NEW HORIZON
COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU. Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

BOARD OF STUDIES MEETING

DATE	:	28/05/2022
VENUE	:	Dept. of ISE, NHCE
TIME	:	11.00 am to 2.00pm

Chandhi
6/6/22

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AGENDA FOR THE MEETING

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Agenda 4: Approval of Proposed Courses-Minor Degree in Data Science

Agenda 5: Approval of BE 5th and 6th semester 2020-2024 Batch (175 credits)

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Agenda 8: Approval of M.Tech in Cyber Forensics and Information Security (3rd , 4th semester)

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Agenda 10: Feedback on Survey Forms

Agenda 11: Suggestions and Recommendations from Board Member

Agenda 12: Concluding Remarks

LIST OF MEMBERS

SI. No	Category	Nomination of the committee	Name of the person	Designation & Affiliation
1	**Head of the Department**	**Chairperson**	Dr. R.J Anandhi	Professor & HOD, Dept. of ISE
2	**Special Invitees**	**1**	Dr. Manjunatha	Principal, NHCE
		2	Dr. R.J Anandhi	Dean Academics, NHCE
3	**Faculty member at different level with different specialization**	**Member**		
		1	Dr. K Saravanan	Professor, Dept. of ISE, NHCE, Bangalore
		2	Dr. Arvind Kapse	Professor, Dept. of ISE, NHCE, Bangalore
		3	Dr. P Mangayarkarasi	Associate Professor, Dept. of ISE, NHCE, Bangalore
		4	Dr. Kalaivani D	Associate Professor, Dept. of ISE, NHCE, Bangalore
		5	Mrs. Swathi Baswaraju	Sr. Assistant Professor, Dept. of ISE, NHCE, Bangalore
		6	Mrs. Shobha Shanmugham	Sr. Assistant Professor, Dept. of ISE, NHCE, Bangalore
		7	Ms. Suvika KV	Assistant Professor, Dept. of ISE, NHCE, Bangalore
4	**Subject expert from outside the college nominated by Academic Council**	**Member**		
		1	Prof. Anandhi Giridharan Principal Research Scientist IISc, Bangalore.	Academic Technical Expert
		2	Dr. Natarajan S Professor and Key Resource Person PES University, Bengaluru	
		3	Dr. Varaprasad G Associate Professor, BMS College of Engineering, Bengaluru	
5	**Experts from outside the college**	**Member**		
		1	Dr Nalini, Professor, Dept. of CSE,	VTU Nominee

	nominated by VTU		Nitte Meenakshi Institute of Technology, Bengaluru	
6	**Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council**	**Member**
		1	Ms. Madhuvanthi Ravi Global Manager(India, Asia, Europe) Talent Acquisition and attraction, A.P.Moller – Maersk, Bengaluru	Industry Technical Expert
		2	Mr. Sachin kumar R S Regional Program Manager, IT Academy, Asia-Pacific & Japan, VMware , Bengaluru	
7	**Post Graduate meritorious alumni nominated by Principal**	**Member**
		1	Mr. Prashanth V Project Manager, Trinity Mobility, Bengaluru	Alumnus
		2	Mrs. Sannutha S Holla, Technical Program Manager, Harman International, USA	
		3	Mr. Venkat Surendra, Consultant , Deloitte consulting, Bengaluru	
		4	Ms. Pavitra Nagendrappa, Colleague Support Engineer, VMware, Bengaluru	
8	**Co-opted members**	**Member**
		1	Mr. Aniz Mirza, Head Placement & Corporate relations, NHCE, Bangalore	Placement
		2	Dr.Gautam K S, Sr. Asst Professor, Dept. of ISE, NHCE.	
		3	Dr. L. Srinivasan Associate Professor Dept. of ISE, NHCE	Academic & Research expertise
		4	Dr.R Senthil kumar , Associate Professor, Dept. of ISE, NHCE.	
		5	Mrs. Vandana C P, Sr. Assistant Professor Dept. of ISE, NHCE	

WELCOME ADDRESS BY THE CHAIRMAN OF BOS AND INTRODUCTION OF MEMBERS

Minutes

The **BOARD OF STUDIES (2021 – 22)** meeting was held on 28/05/2022 in hybrid mode using Google Meet with internal members, few external members (in person) and other external members joined online.

