Design Laboratory	PC	-	-	3	3	50	50	100	2
CHE 424	Project	PW	-	-	6	6	100	100	200	8
CHE 425	MOOCs	OE	-	-	-	-	100	-	100	2
	Total		8	2	9	19	330	270	600	20

LIST OF DEPARTMENT ELECTIVES

ELECTIVE SUBJECTS:

Elective – I

CHE 316(A) Polymer Technology
CHE 316(B) Fertilizer Technology
CHE 316(C) Paper Technology
CHE 316(D) Pharmaceutical Technology
CHE 316(E) Soap and Detergent Technology

Elective – II

CHE 325(A) Petrochemicals
CHE 325(B) Computer Applications in Chemical Engineering
CHE 325(C) Membrane Technology
CHE 325(D) Catalysis
CHE 325(E) Industrial Pollution and Control

Elective – III

CHE 415(A) Petroleum Refinery Engineering
CHE 415(B) Computer Aided Design
CHE 415(C) Nanotechnology
CHE 415(D) Computational Fluid Dynamics
CHE 415(E) Fundamentals of Biological Sciences

Elective – IV

CHE 422(A) Reservoir Engineering
CHE 422(B) Process Optimization
CHE 422(C) Energy Engineering
CHE 422(D) Industrial Management
CHE 422(E) Biochemical Engineering

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M. Tech. Bio Technology

Course structure R-15 regulation

I/II M. Tech. 1ˢᵗ Semester

Code No.	Subject	Periods				Sessional Marks	External Marks	Total Marks	Credits
		Theory	Tutorial	Lab	Total				
MTBT-111	Advanced Microbiology	3	1	-	4	40	60	100	4
MTBT-112	Advanced Biochemistry	3	1	-	4	40	60	100	4
MTBT-113	Advanced Biochemical Engineering	3	1	-	4	40	60	100	4
MTBT-114	Bio Separation Technology	3	1	-	4	40	60	100	4
MTBT-115	Elective-I	4	-	-	4	40	60	100	4
MTBT-116	Elective-II	4	-	-	4	40	60	100	4
MTBT-117	Biotechnology lab-I	-	-	6	6	50	50*	100	2
MTBT-118	Seminar	-	-	-	3	100	-	100	2
	Total	**20**	**4**	**6**	**33**	**390**	**410**	**800**	**28**

*Only internal evaluation

Elective-I: MTBT-115-1 Bio analytical techniques
                  MTBT-115-2 Bioinformatics
                  MTBT-115-3 IPR and Biosafety

Elective-II   MTBT-116-1 Cancer biology
                  MTBT-116-2 Tissue Engineering
                  MTBT-116-3 Animal Biotechnology

I/II M. Tech. 2nd Semester

Code No.	Subject	Periods				Sessional Marks	External Marks	Total Marks	Credits
		Theory	Tutorial	Lab	Total				
MTBT-121	Genetic Engineering	3	1	-	4	40	60	100	4
MTBT-122	Enzyme Engineering	3	1	-	4	40	60	100	4
MTBT-123	Environmental Biotechnology	3	1	-	4	40	60	100	4
MTBT-124	Bio Nanotechnology	3	1	-	4	40	60	100	4
MTBT-125	Elective-III	4	-	-	4	40	60	100	4
MTBT-126	Elective-IV	4	-	-	4	40	60	100	4
MTBT-127	Biotechnology lab-II	-	-	6	6	50	50*	100	2
MTBT-128	Seminar	-	-	-	3	100	-	100	2
	Total	20	4	6	33	390	410	800	28

Elective-III: MTBT-125-1 Industrial Biotech Products
MTBT-125-2 Pharmaceutical Biotechnology
MTBT-125-3 Agricultural Biotechnology

Elective-IV: MTBT-126-1 Biotechnology in Food processing
MTBT-126-2 Bio fuels and Platform chemicals
MTBT-126-3 Bioprocess modelling and simulation

II/II M. Tech. 1st Semester

Code No.	Subject	Sessional Marks	External Marks	Total Marks	Credits
MTBT-211	Project work	100	-	100	10

II/II M. Tech. 2nd Semester

Code No.	Subject	Sessional Marks	External Marks	Total Marks	Credits
MTBT-221	Project work	50	50	100	16

- Project guide will be allotted at the beginning of first semester and the student has to give presentation on his/her project work at the end of first semester and will be evaluated by Research Committee
- At the end of second semester, the students are required to submit their thesis, and final viva-voce examination will be conducted by committee consisting of an external member from reputed institution, HOD, Chairman, BOS, and thesis guide.

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Website : www.anits.edu.in   e-mail : principal@anits.edu.in

Ref: ANITS/Gen-12/BOS Meeting Notice /2018-19   Date: 16th March, 2019

MEETING NOTICE

The fifth meeting of the Board of Studies is scheduled to be held on Saturday the 30th March, 2019 in our college premises at Visakhapatnam as per the following schedule. All the members are requested to attend the meeting.

Agenda:

1. To finalize the course structure of R - 2019
2. To finalize the 1st year syllabus of R - 2019
3. Any other item with the permission of the chair

Common Board of Studies: 09:30 AM, venue: D - 108, Chemical Engineering Block
Individual Departments' Board Meeting: 10:30 AM to 01:00 PM in the respective Depts.

Lunch: 01:00 PM to 02:00 PM
Concluding Session: 02:00 PM

T. Aikue

PRINCIPAL

To:
All the Members of BOS
Special Invitees
Deans, All HoDs
Placement & Library
Master file & BOS file

Convener, IQAC
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DEPARTMENT OF CHEMICAL ENGINEERING

30-03-2019
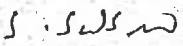
Minutes of the meeting of the Board of Studies, Department of Chemical engineering (UG) held on 30th March, 2019 at 10.30 AM.
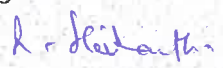
Members present:

1.	Prof. S. Subba Rao	Chairman, BOS, Chemical Engineering
2.	Dr. Ch. Anil	Member
3.	Dr. M. Shiva Naresh	Member
4.	Prof. P.S.T. Sai	Member, Academic council nominee
5.	Prof S. V. Naidu	Member, Andhra University nominee
6.	Dr. A. Srinivasa Kumar	Member, Industry / Research

Resolutions:

1) Structure for B. Tech. Chemical Engineering and Syllabus for I/IV B. Tech. Chemical Engineering I and II Semester were discussed and the experts felt satisfactory about the same.

2) Prof P.S.T Sai amd Prof. S. V. Naidu felt that it would be good to students if Engineering Physics and Engineering Physics lab are shifted from I Sem to II Sem and English and Language lab are shifted from II Sem to I Sem.

3) The external members felt happy about the inclusion of "Biology for Engineers" which is a mandatory course in AICTE and APSCHE syllabus of Chemical Engineering. Prof S. V. Naidu informed the board that they also included "Biology for Engineers" in the curriculum of Dept of Chemical Engineering, Andhra University.

4) The committee felt that "Process Instrumentation" can be removed and combined with Process Dynamics and Control. They also felt that the load for students in final semester should be either minimized or the subjects in eighth semester can be shifted to seventh semester, so that students can focus on internships and projects.

5) The committee suggested to conduct an induction programme for one week before commencement of the I year class work.

(Prof. S. Subba Rao)
Chairman, BOS

Convener, IQAC
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Chemical Engineering - (4 Year B.Tech Programme) - COURSE CURRICULUM R-19

Total Credits:160

I Year Course structure

Semester - I

Code	Title of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE111	Engineering Mathematics – I	BS	3	0	0	1	6	10	40	60	100	3
CHE112	Engineering Physics	BS	3	0	0	1	4	8	40	60	100	3
CHE113	Engineering Chemistry	BS	3	0	0	1	4	8	40	60	100	3
CHE114	Introduction to Chemical Engineering	PC	3	0	0	1	4	8	40	60	100	3
CHE115	Engineering Drawing	ES	2	0	3	1	4	10	40	60	100	3.5
CHE116	Engineering Physics Lab	BS	0	0	3	0	1	4	50	50	100	1.5
CHE117	Engineering Chemistry Lab	BS	0	0	3	0	1	4	50	50	100	1.5
CHE118	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
CHE119	Human Values and Professional Ethics (Mandatory non-credit course)	MC	3	0	0	0	1	4	50	0	50	--
	Total		17	0	12	5	26	60	400	450	850	20

Semester - II

Code	Title of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE121	Engineering Mathematics – II	BS	3	0	0	1	6	10	40	60	100	3
CHE122	Communicative English	HS	3	0	0	1	4	8	40	60	100	3
CHE123	Physical and Analytical Chemistry	BS	3	0	0	1	5	9	40	60	100	3
CHE124	Basic Electrical and Electronics Engineering	ES	3	0	0	1	5	9	40	60	100	3
CHE125	Problem solving with C	ES	3	0	0	1	6	10	40	60	100	3
CHE126	English Language Lab	HS	0	0	3	0	1	4	50	50	100	1.5
CHE127	Problem solving with C Lab	ES	0	0	3	0	3	6	50	50	100	1.5
CHE128	Environmental Science (Mandatory non-credit course)	MC	3	0	0	0	1	4	50	0	50	--
	Total		18	0	6	5	31	60	350	400	750	18

II Year Course structure

Semester - I

Code	Name of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE211	Engineering Mathematics – III	BS	3	0	0	1	6	10	40	60	100	3
CHE212	Organic Chemistry	BS	3	0	0	1	5	9	40	60	100	3
CHE213	Basic Mechanical Engineering	ES	3	0	0	1	5	9	40	60	100	3
CHE214	Chemical Process Calculations	PC	3	0	0	1	6	10	40	60	100	3
CHE215	Mechanical Operations	PC	3	0	0	1	6	10	40	60	100	3
CHE216	Organic Chemistry Lab	BS	0	0	3	0	1	4	50	50	100	1.5
CHE217	Mechanical Operations Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		15	0	6	5	30	56	300	400	700	18

Semester - II

Code	Name of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE221	Engineering Mathematics – IV	BS	3	0	0	1	6	10	40	60	100	3
CHE222	Biology for Engineers	BS	3	0	0	1	3	7	100	--	100	3
CHE223	Momentum Transfer	PC	3	0	0	1	6	10	40	60	100	3
CHE224	Chemical Engineering Thermodynamics – I	PC	3	0	0	1	5	9	40	60	100	3
CHE225	Numerical Methods for Chemical Engineers	PC	3	0	0	1	5	9	40	60	100	3
CHE226	Professional Elective - I	PE	3	0	0	1	3	7	40	60	100	3
CHE227	Momentum Transfer Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CHE228	Computational Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		18	0	6	6	30	60	400	400	800	21

III Year Course structure

Semester - I

Code	Name of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE311	Open Elective - I	OE	3	0	0	1	2	6	40	60	100	3
CHE312	Chemical Engineering Thermodynamics – II	PC	3	0	0	1	4	8	40	60	100	3
CHE313	Heat Transfer	PC	3	0	0	1	4	8	40	60	100	3
CHE314	Mass Transfer - I	PC	3	0	0	1	4	8	40	60	100	3
CHE315	Chemical Technology	PC	3	0	0	1	4	8	40	60	100	3
CHE316	Professional Elective – II	PE	3	0	0	1	3	7	40	60	100	3
CHE317	Quantitative and Verbal Aptitude – I	HS	0	0	3	1	3	7	100	0	100	1.5
CHE318	Heat Transfer Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CHE319	Chemical Technology Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		18	0	9	7	26	60	440	460	900	22.5

Semester - II

Code	Name of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE321	Open Elective - II	OE	3	0	0	1	2	6	40	60	100	3
CHE322	Mass Transfer – II	PC	3	0	0	1	4	8	40	60	100	3
CHE323	Chemical Reaction Engineering – I	PC	3	0	0	1	4	8	40	60	100	3
CHE324	Process Dynamics and Control	PC	3	0	0	1	4	8	40	60	100	3
CHE325	Professional Elective - III	PE	3	0	0	1	3	7	40	60	100	3
CHE326	Professional Elective – IV	PE	3	0	0	1	3	7	40	60	100	3
CHE327	Quantitative Aptitude – II & Soft Skills	HS	0	0	3	2	3	8	100	0	100	1.5
CHE328	Mass Transfer Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CHE329	Process Dynamics and Control Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		18	0	9	8	25	60	440	460	900	22.5

IV Year Course structure

Semester - I

Code	Name of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE411	Open Elective – III	OE	3	0	0	1	2	6	40	60	100	3
CHE412	Chemical Reaction Engineering – II	PC	3	0	0	1	5	9	40	60	100	3
CHE413	Transport Phenomena	PC	3	0	0	1	6	10	40	60	100	3
CHE414	Process Modeling and Simulation	PC	3	0	0	1	5	9	40	60	100	3
CHE415	Chemical Process Economics and Equipment Design	PC	3	0	0	1	6	10	40	60	100	3
CHE416	Chemical Reaction Engineering Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CHE417	Process Modeling and Simulation Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CHE418	Project Phase – I	PR	0	0	3	0	3	6	100	-	100	2
CHE419	Summer Internship *	PR	0	0	0	0	1	1		100	100	1
	Total		**15**	**0**	**9**	**5**	**30**	**59**	**400**	**500**	**900**	**21**

*There is summer Internship (Industrial Training) at the end of III year II Semester for a minimum of three weeks during summer vacation.
Assessment for the same is made during IV year I semester.

Semester - II

Code	Name of the Course	Category	L	T	P	E	O	Total	Max. marks Sess.	Max. marks End. Exam	Total Marks	Credits
CHE421	Open Elective – IV	OE	3	0	0	1	2	6	40	60	100	3
CHE422	Professional Elective – V	PE	3	0	0	1	3	7	40	60	100	3
CHE423	Professional Elective – VI	PE	3	0	0	1	3	7	40	60	100	3
CHE424	Project Phase – II	PR	0	0	9	0	9	18	100	100	200	8
	Total		**9**	**0**	**9**	**3**	**17**	**38**	**220**	**280**	**500**	**17**

* Open Elective can be interdisciplinary/ emerging subjects/ MOOCs that will be decided by the department

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CIVIL

An Autonomous Institute'

Minutes of the meeting of the Board of Studies, Dept. of Civil Engineering (UG) held on 20th June 2015 at 02:00 PM

Members present:

S. No	Name	Designation	Category	Signature of the member
1	Prof. N.D.Narasinga Rao	Head, Civil, ANITS	Chairman, BOS, Civil	
2	Prof. Ramamohan Rao	Professor, Civil, ANITS	Member	
3	Prof. Viswanadham	Professor, Civil, ANITS	Member	
4	Mr. Vikranth	Assoc. Prof., Civil, ANITS	Member	Leave
5	Mr. K.S.S.Krishna Chaitanya	Asst. Prof., Civil, ANITS	Member	
6	Mr. Kiran Kumar	Asst. Prof., Civil, ANITS	Member	
7	Mrs. Sreelakshmi	Asst. Prof., Civil, ANITS	Member	
8	Mr. V. Viswateja	Asst. Prof., Civil, ANITS	Member	
9	Dr. V. Praveen.	Professor, AUCE (A), VSP	Academic council nominee	
10	Dr. E.S. Viswanadham	Professor, IIT, Bombay	Academic council nominee	BVS 20/6/15
11	Prof. Apparao	Professor, Dept. of Civil, IIT, Chennai	University Nominee	Leave
12	Sri. Venkateswara Rao	Joint Director, MES, Indian Navy	Industry	

A. Srikanth
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Minutes of the Board of Studies (Civil Engineering) meeting held on 20/06/2015 at 02.00 PM

AGENDA:

1. Framing, Review and updating the syllabi relating to B.Tech. – (Civil Engineering) for the academic year 2015-16.
2. Introduction of new courses of study (if any)
3. Approval of the panel of examiners and paper setters.
4. Any other item with the permission of the chair

DISCUSSIONS AND RESOLUTIONS:

1. The Draft Course Structure for B.Tech (Civil Engineering) Program under Autonomous Regulations 2015 has been reviewed, modified and approved.

2. Based on suggestions made by the members, and their previous experience, it was resolved to delete the course Introduction to Civil Engineering from I B.Tech II Semester.

3. The detailed syllabus for the course Civil Engineering Materials, offered In I year B.Tech II Semester (Civil Engineering) has been reviewed, modified and approved.

4. Resolved to add a new course on Numerical methods under the title Mathematics for Civil Engineers, in I year B.Tech II Semester.

5. Resolved to request the Department of Mathematics to frame and BoS – Humanities and Sciences to approve syllabus for the subject at Sl.No.4

6. The list of Text Books and References for the Subject in Sl. No.3 has been considered and approved.

7. The panel of paper setters and Examiners for the subject in Sl.No.3 is considered and approved.

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Anil Neerukonda Institute of
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Sangivalasa

Chairman - BOS
Head of the Department
Department of Civil Engineering
Anil Neerukonda Institute of Technology & Sciences
Sangivalasa
VISAKHAPATNAM-531162

ANITS

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)
DEPARTMENT OF CIVIL ENGINEERING

B.TECH. 4 YEAR DEGREE COURSE STRUCTURE
(Effective for the B.Tech. students admitted into first year from the academic year 2015-16)

B.TECH. I Year - I Semester

Code	Subject	Cat.	L	T	P	Total	Sessional Marks	End Exam Marks	Total Marks	Credits
CIV111	English	HS	3	1	-	4	40	60	100	3
CIV112	Engineering Mathematics – I	BS	3	1	-	4	40	60	100	3
CIV113	Engineering Physics	BS	3	1	-	4	40	60	100	3
CIV114	Engineering Drawing	ES	1	-	3	4	40	60	100	3
CIV115	Environmental Sciences	BS	3	1	-	4	40	60	100	3
CIV116	Engineering Physics Lab	BS	-	-	3	3	50	50	100	2
CIV117	Programming with C Lab	ES	2	-	3	5	50	50	100	3
CIV118	Workshop	ES	-	-	3	3	50	50	100	2
CIV AC1	NCC/NSS/Sports	AC	-	-	3	3	-	-	-	-
Total			15	4	15	34	350	450	800	22

B.TECH. I Year – II Semester

Code	Subject	Cat.	L	T	P	Total	Sessional Marks	End Exam Marks	Total Marks	Credits
CIV121	Engineering Mathematics - II	BS	3	1	-	4	40	60	100	3
CIV122	Engineering Chemistry	BS	3	1	-	4	40	60	100	3
CIV123	Professional Ethics & Human Values	HS	2	1	-	3	100	-	100	2
CIV124	Mathematics for Civil Engineers	BS	3	1	-	4	40	60	100	3
CIV125	Civil Engineering Materials	PC	3	1	-	4	40	60	100	3
CIV126	Engineering Chemistry Lab	BS	-	-	3	3	50	50	100	2
CIV127	Language Lab	HS	-	-	3	3	50	50	100	2
CIV AC2	NCC/NSS/Sports	AC	-	-	3	3	-	-	-	-
Total			14	5	9	28	360	340	700	18

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)

B.TECH. 4 YEAR DEGREE COURSE STRUCTURE

B.TECH. II Year – I Semester

Code	Subject	Cat.	Periods				Sessional Marks	End Exam Marks	Total Marks	Credits
			L	T	P	Total				
CIV211	Engineering Mathematics-III	BS	3	1	-	4	40	60	100	3
CIV212	Building Technology	PC	3	1	-	4	40	60	100	3
CIV213	Engineering Geology	PC	3	-	1	4	40	60	100	3
CIV214	Engineering Mechanics	ES	3	1	-	4	40	60	100	3
CIV215	Surveying– I	PC	3	1	-	4	40	60	100	3
CIV216	Strength of Materials	PC	3	1	-	4	40	60	100	3
CIV217	Surveying Field Work-I	PC	-	-	3	3	50	50	100	2
CIV218	Strength of Materials Lab	PC	-	-	3	3	50	50	100	2
Total			18	5	7	30	340	460	800	**22**

B.TECH. II Year - II Semester

Code	Subject	Cat.	Periods				Sessional Marks	End Exam Marks	Total Marks	Credits
			L	T	P	Total				
CIV221	Concrete Technology	PC	3	-	-	3	40	60	100	3
CIV222	Environmental Engineering-I	PC	3	1	-	4	40	60	100	3
CIV223	Fluid Mechanics-I	PC	4	1	-	5	40	60	100	4
CIV224	Surveying – II	PC	3	1	-	4	40	60	100	3
CIV225	Structural Analysis – I	PC	4	1	-	5	40	60	100	4
CIV226	Building Planning & Drawing	PC	1	-	3	4	40	60	100	3
CIV227	Concrete Technology Lab	PC	-	-	3	3	50	50	100	2
CIV228	Fluid Mechanics Lab-I	PC	-	-	3	3	50	50	100	2
CIV229	Surveying Field Work –II	PC	-	-	3	3	50	50	100	2
CIV2210	Technical Seminar *	PC	-	-	2	2	-	-	-	-
Total			18	4	14	36	390	510	900	**26**

*To be evaluated continuously through II year –II semester and III year –I semester and results reported with III year –I semester

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)
DEPARTMENT OF CIVIL ENGINEERING

B.TECH. 4 YEAR DEGREE COURSE STRUCTURE

B.TECH. III Year - I Semester

Code	Subject	Cat.	Periods				Sessional Marks	End Exam Marks	Total Marks	Credits
			L	T	P	Total				
CIV311	Open Elective-I#	OE	3	1	-	4	40	60	100	3
CIV312	Environmental Engineering-II	PC	3	1	-	4	40	60	100	3
CIV313	Reinforced Concrete Structures-I	PC	4	1	-	5	40	60	100	4
CIV314	Structural Analysis – II	PC	3	1	-	4	40	60	100	3
CIV315	Fluid Mechanics-II	PC	4	1	-	5	40	60	100	4
CIV316	Geotechnical Engineering – I	PC	3	1	-	4	40	60	100	3
CIV317	Geotechnical Engineering Lab-I	PC	-	-	3	3	50	50	100	2
CIV318	Environmental Engineering Lab	PC	-	-	3	3	50	50	100	2
CIV319	Fluid Mechanics Lab-II	PC	-	-	3	3	50	50	100	2
CIV3110	Quantitative & Verbal Aptitude -I	HS	4	-		4	100	-	100	2
CIV3111	Technical Seminar *	PC	-	-	2	2	50	-	50	2
Total			24	6	11	41	540	510	1050	30

B.TECH. III Year - II Semester

Code	Subject	Cat.	Periods				Sessional Marks	End Exam Marks	Total Marks	Credits
			L	T	P	Total				
CIV321	Reinforced Concrete Structures-II	PC	3	1	-	4	40	60	100	3
CIV322	Estimation & Costing	PC	3	1	-	4	40	60	100	3
CIV323	Geotechnical Engineering – II	PC	3	1	-	4	40	60	100	3
CIV324	Transportation Engineering-I	PC	3	1	-	4	40	60	100	3
CIV325	Water Resources Engineering – I	PC	3	1	-	4	40	60	100	3
CIV326	Professional Elective – I	PE	3	-	-	3	40	60	100	3
CIV327	Geotechnical Engineering Lab-II	PC	-	-	3	3	50	50	100	2
CIV328	Computer Applications in Civil Engineering Lab-I	PC	-	-	3	3	50	50	100	2
CIV329	Quantitative & Verbal Aptitude – II	HS	4	-		4	100	-	100	2
CIV3210	Soft Skills Lab	HS	-	-	3	3	100	-	100	2
CIV3211	Industrial Training**	PC	-	-	-	-	-	-	-	-
Total			22	5	9	36	540	460	1000	26

Student should take minimum ONE Open Elective from either III year I semester or IV year I semester

* To be evaluated continuously through II year -II semester and III year –I semester and results reported with III year –I semester

** To be conducted after III year-II semester and evaluated in IV year-I semester

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)
DEPARTMENT OF CIVIL ENGINEERING

B.TECH. 4 YEAR DEGREE COURSE STRUCTURE

B.TECH. IV Year - I Semester

Code	Subject	Cat.	Periods				Sessional Marks	End Exam Marks	Total Marks	Credits
			L	T	P	Total				
CIV411	Open Elective-II*	OE	3	1	-	4	40	60	100	3
CIV412	Professional Elective – II	PE	3	-	-	3	40	60	100	3
CIV413	Project Planning & Management	PC	3	1	-	4	40	60	100	3
CIV414	Steel Structures	PC	3	1	-	4	40	60	100	3
CIV415	Water Resources Engineering - II	PC	3	1	-	4	40	60	100	3
CIV416	Transportation Engineering-II	PC	3	-	-	3	40	60	100	3
CIV417	Computer Applications in Civil Engineering Lab-II	PC	-	-	3	3	50	50	100	2
CIV418	Transportation Engineering Lab	PC	-	-	3	3	50	50	100	2
CIV419	Project work-I	PC	-	-	6	6	60	-	60	3
CIV4110	Industrial Training**	PC	-	-	-	-	50	-	50	2
Total			18	4	12	34	450	460	910	27

B.TECH. IV Year – II Semester

Code	Subject	Cat.	Periods				Sessional Marks	End Exam Marks	Total Marks	Credits
			L	T	P	Total				
CIV421	Professional Elective – III	PE	3	-	-	3	40	60	100	3
CIV422	Professional Elective – IV	PE	3	-	-	3	40	60	100	3
CIV423	Engineering Economics & Finance	HS	2	1	-	3	40	60	100	2
CIV424	Irrigation Structures Design & Drawing	PC	1		3	4	50	-	50	2
CIV425	Comprehensive Viva.Voce	PC	-	-	3	3	50	-	50	2
CIV426	Project Work –II	PC	-	-	8	8	60	80	140	8
CIV427	MOOC###	ES	-	-	-	-	-	-	-	2
Total			9	1	14	24	280	260	540	22

Student should take MINIMUM ONE Open Elective during either III year I semester or IV year I semester

** To be conducted after III year-II semester and evaluated in IV year-I semester

Massive Open Online Course: Method of evaluation will be decided by a Departmental Committee constituted for this purpose and students are graded accordingly

R-Seikanth.
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DEPARTMENT OF CIVIL ENGINEERING

Minutes of Board of Studies Meeting held on 30-03-2019
Autonomous Regulations (2019)

Date   :   March 30, 2019
Time   :   11:00 AM
Venue   :   Civil Engineering Department, ANITS

Agenda:
1. To finalize the course structure of R – 2019
2. To finalize the I year syllabus of R – 2019
3. Any other item with the permission of the chair

Members Present:

1. Dr.C.N.V.Satyanarayana Reddy, Professor, Civil, Andhra University
2. Dr. G.Appa Rao, Professor of Civil Engg., IIT Chennai
3. Dr. B.V.S.Viswanadham, Professor of Civil Engg., IIT Bombay
4. Prof. A.Rama Mohana Rao, Professor of Civil Engg.
5. Sri.J.Vikranth, Associate Professor of Civil Engg.
6. Sri T.V.V.Tea, Assistant Professor of Civil Engg.
7. Sri.T.Kiran Kumar, Assistant Professor of Civil Engg.
8. Mrs.P.V.R.Savya, Assistant Professor of Civil Engg.
9. Sri.M.Premeiand, Assistant Professor of Civil Engg.
10. Dr.B.N.D.Narasinga Rao, Professor and HoD, Dept. of Civil Engg. (In Chair)

Minutes:

I. Considered the Four years Course Structure under R-19 Regulations and resolved the following:
1. To move Open Elective Course from III – I to IV – I as there are more subjects in III – I
2. To give 1 extra credit to the subject RCS – II.
3. To approve the revised Course Structure as enclosed.

