Semester-I / B.E. (COMP/ CIVIL / E&CS / CSE) / B.Tech. (IoT/ AI&DS)
Choice-Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)

Sr. No.	Course Code	Course Title	Course Description — Teaching Scheme (Academic) — Modes of Teaching / Learning / Weightage — Hours Per Week — Theory	Tutorial	Practical	Contact Hours	Credits	Examination scheme (Academic) — Theory (100) 40/20 — IA — ISE	IE	60 — ESE	Practical/Oral/ Presentation (25) — PR / OR	Term Work (25) — TW	Total
1	BSC1101	Physics	3	-	2	5	4	20	20	60	25	25	150
2	BSC1102	Mathematics-I	4	1	-	5	5	20	20	60	-	25	125
3	ESC1101	Basic Electrical Engineering	3	-	2	5	4	20	20	60	25	25	150
4	ESC1102	Engineering Graphics& Design	2	-	4	6	4	20	20	60	25	25	150
5	ESC1103	Workshop & ManufacturingPractices-I	-	-	2	2	1	-	-	-	25	-	25
6	HSMC1101	English for General & Professional Communication	2	-	2	4	3	20	20	60	25	-	125
		Total	**14**	**1**	**12**	**27**	**21**				**Total marks (Academic)**		**725**

Course Description			Non-Credit Mandatory Course (Passing is mandatory for this course)								Term Work		
1	MC1101	Attitude & Aptitude Development-I	1	-	-	1	(Non-credit)			-		25	**25**

Course Description			Contact Hrs. During Week End / Semester Break/ End of Semester (Between 21st and 25thWeek)/During Semester										
1	AP1101	Activity Points		-		48#	-			-		-	-
		Total	**15**	**1**	**12**	**28**	**21**			**Grand Total marks:**			**750**

IA- In-Semester Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination, ISE-In-Semester Examinations,
IE- Innovative Learning with Examination.

Guidelines for the Semester:

Semester Conduct:

1. The Academic year will be conducted through two semesters. Odd Semester (1st July-31st December) and Even Semester (1st January-30th June).
2. The credit calculation is
   a) Theory / Tutorial:1 credit = 1 hr
   b) Practical: 1 credit = 2 hrs
   c) Experiential Learning / Internship: 1 credit = 40 hrs
   d) Professional Skills / Industry Practices / Industry Certification: 1 credit = 2 hrs
   e) Holistic Development – Attitude and Aptitude Development - I / II: 1 credit = 1 hr
3. During Academic conduct, practical load shall be conducted in batches.

Evaluation and Assessment:

4. For continuous evaluation, examination shall be conducted under two heads: IA – In-Semester Assessment, ESE – End Semester Examination. Under IA, 20 marks of ISE (In-Semester Examination) shall be conducted for 1 hour. 20 marks of IE (Innovative Learning with Examination) shall also be conducted under IA. ESE shall be conducted for 60 marks with duration of 2 hours.
5. Evaluation and assessment will be formative and summative.
6. Two In semester Examination ISE-I and II (3 modules each) will be summative.
7. One In Semester Examination, ISE-III and Innovative learning with Examination-IE will be formative.
8. End semester Examination (ESE) will be Summative. Term Work, Oral/Practical exam and ESE will be conducted at the end of semester.

AICTE 100 Activity Points:

9. # As per AICTE, Students has to earn 100 Points by participating in 400 Hrs. of activities during 4 years of Engineering. After Completing 48 hrs. of Activities, Students can earn 12 Points. This Points will not be reflected in Grade Card. Separate transcript will be issued to students after completion of Final Year.
   Other activities which also will be considered are: Participation in Hackathon, Development of new Product / Business Plan / Registration of start-up, Participation in IPR workshop / Leadership talks / Idea / Design / Innovation / Technical Expos, Internship with Industry / Govt. / NGO / PSU / MSME / Online Internship, Long Term Goals under Rural Internship

Sd/-	Sd/-	Sd/-
Dr. Sunita Pachori	Dr. Sheetal Rathi	Dr. B. K. Mishra
BoS Chairman	Member Secretary, Academic Council	Chairman, Academic Council
F.E. InCharge, ES&H	Dean Academic	Principal

Semester II / B.E. (COMP/ CIVIL / E&CS / CSE) / B.Tech. (IoT/ AI&DS)
Choice Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE	PR / OR	TW	Total
		Course Description	**Teaching Scheme (Academic)** Modes of Teaching / Learning / Weightage Hours Per Week					**Examination scheme (Academic)** Modes of Continuous Assessment / Evaluation					
1	BSC2101	Chemistry	3	-	2	5	4	20	20	60	25	25	150
2	BSC2102	Mathematics-II	3	1	-	4	4	20	20	60	-	25	125
3	ESC2101	Programming for Problem-Solving@	3	-	2	5	4	20	20	60	25	25	150
4	ESC2102	Engineering Mechanics	3	-	2	5	4	20	20	60	25	25	150
5	ESC2103	Workshop & ManufacturingPractices-II	-	-	2	2	1	-	-	-	25	-	25
6	HSMC2101	Introduction to Indian Knowledge System	2	-	2	4	3	20	20	60	25	-	125
		Total	**14**	**1**	**10**	**25**	**20**				**Total marks (Academic)**		**725**

