

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS),
HYDERABAD-75**

1.2.2 Percentage of Programmes in which **Choice Based Credit System (CBCS)/elective course system** has been implemented (Data for the latest completed academic year)

CBIT has implemented Choice Based Credit System (CBCS) from the academic year 2016-17 onwards.

DATA FOR THE LATEST COMPLETED ACADEMIC YEAR : 2021-22

I, II, III & IV semester students are following the R-20 Syllabus structure whereas V, VI, VII, and VIII semester students are following the R-18 Syllabus structure in the academic year 2021-22

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OSMANIA UNIVERSITY
HYDERABAD – 500 007

No. 55/M/Acad.I/2017

Dated: 1) -04-2017

The Dean

Faculty of -----
Osmania University
Hyderabad.

Sub: Osmania University - Choice Based Credit
System (CBCS) - Report of the committee to
frame Rules, Regulations and Guidelines -
2016 - 2017 for undergraduate courses -
Communication - Reg.

Sir / Madam,

With reference to the subject cited, I am to inform you that the Standing Committee of the Academic Senate at its meeting held on 23-03-2017 has resolved to approve the recommendations of the committee to frame **Rules & Regulations and guidelines** on adoption of **CBCS at undergraduate level** Osmania University with effect from the academic year 2016-2017 (copy enclosed).

This is for your information and necessary action.

Yours Sincerely,


DEPUTY REGISTRAR
(Academic)

Copy to

1. The Principal, -----
2. The Head, Dept. of -----, OU.
3. The Chairperson, BoS. in -----, OU.
4. The Controller of Examinations, OU.
5. The Addl. Controller of Examinations (UG/PG/Prof/Conf.), O.U.
6. The Supt. Unit-II to note the action taken on item No.8

✓ The Director (I.S.) with a request to
place the same in Univ. website



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
Autonomous Institution Under UGC, Accredited by NBA and NAAC-UGC
Chaitanya Bharathi (Post), HYDERABAD – 500075.

Date: 27-06-2016

Minutes of the Fifth Meeting of Academic Council held on 25-06-2016 at 10:30 AM in the Conference Hall, CBIT.

Members Present:

1. Dr. B Chennakesava Rao, Principal & Chairman, Academic Council.
2. Dr. T. Sai Krishna, Head, Department of Biotechnology.
3. Dr. P.V. Naga Prapurna, Head, Department of Chemical Engg.
4. Dr. Y. Rama Devi, Head, Department of CSE.
5. Dr. K. Krishnaveni, Head, Department of Electrical and Electronics Engg.
6. Dr. N. V. Koteswara Rao, Head, Department of Electronics and Comm. Engg., & Dean-CDAAC.
7. Dr. K. Radhika, Head, Department of Information Technology.
8. Dr. P. Ravinder Reddy, Head, Department of Mechanical Engg., & Dean - R&D.
9. Dr. K. Jagannadha Rao, Head, Department of Civil Engg.
10. Dr. K. Sagar, Head, Department of MCA.
11. Dr. S. Saraswathi, Head, SMS.
12. Dr. M. Ganeshwar Rao, Head, Department of Mathematics and Humanities.
13. Dr. P. Giridhar Reddy, Head, Department of Chemistry.
14. Dr. N. Amrutha Reddy, Head, Department of Physics.
15. Dr. M. V. Krishna Rao, Assoc. Professor, Department of Civil Engg.
16. Smt. M. Kalyani, Asst. Professor, Department of Chemical Engg.
17. Dr. T. Sankarshana, Professor of Chemical Engg. & Controller of Examinations.
18. Dr. N. Venkata Reddy, IIT, Hyderabad.
19. Dr. V. Bhikshma, Professor, Dept. of Civil Engg., OU College of Engineering.
20. Dr. N. Suresh Kumar, Professor, Dept. of Civil Engg., OU College of Engineering.
21. Dr. E. Naagabhushan, Professor, Dept. of Chem. Engg., OU College of Technology.
22. Dr. Y. Krishna Reddy I/c. AEC & Professor, MED.

Leave of Absence:

1. Dr. M V S. Murali Krishna, Professor, Department of Mechanical Engg.
2. Sri Raj Kumar Challappan, CTS, Hyderabad.
3. Sri Ch. Srinagesh, Infosys, Hyderabad.
4. Dr. E. Saibaba Reddy, Professor of Civil Engg & Rector, JNTUH.

Dr. B. Chennakesava Rao, Chairman, Academic Council, welcomed the members of the Academic Council. He has also thanked the services rendered by the faculty members who are nominated by the Vice Chancellor of Osmania University and also welcomed the newly nominated members from Osmania University, for the Academic Council. The Chairman has conducted the proceedings.

Minutes:

ITEM 1: To confirm the minutes of Fourth Academic Council meeting.

The Minutes of Fourth meeting of Academic Council held on 30-05-2015 are confirmed.

ITEM 2: To approve BoS Minutes of respective Engineering / Technology disciplines and the syllabus for 4/4 BE / B. Tech of all branches.

Minutes of the all BoS meetings are approved with the following recommendations:

CIVIL: It is recommended:

1. To include concepts of NPV and IRR and Profitability Index in CE 468 course.
2. Swapping of 2nd Text books and 5th Suggested reading for the Course CE411.
3. For CE452 course, to suggest alternate suggestive readings in place of suggested reading 1 and suggested reading 2.

30/6/16

4. Add more books in CH 453
5. To re-draft / re-arrange CE454 course. Also UNIT – IV is missing
6. ME 414 : To include book by Daniel Loucks- Title to be corrected as OPERATIONS RESEARCH
7. CE 466 : To include one more text book and appropriate suggested readings.
8. ME 472 : To include Text books.
9. CE 403 : To include course outcomes, course objectives, text books.

CSE : It is recommended:

1. Minutes of BoS (Any other items), Mini project to be in BE II semester with effect from the academic year 2016-17.
2. Minutes of BoS 2nd item (iii) is differed and not accepted.
3. CS 411 : To include suggested reading .
4. CS 422 : Do not use the word "Write a program..."
5. The phrase "Detailed Syllabus" has to be removed.
6. Where suggested readings are not included, it is hereby informed to include the same.
7. Elective courses codes are to be followed as per CBIT(A) guidelines.

ECE: It is recommended :

1. In BoS Minutes, the modified syllabus for ME programme (for the subjects listed) to be adopted from the academic year 2016-17.
2. More suggested readings in EC 411.
3. Course title EC465, to correct as "DSP Processors Architectures" (in the I semester Scheme)
4. In the II Semester scheme, to expand EMI/ EMC.

EEE: It is recommended:

1. In the scheme (I Semester), to replace Elective III as Elective II.
2. EE 462, to replace the 2nd suggested reading with the book by author "Kalyanmoy Deb" in the same field.
3. EE 464, to suggest an alternate name for the course title instead of VLSI Design or the course offered in ECE "VLSI Design" may be considered.
4. To introduce Elective IV / Open Elective in II Semester.
5. EE 421 to be shifted to Elective III.
6. To avoid naming "Part-A / Part-B" in laboratory courses.

IT : It is recommended:

1. IT 414 : To suggest an alternate name for the course title "VLSI Design" - (Title re-design for Lab Course too)
2. CE : "Disaster Management", the course title is "Disaster Mitigation and management".
3. MB : Organisational Behaviour is approved.
4. "Disaster Mitigation and Management" and "Organisational Behaviour" are to be included in the Elective IV / Open Elective.
5. IT 416 : VLSI Design Lab – Increase the number of experiments
6. IT 464 : To include Text Books.
7. IT 483 : To include suggested readings.

MECHANICAL: It is recommended:

1. ME 462 : To revise sub-titles of the units.
2. ME 471 : To shift the 3rd book of suggested reading appropriately to Text Books.
3. PE 412 : To append a suggested reading, recommendation by the expert and needs revision of books.