II. Considered the list of paper setters for I year courses and approved the same. The HoD-Civil is however authorized to add or modify the list when necessary.

(Dr.B.N.D.Narasinga Rao)
Chairman – Board of Studies
Civil Engineering - ANITS

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CIVIL ENGINEERING (4 Year B.Tech Programme) - COURSE CURRICULUM R-19 Total Credits:160

I Year Course structure

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
CIV111	Engineering Mathematics – 1	BS	3	0	0	1	6	10	40	60	100	3
CIV112	Engineering Physics	BS	3	0	0	1	4	8	40	60	100	3
CIV113	Engineering Chemistry	BS	3	0	0	1	4	8	40	60	100	3
CIV114	Building Technology	PC	2	1	0	1	2	6	40	60	100	3
CIV115	Engineering Drawing	ES	2	0	3	1	4	10	40	60	100	3.5
CIV116	Engineering Physics Lab	BS	0	0	3	0	1	4	50	50	100	1.5
CIV117	Engineering Chemistry Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
CIV118	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
CIV119	Human Values and Professional Ethics(Mandatory non-credit course)	MC	3	0	0	0	1	4	50	0	50	-
	Total		16	1	12	5	24	58	400	450	850	20

Semester - II

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam	Total Marks	Credits
			L	T	P	E	O	Tot				
CIV121	Engineering Mathematics – II	BS	3	0	0	1	6	10	40	60	100	3
CIV122	Communicative English	HS	3	0	0	0	2	5	40	60	100	3
CIV123	Engineering Geology	PC	2	0	1	1	2	6	40	60	100	3
CIV124	Engineering Mechanics	ES	2	1	0	1	4	8	40	60	100	3
CIV125	Problem solving with C	ES	3	0	0	1	3	7	40	60	100	3
CIV126	English Language Lab	HS	0	0	3	0	1	4	50	50	100	1.5
CIV127	Problem solving with C- lab.	ES	0	0	3	0	1	4	50	50	100	1.5
CIV128	Environmental Science (Mandatory non credit course)	MC	3	0	0	0	1	4	50	0	50	-
	Total		16	1	7	4	20	48	350	400	750	18

II Year Course structure

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam	Total Marks	Credits
			L	T	P	E	O	Tot				
CIV211	Engineering Mathematics - III	BS	2	1	0	1	2	6	40	60	100	3
CIV212	Building Planning & Design	PC	1	0	2	1	2	6	40	60	100	3
CIV213	Concrete Technology	PC	3	0	0	1	2	6	40	60	100	3
CIV214	Environmental Engineering-I	PC	2	1	0	1	2	6	40	60	100	3
CIV215	Strength of Materials	PC	2	1	0	2	3	8	40	60	100	3
CIV216	Surveying– I	PC	2	1	0	1	2	6	40	60	100	3
CIV217	Environmental Engineering Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CIV218	Strength of Materials Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		12	4	8	7	15	40	340	460	800	21

Semester - II

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam	Total Marks	Credits
			L	T	P	E	O	Tot				
CIV221	Environmental Engineering-II	PC	2	1	0	2	2	7	40	60	100	3
CIV222	Fluid Mechanics-I	PC	2	1	0	2	3	8	40	60	100	3
CIV223	Geotechnical Engineering – I	PC	2	1	0	2	2	7	40	60	100	3
CIV224	Structural Analysis – I	PC	2	1	0	2	3	8	40	60	100	3
CIV225	Surveying II	PC	2	1	0	2	1	6	40	60	100	3
CIV226	Concrete Technology Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CIV227	Geotechnical Engineering Lab-I	PC	0	0	3	0	1	4	50	50	100	1.5
CIV228	Surveying Field Work	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		10	5	9	10	14	48	350	450	800	19.5

III Year Course structure

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam	Total Marks	Credits
			L	T	P	E	O	Tot				
CIV311	Open Elective-I*	OE	2	1	0	1	2	6	40	60	100	3
CIV312	Fluid Mechanics-II	PC	2	1	0	2	4	9	40	60	100	3
CIV313	Geotechnical Engineering – II	PC	2	1	0	2	3	8	40	60	100	3
CIV314	Reinforced Concrete Structures-I	PC	2	1	0	2	2	7	40	60	100	3
CIV315	Structural Analysis – II	PC	2	1	0	2	3	8	40	60	100	3
CIV316	Fluid Mechanics Lab-I	PC	0	0	3	0	1	4	50	50	100	1.5
CIV317	Quantitative Aptitude-I & Verbal Aptitude-I	HS	0	0	3	1	3	7	100	0	100	1.5
CIV318	Geotechnical Engineering Lab-II	PC	0	0	3	0	1	4	50	-	100	1.5
CIV319	Technical Seminar**	PR	0	0	3	0	1	4				
Total			10	5	12	10	20	57	400	350	800	19.5

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam	Total Marks	Credits
			L	T	P	E	O	Tot				
CIV321	Open Elective-II*	OE	2	1	0	1	2	6	40	60	100	3
CIV322	Estimation & Costing	PC	2	1	0	2	3	8	40	60	100	3
CIV323	Reinforced Concrete Structures-II	PC	2	1	0	2	3	8	40	60	100	3
CIV324	Transportation Engineering-I	PC	2	1	0	1	2	6	40	60	100	3
CIV325	Water Resources Engineering – I	PC	2	1	0	2	2	7	40	60	100	3
CIV326	Computer Applications in Civil Engineering Lab-I	PC	0	0	3	0	2	5	50	50	100	1.5
CIV327	Quantitative Aptitude-II & Soft Skills	HS	0	0	3	2	3	8	100	0	100	1.5
CIV328	Fluid Mechanics Lab-II	PC	0	0	3	0	1	4	50	50	100	1.5
CIV329	Technical Seminar**	PR	0	0	3	0	1	4	50	-	50	1.5
Total			10	5	12	10	19	56	450	400	850	21

* Open Elective can be either inter-disciplinary subject/emerging subject/MOOCs as decided by the Department.

* Summer Internship to be conducted after III year-II semester and evaluated in III year-I semester

** To be evaluated continuously through III year-I semester and III year-II semester and results reported in III year-II semester

IV Year Course structure

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam	Total Marks	Credits
			L	T	P	E	O	Tot				
CIV411	Open Elective-III*	OE	2	1	0	1	2	6	40	60	100	3
CIV412	Steel Structures	PC	2	1	0	2	3	8	40	60	100	3
CIV413	Project Planning & Management	PC	2	1	0	1	2	6	40	60	100	3
CIV414	Professional Elective – I	PE	3	0	0	1	2	6	40	60	100	3
CIV415	Professional Elective – II	PE	2	1	0	2	3	8	40	60	100	3
CIV416	Computer Applications in Civil Engineering Lab-II	PC	0	0	3	0	2	5	50	50	100	1.5
CIV417	Transportation Engineering Lab	PC	0	0	3	0	1	4	50	50	100	1.5
CIV418	Project work-I	PR	0	0	6	0	6	12	100	-	100	4
CIV419	Summer Internship*	PR	0	0	0	0	4	4	100		100	1
	Total		11	4	12	7	25	59	500	400	900	23

Semester - II

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam	Total Marks	Credits
			L	T	P	E	O	Tot				
CIV421	Open Elective - IV*	OE	2	1	0	1	2	6	40	60	100	3
CIV422	Professional Elective – III	PE	2	1	0	1	2	6	40	60	100	3
CIV423	Professional Elective – IV	PE	2	1	0	1	2	6	40	60	100	3
CIV424	Professional Elective – V	PE	2	1	0	1	2	6	40	60	100	3
CIV425	Project Work –II	PR	0	0	9	0	9	18	50	50	100	6
	Total		8	4	9	4	17	42	210	290	500	18

* Summer Internship to be conducted after III year II semester and evaluated in IV year-I semester

= Open Electives can be either Interdisciplinary, subjects emerging subject MOOCs as decided by the Department

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ANITS

Department of Civil Engineering

List of Elective courses approved in the BoS meeting held on 19/06/2021 for the academic year 2021-2022.

Regulation: R19

IV B.Tech – I Semester
Professional Elective – I (CIV 414)
1. Water Recourses Engineering -- II
2. Solid Waste Management
3. Repair and Rehabilitation of structures
4. Urban Planning and Smart Cities

Professional Elective – II (CIV 415)
1. Transportation engineering - II
2. Disaster Management
3. Advanced Geotechnical Engineering
4. Soil Dynamics and Machine Foundations

IV.B.Tech – II Semester
Professional Elective – III (CIV 422)
1. Pre stressed concrete
2. Advanced Fluid Mechanics
3. Advanced Design of structures
4. Ground Improvement Techniques

Professional Elective – IV (CIV 423)
1. Water shed management
2. Advanced Building Construction
3. Earthquake Engineering.
4. Environment Impact Analysis
5. Air Pollution Control

Professional Elective – V (CIV 424)
1. Optimization Techniques
2. RS & GIS applications in Civil Engineering
3. Bridge Engineering
4. Introduction to Finite Element Methods
5. Engineering Economics and Finance

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Minutes of the meeting of the Joint Board of Studies, Dept. of CSE & IT (UG&PG) held on 20th June 2015 at 02:00 PM

Members present:

S. No	Name	Designation	Category	Signature of the member
1	Prof. S. Satapathy	HoD, CSE, ANITS	Chairman, BOS, ~~Mechanical~~ CSE &IT	
2	Prof. Ch. suresh	Prof., IT, ANITS	Member	
3	Mr. S. Ravn Kumar	Assoc. Prof., CSE, ANITS	Member	
	Mrs. Sur A Yadwad	Sr. Asst. Prof., CSE, ANITS	Member	
5	Mrs. S. Japrada	Sr. Asst. Prof., CSE, ANITS	Member	
6	Mr. Ch. shadri Rao	Asst. Prof., CSE, ANITS	Member	
7	Mrs. Pre Parwekar	Asst. Prof., CSE, ANITS	Member	
8	Mrs. B. eena	Asst. Prof., & I/c. HoD, IT, ANITS	Member	
9	Mr. Ch. emudu Naidu	Sr. Asst. Prof., IT, ANITS	Member	
10	Mrs. N. rada	Asst. Prof., IT, ANITS	Member	On leu.
11	Mr. N. itya Sundar	Asst. Prof., IT, ANITS	Member	
12	Dr. B. jhi	Professor, Dept. of CSE, NIT, Rourkela	Academic council nominee	
13	Dr. RajMall.	Prof. Dept. of CSE, IIT, Kharagapur	Academic council nominee	
14	Dr. P. ltha Bhaskari	Professor, Dept. of Computer Science & Systems Engineering, AU college of Engg. For Women, VSP	University Nominee	Leave of Absence
15	Dr. C. agesh	Manager, Campus Connect, Infosys Technologies, Hyd.	Industry	Leave of Absence
16	Mr. T. am Vamsi,	IBM, Chennai	Alumni	Leave of Absence
17	Sri. S. Lhminarayana	Former Regional Officer, AICTE	Special Invitee	
18	Sri. K.V. Rajeswara Rao	General Manager, IT, Vizag Steel Plant	Special Invitee	Leave of Absence
19	Prof. VSVN Raju	Dir (R&D), ANITS	Member	

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Minutes of Board of Studies Meeting

Department of CSE & IT

Minutes of the Meeting:

Subject: Board of Studies-Bachelor of Technology (CSE &IT)
 Board of Studies-Master of Technology (CST)
Venue: CSE Lab-2, Dept. of CSE
Date: 20-6-2015
Agenda: Design of Curriculum (B. Tech & M. Tech)

The following members were present in the Meeting:

- Prof. (Dr.) Suresh Chandra Satapathy- Chairperson-Board of Studies- CSE& IT ANITS.
- Prof. Ch. Suresh- Member-IT-ANITS.
- Prof. KVSVN Raju-Member- Director(R&D)-ANITS.
- Mr. S. Ratan Kumar-Member- CSE-ANITS.
- Mrs. SunitaYadwad-Member- CSE-ANITS.
- Mrs. S. Jaya Prada-Member- CSE-ANITS.
- Mr. Ch. SeshadriRao-Member- CSE-ANITS.
- Mrs. PriteeParwekar-Member- CSE-ANITS.
- Mrs. B. Meena-Member-I/c HOD-IT-ANITS.
- Mr. Ch. Demudu Naidu-Member-IT-ANITS.
- Mr. N. AdityaSundar- Member-IT-ANITS.
- Dr. B. Majhi-Professor-Academic Council Nominee-Dept. of CSE-NIT Rourkela.
- Dr. Rajib Mall-Professor-Academic Council Nominee-Dept. of CSE-IIT Kharagpur.
- Dr. S. Lakshminarayana- Special Invitee-Principal Scientist-CSIR-NIO, Vizag.

Apologies:

- Mrs. N. Sarada-Member-Dept. of IT-ANITS.
- Dr. P. LalithaBhaskari-Professor-University Nominee-Dept. of CS&SE-AUCOEW.
- Dr. C. Sri Nagesh-Industry-Manager- Campus Connect-Infosys Technologies, Hyd.
- Mr. T. ShyamVamsi-Alumni-IBM Chennai.
- Sri KVSS RajeswaraRao-Special Invitee- GM-IT-Vizag Steel Plant, VSP.

Chairman BOS officially welcomed all the members for the first common BOS B. Tech CSE, B. Tech-IT and M. Tech-CST. He also informed the house, the absents of other members due to some unavoidable circumstances.

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Mr. S. Ratan Kumar, Assoc. Prof., Dept. of CSE, Mrs. B. Meena, I/c HOD- Dept. of IT and Mrs. PriteeParwekar M. Tech coordinator, Dept. of CSE presented the draft curriculum of B. Tech CSE, B. Tech IT and M. Tech CST respectively. Members deliberated on the design of the curriculum for the first year based on resolutions taken on the joint board of studies of all departments and also the entire course structure. Following are the resolutions taken after a rigorous discussion/ debate among the members.

Suggestions form BOS for B. Tech CSE Curriculum:

- The teaching of C language should be interactive in nature comprising of explanation and practice. Members suggested having 'lab' for C language with 1 tutorial/ theory and 3 periods of practice with total of 3 credits. The lab should be named as "Introduction to Programming Language with C".
- Basic electronics Engineering to be brought to I year I Sem.
- Remove the title EDC and change the title of Basic Electronics Engineering Lab to "Digital Electronics Lab".
- Discrete Mathematical Structures to be placed in II year I semester.
- Rename the title of "Data structures" to "Data Structures and Algorithms" with some fundamental concepts of complexity analysis and basics of algorithms.
- Introduce OOPs through Java in II year I semester with JAVA Lab.
- Place "Computer Organization" to II Year II semester.
- Remove "System Programming" as no industry is now inclined to Assembly Programming.
- A specific course on "Data Communication" must be included for B. Tech CSE in one semester and "Computer Networks" should be in other higher semester.
- To encourage students in hardware parts committee suggested introducing a hardware lab in II year II semester in which student would develop understanding of internal parts of a system and would be able to assemble, de-assemble and troubleshoot a system at ease.
- Committee suggested including a course on web technologies which must be interactive in nature.
- An advanced course on computer architecture should be introduced in III year I semester and a text book by Hennessey & Patterson must be adopted.
- Change the title of" Case Tools Lab" to "Software Engineering Lab".
- Introduce "Object Oriented Analysis and Design" instead of "Data Warehousing and Data Mining" and suggested DWDM as an elective.
- "Security Engineering" title to be renamed to "Cryptography ad Network Security".
- Due to recent guidelines from UGC online course (MOOC) to be introduced in final year 2nd semester with credits. Department should identify the list of such courses and plan for assessment and encourage students to obtain certification for the same.

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- List of electives should be further enriched with few more recent technologies/ subjects. Students may be advised to create their interest in a particular domain by choosing all six electives offered in B. Tech CSE in successive semesters.

Resolution:

With the above modifications and suggestions the B. Tech CSE 4year complete structure are approved by BOS. However, any further modification can be taken up in next BOS meet.

Suggestions form BOS for M. Tech CST Curriculum:

- No changes made to electives list but suggested to have 2 electives each in each of the semester making two pools of electives that are connected to each other.
- High Performance Computing to move to I year II semester.
- Approved the idea of having Seminar and Technical writing in I year II semester.
- Due to recent guidelines from UGC online course (MOOC) to be introduced in 2nd semester with credits. Department should identify the list of such courses and plan for assessment and encourage students to obtain certification for the same.

Resolution:

With the above modifications and suggestions the M. Tech CST, 2year complete structure are approved by BOS. However, any further modification can be taken up in next BOS meet.

Suggestions form BOS for B. Tech IT Curriculum:

- Remove "Python Programming".
- A specific course on "Data Communication" must be included for B. Tech IT in one semester (II year I semester) and "Computer Networks" should be in other higher semester.
- Have "Computer Networks Lab" instead of "Data Communication & Computer Networks lab" in II year II semester.
- Remove "Micro Processor and Interfacing" and its associated lab and introduce "Information System Design" course in place of these.
- Place "Computer Graphics Lab" in II year II semester
- Remove "Software Engineering" course from III year I semester.
- Push "Unix and Network Programming" and its associated lab to III year I semester from III Year II semester.
- Introduce "Mobile Computing" and "Mobile Computing Programming Lab" in place of Unix and Network Programming.

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- Due to recent guidelines from UGC online course (MOOC) to be introduced in final year 2nd semester with credits. Department should identify the list of such courses and plan for assessment and encourage students to obtain certification for the same.
- List of electives should be further enriched with few more recent technologies/ subjects. Students may be advised to create their interest in a particular domain by choosing all six electives offered in B. Tech IT in successive semesters.
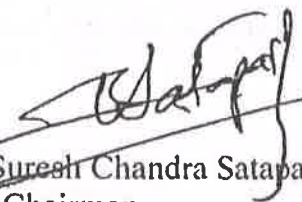
Resolution:

With the above modifications and suggestions the B. Tech IT 4year complete structure are approved by BOS. However, any further modification can be taken up in next **BOS** meet.
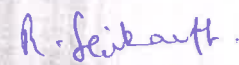
The BOS also verified the model question paper of both B. Tech (CSE & IT) and M. Tech (CST) and approved the same.

The BOS members approved the list of panel members for paper setting and advised to add more names to the list in future.

Mrs. B. Meena, I/c HOD Dept. of IT, thanked all the external members and internal members for their valuable time and suggestions.

Prof. (Dr) Suresh Chandra Satapathy
Chairman
BOS-CSE&IT

Dr. S C SATAPATHY
Ph.D.(CS)
Sr. Member IEEE
Prof & Head, Dept. of CSE
Anil Neerukonda Institute of Technology & Sciences
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ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY && SCIENCES(Autonomous)
DEPARTMENT OF COMPUTER SCIENCE && ENGINEERING
B TECH COURSE PROPOSED SCHEME UNDER AUTONOMOUS SYSTEM 2015-16

1ˢᵗ Year Semester I

CODE NO	SUBJECT NAME	Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Credits
CSE111	ENGLISH	HS	3	1	-	4	40	60	3
CSE112	ENGINEERING MATHEMATICS-I	HS	3	1	-	4	40	60	3
CSE113	ENGINEERING CHEMISTRY	BS	3	1	-	4	40	60	3
CSE114	PROFESSIONAL ETHICS &HUMAN VALUES	HS	2	1	-	3	100	-	2
CSE115	BASIC ELECTRONICS ENGINEERING	ES	3	1	-	4	40	60	3
CSE116	ENGINEERING CHEMISTRY LAB	BS	-	-	3	3	50	50	2
CSE117	PROGRAMMING WITH C-LAB	PC	-	2	3	5	50	50	3
CSEAC1	NCC/NSS/SPORTS	AC	-	-	3	3	-	-	0
Total			**14**	**7**	**9**	**30**	**360**	**340**	**19**

1ˢᵗ Year Semester II

CODE NO	SUBJECT NAME	Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Credits
CSE121	ENGNEERING MATHEMATICS-II	HS	3	1	-	4	40	60	3
CSE122	ENGINEERING PHYSICS	BS	3	1	-	4	40	60	3
CSE123	ENVIRNOMENTAL SCIENCES	HS	3	1	-	4	40	60	3
CSE124	ENGINEERING DRAWING	ES	1	-	3	4	40	60	3
CSE125	ELEMENTS OF ELECTRICAL ENGINEERING	ES	3	1	-	4	40	60	3
CSE126	ENGINEERING PHYSICS LAB	BS	-	-	3	3	50	50	2
CSE127	LANGUAGE LAB	HS	-	-	3	3	50	50	2
CSE128	OBJECT ORIENTED PROGRAMMING WITH C++ --LAB	PC	-	2	3	5	50	50	3
CSE129	WORKSHOP	ES	-	-	3	3	50	50	2
CSEAC2	NCC/NSS/SPORTS	AC	-	-	3	3	-	-	0
Total			**13**	**6**	**18**	**37**	**400**	**500**	**24**

BS: Basic Sciences; ES : Engineering Sciences; HS : Humanities and Social Sciences; PC : Professional Core;
PE : Professional Elective; OE : Open Elective; PW : Project Work; IT : Industrial Training; AC : Audit Course

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY && SCIENCES(Autonomous)
DEPARTMENT OF COMPUTER SCIENCE && ENGINEERING
B TECH COURSE PROPOSED SCHEME UNDER AUTONOMOUS SYSTEM 2015-16
2nd Year Semester I

CODE NO	SUBJECT NAME	Instruction periods per week					Max Marks		Credits
		Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	
CSE211	DATA STRUCTURES & ALGORITHMS	PC	4	1	-	5	40	60	4
CSE212	DIGTAL LOGIC DESIGN	ES	3	1	-	4	40	60	3
CSE213	DISCRETE MATHEMATICAL STRUCTURES	HS	4	1	-	5	40	60	4
CSE214	OBJECT ORIENTED PROGRAMMING WITH JAVA	PC	3	1	-	4	40	60	3
CSE215	PROBABILITY, STATISTICS & QUEUING THEORY	HS	4	1	-	5	40	60	4
CSE216	DATA STRUCTURES LAB	PC	-	-	3	3	50	50	2
CSE217	DIGITAL ELECTRONICS LAB	ES	-	-	3	3	50	50	2
CSE218	JAVA LAB	PC	-	-	3	3	50	50	2
	Total		**18**	**5**	**9**	**32**	**350**	**450**	**24**

2nd Year Semester II

CODE NO	SUBJECT NAME	Instruction periods per week					Max Marks		Credits
		Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	
CSE221	DATA COMMUNICATIONS	PC	4	1	-	5	40	60	4
CSE222	MICROPROCESSORS AND INTERFACING	PC	3	1	-	4	40	60	3
CSE223	OPERATING SYSTEMS	PC	4	1	-	5	40	60	4
CSE224	COMPUTER ORGANIZATION	PC	4	1	-	5	40	60	4
CSE225	FORMAL LANGUAGES AND AUTOMETA THEORY	PC	4	1	-	5	40	60	4
CSE226	MICROPROCESSOR & INTERFACING LAB	PC	-	-	3	3	50	50	2
CSE227	OPERATING SYSTEMS LAB	PC	-	-	3	3	50	50	2
CSE228	HARDWARE LAB	PC	-	-	3	3	50	50	2
	Total		**19**	**5**	**9**	**33**	**350**	**450**	**25**

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B TECH COURSE PROPOSED SCHEME UNDER AUTONOMOUS SYSTEM 2015-16

3rd Year Semester I

CODE NO	SUBJECT NAME	Instruction periods per week					Max Marks		Credits
		Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	
CSE311	OPEN ELECTIVE I	OE	3	1	-	4	40	60	3
CSE312	DATA BASE MANAGEMENT SYSTEMS	PC	4	1	-	5	40	60	4
CSE313	COMPUTER GRAPHICS	PC	4	1	-	5	40	60	4
CSE314	COMPUTER NETWORKS	PC	4	1	-	5	40	60	4
CSE315	DESIGN & ANALYSIS OF ALGORITHMS	PC	4	1	-	5	40	60	4
CSE316	DATA BASE MANAGEMENT SYSTEMS LAB	PC	-	-	3	3	50	50	2
CSE317	COMPUTER NETWORK LAB	PC	-	-	3	3	50	50	2
CSE318	SOFT SKILLS LAB	HS	-	-	3	3	100	-	2
CSE319	QUANTATIVE& VERBAL APTITUDE I	HS	4	-	0	4	100	-	2
	Total		**23**	**5**	**9**	**37**	**500**	**400**	**27**

3rd Year Semester II

CODE NO	SUBJECT NAME	Instruction periods per week					Max Marks		Credits
		Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	
CSE321	COMPILER DESIGN	PC	4	1	-	5	40	60	4
CSE322	SOFTWARE ENGINEERING	PC	4	1	-	5	40	60	4
CSE323	WEB TECHNOLOGIES	PC	4	1	-	5	40	60	4
CSE324	COMPUTER ARCHITECTURE	PC	4	1	-	5	40	60	4
CSE325	PROFESSIONAL ELECTIVE I	PE	4	1	-	5	40	60	4
CSE326	OPEN SOURCE TECHNOLOGIES LAB	PC	-	-	3	3	50	50	2
CSE327	SOFTWARE ENGINEERING LAB/MINI PROJECT LAB	PC	-	-	3	3	50	50	2
CSE328	QUANTATIVE & VERBAL APTITUDE II	HS	4	-	0	4	100	-	2
	Total		**24**	**5**	**6**	**35**	**400**	**400**	**26**

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY && SCIENCES(Autonomous)

DEPARTMENT OF COMPUTER SCIENCE && ENGINEERING

B TECH COURSE PROPOSED SCHEME UNDER AUTONOMOUS SYSTEM 2015-16

4th Year Semester I

CODE NO	SUBJECT NAME	Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Credits
CSE411	OPEN ELECTIVE II	OE	3	1	-	4	40	60	3
CSE412	CRYPTOGRAPHY & NETWORK SECURITY	PC	3	1	-	4	40	60	3
CSE413	OBJECT ORIENDTED ANALYSIS & DESIGN	PC	4	1	-	5	40	60	4
CSE414	PROFESSIONAL ELECTIVE II	PE	4	1	-	5	40	60	4
CSE415	PROFESSIONAL ELECTIVE III	PE	4	1	-	5	40	60	4
CSE416	CRYPTOGRAPHY & NETWORK SECURITY LAB	PC	-	-	3	3	50	50	2
CSE417	INDUSTRIAL TRAINING & SEMINAR	IT	-	-	-	0	100	-	2
CSE418	PROJECT I	PW			6	6	100	0	4
	Total		**18**	**5**	**9**	**32**	**450**	**350**	**26**

4th Year Semester II

CODE NO	SUBJECT NAME	Category	Lecture	Tutorial	Lab	Total	Sessional Marks	Semester End Marks	Credits
CSE421	PROFESSIONAL ELECTIVE- IV	PE	4	1	-	5	40	60	4
CSE422	PROFESSIONAL ELECTIVE – V	PE	4	1	-	5	40	60	4
CSE423	PROJECT II	PW	-	-	12	12	100	100	8
CSE424	MOOC	OE	-	-	-	0	-	-	2
	Total		**8**	**2**	**12**	**22**	**180**	**220**	**18**

· Note: **Total Credits: 189**

1 **Academic activities** I- Paper Presentation, Participation in Programming/coding contests.
2 **Academic activities II-** Certificate of participation related to Skill Development Programs/Advanced Topics
3 These courses can be completed from 2nd year to 4th year. It is student choice only.
4 Any one departmental elective, any one Open Elective and MOOC are Optional courses.
5 The total no of credits required to award B Tech Degree :180
6 Students having minimum 8 CGPA with no backlog till 3rd Yr 2nd semester can take advance Departmental elective (IV or/and V) in 4th Yr 1st Semester in place of OPEN ELECTIVE II having registered for OPEN ELECTIVE I in 3rd Yr 1st Semester. Department will conduct extra classes as per the requirement . This is only for students having Internship order. Students should consult the department and decision of Head of the Department is final in this regard.

