SCHOOL OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Ref. No. PU/SOE/CSE/BOS-09/2018-19/CIR01

Date: 7th April, 2019

9th BOS Meeting Notice

The 9th Board of Studies (BOS) meeting of Department of Computer Science and Engineering is scheduled on Saturday, 4th May 2019 at 11.00 AM in the Presidency University campus. You are hereby requested to attend the meeting.

Agenda:

CSE 9.1 Approval of the Minutes of 8th BOS meeting.

CSE 9.2 Action Taken Report.

CSE 9.3 Approval of regulations and curriculum of the following M.Tech programs
- M.Tech in Data Science
- M.Tech in Artificial Intelligence.

CSE 9.4 Approval of introduction of the following two new elective courses
- Robotic Process Automation (RPA)
- Agile Technology.

CSE 9.5 Approval of program regulations and curriculum of the four year B.Tech program 2019-23.

CSE 9.6 Approval of the syllabi of 2018-22 for the following four year B.Tech programs
- B.Tech in Computer Engineering (COM)
- B.Tech in Computer and Communication Engineering (CCE)
- B.Tech in Information Science and Engineering (ISE)
- B.Tech in Information Science and Technology (IST).

CSE 9.7 Approval of modification in the program structure of the four year B.Tech program 2016-20, 2017-21, 2018-22.

CSE 9.8 Modification of credit structures of selective courses from 0-0-6 to 1-0-4.

CSE 9.9 Approval of list of examiners.

CSE 9.10 Approval of NPTEL courses to be offered as Discipline/Open electives.

CSE 9.11 Any other matter with the permission of the chair.

Chairperson 7/4/19
BOS-CSE Committee

City Office: University House, 8/1, King Street, Richmond Town, Bengaluru 56002
Campus: Presidency University, Itgalpur, Rajanakunte, Yelahanka, Bengaluru 560 089
Phone: +91 80 4925 5533 / 5599 Email ID: info@presidencyuniversity.in
www.presidencyuniversity.in

REGISTRAR

Copy to:

- Pro-Chancellor, PU
- Registrar, PU
- Dean-SoE, PU
- Members of the BOS-PET Committee:

- Vice-Chancellor, PU
- Pro-Vice-chancellor, PU
- Dean-Academics, PU

1.	Dr. C. Kalaiarasan	9.	Dr. Shreyas Suresh Rao
2.	Dr. D.C. Kiran	10	Ms. Venu Sangwan
3.	Dr. N. Mehala	11	Mr. Swastik Sahoo
4.	Dr. J. Alamelu Mangai	12	Dr. N.K. Srinath, Dean Academics, RVCE
5	Dr. R. Mahalakshmi	13	Dr. H.S. Guruprasad, Prof., BMSCE
6	Dr. G.Shanmugarathinam	14	Mr. Sadashiv Bolanthur, M/s. Inforeach Tech.
7	Dr Ramesh V	15	Dr. Rajanikanth, Former Principal, MSRIT
8	Mr. Tapas Guha		

City Office: University House, 8/1, King Street, Richmond Town, Bengaluru 5600
Campus: Presidency University, Itgalpur, Rajanakunte, Yelahanka, Bengaluru 560 089 REGISTRAR
Phone: +91 80 4925 5533 / 5599   Email ID: info@presidencyuniversity.in
www.presidencyuniversity.in

SCHOOL OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Ref. No.: PU/SOE/CSE/BOS-09/2018-19/MOM-01   Date: 4th May, 2019

Minutes of the 9th Meeting of Board of Studies (Computer Science and Engineering – BOS – CSE)

The 9th meeting of Board of Studies (BOS) of the Computer Science and Engineering is held today on 4th May, 2019 at 11.00 AM in Room No. MG 04.