CHEMICAL: It is recommended :

1. Scheme to be prepared as per CBIT(A).
2. CH 412, 415 and 422, the workload is 4(L)only.
3. CE 422, the title to be read as "Disaster Mitigation and Management".
4. CH 411 : To replace Unit-1 as Unit-I, Unit-2 as Unit-II etc.
5. CH 414 : Text books (Year) to be corrected.
6. To offer "Nano Materials and Technology" as Open elective, which is offered by Mechanical Engg. Board.
7. CH 414 to be re-coded with MBA code.
8. CH 461, CH 465 - To replace the books with recent editions / reprints.
9. CH 421, CH 416 - Instead of List of Experiments as "List of Exercise". The course title to replace as "Equipment Design and Drawing Practice".
10. CH 481 may be offered as Open Elective for other disciplines also.

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BIO-TECHNOLOGY: It is recommended :

1. To include attendance of BoS Members in the Minutes.
2. In I-Semester, it is to be mentioned as "Project Seminar" and in the II Semester as "Seminar".
3. To include "Entrepreneurship" as "Open Elective. "
4. To re-write course outcomes / course objectives for all the courses.
5. "Principles and Practice of Management" is a common course for "Chemical" and "Biotechnology" with the syllabus drafted in Chemical Engineering Curriculum. (Syllabus is drafted by SMS).
6. BT 415 : To elaborate List of experiments.
7. BT 421 : To re-draft the syllabus.

ITEM 3: Guidelines for Seminar, Project Seminar & Project.

A Sub-Committee with the following members is constituted to finalise the same.

- a. Dr. P. Ravinder Reddy, Head, Dept. of Mech. Engg., & Dean-R&D.
- b. Dr. N. V. Koteswara Rao, Head, Dept. of ECE & Dean-CDAAC.
- c. Dr. Y. Krishna Reddy, Prof., Dept. of Mech. Engg., & I/C-AEC.

ITEM 4: To consider the proposal of implementing Choice Based Credit System from the academic year 2016-17.

1. It is approved and decided to implement for the academic year 2016-17 onwards with slight modifications / scheme as mentioned below.

Depts. of CSE, IT & ECE

Suggested Plan of Study :		Sections (1-8) Total : Eight(8) Sections	
Semester-I		Semester-II	
Engineering Mathematics-I	3-0-0-3	Engineering Mathematics-II	3-0-0-3
Engineering Physics	3-0-0-3	Engineering Chemistry	3-0-0-3
Applied Chemistry	2-0-0-2	Applied Physics	2-0-0-2
Engg. Physics Laboratory	0-0-2-1	Engg. Chemistry Laboratory	0-0-2-1
Applied Chemistry Lab	0-0-2-1	Applied Physics Lab	0-0-2-1
Engineering Mechanics	3-0-0-3	Elements of ME	3-0-0-3
Elements of EE	3-0-0-3	Elements of ECE	3-0-0-3
Engineering Graphics	1-0-3-3	Computer Programming	3-0-0-3
Professional Communication	3-0-0-3	Computer Programming Lab	0-0-3-2
Professional Communication Lab	0-0-2-1	Mechanical and IT Workshop	0-0-3-2
Environmental Studies	1-0-0-1	Professional Ethics and Human values	1-0-0-1
Total	19-0-9-24	Total	18-0-10-24
Work Load : 28 (Hours / per week)		Work Load: : 28 (Hours / per week)	

Depts. of CIVIL, MECH., PROD., EEE & CHEMICAL ENGG.

Suggested Plan of Study :		Sections (9-16) Total : Eight(8) Sections	
Semester-I		Semester-II	
Engineering Mathematics-I	3-0-0-3	Engineering Mathematics-II	3 -0-0-3
Engineering Chemistry	3-0-0-3	Engineering Physics	3-0-0-3
Applied Physics	2-0-0-2	Applied Chemistry	2-0-0-2
Engg. Chemistry Laboratory	0-0-2-1	Engg. Physics Laboratory	0-0-2-1
Applied Physics Lab	0-0-2-1	Applied Chemistry Lab	0-0-2-1
Elements of ME	3-0-0-3	Engineering Mechanics	3-0-0-3
Elements of ECE	3-0-0-3	Elements of EE	3-0-0-3
Computer Programming	3-0-0-3	Professional Communication	3-0-0-3
Computer Programming Lab	0-0-3-2	Professional Communication Lab	0-0-2-1
Mechanical and IT Workshop	0-0-3-2	Environmental Studies	1-0-0-1
Professional Ethics and Human values	1-0-0-1	Engineering Graphics	1-0-3-3
Total	18-0-10-24	Total	19-0-9-24
Work Load: : 28 (Hours / per week)		Work Load : 28 (Hours / per week)	

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Suggested Plan of Study of I-Sem and II-Sem of B.Tech (Bio-Technology)

Semester-I		Semester-II	
Engg. Mathematics-I / Biology-I	3-0-0-3	Engg. Mathematics-II/ Biology-II	3-0-0-3
Engineering Chemistry (3Hrs)	3-0-0-3	Bio Physics(3Hrs)	3-0-0-3
Engg. Physics(3Hrs)	3-0-0-2	Bio Physics Laboratory	0-0-2-1
Engg. Chemistry Laboratory	0-0-2-1	Bio-Organic Chemistry	3-0-0-3
Engg. Physics Lab	0-0-2-1	Bio-Organic Chemistry Lab	0-0-2-1
Elements of EE	3-0-0-3	Introduction to Anatomy and Physiology of Humans	3-0-0-3
Elements of Bio-Technology	3-0-0-3	Computer Programming	3-0-0-3
Professional Communication	3-0-0-3	Computer Programming Lab	0-0-3-2
Professional Communication Lab	0-0-2-1	Mechanical and IT Workshop	0-0-3-2
Engineering Graphics	1-0-3-3	Environmental Studies	1-0-0-1
		Professional Ethics & Human values	1-0-0-1
Total	19-0-9-23	Total	17-0-10-23
Work Load:	: 28 (Hours / per week)	Work Load	: 27 (Hours / per week)

2. Engineering Mathematics-III to rename as per the contents of the syllabus.
3. It is decided to have core course / Engineering mathematics in IV semester depending upon the requirement of concern disciplines. The departments who are not offering Engineering Mathematics course in IV semester, it is recommended to include the same as Interdisciplinary Elective in their respective curriculum.
4. For one credit lab course, sessional marks are 15 and semester end examinations are for 35 marks.
5. For two(2) credit course (Theory), it is to have 25 marks for sessionals and 50 marks for semester end examination, out of 25 marks, 5 marks are allotted for slip tests and 20 marks are based on two internal tests.

ITEM 11: Any other item with the permission of Chair

1. To use the name "End Semester Examination" in place of "University Examination".
2. To draft six(06) course outcomes and six(06) course objectives for every course.
3. To use standard format for the text books and suggested readings.
4. Using of Symbol "&" in the titles / text is not recommended.
5. Almanac for the Academic year 2016-17 is approved for the 2/4,3/4, 4/4 BE / B. Tech. and 3/3 MCA.
6. It is decided to revise remuneration for the examiners in all the examinations, i.e., both theory and practical examinations.

The meeting of Academic Council concluded with vote of thanks by the Chairman.

B. Chakrabarti
30/6/16

**Chairman
Academic Council**

Copy to:
All the members of Academic Council

Note:

The members are requested to suggest modifications to the minutes of the Academic Council if any, within a week, otherwise the same minutes stand approved.

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
Chaitanya Bharathi (Post), Hyderabad – 500075

Date: 05-05-2017

Minutes of the Sixth Meeting of Academic Council held on 05-05-2017 at 10:30 AM in the Conference Hall, CBIT.