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY && SCIENCES(Autonomous)
DEPARTMENT OF COMPUTER SCIENCE && ENGINEERING
B TECH COURSE PROPOSED SCHEME UNDER AUTONOMOUS SYSTEM 2015-16

Semester	Elective Number	Subjects
3rd year 2nd Semester	PROFESSIONAL ELECTIVE-I CSE325	• CSE 325(A)Smart Systems Design & Programming • CSE 325(B)High Performance Computing • CSE325(C)Principles Of Programming Languages • CSE325(D)Advanced Data Structures • CSE325(E)Digital Image Processing • CSE325(F)No SQL Data Bases
4th year 1st Semester	PROFESSIONAL ELECTIVE-II CSE414	• CSE414(A)Mobile Computing • CSE414(B)Distributed Operating Systems • CSE414(C)Neural Networks & Deep Learning • CSE414(D)Human Computer Interaction • CSE414(E)Pattern Recognition
4th year 1st Semester	PROFESSIONAL ELECTIVE-III CSE415	• CSE415(A)Computer vision • CSE415(B)Embedded Systems • CSE415(C)Data Ware Housing & Data Mining • CSE415(D)Machine Learning • CSE415(E)Cyber Security
4th year 2nd Semester	PROFESSIONAL ELECTIVE-IV CSE421	• CSE421(A)Client Server Computing • CSE421(B)Augmented Reality • CSE421(C)Semantic Web • CSE421(D)Big Data Analytics • CSE421(E)Information Security & Auditing • CSE421(F)Social Network Analysis
4th year 2nd Semester	PROFESSIONAL ELECTIVE-V CSE422	• CSE422(A)Network Management • CSE422(B)Fuzzy Computing • CSE422(C)Wireless Sensor Networks • CSE422(D) Cloud Computing • CSE422(E) Computing Optimization
3rd year 1st Semester	OPEN ELECTIVE -1 CSE311	• CSE311(A)File Systems & Data Bases • CSE311(B)Computer Operating Systems • CSE311(C)Fundamentals of Computer Networks • CSE311(D)Concepts of Object Oriented Programming
4th year 1st Semester	OPEN ELECTIVE -II CSE411	• CSE411(A)Introduction to Soft Computing • CSE411(B)Web Design • CSE411(C)Cloud Computing • CSE411(D)Fundamentals of Digital Image Processing

R. Srikanth.

Convener,
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Visakhapatnam Dist

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES
'UGC AUTONOMOUS'

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ANITS

Minutes of the meeting of the Board of Studies Dept. of CSE(UG&PG)

30.08.2014

Members Present:

Dept. Of CSE

S. No	Name	Designation	Category	Signature of the member
1	Dr. R.Sivaranjani	HoD&Professor, CSE, ANITS	Chairman, BOS, CSE	
2	Mr. S. Ratan Kumar	Assoc. Prof., CSE, ANITS	Member	
3	Dr. Tusarkanti Mishra	Assoc. Prof., CSE, ANITS	Member	
4	Dr M Rama Krishna Murthy	Assoc. Prof., CSE, ANITS	Member	
5	Dr J Hyma	Assoc. Prof., CSE, ANITS	Member	
6	Mr. B.Ravi kiran	Asst. Prof., CSE, ANITS	Member	
7	Dr K S Deepthi	Asst. Prof., CSE, ANITS	Member	
8	Mr. G.Jagadish	Asst. Prof., CSE, ANITS	Member	
9	Mr. Ch. SeshadriRao	Asst. Prof., CSE, ANITS	Member	
10	Mr. K. Suresh	Asst. Prof., CSE, ANITS	Member	
11	Dr. B. Majhi	Professor, CSE, NIT,Rourkela	Academic Council Nominee	
12	Dr. Rajib Mall	Professor, CSE, IIT Khargpur	Academic Council Nominee	
13	Dr. B Prajna	Professor, CSE,AUCE	University Nominee	
14	Dr. KVSVN RAJU	Professor Department of Computer Science And Engineering. GVPC Degree & PG Courses	Member	
15	Mr. T. Shyam Vamsi	IBM ,Chennai	Alumni	
16	Dr. S. Raja,	Scientist "G",Associate Director,NSTL, Visakhapatnam	Industry	
17	Roy Antony Arnold George Charles	Manager, Campus Connect, Infosys Technologies ,Hyd	Industry	

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Minutes of Board of Studies Meeting

Department of CSE

Minutes of the Meeting:

Subject	:	Board of Studies-Bachelor of Technology (CSE)
Venue	:	LAB 2, Dept. of CSE
Date	:	30-3-2019
Agenda	:	1)Overview of B Tech Course Structure –R15
		2)Overview of B Tech Course Structure –R19
		3)Revising Course Outcomes –R15

The following members were present in the meeting:

- Dr. R.Sivaranjani, HoD&Professor, CSE, ANITS Chairman, BOS, CSE
- Mr. S. Ratan Kumar ,Assoc. Prof., CSE, ANITS,Member
- Dr. Tusarkanti Mishra. Assoc. Prof., CSE, ANITS,
- Dr M Rama Krishna Murthy,Assoc. Prof., CSE, ANITS,Member
- Dr J Hyma,Assoc. Prof., CSE, ANITS,Member
- Mr. B.Ravi kiran,Sr.Asst. Prof., CSE, ANITS Member
- Dr K S Deepthi,Asst. Prof., CSE, ANITS, Member
- Mr. G.Jagadish, Asst. Prof., CSE, ANITS, Member
- Mr. Ch. SeshadriRao.Asst. Prof., CSE, ANITS .Member
- Mr. K. Suresh,Asst. Prof., CSE, ANITS ,Member
- Dr. B Prajna,Professor, CSE,AUCE University Nominee
- Dr. KVSVN RAJU,Professor,Department of Computer Science And Engineering.GVPC Degree & PG Courses Member
- Mr. T. Shyam Vamsi,IBM ,Chennai,Alumni,Industry
- Dr. S. Raja,Scientist "G",Associate Director,NSTL, Visakhapatnam ,Industry
- Roy Antony Arnold George Charles,Manager, Campus Connect,,Infosys Technologies ,Hyd, Industry

Apologies:

1. Dr.B.Majhi, Professor,CSE, NIT-Rourkela, Academic Council Nominee

2. Dr.Rajib Mall, Professor, CSE, IIT-Kharagpur, Academic Council Nominee

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Chairman BOS officially welcomed all the members for the BOS B. Tech-CSE, B. Tech. She also informed the house, the absents of other members due to some unavoidable circumstances.

Mr. S. Ratan Kumar, Assoc. Prof., Dept. of CSE presented the details of B Tech Program offered in R15 and Proposed B Tech Course Structure in R19. Members deliberated on the design of the curriculum based on resolutions taken on the joint board of studies of all departments.

Following the resolutions are taken after a rigorous discussion, debate among the members.

All members approved vision & mission statements, program educational objectives (PEO),program outcomes (PO) and program specific outcomes(PSO) of CSE department.

SUMMARY OF BTECH COURSE

- The overall summary of the B.Tech course is presented for feedback.
- Comparison of CSE curriculum with APSCHE(2019), AICTE-(2018) proposals is displayed.
- The total credits offered is 160 as per the guidelines of AICTE,APSCHE.

SEMESTER- I

- No changes mentioned

SEMESTER- 2

- No changes mentioned

SEMESTER- 3
- Introduction of JAVA theory & Lab in place of C++ theory & Lab to accommodate Python programming in Semester 5.

SEMESTER- 4
- Placing OS theory & Lab in place of JAVA theory & Lab

SEMESTER- 5
- Introduction of Python Programming theory & Lab in place of OS Theory & Lab.
- Python syllabus must be framed including Python Structured Programming & Object Oriented Programming Concepts

SEMESTER- 6
- OS must be completed before DBMS.
- STL in C++ (Version 17) must be introduced in CP (Competitive Programming Course)

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SEMESTER-7
- In WT course HTML5,CSS3 must be covered.
- Project 1 deliverables must include SRS and Test Cases.
- Application oriented projects must be encouraged along with Research Oriented Projec

SEMESTER-8
- Electives presented in Tracks was well taken by the members.
- Freedom must be given in selecting any elective from any track.
- Introduction of User Experience Design in Track 1
- Introduction of Business Intelligence and Social Network Analysis in Track 2.
- Introduction of IOT in Track 3.
- Introduction of Edge Computing in Track 4.
- Introduction of Dockers in the course " Virtual machine Essentials".
- Introduction of Gamification in Track 5.
- If possible introduce "Digital Signal Processing " Course .
- No repetition must be there in any of the tracks.

All members approved the revised course outcomes for the courses offered in R15.

Finally the meeting ended with vote of thanks BOS chairman.

Prof. (Dr) R Sivaranjaı
Chairma
BOS-CS

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Visakhapatnam Dis

ANITS-CSE CURRICULUM – REGULATIONS –R19

Semester - I

Course Code	Title of the course	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE111	EngineeringMathematics – I	BS	3	0	0	3	40	60	100	3
CSE112	Communicative English	HS	3	0	0	3	40	60	100	3
CSE113	Basic Electronics Engineering	ES	3	0	0	3	40	60	100	3
CSE114	Digital Logic Design	ES	3	0	0	3	40	60	100	3
CSE115	PROBLEM SOLVING WITH C	ES	3	0	0	3	40	60	100	3
CSE116	English Language Lab	HS	0	0	3	3	50	50	100	1.5
CSE117	Problem solving with C – lab.	ES	0	0	3	3	50	50	100	1.5
CSE118	Environmental Science (Mandatory non-credit course)	BS	3	0	0	3	50	-	50	-
Total			18	0	6	24	350	400	750	18

Semester - II

Course Code	Title of the course	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE121	Engineering Mathematics – II	BS	3	0	0	3	40	60	100	3
CSE122	Engineering Physics	BS	3	0	0	3	40	60	100	3
CSE123	Engineering Chemistry	BS	3	0	0	3	40	60	100	3
CSE124	ELEMENTS OF ELECTRICAL ENGINEERING	ES	3	0	0	3	40	60	100	3
CSE125	Engineering Drawing	ES	2	0	3	5	40	60	100	3.5
CSE126	Engineering Physics Lab.	BS	0	0	3	3	50	50	100	1.5
CSE127	Engineering Chemistry Lab.	BS	0	0	3	3	50	50	100	1.5
CSE128	Engineering Workshop	ES	0	0	3	3	50	50	100	1.5
CSE129	Human Values and Professional Ethics(Mandatory non-credit course)	HS	3	0	0	3	50	0	50	-
Total			17	0	12	29	400	450	850	20

Semester - I

CODE	SUBJECT NAME	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE 211	DATA STRUCTURES&ALGORITHMS	PC	2	1	0	3	40	60	100	3
CSE 212	COMPUTER ORGANIZATION	PC	3	0	0	3	40	60	100	3
CSE 213	JAVA PROGRAMMING	PC	3	0	0	3	40	60	100	3
CSE 214	DATA COMMUNICATION	PC	3	0	0	3	40	60	100	3
CSE 215	DISCRETE MATHEMATICAL STRUCTURES	BS	3	0	0	3	40	60	100	3
CSE 216	DESIGN THINKING & PRODUCT INNOVATION	ES	2	0	2	4	40	60	100	3
CSE 217	*JAVA PROGRAMMING LAB*	*PC*	0	0	*3*	3	*50*	*50*	*100*	1.5
CSE 218	*DATA STRUCTURES LAB USING C*	*PC*	0	0	*3*	3	*50*	*50*	*100*	1.5
Total			16	1	8	25	340	460	800	21

Semester - II

(Tentative)

CODE	SUBJECT NAME	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE 221	PROBABILITY , STATISTICS AND QUEUING THEORY	BS	3	0	0	3	40	60	100	3
CSE 222	MICROPROCESSOR & INTERFACING	PC	2	1	0	3	40	60	100	3
CSE 223	OPERATING SYSTEMS	PC	3	0	0	3	40	60	100	3
CSE 224	COMPUTER NETWORKS	PC	3	0	0	3	40	60	100	3
CSE 225	COMPUTER GRAPHICS	PC	2	1	0	3	40	60	100	3
CSE 226	FORMAL LANGUAGES AND AUTOMETA THEORY	PC	2	1	0	3	40	60	100	3
CSE 227	*MICRO PROCESSOR INTERFACING LAB*	*PC*	0	0	*3*	3	*50*	*50*	*100*	1.5
CSE 228	*OPERATING SYSTEM LAB*	*PC*	0	0	*3*	3	*50*	*50*	*100*	1.5
Total			15	3	6	24	340	460	800	21

III Year Course structure – CSE

Semester - I

CODE	SUBJECT NAME	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE 311	OPEN ELECTIVE-I*	OE	3	0	0	3	40	60	100	3
CSE 312	PROFESSIONAL ELECTIVE -I	PE	3	0	0	3	40	60	100	3
CSE 313	COMPETITIVE PROGRAMMING	PC	2	1	0	3	40	60	100	3
CSE 314	COMPILER DESIGN	PC	2	1	0	3	40	60	100	3
CSE 315	DATA BASE MANAGEMENT SYSTEMS	PC	3	0	0	3	40	60	100	3
CSE 316	DESIGN & ANALYSIS OF ALGORITHMS	PC	2	1	0	3	40	60	100	3
CSE 317	QA&VA-I	HS	0	0	3	3	100	0	100	1.5
CSE 318	COMPETITIVE PROGRAMMING LAB	PC	0	0	3	3	50	50	100	1.5
CSE 319	DATA BASE MANAGEMENT SYSTEMS LAB	PC	0	0	3	3	50	50	100	1.5
CSE 320	Constitution of India & - Intellectual Property Rights	HS	2	0	0	2	50	0	50	-
	Total		17	3	9	29	490	460	950	22.5

III Year Course structure – CSE

Semester - II

CODE	SUBJECT NAME	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE 321	OPEN ELECTIVE -II*	OE	3	0	0	3	40	60	100	3
CSE 322	PROFESSIONAL ELECTIVE -II	PE	3	0	0	3	40	60	100	3
CSE 323	PROFESSIONAL ELECTIVE -III	PE	3	0	0	3	40	60	100	3
CSE 324	OBJECT ORIENTED SOFTWARE ENGINEERING	PC	3	0	0	3	40	60	100	3
CSE 325	WEB TECHNOLOGIES	PC	2	1	0	3	40	60	100	3
CSE 326	CRYPTOGRAPHY AND NETWORK SECURITY	PC	3	0	0	3	40	60	100	3
CSE 327	QA-II& SoftSkills	HS	0	0	3	3	100	0	100	1.5
CSE 328	OBJECT ORIENTED SOFTWARE ENGINEERING LAB	PC	0	0	3	3	50	50	100	1.5
CSE 329	WEB TECHNOLOGIES LAB	PC	0	0	3	3	50	50	100	1.5
	Total		17	1	9	27	440	460	900	22.5

IV Year Course structure – CSE

Semester - I

CODE	SUBJECT NAME	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE 411	OPEN ELECTIVE -III*	OE	3	0	0	3	40	60	100	3
CSE 412	PROFESSIONAL ELECTIVE -IV	PE	3	0	0	3	40	60	100	3
CSE 413	PROFESSIONAL ELECTIVE -V	PE	3	0	0	3	40	60	100	3
CSE 414	MANAGEMENT PRINCIPLES	HS	3	0	0	3	40	60	100	3
CSE 415	DATA ANALYTICS	PC	2	1	0	3	40	60	100	3
CSE 416	CRYPTOGRAPHY & NETWORK SECURITY LAB	PC	0	0	3	3	50	50	100	1.5
CSE 417	DATA ANALYTICS LAB	PC	0	0	3	3	50	50	100	1.5
CSE 418	PROJECT -I	PR	0	0	3	3	100	0	100	2
CSE 419	SUMMER INTERNSHIP-INDUSTRY	PR	0	0	0	0	100	0	100	1
Total			14	1	9	24	500	400	900	21

Semester - II

CODE	SUBJECT NAME	Category	Periods				Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	Total				
CSE 421	OPEN ELECTIVE -IV*	OE	3	0	0	3	40	60	100	3
CSE 422	PROFESSIONAL ELECTIVE -VI/MOOC	PE	3	0	0	3	40	60	100	3
CSE 423	PROJECT -II	PR	0	0	9	9	100	100	200	8
Total			6	0	9	15	180	220	400	14

Total Credits   **160**

*Open Elective can be Inter Department Disciplinary Cour~ Emerging Courses or MOOC. Final decision will b~ aken by the department.

	List of Professional Electives
PE1 3rd Yr-Sem -1	•CSE 312(A)Embedded Systems •CSE312(B)Advanced Data Structures •CSE312(C)Digital ImageProcessing .CSE 312(D)Artificial Intelligence
PE2 3rd Yr-Sem -2	•CSE322(A)Human Computer Interaction •CSE 322(B) Mobile Computing .CSE322(C)No SQL Data Bases .CSE322(D)Data warehousing and Data mining
PE3 3rd Yr-Sem -2	•CSE323(A)Distributed Operating Systems • CSE323(B)Smart Systems Design & Programming • CSE323(C)Machine Learning • CSE323(D)Computer vision
PE4 4th Yr-Sem -1	.CSE412(A)Natural Language Processing • CSE412(B)Bioinformatics .CSE 412(C)High Performance Computing • CSE415(D)Neural Networks
PE5 4th Yr-Sem -1	.CSE413(A)IOT • CSE413(B)AugmentedReality • CSE413(C)Semantic Web • CSE413(D)Multimedia & Animation
PE6 4th Yr-Sem -2	.CSE422(A) Deep Learning • CSE422(B)Cyber Security • CSE422(C)Social Network Analysis • CSE422(D) Cloud Computing

	OPEN ELECTIVES
OE 1 3rd Yr-Sem -1	CSE 311Python Programming Essentials (as emerging subject) Python Programming Basics
OE2 3rd Yr-Sem -2	FILE SYSTEMS & DATA BASES COMPUTER OPERATING SYSTEMS FUNDAMENTALS OF COMPUTER NETWORKS
OE3 4th Yr-Sem -1	will be decided next year
OE4 4th Yr-Sem -2	will be decide next year

Ref: ANITS/Gen-12/Meeting Notice/2014-15   Date: 18-05-2015

MEETING NOTICE

There will be a meeting of the Board of Studies (BOS) of the Departments of ECE, EEE, CSE & IT, Mechanical, Civil, Chemical and Humanities & Sciences on 20-06-2015 (Inauguration: 09:30 AM; Joint BOS meeting: 11:30 AM; BOS meeting in the respective departments: 02:00 PM and concluding Joint Board meeting: 04:00 PM). All the members are requested to attend the meeting without fail. The members are further requested to send proposals (if any) to the Chairman BOS (HoD of the respective department) on or before 30-05-2015.

Agenda of the BOS meeting:

1. Framing, Review and updating the syllabi relating to UG & PG courses of study of the Departments of ECE, EEE, CSE&IT, Mechanical, Civil, Chemical and Humanities & Sciences for the academic year 2015-16.
2. Introduction of choice based credit system (CBCS) from the academic year 2015-16
3. Introduction of new courses of study (if any)
4. Innovative methodologies for Continuous assessment
5. Methodology for innovative teaching and evaluation techniques.
6. Approval of the panel of examiners and paper setters.
7. Methodologies to coordinate Research, Teaching, Extension and other academic activities in the department.
8. Any other item with the permission of the chair

PRINCIPAL

Copy to:

All members of Board of Studies, Departments of ECE, EEE, CSE&IT, Mechanical, Civil, Chemical and Humanities & Sciences

R. Srikanth.
Convener, IQAC
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'An Autonomous Institute'

Minutes of the meeting of the 1st Board of Studies, Dept. of ECE (UG& PG) held on
20th June 2015 at 02:00 PM

Members present:

S. No	Name	Designation	Category	Signature of the member
1	Prof. K.Murali Krishna	Head, ECE, ANITS	Chairman, BOS, ECE	
2	Dr. V. Rajya Lakshmi	Assoc. Prof., ANITS	Member	
3	Mr. S. Balaramamurthy	Assoc. Prof., ANITS	Member	
4	Mrs. M.Syamala	Asst. Prof., ANITS	Member	
5	Mrs. P.S.M.Veena	Asst. Prof. ECE, ANITS	Member	
6	Mr. D.Anilprasad	Asst. Prof. ECE, ANITS	Member	
7	Mrs. M Nirmala	Asst. Prof. ECE, ANITS	Member	
8	Mr. J. Bhaskara Rao	Asst. Prof. ECE, ANITS	Member	
9	Mrs. D.Nagamani	Asst. Prof. ECE, ANITS	Member	
10	Mrs. G. Anoosha	Asst. Prof. ECE, ANITS	Member	
11	Mrs. K.Deepa	Asst. Prof. ECE, ANITS	Member	
12	Mr. A.Sivakumar	Asst. Prof. ECE, ANITS	Member	
13	Mr. A.Lakshminarayana	Asst. Prof. ECE, ANITS	Member	
14	Mr. B.Chandramouli	Asst. Prof. ECE, ANITS	Member	
15	Mr. Vijaya Kumar Sahu	Asst. Prof. ECE, ANITS	Member	
16	Prof. P Ramakrishna Rao,	Advisor, ANITS	Academic council nominee	
17	Dr. P.Rajesh Kumar,	Prof. & HoD, AUCE(A), VSP	Academic council nominee	
18	Prof. I. Mallikarjuna Prasad	Dept. of ECE, JNTU, Kakinada	University Nominee	
19	Dr. K.J. Ranga Rao,	Scientist - F, & HoD, RCI Division (Retd.), NSTL	Industry	
20	Mr. B.Ramesh,	Asst. Prof., Raghu Engg. College, VSP	Alumni	
21	Dr. Shankar Prakriya	Professor, IIT, Delhi	Special invitee	

R. Srikanth.
Convener, IQAC
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Anil Neerukonda Institute of
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Board of Studies - Dept. of ECE (UG& PG)

S. No	Name	Designation	Category	Affiliation
1	Prof. K. Murali Krishna	Head	Chairman, BOS, ECE	ANITS
2	Dr. V. Rajya Lakshmi	Associate Professor	Member	ANITS
3	Mr. S. Balaramamurthy	Associate Professor	Member	ANITS
4	Mrs. M. Syamala	Assistant Professor	Member	ANITS
5	Mrs. P.S.M.Veena	Assistant Professor	Member	ANITS
6	Mr. D. Anilprasad	Assistant Professor	Member	ANITS
7	Mrs. M. Nirmala	Assistant Professor	Member	ANITS
8	Mr. J. Bhaskara Rao	Assistant Professor	Member	ANITS
9	Mrs. D. Nagamani	Assistant Professor	Member	ANITS
10	Mrs. Ch. Anoosha	Assistant Professor	Member	ANITS
11	Mrs. K. Deepa	Assistant Professor	Member	ANITS
12	Mr. A. Sivakumar	Assistant Professor	Member	ANITS
13	Mr. A. Lakshminarayana	Assistant Professor	Member	ANITS
14	Mr. B. Chandramouli	Assistant Professor	Member	ANITS
15	Mr. Vijaya Kumar Sahu	Assistant Professor	Member	ANITS
16	Prof. P. Ramakrishna Rao,	Former HoD, NIT, Trichy	Academic council nominee	Advisor, ANITS
17	Dr. P. Rajesh Kumar,	Prof. & HoD, AUCE(A), VSP	Academic council nominee	AUCE (A), Visakhapatnam
18	Prof. A. Mallikarjuna Prasad	Dept. of ECE,	University Nominee	JNTU, Kakinda
19	Dr. K. S. Ranga Rao,	Scientist - F, & HoD, RCI Division (Retd.)	Industry	NSTL, VSP
20	Mr. B. Ramesh,	Asst. Prof.,	Alumni	Raghu Engg. College, Visakhapatnam
21	Dr. Shankar Prakriya	Professor	Special invitee	IIT, Delhi

Term: The term of the above body is for two years
Frequency of the meetings: At least once in a year

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Minutes of the meeting of the Board of Studies, Dept. of ECE (UG & PG) held on 20th June 2015 at 02:00PM in the ECE Department.