The following members were present:

S. No.	Name	Designation with Affiliation	Status
1	Dr. K.G. Mohan	Professor & Head, CSE, Presidency University	Chairman
2	Dr. K. Rajanikanth	Former Principal, M.S.R.I.T, Bangalore	Special Invitee
3	Dr. C. Kalaiarasan	Associate Dean & Professor, CSE, Presidency University	Member
4	Dr. D.C. Kiran	Associate Professor, CSE, Presidency University	Member
5	Dr. N. Mehala	Associate Professor, CSE, Presidency University	Member
6	Dr. J. Alamelu Mangai	Associate Professor, CSE, Presidency University	Member
7	Dr. R. Mahalakshmi	Associate Professor, CSE, Presidency University	Member
8	Dr. G.Shanmugarathinam	Associate Professor, CSE, Presidency University	Member
9	Dr Ramesh V	Associate Professor, CSE, Presidency University	Member
10	Dr. Shreyas Suresh Rao	Assistant Professor, CSE, Presidency University	Member
11	Ms. Venu Sangwan	Assistant Professor, CSE, Presidency University	Member
12	Mr. Swastik Sahoo	Assistant Professor, ECE, Presidency University	Member
13	Mr. Tapas Guha	Assistant Professor, CSE, Presidency University	Member Secretary

City Office: University House, 8/1, King Street, Richmond Town, Bengaluru 56002
Campus: Presidency University, Itgalpur, Rajanakunte, Yelahanka, Bengaluru 560 089
Phone: +91 80 4925 5533 / 5599   Email ID: info@presidencyuniversity.in
www.presidencyuniversity.in

REGISTRAR

The following members are given leave of absence:

Sr. No.	Name	Designation	Status
1	Mr. Sadashiv Bolanthur	Director & Principal Consultant, MS Info Reach Technologies, Bengaluru.	External Member
2	Dr. N.K. Srinath	Dean Academics, RVCE	External Member
3	Dr. H.S. Guruprasad	Prof. and Dean- Student Affairs, ISE, BMSCE Bengaluru.	External Member

The Chairman welcomed the Members and called the meeting to order.

Agenda CSE 9.1: Approval of 8th BoS meeting Minutes.

The minutes of the 8th meeting of the Board of Studies of Computer Science and Engineering held on 12th January 2019 was placed before the members and the same was unanimously approved.

Agenda CSE 9.2: Action Taken Report.

The Action taken report on the previous minutes was presented by the Chairperson. The same was noted and taken on record (**Annexure CSE 9.1**).

Agenda CSE 9.3: Approval of program regulations and curriculum of the following M.Tech programs
- **M.Tech in Data Science**
- **M.Tech in Artificial Intelligence**

The details of the program regulations and curriculum were presented before the members. The members discussed the same at length

Resolution: Resolved that the program regulations and curriculum of the two M.Tech programs, namely M.Tech (Data Science) and M.Tech (Artificial Intelligence) are approved with the following suggestions.

-M.Tech in Data Science:

> 1. In the course 'Advanced Mathematics', more advanced topics and concepts should be included. It should cover optimization techniques up to certain depth. The book 'Optimization by Vector Space Methods, David G. Luenberger (1969) John Wiley & Sons (NY)' should be a Text book rather than a reference book.

2. The course 'Advanced Programming in Python' (MDS 252) should be renamed to "Programming for Data Science". In the course content, 'Introduction to Python' should be changed to 'Review of Python' More packages related Data Science and analysis should be included.

3. The elective course 'Information Retrieval' (MAI 304) should have the credit structure 3-0-2 (4 credits) and not 3-0-0 structure.

4. In the course 'Advanced Analytics and Visualization' (MDS 255), the book 'Tom Mitchell, "Machine Learning", Latest Edition, McGraw Hill' has been prescribed as Textbook 1. This book does not cover Visualization. This has to be relooked and appropriate Text Book should be prescribed and followed.

-M.Tech in Artificial Intelligence:

1. Instead of the course 'Parallel Programs and their Performance' (MAI 204), a course on 'Natural Language Processing' should be introduced.

2. Move "Parallel Programming for AI" course into electives.

3. The title for the course 'AI and Neural Networks' should be changed to 'Deep Neural Networks'.

4. The course 'Image Processing and Machine Vision' (MAI 206) should be renamed as 'Machine Vision'.

5. The course 'Information Theory' should be removed from elective list.

The suggestions given by the members are considered and the updates are shown in the **(Annexure CSE 9.2 and Annexure CSE 9.3)**.