Dr. R.J Anandhi, Chairperson of BOS, Dean Academics, Professor & Head -Department of ISE welcomed the BOS Committee members. BOS Chairperson specially welcomed the new members of the board of studies, Ms. Madhuvanthi Ravi, Industry Technical Expert and Mr. Prashanth V, Alumnus.

HOD presented the agenda of the Board of studies meeting to the members. She introduced the Internal and External BOS members. The Scheme and syllabus of B.E (2021-2025)Batch, BE 5th and 6th semester 2020-2024 Batch, BE 7th and 8th semester 2019-2023 Batch & M.Tech (3rd and 4th semester) was shared via email to all the board members for effective discussion and recommendations.

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AGENDA - 1

TITLE Introduction & Achievements for A.Y 2021 - 22

Minutes

1 HOD started the presentation by highlighting ISE faculty Ph.D research progress, faculty achievements in NPTEL Discipline Star and Motivated Learner awards.

2 Student achievements like Toycathon 2021 winners, Manthan 2021, Corona Safe Engineering Fellowship, SAP Semicolon Hackathon were highlighted and presented to the board members.

3 The BOS chairperson presented the R&D achievements including 12 KSCST proposal selection, Best project awards, Research Proposals (VGST, AICTE, STTP), Patents, Paper publications, Patent filing and Books publications to the panel.

4 Placement achievement of 94% of 2022 Batch and the kickstart of 2023 batch placements with Eurofins 12LPA was highlighted.

5 BOS members appreciated the achievements and initiatives taken by the department.

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AGENDA - 2

TITLE
> Status update on suggestions given by BOS members during 2020-21

Minutes

Salient features as below were highlighted by the BOS chairman:

1. BOD chairman updated the status of the categorization of professional electives according to information security, Data science, IoT and Bio-informatics as recommended by the BOS.
2. Final year students were encouraged to publish papers in IEEE conferences.
3. Mini project work of the students checked in Github code repository.

Suggestions:

1. Dr. Nalini suggested to arrange mini project exhibition to further enhance the quality of project, leadership skills of students.

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AGENDA - 3

TITLE
> BE - Scheme and Syllabus for 2021-2025 Batch – Discussion and Approval (NEP 160 Credits)

Minutes

1. HoD presented the scheme of 2021-2025 batch with the ability enhancement courses.
2. Summer Internship-I was introduced with 2 credits. HOD updated that discussion regarding providing it through Centre of Excellence in college is in pipeline.
3. Summer Internship-II introduced to be undertaken with industry collaboration.
4. Comparative credit distribution was presented showcasing NHCE proposed curriculum aligned with AICTE and VTU.

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AGENDA - 4

TITLE
> Approval of Proposed Courses-Minor Degree in Data Science

Minutes

1. The BOS chairman highlighted the BE Minor-Data Science requirement and credit accumulation.

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AGENDA - 5

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TITLE

> Approval of BE 5th and 6th semester 2020-2024 Batch (175 credits)

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Minutes

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1. The board members approved the scheme and syllabus of 5th and 6th semester, which incorporated the previous suggestions given by BOS.

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AGENDA - 6

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TITLE

> Approval of BE 7th and 8th semester 2019-2023 Batch (175 credits)

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Minutes

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1. The board members approved the scheme and syllabus of 7th and 8th semester, which incorporated the previous suggestions given by BOS.

2. Dr. Natarajan and Dr. Varaprasad suggested the text books on OOMD course and Machine Learning Course. Text book authored by Tom Micheele suggested to be moved from reference textbook to main textbook section.

3. Course Computer Networks suggested to be moved to core subject rather than elective.

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AGENDA - 7

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TITLE

> Discussion and Approval of Evaluation Metrics in CIE

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Minutes

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1. HOD presented the CIE evaluation metrics as Open Book Assignment and Online Coding Platform like Hackerrank , LeeCode.