The following are the Minutes of the meeting of the Board of Studies, Dept. of ECE (UG & PG) held on 20th June 2015 at 02:00PM.

AGENDA:

1. Framing, Review and updating the syllabi relating to B.Tech (UG), M.Tech (PG) Courses of study of the Department of ECE for the academic year 2015-2016.
2. Introduction of new courses of study (if any).
3. Methodology for innovative teaching and evaluation techniques.
4. Panel of examiners and paper setters.
5. Methodologies to coordinate Research, Teaching and other academic activities in the Department.
6. Any other item with the permission of the chair.

Prof.K.Murali Krishna, Chairman, BOS welcomed all the members present in the meeting and presented the 4 year B.Tech., 2 year M.Tech autonomous scheme and syllabus for the academic year 2015-2016 and requested members of BOS for open discussion and resolved the following.

1. **Framing, Review and updating the syllabi relating to B.Tech (UG), M.Tech (PG) Courses of study of the Department of ECE for the academic year 2015-2016:**

    a. BOS chairman requested Mr.Anil Prasad to present the scheme for the 4 year B.Tech(UG) and contents of the course Basic Electronics Engineering in 1st semester, Prof. P. Ramakrishna Rao advised to limit two text books for this course. Prof. A. Mallikarjuna Prasad suggested to change 5th unit name as IC Technology in this course.

    b. Prof. P. Ramakrishna Rao, Prof.P.Rajesh Kumar, Prof. A. Mallikarjuna Prasad Dr.Shankar Prakriya, Dr.K.S Ranga Rao , internal members and chairman finalized the course Electromagnetic Field Theory & Transmission Lines to be in Sem-IV to reduce the semester gap from physics to this course, Antennas & Wave Propagation in Sem-V, ,Microwave engineering in Sem-VI, VLSI

Design in Sem-VII, Cellular & Mobile Communications in Professional Elective-II , Electronic Measurements and Instrumentation in Sem-VIII and Biomedical Signal Processing in Professional Electric - III

c. Chairman proposed new course Communication System Engineering consists of analog communication 60% and Digital Communications 40% and all the members accepted and resolved.

d. BOS chairman requested Mr.Anil Prasad to present the scheme and syllabi for the 2year M.Tech (PG).

Prof. P. Ramakrishna Rao, Prof.P.Rajesh Kumar, Prof. A. Mallikarjuna Prasad Dr.Shankar Prakriya, Dr.K.S Ranga Rao , internal members and chairman finalized the enclosed scheme and syllabus.

2. **Introduction of new courses of study (if any):**

The list of courses introduced

S.No	Stream/ Subject area	Courses
1.	Engineering sciences	1. Basic Electronics Engineering
2.	Professional Core	1. Solid state Electronic devices 2. Electronic Circuits and Analysis 3. Electronic Circuits 4. Electronic Circuits and Analysis Laboratory 5. Electronic Circuits Laboratory 6. Simulation Laboratory 7. Communication system engineering 8. IC Laboratory 9. Advanced Microprocessors Microcontrollers & Embedded Systems 10. Microprocessors and Microcontrollers lab 11. Digital Image Processing 12. Electronic Measurements and Instrumentation 13. Signal and Image Processing laboratory
3.	Professional Elective-I	1. Analog IC Design 2. Electronic design and automation theory
	Professional Elective-II	1. Advanced Digital Signal Processing 2. Radar Signal Processing 3. Satellite Communications & GPS
	Professional Elective-III	1. Phased array systems 2. Bio-medical Signal processing 3. VLSI Signal processing
	Professional Elective-IV	1. Signal-processing algorithms and architecture 2. Design of testability 3. Wireless sensor networks
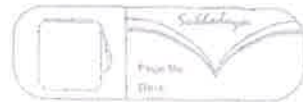
3. **Methodology for innovative teaching and evaluation techniques:**

    a. Teaching using NPTEL Video lectures, LCD Projectors, internet based, simulation / animation based, Web enabled content.

    b. Splitting of sessionals marks in the form of Assignments, class tests, quiz test, surprise test, group discussion based on choice.

4. **Panel of examiners and paper setters:**

    Expert members suggested that the question papers should be set by internal faculty for better assessment to evaluate the students' performance.

5. **Methodologies to coordinate Research, Teaching and other academic activities in the Department:**

    a. Chairman appraised the members about the research groups in the department. All faculty were grouped into 4 teams comprising of Communications, Microwaves & Antennas, VLSI & Embedded Systems and Signal Processing. Seminars on research topics are conducted in the department twice in a month.

    b. Teaching using NPTEL Video lectures, PPTs, internet based, simulation/animation based, Web enabled content

    c. Industry interaction by conducting industry experts guest lectures, Faculty Development Programs, guiding UG/PG projects

6. **Any other item with the permission of the Chair:**

    a. **Mid marks evaluation:** Chance may be given to the student, if he/she absent for mid examination in case of genuine reason.

    b. Web enable course (abstract) information may be given to the student prior to the class.

R15 Course Structure - B.Tech 4 Year Degree Course

First Year I - Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
ECE111	English	HS	3	1	-	4	40	60	3
ECE112	Engineering Mathematics I	BS	3	1	-	4	40	60	3
ECE113	Engineering Chemistry	BS	3	1	-	4	40	60	3
ECE114	Professional Ethics & Human Values	HS	2	1	-	3	100	-	2
ECE115	Engineering Physics	BS	3	1	-	4	40	60	3
ECE116	Engineering Chemistry lab	BS	-	-	3	3	50	50	2
ECE117	Programming with C Lab	ES	2	-	3	5	50	50	3
ECEAC1	NCC/ NSS/ Sports	AC	-	-	3	3	-	-	-
Total			16	5	9	30	360	340	19

First Year II - Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
ECE121	Engineering Mathematics II	BS	3	1	-	4	40	60	3
ECE122	Applied Physics	BS	3	1	-	4	40	60	3
ECE123	Environmental Science	BS	3	1	-	4	40	60	3
ECE124	Engineering Drawing	ES	1	-	3	4	40	60	3
ECE125	Basic Electronics Engineering	ES	3	1	-	4	40	60	3
ECE126	Engineering Physics lab	BS	-	-	3	3	50	50	2
ECE127	Language Lab	HS	-	-	3	3	50	50	2
ECE128	Object Oriented Programming with C++ Lab	ES	2	-	3	5	50	50	3
ECE129	Workshop	ES	-	-	3	3	50	50	2
ECEAC 2	NCC/ NSS/ Sports	AC	-	-	3	3	-	-	-
Total			15	4	18	37	400	500	24

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Second Year I - Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
			Instruction periods per week				Max marks		
ECE211	Engineering Mathematics-III	BS	3	1	-	4	40	60	3
ECE212	Electrical Machines	ES	3	1	-	4	40	60	3
ECE213	Data structures	ES	3	1	-	4	40	60	3
ECE214	Signals and Systems	PC	3	1	-	4	40	60	3
ECE215	Network analysis and synthesis	ES	3	1	-	4	40	60	3
ECE216	Electronic Circuits and Analysis-I	PC	4	1	-	5	40	60	4
ECE217	Electronic Circuits and Analysis-I Laboratory	PC	-	-	3	3	50	50	2
ECE218	Network & Electrical Machines Laboratory	ES	-	-	3	3	50	50	2
	Total		19	6	6	31	340	460	23

Second Year II - Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
			Instruction periods per week				Max marks		
ECE221	Engineering Mathematics –IV	BS	3	1	-	4	40	60	3
ECE222	Electronic Circuits and Analysis-II	PC	3	1	-	4	40	60	3
ECE223	Digital Electronics	PC	3	1	-	4	40	60	3
ECE224	Probability Theory & Random Processes	PC	3	1	-	4	40	60	3
ECE225	Electromagnetic Field Theory & Transmission Lines	PC	3	1	-	4	40	60	3
ECE226	Control Systems	ES	3	1	-	4	40	60	3
ECE227	Electronic Circuits and Analysis-II Laboratory	PC	-	-	3	3	50	50	2
ECE228	Simulation Laboratory	PC	-	-	3	3	50	50	2
	Massive Open Online Course (MOOC)	AC	-	-	-	-	-	-	-
	Total		18	6	6	30	340	460	22

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Third Year I–Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
			Instruction periods per Week				**Max Marks**		
ECE 311	Open Elective- I	OE	3	1	-	4	40	60	3
ECE 312	Communication Systems Engineering	PC	4	1	-	5	40	60	4
ECE 313	Microprocessors and Applications	PC	3	1	-	4	40	60	3
ECE 314	Computer Architecture & Organization	ES	3	1	-	4	40	60	3
ECE 315	Integrated circuits and Applications	PC	3	1	-	4	40	60	3
ECE 316	Antennas & Wave Propagation	PC	3	1	-	4	40	60	3
ECE 317	Microprocessors & Applications Laboratory	PC	-	-	3	3	50	50	2
ECE 318	IC Laboratory	PC	-	-	3	3	50	50	2
ECE 319	Quantitative Aptitude & Verbal Aptitude-I	HS	4	-	-	4	100	-	2
	Total		23	6	6	35	440	460	25

Open Elective- I: (for ECE, offered by other departments) Refer Annexure-I

Third Year II–Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
			Instruction periods per Week				**Max marks**		
ECE 321	Microwave & Radar Engineering	PC	3	1	-	4	40	60	3
ECE 322	Digital Signal Processing	PC	4	1	-	5	40	60	4
ECE 323	Microcontrollers & Embedded Systems	PC	3	1	-	4	40	60	3
ECE 324	Professional Elective-I	PE	3	1	-	4	40	60	3
ECE 325	Digital Communications	PC	3	1	-	4	40	60	3
ECE 326	Communication Systems Engineering Laboratory	PC	-	-	3	3	50	50	2
ECE 327	Microcontrollers & Embedded Systems Laboratory	PC	-	-	3	3	50	50	2
ECE 328	Soft Skills Laboratory	HS	-	-	3	3	100	-	2
ECE 329	Quantitative Aptitude & Verbal Aptitude-II	HS	4	-	-	4	100	-	2
	Total		20	5	9	34	500	400	24

Professional Elective-I

1. Analog IC Design
2. EMI / EMC
3. Electronic Measurements and Instrumentation
4. Telecommunications and switching Networks

Industrial Training during summer vacation after Third Year II –Semester. But its grade will be accorded with the 4-1 courses of the program

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Fourth Year I - Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
							Max marks		
ECE411	Engineering Economics and Management	HS	3	1	-	4	40	60	3
ECE412	Computer Network Engineering	PC	3	1	-	4	40	60	3
ECE413	Open Elective-II	OE	3	1	-	4	40	60	3
ECE414	Professional Elective -II	PE	3	1	-	4	40	60	3
ECE415	VLSI Design	PC	3	1	-	4	40	60	3
ECE416	Elective Lab	PC	-	-	3	3	50	50	2
ECE417	Digital Communications Laboratory	PC	-	-	3	3	50	50	2
ECE418	Industrial Training Seminar	IT	-	2	2	4	100	-	4
ECE419	Project Phase – I	PW	-	-	8	8	100	-	4
	Total		15	7	16	38	500	400	27

Professional Elective-II
1. Advanced Digital Signal Processing
2. Radar Signal Processing
3. Digital IC design using HDL
4. Digital Image Processing

Open Elective-II: (for ECE, offered other departments)
1. Project management
2. Industrial Safety and Hazards Management
3. IT infrastructure and management
4. Multimedia concepts 5.E-Governance
6. Robotics   7.Power Electronics

Elective Lab
1. VLSI
2. Signal and image processing
3. Virtual instrumentation
4. Antenna Design

Fourth Year II - Semester

Code	Subject name	Cat	L	T	P	Total	Sessional	End marks	Credits
							Max marks		
ECE421	Cellular and Mobile Communications	PC	3	1	-	4	40	60	3
ECE422	Professional Elective-III	PE	4	1	-	5	40	60	4
ECE423	Professional Elective-IV	PE	4	1	-	5	40	60	4
ECE424	Microwave Engineering Laboratory	PC	-	-	3	3	50	50	2
ECE425	Project Phase - II & Dissertation	PW	-	-	16	16	100	100	8
ECE426	Massive Open Online Course (MOOC)	OE	-	-	-	-	100	-	2
	Total		11	3	19	33	270	330	23

Professional Elective-III
1. Phased array systems
2. Bio-medical Instrumentation
3. Optical communications
4. Embedded and Real Time Systems

Professional Elective-IV
1. Satellite Communications & GPS
2. VLSI Signal processing
3. Wireless sensor networks
4. Cognitive Radio Networks

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Minutes of the 5th meeting of the Board of Studies, Dept. of ECE (UG) held on 30.03.2019 at 10:30 AM.

S.No	Name of the member	Designation	Category	Signature of member
1.	Dr. V. Rajya Lakshmi	Head, ECE, ANITS	Chairman, BOS, ECE	
2.	Dr.K.MuraliKrishna	Prof., ECE, ANITS	Member	
3.	Dr. G.Manmadha Rao	Prof., ECE, ANITS	Member	
4.	Mr. S. Balaramamurthy	Assoc. Prof., ECE, ANITS	Member	S.B
5.	Dr.B.SomaSekhar	Assoc. Prof., ECE, ANITS	Member	
6.	Dr. Ch Praveeen Babu	Assoc. Prof., ECE, ANITS	Member	
7.	Dr.S.Srinivas	Assoc. Prof., ECE, ANITS	Member	
8.	Dr.P.MurgaPandiyan	Assoc. Prof., ECE, ANITS	Member	
9.	Dr.S.Ravi	Assoc. Prof., ECE, ANITS	Member	
10.	Dr.D.Easwara Chaitanya	Asst. Prof. ECE, ANITS	Member	
11.	Mr. D. Anilprasad	Asst. Prof. ECE, ANITS	Member	
12.	Mr. J. Bhaskara Rao	Asst. Prof. ECE, ANITS	Member	
13.	Mr. A. Lakshminarayana	Asst. Prof. ECE, ANITS	Member	
14.	Mr. Vijaya Kumar Sahu	Asst. Prof. ECE, ANITS	Member	
15.	Mr.N.Srinivasa Naidu	Asst. Prof. ECE, ANITS	Member	
16.	Prof. P. Ramakrishna Rao	Advisor, ANITS	Academic council nominee	
17.	Prof K. Chandra Bhusahan Rao	Prof., Dept of ECE, JNTUV	Academic council nominee	
18.	Prof.N.V.S.N.Sharma	Prof., Dept of ECE, NITW	University Nominee	NOT ATTEN
19.	Mr.N.Srinivas G.BHASKAR	Avantel, Visakhapatnam	Industry	
20.	Mr. M. Durga Prasad	JTO, BSNL	Alumni	

Dr.K. S. Ranga Rao

G. Sujatha   student   member   G. Sujath

R. Vinay   student   member   R. Vinay

deepthi   student   member   S. Deepti

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Minutes of the 5th meeting of the BOS, Department of ECE (UG) held on 30.03.2019 at 10. AM in the DSP lab with the following agenda.

1. To finalize the course structure of R-2019
2. To finalize the 1st year syllabus of R-2019
3. Any other item with the permission of the chair

The chairperson, Dr.V.Rajya Lakshmi, HOD, dept of ECE, ANITS welcomed all the B members present in the meeting. The Committee discussed the points given in the ager submitted by the Dr.V.Rajyalakshmi and made the follow recommendations/suggestions.

1. a)Prof. P. Ramakrishna Rao and Prof.K.Chandra Bhusahan Rao, expressed that Engineer is an extension of physics and it would be helpful to the students if course "Physics" studied in First year I semester rather than in II semester.

b) Prof.K.Chandra Bhusahan Rao suggested the course "Basic Electronics Engineerir should be in First year II semester

c)Prof.P. Ramakrishna Rao, expressed that it will be difficult to ensure maximum stud participation in Mandatory non-credit course. Prof. V.Rajya Lakshmi replied t maximum student participation in any Mandatory non-credit course can be achie through preparation of the timetable in such a way that Mandatory non credit course i between any other two credit courses.

d)Prof.K.Chandra Bhusahan Rao suggested the name of the "simulation lab" has to be v specific such that student's specific skills can be evident in their marks sheet for the purp of getting into higher studies/placements.

e)Prof.K.MuraliKrishna, expressed that ICA Lab may be interchanged with AC & DC Lal Analog Communications and Digital communications are covered in previous semesters

f)Mr.G.Bhaskar, Aventel, expressed that "Speech processing" Professional Elective-3 car interchanged with "WSN" in Professional Elective-5 as Speech processing required tc studied after Digital signal processing which is in Third year II semester.

i)Prof.K.Chandra Bhusahan Rao suggested that prescribed textbooks need to be followed by faculty and inorder to ensure the same, it is advised to ask the faculty to submit coverage plan for the courses of all basic sciences in advance signed by head of department.

j)Prof.K.Chandra Bhusahan Rao expressed that physics syllabus is heavy and suggested the text book Halliday / Resnick, to be made as prescribed text book in the course ECE 122 (Physics) and to ensure redundancy of the contents is not present.

k)Prof. V.Rajya Lakshmi informed the members that in the course "Workshop" soldering and PCB Design are introduced keeping in view of ECE graduates and all members agreed that it is very essential to the ECE students in the current trend.
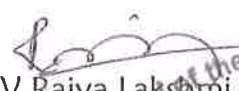
l)Prof. K. S. Ranga Rao, expressed that PCB design can be renamed as Layout design on PCB.

m)Prof.K.MuraliKrishna, said that soldering can be done in the Electronic circuits Laboratory

n)Prof. P. Ramakrishna Rao, expressed that the faculty who are likely to teach course "Ethics" should have good communication skills.

The chairperson thanked all the members for their active participation and valuable suggestions. She informed that all modifications suggested will be incorporated in the proposed structure for curriculum regulations 2019 and sent to the members for their approval.

Mr. S. Balaramamurthy, proposed the vote of thanks.

Dr.V.Rajya Lakshmi
Chairperson, BOS & HOD, ECE
ANITS

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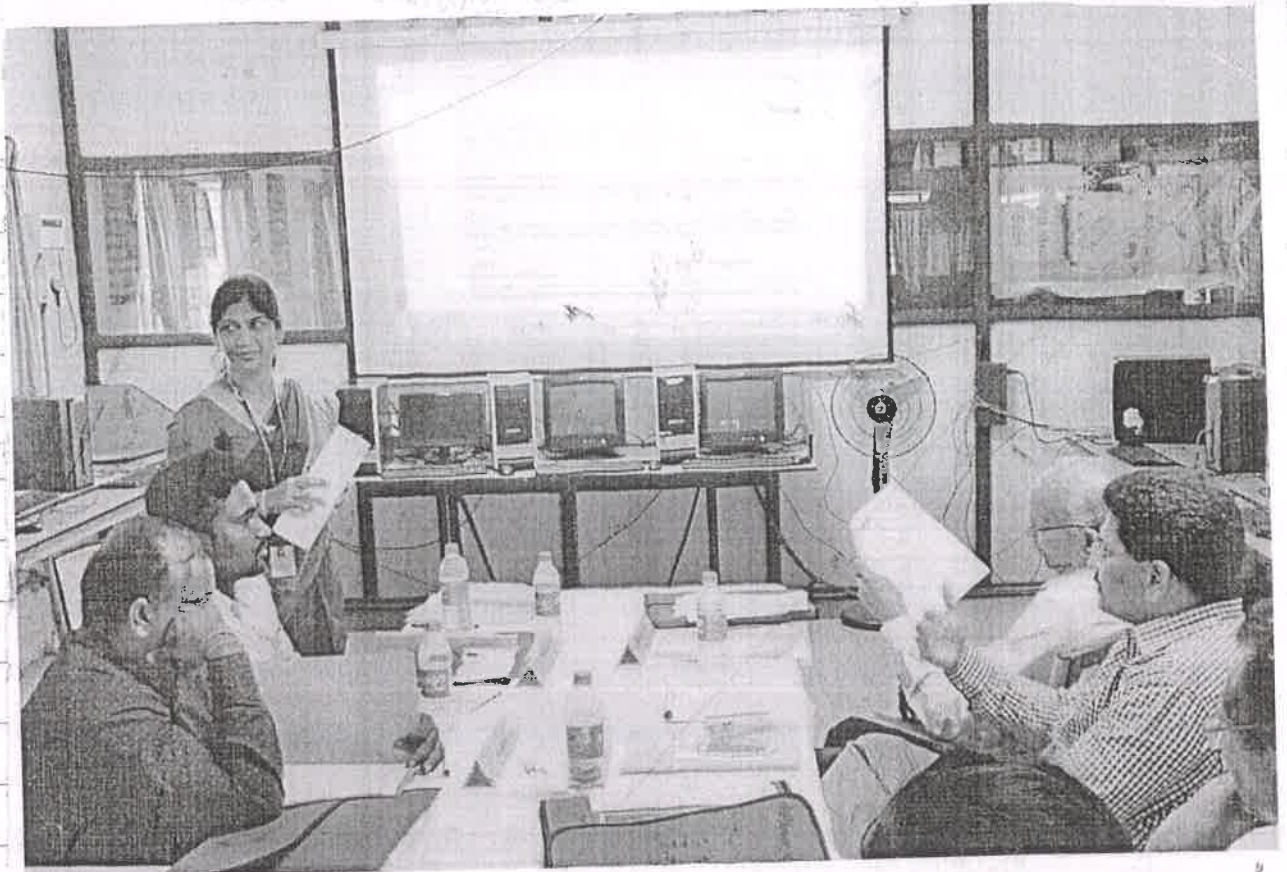
5th BOS Meeting of ECE held on 30-03-2019 : left: Mr.G.Bhaskar, Aventel, Mr.M.DurgaPrasad, JTO, BSNL , Prof.V.Rajyalakshmi, Chairperson. Right: Prof.K.Chandra Bhusahan Rao, Professor, JNTUV, Prof. P. Ramakrishna Rao, Advisor, ANITS

5th BOS Meeting of ECE held on 30-03-2019 at , DSP Lab, department of ECE

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ECE - (4 Year B.Tech Programme) - COURSE CURRICULUM R-19   Total Credits:160

I Year Course structure

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
ECE 111	EngineeringMathematics – I	BS	3	0	0	1	6	10	40	60	100	3
ECE 112	Communicative English	HS	3	0	0	1	3	7	40	60	100	3
ECE 113	Basic Electronics Engineering	ES	3	0	0	1	4	8	40	60	100	3
ECE 114	Principles of Electrical Engineering	ES	3	0	0	1	4	8	40	60	100	3
ECE 115	Problem solving with C	ES	3	0	0	1	3	7	40	60	100	3
ECE 116	English Language Lab	HS	0	0	3	0	1	4	50	50	100	1.5
ECE 117	Problem solving with C – lab.	ES	0	0	3	0	3	6	50	50	100	1.5
ECE 118	Environmental Science (Mandatory non-credit course)	MC	3	0	0	0	1	4	50	-	50	-
	Total		18	0	6	5	25	54	350	400	750	18

Semester - II

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
ECE 121	Engineering Mathematics – II	BS	3	0	0	1	6	10	40	60	100	3
ECE 122	Engineering Physics	BS	3	0	0	1	4	8	40	60	100	3
ECE 123	Engineering Chemistry	BS	3	0	0	1	4	8	40	60	100	3
ECE 124	Network Analysis and Synthesis	ES	3	0	0	1	4	8	40	60	100	3
ECE 125	Engineering Drawing	ES	2	0	3	1	4	10	40	60	100	3.5
ECE 126	Engineering Physics Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
ECE 127	Engineering Chemistry Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
ECE 128	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
ECE 129	Biology(Mandatory non-credit course)	MC	2	1	0	0	2	5	50	0	50	-
	Total		16	1	12	5	27	61	400	450	850	20