Agenda CSE 9.4: Approval of introduction of the following two new elective courses

- **Robotic Process Automation (RPA)**
- **Agile Technology**

The members were presented with the course descriptions and outline of the two proposed elective courses, Robotic Process Automation (RPA) **(Annexure CSE 9.4)** and Agile Technology **(Annexure CSE 9.5)**.

Resolution: Resolved that the two proposed elective courses are relevant with the current industry trend and the same is approved with the following suggestions.

- The elective course Robotic Process Automation (RPA) should contain Lab components in order to provide some practical exposure of automation to the students.

- In the elective course "Agile Technology", in some module towards the end 'Agile Testing' should be included.

Agenda CSE 9.5: **Approval of changes in program regulation and curriculum of the four year B.Tech program 2019-23.**

The members were presented with the details of the modifications in program regulation and curriculum.

Resolution: Resolved that the same is approved **(Annexure CSE 9.6)**.

Agenda CSE 9.6: Approval of the revised curriculum of 2018-22 for the following four year B.Tech programs
- **B.Tech in Computer Engineering (COM)**
- **B.Tech in Computer and Communication Engineering (CCE)**
- **B.Tech in Information Science and Engineering (ISE)**
- **B.Tech in Information Science and Technology (IST).**

The members were presented with the revised curriculum of the four B.Tech programs.
Resolution: The revised curriculum for the four B.Tech programs were unanimously approved by the members with the following suggestions.

- B.Tech in Computer Engineering (COM):

     For the fourth semester course 'Database Management Systems' (CSE 207), MongoDB and NoSQL should be included in the course content. This may be applied to the other programs of Computer Science and Engineering department.

- B.Tech in Computer and Communication Engineering (CCE):

     1. For the course 'Principles of Data Communication and Computer Networks' (CCE 201), top down approach in networking may be considered instead of bottom up approach.

     2. The course 'Client Server Computing' (CCE 203) can be made a 3 credit course.

- B.Tech in Information Science and Engineering (ISE)

     The course 'Machine Learning with Python' (ISE 252) should be renamed to 'Machine Learning'.

- B.Tech in Information Science and Technology (IST)

City Office: University House, 8/1, King Street, Richmond Town, Bengaluru 560025
Campus: Presidency University, Itgalpur, Rajanakunte, Yelahanka, Bengaluru 560 089
Phone: +91 80 4925 5533 / 5599 Email ID: info@presidencyuniversity.in
www.presidencyuniversity.in

The content of the course 'Web Science' (IST 205) should be relooked and modified.

The suggestions made are accepted and shown in the **Annexure CSE 9.7, Annexure CSE 9.8, Annexure CSE 9.9 and Annexure CSE 9.10.**

CSE 9.7 Approval of modification in the program structure of the four year B.Tech program 2016-20, 2017-21, 2018-22.

The members were presented with the details of the modifications in program structure of the four year B.Tech programs.

Resolution: Resolved that the same is approved with the following suggestion (**Annexure CSE 9.11**).

- For the upcoming batches, in the course 'Theory of Computation' (CSE 208), use of JFLAP simulator can be introduced to facilitate the students to visualize the theoretical concepts.

CSE 9.8 Modification of credit structures of selected courses from 0-0-6 to 1-0-4.

The modifications in the credit structures of the following courses were presented before the members.

Course Code	Course Name	Existing Credit structure	Proposed Credit structure
CSE 220	Internet of Things	2-0-2	1-0-4
CSE 219	Big Data Analytics	2-0-2	1-0-4
CSE 317	Programming in Python	0-0-6	1-0-4
CSE 301	Programming in Advanced Java	0-0-6	1-0-4
CSE 302	Programming in C# and .NET framework	0-0-6	1-0-4
CSE 303	LAMP	0-0-6	1-0-4
CSE 310	Mobile Application Development	0-0-6	1-0-4
CSE 311	Web Services	0-0-6	1-0-4
CSE 204	Object Oriented Programming	0-0-6	1-0-4
CSE 256	Internet Technologies	0-0-6	1-0-4

Resolution: For CSE 202 and CSE 219, retaining the same total credit, it is accepted to increase the lab hours and the structure should be 1-0-4. For the remaining courses listed above, to include the classroom teaching to provide the required theoretical foundation, it is accepted to include one theory hour and the structure should be 1-0-4.