	Course Code	Course Description	Conduction Scheme					Presentation		Report	Term Work	
1	SI2101	Summer Internship	Internship will be conducted during the semester break			40*	1	10		15	**25**	
2	MC2101	Attitude & Aptitude Development-II	1	-	-	1	Non Credit	-		25	**25**	
3	HME-PS2101	Professional Skills-I (Object Oriented Programming)	-	-	2	2	1	15		10	**25**	
		Course Description	**Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week) / During Semester**									
1	AP2101	Activity Points		-		52#	-	-		-	-	
		Total	**15**	**1**	**12**	**28**	**22**	**Grand Total marks:**			**800**	

IA- In-Semester Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination, ISE-In-Semester Examinations,
IE- Innovative Learning with Examination.

Guidelines for the Semester:

Semester Conduct:

1. The Academic year will be conducted through two semesters. Odd Semester (1st July-31st December) and Even Semester (1st January-30th June).
2. The credit calculation is
   a) Theory / Tutorial:1 credit = 1 hr
   b) Practical: 1 credit = 2 hrs
   c) Experiential Learning / Internship: 1 credit = 40 hrs
   d) Professional Skills / Industry Practices / Industry Certification: 1 credit = 2 hrs
   e) Holistic Development – Attitude and Aptitude Development - I / II: 1 credit = 1 hr
3. Professional Skill - I will run in the form of practical mode & syllabus linked with level 5 of NSQF.
4. @ Programming for Problem Solving is linked with syllabus of Certificate in Computer Applications [CCA] and mapped with NSQF level 5.
5. During Academic conduct, practical load shall be conducted in batches.

Evaluation and Assessment:

6. For continuous evaluation, examination shall be conducted under two heads: IA – In-Semester Assessment, ESE – End Semester Examination. Under IA, 20 marks of ISE (In-Semester Examination) shall be conducted for 1 hour. 20 marks of IE (Innovative Learning with Examination) shall also be conducted under IA. ESE shall be conducted for 60 marks with duration of 2 hours.
7. Evaluation and assessment will be formative and summative.
8. Two In semester Examination ISE-I and II (3 modules each) will be summative.
9. One In Semester Examination, ISE-III and Innovative learning with Examination-IE will be formative.
10. End semester Examination (ESE) will be Summative. Term Work, Oral/Practical exam and ESE will be conducted at the end of semester.

Internship:

11. * The summer Internship will be conducted in the form of in-house internship which is mandatory for all students in semester break.
    The internship credits accumulated will be credited in even semester. The content of internship is mapped with NSQF level 5.

AICTE 100 Activity Points:

12. # As per AICTE, Students has to earn 100 Points by participating in 400 Hrs. of activities during 4 years of Engineering. After Completing 52 hrs. of Activities, Students can earn 13 Points. This Points will not be reflected in Grade Card. Separate transcript will be issued to students after completion of Final Year.
    Other activities which also will be considered are: Participation in Hackathon, Development of new Product / Business Plan / Registration of start-up, Participation in IPR workshop / Leadership talks / Idea / Design / Innovation / Technical Expos, Internship with Industry / Govt. / NGO / PSU / MSME / Online Internship, Long Term Goals under Rural Internship

Sd/-	Sd/-	Sd/-
Dr. Sunita Pachori	Dr. Sheetal Rathi	Dr. B. K. Mishra
BoS Chairman	Member Secretary, Academic Council	Chairman, Academic Council
F.E. InCharge, ES&H	Dean Academic	Principal

SE. Semester –III (Computer Engineering)
Choice-Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE	PR/OR	TW	Total
		Course Description	**Modes of Teaching / Learning / Weightage**					**Modes of Continuous Assessment / Evaluation**					
			Hours Per Week					**Theory (100/50)**			**Practical / Oral / Presentation (25)**	**Term Work (25)**	
								40/20 IA		**60/30**			
								ISE	IE	ESE	PR/OR	TW	
1	HSMC-301	Universal Human Values-II	2	1	-	3	3	20	20	60	-	25	125
2	BSC-CS301	Mathematics-III	3	1	-	4	4	20	20	60	-	25	125
3	ESC-CS301	Digital Logic Design & Computer Architecture	3	-	2	5	4	20	20	60	25	25	150
4	PCC-CS301	Database Management System	3	-	2	5	4	20	20	60	25	25	150
5	PCC-CS302	Data Structure using JAVA	3	1	2	6	5	20	20	60	25	25	150
		Total	**14**	**3**	**6**	**23**	**20**	**Total marks (Academic)**					**700**
		Course Description	**Non-Credited Mandatory Course (Passing is mandatory for this course)**									**Term Work**	
1	MC-301	Attitude & Aptitude Development-III	1	-	-	1	(Non-Credit)	-				25	**25**
		Course Description	**Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week)**										
1	SI-CS301	Summer Internship	-	-	-	120*	-	-		-	-	-	-
		Course Description	**Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week)/During Semester**										
1	AP-CS301	Activity Points	-	-		48#	-	-		-	-	-	-
		Course Description	**Teaching scheme (Holistic and Multidisciplinary Education-HME)**					**Assessment/Evaluation Scheme**				**Term Work**	
								Presentation AC			**Report AC**		
1	HME - CSPS301	Professional Skills-II (Cloud Infrastructure Analysis-I)	-	-	2	2	1	15			10		25
2	HME -IP301	Industry Practice-I (HTML/CSS)	-	-	2	2	1	15			10		25
		Total	**-**	**-**	**4**	**4**	**2**	**Total marks (HME)**					**50**
		Total	**15**	**3**	**10**	**28**	**22**	**Grand Total marks**					**775**