Members Present:

1. Dr. B Chennakesava Rao, Principal & Chairman, Academic Council
2. Dr. A.V.N. Swamy, i/c Head, Department of Biotechnology
3. Dr. P.V. Naga Prapurna, Head, Department of Chemical Engineering
4. Dr. K. Jagannadha Rao, Head, Department of Civil Engineering
5. Dr. N. V. Koteswara Rao, Head, Department of Electronics and Comm. Engg., & Dean-CDAAC
6. Dr. P.V. Prasad, Head, Department of Electrical and Electronics Engineering
7. Dr. K. Radhika, Head, Department of Information Technology
8. Dr. P. Ravinder Reddy, Head, Department of Mechanical Engg., & Dean - R&D
9. Dr. S Saraswathi, Head(i/c), SMS
10. Dr. K. Sagar, Head, Department of MCA
11. Dr. M. Ganeshwar Rao, Head, Department of Mathematics and Humanities
12. Dr. K. Lakshmi, Head, Department of Chemistry
13. Dr. M.V.S. Murali Krishna, Professor, Department of Mechanical Engineering
14. Dr. M. V. Krishna Rao, Assoc. Professor, Department of Civil Engineering
15. Smt. M. Kalyani, Asst. Professor, Department of Chemical Engineering
16. Dr. N. Venkata Reddy, IIT, Hyderabad
17. Dr. V. Bhikshma, Professor, Dept. of Civil Engg., OU College of Engineering
18. Dr. N. Suresh Kumar, Professor, Dept. of Civil Engg., OU College of Engineering
19. Dr. E. Naagabhushan, Professor, Dept. of Chem. Engg., OU College of Technology
20. Dr. T. Sankarshana, Professor of Chemical Engg. & Controller of Examinations
21. Dr. Y. Krishna Reddy i/c. AEC & Professor, MED
22. Dr. C. R. K. Reddy, Professor Dept. of CSE (on behalf of Head, Dept. of CSE)
23. Dr. B. Linga Reddy, Professor, Department of Physics (on behalf of Head, Dept. of Physics)

Leave of Absence:

1. Sri Raj Kumar Chellappan, CTS, Hyderabad
2. Sri Ch. Srinagesh, Infosys, Hyderabad
3. Dr. E. Saibaba Reddy, Professor of Civil Engg & Rector, JNTUH

Dr. B. Chennakesava Rao, Chairman, Academic Council, welcomed the members of the Academic Council and has conducted the proceedings.

Minutes:

ITEM 1: To confirm the minutes of Fifth (5th) Academic Council meeting.

The Minutes of Fifth meeting of Academic Council held on 25-06-2016 are confirmed.

ITEM 2 : To approve Minutes of Common Board of Studies meeting held on 17-01-2017

The Minutes of common Board of Studies meeting held on 17-01-2017 are confirmed.

ITEM 3: To approve Scheme for III Semester to VIII Semester under CBCS and Syllabus for III Semester & IV Semester for all UG programs, along with respective BoS meeting minutes.

CIVIL:

1. Course code numbers are to be assigned as per CBCS guidelines.
2. Soft Skills Lab is a one credit course.
3. Text books/Suggested Reading should be indicated as per prescribed format (as decided in 3rd Academic Council meeting under Item-5).
4. Page#9, S.no-4, Semester-III, Four (4) hours may be converted to Three(3) Lecture hours plus One(1) hour Drawing for the course "Building Materials Planning and Construction".
5. Content of Strength of Materials courses should be reviewed.

CSE:

1. Mini Project is a one credit course with 50 marks (maximum) assigned for continuous internal evaluation.
2. Unit-I of Logic and Switching Theory may be re-checked as some of the contents are already covered in the course Element of ECE.
3. Serial Number-9 of Page -51 is to be renamed as Web Technology Lab and Mini Project may be part of the Lab activity and it is a two credit lab course.
4. Course code numbers are to be assigned as per CBCS guidelines.
5. Text books/Suggested Reading should be indicated as per prescribed format (as decided in 3rd Academic Council meeting under Item-5).

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17/5/17

ECE:

1. Item-6 of 5th BoS meeting minutes were discussed and contents were not approved as there was no provision in the curriculum.
2. To include more books under suggested reading in Page#79 and 90.
3. To include course objectives for all the courses.

EEE:

1. Page#102 Service course offered to other department - "Basics of Mechanical and Electrical Engineering lab" is a two credit lab course and changes should be incorporated accordingly.
2. To include open electives in VII and VIII semesters respectively.
3. Page#104 elective course - Signals and Systems: This title is same as the title used in ECE BoS. Hence it is advised to consider the same syllabus as approved in ECE-BoS or to rename the course title as per the contents.

IT:

1. Page#132: Mini Project is a one credit course with 50 marks (maximum) assigned for continuous internal evaluation.
2. For core courses - "Discrete Structures", "Computer Organization and Micro Processors (theory and lab)" and "Data Structures (theory and lab)", the title names are same as the ones mentioned in CSE BoS. Hence it is recommended to have a common syllabus or rename the titles appropriately.

MECHANICAL & PRODUCTION:

1. To shift Soft Skills Lab to IV-Semester as a one credit lab course.
2. Total number of credits for the program is 188 instead of 191 and accordingly the scheme has to be revised.
3. Page#192: To review the syllabus for UNIT-III and UNIT-IV.
4. Page#200: Four (4) hours of instruction may be converted to Three(3) hours Lecture plus One(1) hour Tutorial

CHEMICAL:

1. A committee is constituted with the following members, to look into the curriculum regarding the inclusion of "Organic Chemistry" in the scheme, as per the minutes of 'Chemistry BoS':
 - i. Dr. E. Naagabhushan, Professor, Dept. of Chem. Engg., OU College of Technology
 - ii. Dr. P.V. Naga Prapurna, Head, Department of Chemical Engg.
 - iii. Dr. T. Sankarshana, Professor of Chemical Engg. & Controller of Examination, CBIT.The committee is advised to submit a report within two weeks.
2. Page#226-to rename "MATLAB Programming for Numerical Methods Laboratory" suitably.

BIOTECH:

1. To review course outcomes.
2. To choose a suitable title for 16BT C58 (Page#240).

Mathematics and Humanities:

1. To rename the title - "Calculus for Biotechnology" as "Mathematics-III"
2. To draft the syllabus for "Chemical Engineering Analysis" in consultation with Chairperson of Chemical Engineering BoS
3. The course title for Mathematics course in III-Semester (except Biotechnology) is "Engineering Mathematics - III" and for Biotechnology as "Mathematics - III"
4. Page#262- Replace S.No-1 under suggested readings with an equivalent standard textbook.
5. Text books and Suggested Reading should be indicated in the standard format prescribed.
6. Text books and Suggested Readings : Suitable books may be advised (Page#262)

CHEMISTRY: Same as item#1 of Chemical Engineering minutes.

ITEM 4 : To approve scheme for M.E/M.Tech under CBCS, effective from 2016-2017 and their respective BoS meeting minutes and syllabus.

The rules, scheme and syllabus for M.E/M.Tech under CBCS, effective from 2016-2017 are ratified by the council.

ITEM 5 : To approve scheme for MCA and MBA under CBCS, effective from 2016-2017 and their respective BoS meeting minutes and syllabus.

1. The rules, scheme and syllabus for MCA and MBA under CBCS, effective from 2016-2017 are ratified by the council.
2. The syllabus for III and IV semesters of MCA and MBA programs are approved.
3. Instead of indicating marks for internal examinations, assignments/case study/quiz/seminar, it is recommended to use Continuous Internal Evaluation (CIE).