II Year Course structure

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
ECE211	EngineeringMathematics – III	BS	3	0	0	1	6	10	40	60	100	3
ECE212	Computer Architecture and Organization	ES	3	0	0	1	4	8	40	60	100	3
ECE213	Digital Electronics	PC	3	0	0	1	3	7	40	60	100	3
ECE214	Signals and systems	PC	3	0	0	1	5	9	40	60	100	3
ECE215	Probability Theory and Random Process	PC	3	0	0	1	5	9	40	60	100	3
ECE216	Electronic circuits and analysis-I	PC	3	0	0	1	5	9	40	60	100	3
ECE217	Electronic circuits and analysis-I Lab	PC	0	0	3	0	1	4	50	50	100	1.5
ECE218	Simulation Lab(MATLAB and HDL Programming)	PC	0	0	3	0	1	4	50	50	100	1.5
ECE 219	Human Values and Professional Ethics(Mandatory non-credit course)	HS	3	0	0	0	1	4	50	0	50	-
	Total		21	0	6	6	31	64	390	460	850	21

Semester - II

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
ECE221	EngineeringMathematics – IV	BS	3	0	0	1	6	10	40	60	100	3
ECE222	Control systems	ES	3	0	0	1	4	8	40	60	100	3
ECE223	Electronic circuits and analysis-II	PC	3	0	0	1	5	9	40	60	100	3
ECE224	Analog communication	PC	3	0	0	1	4	8	40	60	100	3
ECE225	Transmission Lines and EM waves	PC	3	0	0	1	6	10	40	60	100	3
ECE226	Microprocessors and Microcontrollers	FC	3	0	0	1	5	9	40	60	100	3
ECE227	Electronic circuits and analysis-II Lab	PC	0	0	3	0	1	4	50	50	100	1.5
ECE228	Microprocessors and Microcontrollers lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		18	0	6	6	32	62	340	460	800	21

III Year Course structure

Semester - I

Course Code	Title of the course	Category	L	T	P	E	O	Total	Sessionals Marks	Semester end Exam marks	Total Marks	Credits
ECE311	Open Elective- I	OE	3	0	0	1	2	6	40	60	100	3
ECE312	Professional Elective-1	PE	3	0	0	1	2	6	40	60	100	3
ECE313	Digital communications	PC	3	0	0	1	5	9	40	60	100	3
ECE314	Embedded systems and IOT	PC	3	0	0	1	5	9	40	60	100	3
ECE315	Integrated circuits and Applications	PC	3	0	0	1	5	9	40	60	100	3
ECE316	Antennas and Propagation	PC	3	0	0	1	5	9	40	60	100	3
ECE317	Quantitative Aptitude & Verbal Aptitude-I	HS	0	0	3	1	3	7	100	0	100	1.5
ECE318	Embedded systems and IOT lab	PC	0	0	3	0	1	4	50	50	100	1.5
ECE319	AC& DC Laboratory	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		18	0	9	7	29	63	440	460	900	22.5

Professional Elective 1
1. Electronic measurements and Instrumentation
2. EMI/EMC
3. Micro electronics

Semester - II

Course Code	Title of the course	Category	L	T	P	E	O	Total	Sessionals Marks	Semester end Exam marks	Total Marks	Credits
ECE321	Open Elective- II	OE	3	0	0	1	2	6	40	60	100	3
ECE322	Professional Elective-2	PE	3	0	0	1	4	8	40	60	100	3
ECE323	Professional Elective-3	PE	3	0	0	1	4	8	40	60	100	3
ECE324	Data structures	ES	3	0	0	1	5	9	40	60	100	3
ECE325	Digital signal processing	PC	3	0	0	1	5	9	40	60	100	3
ECE326	VLSI Design	PC	3	0	0	1	5	9	40	60	100	3
ECE327	Quantitative Aptitude-II & Softskills	HS	0	0	2	2	3	7	100	0	100	1.5
ECE328	ICA Laboratory	PC	0	0	3	0	1	4	50	50	100	1.5
ECE329	DS lab	ES	0	0	3	0	1	4	50	50	100	1.5
	Total		18	0	8	8	30	64	440	460	900	22.5

Professional elective 2
1. Digital IC design using HDL
2. Bio medical Instrumentation
3. Optical Communication

Professional Elective 3
1. Information Theory and Coding
2. Wireless Sensor Networks
3. Computer Network Engineering

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Visakhapatnam Dist.

IV Year Course structure

Semester - I

Course Code	Title of the course	Category	L	T	P	E	O	Total	Sessionals Marks	Semester end Exam marks	Total Marks	Credits
ECE411	Open Elective- III	OE	3	0	0	1	2	6	40	60	100	3
ECE412	Engineering Economics and Management	HS	3	0	0	0	2	5	40	60	100	3
ECE413	Professional Elective –4	PE	3	0	0	1	4	8	40	60	100	3
ECE414	Professional Elective -5	PE	3	0	0	1	3	7	40	60	100	3
ECE415	Microwave and Radar Engineering	PC	3	0	0	1	5	9	40	60	100	3
ECE416	Microwave Engineering Laboratory	PC	0	0	3	0	1	4	50	50	100	1.5
ECE417	DSP Lab	PC	0	0	3	0	1	4	50	50	100	1.5
ECE418	Industrial Training	PR	0	0	0	0	1	1	100	0	100	1
ECE419	Project Phase – I	PR	0	0	4	0	4	8	100	0	100	2
	Total		15	0	10	4	23	52	500	400	900	21

Professional Elective 4
1. Cellular and Mobile Communications
2. Real time operating systems (RTOS)
3 Speech Processing

Professional Elective 5
1. Digital Image Processing
2. Satellite communications & GPS
3. Low power VLSI

Semester - II

Course Code	Title of the course	Category	L	T	P	E	O	Total	Sessionals Marks	Semester end Exam marks	Total Marks	Credits
ECE411	Open Elective- IV	OE	3	0	0	1	2	6	40	60	100	3
ECE422	Professional Elective-6	PE	3	0	0	1	2	6	40	60	100	3
ECE423	Project Phase – II	PR	0	0	16	0	16	32	100	100	200	8
	Total		6	0	16	2	20	44	180	220	400	14

Professional Elective 6
1. VLSI Signal processing
2. Data Communications
3. Phased array systems

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Visakhapatnam Dist

'An Autonomous Institute'

Board of Studies - Dept. of EEE (UG & PG)

S. No	Name	Designation	Category	Affiliation
1	Prof. Guntu Raja Rao,	Head	Chairman, BOS, EEE	ANITS
2	Prof. R. Govardhana Rao	Director (Admn)	Member	ANITS
3	Mr. V. Murali	Associate Professor, EEE	Member	ANITS
4	Mr. S. Balamurali	Associate Professor, EEE	Member	ANITS
5	Mr. Kottala Kiran Kumar	Assistant Professor, EEE	Member	ANITS
6	Mrs. K.V.R.Swathi	Assistant Professor, EEE	Member	ANITS
7	Mr. Kavala Kiran Kumar	Assistant Professor, EEE	Member	ANITS
8	Mr. B. Rajasekhar	Assistant Professor, EEE	Member	ANITS
9	Mr. R. Satish	Assistant Professor, EEE	Member	ANITS
10	Mrs. K. Lavanya	Assistant Professor, EEE	Member	ANITS
11	Mr. Ch.V.N.Raja	Assistant Professor, EEE	Member	ANITS
12	Mr. M. Sudheer Kumar	Assistant Professor, EEE	Member	ANITS
13	Mr. K. Trinadh Babu	Assistant Professor, EEE	Member	ANITS
14	Mr. T. Ramasastry	Assistant Professor, EEE	Member	ANITS
15	Mr. L. Dinesh	Assistant Professor, EEE	Member	ANITS
16	Mr. S. Harish	Assistant Professor, EEE	Member	ANITS
17	Mr. A.Dhanamjay	Assistant Professor, EEE	Member	ANITS
18	Mr. L. Vijay	Assistant Professor, EEE	Member	ANITS
19	Prof. Deba Priya Das	Professor	Academic council nominee	IIT, Kharagapur
20	Prof. B.M. Mohan	Professor	Academic council nominee	IIT, Kharagapur
21	Prof. Jayanta Pal	Professor	University Nominee	IIT, kharagapur
22	Mr. V. Sudhakar Rao	Director & Chief Scientific Advisor	Industry	Yantha Controls (P) ltd, Forme: Med Systems, Hiderabad
23	Mr. P. Santhosh Kumar,	Manager, L&T	Alumni	L & T. Chennai
24	Sri. B. Srinivasa Reddy	AGM (Electrical), RINL	Special Invitee	Visakhapatnam
25	Sri. K. Anil Kumar	Asst. Manager (Electrical), RINL	Special Invitee	Visakhapatnam

Term: The term of the above body is for two years

Frequency of the meetings: At least once in a year

PRINCIPAL
Principal
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Visakhapatnam D

R. Srikanth
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ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES

(Autonomous)

(Affiliated to Andhra University, Approved by AICTE & Re-accredited by NBA)

Sangivalasa - 531 162, Bheemunipatnam Mandal, Visakhapatnam Dt.

ANITS

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Minutes of the Board of Studies (BOS) meeting held on 20-06-2015 (Saturday) at 1.30 PM.

MEMBERS PRESENT:

1. **Prof. V.S.R.K. Prasad,** Principal, ANITS.
2. **Prof. R. Govardhana Rao,** Director (Admn.), ANITS.
3. **Prof. Debapriya Das,** Professor, Dept. of Electrical Engg., IIT Kharagpur.
4. **Sri B. Srinivasa Reddy,** Asst. General Manager (Electrical), RINL, VSP
5. **Sri K. Anil Kumar,** Asst. Manager, RINL, Visakhapatnam.
6. **Mr. V. Murali,** Assoc. Prof., ANITS.
7. **Mr. S. Balamurali,** Assoc. Prof., ANITS.
8. **Mr. J. Vijay Kumar,** Assoc. Prof., ANITS.
9. **Mrs. K.V.R. Swathi,** Asst. Prof., ANITS.
10. **Mr. Kavala Kiran Kumar,** Asst. Prof., ANITS.
11. **Mr. R. Satish,** Asst. Prof., ANITS.
12. **Mrs. K. Lavanya,** Asst. Prof., ANITS.
13. **Mr. Ch.V.N. Raja,** Asst. Prof., ANITS.
14. **Mr. M. Sudheer Kumar,** Asst. Prof., ANITS.
15. **Mr. K. Trinadhbabu,** Asst. Prof., ANITS.
16. **Mr. T. Ramasastry,** Asst. Prof., ANITS.
17. **Mr. L. Dinesh,** Asst. Prof., ANITS.
18. **Mr. S. Harish,** Asst. Prof., ANITS.
19. **Mr. A. Dhanamjay,** Asst. Prof., ANITS.
20. **Mr. L. Vijay,** Asst. Prof., ANITS.
21. **Prof. G. Raja Rao (Chair person),** Professor & HOD of EEE, ANITS.

* * *

1. The Chair person introduced the external BOS members to all the BOS members of the department. The board once again discussed on the merits and demerits of having C^+ lab and C^{++} lab in 1st and 2nd semesters of the first year respectively and finalized that both the labs are necessary for EEE students.

2. Prof. Debapriya Das advised to reduce the topics on the DC Machines in the course 'PEM-I' as they are obsolete and include some design aspects of electrical machines.

3. The external members from industry have advised to introduce numerical relays and Smart Grid topics. In this regard, after several discussions it is resolved to propose to introduce a new course on 'Semi-conductor drives and control automation' in 4th year

1st semester in place of 'Electrical Drives & Traction' by which student can learn industry oriented drives and control automation techniques. Further, it is resolved to include concepts of smart grid in the course 'Energy Control and Management' in 4th year 2nd semester.

4. The committee members decided to continue with the existing curriculum of M. Tech (Control Systems) course with minor changes in syllabus of 'Advanced Drives & Control' in 1st year 1st semester of M. Tech curriculum.

HOD of EEE

Head of the Department
ELECTRICAL & ELECTRONICS ENGG
ANITS, Sangivalasa,
Visakhapatnam-531 162

C/s to:
1. The Principal
2. The Director (Admn.)

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Visakhapatnam D.

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PROPOSED SCHEME UNDER AUTONOMOUS SYSTEM

Details of category wise credits:

Sl. No.	Category	Subject	Credits	% of credits
1	Basic Science (BS)	Mathematics, Physics, Chemistry, Environmental Sciences	28	15
2	Humanity & Social Sciences (HS)	English, Soft Skills, Engineering Economics & Management	16	9
3	Engineering Science (ES)	Inter Departmental Engineering Subjects	31	17
4	Professional Core (PC)	Core Engineering Subjects	79	42
5	Professional Elective (PE)	Core Electives	12	7
6	Optional Elective (OE)	Inter Departmental Electives	6	3
7	Industrial Training (IT)	Industrial Training	2	1
8	Project Work (PW)	Project Work	12	6
9	Others (OT)	Others like Sports/NCC/NSS	---	---
Total			**186**	100
MOOCs			3	----
Grand Total			**189**	----

For the award of the degree:

1. The student has to register for all the 189 credits and secure a minimum of 180 credits by opting out one course each from open electives, professional electives and MOOCs.

2. The student has to undergo one MOOCs course during pre-final or final year.

FIRST YEAR FIRST SEMESTER

Code	Subject	Category	Instruction Periods per Week	Semester End Examination		Sessional Marks	Total Marks	Credits
				Duration (Hours)	Marks			
EEE111	English	HS	4	3	60	40	100	3
EEE 112	Engineering Mathematics – I	BS	4	3	60	40	100	3
EEE 113	Engineering Physics	BS	4	3	60	40	100	3
EEE 114	Engineering Drawing	ES	4	3	60	40	100	3
EEE 115	Environmental Sciences	BS	4	3	60	40	100	3
EEE116	Engineering Physics Lab	BS	3	3	50	50	100	2
EEE117	C Language Lab	ES	1+3	3	50	50	100	3
EEE118	Engineering Workshop	ES	3	3	50	50	100	2
	NCC	OT	2	--	--	--	--	--
	Total		32	--	450	350	800	22

FIRST YEAR SECOND SEMESTER

Code	Subject	category	Instruction Periods per Week	Semester End Examination		Sessional Marks	Total Marks	Credits
				Duration (Hours)	Marks			
EEE 121	Engineering Mathematics – II	BS	4	3	60	40	100	3
EEE 122	Engineering Chemistry	BS	4	3	60	40	100	3
EEE 123	Applied Physics	BS	4	3	60	40	100	3
EEE 124	Professional Ethics & Human Values	HS	3	--	--	100	100	2
EEE 125	Fundamentals of EEE	PC	4	3	60	40	100	3
EEE 126	English Lab	HS	3	3	50	50	100	2
EEE 127	Engineering Chemistry Lab	BS	3	3	50	50	100	2
EEE 128	C++ Lab	ES	1+3	3	50	50	100	3
	NSS / Sports	OT	2	--	--	--	--	--
	Total		31	--	390	410	800	21

SECOND YEAR FIRST SEMESTER

Code	Subject	Category	Instruction Periods per Week	Semester End Examination Duration (Hours)	Marks	Sessional Marks	Total Marks	Credits
EEE 211	Engineering Mathematics-III	BS	4	3	60	40	100	3
EEE 212	Engineering Mechanics & Strength of Materials	ES	4	3	60	40	100	3
EEE 213	Electromagnetics	PC	4	3	60	40	100	3
EEE 214	Network Theory	PC	4	3	60	40	100	3
EEE 215	Electronic Devices & Circuits	PC	4	3	60	40	100	3
EEE 216	Digital Logic Design	ES	4	3	60	40	100	3
EEE 217	Networks Lab	PC	3	3	50	50	100	2
EEE 218	Electronic Devices & Circuits Lab	PC	3	3	50	50	100	2
Total			30	--	460	340	800	22

SECOND YEAR SECOND SEMESTER

Code	Subject	Category	Instruction Periods per Week	Semester End Examination Duration (Hours)	Marks	Sessional Marks	Total Marks	Credits
EEE 221	Engineering Mathematics-IV	BS	4	3	60	40	100	3
EEE 222	Electrical Measurements	PC	4	3	60	40	100	3
EEE 223	Performance of Electrical Machines-I	PC	4	3	60	40	100	3
EEE 224	Analog Electronic Circuits	PC	4	3	60	40	100	3
EEE 225	Signals & Systems	PC	4	3	60	40	100	3
EEE226	Microprocessors and Micro Controllers	ES	4	3	60	40	100	3
EEE227	Electrical Measurements Lab	PC	3	3	50	50	100	2
EEE228	AEC Lab	PC	3	3	50	50	100	2
Total			30	--	460	340	800	22

THIRD YEAR FIRST SEMESTER

Code	Subject	Category	Instruction Periods per Week	Semester End Examination		Sessional Marks	Total Marks	Credits
				Duration (Hours)	Marks			
EEE311	Open Elective-I	OE	4	3	60	40	100	3
EEE312	Data Structures	ES	4	3	60	40	100	3
EEE313	Pulse and Digital Circuits	PC	4	3	60	40	100	3
EEE314	Linear IC's and Applications	PC	4	3	60	40	100	3
EEE315	EPGU	PC	4	3	60	40	100	3
EEE316	LCS	PC	4	3	60	40	100	3
EEE317	DEMP Lab	PC	3	3	50	50	100	2
EEE318	LIC & PDC Lab	PC	3	3	50	50	100	2
EEE319	V&QA-I	HS	4	---	---	100	100	2
	Total		34	--	460	440	900	24

OE-I : 1) OR 2) CAD 3) Introduction to embedded system design 4) Applications of Fields and waves

THIRD YEAR SECOND SEMESTER

Code	Subject	Category	Instruction Periods per Week	Semester End Examination		Sessional Marks	Total Marks	Credits
				Duration (Hours)	Marks			
EEE321	Professional Elective-I	PE	4	3	60	40	100	3
EEE322	Thermo Dynamics and Mechanics of Fluids	ES	4	3	60	40	100	3
EEE323	CAO	ES	4	3	60	40	100	3
EEE324	PEM-II	PC	4	3	60	40	100	3
EEE325	Power Electronics	PC	4	3	60	40	100	3
EEE326	Power Transmission and Distribution	PC	4	3	60	40	100	3
EEE327	Electrical Machines Laboratory- I	PC	3	3	50	50	100	2
EEE328	TD & MF Laboratory	ES	3	3	50	50	100	2
EEE 329	Soft Skills Laboratory	HS	3	---	---	100	100	2
EEE 3210	V&QA-II	HS	4	---	---	100	100	2
	Total		37	24	460	540	1000	26

PE-I: 1) Advanced Control Systems and Design 2) ANN & Fuzzy Systems 3) NCES & Applications

FOURTH YEAR FIRST SEMESTER

Code	Subject	Category	Instruction Periods per Week	Semester End Examination		Sessional Marks	Total Marks	Credits
				Duration (Hours)	Marks			
EEE411	Open Elective-II	OE	4	3	60	40	100	3
EEE412	Professional Elective-II	PE	4	3	60	40	100	3
EEE413	Professional Elective-III	PE	4	3	60	40	100	3
EEE414	Power System Analysis & Stability	PC	4	3	60	40	100	3
EEE415	Semi Conductor Drives & Automation	PC	4	3	60	40	100	3
EEE 416	Power System Protection	PC	4	3	60	40	100	3
EEE417	Power Electronics Laboratory	PC	3	3	50	50	100	2
EEE418	Electrical Machines Laboratory-II	PC	3	3	50	50	100	2
EEE 419	Industrial Training *	IT	----	---	--	100	100	2
EEE 4110	Project Work	PW	3	---	---	60	60	4
	Total		**33**	**24**	**460**	**500**	**960**	**28**

OE-II: 1) Robotics 2) Finite Element Analysis 3) Introduction to VLSI system design 4) Introduction to image processing / Computer Vision

PE-II: 1) Electrical Drives & Traction 2) Electrical Engineering Drawing 3) DSP

PE-III: 1) Distribution System Automation; 2) DCS 3) JAVA

FOURTH YEAR SECOND SEMESTER

Code	Subject	Category	Instruction Periods per Week	Semester End Examination		Sessional Marks	Total Marks	Credits
				Duration (Hours)	Marks			
EEE421	Engineering Economics & Mgmt.	HS	4	3	60	40	100	3
EEE422	Professional Elective-IV	PE	4	3	60	40	100	3
EEE423	Energy Control & Management	PC	4	3	60	40	100	3
EEE424	Power System Simulation Lab	PC	3	3	50	50	100	2
EEE425	Control Systems Laboratory	PC	3	3	50	50	100	2
EEE426	Project Work	PW	6	3	80	60	140	8
	Total		**24**	**18**	**360**	**280**	**640**	**21**

PE-IV: 1) Non-Linear Systems; 2) Power System Reliability; 3) Design of Electrical Machines

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Visakhapatnam Dist.

Head of the Department
ELECTRICAL & ELECTRONICS E
ANITS, Sangivalasa.

Minutes of the meeting of the Board of Studies, Department of EEE (UG) held on 30th March 2019 at 11.30 AM.
(Under Autonomous System)

MEMBERS PRESENT:

S. No.	Name	Designation	Category	Signature of the members
1	Dr. Guntu Raja Rao	Head, EEE, ANITS	Chairman, BOS	
2	Mr. V. Murali	Assoc. Prof., EEE, ANITS	Member	
3	Mr. S. Balamurali	Assoc. Prof., EEE, ANITS	Member	Absent
4	Dr. J. Vijaya Kumar	Assoc. Prof., EEE, ANITS	Member	
5	Mrs. K.V.R. Swathi	Asst. Prof., EEE, ANITS	Member	
6	Mr. Kavala Kiran Kumar	Asst. Prof., EEE, ANITS	Member	
7	Mr. B. Rajasekhar	Asst. Prof., EEE, ANITS	Member	
8	Mr. R. Satish	Asst. Prof., EEE, ANITS	Member	
9	Mrs. Lavanya	Asst. Prof., EEE, ANITS	Member	
10	Mr. Ch. V. N. Raja	Asst. Prof., EEE, ANITS	Member	
11	Mr. M. Sudheer Kumar	Asst. Prof., EEE, ANITS	Member	
12	Mr. L. Dinesh	Asst. Prof., EEE, ANITS	Member	
13	Mr. L. Vijay	Asst. Prof., EEE, ANITS	Member	
14	Mr. A. Dhanamjay	Asst. Prof., EEE, ANITS	Member	
15	Mr. K. Trinadh Babu	Asst. Prof., EEE, ANITS	Member	
16	Mr. J. Uday Venkatesh	Asst. Prof., EEE, ANITS	Member	
17	Mrs. V. Rangavalli	Asst. Prof., EEE, ANITS	Member	
18	Mr. V. Anil Kumar	Asst. Prof., EEE, ANITS	Member	Absent
19	Mr. S. Harish	Asst. Prof., EEE, ANITS	Member	
20	Mrs. T. V. Subhashini	Asst. Prof., EEE, ANITS	Member	
21	Ms. D. Srilakshmi	Asst. Prof., EEE, ANITS	Member	
22	Mr. N. Kiran	Asst. Prof., EEE, ANITS	Member	
23	MR. T. Subrahmanyam	Asst. Prof., EEE, ANITS	Member	
24	Prof. Deba Priya Das	Professor	Academic Council Nominee	
25	Prof. B.M. Mohan	Professor	Academic Council Nominee	
26	Prof. G.V. Siva Krishna Rao	Professor	University Nominee	Absent
27	Sri. B. Srinivasa Reddy	AGM (Electrical), RINL	Industry	
28	Sri. K. Anil Kumar	Asst. Manager (Electrical), RINL	Special Invitee & Alumnus	

Minutes of the Board of Studies (BOS of EEE) meeting held on 30th March 2019 (Saturday) at 11.30 AM.

MEMBERS PRESENT:

1. Prof. Debapriya Das, Professor, Dept. of Electrical Engg., IIT Kharagpur.
2. Prof. B.M. Mohan, Professor, Dept. of Electrical Engg., IIT Kharagpur.
3. Sri B. Srinivasa Reddy, Asst. General Manager (Electrical), RINL, VSP.
4. Sri K. Anil Kumar, Asst. Manager (Electrical), RINL, VSP.
5. Mr. V. Murali, Assoc. Prof., ANITS.
6. Mr. S. Balamurali, Assoc. Prof., ANITS.
7. Mr. J. Vijaya Kumar, Assoc. Prof., ANITS.
8. Mrs. K.V.R. Swathi, Asst. Prof., ANITS.
9. Mr. Kavala Kiran Kumar, Asst. Prof., ANITS.
10. Mr. B. Rajasekhar, Asst. Prof., ANITS.
11. Mr. R. Satish, Asst. Prof., ANITS.
12. Mrs. K. Lavanya, Asst. Prof., ANITS
13. Mr. Ch.V.N. Raja, Asst. Prof., ANITS.
14. Mr. M. Sudheer Kumar, Asst. Prof., ANITS.
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18. Mr. K. Trinadh Babu, Asst. Prof., ANITS.
19. Mr. J. Uday Venkatesh, Asst. Prof., ANITS.
20. Mrs. V. Rangavalli, Asst. Prof., ANITS.
21. Mr. V. Anil Kumar, Asst. Prof., ANITS.
22. Mr. S. Harish, Asst. Prof., ANITS.
23. Mrs. T. V. Subhashini, Asst. Prof., ANITS.
24. Ms. D. Srilakshmi, Asst. Prof., ANITS.
25. Mr. N. Kiran, Asst. Prof., ANITS.
26. Mr. T. Subrahmanyam, Asst. Prof., ANITS.
27. Prof. G. Raja Rao (Chair person), Professor & HOD of EEE, ANITS.

* * *

1. The Chair person welcomed all the BOS members of the department and thanked the members for the support they have rendered to the department during the last four years.