CSE 9.9 Approval of list of examiners.

List of examiners were presented before the committee.

Resolution: The same was unanimously approved (**Annexure CSE 9.12**).

CSE 9.10 Approval of NPTEL courses to be offered as Discipline/Open electives.

The following twelve week courses of NPTEL are identified from the list of courses offered during July 2019 to December 2019. These courses are approved for consideration as Disciplined/ Open electives.
The courses are as follows:

Course Code (NPTEL)	Course Name	Duration
NOC19-CS53	Introduction to Machine Learning	12 weeks
NOC19-CS58	Computer Vision	12 weeks
NOC19-CS66	Social Networks	12 weeks
NOC19-CS68	Ethical Hacking	12 weeks
NOC19-CS82	Machine Learning for Engineering and Science Applications	12 weeks

CSE 9.11 Any other matter with the permission of the chair.

It was suggested by the External member to include courses related to Project Management and Finance common to all the Engineering Program.

As BOS meetings for all the departments are taking place simultaneously in different venues today, the Chairman has requested approval from the committee to incorporate modifications / alterations, if any, approved by the BOS committee of other departments for the existing courses offered in Computer Science and Engineering by other departments. The BOS Committee for Computer Science and Engineering has approved the proposal unanimously.

The BOS Committee authorizes the Chairperson of the BOS to formulate a sub-committee for making any modifications required in the program curriculum and seek the approval in the next meeting.
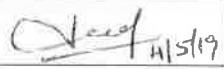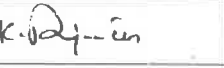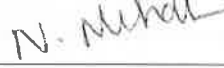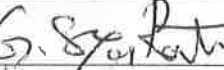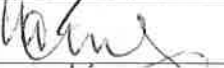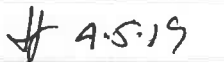
The BOS Chairperson has conveyed that the decisions taken during the 9th meeting of BOS for Computer Science and Engineering will be implemented for 2018-2022, 2017-2021, and 2016-2020 as early as possible whereever applicable. He has conveyed thanks to all the members and informed that the date of next BOS meeting will be notified soon.

The meeting ended with Vote of Thanks to the Chair.

BOS Committee:

S. No.	Name	Position	Signature with date
1	Dr. K.G. Mohan	Chairman	4/5/19
2	Dr. K. Rajanikanth	Special Invitee	
3	Dr. C. Kalaiarasan	Internal Member	
4	Dr. D.C. Kiran	Internal Member	
5	Dr. N. Mehala	Internal Member	
6	Dr. J. Alamelu Mangai	Internal Member	
7	Dr. R. Mahalakshmi	Internal Member	
8	Dr. G.Shanmugarathinam	Internal Member	
9	Dr Ramesh V	Internal Member	
10	Dr. Shreyas Suresh Rao	Internal Member	
11	Ms. Venu Sangwan	Internal Member	
12	Mr. Swastik Sahoo	Internal Member	4/5/19
13	Mr. Tapas Guha	Member Secretary	4.5.19

City Office: University House, 8/1, King Street, Richmond Town, Bengaluru 560025
Campus: Presidency University, Itgalpur, Rajanakunte, Yelahanka, Bengaluru 560 089
Phone: +91 80 4925 5533 / 5599   Email ID: info@presidencyuniversity.in
www.presidencyuniversity.in

REGISTRAR

PRESIDENCY UNIVERSITY

Presidency University Act, 2013 of the Karnataka Act No. 41 of 2013 | Established under Section 2(f) of UGC Act, 1956