ITEM 6 : To discuss matters as proposed in the HODs meeting held on : 04-04-2017

- a) **To provide attendance to the students during the time of the internship**
Council has not approved in giving attendance during the time of the internship.
- b) **To conduct Mid Sessional Examination on alternate date to those students, who represent the college in any event with prior permission and also to those who were unable to write the examinations on scheduled dates due to illness.**
Council advised to obtain the guideline which are adopted in OU and to put up the same in the next council meeting

ITEM 7 :

- a) **To adopt 0.5% rule for CBIT(A) , as implemented in OU (Autonomous).**
Council has approved to adopt 0.5% rule.
- b) **To ratify 10% reduction in the pass mark for the students who gets admission under physically challenged quota, as implemented in OU.**
Council has approved to ratify 10% reduction in the pass mark for the students who gets admission under physically challenged quota.

ITEM 8 : Any other item with the permission of Chair

1. To include "Organization Behavior" as an open elective for all UG programs.
2. It is decided to have six course outcomes and four/five course objectives for every course.
3. For the student(s) who have failed in the courses for which there is only internal evaluation, the following measures were approved:

B.E/B.Tech Program: Students are required to reappear for the same, when offered next time, by the respective department otherwise grades are not awarded.

M.E/M.Tech Program:

Project Work - Project Seminar (III-Semester): Students are required to re-register in the IV semester


Seminar - 1 and 2/Lab - 1 and 2/Mini Project/Soft Skills Lab: Students are required to re-register when the course is offered next time.

MBA and MCA Programs:

Seminar: Students are required to re-register when the course is offered next time.

4. Almanac is approved for the following:
 - a. III and IV semester of B.E/B.Tech (CBCS)
 - b. I and II Semester of 3/4 and 4/4 B.E/B.Tech
 - c. I and II Semester 3/3 MCA
5. The symbol '&' is not to be used either in the text or in the title.
6. The latest text books are to be included in the syllabus.

The meeting of Academic Council is concluded with vote of thanks by the Chairman.


11/5/12
Chairman
Academic Council

Copy to:

All the members of Academic Council

Note:

1. The members are requested to offer the comments, if any, within a week from the date of receipt of this communication. If no comments are received, the minutes will be taken as confirmed.
2. All the Chairpersons of BoS are hereby requested to send the soft copy of syllabus both in word and pdf formats through email to principal@cbit.ac.in and dean_cdaac@cbit.ac.in after incorporating all the changes in the syllabus.
3. A sample template is enclosed herewith for the scheme and for the course. All the Chairpersons are requested to adopt the same.

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of I Semester of B.E. –Civil Engineering
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CIVIL ENGINEERING

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C05	Calculus	3	1	-	3	40	60	4
2	20CYC01	Chemistry	3	-	-	3	40	60	3
3	20CE C01	Engineering Mechanics-I	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20CYC02	Chemistry Lab	-	-	4	3	50	50	2
6	20CS C02	Programming for Problem Solving Lab	-	-	4	3	50	50	2
7	20ME C02	Workshop/ Manufacturing Practice	-	-	5	3	50	50	2.5
8	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	1	13	-	360	390	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of II Semester of B.E. –Civil Engineering
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CIVIL ENGINEERING

SEMESTER -II

SEMESTER - II									
S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C06	Vector Calculus and Differential Equations	3	1	-	3	40	60	4
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C05	Mechanics and Materials Science	3	-	-	3	40	60	3
4	20CE C02	Engineering Mechanics – II	3	-	-	3	40	60	3
5	20EE C01	Basic Electrical Engineering	3	-	-	3	40	60	3
PRACTICAL									
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20PY C08	Mechanics and Materials Science Lab	-	-	4	3	50	50	2
8	20EE C02	Basic Electrical Engineering Lab	-	-	2	3	50	50	1
9	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			14	1	8	-	400	450	20.5

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

AICTE Model Curriculum with effect from A.Y. 2021-22

B.E (Civil Engineering)

SEMESTER III

SEMESTER-III									
Sl No	Course code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in hours	Maximum marks		
			L	T	P		CIE	SEE	
THEORY									
1	20MTC08	Partial Differential Equations and Statistics	3	1	0	3	40	60	4
2	20CE C03	Surveying-I	3	-	-	3	40	60	3
3	20CE C04	Solid Mechanics	3	-	-	3	40	60	3
4	20CE C05	Fluid Mechanics	3	-	-	3	40	60	3
5	20CE C06	Building Construction Practices & Concrete Technology	3	-	-	3	40	60	3
6	20EG M03	Universal Human Values -II Understanding Harmony	3	-	-	3	40	60	3
PRACTICAL									
7	20CE C07	Solid Mechanics Lab			2	3	50	50	1
8	20CE C08	Fluid Mechanics Lab			2	3	50	50	1
9	20CE I01	MOOCs/Training/ Internship	2-3 weeks/90 hours						2
		Total	18	1	4		340	460	23
Clock Hours per week:						25			

L : Lecture, T : Tutorial , P : Practical/Drawing/Seminar/Project



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

AICTE Model Curriculum with effect from A.Y. 2021-22

B.E (Civil Engineering)

SEMESTER – IV

SEMESTER-IV									
Sl No	Course code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week						
			L	T	P	Duration of SEE in hours	Max marks		
						CIE	SEE		
1	20CE C09	Hydraulic Engineering	3	-	-	3	40	60	3
2	20CE C10	Surveying II	3	-	-	3	40	60	3
3	20CE C11	Structural Analysis I	3	-	-	3	40	60	3
4	20CE C12	Reinforced Concrete Design - I	3	1	-	3	40	60	4
5		PE-1	3	-	-	3	40	60	3
6	20CE C13	Hydraulic Engineering Lab	-	-	2	3	50	50	1
7	20CE C14	Surveying & Geomatics Lab	-	-	2	3	50	50	1
8	20CE C15	Computer Aided Drafting (CAD)	--	1	3	3	50	50	2.5
9	20EG M01	Indian Constitution & Fundamental Principles (MC)	2	1	1	2	1	50	Non - Credit
10	20EE M01	Indian Traditional Knowledge (MC)	2	1	1	2	1	50	Non - Credit
Total			19	2	7		350	550	20.5
Clock Hours per week: 28									

L: Lecture, T : Tutorial , P : Practical/Drawing/Seminar/Project

Professional Elective-I

S. No.	Course Code	Name of the Course
1.	20CE E01	Green Building Technologies
2.	20CE E02	Principles of Geographical information systems
3.	20CE E03	Solid and Hazardous Waste Management
4.	20CE E04	Ground Water Engineering

R 18 Curriculum (V – VIII Semesters)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A) Model Curriculum (with effect from 2020-2021) B.E (CIVIL ENGINEERING)

SEMESTER – V

SEMESTER IV									
S. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
			L	T	P/D				
	THEORY								
1	18CE C13	Transportation Engineering	3	-	-	3	30	70	3
2	18CE C14	Geotechnical Engineering	3	-	-	3	30	70	3
3	18CE C15	Structural Analysis-II	3	-	-	3	30	70	3
4		Core Elective 1	3	-	-	3	30	70	3
5		Core Elective 2	3	-	-	3	30	70	3
6	18MB C01	Engineering Economics and Accountancy	3	-	-	3	30	70	3
	PRACTICALS								
7	18CE C16	Transportation Engineering Lab	-	-	2	2	15	35	1
8	18CE C17	Geotechnical Engineering Lab	-	-	2	2	15	35	1
9	18CE C18	Auto CAD Lab	-	-	2	2	15	35	1
Total			18	-	06		225	515	21

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

Core Elective 1:



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

Model Curriculum (with effect from 2020-2021) B.E (CIVIL ENGINEERING)