2. BOS member Mr. Venkat appreciated the usage of online coding platform.

3. Ms. Madhuvanthi suggested that the problem statement can be academics -based problems rather than business use cases.

4. Mr. Anish appreciated the mini project work carried out by students and its effect during placement season.

5. Dr. Natarajan.S suggested to have an additional quality check of the questions in Continuous Internal Evaluation process.

6. Dr. Nalini suggested the best practice for faculty as Moodle platform for assignment & document uploading and evaluation.

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AGENDA - 8

TITLE Approval of M.Tech in Cyber Forensics and Information Security

Minutes

1. The Board of members recommended no changes as it adheres to VTU norms.

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AGENDA - 9

TITLE Best Practices

Minutes

1. HOD presented the best practices for students- encouraging for online competitions, uploading mini project in Github repository, domain training, open-source usage etc.

2. BOS members appreciated the best practices inculcated.

AGENDA - 10

TITLE Feedback on Survey Forms

Minutes

1. BOS chairperson presented the summary of all survey forms collected from stakeholders. Summary of Course feedback form, Graduate survey from, Alumni survey, parent survey collected were discussed and actions for ratification were proposed. BOS members gave their consent for implementing the actions for ratification.

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AGENDA - 11

TITLE	Suggestions and Recommendations from Board Members

The suggestions from various BOS members are presented as following:

Dr. Anandhi Giridharan , Academic Technical Expert

1. Dr. Anandhi Giridharan recommended upgrading faculty knowledge so that they can frame better syllabus incorporating latest technology. Example, in cloud computing course need to give an in site of edge computing. More Analytical learning and hands-on oriented approaches to be used

2. Dr. Anandhi Giridharan suggested that students to be made part of IEEE professional societies, so that funding can be provided by IEEE site by submitting projects. She suggested IISc certification program to be taken.

3. Discrete mathematics course may be introduced, Object oriented DB, Specification languages in communication and networks may be included.

4. Inclusion of Entrepreneurship course in 3rd semester was appreciated.

5. Industrial management courses can be introduced was suggested.

6. Latex for thesis documentation can be included in Research Methodology course.

7. Environmental science course inclusion was appreciated.

8. Rural schools outreach activities to be encouraged to develop leadership skills in students. BOS chairperson augmented that AICTE Activity point mandates this activity and is in place.

9. BOS chairman updated the 5G Capgemini – Lab set up in campus to further upskill the students in telecom domain.

Dr Natarajan S, Academic Technical Expert

1. Recommended to have Computer Networks course as a core subject not to be in elective.

2. Apart from IEEE students can join ACM to get better benefits.

3. Suggested that Engineering mathematics syllabus needs to be strengthened and it needs to be ratified so that students will get applied mathematics knowledge.

Mathematics department faculty training suggested to be conducted by IISc Professors.

4. Faculty upgradation should be a continuous process, they have to balance between the theoretical and practical approaches.

5. BOS Chairman updated that all the final year students are IEEE members and have submitted papers to various IEEE conferences.

Ms. Madhuvanthi Ravi, Industry Technical Expert

1. Ms. Madhuvanthi Ravi appreciated the BOS process and mentioned that the scheme and syllabus of ISE department is in line with the industry requirements and standards.

2. She suggested to include User Experience as an elective course.

3. Principles of scrum in Agile can be included as guest lecture.

4. She suggested that students can specialize in specific areas like AI, ML, App development. Collaboration with foreign universities was suggested for betterment of student community.

5. She suggested that faculties can have mentors from industry to further enhance the skills.

6. Cyber security suggested to be included as core subject rather than elective.

7. BOS chairman updated that guest talks are conducted by industry experts in all the courses (5th module) to further bridge the gap between academics and industry and to enrich students' knowledge with up-to-date technology trends.

8. BOS chairman augmented the presence of strong industry institute interaction cell and 13 center of excellence (COE) in college. 'Train the Trainer' programs are conducted by COE which enhances faculty skillset.

9. BOS chairperson updated that the study abroad program in collaboration with French university is actively in place and progress in college.

10. BOS chairman also highlighted that 'Life skill and lifelong learning' is a separate department in college which enhance the communication skill, soft skill and personality development of students. Toastmaster collaborated activities are in place and students actively take part in it.