IA- In-Semester Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination, AC- Activity evaluation, ISE-In-Semester Examinations, IE-Innovative Examination

Guidelines for the Semester:

Semester Conduct:
1. The Academic year will be conducted through two semesters. Odd Semester (1st July-31st December) and Even Semester (1st January-30th June).
2. The credit calculation is
   a) Theory/Tutorial:1 credit=1 hr b) Practical: 1 credit =2 hrs c) Experiential Learning/Internship: 1 credit= 40 hrs
   d) Professional skills/Industry Practices/Industry Certification: 1 credit =2 hrs) Holistic Development - Activity Based Learning/Project Based Learning/Research Based Learning: 1 credit=2 hrs
3. Professional Skills & Industry Practice activity will run in the form of integrated theory and practical course & syllabus is linked with level 6 of NSQF.
4. During Academic conduct, practical load shall be conducted in batches.

Evaluation and Assessment:
5. For continuous evaluation, examination shall be conducted under two heads: IA – In-Semester Assessment, ESE – End Semester Examination. Under IA, 20 marks of ISE (In-Semester Examination) shall be conducted for 1 hour. 20 marks of IE (Innovative Learning with Examination) shall also be conducted under IA. ESE shall be conducted for 60 marks with duration of 2 hours.
6. Evaluation and assessment will be formative and summative.
7. Two In semester Examination ISE-I and II (3 modules each) will be summative.
8. One In Semester Examination, ISE-III and Innovative learning with Examination-IE will be formative.
9. End semester Examination, ESE will be Summative and Term Work and Oral/Practical exam and ESE will be conducted at the end of semester.

Internship:
10. * The summer Internship will be conducted in the form of in-house/outhouse internship which is mandatory for all students in semester break. The internship credits accumulated will be credited in even semester.

AICTE 100 Activity Points:
11. # As per AICTE, Students has to earn 100 Points by participating in 400 Hrs. of activities during 4 years of Engineering. After Completing 48 hrs. of Activities, Students can earn 12 Points. This Points will not be reflected in Grade Card. Separate transcript will be issued to students after completion of Final Year.

 Other activity which also will be considered are: Participation in Hackathon, Development of new Product/ Business Plan / Registration of start-up, Participation in IPR workshop/Leadership talks/Idea/ Design / Innovation/Technical Expos, Internship with Industry / Govt. / NGO/ PSU/MSME/Online Internship, Long Term Goals under Rural Internship.

Sd/-	Sd/-	Sd/-
Dr. Harshali Patil	**Dr. Sheetal Rathi**	**Dr. B.K. Mishra**
BOS Chairman, HoD-COMP	**Member Secretary Academic Council, Dean Academic**	**Chairman Academic Council, Principal**

S.E. Semester –IV (Computer Engineering)
Choice Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE	PR/OR	TW	Total
		Course Description	Teaching Scheme (Program Specific) Modes of Teaching / Learning / Weightage Hours Per Week					Examination scheme Modes of Continuous Assessment / Evaluation					
1	BSC-CS401	Mathematics-IV	3	1	-	4	4	20	20	60	-	25	125
2	PCC-CS401	Design and Analysis of Algorithm using Python	3	-	2	5	4	20	20	60	25	25	150
3	PCC-CS402	Operating System	3	-	2	5	4	20	20	60	25	25	150
4	PCC-CS403	Computer Networks	3	-	2	5	4	20	20	60	25	25	150
		Total	12	1	6	19	16	**Total marks (Academic)**					575

Non Credited Mandatory Course (Passing is mandatory for this course)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits					TW	Total
1	MC-401	Environmental Studies	1	-	-	1	(Non-Credit)	-				25	**25**

Contact Hrs. during Week End / Semester Break/ End of Semester(Between 21st and 25th Week)

Sr. No.	Course Code	Course Title				Contact Hours	Credits					TW	Total
1	SI-CS401	Summer Internship	-	-	-	120*	3	-		-		50	**50**

Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week)/During Semester

Sr. No.	Course Code	Course Title				Contact Hours	Credits						
1	AP-CS401	Activity Points	-	-	-	52@	-	-					