SEMESTER – VI

S. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
	THEORY								
1	18CE C19	Design of Steel Structures -I	3	-	-	3	30	70	3
2	18CE C20	Environmental Engineering	3	-	-	3	30	70	3
3	18CE C21	Engineering Geology	3	-	-	3	30	70	3
4		Core Elective 3	3	-	-	3	30	70	3
5		Core Elective 4	3	-	-	3	30	70	3
6		Open Elective 1	3	-	-	3	30	70	3
	PRACTICALS								
7	18CE C22	Environmental Engineering Lab	-	-	2	2	15	35	1
8	18CE C23	Engineering Geology lab	-	-	2	2	15	35	1
Total			18	-	04		210	490	20

L: Lecture T: Tutorial D: Drawing

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

Core Elective 3:

1. 18CE E09 - Structural Analysis-III
2. 18CE E10 - Foundation Engineering
3. 18CE E11 – Water Shed Management
4. 18CE E12 - Urban Transportation Planning

Core Elective 4:

1. 18CE E13 - Finite Element Methods
2. 18CE E14 - Reinforced Concrete Design-II
3. 18CE E15 - Railway Engineering
4. 18CE E16 - Groundwater Engineering
5. 18CE E17 -Applications of Artificial Intelligence in Civil Engineering

Open Elective 1:

1. 18CS O06 – Fundamentals of DBMS
2. 18ME O04 – Entrepreneurship
3. 18EG O01 – Technical Writing Skills
4. 18EE O04 – Energy Management Systems

R 18 Curriculum (VII & VIII Semesters)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

Model Curriculum (with effect from 2021-2022)

B.E (CIVIL ENGINEERING)

SEMESTER – VII

S. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
	THEORY								
1	18CE C24	Construction Engineering and Management	3	-	-	3	30	70	3
2	18CE C25	Hydrology and Water Resources Engineering	3	-	-	3	30	70	3
3	18CE C26	Estimation, Specifications and Costing	3	-	-	3	30	70	3
4		Core Elective 5	3	-	-	3	30	70	3
5		Open Elective 2	3	-	-	3	30	70	3
	PRACTICALS								
6	18CE C27	Concrete Technology Lab	-	-	3	3	25	50	1.5
7	18CE C28	Computer Applications Lab	-	-	3	3	25	50	1.5
8	18CE C29	Project Part 1	-	-	4				2
Total			15	-	10		200	450	20

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation SEE - Semester End Examination

Core Elective 5:

1. 18CE E18 - Design of Steel Structures-II
2. 18CE E19 - Airport Engineering
3. 18CE E20 - River Engineering
4. 18CE E21 - Water and Air Quality Modeling
5. 18CE E22 - Applications of Data Analytics in Civil Engineering

Open Elective 2:

1. 18ME O07 – Intellectual Property Rights



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
Model Curriculum (with effect from 2021-2022)
B.E (CIVIL ENGINEERING)

SEMESTER – VIII

SEMESTER VII									
S. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
	THEORY								
1		Core Elective 6	3	-	-	3	30	70	3
2		Open Elective 3	3	-	-	3	30	70	3
	PRACTICALS								
3	18CE C30	Technical Seminar (On the latest trends and other than project)	-	-	2	-	50	-	1
4	18CE C31	Project Part 2	-	-	20				10
Total			06	-	22		110	140	17

L: Lecture T: Tutorial D: Drawing P: Practical
 CIE - Continuous Internal Evaluation SEE - Semester End Examination

Core Elective 6:

1. 18CE E23 - Earthquake Resistant Design of Structures
2. 18CE E24 - Ground Improvement Techniques
3. 18CE E25 - Design of Hydraulic Structures/Irrigation Engineering
4. 18CE E26 - Rural Water Supply and Onsite Sanitation Systems
5. 18CE E27 Applications of Block Chain Technology in Civil Engineering

Open Elective 3:

1. 18ME O06 – Nano Materials and Technology
2. 18IT O03 – Principles of Internet of Things
3. 18EE O05 – Waste Management
4. 18EC O08 – Neutral Networks and Fuzzy Logic



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

IN

MECHANICAL ENGINEERING

(For the batch admitted in 2020-21)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of I Semester of B.E. – Mechanical Engineering
as per AICTE Model Curriculum 2020-21

DEPARTMENT OF MECHANICAL ENGINEERING

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C05	Calculus	3	1	-	3	40	60	4
2	20CY C01	Chemistry	3	-	-	3	40	60	3
3	20CE C01	Engineering Mechanics-I	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20CY C02	Chemistry Lab	-	-	4	3	50	50	2
6	20CS C02	Programming for Problem Solving Lab	-	-	4	3	50	50	2
7	20ME C02	Workshop/ Manufacturing Practice	-	-	5	3	50	50	2.5
8	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	1	13	-	360	390	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of II Semester of B.E. – Mechanical Engineering
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF MECHANICAL ENGINEERING

SEMESTER -II

SEMESTER I									
S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C06	Vector Calculus and Differential Equations	3	1	-	3	40	60	4
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C05	Mechanics and Materials Science	3	-	-	3	40	60	3
4	20EEC01	Basic Electrical Engineering	3	-	-	3	40	60	3
PRACTICAL									
5	20EG C02	English lab	-	-	2	3	50	50	1
6	20PY C08	Mechanics and Materials Science Lab	-	-	4	3	50	50	2
7	20EEC02	Basic Electrical Engineering Lab	-	-	2	3	50	50	1
8	20ME C01	CAD and Drafting	-	1	3	3	50	50	2.5
9	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	2	11	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

With effect from academic year 2021-2022

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)****Scheme of Instruction as per R20 Curriculum****B.E. (MECHANICAL ENGINEERING)****SEMESTER – III**

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hrs	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MEC04	Material Science And Metallurgy	3	--	--	3	40	60	3
2	20MEC05	Strength of Materials	3	1	--	3	40	60	4
3	20MEC06	Manufacturing Processes	4	--	--	3	40	60	4
4	20MTC08	Partial Differential Equations And Statistics	3	1	--	3	40	60	4
5	20CSC06	Basics Of Data Structures	2	--	--	3	40	60	2
6	20EGM03	Universal Human Values II- Understanding Harmony	3	--	--	3	40	60	3
7	20CEM01	Environmental Science	2	--	--	2	--	50	*Non Credit
PRACTICALS									
8	20MEC07	Material Science and Metallurgy Lab	--	--	2	3	50	50	1
9	20MEC08	Strength of Materials Lab	--	--	2	3	50	50	1
10	20MEC09	Manufacturing Processes Lab	--	--	2	3	50	50	1
11	20CSC07	Basic data structures Lab	--	--	2	3	50	50	1
MOOCs/Training/Internship			2-3 weeks/90 hours						2
TOTAL			21	02	06	--	390	500	24+2

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation SEE – Semester End Examination

CBIT (A)

With Effect from the Academic Year 2021-22

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)****Scheme of Instruction as per R20 Curriculum****B.E. (MECHANICAL ENGINEERING)****SEMESTER – IV**

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MEC10	Kinematics of Machines	3	1	--	3	40	60	4
2	20MEC11	Thermodynamics	3	--	--	3	40	60	3
3	20MEC12	Fluid Principles and Hydraulic Machines	3	1	--	3	40	60	4
4	20MEC13	Metal Cutting and Machine Tool Engineering	3	--	--	3	40	60	3
5	20EGM01	Indian Constitution and Fundamental Principles	2	--	--	2	--	50	*Non Credit
6	20EGM02	Indian Traditional Knowledge	2	--	--	2	--	50	*Non Credit
7		Professional Elective - I	3	--	--	3	40	60	3
PRACTICALS									
8	20MEC14	Fluid Principles and Hydraulic Machines Lab	--	--	2	3	50	50	1
9	20MEC15	Metal Cutting and Machine Tool Engineering Lab	--	--	2	3	50	50	1
TOTAL			19	02	04	--	300	500	19

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation SEE – Semester End Examination