Dr. Nalini, VTU Nominee

1. Appreciated that the scheme and syllabus is well framed
2. Dr. Nalini suggested for integrated labs in the scheme.
3. Congratulated for NIRF ranking of the institution

Mr. Prashanth, Alumnus from 2012-2016 Batch

1. Coursera, Bootcamp platforms suggested to be used for student upskill.
2. Entrepreneurship course in 3rd semester is too early.
3. Communication skill course inclusion in scheme was appreciated.
4. BOS chairman shared the observation that lower semester students came up with very innovative ideas which got recognized in National level events Toycathon, Manhattan 2021. Hence Entrepreneurship course at 3rd semester can be fruitful as it can be a brainstorming activity to build future entrepreneurs.

Mr. Venkat, Alumnus from 2012-2016 Batch

1. Courses chosen from Coursera platform must be aligned to their scheme.
2. Full stack course as capacity skill development course is too vast and can be de-merit during interview process. Hence renaming and re-structuring can be done.
3. E-mail etiquette can be taught at college level as communication skill. Alumni can be invited for sharing skill set related to same.

Mr. Aneesh Mirza, Placement Nominee

1. Mr. Aneesh updated that during internship period, department closely and constantly monitor the students so that they can be absorbed by companies.
2. College provides the orientation session before any placement drive highlighting the company polices, culture and basic etiquette to be followed.
3. Suggested that the mini project documentations can be shared with faculties via email so that email writing process comes inbuilt.
4. BOS chairman augmented that the suggestions provided will be considered and feasible solutions will be provided.

AGENDA - 12

TITLE

Concluding Remarks

Minutes

1. BOS chairperson expressed that our students are being given quality education as par with foreign universities.

2. Industry readiness and technical excellence are being attained in trending technologies.

3. Students and faculty are trained to write proposals for funding agencies.

4. Students have won prizes in SAP semicolon Hackathon, Lowe's Campus Challenge, IEEE Hackathon, Toycathon 2021.

VOTE OF THANKS BY THE CHAIRMAN-BOS

BOS Chairman delivered Vote of Thanks and appreciated each and every member of the board for their contribution and valuable suggestions provided.

SCREENSHOTS

Third Semester B.E Program–Scheme

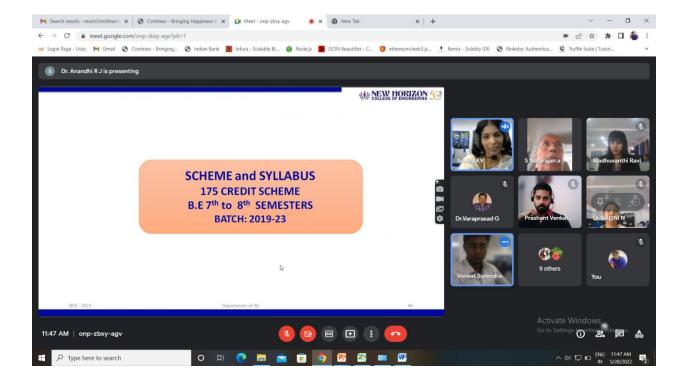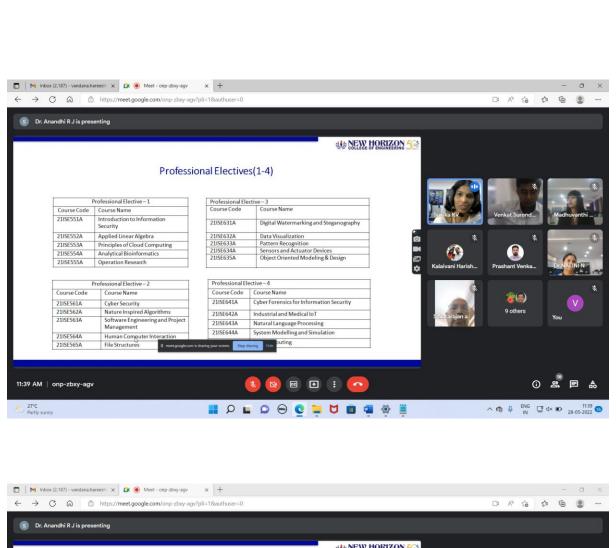| S. No	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	21ISE31A	Mathematical Foundation for Computing sciences	AS	3	0	0	0	3	4	50	50	100
2	21HSS321A*	Life Skills for Engineers	HSS	1	0	1	0	2	3	50	50	100
3	21HSS331A	Entrepreneurship Development - 2	HSS	1	0	0	0	1	1	50	50	100
4	21HSS341A	Constitution of India & Professional Ethics	HSS	1	0	0	0	1	1	50	50	100
5	21ISE35A	Logic Design and Computer Organization	ISE	3	0	0	0	3	4	50	50	100
6	21ISL35A	Logic Design and Computer Organization Laboratory	ISE	0	0	1	0	1	2	50	50	100
7	21ISE36A	Operating System	ISE	3	0	0	0	3	4	50	50	100
8	21ISL36A	Operating System Laboratory	ISE	0	0	1	0	1	2	50	50	100
9	21ISE37A	Data Base Management Systems	ISE	3	0	0	0	3	4	50	50	100
10	21ISL37A	Data Base Management Systems Laboratory	ISE	0	0	1	0	1	2	50	50	100
11	21ISE38A	Mini Project	ISE	0	0	2	0	2	0	50	50	100
Total								**21**	**27**	**550**	**550**	**1100**