Sr. No.	Course Code	Course Description	Theory	Tutorial	Practical	Contact Hours	Credits	Presentation AC	Report AC	Term Work
			Teaching scheme (Holistic and Multidisciplinary Education-HME) (Conducted at the beginning of Semester during the first 3 Weeks)					Assessment/Evaluation Scheme		
1	HME – CSPS401	Professional Skills-III (Cloud Infrastructure Analysis-II)	-	-	2	2	1	15	10	25
2	HME –IP401	Industry Practice-II (Javascript/React)	-	-	2	2	1	15	10	25
3	HME -ABL401	Activity Based Learning	-	-	2	2	1	15	10	25
		Total	-	-	6	6	3	**Total marks (HME)**		75
		Total	13	1	12	26	22	**Grand Total marks**		725

IA- In-Semester Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination, AC- Activity evaluation, ISE-In-Semester Examinations, IE-Innovative Examination

Guidelines for the Semester:

Semester Conduct:
1. The Academic year will be conducted through two semesters. Odd Semester (1st July-31st December) and Even Semester (1st January-30th June).
2. The credit calculation is
   a) Theory/Tutorial:1 credit=1 hr b) Practical: 1 credit =2 hrs c) Experiential Learning/Internship: 1 credit= 40 hrs
   d) Professional skills/Industry Practices/Industry Certification: 1 credit =2 hrs) Holistic Development - Activity Based Learning/Project Based Learning/Research Based Learning: 1 credit=2 hrs
3. Professional Skills & Industry Practice activity will run in the form of integrated theory and practical course & syllabus is linked with level 6 of NSQF.
4. During Academic conduct, practical load shall be conducted in batches.

Evaluation and Assessment:
5. For continuous evaluation, examination shall be conducted under two heads: IA – In-Semester Assessment, ESE – End Semester Examination. Under IA, 20 marks of ISE (In-Semester Examination) shall be conducted for 1 hour. 20 marks of IE (Innovative Learning with Examination) shall also be conducted under IA. ESE shall be conducted for 60 marks with duration of 2 hours.
6. Evaluation and assessment will be formative and summative.
7. Two In semester Examination ISE-I and II (3 modules each) will be summative.
8. One In Semester Examination, ISE-III and Innovative learning with Examination-IE will be formative.
9. End semester Examination, ESE will be Summative and Term Work and Oral/Practical exam and ESE will be conducted at the end of semester.

Internship:
10. * The summer Internship will be conducted in the form of in-house/outhouse internship which is mandatory for all students in semester break. The internship credits accumulated will be credited in even semester.

AICTE 100 Activity Points:
11. # As per AICTE, Students has to earn 100 Points by participating in 400 Hrs. of activities during 4 years of Engineering. After Completing 48 hrs. of Activities, Students can earn 12 Points. This Points will not be reflected in Grade Card. Separate transcript will be issued to students after completion of Final Year.
    Other activity which also will be considered are: Participation in Hackathon, Development of new Product/ Business Plan / Registration of start-up, Participation in IPR workshop/Leadership talks/Idea/ Design / Innovation/Technical Expos, Internship with Industry / Govt. / NGO/ PSU/MSME/Online Internship, Long Term Goals under Rural Internship.

Sd/-	Sd/-	Sd/-
Dr. Harshali Patil	**Dr. Sheetal Rathi**	**Dr. B.K. Mishra**
BOS Chairman, HoD-COMP	**Member Secretary Academic Council, Dean Academic**	**Chairman Academic Council, Principal**

T.E. Semester –V (Computer Engineering)
Choice-Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE	PR/OR	TW	Total
		Course Description	**Teaching Scheme (Program Specific)** — Modes of Teaching / Learning / Weightage — Hours Per Week					**Examination scheme** — Modes of Continuous Assessment / Evaluation — Theory (100/50) 40/20 IA / 60/30			Practical / Oral / Presentation (25)	Term Work (25)	
1	HSMC-501	Soft Skill & Interpersonal Communication	2	-	2	4	3	20	20	60	-	-	100
2	ESC-CS501	Computer Graphics	3	-	2	5	4	20	20	60	25	25	150
3	PCC-CS501	Theory of Computation	3	1	-	4	4	20	20	60	-	25	125
4	PCC-CS502	Introduction to intelligent Systems	3	-	2	5	4	20	20	60	25	25	150
5	PCC-CS503	Microprocessor	3	-	2	5	4	20	20	60	25	25	150
		Total	15	1	6	22	19	**Total marks (Academic)**					675
		Course Description	**Non-Credited Mandatory Course(Passing is mandatory for this course)**									**Term Work**	
1	MC-501	Indian Constitution	1	-	-	1	(Non-Credit)	-				25	**25**
		Course Description	**Contact Hrs. during Semester Break/ End of Semester(Between 21st and 25th Week)**										
1	SI-CS501	Summer Internship	-	-	-	120*	-	-		-	-	-	-
		Course Description	**Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week) / During Semester**										
1	AP-CS501	Activity Points	-	-		48#	-	-		-	-	-	-