2. The board has approved the course 'Competitive Programming' which was offered as an additional elective in Professional Elective – 1 in 3rd year 2nd semester during 2018-19. It is also resolved to continue to offer the same course for the coming batches.

3. The Committee has mainly discussed on the scheme and syllabi of 1st year 1st semester and 2nd semester courses to be taught by EEE faculty.

4. The external members from IIT Kharagpur have suggested to introduce NPTEL course on C – programming in support of course "Programming for Problem Solving" in 1st year 2nd semester.

5. The board has discussed and resolved to include BLDC motors in the syllabus of PDMT course in 2nd year 2nd semester.

6. As the future power demand will mostly be met by non conventional energy sources, the board has resolved to give special emphasize on fuel cells and batteries by including these topics in RET course or some other appropriate course.

7. Mr. B. Srinivasa Reddy and Prof. Debapriya Das have suggested to offer Power Quality, HVDC & FACTS, Smart Grid as professional electives.

8. Prof. B.M. Mohan & Mr. K. Anil Kumar have suggested to include 'Machine Learning' as one of the PEs or OEs.

9. The board has discussed in full length and resolved to introduce 'Comprehensive Viva' for 2 credits at the end of 4th year 2nd semester. However, to accommodate these 2 credits the final project work credits have been reduced from 8 to 6 credits.

10. The board members were happy about the modifications and the scheme & syllabi of 1st year.

HOD of EEE

Date: 01-04-2019

Dr. G. RAJA RAO

Head of the Department
ELECTRICAL & ELECTRONICS ENGG.
ANITS, Sangivalasa
VISAKHAPATNAM - 531 162

C/s to: 1. The Principal

Convener, IQAC
Anil Neerukonda Institute of
Technology & Sciences
Sangivalasa-531 162
Visakhapatnam Dist.

Principal
Anil Neerukonda Institute
Technology & Sciences
Sangivalasa-531 162
Visakhapatnam Dist.

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING - CURRICULUM
REGULATIONS – R19

1st Year

Semester - I

Course Code	Title of the course	Category	L	T	P	E	O	Total	Sessional Marks	Semester end Exam marks	Total Marks	Credits
EEE111	Engineering Mathematics – I	BS	3	0	0	1	6	10	40	60	100	3
EEE112	Engineering Physics	BS	3	0	0	1	4	8	40	60	100	3
EEE113	Engineering Chemistry	BS	3	0	0	1	4	8	40	60	100	3
EEE114	Engineering Drawing	ES	2	0	3	1	2	8	40	60	100	3.5
EEE115	Digital Logic Design	PC	2	1	0	1	5	9	40	60	100	3
EEE116	Engineering Physics Laboratory	BS	0	0	3	0	1	4	50	50	100	1.5
EEE117	Engineering Chemistry Laboratory	BS	0	0	3	0	1	4	50	50	100	1.5
EEE118	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
EEE119	Human Values and Professional Ethics (Mandatory non-credit course)	HS	3	0	0	0	1	4	50	0	50	-
Total			16	1	12	5	25	59	400	450	850	20

Semester - II

Course Code	Title of the course	Category	L	T	P	E	O	Total	Sessional Marks	Semester end Exam marks	Total Marks	Credits
EEE121	Engineering Mathematics-II	BS	3	0	0	1	6	10	40	60	100	3
EEE122	Communicative English	HS	3	0	0	1	3	7	40	60	100	3
EEE123	Basics of Electronics Engineering (BEE)	ES	3	0	0	1	5	9	40	60	100	3
EEE124	Fundamentals of Electrical Engineering (FEE)	ES	2	1	0	1	5	9	40	60	100	3
EEE125	Problem solving with C	ES	3	0	0	0	3	6	40	60	100	3
EEE126	Language Laboratory	HS	0	0	3	0	1	4	50	50	100	1.5
EEE127	Problem solving with C– Laboratory	ES	0	0	3	0	3	6	50	50	100	1.5
EEE128	Environmental Science (Mandatory non-credit course)	BS	3	0	0	0	1	4	50	0	50	-
Total			17	1	6	4	27	55	350	400	750	18

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING - CURRICULUM
REGULATIONS – R19

2nd Year												
Semester - I												
Course Code	Title of the course	Category	Periods						Sessional Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
EEE211	Engineering Mathematics – III	BS	3	0	0	1	5	9	40	60	100	3
EEE212	Engineering Mechanics & Strength of Materials	ES	2	1	0	1	5	9	40	60	100	3
EEE213	Network Theory	PC	2	1	0	1	5	9	40	60	100	3
EEE214	Electrical Measurements	PC	3	0	0	1	5	9	40	60	100	3
EEE215	Electronics Circuits and Analysis	PC	3	0	0	1	4	8	40	60	100	3
EEE216	Microprocessors and Micro Controllers	PC	3	0	0	1	4	8	40	60	100	3
EEE217	Networks & Measurements Laboratory	PC	0	0	3	0	1	4	50	50	100	1.5
EEE218	Electronics Laboratory -I	PC	0	0	3	0	1	4	50	50	100	1.5
Total			16	2	6	6	30	60	340	460	800	21

Semester - II												
Course Code	Title of the course	Category	Periods						Sessional Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
EEE221	Engineering Mathematics – IV	BS	3	0	0	1	6	10	40	60	100	3
EEE222	Thermo Dynamics and Mechanics of Fluids	ES	2	1	0	1	5	9	40	60	100	3
EEE223	Signals & Systems	PC	3	0	0	1	4	8	40	60	100	3
EEE224	Electromagnetics	PC	3	0	0	1	4	8	40	60	100	3
EEE225	Performance of DC Machines and Transformers	PC	2	1	0	1	5	9	40	60	100	3
EEE226	Electrical Power Generation and Utilization	PC	3	0	0	1	4	8	40	60	100	3
EEE227	Thermo Dynamics & Mechanics of Fluids Laboratory	ES	0	0	3	0	1	4	50	50	100	1.5
EEE228	Digital Electronics, Micro Processors and Controllers Laboratory	PC	0	0	3	0	1	4	50	50	100	1.5
Total			16	2	6	6	30	60	340	460	800	21

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING - CURRICULUM
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3rd Year

Semester - I

Course Code	Title of the course	Category	Periods						Sessional Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
EEE311	Open Elective-I	OE	3	0	0	1	3	7	40	60	100	3
EEE312	Professional Elective –I	PE	3	0	0	1	3	7	40	60	100	3
EEE313	Pulse, Digital and Integrated Circuits	PC	3	0	0	1	3	7	40	60	100	3
EEE314	Linear Control Systems	PC	2	1	0	1	3	7	40	60	100	3
EEE315	Performance of Induction and Synchronous Machines	PC	2	1	0	1	3	7	40	60	100	3
EEE316	Power Transmission and Distribution	PC	2	1	0	1	3	7	40	60	100	3
EEE317	Quantitative Aptitude -I / Verbal Aptitude-I	HS	0	0	3	0	3	6	100	0	100	1.5
EEE318	Electrical Machines Laboratory - I	PC	0	0	3	0	2	5	50	50	100	1.5
EEE319	Electronics Laboratory –II	PC	0	0	3	0	2	5	50	50	100	1.5
Total			15	3	9	6	25	58	440	460	900	22.5

Open Elective –I
1. Python
2. Computer Architecture and Organization
3. JAVA

Professional Elective –I
1. Renewable Energy Technologies
2. VLSI
3. Embedded Systems

Semester - II

Course Code	Title of the course	Category	Periods						Sessional Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
EEE321	Open Elective-II	OE	3	0	0	1	2	6	40	60	100	3
EEE322	Professional Elective –II	PE	3	0	0	1	3	7	40	60	100	3
EEE323	Professional Elective –III	PE	3	0	0	1	3	7	40	60	100	3
EEE324	Power Electronics	PC	3	0	0	1	5	9	40	60	100	3
EEE325	Power System Analysis	PC	2	1	0	1	6	10	40	60	100	3
EEE326	Advanced Control Systems	PC	2	1	0	1	6	10	40	60	100	3
EEE327	Quantitative Aptitude -II / Soft Skills	HS	0	0	3	0	2	5	100	0	100	1.5
EEE328	Control Systems Lab	PC	0	0	3	0	1	4	50	50	100	1.5
EEE329	Electrical Machines Lab – II	PC	0	0	3	0	1	4	50	50	100	1.5
Total			16	2	9	6	29	62	440	460	900	22.5

Open Elective –II
1. Competitive Programming
2. Internet of Things
3. Robotics

Professional Elective –II
1. Electrical Drives and Traction
2. Digital Control Systems
3. Digital Signal Processing

Professional Elective –III
1. Optimization Techniques
2. Electrical Machine Design
3. ANN & Fuzzy Systems

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)
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REGULATIONS – R19

Course Code	Title of the course	Category	Periods						Sessional Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
					4th Year							
					Semester - I							
EEE411	Open Elective-III	OE	3	0	0	1	2	6	40	60	100	3
EEE412	Professional Elective –IV	PE	3	0	0	1	2	6	40	60	100	3
EEE413	Professional Elective –V	PE	3	0	0	1	2	6	40	60	100	3
EEE414	Power System Protection	PC	3	0	0	1	5	9	40	60	100	3
EEE415	Design Thinking	SC	2	0	2	0	0	4	0	0	0	0
EEE416	Power Electronics Laboratory	PC	0	0	3	0	1	4	50	50	100	1.5
EEE417	Power Systems Simulation Laboratory	PC	0	0	3	0	1	4	50	50	100	1.5
EEE418	Project -I	PR	0	0	3	0	1	4	60	0	60	2
EEE419	Summer Internship	PR	0	0	0	0	1	1	100	0	100	1
Total			12	0	9	4	15	40	420	340	760	18

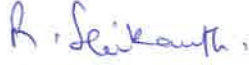| Open Elective-III	
S. No.	Infosys Springboard Courses
1.	Computational Problem Solving
2.	Programming Fundamentals using Python - Part 1
3.	Python - The Practical and Hands-on approach
4.	Data Structures and Algorithms: The Complete Master class
5.	Data Structures and Algorithms using Python - Part 1
6.	Machine Learning, NLP & Python
7.	Data Analysts Toolbox: Excel, Python, Power BI
8.	Advanced Python Concepts
9.	Programming Fundamentals using Python - Science Graduates - Foundation Program
10.	Hands-On Deep Learning on Artificial Neural Networks
11.	Learn Python and Ethical Hacking from Scratch
12.	Data Structures and Algorithms using Java

Professional Elective –IV
1. Energy Management and Control
2. Nonlinear Systems
3. Control & Instrumentation
4. Electrical Engineering Drawing

Professional Elective – V
1. Electric Hybrid Vehicles
2. Electrical Machine Design
3. Power Semiconductor Drives
4. AI Techniques in Electrical Engineering
5. Process Control & Automation

Semester - II

Course Code	Title of the course	Category	Periods						Sessional Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
EEE421	Open Elective-IV	OE	3	0	0	1	2	6	0	0	100	3
EEE422	Engineering Economics and Management	HS	3	0	0	0	1	4	40	60	100	3
EEE423	Professional Elective –VI	PE	3	0	0	1	2	6	40	60	100	3
EEE424	Research Methodology	SC	2	0	0	0	0	2	0	0	0	0
EEE425	Comprehensive Viva	PR	0	0	0	0	1	1	0	100	100	2
EEE426	Project - II	PR	0	0	9	0	2	11	60	80	140	6
Total			9	0	9	2	8	28	140	300	540	17

Open Elective-IV

S. No.	Infosys Springboard Courses
1.	Computational Problem Solving
2.	Programming Fundamentals using Python - Part 1
3.	Python - The Practical and Hands-on approach
4.	Data Structures and Algorithms: The Complete Master class
5.	Data Structures and Algorithms using Python - Part 1
6.	Machine Learning, NLP & Python
7.	Data Analysts Toolbox: Excel, Python, Power BI
8.	Advanced Python Concepts
9.	Programming Fundamentals using Python - Science Graduates - Foundation Program
10.	Hands-On Deep Learning on Artificial Neural Networks
11.	Learn Python and Ethical Hacking from Scratch
12.	Data Structures and Algorithms using Java

Professional Elective –VI

1. HVDC & FACTS
2. Smart Grid
3. Advanced Power Electronic Converters
4. Sliding Mode Control
5. Electrical Installation, Estimation & Cost

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Principal
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Sangivalasa-531 162

ANITS

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'An Autonomous Institute'

Minutes of the meeting of the Joint Board of Studies, Dept. of CSE & IT (UG&PG) held on 20th June 2015 at 02:00 PM

Members present:

S. No	Name	Designation	Category	Signature of the member
1	Prof. S Satapathy	HoD, CSE, ANITS	Chairman, BOS, ~~Mechanical~~ CSE &IT	
2	Prof. G Suresh	Prof., IT, ANITS	Member	
3	Mr. S Ivan Kumar	Assoc. Prof., CSE, ANITS	Member	
4	Mrs. Uma A Yadwad	Sr. Asst. Prof., CSE, ANITS	Member	
5	Mrs. Jayaprada	Sr. Asst. Prof., CSE, ANITS	Member	20/6/15
6	Mr. Ch Seshadri Rao	Asst. Prof., CSE, ANITS	Member	CSE 2016
7	Mrs. Rina Parwekar	Asst. Prof., CSE, ANITS	Member	
8	Mrs. B Meena	Asst. Prof., & I/c. HoD, IT, ANITS	Member	
9	Mr. G Demudu Naidu	Sr. Asst. Prof., IT, ANITS	Member	
10	Mrs. K Sarada	Asst. Prof., IT, ANITS	Member	On leave
11	Mr. N Aditya Sundar	Asst. Prof., IT, ANITS	Member	N.
12	Dr. B Majhi	Professor, Dept. of CSE, NIT, Rourkela	Academic council nominee	
13	Dr. R Mall,	Prof. Dept. of CSE, IIT, Kharagapur	Academic council nominee	Rajib Mall
14	Dr. P Litha Bhaskari	Professor, Dept. of Computer Science & Systems Engineering, AU college of Engg. For Women, VSP	University Nominee	Leave of Absence
15	Dr. C Nagesh	Manager, Campus Connect, Infosys Technologies, Hyd.	Industry	Leave of Absence
16	Mr. T Syam Vamsi,	IBM, Chennai	Alumni	Leave of Absence
17	Sri. S Lakshminarayana	Former Regional Officer, AICTE	Special Invitee	
18	Sri. K V S S Rajeswara Rao	General Manager, IT, VIzag Steel Plant	Special Invitee	Leave of Absence
19	Prof K V S VN Raju	Dir (R&D), ANITS	Member	

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES
(Affiliated to AU, Approved by AICTE & Accredited by NBA & NAAC with 'A'Grade)
SANGIVALASA-531 162, Bheemunipatnam Mandal, Visakhapatnam District
Phone: 08933-225083/84/87 Fax: 226395
website: www.anits.edu.in   email: principal@anits.edu.in

Ref: ANITS/Gen-12/Meeting Notice/2014-15   Date: 18-05-2015

MEETING NOTICE

There will be a meeting of the Board of Studies (BOS) of the Departments of ECE, EEE, CSE & IT, Mechanical and Humanities & Sciences on 20-06-2015 (Inauguration: 09:30 AM; Joint BOS meeting: 11:30 AM; BOS meeting in the respective departments: 02:00 PM and concluding Joint Board meeting: 04:00 PM). All the members are requested to attend the meeting without fail. The members are further requested to send proposals (if any) to the Chairman BOS (HoD of the respective department) on or before **30-05-2015**.

Agenda of the BOS meeting:

1. Framing, Review and updating the syllabi relating to B.Tech. - UG courses of study of the Departments of ECE, EEE, CSE&IT, Mechanical and Humanities & Sciences for the academic year 2015-16.
2. Introduction of choice based credit system (CBCS) from the academic year 2015-16
3. Introduction of new courses of study (if any)
4. Innovative methodologies for Continuous assessment
5. Methodology for innovative teaching and evaluation techniques.
6. Approval of the panel of examiners and paper setters.
7. Methodologies to coordinate Research, Teaching, Extension and other academic activities in the department.
8. Any other item with the permission of the chair

PRINCIPAL

Copy to:

All members of Board of Studies, Departments of ECE, EEE, CSE&IT, Mechanical and Humanities & Sciences

Convener, IQAC
Anil Neerukonda Institute of
Technology & Sciences
Sangivalasa-531 162
Visakhapatnam Dist.

Principal
Anil Neerukonda Institute of
Technology & Sciences
Sangivalasa-531 162
Visakhapatnam Dist.

DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE STRUCTURE FOR BTECH (IT) UNDER AUTONOMOUS STATUS

With effect from Admitted Batch 2015

FIRST YEAR SEMESTER – I

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT111	English	HS	3	1	-	4	40	60	100	3
IT112	Engineering Mathematics-I	BS	3	1	-	4	40	60	100	3
IT113	Engineering Chemistry	BS	3	1	-	4	40	60	100	3
IT114	Professional Ethics & Human Values	HS	2	1	-	3	100	-	100	2
IT115	Basics of Electronics Engineering	ES	3	1	-	4	40	60	100	3
IT116	Engineering Chemistry Lab	BS	-	-	3	3	50	50	100	2
IT117	Programming with C Lab	PC	1	1	3	5	50	50	100	3
ITAC1	NCC / NSS / SPORTS	AC	-	-	3	3	-	-	-	-
	TOTAL		15	6	9	30	360	340	700	19

FIRST YEAR SEMESTER – II

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT121	Engineering Mathematics-II	BS	3	1	-	4	40	60	100	3
IT122	Engineering Physics	BS	3	1	-	4	40	60	100	3
IT123	Environmental Science	BS	3	1	-	4	40	60	100	3
IT124	Engineering Drawing	ES	1	-	3	4	40	60	100	3
IT125	Elements of Electrical Engineering	ES	3	1	-	4	40	60	100	3
IT126	Engineering Physics lab	BS	-	-	3	3	50	50	100	2
IT127	Language lab	HS	-	-	3	3	50	50	100	2
IT128	Object Oriented Programming with C++ Lab	ES	1	1	3	5	50	50	100	3
IT129	Workshop	ES	-	-	3	3	50	50	100	2
ITAC2	NCC / NSS / SPORTS	AC	-	-	3	3				
	TOTAL		14	5	18	37	400	500	900	24

FIRST SEM, SECOND SEM COMMON FOR CSE & IT DEPARTMENTS

Head of the Department
Department of IT
ANITS, Visakhapatnam

SECOND YEAR SEMESTER – I

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT211	Data Structures	PC	4	1	-	5	40	60	100	4
IT212	Digital Logic Design	ES	3	1	-	4	40	60	100	3
IT213	Discrete Mathematical Structures	BS	4	1	-	5	40	60	100	4
IT214	Computer Organization	PC	4	1	-	5	40	60	100	4
IT215	Data Communications	PC	3	1	-	4	40	60	100	3
IT216	Data Structures Lab	PC	-	-	3	3	50	50	100	2
IT217	Digital Electronics lab	ES	-	-	3	3	50	50	100	2
IT218	Python Programming Lab	PC	-	1	3	4	50	50	100	3
	TOTAL		18	6	9	33	350	450	800	25
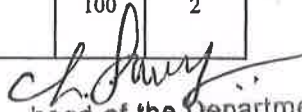
SECOND YEAR SEMESTER – II

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT221	Computer Networks	PC	3	1	-	4	40	60	100	3
IT222	Information Systems Design	PC	3	1	-	4	40	60	100	3
IT223	Operating Systems	PC	4	1	-	5	40	60	100	4
IT224	Probability Statistics & Queuing Theory	BS	4	1	-	5	40	60	100	4
IT225	Computer Graphics & Multimedia	PC	3	1	-	4	40	60	100	3
IT226	Networking Lab	PC	-	-	3	3	50	50	100	2
IT227	Computer Graphics & Multimedia Lab	PC	-	-	3	3	50	50	100	2
IT228	Operating Systems (Linux) Lab	PC	-	-	3	3	50	50	100	2
	TOTAL		17	5	9	31	350	450	800	23

* The students must undergo a non credit course on any one of the Foreign languages (Japanese, German, French, Chinese, etc) after second year Sem2 during summer vacation or Third year Sem 1

head of the Department
Department of IT
ANITS, Visakhapatnam

THIRD YEAR SEMESTER – I

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT311	* Open Elective-1	OE	3	1	-	4	40	60	100	3
IT312	Database Management Systems	PC	3	1	-	4	40	60	100	3
IT313	Unix Network Programming	PC	3	1	-	4	40	60	100	3
IT314	Formal Languages Automata Theory	PC	4	1	-	5	40	60	100	4
IT315	Object Oriented Programming through JAVA	PC	3	1	-	4	40	60	100	3
IT316	Database Management Systems Lab	PC	-	-	3	3	50	50	100	2
IT317	Unix Network Programming Lab	PC	-	-	3	3	50	50	100	2
IT318	Java Programming Lab	PC	-	-	3	3	50	50	100	2
IT319	Quantitative Aptitude - 1 & Verbal Aptitude – 1	HS	4	-	-	4	100	-	100	2
TOTAL			20	5	9	34	450	450	900	24

THIRD YEAR SEMESTER – II

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT321	Compiler Design	PC	4	1	-	5	40	60	100	4
IT322	Design & Analysis of Algorithms	PC	4	1	-	5	40	60	100	4
IT323	Object Oriented Analysis and Design with UML	PC	3	1	-	4	40	60	100	3
IT324	Mobile Computing and Application Development	PC	3	1	-	4	40	60	100	3
IT325	Professional Elective-I	PE	4	1	-	5	40	60	100	4
IT326	Mobile Computing and Application Development Lab	PC	-	-	3	3	50	50	100	2
IT327	Web based open source technologies Lab	PC	-	1	3	4	50	50	100	3
IT328	Computer Aided Software Engineering tools Lab	PC	-	-	3	3	50	50	100	2
IT329	Soft Skills lab	HS	-	-	3	3	100	-	100	2
IT3210	Quantitative Aptitude-2 & Verbal Aptitude -2	HS	4	-	-	4	100	-	100	2

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			Periods				Sessional Marks	External Marks	Total Marks	Credits
TOTAL			22	6	12	40	550	450	1000	29

FOURTH YEAR SEMESTER – I

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT411	*Open-Elective- II	OE	3	1	-	4	40	60	100	3
IT412	Cryptography & Network Security	PC	3	1	-	4	40	60	100	3
IT413	Data Analytics	PC	3	1	-	4	40	60	100	3
IT414	Professional Elective – II	PE	4	1	-	5	40	60	100	4
IT415	Professional Elective – III	PE	4	1	-	5	40	60	100	4
IT416	Analytics Lab	PC	-	-	3	3	50	50	100	2
IT417	Network Security Lab	PC	-	-	3	3	50	50	100	2
IT418	PROJECT I	PW	-	-	6	6	100	-	100	4
IT419	# Industrial Training	IT	-	-	-	-	100	-	100	2
	TOTAL		17	5	12	34	500	400	900	27

Assessment done based on the Industrial Training (Industrial training / Internship /Certification course)taken after Third Year Semester – II during summer vacation.

FOURTH YEAR SEMESTER – II

Code No	Subject	Category	Periods				Sessional Marks	External Marks	Total Marks	Credits
			Lecture	Tutorial	Practical	Total				
IT421	Professional Elective – IV	PE	4	1	-	5	40	60	100	4
IT422	Professional Elective – V	PE	4	1	-	5	40	60	100	4
IT423	PROJECT II	PW	-	-	9	9	100	100	200	8
IT424	Massive Open Online Course	OOC	-	-	-	-	100	-	100	2
	TOTAL		8	2	9	19	280	220	500	18
	TOTAL CREDITS									189

NOTE:

o Students are enabled for self-learning outside the class rooms through Academic activities (Paper Presentation, Participation in Programming/coding contests/Workshops Etc), Extra Curricular activities/NSS/NCC/Sports.

OPEN ELECTIVES – 1
III Year Semester – 1

Department	Name of the Course offered
INFORMATION TECHNOLOGY	IT 311 (A) Intellectual Property Right And Patents IT 311 (B) Data Structures IT 311 (C) Software Engineering Concepts

OPEN ELECTIVES – II
IV Year Semester – 1

Department	Name of the Course offered
INFORMATION TECHNOLOGY	IT 411 (A) Introduction to Engineering Analytics IT 411 (B) Foundations of Web Development & Design IT 411 (C) Open Source Technologies IT 411 (D) Multimedia Concepts

Category	Professional Elective –I IT 325	Professional Elective-II IT 414	Professional Elective-III IT 415	Professional Elective-IV IT 421	Professional Elective-V IT 422
1	Distributed Operating Systems	Artificial Intelligence and Robotics	Machine Learning	Soft computing	Image Processing
2	Technology management	Parallel computing	Storage Area Networks	Cognitive computing	Cyber Security
3	Software Testing and Automation	Data Ware Housing And Mining	User Experience (Ux)	Cloud computing	Enterprise Resource Planning
4	Client Server Technologies	Software Project Management	Intellectual property right & patents	E commerce	Internet of Things

R. Seshath.

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Sangivalasa-531 162
Visakhapatnam Dist.

Head of the Department
Department of IT
ANITS, Visakhapatnam

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES
'UGC AUTONOMOUS'
(Affiliated to AU, Approved by AICTE & Accredited by NBA & NAAC with 'A' Grade)
Sangivalasa-531 162, Bheemunipatnam Mandal, Visakhapatnam Dt.

ANITS

DEPARTMENT OF INFORMATION TECHNOLOGY

1ST BOS MEETING TO BE HELD ON 25-03-2017.

BOS Meeting Agenda:-

1. 3rd Year syllabus finalization.

2. Open electives.

3. Departmental electives.

4. 4th Year Scheme.