Approved by AICTE, New Delhi

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

School of Engineering

Bachelor of Technology Degree

Program Regulations and Curriculum 2019-2023

B. Tech. (Computer Engineering)

2019-2023

REGISTRAR

PROGRAM STRUCTURE

I SEM - PHYSICS CYCLE (Aug-Dec)#
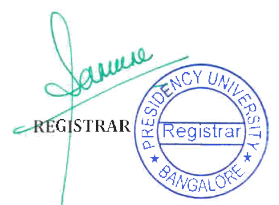
S. NO.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS	TYPE OF SKILL	COURSE ADDRESSES TO
			L	T	P	CREDITS			
1	MAT 105	Calculus and Linear Algebra	3	1	0	4	4	1	-
2	PHY 101	Engineering Physics	4	0	0	4	4	1	-
3	EEE 101	Elements of Electrical Engineering	3	0	0	3	3	2	-
4	CIV 101	Elements of Civil Engineering	3	0	0	3	3	2	7
5	MEC 152	Engineering Graphics	2	0	4	4	6	2	-
6	ENG 1XX	Humanities-I	2	1	0	3	3	1/3	-
7	PHY 151	Engineering Physics Lab	0	0	2	1	2	1	-
8	MEC 151	Workshop Practice	0	0	2	1	2	2	-
9	PPS 105	Building Self Confidence	0	0	2	1	2	3	-
		TOTAL	17	2	10	24	29		

[1] Foundation Course; [2] Professional Skills; [3] Employability Skills; [4] Entrepreneurship skills; [5] Research skills [6]Sustainability Issues; [7] Environment Issues; [8] Professional Ethics; [9] Gender Equality, [10]Knowledge Enhancement.

I SEM - CHEMISTRY CYCLE (Aug-Dec)#

S. NO.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS	TYPE OF SKILL	COURSE ADDRESSES TO
			L	T	P	CREDITS			
1	MAT 105	Calculus and Linear Algebra	3	1	0	4	4	1	-
2	CHE 101	Engineering Chemistry	4	0	0	4	4	1	-
3	ECE 101	Elements of Electronics Engineering	3	0	0	3	3	2	-
4	MEC 101	Elements of Mechanical Engineering	3	0	0	3	3	2	-
5	CIV 102	Environmental Science and Disaster Management	3	0	0	3	3	1	7
6	ENG 1XX	Humanities-I	1	0	2	2	3	3	-

			L	T	P				
7	CSE 151	Computer Programming	2	0	4	4	6	3	-
8	CHE 151	Engineering Chemistry Lab	0	0	2	1	2	1	-
9	PPS 105	Building Self Confidence	0	0	2	1	2	1	8/6
		TOTAL	19	1	10	25	30		

¹ Foundation Course; ² Professional Skills; ³ Employability Skills; ⁴ Entrepreneurship skills; ⁵ Research skills
⁶Sustainability Issues; ⁷ Environment Issues; ⁸ Professional Ethics; ⁹ Gender Equality, ¹⁰Knowledge Enhancement.

II SEM - CHEMISTRY CYCLE (Jan-May)#

NO.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS	TYPE OF SKILL	COURSE ADDRESSES TO
			L	T	P	CREDITS			
1	MAT 106	Calculus, Differential Equations and Complex Variables	3	1	0	4	4	1	-
2	CHE 101	Engineering Chemistry	4	0	0	4	4	1	-
3	ECE 101	Elements of Electronics Engineering	3	0	0	3	3	2	-
4	MEC 101	Elements of Mechanical Engineering	3	0	0	3	3	2	-
5	CIV 102	Environmental Science and Disaster Management	3	0	0	3	3	1	7
6	ENG 1XX	Humanities-II	1	0	2	2	3	3	-
7	CSE 151	Computer Programming	2	0	4	4	6	3	-
8	CHE 151	Engineering Chemistry Lab	0	0	2	1	2	1	-
9	PPS 106	Effective Communication	0	0	2	1	2	1	8/6
		TOTAL	19	1	10	25	30		

¹ Foundation Course; ² Professional Skills; ³ Employability Skills; ⁴ Entrepreneurship skills; ⁵ Research skills
⁶Sustainability Issues; ⁷ Environment Issues; ⁸ Professional Ethics; ⁹ Gender Equality, , ¹⁰Knowledge Enhancement