	Course Code	Course Description	Theory	Tutorial	Practical	Contact Hours	Credits	Presentation AC	Report AC	Term Work
		Course Description	**Teaching scheme (Holistic and Multidisciplinary Education-HME)** (Conducted in the beginning of Semester during first 3 Weeks)					**Assessment/Evaluation Scheme**		
1	HME – CSPS501	Professional Skills-IV (Cloud Architecture-1)	-	-	2	2	1	15	10	25
2	HME –IP501	Industry Practice-III (Node/Express/JSON/MongoDB)	-	-	2	2	1	15	10	25
3	HME – CSPBL501	Project Based Learning (Mini-Project)	-	-	2	2	1	15	10	25
		Total	-	-	6	6	3	**Total marks (HME)**		75
		Total	16	1	12	29	22	**Grand Total marks**		775

IA- In-Semester Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination, AC- Activity evaluation

Guidelines for the Semester:

Semester Conduct:
1. The Academic year will be conducted through two semesters. Odd Semester (1st July-31st December) and Even Semester (1st January-30th June).
2. The credit calculation is
   a) Theory/Tutorial:1 credit=1 hr b) Practical: 1 credit =2 hrs c) Experiential Learning/Internship: 1 credit= 40 hrs
   d) Professional skills/Industry Practices/Industry Certification: 1 credit =2 hrs) Holistic Development - Activity Based Learning/Project Based Learning/Research Based Learning: 1 credit=2 hrs
3. Professional Skills & Industry Practice activity will run in the form of integrated theory and practical course & syllabus is linked with level 6 of NSQF.
4. During Academic conduct, practical load shall be conducted in batches.

Evaluation and Assessment:
5. For continuous evaluation, examination shall be conducted under two heads: IA – In-Semester Assessment, ESE – End Semester Examination. Under IA, 20 marks of ISE (In-Semester Examination) shall be conducted for 1 hour. 20 marks of IE (Innovative Learning with Examination) shall also be conducted under IA. ESE shall be conducted for 60 marks with duration of 2 hours.
6. Evaluation and assessment will be formative and summative.
7. Two In semester Examination ISE-I and II (3 modules each) will be summative.
8. One In Semester Examination, ISE-III and Innovative learning with Examination-IE will be formative.
9. End semester Examination, ESE will be Summative and Term Work and Oral/Practical exam and ESE will be conducted at the end of semester.

Internship:
10. * The summer Internship will be conducted in the form of in-house/outhouse internship which is mandatory for all students in semester break.
    The internship credits accumulated will be credited in even semester.

AICTE 100 Activity Points:
11. # As per AICTE, Students has to earn 100 Points by participating in 400 Hrs. of activities during 4 years of Engineering. After Completing 48 hrs. of Activities, Students can earn 12 Points. This Points will not be reflected in Grade Card. Separate transcript will be issued to students after completion of Final Year.

    Other activity which also will be considered are: Participation in Hackathon, Development of new Product/ Business Plan / Registration of start-up, Participation in IPR workshop/Leadership talks/Idea/ Design / Innovation/Technical Expos, Internship with Industry / Govt. / NGO/ PSU/MSME/Online Internship, Long Term Goals under Rural Internship.

Sd/-	Sd/-	Sd/-
Dr. Harshali Patil	**Dr. Sheetal Rathi**	**Dr. B.K. Mishra**
BOS Chairman, HoD-COMP	**Member Secretary Academic Council, Dean Academic**	**Chairman Academic Council, Principal**

T.E. Semester –VI (Computer Engineering)
Choice Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE	PR/OR	TW	Total
		Course Description	**Teaching Scheme (Program Specific)**					**Examination scheme**					
			Modes of Teaching / Learning / Weightage					**Modes of Continuous Assessment / Evaluation**					
			Hours Per Week				**Credits**	**Theory (100/50)**			**Practical / Oral / Presentation (25)**	**Term Work (25)**	**Total**
								40/20		**60/30**	**PR/OR**	**TW**	
			Theory	**Tutorial**	**Practical**	**Contact Hours**		**IA**		**ESE**			
								ISE	**IE**				
1	HSMC-601	Work Place Mental Health	2	-	-	2	2	10	10	30	-	25	75
2	PCC-CS601	System Programming & Compiler Construction	3	-	2	5	4	20	20	60	25	25	150
3	PCC-CS602	Software Engineering	3	-	2	5	4	20	20	60	25	25	150
4	PEC- CS601X	Professional Elective-I	3	-	-	3	3	20	20	60	-	25	125
5	OEC-601X	Open Elective-I	3	-	-	3	3	20	20	60	-	25	125
		Total	**14**	**-**	**4**	**18**	**16**	**-**		**-**	**Total marks (Academic)**		**625**
		Course Description	**Contact Hrs. during Semester Break/ End of Semester (Between 21st and 25th Week)**									**Term Work**	
1	SI-CS601	Summer Internship	**-**	**-**	**–**	120*	3	-	**-**	-		50	**50**
		Course Description	**Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week) / During Semester**										
1	AP-CS601	Activity Points	-	-		**52@**	**-**	**-**	**-**		-	-	**-**