Professional Elective – I (3/3)		
SNO	Subj. Code	Name of the Subject
1	20ME E01	Power Plant Engineering
2	20ME E02	Production and Operations Management
3	20ME E03	Entrepreneurship
4	20ME E04	Mechatronics and Automation



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE MODEL CURRICULUM
B.E (Mechanical Engineering)

SEMESTER-V

SEMESTER-V									
S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	18ME C12	Dynamics of Machines	3	--	--	3	30	70	3
2	18ME C13	Applied Thermodynamics and Heat Transfer	3	--	--	3	30	70	3
3	18ME C14	Design of Machine Elements	3	--	--	3	30	70	3
4	18PE C07	Metal Cutting and Machine Tool Engineering	3	--	--	3	30	70	3
5		Core Elective – I	3	--	--	3	30	70	3
6		Core Elective – II	3	--	--	3	30	70	3
PRACTICALS									
7	18ME C15	Dynamics and Vibrations Lab	--	--	2	2	15	35	1
8	18ME C16	Applied Thermodynamics and Heat Transfer Lab	--	--	2	2	15	35	1
9	18PE C08	Metal Cutting and Machine Tool Engineering Lab	--	--	2	2	15	35	1
TOTAL			18	--	06	--	225	525	21

L: Lecture
Evaluation

T: Tutorial
SEE – Semester End Examination

D: Drawing

P: Practical CIE – Continuous Internal

Core Elective– I (3/3)			Core Elective– II (3/3)		
S.No	Subj.Code	Name of the Subject	S.No	Subj.Code	Name of the Subject
1	18ME E01	Refrigeration and Air Conditioning	1	18ME E04	Automobile Engineering
2	18ME E02	Values, Ethics and Society	2	18ME E05	Nano Science and Technology
3	18PE E01	Plastics, Ceramics and Composite Materials	3	18ME E06	Rights, Duties and Legislation
4	18PE E02	Product Design and Process Planning	4	18PE E04	Non Destructive Testing and Evaluation
5	18ME E03	Mechanical Vibrations	5	18ME E07	Fuels and Combustion



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE MODEL CURRICULUM
B.E (Mechanical Engineering)

SEMESTER-VI

SEMESTER VI									
S. No	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	18ME C17	CAD/CAM	3	--	--	3	30	70	3
2	18ME C18	Machine Design	3	--	--	3	30	70	3
3	18ME C19	Thermal Turbo Machines	3	--	--	3	30	70	3
4		Core Elective – III	3	--	--	3	30	70	3
5		Core Elective – IV	3	--	--	3	30	70	3
6		Core Elective – V	3	--	--	3	30	70	3
PRACTICALS									
7	18ME C20	CAD/CAM Lab	--	--	2	2	15	35	1
8	18ME C21	Thermal Engineering Lab	--	--	2	2	15	35	1
TOTAL			18	--	04	--	210	490	20

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE – Continuous Internal Evaluation

SEE – Semester End Examination

Core Elective – III (3/3)			Core Elective – IV (3/3)		
SNO	Subj. Code	Name of the Subject	SNO	Subj. Code	Name of the Subject
1	18ME E08	Object Oriented Programming with C++	1	18ME E12	Computational Fluid Dynamics
2	18ME E09	Mechanics of Composite Materials	2	18ME E13	Principles of Entrepreneurship
3	18ME E10	Robotic Engineering	3	18PE E08	Modern Machining and Forming Methods
4	18PE E06	Production and Operations Management	4	18ME E14	Heat and Mass Transfer
5	18ME E11	Advanced IC Engines	5	18ME E15	Blockchain Technology

Core Elective – V (3/3)		
SNO	Subj. Code	Name of the Subject
1	18ME E17	Renewable Energy Sources
2	18ME E18	Control Systems Theory
3	18ME E19	Artificial Intelligence
4	18ME E20	Industrial Administration and Financial Management
5	18PE E11	Principles and Applications of Additive Manufacturing



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE MODEL CURRICULUM
B.E (Mechanical Engineering)

SEMESTER – VII

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	18ME C22	Metrology and Instrumentation	3	--	--	3	30	70	3
2	18ME C23	Operations Research	3	--	--	3	30	70	3
3	18ME C24	Finite Element Analysis	3	--	--	3	30	70	3
4		Core Elective – VI	3	--	--	3	30	70	3
5		Open Elective – I	3	--	--	3	30	70	3
PRACTICALS									
6	18ME C25	Metrology and Instrumentation Lab	--	--	3	3	25	50	1.5
7	18ME C26	Computer Aided Engineering Lab	--	--	3	3	25	50	1.5
8	18ME C27	Project: Part – 1	--	--	4	--	50	--	2
TOTAL			15	--	10	--	250	450	20

L: Lecture T: Tutorial D: Drawing P: Practical

CIE – Continuous Internal Evaluation

SEE – Semester End Examination

Core Elective– VI (3/3)			Open Elective–I (3/3)		
S. NO	Subj. Code	Name of the Subject	S. NO	Subj. Code	Name of the Subject
1	18ME E21	Power Plant Engineering	1	18IT 001	Object Oriented Programming using JAVA
2	18ME E22	Engineering Research Methodology	2	18PY 001	History of Science & Technology
3	18ME E23	Data Analytics	3	18EG 002	Gender Sensitization
4	18ME E24	Innovation and Intellectual Property Rights	4	18IT 003	Principles of Internet of Things
5	18PE E12	Supply Chain Management	5	18CS 009	Basics of Artificial Intelligence



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE MODEL CURRICULUM
B.E (Mechanical Engineering)

SEMESTER – VIII

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1		Open Elective – II	3	--	--	3	30	70	3
2		Open Elective – III	3	--	--	3	30	70	3
PRACTICALS									
3	18ME C28	Technical Seminar (On the latest trends and other than Project)	--	--	2	--	50	--	1
4	18ME C29	Project Part - 2	--	--	20	--	100	100	10
TOTAL			6	--	22	--	210	240	17

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation SEE – Semester End Examination

Open Elective – II (3/3)			Open Elective – III (3/3)		
S NO	Subj. Code	Name of the Subject	S NO	Subj. Code	Name of the Subject
1	18EC O01	Remote Sensing and GIS	1	18EG O01	Technical Writing Skills
2	18MT O01	Decision Theory	2	18BT O01	Basics of Biology
3	18EE O03	Energy Auditing	3	18CE O02	Disaster Mitigation and Management
4	18CS O04	Basics of Cyber Security	4	18EE O05	Waste Management
5	18EC O05	MEMS and its Applications	5	18EC O07	Systems Automation & Control



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

IN

ELECTRICAL & ELECTRONICS ENGINEERING

(For the batch admitted in 2020-21)



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(An Autonomous Institution)

Affiliated to Osmania University

Kokapet Village, Gandipet Mandal, Hyderabad- 500 075. Telangana

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ABOUT THE DEPARTMENT:

The EEE Department at CBIT operates with one eye on Excellence and the other one on the Future. This is because we know just how fast the world is changing. As such, our students are armed with not only with the traditional knowledge and wisdom in the field of electrical engineering, but also with an interdisciplinary perspective that helps them work in tandem with other specializations in the world of technology and science.

The department of EEE bestowed with Elite students, Eminent Staff and Efficacious Infrastructure is endeavouring the synergy with Research, Innovation and Education Eco system. In order to meet the target the department

- (i) heed its Alumni to transfer their expertise to their juniors; [**ALTEREGO**]
- (ii) takes the students to Industrial visits for a practical exposure; [**VIKASA**]
- (iii) conducts annual technical fest '**ELECTRET**' under 'SUDHEE' banner in order to create a platform to manifest technical skills and leadership qualities;
- (iv) arranges Guest Lectures by Industry experts to complement the class room Instruction;
- (v) organizes Conferences, Seminars & workshops to bring out the latent talent in the students;
- (vi) showcases the achievements of students and staff in order to boast their confidence levels.