5. Any other item with the permission of the chair.

Members to be present:

Sl No	Name	Designation	Signature
1	Prof. Suresh Chittineni	Chairman, BOS, IT. HoD, IT, ANITS	
2	Prof. Kasukurthi Venkata Rao	Professor, Department of CS&SE, A.U. College of Engineering (A).	
3	Mr. Sairam Bollapragada	Vice President (Digital, Automation, Delivery Excellence Strategy) at Tech Mahindra.	
4	Mr. CSS Prithvi Raj	Expert ERP Developer & Certified Financial Risk Manager(FRM) from Skillro.	
5	Mr. Suresh Batha	Joint Director, Software Technology Parks of India (STPI)	
6	Dr. M. Rama Krishna Murthy	Assoc. Prof., IT, ANITS.	
7	Dr. G. Srinivas	Assoc. Prof., IT, ANITS.	

8	Mr. Ch. Demudu. Naidu	Sr. Asst. Prof., IT, ANITS.	
9	Mrs. B. Meena	Asst. Prof., IT. ANITS.	
10	Mrs. I S L Sarwani	Asst. Prof., IT, ANITS.	
11	Mrs. N. Sharada	Asst. Prof., IT, ANITS.	
12	Mr. Pandit Samuel	Asst. Prof., IT. ANITS.	
13	Mr. N. Aditya Sundar	Asst. Prof., IT, ANITS.	
14	Mr. M. V. Kishore	Asst. Prof., IT. ANITS.	

R. Seikath.
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DEPARTMENT OF INFORMATION TECHNOLOGY

Minutes of Board of Studies Meeting

Department of Information Technology

Minutes of the Meeting:

Subject: Board of Studies-Bachelor of Technology (IT)
Venue: Room no - 407, Dept. of IT
Date: 25-3-2017

Agenda:
1. 3rd Year syllabus finalization.
2. Open electives.
3. Departmental electives.
4. 4th Year Scheme.

The following members were present in the Meeting:
1. Prof. Suresh Chittineni, Chairman, BOS & HoD, IT, ANITS
2. Prof. Kasukurthi Venkata Rao, Professor, Department of CS&SE, AUCE (A).
3. Mr. Sairam Bollapragada, Vice President (Digital, Automation, Delivery Excellence Strategy) at Tech Mahindra.
4. Dr. M. Rama Krishna Murthy, Assoc. Prof., IT, ANITS.
5. Dr. G. Srinivas, Assoc. Prof., IT, ANITS.
6. Mr. Ch. Demudu. Naidu, Sr. Asst. Prof., IT, ANITS.
7. Mrs. B. Meena, Asst. Prof., IT, ANITS.
8. Mrs. I S L Sarwani, Asst. Prof., IT, ANITS.
9. Mr. Pandit Samuel, Asst. Prof., IT, ANITS.
10. Mr. N. Aditya Sundar, Asst. Prof., IT, ANITS.
11. Mr. M. V. Kishore, Asst. Prof., IT, ANITS.

Discussions:

Prof. Suresh Chittineni, Chairman BOS officially welcomed all the members for the first BOS B.Tech-IT. He also informed the house, the absents of other members due to some unavoidable circumstances.

Prof. Suresh Chittineni, HoD, IT has presented objective, achievements and future endeavors of the Department

Mrs. B. Meena, Assistant Professor presented the draft curriculum and syllabus for III/IV B. Tech IT.

Members deliberated on the design of the curriculum for the third year ba[...]
resolutions taken on the joint board of studies of all departments. Following are the resol[...]
are taken after a rigorous discussion among the members.

Suggestions from BOS for III/ IV B. Tech IT:

- The members suggested to offer "Engineering Analytics" as one of Open Electives as this course is beneficial for other Engineering courses
- The members suggested to add 4th and 5th normal forms in the course Database Management Systems (DBMS)
- In the course "Object Oriented Programming through JAVA" (OOP through JAVA) a topic – Introduction to kept in first unit and packages topic of unit 3 to be shifted to unit 2
- In the course "Design and Analysis of Algorithms" (DAA) the members suggested to put examples in Branch and Bound, Backtracking topics
- For the course "Mobile computing", the members suggested to name it as "Mobile Computing and Application Development". This course align with mobile computing and application development laboratory by introducing common platform for mobile application.
- For the CASE tools lab the members suggested mini project domain such as
  - Web Content Management System
  - Internet of Things
  - Speech Recognition
  - Enterprise Resource Planning (ERP) based system
  - Online Analytical Processing (OLAP)
  - Online Transaction Processing (OLTP)
  - Information Security
  - Image Processing
  - Automation Systems etc.,
- The professional electives suggested by the members for III/IV BTech Sem 2 are
  - Distributed Operating Systems
  - Technology management
  - Software Testing and Automation
  - Client Server Technology
- The members suggested that the department should encourage certification course. Internship in Industrial training which is after 3-2.
- The members suggested to include Foreign language / Personality Development under MOOC or during summer vacation after second year SEM-2.

- Further the members explored that the potential of IT lies in offering Internet of things for multidisciplinary branches by establishing IoT Lab in collaboration with other departments. The members asserted to establish IoT Lab.

Resolution:

With the above modifications and suggestions the syllabus for III/IV B.Tech IT is approved by BOS. However, any further modification can be taken up in next BOS meet.

The BOS members approved the list of panel members for paper setting and advised to add more names to the list in future.

Prof. Suresh Chittineni HoD, IT, thanked all the external members and internal members for their valuable time and suggestions.

Prof. Suresh Chittineni
Chairman, BOS & HoD, IT

Head of the Department of
Information Technology
Anil Neerukonda Institute of
Technology & Science,
Sangivalasa, Visakhapatnam

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Visakhapatnam Dist

3rd Board of Studies Meeting Held on 30-03-2019

Department of Information Technology

Minutes of the Meeting:-

Subject: Board of studies – Bachelor of Technology (IT)
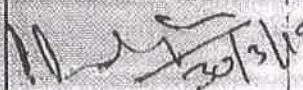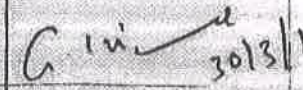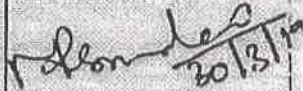
Venue: Conference Hall, Main Block, ANITS.

Date: 30 – 03 – 2019

Agenda:-

1. R19 Course Structure and 1st year syllabus finalization.

2. Scheme for 2019 admitted batch.

3. Any other item with the permission of the chair.

The following members were present in the meeting:

Sl No	Name	Designation	Signature
1	Prof. Suresh Chittineni	Chairman, BOS, IT. HoD, IT, ANITS	
2	Prof. M Shashi	Professor, Department of CS&SE, A.U. College of Engineering (A).	
3	Prof. S Krishna Rao	Professor & HoD of IT, CRR College of Engineering.	
4	Mr. Ravichandra Kolluru	Location Head, Tech Mahindra, Visakhapatnam.	
5	Mr. Varadha Sri Harsha	Technical Lead, IBM, Visakhapatnam.	Sri harsha.v

Sl No	Name	Designation	Signature
6	Prof. P Padmaja	Prof., IT, ANITS.	
7	Dr. G Srinivas	Assoc. Prof., IT, ANITS.	
8	Dr. M Rekha Sundari	Assoc. Prof., IT, ANITS.	
9	Dr. K Sharada	Asst. Prof., IT, ANITS.	
10	Dr. V Suresh	Asst. Prof., IT, ANITS.	
11	Mr. Ch Demudu Naidu	Sr. Asst. Prof., IT, ANITS.	
12	Mrs. B Meena	Asst. Prof., IT, ANITS.	

Chairman, BOS, IT.
HoD, IT, ANITS

Minutes of Board of Studies Meeting
Department of Information Technology

Minutes of the Meeting:

Subject: Board of Studies-Bachelor of Technology (IT)
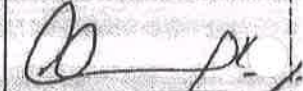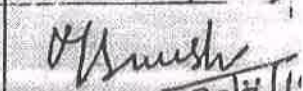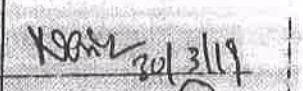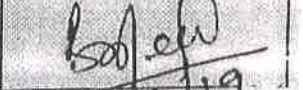*Venue:* Conference Hall, Main Block, ANITS.
Date: 30-3-2019.

Agenda:
1. R19 Course Structure and 1st year syllabus finalization.
2. Scheme for 2019 admitted batch.
3. Any other item with the permission of the chair.

The following members were present in the Meeting:
1. Prof. Suresh Chittineni , Chairman, BOS, IT, HoD, IT, ANITS
2. Prof. M Shashi, Professor, Department of CS&SE, A.U. College of Engineering (A). M·Sl
3. Prof. S Krishna Rao , Professor & HoD of IT, CRR College of Engineering.
4. Mr. Ravichandra Kolluru, Location Head, Tech Mahindra,Visakhapatnam.
5. Mr. Varadha Sri Harsha, Technical Lead, IBM, Visakhapatnam. Sri harsha
6. Prof. P Padmaja, Prof., IT, ANITS.
7. Dr. G Srinivas ,Assoc. Prof., IT, ANITS.
8. Dr. M Rekha Sundari,Assoc. Prof., IT, ANITS.
9. Dr. K Sharada,Asst. Prof., IT, ANITS.
10. Dr. V Suresh,Asst. Prof., IT, ANITS.
11. Mr. Ch Demudu Naidu,Sr. Asst. Prof., IT, ANITS.
12. Mrs. B Meena,Asst. Prof., IT, ANITS.

Discussions:
- Prof. Suresh Chittineni, Chairman BOS and HoD,IT officially welcomed all the members for the third BOS B.Tech-IT and presented objective, achievements and future endeavors of the Department
- Mrs. B. Meena, Assistant Professor presented the draft curriculum of B.Tech II Regulations 2019
- Members deliberated on the design of the new curriculum based on resolutions taken on the joint board of studies of all departments.

Following are the resolutions are taken after a rigorous discussion among the members.

Suggestions from BOS :

- The I/IV sem 1 "Problem solving with C lab" set 2 experiments can be arranged Low, Medium and High Level separately. The students can be given an opportunity to come up with their own case study and solve it.
- The course "Computer Communications" which is offered in III/IV Sem 1 can be renamed as "Computer Networks"
- The lab Internet of Things has been introduced in III/IV sem 2
- Labs related to one of the electives is introduced in IV/IV sem 1
- Certain courses are swapped in the proposed curriculum They are as follows:
  - The Course Software Engineering and UML & Testing Lab with Database Management Systems and Database Management Systems Lab
  - The course Formal Languages Automata Theory with the course Design & Analysis of Algorithms
  - The course Compiler Design with Cryptography & Network security
- The members suggested various stream of electives as follows:

YEAR - SEM	III/IV SEM 1	IV/IV SEM 1	IV/IV SEM 2
ELECTIVE-STREAM	Professional Elective - 1	PE-III	PE-V
Stream 1 : Networks	Unix Network Programming	Mobile Adhoc Networks	Storage Area Networks
Stream 2: Data Engineering	Data Warehousing and Data Mining	Machine Learning	Big Data
Stream 3 : Management	Business Automation	Software Project Management	Principles of Economics Management
Stream 4 : Security & Embedded	Embedded Systems	Cyber Security	Malware Analysis
Stream 5 : Software Engineering	Management Information Systems	Software Testing Methodologies	Design Patterns
ELECTIVE-STREAM	PE-II	PE-IV	PE-VI
Stream 1 : Networks	Distributed Operating Systems	Cloud Computing	Network Management Systems
Stream 2: Data Engineering	Artificial Intelligence	Soft Computing	Deep Learning
Stream 3 : Management	Operation Research	Intellectual Property Rights	E-Commerce
Stream 4 : Security & Embedded	Internet Of Things	Digital Forensics	Law & Ethical issues of Security
Stream 5 : Software Engineering	Dev Apps	Software Project Management	User Experience(Ux)
			Proposed MOOC courses
			Data Visualization with tableau
			modeling and simulation using MATL
			Mongo DB for developers
			Rasberri pi platform

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Visakhapatnam Dist

Prof. Suresh Chittineni
Chairman, BOS & HoD, I

IT - COURSE STRUCTURE R - 2019

FIRST YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT111	Engineering Mathematics – I	BS	3	0	0	1	6	10	40	60	100	3
IT112	Communicative English	HS	3	0	0	1	2	6	40	60	100	3
IT113	Basic Electronics Engineering	ES	3	0	0	1	6	10	40	60	100	3
IT114	Fundamentals of Information Technology	ES	3	0	0	1	2	6	40	60	100	3
IT115	Problem Solving with C	ES	3	0	0	1	6	10	40	60	100	3
IT116	English Language Laboratory	HS	0	0	3	0	1	4	50	50	100	1.5
IT117	Problem Solving with C Lab	ES	0	0	3	0	3	6	50	50	100	1.5
IT118	Environmental studies (Mandatory non-credit course)	MC	3	0	0	0	1	4	50	-	50	-
TOTAL			18	0	6	5	27	56	350	400	750	18

FIRST YEAR SEMESTER – II

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT121	Engineering Mathematics – II	BS	3	0	0	1	6	10	40	60	100	3
IT122	Engineering Physics	BS	3	0	0	1	4	8	40	60	100	3
IT123	Engineering Chemistry	BS	3	0	0	1	4	8	40	60	100	3
IT124	Digital Logic Design	ES	3	0	0	1	6	10	40	60	100	3
IT125	Engineering Drawing	ES	2	0	3	1	4	10	40	60	100	3.5
IT126	Engineering Physics Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
IT127	Engineering Chemistry Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
IT128	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
IT129	Human Values and Professional Ethics(Mandatory non-credit course)	MC	3	0	0	0	1	4	50	0	50	-
TOTAL			17	0	12	5	28	62	400	450	850	20

SECOND YEAR SEMESTER – I

IT – COURSE STRUCTURE R – 2019

FIRST YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT111	Engineering Mathematics – I	BS	3	0	0	1	6	10	40	60	100	3
IT112	Communicative English	HS	3	0	0	1	2	6	40	60	100	3
IT113	Basic Electronics Engineering	ES	3	0	0	1	6	10	40	60	100	3
IT114	Fundamentals of Information Technology	ES	3	0	0	1	2	6	40	60	100	3
IT115	Problem Solving with C	ES	3	0	0	1	6	10	40	60	100	3
IT116	English Language Laboratory	HS	0	0	3	0	1	4	50	50	100	1.5
IT117	Problem Solving with C Lab	ES	0	0	3	0	3	6	50	50	100	1.5
IT118	Environmental studies (Mandatory non-credit course)	MC	3	0	0	0	1	4	50	-	50	-
TOTAL			18	0	6	5	27	56	350	400	750	18

FIRST YEAR SEMESTER – II

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT121	Engineering Mathematics – II	BS	3	0	0	1	6	10	40	60	100	3
IT122	Engineering Physics	BS	3	0	0	1	4	8	40	60	100	3
IT123	Engineering Chemistry	BS	3	0	0	1	4	8	40	60	100	3
IT124	Digital Logic Design	ES	3	0	0	1	6	10	40	60	100	3
IT125	Engineering Drawing	ES	2	0	3	1	4	10	40	60	100	3.5
IT126	Engineering Physics Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
IT127	Engineering Chemistry Lab.	BS	0	0	3	0	1	4	50	50	100	1.5
IT128	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
IT129	Human Values and Professional Ethics(Mandatory non-credit course)	MC	3	0	0	0	1	4	50	0	50	-
TOTAL			17	0	12	5	28	62	400	450	850	20

SECOND YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT211	Data Structures	PC	2	1	0	1	4	8	40	60	100	3
IT212	Basics of Electrical Engineering	ES	3	0	0	1	4	8	40	60	100	3
IT213	Discrete Mathematical Structures	BS	3	0	0	1	5	9	40	60	100	3
IT214	Computer Organization	PC	2	1	0	1	3	7	40	60	100	3
IT215	Microprocessors	PC	2	1	0	1	2	6	40	60	100	3
IT216	Data Structures Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT217	Microprocessor Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT218	Python Programming Lab	SC	0	1	3	0	1	5	50	50	100	2.5
TOTAL			12	4	9	5	25	55	350	450	800	20.5

SECOND YEAR SEMESTER – II

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT221	Operating Systems	PC	2	1	0	1	3	7	40	60	100	3
IT222	Probability Statistics & Queuing Theory	BS	3	0	0	1	6	10	40	60	100	3
IT223	Data Communications	PC	3	0	0	1	2	6	40	60	100	3
IT224	Database Management Systems	PC	2	1	0	1	3	7	40	60	100	3
IT225	Object Oriented Programming using JAVA	PC	3	0	0	1	4	8	40	60	100	3
IT226	Object Oriented Programming using JAVA Lab	SC	0	0	3	0	3	6	50	50	100	1.5
IT227	Operating Systems Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT228	Database Management Systems	PC	0	0	3	0	3	6	50	50	100	1.5
TOTAL			13	2	9	5	27	56	350	450	800	19.5

THIRD YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT311	Open Elective-1	OE	3	0	0	1	2	6	40	60	100	3
IT312	Computer Networks	PC	3	0	0	1	2	6	40	60	100	3

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT313	Automata Theory and Compiler Design	PC	3	1	0	1	3	8	40	60	100	3
IT314	Software Engineering	PC	3	0	0	1	2	6	40	60	100	3
IT315	Artificial Intelligence	PC	2	1	0	1	3	7	40	60	100	3
IT316	QA-1 & VA-1	HS	0	0	3	1	3	7	100	-	100	1.5
IT317	UML & Testing Lab	PC	0	0	3	0	0	3	50	50	100	1.5
IT318	Computer Networks lab	SC	0	0	3	0	1	4	50	50	100	1.5
IT319	Web Technologies Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT3110	Internship in Industry-I	PR	--	-	-	0	2	2	100	-	100	2
IT3111	Constitution of Indian & - Intellectual Property Rights	MC	3	0	0	0	1	4	50	0	50	
TOTAL			17	2	12	6	22	59	600	450	1050	23

THIRD YEAR SEMESTER – II

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT321	Open Elective - 2	OE	3	0	0	1	2	6	40	60	100	3
IT322	Professional Elective - 1	PE	3	0	0	1	2	6	40	60	100	3
IT323	Professional Elective - 2	PE	3	0	0	1	2	6	40	60	100	3
IT324	Design and Analysis of Algorithms	PC	3	0	0	1	3	7	40	60	100	3
IT325	DesignThinking	HS	3	0	0	1	2	6	40	60	100	3
IT326	QA-2 & Soft Skills	HS	0	0	3	2	3	8	100		100	1.5
IT327	Elective Lab	SC	0	1	3	0	3	7	50	50	100	2.5
IT328	Internet of Things Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT329	Graphics and Multimedia Lab	PC	0	0	3	0	1	4	50	50	100	1.5
TOTAL			15	1	12	7	21	56	450	450	900	22

FOURTH YEAR SEMESTER – I

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT411	Open Elective-3	OE	3	0	0	1	2	6	40	60	100	3
IT412	Professional Elective-3	PE	3	0	0	1	2	6	40	60	100	3
IT413	Professional Elective-4	PE	3	0	0	1	2	6	40	60	100	3
IT414	Cryptography & Network Security	PC	3	0	0	1	3	7	40	60	100	3

Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT415	Foundation on Data Science	PC	2	1	0	1	2	6	40	60	100	3
IT416	Data Science Applications Lab	PC	0	0	3	0	3	6	50	50	100	1.5
IT417	Elective Lab	SC	0	1	3	0	3	7	50	50	100	2.5
IT418	Project Phase-I	PR	0	0	4	0	4	8	100		100	2
IT419	Internship in Industry-II	PR	-	-	-	0	2	2	100	-	100	2
TOTAL			14	2	10	5	23	54	500	400	900	23
FOURTH YEAR SEMESTER – II												
Code	Course	Category	L	T	P	E	O	Total	Sessional Marks	External Marks	Total Marks	Credits
IT421	Open Elective-4	OE	3	0	0	1	2	6	40	60	100	3
IT422	Professional Elective-5 / MOOC - 1	PE	3	0	0	1	2	6	40	60	100	3
IT423	Project Phase-II	PR	0	0	16	0	16	32	100	100	200	8
TOTAL			6	0	16	2	20	44	180	220	400	14
										TOTAL CREDITS		160

Proposed Electives

YEAR - SEM	III/IV SEM 2	IV/IV SEM 1	IV/IV SEM 2
ELECTIVE-STREAM	**Professional Elective - 1**	**PE-III**	**PE-V**
Stream 1 : Networks	Unix Network Programming	Mobile Adhoc Networks	Storage Area Networks
Stream 2: Data Engineering	Data Warehousing and Data Mining	Soft Computing	NLP
Stream 3 : Management	Business Automation	Organization Behaviour	Principles of Economics Management
Stream 4 : Security & Embedded	Embedded Systems	Cyber Security with web security	Malware Analysis
Stream 5 : Software Engineering	Management Information Systems	Software Testing Methodologies	Design Patterns
ELECTIVE-STREAM	**PE-II**	**PE-IV**	**Proposed MOOC courses**
Stream 1 : Networks	Distributed Operating Systems	Cloud Computing	Data Visualization with tableau modeling and simulation using matlab
Stream 2: Data Engineering	Machine Learning	Deep Learning	
Stream 3 : Management	Operation Research	Intellectual Property Rights	Mongo DB for developers
Stream 4 : Security & Embedded	Internet Of Things	Digital Forensics	Rasberri pi platform
Stream 5 : Software Engineering	User Experience(Ux)	Software Project Management	
	Elective lab 1	**Elective lab 2**	
	ETL Tools	Mobile Appplication development lab	
	DEVOpps	Matlab	
	ADV.Java	R-programming	

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'An Autonomous Institute'

Minutes of the meeting of the Board of Studies, Dept. of Mechanical Engineering (UG&PG) held on 20th June 2015 at 02:00 PM

Members present:

S. No	Name	Designation	Category	Signature of the member
1	Prof. T. V. Hanumantha Rao	Head, Mechanical, ANITS	Chairman, BOS, Mechanical	
2	Dr. B. Nagaraju	Professor, Mech., ANITS	Member	20/6/15
3	Dr. N.V.N. Indrakiran	Professor, Mech., ANITS	Member	
4	Dr. K. Sivaprasad	Assoc. Prof., Mech., ANITS	Member	
5	Mr. R. Chandra Mouli	Assoc. Prof., Mech., ANITS	Member	
6	Mr. G. Umamaheswara Rao	Sr. Asst. Prof., Mech., ANITS	Member	
7	Mr. M.S.S.Srinivas Rao	Sr. Asst. Prof., Mech., ANITS	Member	on leave
8	Mr. M. Raja Roy	Sr. Asst. Prof., Mech., ANITS	Member	M.Raja Roy
9	Mr. M. Prasanth Kumar	Asst. Prof., Mech., ANITS	Member	
10	Mr. K. Naresh Kumar	Asst. Prof., Mech., ANITS	Member	
11	Mr. S. Phani Kumar	Asst. Prof., Mech., ANITS	Member	
12	Mr. V. Krishna	Asst. Prof., Mech., ANITS	Member	
13	Mrs. M. Sailaja	Asst. Prof., Mech., ANITS	Member	20/6/15
14	Mrs. M.N.V.Krishna Veni	Asst. Prof., Mech., ANITS	Member	20/6/15
15	Ms. K.V.Rukmini	Asst. Prof., Mech., ANITS	Member	K.V. Rukmini 20/6/15
16	Prof. D. Ravi Kumar	Professor, Dept. of Mechanical, IIT, Delhi	Academic council nominee	D Ravi kum
17	Prof. K. Ramji	Prof. Dept. of Mechanical, AUCE (A), VSP	Academic council nominee	K. Ramji
18	Prof. Ch. Ratnam	Prof., Dept. of Mechanical, AUCE (A), VSP	University Nominee	
19	Dr. A. Shyam Sundar	Dy. General Manager, R&D, Steel Plant, VSP	Industry	
20	Smt. K.R.M.Alekhya,	Asst. Prof., Bullayya College of Engineering for women, VSP	Alumni	

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Ref: ANITS/Gen-12/Meeting Notice/2014-15   Date: 18-05-2015

MEETING NOTICE

There will be a meeting of the Board of Studies (BOS) of the Departments of ECE, EEE, CSE & IT, Mechanical and Humanities & Sciences on 20-06-2015 (Inauguration: 09:30 AM; Joint BOS meeting: 11:30 AM; BOS meeting in the respective departments: 02:00 PM and concluding Joint Board meeting: 04:00 PM). All the members are requested to attend the meeting without fail. The members are further requested to send proposals (if any) to the Chairman BOS (HoD of the respective department) on or before 30-05-2015.

Agenda of the BOS meeting:

1. Framing, Review and updating the syllabi relating to B.Tech. - UG courses of study of the Departments of ECE, EEE, CSE&IT, Mechanical and Humanities & Sciences for the academic year 2015-16.
2. Introduction of choice based credit system (CBCS) from the academic year 2015-16
3. Introduction of new courses of study (if any)
4. Innovative methodologies for Continuous assessment
5. Methodology for innovative teaching and evaluation techniques.
6. Approval of the panel of examiners and paper setters.
7. Methodologies to coordinate Research, Teaching, Extension and other academic activities in the department.
8. Any other item with the permission of the chair

PRINCIPAL

Copy to:

All members of Board of Studies, Departments of ECE, EEE, CSE&IT, Mechanical and Humanities & Sciences

<u>MINUTES OF MECHANICAL ENGINEERING DEPARTMETN BOS MEETING HELD AT ANITS ON 20.06.2015</u>

Item No I:

The BOS of Mechanical Engineering Department has approved the course structure for the IV Year B Tech Mechanical Engineering programme for academic regulations 2015-16 under autonomous scheme of ANITS. Details provided in Annexure-I

Item No II:

It has been discussed and approved by the board to introduce open electives and MOOCS {Massive online open courses} in the curriculum and accordingly the structure was revised.