II SEM - PHYSICS CYCLE (Jan-May)#

REGISTRAR

S. NO.	COURSE CODE	COURSE NAME	L	T	P	CREDITS	CONTACT HOURS	TYPE OF SKILL	COURSE ADDRESSES TO
1	MAT 106	Calculus, Differential Equations and Complex Variables	3	1	0	4	4	1	-
2	PHY 101	Engineering Physics	4	0	0	4	4	1	-
3	EEE 101	Elements of Electrical Engineering	3	0	0	3	3	2	-
4	CIV 101	Elements of Civil Engineering	3	0	0	3	3	2	7
5	MEC 152	Engineering Graphics	2	0	4	4	6	2	-
6	ENG 1XX	Humanities-II	2	1	0	3	3	1/3	-
7	PHY 151	Engineering Physics Lab	0	0	2	1	2	1	-
8	MEC 151	Workshop Practice	0	0	2	1	2	2	-
9	PPS 106	Effective Communication	0	0	2	1	2	3	-
		TOTAL	17	2	10	24	29		

Note: At the end of the 1ˢᵗ year (Common to all B.Tech programs) the total credits offered is 49.

The 1ˢᵗ year B.Tech Program structure is executed in two cycles.

*The students undergoing the "Physics" cycle shall take the Courses as indicated.

#The students undergoing "Chemistry" cycle shall take the Courses as indicated.

III SEMESTER									
S.No.	COURSE CODE	COURSE NAME	L	T	P	C	CONTACT HOURS	TYPE OF SKILL	COURSE ADDRESSES TO
1	MAT 107	Transform Techniques, Partial Differential Equations and Probability	3	1	0	4	4	1	-
2	CSE 201	**Data Structures**	3	0	0	3	3	2	-
3	CSE 222	Fundamentals of Data Analysis	2	0	2	3	4	2	-
4	CSE 203	**Discrete Mathematics**	3	1	0	4	4	1	-
5	CSE 258	**Problem Solving using Python**	1	0	4	3	5	2/3	-
6	CSE 223	**Computer Architecture and Organization**	3	0	0	3	3	2	-
7	CSE 251	Data Structures Lab	0	0	4	2	4	2	-

REGISTRAR

8	PPS 107	Design Thinking And Team Building	0	0	2	1	2	3	PE
		TOTAL	**15**	**2**	**12**	**23**	**29**		

[1] Foundation Course; [2] Professional Skills; [3] Employability Skills; [4] Entrepreneurship skills; [5] Research skills [6] Sustainability Issues; [7] Environment Issues; [8] Professional Ethics; [9] Gender Equality, [10] Knowledge Enhancement.

*Student has to register for Social Immersion Course in any one semester 3/4/6 to earn the mandatory credits

		IV SEMESTER							
S.No	**COURSE CODE**	**COURSE NAME**	**CREDIT STRUCTURE**				**CONTACT HOURS**	**TYPE OF SKILL**	**COURSE ADDRESSES TO**
			L	**T**	**P**	**C**			
1	MAT 108	Numerical Methods, Probability Distributions and Sampling Techniques	4	0	0	4	4	1	-
2	CSE 224	Introduction to Data Science	3	0	0	3	3	2	-
3	CSE 210	Operating Systems	3	0	0	3	3	2	-
4	CSE 225	Introduction to Combinatorics and Graph Theory	3	0	0	3	3	2	-
5	CSE 207	Database Management Systems	3	0	0	3	3	2	-
6	CSE 208	Theory of Computation	3	1	0	4	4	2	-
7	CSE 253	Database Management Systems Lab	0	0	4	2	4	2	-
8	CSE 260	Data Science Lab	0	0	2	1	2	2	-
9	PPS 108	Being Corporate Ready	0	0	2	1	2	3	PE
		TOTAL	**19**	**1**	**8**	**24**	**28**		

[1] Foundation Course; [2] Professional Skills; [3] Employability Skills; [4] Entrepreneurship skills; [5] Research skills [6] Sustainability Issues; [7] Environment Issues; [8] Professional Ethics; [9] Gender Equality, [10] Knowledge Enhancement.

**NOTE: Students will undergo Professional Practice-I during the summer break between the fourth and fifth semesters and the credits earned will be accounted for in the fifth semester.

* Student has to register for university learning courses in any one semester 5/ 6 to earn the mandatory credits.