		Course Description	**Teaching scheme (Holistic and Multidisciplinary Education-HME)** (Conducted in the beginning of Semester during first 3 Weeks)					**Assessment/Evaluation Scheme**		**Term Work**
								Presentation	**Report**	
								AC	**AC**	
1	HME –CSPS601	Professional Skills-V (Cloud Architecture-II)	-	-	2	2	1	15	10	25
2	HME –IP601	Industry Practice-IV (Javascript Object oriented Programming/Linear Data Structure & Algorithms)	-	-	2	2	1	15	10	25
3	HME -RBL601	Research Based Learning (Minor-Project)	-	-	2	2	1	15	10	25
		Total	**-**	**-**	**6**	**6**	**3**	**Total marks (HME)**		**75**
		Total	**14**	**-**	**10**	**24**	**22**	**Grand Total marks:**		**750**

IA- In-Semester Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination, AC- Activity evaluation

PROFESSIONAL ELECTIVE I		
Course Code	**Course name**	**Domain**
PEC-CS6011	Advanced Operating Systems	1
PEC-CS6012	Mobile Computing	2
PEC-CS6013	Advanced Database Management System	3
PEC-CS6014	Multimedia Systems	4
PEC-CS6015	Machine Learning	5

List of Courses- Open Electives (Interdisciplinary Offerings)

	SEM-VI Emerging Technologies	
	OPEN ELECTIVE I To be conducted by dept. for other dept. students (e.g. Not for COMP/IT background students if completed as a core or PE course)	
Sr. No	**Course Code- OEC601X (Dept. Name)**	**Course name**
1	COMP	Basics of Social Network Analysis (SNA)
2	IT	Basics of Robotic Process Automation (RPA)
3	EXTC	Fundamentals of Communication Engineering
4	E&CS	Introduction to Eco-design of Sustainable Electronic Products
5	CIVIL	Fundamentals of Development Engineering
6	MECH	Introduction to Industry 4.0
7	AIDS	Introduction to Artificial Intelligence and Data Science
8	IOT	Introduction to IoT Applications
9	AIML	Introduction to Blockchain
10	CS&E	Basics of Cyber Security and Laws
11	MME	Introduction to Robotics
12	EH&S	English for Competitive Exams

Guidelines for the Semester:

Semester Conduct:

1. The Academic year will be conducted through two semesters. Odd Semester (1st July-31st December) and Even Semester (1st January-30th June).
2. The credit calculation is
   a) Theory/Tutorial:1 credit=1 hr b) Practical: 1 credit =2 hrs c) Experiential Learning/Internship: 1 credit= 40 hrs
   d) Professional skills/Industry Practices/Industry Certification: 1 credit =2 hrs) Holistic Development - Activity Based Learning/Project Based Learning/Research Based Learning: 1 credit=2 hrs
3. Professional Skills & Industry Practice activity will run in the form of integrated theory and practical course & syllabus is linked with level 6 of NSQF.
4. During Academic conduct, practical load shall be conducted in batches.

Evaluation and Assessment:

5. For continuous evaluation, examination shall be conducted under two heads: IA – In-Semester Assessment, ESE – End Semester Examination. Under IA, 20 marks of ISE (In-Semester Examination) shall be conducted for 1 hour. 20 marks of IE (Innovative Learning with Examination) shall also be conducted under IA. ESE shall be conducted for 60 marks with duration of 2 hours.
6. Evaluation and assessment will be formative and summative.
7. Two In semester Examination ISE-I and II (3 modules each) will be summative.
8. One In Semester Examination, ISE-III and Innovative learning with Examination-IE will be formative.
9. End semester Examination, ESE will be Summative and Term Work and Oral/Practical exam and ESE will be conducted at the end of semester.

Internship:

10. * The summer Internship will be conducted in the form of in-house/outhouse internship which is mandatory for all students in semester break.
    The internship credits accumulated will be credited in even semester.

AICTE 100 Activity Points:

11. # As per AICTE, Students has to earn 100 Points by participating in 400 Hrs. of activities during 4 years of Engineering. After Completing 48 hrs. of Activities, Students can earn 12 Points. This Points will not be reflected in Grade Card. Separate transcript will be issued to students after completion of Final Year.

    Other activity which also will be considered are: Participation in Hackathon, Development of new Product/ Business Plan / Registration of start-up, Participation in IPR workshop/Leadership talks/Idea/ Design / Innovation/Technical Expos, Internship with Industry / Govt. / NGO/ PSU/MSME/Online Internship, Long Term Goals under Rural Internship.