Item no III:

The board has suggested to introduce Product development and manufacturing as elective and accordingly the structure was revised.

Item no IV, V and VII:

The items in the agenda could not be taken up due to time constraint.

Item no VI:

The BOS has approved the model papers and the list of paper setters for the above mentioned papers for academic regulations 2015-16 under autonomous scheme of ANITS. The details of papers setters provided in Annexure –III.

The BOS has approved the syllabus of the following subjects which is offered by Mechanical Engineering Department for the I Year for academic regulations 2015-16 under autonomous scheme of ANITS.

01. Engineering Drawing
02. Engineering Workshop
03. Advanced Engineering Drawing

Item no VIII:

The Board has approved the syllabus structure of M. Tech Machine Design. Details provided in Annexure-II

1

CODE	Name of the subject		Instruction periods per week				MAX MARKS		CREDITS
			Lecture	Tutorial	Practical	Total	Sessional Marks	Semester end marks	
MEC111	English	HS	3	1	-	4	40	60	3
MEC112	Engineering Mathematics I	BS	3	1	-	4	40	60	3
MEC113	Engineering Physics	BS	3	1	-	4	40	60	3
MEC114	Engineering Drawing	ES	1	-	3	4	40	60	3
MEC115	Environmental Sciences	BS	3	1	-	4	40	60	3
MEC116	Engineering Physics Lab	BS	-	-	3	3	50	50	2
MEC117	Programming with C Lab	ES	2	-	3	5	50	50	3
MEC118	Work Shop	ES	-	-	3	3	50	50	2
MEC AC 1	NCC/NSS/Sports	AC	-	-	3	3	-	-	-
Total			**15**	**4**	**15**	**34**	**350**	**450**	**22**

First Year II –Semester

CODE	Name of the subject		Instruction periods per week				MAX MARKS		CREDITS
			Lecture	Tutorial	Practical	Total	Sessional Marks	Semester end marks	
MEC121	Engineering Mathematics II	BS	3	1	-	4	40	60	3
MEC122	Engineering Chemistry	BS	3	1	-	4	40	60	3
MEC123	Professional Ethics & Human Values	HS	2	1	-	3	100		2
MEC124	Applied Physics	BS	3	1	-	4	40	60	3
MEC125	Advanced Engineering Drawing	ES	1	-	3	4	50	50	3
MEC126	Engineering Chemistry Lab	BS	-	-	3	3	50	50	2
MEC127	Language Lab	HS	-	-	3	3	50	50	2
MEC128	Object oriented Programming with C++ Lab	ES	2	0	3	5	50	50	3
MECAC 2	NCC/NSS / Sports	AC	-	-	3	3	-	-	-
Total			**14**	**4**	**15**	**33**	**420**	**380**	**21**

BS : Basic Sciences; ES : Engineering Sciences; HS : Humanities and Social Sciences; PC : Professional Core;
PE : Professional Elective; OE : Open Elective; PW : Project Work; IT : Industrial Training; AC : Audit Course

Second Year I –Semester

Code	Name of the subject		Periods per week			Max. marks		Credits
			Lecture	Tutorial	Practical	Sessionals	End Exams	
MEC211	Engineering Mathematics –III	BS	3	1		40	60	3
MEC212	Material Science and Metallurgy	PC	3	1		40	60	3
MEC213	Engineering Mechanics	PC	4	1		40	60	4
MEC214	Mechanics of Solids	PC	4	1		40	60	4
MEC215	Engineering Thermodynamics – I	PC	4	1		40	60	4
MEC216	Manufacturing Technology – I	PC	3	1		40	60	3
MEC217	Strength of Materials Lab	PC			3	50	50	2
MEC218	Mechanical Engineering Lab –I	PC			3	50	50	2
	Total		*21*	*6*	*6*	*340*	*460*	*25*

Second Year II –Semester

Code	Name of the subject		Periods per week			Max. marks		Credits
			Lecture	Tutorial	Practical	Sessionals	End Exams	
MEC221	Engineering Mathematics –IV	BS	3	1		40	60	3
MEC222	Basic Electrical and Electronics Engineering	ES	3	1		40	60	3
MEC223	Fluid Mechanics	PC	4	1		40	60	4
MEC224	Theory of Machines-I	PC	4	1		40	60	4
MEC225	Manufacturing Technology–II	PC	3	1		40	60	3
MEC226	Machine Drawing	PC	1		3	40	60	3
MEC227	Basic Electrical and Electronics Engineering Lab	PC			3	50	50	2
MEC228	Manufacturing Technology Lab– I	PC			3	50	50	2
	Total		*18*	*5*	*9*	*340*	*460*	*24*

Third Year I – Semester

Code	Name of the subject		Periods per week			Max. marks		Credits
			Lecture	Tutorial	Practical	Sessionals	End Exams	
MEC311	Open Elective-1	OE	3	1		40	60	3
MEC312	Hydraulic Machinery and Systems	PC	3	1		40	60	3
MEC313	Engineering Thermodynamics – II	PC	4	1		40	60	4
MEC314	Theory of Machines – II	PC	4	1		40	60	4
MEC315	Design of Machine Elements–I	PC	4	1		40	60	4
MEC316	FMM Lab	PC			3	50	50	2
MEC317	Manufacturing Technology Lab–II	PC			3	50	50	2
MEC318	Soft Skills lab	HS			3	100		2
MEC319	Verbal and Quantitative Aptitude –I	HS	4			100		2
	Total		**22**	**5**	**9**	**500**	**400**	**26**

Third Year II – Semester

Code	Name of the subject		Periods per week			Max. marks		Credits
			Lecture	Tutorial	Practical	Sessionals	End Exams	
MEC321	Manufacturing Technology – III	PC	3	1		40	60	3
MEC322	Industrial Engineering and Management	PC	3	1		40	60	3
MEC323	Design of Machine Elements-II	PC	4	1		40	60	4
MEC324	Engineering Thermodynamics-III	PC	4	1		40	60	4
MEC325	Operations Research	PC	3	1		40	60	3
MEC326	Dept Elective-1	PE	3	1		40	60	3
MEC327	Metrology & Mechatronics Lab	PC			3	50	50	2
MEC328	Mechanical Engineering Lab – II	PC			3	50	50	2
MEC329	Verbal and Quantitative Aptitude –II	HS	4			100		2
	Industrial Training *							
	Total		**24**	**6**	**6**	**440**	**460**	**26**

Fourth Year I - Semester

Code	Name of the subject		Periods per week			Max. marks		Credits
			Lecture	Tutorial	Practical	Sessionals	End Exams	
MEC411	Open elective –II	OE	3	1		40	60	3
MEC412	Managerial Economics and Financial Analysis	PC	3	1		40	60	3
MEC413	Heat Transfer	PC	4	1		40	60	4
MEC414	Computer Aided Design	PC	3	1		40	60	3
MEC415	Dept Elective –II	PE	3	1		40	60	3
MEC416	Dept Elective –III	PE	3	1		40	60	3
MEC417	Heat Transfer Lab	PC			3	50	50	2
MEC418	Computer Aided Design Lab	PC			3	50	50	2
MEC419	Industrial Training**	IT				100		2
MEC420	Project -Phase –I	PW			5	100		4
	Total		**19**	**6**	**11**	**540**	**460**	**29**

Fourth Year II - Semester

Code	Name of the subject		Periods per week			Max. marks		Credits
			Lecture	Tutorial	Practical	Sessionals	End Exams	
MEC421	Instrumentation & Control systems	PC	3	1		40	60	3
MEC422	Dept Elective – IV	PE	3	1		40	60	3
MEC423	Project Phase –II	PW			12	100	100	8
MEC424	MOOCs ##	OE				100		2
	Total		**6**	**2**	**12**	**280**	**220**	**16**

R. Srikanth.

Convener, IQAC
Anil Neerukonda Institute of
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Sangivalasa-531 162
Visakhapatnam Dist

Principal
Anil Neerukonda Institute of
Technology & Sciences
Sangivalasa-531 162
Visakhapatnam Dist

LIST OF DEPARTMENT ELECTIVES

ELECTIVE SUBJECTS:

	Stream - 1	Stream - 2	Stream - 3	Stream - 4	Stream - 5
Elective -I MEC 326	Power Plant Engineering	Automation in Manufacturing	Advanced Mechanics of Solids	Production Planning and Control	Rapid Prototyping
Elective -II MEC 415	Gas Turbines and Jet Propulsion	product Design and Manufacturing	Robotics	Total Quality Management	Finite Element Analysis
Elective -III MEC 416	Refrigeration and Air Conditioning	Computer Numerical Control and Computer Aided Manufacturing	Automobile Engineering	Entrepreneurship Development	Nano Technology
Elective -IV MEC 422	Non-conventional sources of energy	Condition Monitoring	Computa-tional Fluid Dynamics	Statistical Quality Control	Mechatronics

To award degree, a student has to obtain 180 credits. For a student who has obtained all 190 credits by successfully completing required electives, the best 180 credits will be considered for calculating final CGPA. The student is also having the choice of registering for 180 credits only {However, a student cannot opt out of more than 1 open elective and 1 department elective}. In this case the CGPA is calculated for 180 credits.

* Students have to undergo Industrial Training after III Year and during summer vacation

**Viva-voce for Industrial Training will be organized in IV Year – I Sem

\#\# A student can also opt for MOOCS{Massive online open courses} at any time during the IV Year B. Tech course in any of the courses offered by Premium institutions such MIT, Stanford etc., and have to provide course completion certificate for award of credits. Compatibility to our system and corresponding marks are evaluated by a departmental committee. But marks and credits will be awarded in IV year- II Sem. only.

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Website : www.anits.edu.in   e-mail : principal@anits.edu.in

Members of Board of studies (Dept. of Mechanical Engineering)
(UG&PG held on 30-03-2019 at 10:30AM)

S.No	Name	Designation	Category	Signature
1	PROF. D. RAVI KUMAR	Prof., Dept. of Mech. Engg, IIT-Delhi	Academic Council Nominee	
2	PROF. N. RAMANAIAH	Professor, Dept. of Mech. Engg.,AUCE(A). Vishakapatnam.	University Nominee	30/3/19
3	PROF. CH. RATNAM	Prof. & HOD, Dept. of Mech. Engg.AUCE(A). Vishakapatnam.	Academic Council Nominee	
4	MR. K. VENKAT POORNESH	Sr. Engineer, Production Division, BHEL, Vishakapatnam	Alumni & Industry Nominee	30.03.
5	PROF.T.V.HANUMANTHA RAO	Dean Academics,ANITS & Professor of Mechanical Engineering	Honorary Member	C.L
6	PROF. D. PRASADA RAO	Prof., Dept.of Mech. Engg.,Dean and Controller of Examination, ANITS	Honorary Member	30/1/19
7	Dr. N. INDRAKIRAN	Prof., Dept.of Mech. Engg.. ANITS	Member	
8	Dr. K.SIVA PRASAD	Prof., Dept.of Mech. Engg. ANITS	Member	
9	Dr. M.RAJA ROY	Assoc. Prof., Dept.of Mech. Engg. ANITS	Member	M.Rgx
10	Dr. RAJESH GHOSH	Assoc. Prof., Dept.of Mech. Engg.. ANITS	Member	
11	R. CHANDRAMOULI	Assoc. Prof., Dept.of Mech. Engg. ANITS	Member	30/3/19
12	G.UMAMAHESWARA RAO	Sr. Asst. Prof., Dept.of Mech. Engg. ANITS	Member	
13	M.S.S. SRINIVAS RAO	Sr. Asst. Prof., Dept.of Mech. Engg. ANITS	Member	MSSR
14	M PRASANTH KUMAR	Asst. Prof., Dept.of Mech. Engg. ANITS	Member	
15	J.V.BHANU TEJ	Asst. Prof., Dept.of Mech. Engg. ANITS	Member	J.v.Bhanu
16	M PREM DHEERAJ	Asst. Prof., Dept.of Mech. Engg. ANITS	Member	
17	PROF. B. NAGARAJU	HOD, Dept.of Mech. Engg., ANITS	Chairman- Board of Studies (Mechanical)	30.3.19

PROFESSOR & HEAD 30.3.19.
Department of Mechanical Engineering

Principal

Minutes of Board of studies meeting held on 30-03-2019

Agenda:

Review and ratification of B.Tech and M.Tech (Machine design) course structures and B.Tech first year syllabus under autonomous scheme.

Suggestions & Resolutions:

The members of board of studies met on this day in metrology lab, Mechanical engineering department, ANITS to review the course structures (R-19 regulations) and B.Tech I year syllabus under autonomous scheme and suggest suitable modifications wherever necessary. At the outset, the chairman of BOS Prof. P. Nagaraju, welcomed the gathering and initiated the process. The review of the course structure was taken up as an immediate agenda and was done semester wise. The following observations/suggestions were made by the members:

1. It was suggested by the expert members not to include extended contact hours and outside contact hours in the curriculum as they do not carry any credits. But the extended contact hours may be included in the time table to cover the syllabus holistically.

2. It was suggested to transfer **Engineering Workshop** from first semester to second semester in the first year curriculum so at to reduce the number of labs from 3 to 2 in the beginning semester. Hence the total number of credits for first semester is **18.5** and **19.5** for the second semester of the first year.

3. The titles of the following courses were suggested to be modified which was accepted by the board.
   a) 'Elements of Mechanical Engineering' changed to **'Basics of Mechanical Engineering'**.
   b) 'Production technology' modified to **'Manufacturing Processes'**.
   c) 'Production Technology Lab' modified to **'Manufacturing Lab'**.
   d) 'Metal cutting & Machine Tools' modified to **'Metal cutting, Machine Tools & Metrology'**.
   e) 'Machine and Production Drawing' modified to **'Mechanical Engineering Drawing'**.
   f) 'Applied Mechanics Lab' modified to **'Machines and Mechanisms Lab'**.

PROFESSOR & HEAD
Department of Mechanical Engineering

4. It is strongly observed by the expert members that 'Verbal Aptitude' and 'Quantitative Aptitude' cannot be considered as Mechanical Engineering courses and hence they cannot be part of Mechanical Engineering curriculum. However, if these two courses are required for placement drives, the number of credits shall be limited to 1 credit each. The chairman BOS said that this will be conveyed to the Principal and the decision on this suggestion has to be taken at institution level.

5. The following suggestions were given by the external members with regards to professional electives.
   a) Dr Ravi Kumar said that the list of professional electives may be reorganised to the maximum possibility such that every professional elective has one subject each from the four specialisations.
   b) **'Managerial Economics & Financial Analysis'** course shall be replaced by **'Supply Chain Management'**.
   c) **'Advanced Materials'** course shall be replaced by **'Advanced Mechanics of Materials'**.
   d) **'Rapid Prototyping'** course shall be replaced by **'Unconventional Machining'**.
   e) **'Energy Conversion & Management'** course shall be replaced by **'Processing of Plastics & Composites'**.

6. The expert members opined that since **'Material Science & Metallurgy'** is one of the courses being offered by the department, it will be worthwhile to include few experiments on metallurgy in the Mechanics of Solids Lab. This was accepted by the board for implementation.

7. Some minor modifications / suggestions were given by the external members with regards to the syllabus of Engineering drawing, Advanced Engineering drawing & engineering work shop which has to be reviewed.

8. It was suggested by the external members to include a unit on basics of materials instead of principles of steel making. They further suggested to include steel making processes in **Metallurgy and Material science** in the 2nd year 1st semester.

30.3.19

R. Srikanth.
Convener, IQAC
Anil Neerukonda Institute of
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Sangivalasa-531 162

PROFESSOR & HEAD
Department of Mechanical Engineering
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Principal
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9. Regarding M.Tech course structure external members suggested to include **Theory of Elasticity & Plasticity** as a core subject in the first year first semester. They also suggested to introduce **Research Methodology** as a non-credit course.

The chairman thanked the members of the board for their valuable suggestions. The UG & PG course structures were ratified by the board of studies after including the minor corrections.

30.3.19

(HOD, Mechanical)

Head of the Department
Department of Mechanical Engineering
Anil Neerukonda Institute of Technology & Science:
Sangivalasa - 531162

CC to: 1) Principal
2) Dean of examinations
} for the kind information

Convener, IQAC
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ANITS (A)
Department of Mechanical engineering
R-19-Course structure

I Year

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
MEC111	Engineering Mathematics - I	BS	3	0	0	2	4	9	40	60	100	3
MEC112	Engineering Physics	BS	3	0	0	1	3	7	40	60	100	3
MEC113	Engineering Chemistry	BS	3	0	0	1	3	7	40	60	100	3
MEC114	#Biology for Engineers	BS	2	1	0	1	3	7	100	---	100	3
MEC115	Engineering Drawing	ES	2	0	3	1	4	10	40	60	100	3.5
MEC116	Engineering Physics Lab	BS	0	0	3	0	1	4	50	50	100	1.5
MEC117	Engineering Chemistry Lab	BS	0	0	3	0	1	4	50	50	100	1.5
MEC118	Engineering Workshop	ES	0	0	3	0	1	4	50	50	100	1.5
MEC119	Human Values and Professional Ethics(Mandatory non-credit course)	MC	0	0	0	3	1	4	50		50	0
	Total		13	1	12	9	21	56	460	390	850	20

I Year

Semester - II

Code	Title of the course	Category	Periods						Sessionals Marks	end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
MEC121	Engineering Mathematics - II	BS	2	1	0	2	4	9	40	60	100	3
MEC122	English	HS	3	0	0	0	2	5	40	60	100	3
MEC123	*Advanced Engineering drawing	ES	2	0	2	2	4	10	50	50	100	3
MEC124	Basic Electronics Engineering	ES	3	0	0	1	3	7	40	60	100	3
MEC125	Problem solving with C	ES	3	0	0	0	2	5	40	60	100	3
MEC126	Language Laboratory	HS	0	0	3	0	1	4	50	50	100	1.5
MEC127	Problem solving with C– lab.	ES	0	0	3	3	3	9	50	50	100	1.5
MEC128	Environmental studies (Mandatory non-credit course)	MC	0	0	0	3	3	6	50		50	0
	Total		13	1	8	11	22	55	360	390	750	18

II Year

Semester - I

Code	Title of the course	Category	Periods L	T	P	E	O	Total	Sessionals Marks	end Exam marks	Total Marks	Credits
MEC211	Engineering Mathematics - III	BS	2	1	0	2	4	9	40	60	100	3
MEC212	Material science & Metallurgy	PC	3	0	0	1	2	6	40	60	100	3
MEC213	Engineering Mechanics	PC	2	1	0	2	4	9	40	60	100	3
MEC214	Mechanics of solids	PC	2	1	0	2	4	9	40	60	100	3
MEC215	Basic Thermodynamics	PC	2	1	0	2	4	9	40	60	100	3
MEC216	Manufacturing Processes	PC	3	0	0	2	2	7	40	60	100	3
MEC217	Mechanics of solids-Lab	PC	0	0	3	0	1	4	50	50	100	1.5
MEC218	Manufacturing- Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		14	4	6	11	22	57	340	460	800	21

II Year

Semester - II

Code	Title of the course	Category	Periods L	T	P	E	O	Total	Sessionals Marks	end Exam marks	Total Marks	Credits
MEC 221	Engineering Mathematics - IV	BS	2	1	0	2	4	9	40	60	100	3
MEC 222	Basic Electrical Engineering	ES	2	1	0	1	3	7	40	60	100	3
MEC 223	Applied Thermal Engineering-I	PC	2	1	0	2	4	9	40	60	100	3
MEC 224	Kinematics of Machinery	PC	2	1	0	2	4	9	40	60	100	3
MEC 225	Metal cutting, Machine Tools & Metrology	PC	3	0	0	2	2	7	40	60	100	3
MEC 226	Mechanical Engineering Drawing	PC	1	0	4	0	3	8	40	60	100	3
MEC 227	Machine Tools Lab	PC	0	0	3	0	1	4	50	50	100	1.5
MEC 228	**Basic Electrical Engineering-Lab	ES	0	0	3	0	1	4	50	--	50	1.5
	Total		12	4	10	9	22	57	340	410	750	21

III Year

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
MEC 311	***Open Elective-I	OE	3	0	0	1	2	6	40	60	100	3
MEC 312	Humanities Elective	HS	3	0	0	1	2	6	40	60	100	3
MEC 313	Design Thinking	ES	2	0	2	1	2	6	40	60	100	3
MEC 314	Dynamics of Machinery	PC	2	1	0	2	4	9	40	60	100	3
MEC 315	Applied Thermal Engineering-II	PC	2	1	0	2	4	9	40	60	100	3
MEC 316	Design of Machine Elements-I	PC	2	1	0	2	4	9	40	60	100	3
MEC 317	Quantitative Aptitude-I & Verbal Aptitude	HS	0	0	3	1	3	7	100	0	100	1.5
MEC 318	Thermal Engineering Lab	PC	0	0	3	0	1	4	50	50	100	1.5
MEC 319	Applied Mechanics-Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		**15**	**3**	**9**	**10**	**23**	**60**	**440**	**460**	**900**	**22.5**

III Year

Semester - II

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
MEC 321	***Open Elective-II	OE	3	0	0	0	2	5	50	50	100	3
MEC 322	Professional Elective-I	PE	3	0	0	1	2	6	40	60	100	3
MEC 323	Professional Elective-II	PE	3	0	0	1	3	7	40	60	100	3
MEC 324	Operations Research	PC	2	1	0	1	4	8	40	60	100	3
MEC 325	Fluid Mechanics & Hydraulic Machinery	PC	2	1	0	2	3	8	40	60	100	3
MEC 326	Design of Machine Elements-II	PC	2	1	0	2	4	9	40	60	100	3
MEC 327	Quantitative Aptitude-II & Soft Skills	HS	0	0	3	2	3	8	100	0	100	1.5
MEC 329	Metrology & Mechatronics-Lab	PC	0	0	3	0	1	4	50	50	100	1.5
MEC 328	Fluid Mechanics & Hydraulic Machinery - Lab	PC	0	0	3	0	1	4	50	50	100	1.5
	Total		**15**	**3**	**9**	**9**	**23**	**59**	**450**	**450**	**900**	**22.5**

IV Year

Semester - I

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
MEC 411	***Open Elective-III	OE	3	0	0	0	2	5	40	60	100	3
MEC 412	Professional Elective-III	PE	3	0	0	1	2	6	40	60	100	3
MEC 413	Professional Elective-IV	PE	3	0	0	1	3	7	40	60	100	3
MEC 414	Computer Aided Design & Manufacturing	PC	2	1	0	2	2	7	40	60	100	3
MEC 415	Heat Transfer	PC	2	1	0	2	4	9	40	60	100	3
MEC 416	Computer Aided Design & Manufacturing Lab	PC	0	0	3	0	2	5	50	50	100	1.5
MEC 417	Heat Transfer-Lab	PC	0	0	3	0	1	4	50	50	100	1.5
MEC 418	****Industrial Training	PR	0	0	0	0	0	0	--	100	100	1
MEC 419	Project Phase-I	PR	0	0	4	0	4	8	--	100	100	2
	Total		13	2	10	6	20	51	300	600	900	21

IV Year

Semester - II

Course Code	Title of the course	Category	Periods						Sessionals Marks	Semester end Exam marks	Total Marks	Credits
			L	T	P	E	O	Total				
MEC 421	***Open Elective-IV	OE	3	0	0	0	2	5	40	60	100	3
MEC 422	*****Professional Elective-V	PE	3	0	0	1	2	6	40	60	100	3
MEC 423	Project Phase-II	PR	0	0	16	0	16	32	100	100	200	8
	Total		6	0	16	1	20	43	180	220	400	14

Total Credits   160

The assessment for the subject Biology for Engineers shall be "INTERNAL ONLY" for 100 Marks. The subject will not have external end exam.

* The External examination shall be conducted in two parts each for one and half hour duration under the purview of an internal and external examiner. The first part shall be in the conventional drawing format (manually) and the second using Auto CAD software. In conventional drawing, the student has to attempt two problems out of three questions, which will be purely based on drawing. The second part will consist of two questions, the first being a theoretical question on AutoCAD and the second will be an application of AutoCAD(on computer) to produce a drawing.

** The assessment for Basic Electrical Engineering Lab shall be "INTERNAL ONLY" for 50 Marks.

*** Open electives can be interdisciplinary subjects/Emerging subjects/ MOOCS (will be decided by the department).

**** The industrial training programme should be done by the student at the end of III year II semester. The minimum duration of industrial training should not be less than 15 working days. The evaluation process has to be carried out in the final year first semester.

*****Those who are going for full semester project internship in an industry can opt for 2 MOOCS courses in lieu to 2 courses offered in IV-II. The grade for the MOOCS courses will be awarded based on an evaluation by the departmental committee.

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Principal
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List of Professional electives and other electives

Professional Elective-I	Production Planning & Control	Gas Turbines & Jet Proplusions	Additive Manufacturing	Non-Destructive Testing
Professional Elective-II	Refrigeration & Air-conditioning	Statistical Quality Control	Computational Fluid Dynamics	Nano Technology
Professional Elective-III	Automobile Engineering	Automation in Manufacturing	Unconventional machining process	Quality & Reliability Engineering
Professional Elective-IV	FEA	Alternate fuels	Industrial Tribology	Advanced Mechanics of Materials
Professional Elective-V	Mechanical Measurements & Control systems	Non-Conventional Energy sources	Power Plant Engineering	Condition Monitoring

Open Electives: Artificial Intelligence, Internet of things, C++, Java, Python, MATLAB etc.

Emerging Subjects: Robotics, Additive Manufacturing, Mechtronics etc.

Humanities Elective-A) MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS
B) INDUSTRIAL ENGINEERING AND MANAGEMENT
C) ENTREPRENEURSHIP DEVELOPMENT
D) SUPPLY CHAIN MANAGEMANT

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