S. No	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	21DMAT31A	Basic Applied Mathematics -1	AS	0	0	0	0	0	2	50	50	100

Fourth Semester B.E Program–Scheme

S. No	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	21ISE41A	Discrete Mathematics and Graph Theory	AS	3	0	0	0	3	4	50	50	100
2	21ISE422A*	Problem Solving using C	ISE	1	0	1	0	2	3	50	50	100
3	21HSS432A/ 21HSS433A	Aadalitha Kannada / Vyavaharikha Kannada	HSS	1	0	0	0	1	1	50	50	100
4	21HSS442A	Environmental Science	CV	1	0	0	0	1	1	50	50	100
5	21ISE45A	Data Structures with C	ISE	3	0	0	0	3	4	50	50	100
6	21ISL45A	Data Structures with C Laboratory	ISE	0	0	1	0	1	2	50	50	100
7	21ISE46A	Object Oriented Programming using Java	ISE	3	0	0	0	3	4	50	50	100
8	21ISL46A	Object Oriented Programming using Java Laboratory	ISE	0	0	1	0	1	2	50	50	100
9	21ISE47A	Internet Of Things	ISE	3	0	0	0	3	4	50	50	100
10	21ISL47A	Internet Of Things Laboratory	ISE	0	0	1	0	1	2	50	50	100
11	21ISE48A	Summer Internship - I	ISE	0	0	0	2	2	0	50	50	100
Total								**21**	**27**	**550**	**550**	**1100**

S. No	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	21DAEC40A	Communicative English	HSS	0	0	0	0	0	2	50	50	100
2	21DMAT41A	Basic Applied Mathematics - 2	AS	0	0	0	0	0	2	50	50	100

Fifth Semester B.E Program–Scheme

S. No	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			CIE	SEE	Total
1	21AEC51A	Research Methodology and Intellectual Property Rights	ISE	2	0	0	0	2	2	50	50	100
2	21ISE52A*	Web Internet Programming	ISE	1	0	1	0	2	3	50	50	100
4	21ISE53A	Design and Analysis of Algorithms	ISE	2	1	0	0	3	4	50	50	100
5	21ISL53A	Design and Analysis of Algorithms Laboratory	ISE	0	0	1	0	1	2	50	50	100
6	21ISE54A	Data Science	ISE	2	1	0	0	3	4	50	50	100
7	21ISL54A	Data Science Laboratory	ISE	0	0	1	0	1	2	50	50	100
8	21ISE55XA	Professional Elective-1	ISE	2	1	0	0	3	4	50	50	100
9	21ISE56XA	Professional Elective-2	ISE	2	1	0	0	3	4	50	50	100
10	21PEN57A*/ 21PEN67A*	Physical Education	HSS	0	0	0	0	0	2	50	50	100
11	21ISE58A	Mini Project	ISE	0	0	2	0	2	4	50	50	100
		Total						20	31	500/ 450	500/450	1000/ 900