As the Head of the Department, I have a vision to carve a niche in the Power and Electronics arena so that the department stands out and most of the students get motivated towards having start-ups of their own.

In order to achieve the vision, the set mission is to amplify the Industry- Institute Interaction in manifold. In this direction, the department entered into an MoU with Industries such as M/s EesaVyasa Technologies Private Limited ; Interleaved Multi disciplinary Research Centre; CARES-Renewable-Coimbatore; HIEE; In this regard, the department has also launched **VIKASA** (**V**Idyuth **K**Armagara **S**Ammelanam) to create an avenue for the students to get placements in the core sector and become self-reliant as well (Swayam Tejaswin Bhava).

My wish is that our department should be looked up to as a **ROLE MODEL – sculptor** and get International recognition in training Engineering students as **Industry-Ready Ethical Professional Engineers** of our nation. Though the existing qualified staff and well-equipped labs are assets to the department, a lot more is required to achieve the set vision of the department and college.

There is a dire need to coherently work with Premier Institutes and Industries.

Sincerity in implementing an effective **Teaching-Learning Process** blended with **Morals** is one of the top reasons for parents and student aspirants to opt for the EEE department of the prestigious CBIT.



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of II Semester of B.E. – Electrical & Electronics Engineering
as per AICTE Model Curriculum 2020-21

B.E. –ELECTRICAL & ELECTRONICS ENGINEERING

SEMESTER -II

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C06	Vector Calculus and Differential Equations	3	1	-	3	40	60	4
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C06	Electromagnetic Theory and Quantum Mechanics	3	-	-	3	40	60	3
4	20EE C01	Basic Electrical Engineering	3	-	-	3	40	60	3
PRACTICAL									
5	20EG C02	English lab	-	-	2	3	50	50	1
6	20PY C09	Electromagnetic Theory and Quantum Mechanics Lab	-	-	4	3	50	50	2
7	20EE C02	Basic Electrical Engineering Lab	-	-	2	3	50	50	1
8	20ME C01	CAD and Drafting	-	1	3	3	50	50	2.5
9	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	2	11	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



With effect from the Academic Year 2021-22

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
Scheme of Instructions of III Semester of B.E. – Electrical & Electronics Engineering
as per AICTE Model Curriculum 2021-22
B.E. (ELECTRICAL AND ELECTRONICS ENGINEERING)

SEMESTER-III

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20MTC07	Applied Mathematics	3	1	0	3	40	60	4
2	20 CS C06	Basic Data Structures	2	0	0	3	40	60	2
3	20 EE C03	Core- 1 Electrical Circuit Analysis	3	0	0	3	40	60	3
4	20 EE C04	Core- 2 Analog Electronic Circuits	3	1	0	3	40	60	4
5	20 EE C05	Core- 3 Electrical Measurements and Instrumentation	3	0	0	3	40	60	3
6	20 EE C06	Core- 4 Signals & System	3	0	0	3	40	60	3
7	20 CE M01	Environmental Science	2	0	0	2	----	50	NC
8	20 EE I01	MOOCs/Training/ Internship	2-3 weeks/90 hours				40	60	2
PRACTICALS									
9	20 EE C 07	Analog Electronic Circuits Lab	0	0	2	3	50	50	1
10	20 EE C08	Electrical Circuits and Measurements Lab	0	0	2	3	50	50	1
11	20 CS C07	Basic Data Structures Lab	0	0	2	3	50	50	1
Total			19	2	6	-	430	620	24

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



With effect from the Academic Year 2021-22

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
Scheme of Instructions of IV Semester of B.E. – Electrical & Electronics Engineering
as per AICTE Model Curriculum 2021-22
B.E. (ELECTRICAL AND ELECTRONICS ENGINEERING)

SEMESTER-IV

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20 EE C09	Core -5 Digital Electronics	3	0	0	3	40	60	3
2	20 EE C10	Core -6 Electrical Machines-1	3	0	0	3	40	60	3
3	20 EE C11	Core -7 Electromagnetic Fields	3	0	0	3	40	60	3
4	20 EE C12	Core -8 Power Electronics	3	0	0	3	40	60	3
5	20 EE C13	Core -9 Power systems I	3	0	0	3	40	60	3
6	20EGM02	Indian Traditional Knowledge	2	0	0	-	----	-	NC
7	20EGM03	Universal Human Values-II: Understanding Harmony	3	0	0	3	40	60	3
PRACTICALS									
8	20 EE C14	Digital Electronics Lab	0	0	2	3	50	50	1
9	20 EE C 15	Electrical Machines-1 Lab	0	0	2	3	50	50	1
10	20 EE C 16	Power Electronics Lab	0	0	2	3	50	50	1
Total			20	0	6	-	390	510	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

With effect from the academic year 2020-21



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
AICTE MODEL CURRICULUM
B.E. (ELECTRICAL AND ELECTRONICS ENGINEERING)

SEMESTER-V

SEMESTER V

Sl. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			
			Hours per week			Duration in Hours	Maximum Marks		Credits
							CIE	SEE	
THEORY									
1	18EEEC14	Electrical Machines-II	3	-	-	3	30	70	3
2	18EEEC15	Power Systems-II	3	-	-	3	30	70	3
3	18EEEC16	Power Electronics	3	-	-	3	30	70	3
4	18EEEXX	Core Elective -1	3	-	-	3	30	70	3
5	18EEEXX	Core Elective -2	3	-	-	3	30	70	3
6	18MBC01	Engineering Economics and Accountant	3	-	-	3	30	70	3
PRACTICALS									
7	18EEEC17	Electrical Machines-II Lab	-	-	2	2	15	35	1
8	18EEEC18	Power Systems-I Lab	-	-	2	2	15	35	1
9	18EEEC19	Power Electronics Lab	-	-	2	2	15	35	1
		Total	18	-	6	-	225	525	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

Course Code	Core Elective-1
18EEE01	Wind and Solar Energy
18EEE02	Optimization Techniques
18EEE03	Electrical Engineering Materials
18EEE04	Electronic Instrumentation

Course Code	Core Elective-2
18EEE05	Simulation Techniques in Electrical Engineering
18EEE06	Energy Conservation & Auditing
18EEE07	Industrial Electrical Systems
18EEE08	Electrical Estimation & Costing



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
AICTE MODEL CURRICULUM
B.E. (ELECTRICAL AND ELECTRONICS ENGINEERING)

SEMESTER-VI

Sl. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			
			Hours per week			Duration in Hours	Maximum Marks		Credits
			L	T	P		CIE	SEE	
THEORY									
1	18EEEC20	Control Systems	3	-	-	3	30	70	3
2	18EEEC21	Microprocessors and Microcontrollers	3	-	-	3	30	70	3
3	18EEEC22	Power Systems Operation and Control	3	-	-	3	30	70	3
4	18EEEXX	Core Elective-3	3	-	-	3	30	70	3
5	18EEEXX	Core Elective-4	3	-	-	3	30	70	3
6	18XXOYY	Open Elective-1	3	-	-	3	30	70	3
PRACTICALS									
7	18EEEC23	Control Systems Lab	-	-	2	2	15	35	1
8	18EEEC24	Microprocessors Lab	-	-	2	2	15	35	1
		Total	18	-	4	22	210	490	20

L: Lecture **T: Tutorial**
CIE - Continuous Internal Evaluation

P: Practical
SEE - Semester End Examination

Course Code	Core Elective-3
18EEEE09	Power Quality
18EEEE10	Advanced Power Converters
18EEEE11	Electrical Distribution Systems
18EEEE12	HVDC Transmission Systems