Sd/-	Sd/-	Sd/-
Dr. Harshali Patil	**Dr. Sheetal Rathi**	**Dr. B.K. Mishra**
BOS Chairman, HoD-COMP	**Member Secretary Academic Council, Dean Academic**	**Chairman Academic Council, Principal**

B.E. Semester –VII (Computer Engineering)

Choice Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS- HME 2023)

Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE)	PR/OR	TW	Total
			Hours Per Week				Credits	IA (40/20)		60/30	Practical/Oral (25/75)	Term Work (25/50)	Total
1	PCC- CS701	Data Warehousing and Mining	3	-	2	3	4	20	20	60	25	25	150
2	PCC- CS702	Cryptography and System Security	3	-	2	5	4	20	20	60	25	25	150
3	PEC- CS701X	Professional Elective-II	3	-	2@	5	4	20	20	60	25	25	150
4	PEC- CS702X	Professional Elective-III	3	-	-	3	3	20	20	60	25	25	150
5	OEC-701X	Open Elective-II	3	-	-	3	3	20	20	60	-	25	125
6	PROJ-CS701	Project-I	-	-	4	4	2	-	-		25	25	50
		Total	**15**	**-**	**10**	**23**	**20**				**Total marks**		**775**

Course Description	Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week) / During Semester											
1	AP-CS701	Activity Points	-	-	-	48#	-	-	-		--	-	-

Course Description			Teaching scheme (Holistic Student Development - HSD) (Conducted in the beginning of Semester during first 3 Weeks)					Presentation AC	Report AC	Term Work
1	HME-CSIC701	Industry Certification-I	-	-	4	4	2	25	25	50
	Total		**-**	**-**	**4**	**4**	**2**		**Total marks**	**50**
	Total		**15**	**-**	**14**	**27**	**22**		**Grand Total marks:**	**825**

IA- In-Semester Assessment, ESE- End Semester Examination, PR- Practical Examination, TW – Term Work Examination, OR- Oral Examination, AC- Activity evaluation

PROFESSIONAL ELECTIVE II			PROFESSIONAL ELECTIVE III		
Course Code	Course name	Domain	Course Code	Course name	Domain
PEC-CS7011	Advanced Algorithm	1	PEC-CS7021	Parallel Computing	1
PEC-CS7012	Network Infrastructure	2	PEC-CS7022	Internet of Things (IoT)	2
PEC-CS7013	Data Analytics using Hadoop	3	PEC-CS7023	Enterprise Resource Planning	3
PEC-CS7014	Digital Signal & Image Processing	4	PEC-CS7024	Human Computer Interaction	4
PEC-CS7015	Cognitive Computing using Tensorflow	5	PEC-CS7025	Robotics	5

List of Courses- Open Electives (Multidisciplinary Offerings)

SEM	Tracks	OE-II
SEM-VII	Sectors Specific Courses	1. Product Design and development 2. Alternative Fuels 3. Food Safety and Management 4. Design Thinking
	Research Based Courses	1. Research Methodology 2. Innovation & Entrepreneurship development and management 3. Intellectual Property Rights-Laws and Practice 4. Contemporary Technology Development(Industry Case Study Based))
	Management Courses	1. Business Intelligence 2. Supply Chain Management 3. Digital Marketing and E-commerce 4. Industrial Safety and Management
	Sustainable Development Courses	1. Renewable Energy Technologies 2. Sustainable Agriculture 3. Fundamentals of Disaster Management 4. Waste Management and Energy Recovery
	Foreign Languages	1. German Language 1 2. French Language 1 3. Japanese Language 1

Guidelines for the Semester:

Semester Conduct:

1. The Academic year will be conducted through two semesters. Odd Semester (1st July-31st December) and Even Semester (1st January-30th June).

2. The credit calculation is

   a) Theory/Tutorial:1 credit=1 hr b) Practical: 1 credit =2 hrs c) Experiential Learning/Internship: 1 credit= 40 hrs

   d) Professional skills/Industry Practices/Industry Certification: 1 credit =2 hrs) Holistic Development - Activity Based Learning/Project Based Learning/Research Based Learning: 1 credit=2 hrs

3. Professional Skills & Industry Practice activity will run in the form of integrated theory and practical course & syllabus is linked with level 6 of NSQF.

4. During Academic conduct, practical load shall be conducted in batches.

5. @-Professional Elective Courses Lab will be conducted in the form of Capstone Project.

Evaluation and Assessment:

6. For continuous evaluation, examination shall be conducted under two heads: IA – In-Semester Assessment, ESE – End Semester Examination. Under IA, 20 marks of ISE (In-Semester Examination) shall be conducted for 1 hour. 20 marks of IE (Innovative Learning with Examination) shall also be conducted under IA. ESE shall be conducted for 60 marks with duration of 2 hours.

7. Evaluation and assessment will be formative and summative.

8. Two In semester Examination ISE-I and II (3 modules each) will be summative.

9. One In Semester Examination, ISE-III and Innovative learning with Examination-IE will be formative.

10. End semester Examination, ESE will be Summative and Term Work and Oral/Practical exam and ESE will be conducted at the end of semester.

Internship:

11. * The summer Internship will be conducted in the form of in-house/outhouse internship which is mandatory for all students in semester break. The internship credits accumulated will be credited in even semester.

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12. # As per AICTE, Students has to earn 100 Points by participating in 400 Hrs. of activities during 4 years of Engineering. After Completing 48 hrs. of Activities, Students can earn 12 Points. This Points will not be reflected in Grade Card. Separate transcript will be issued to students after completion of Final Year.