		V SEMESTER							
S. No.	**COURSE CODE**	**COURSE NAME**	**CREDIT STRUCTURE**				**CONTACT HOURS**	**TYPE OF SKILL**	**COURSE ADDRESSES TO**
			L	**T**	**P**	**CREDITS**			
1	CSE 226	Optimization Techniques	3	0	0	3	3	2	_

REGISTRAR

S.No.	COURSE CODE	COURSE NAME	L	T	P	CREDITS	CONTACT HOURS	TYPE OF SKILL	COURSE ADDRESSES TO
2	CSE 227	**Software Engineering and Project Management**	3	0	0	3	3	2/3	_
3	CSE 228	**Principles of Artificial Intelligence**	3	0	0	3	3	2/3	_
4	CSE 261	Machine Learning using Python	2	0	2	3	4	2/3	_
5	CSE 204	**Object oriented Programming**	1	0	4	3	5	2	_
6	MGT 113	Engineering Economics	3	0	0	3	3	2	_
7	CSE XXX	Discipline Elective-I	3	0	0	3	5	_	_
8	CSEXXX	Discipline Elective-II	3	0	0	3	3	_	_
9	PIP 101	Professional Practice	0	0	0	5		3	_
		TOTAL	19	0	10	29	29		

[1] Foundation Course; [2] Professional Skills; [3] Employability Skills; [4] Entrepreneurship skills; [5] Research skills [6]Sustainability Issues; [7] Environment Issues; [8] Professional Ethics; [9] Gender Equality, , [10]Knowledge Enhancement.

**Internal Evaluation only

			VI SEMESTER						
S. No.	COURSE CODE	COURSE NAME	CREDIT STRUCTURE				CONTACT HOURS	TYPE OF SKILL	COURSE ADDRESSES TO
			L	T	P	CREDITS			
1	CSE 219	**Big Data Analytics**	1	0	4	3	5	2	-
2	CSE 233	**Cloud Computing and Services**	3	0	0	3	3	2	-
3	CSE 232	Information Retrieval and Organization	3	0	0	3	3	2	-
4	CSE 235	Introduction to Deep Learning	3	0	0	3	3	2	-
5	CSE246	Computer Network and Simulation	2	0	2	3	4	2/3	-
6	XXX XXX	Open Elective – I	3	0	0	3	3	-	-
7	MGT 114	Business Intelligence	3	0	0	3	3	4	-
8	SIC 501	Social Immersion Course	-	-	-	1	-	-	9/7/8
		TOTAL	18	0	6	22	24		

[1] Foundation Course; [2] Professional Skills; [3] Employability Skills; [4] Entrepreneurship skills; [5] Research skills [6]Sustainability Issues; [7] Environment Issues; [8] Professional Ethics; [9] Gender Equality, , [10]Knowledge Enhancement.

REGISTRAR

VII SEMESTER								
S.No.	**COURSE CODE**	**COURSE NAME**	**CREDIT STRUCTURE**				**CONTACT HOURS**	**TYPE OF SKILL**	**COURSE ADDRESSES TO**
			L	T	P	CREDITS			
1	CSE 234	**Social Media Analytics**	2	0	2	3	4	2	-
2	CSE 384	Data Warehousing and Mining	3	0	0	3	3	2	-
3	CSE 220	**Internet of Things**	1	0	4	3	5	2	-
4	CSE XXX	Discipline Elective – III	3	0	0	3	3	-	-
5	CSE XXX	Discipline Elective – IV	1	0	4	3	5	-	-
6	XXXXXX	Open Elective – II	3	0	0	3	3	P/E	-
		TOTAL	13	0	13	18	23		

[1] Foundation Course; [2] Professional Skills; [3] Employability Skills; [4] Entrepreneurship skills; [5] Research skills [6] Sustainability Issues; [7] Environment Issues; [8] Professional Ethics; [9] Gender Equality, , [10] Knowledge Enhancement.

VIII SEMESTER								
S.No.	**COURSE CODE**	**COURSE NAME**	**CREDIT STRUCTURE**				**CONTACT HOURS**	**TYPE OF SKILL**	**COURSE ADDRESSES TO**
			L	T	P	C			
1.	PIP 102	Professional Practice - II	0	0	0	15		P/E	PE
		TOTAL	**0**	**0**	**0**	**15**	0		

REGISTRAR