Professional Elective – 1	
Course Code	Course Name
21ISE551A	Introduction to Information Security
21ISE552A	Applied Linear Algebra
21ISE553A	Principles of Cloud Computing
21ISE554A	Analytical Bioinformatics
21ISE555A	Operation Research

Professional Elective – 2	
Course Code	Course Name
21ISE561A	Cyber Security
21ISE562A	Nature Inspired Algorithms
21ISE563A	Software Engineering and Project Management
21ISE564A	Human Computer Interaction
21ISE565A	File Structures

Sixth Semester B.E Program–Scheme

S. No	Course Code	Course	BoS	L	T	P	S	Overall Credits	Contact Hours	CIE	SEE	Total
				Credit Distribution						**Marks**		
1	21ISE61A	Advanced Machine Learning	ISE	2	1	0	0	3	4	50	50	100
2	21ISL61A	Advanced Machine Learning Lab	ISE	0	0	1	0	1	2	50	50	100
3	21ISE62A	Mobile Application Development	ISE	2	1	0	0	3	4	50	50	100
4	21ISL62A	Mobile Application Development Lab	ISE	0	0	1	0	1	2	50	50	100
5	21ISE63XA	Professional Elective – 3	ISE	2	1	0	0	3	4	50	50	100
6	21ISE64XA	Professional Elective - 4	ISE	2	1	0	0	3	4	50	50	100
7	21NHOP6XXA	Open Elective -1	-	2	0	1	0	3	4	50	50	100
8	21ISE66A	Summer Internship - II	ISE	0	0	0	3	3	0	50	50	100
9	21PEN57A*/ 21PEN67A*	Physical Education	HSS	0	0	0	0	0	2	50	50	100
		Total						20	26	400/450	400/450	800/900

Professional Elective – 3	
Course Code	Course Name
21ISE631A	Digital Watermarking and Steganography
21ISE632A	Data Visualization
21ISE633A	Pattern Recognition
21ISE634A	Sensors and Actuator Devices
21ISE635A	Object Oriented Modeling & Design

Professional Elective – 4	
Course Code	Course Name
21ISE641A	Cyber Forensics for Information Security
21ISE642A	Industrial and Medical IoT
21ISE643A	Natural Language Processing
21ISE644A	System Modelling and Simulation
21ISE645A	Soft Computing

Seventh Semester B.E Program–Scheme

S. No	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			SEE	CIE	Total
1	21ISE71XA	Professional Elective-5	ISE	2	1	0	0	3	4	50	50	100
2	21ISE72XA	Professional Elective-6	ISE	2	1	0	0	3	4	50	50	100
3	21NHOP7XXA	Open Elective - 2	-	2	0	1	0	3	4	50	50	100
4	21NHOP7XXA	Open Elective- 3	-	2	1	0	0	3	4	50	50	100
5	21ISE75A	PROJECT WORK	ISE	0	0	10	0	10	20	200	200	400
		Total						22	34	400	400	800

Professional Elective – 5	
Course Code	Course Name
21ISE711A	Computer Networks
21ISE712A	Management and Entrepreneurship
21ISE713A	Parallel and Distributed Computing
21ISE714A	Web Intelligence
21ISE715A	Software Architectures and Design Patterns

Professional Elective – 6	
Course Code	Course Name
21ISE721A	Software Testing & Automation
21ISE722A	Embedded Systems
21ISE723A	Game Theory
21ISE724A	Computer System Performance Analysis
21ISE725A	Computer Graphics

Eighth Semester B.E Program–Scheme

S. No	Course Code	Course	BoS	Credit Distribution				Overall Credits	Contact Hours	Marks		
				L	T	P	S			SEE	CIE	Total
1	21ISE81A	Technical Seminar	ISE	0	1	0	0	1	2	50	50	100
2	21ISE82A	Industry Internship/Research	ISE	0	0	0	15	15	0	200	200	400
Total								16	2	250	250	500

*Research/ Industry Internship: To be evaluated on a regular basis
Attendance certificate Mandatory for (24 weeks) Research/ Industry Internship