   Other activity which also will be considered are: Participation in Hackathon, Development of new Product/ Business Plan / Registration of start-up, Participation in IPR workshop/Leadership talks/Idea/ Design / Innovation/Technical Expos, Internship with Industry / Govt. / NGO/ PSU/MSME/Online Internship, Long Term Goals under Rural Internship.

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B.E. Semester –VIII (Computer Engineering)
Choice Based Credit Grading Scheme with Holistic Student Development (CBCGS- HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)- Category-1

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE)	PR/OR	TW	Total
	Course Description		**Teaching Scheme (Program Specific)**					**Examination Scheme**					
			Modes of Teaching / Learning / Weightage					**Modes of Continuous Assessment / Evaluation**					
			Hours Per Week					**40/20**		**60/30**	**Practical/Oral (25/50)**	**Term Work (25/100)**	
								IA					
								ISE	IE	ESE)	PR/OR	TW	
1	PCC- CS801	Distributed Computing	3	-	-	3	3	20	20	60	-	25	125
2	PCC- CS802	Software Architecture	3	-	-	3	3	20	20	60	-	25	125
3	PEC- CS801X	Professional Elective-IV	3	-	2@	5	4	20	20	60	25	25	150
4	OEC-801X	Open Elective-III	3	-	-	3	3	20	20	60	-	-	100
6	PROJ-CS801	Project-II	-	-	12	12	6	-		-	50	50	100
		Total	**12**	**-**	**14**	**26**	**19**	**-**		**-**	**Total marks**		**600**

	Course Description		**Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week) / During Semester**										
1	AP-CS801	Activity Points	-	-	-	52#	-	-		-	--	-	-

	Course Description		**Teaching scheme (Holistic Student Development - HSD)** **(Conducted in the beginning of Semester during first 3 Weeks)**					**Assessment/Evaluation Scheme**					
								Presentation		**Report**			**Term Work**
								AC		**AC**			
1	HME-CSIC701	Industry Certification-II	-	-	4	4	2	25		25			50
		Total	**-**	**-**	**4**	**4**	**2**				**Total marks**		**50**
		Total	**12**	**-**	**18**	**30**	**21**				**Grand Total marks:**		**650**

B.E. Semester –VIII (Computer Engineering)
Choice Based Credit Grading Scheme with Holistic Student Development (CBCGS- HME 2023)
Proposed TCET Autonomy Scheme (w.e.f. A.Y. 2023-24)-Category-2 (Full Semester Internship)

Sr. No.	Course Code	Course Title	Theory	Tutorial	Practical	Contact Hours	Credits	ISE	IE	ESE	PR/OR	TW	Total
			Modes of Teaching / Learning / Weightage					**Modes of Continuous Assessment / Evaluation**					
			Hours Per Week					40/20 IA		60/30	Practical/Oral (25/50)	Term Work (25/100)	
1	*PEC- CS801X	Professional Elective-IV	3	-	2@	5	4	20	20	60	25	25	150
2	*OEC-801X	Open Elective-III	3	-	-	3	3	20	20	60	-	-	100
		Total	**6**	**-**	**2**	**8**	**7**	-	-	Total marks			**250**

Course Description — **Contact Hrs. during Full Semester**

1	SI-CS801	Industry oriented professional Internship	-	-	–	480	**12**	-	**-**	-	350		**350**

Course Description — **Contact Hrs. during Week End / Semester Break/ End of Semester (Between 21st and 25th Week) / During Semester**

| 1 | AP-CS801 | Activity Points | - | - | - | 52# | - | - | - | - | -- | - | - |

Course Description			**Teaching scheme (Holistic Student Development - HSD)** (Conducted in the beginning of Semester during first 3 Weeks)					**Assessment/Evaluation Scheme**				**Term Work**
								Presentation AC		Report AC		
1	HME-CSIC701	Industry Certification-II	-	-	4	4	2	25		25			50
		Total	**-**	**-**	**4**	**4**	**2**			Total marks			**50**
		Total	**6**	**-**	**6**	**12**	**21**			Grand Total marks:			**650**

PROFESSIONAL ELECTIVE IV		
Course Code	**Course name**	**Domain**
PEC-CS8011	Graph Theory	1
PEC-CS8012	Advanced System Security and Digital Forensics	2
PEC-CS8013	Data Science using Python and R	3
PEC-CS8014	Augmented & Virtual Reality	4
PEC-CS8015	Natural Language Processing	5

List of Courses- Open Electives (Multidisciplinary Offerings)

SEM	Tracks	OE-III
SEM-VIII	**Sectors Specific Courses**	1. Engineering Optimization 2. Biofuels 3. Hi. Tech Horticulture 4. Game Design
	Research Based Courses	1. Research & Publication Ethics 2. Business development 3. Patent Drafting 4. Sustainable research practice
	Management Courses	1. Project Management 2. Human Resource Management 3. Knowledge Management 4. Pollution and its Management
	Sustainable Development Courses	1. Green Technology 2. Climate change and Sustainability 3. Smart Cities 4. Sanitation and Water Management
	Foreign Languages	1. German Language 2 2. French Language 2 3. Japanese Language 2

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