Course Code	Core Elective-4
18EEEE13	AI Techniques In Electrical Engineering
18EEEE14	Electric Hybrid Vehicles
18EEEE15	FACTS
18EEEE16	Special Electrical Machines

Course Code	Open Elective-1
18ECO06	Principles of Embedded Systems (PES)
18CSO07	Basics of Cyber Security (BCS)
18BTO01	Basics of Biology
18PYO01	History of Science and Technology



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
AICTE MODEL CURRICULUM
B.E. (ELECTRICAL AND ELECTRONICS ENGINEERING)

SEMESTER-VII

Sl. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			
			Hours per week			Duration in Hours	Maximum Marks		Credits
			L	T	P		CIE	SEE	
THEORY									
1	18EEEC25	Power System Protection	3	-	-	3	30	70	3
2	18EEEC26	Electrical Drives	3	-	-	3	30	70	3
3	18EEEC27	Signals & Systems	3	-	-	3	30	70	3
4	18EEEXX	Core Elective-5	3	-	-	3	30	70	3
5	18XXOYY	Open Elective-2	3	-	-	3	30	70	3
PRACTICALS									
6	18EEEC28	Power Systems-II Lab	-	-	3	3	25	35	1.5
7	18EEEC29	Electrical Drives Lab	-	-	3	3	25	35	1.5
8	18EEEC30	Project: Part-1	-	-	4	-	50		2
		Total	15	-	10	21	250	420	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

Course Code	Core Elective-5
18EEEE17	Power System Dynamics and Control
18EEEE18	Switch Mode Power Converters
18EEEE19	Electrical Machine Design
18EEEE20	High Voltage Engineering

Course Code	Open Elective-2
18MEO03	Research Methodologies
18MEO04	Entrepreneurship
18EGO01	Technical Writing Skills
18CSO04	Basics of Data Science using R
18CSO07	Basics of Cyber Security



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE MODEL CURRICULUM
B.E. (ELECTRICAL AND ELECTRONICS ENGINEERING)

SEMESTER-VIII

Sl. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			
			Hours per week			Duration In Hours	Maximum Marks		Credits
			L	T	P		CIE	SEE	
THEORY									
1.	18EEEXX	Core Elective-6	3	-	-	3	30	70	3
2.		Open Elective-3	3	-	-	3	30	70	3
PRACTICALS									
3.	18EEEC31	Technical Seminar	-	-	2	-	50	-	1
4.	18EEEC32	Project: Part-2	-	-	20	Viva voce	100	100	10
		Total	6		22		210	240	17

L: Lecture T: Tutorial
CIE - Continuous Internal Evaluation

P: Practical
SEE - Semester End Examination

Course Code	Core Elective-6
18EEE21	Advanced Electric Drives
18EEE22	Digital Signal Processing
18EEE23	Smart Grid
18EEE24	Digital Control System

Course Code	Open Elective-3
18MEO07	Intellectual Property Rights (IPR)
18CEO02	Disaster Mitigation and Management (DMM)
18ITO02	Python Programming
18EGO02	Gender Sensitization
18PY O01	History of Science and Technology



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

IN

ELECTRONICS & COMMUNICATION ENGINEERING

(For the batch admitted in 2020-21)



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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of I Semester of B.E. – Electronics & Communication Engineering
as per AICTE Model Curriculum 2020-21

B.E. - ELECTRONICS & COMMUNICATION ENGINEERING

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C05	Calculus	3	1	-	3	40	60	4
2	20CYC01	Chemistry	3	-	-	3	40	60	3
3	20CE C01	Engineering Mechanics-I	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20CYC02	Chemistry Lab	-	-	4	3	50	50	2
6	20CS C02	Programming for Problem Solving Lab	-	-	4	3	50	50	2
7	20ME C02	Workshop/ Manufacturing Practice	-	-	5	3	50	50	2.5
8	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	1	13	-	360	390	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of II Semester of B.E. – Electronics & Communication Engineering
as per AICTE Model Curriculum 2020-21

B.E. - ELECTRONICS & COMMUNICATION ENGINEERING

SEMESTER -II

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20MT C06	Vector Calculus and Differential Equations	3	1	-	3	40	60	4
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C06	Electromagnetic Theory and Quantum Mechanics	3	-	-	3	40	60	3
4	20EE C01	Basic Electrical Engineering	3	-	-	3	40	60	3
PRACTICAL									
5	20EG C02	English lab	-	-	2	3	50	50	1
6	20PY C09	Electromagnetic Theory and Quantum Mechanics Lab	-	-	4	3	50	50	2
7	20EE C02	Basic Electrical Engineering Lab	-	-	2	3	50	50	1
8	20ME C01	CAD and Drafting	-	1	3	3	50	50	2.5
9	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	2	11	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

AICTE Model Curriculum with effect from AY 2021-22

B.E (Electronics and Communication Engineering)

SEMESTER – III

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours Per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MTC07	Applied Mathematics	3	1	-	3	40	60	4
2	20CSC06	Basics of Data Structures	2	-	-	3	40	60	2
3	20ECC01	Electromagnetic Theory and Transmission Lines	3	-	-	3	40	60	3
4	20ECC02	Electronic Devices	3	-	-	3	40	60	3
5	20ECC03	Network Theory	3	-	-	3	40	60	3
6	20ECC04	Signals and Systems	3	-	-	3	40	60	3
7	20CEM01	Environmental Science	2	-	-	2	-	50	Non-Credit
PRACTICALS									
8	20CSC07	Basics of Data Structures Lab	-	-	2	3	50	50	1
9	20ECC05	Electronic Devices Lab	-	-	2	3	50	50	1
10	20ECC06	Electronic Workshop and Networks Lab	-	-	2	3	50	50	1
11	20ECI01	MOOCs/Training/Internship	3-4 Weeks/90 Hours				40	60	2
Total			19	01	06	29	430	620	21+2
Clock Hours Per Week: 26									

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

P: Practical/Project Seminar/Dissertation

SEE: Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

AICTE Model Curriculum with effect from AY 2021-22

B.E (Electronics and Communication Engineering)

SEMESTER – IV

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20ECC07	Analog Circuits	3	-	-	3	40	60	3
2	20ECC08	Analog Communication	3	-	-	3	40	60	3
3	20ECC09	Antennas and Wave Propagation	3	-	-	3	40	60	3
4	20ECC10	Control Systems	3	-	-	3	40	60	3
5	20ECC11	Digital Systems Design	3	-	-	3	40	60	3
6	20EGM03	Universal Human Values II: Understanding Harmony	2	1	-	3	50	50	3
7	20EGM01	Indian Constitution and Fundamental Principles	2	-	-	2	-	50	Non-Credit
8	20EGM02	Indian Traditional Knowledge	2	-	-	2	-	50	Non-Credit
PRACTICALS									
9	20ECC12	Analog Circuits Lab	-	-	2	3	50	50	1
10	20ECC13	Analog Communication Lab	-	-	2	3	50	50	1
11	20ECC14	Digital Systems Design Lab	-	-	2	3	50	50	1
Total			21	1	06	31	400	600	21
Clock Hours Per Week: 28									

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

P: Practical/Project Seminar/Dissertation

SEE: Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE Model Curriculum with effect from AY 2020-21
B.E (Electronics and Communication Engineering)

SEMESTER – V

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	18EC C15	Computer Architecture and Microprocessors	3	-	-	3	30	70	3
2	18EC C16	Digital Communication	3	-	-	3	30	70	3
3	18EC C17	Linear and Digital Integrated Circuits	3	-	-	3	30	70	3
4	18ME C09	Principles of Management	3	-	-	3	30	70	3
5		Program Elective-I	3	-	-	3	30	70	3
6		Open Elective-I	3	-	-	3	30	70	3
PRACTICALS									
7	18EC C18	Digital Communication Lab	-	-	2	2	15	35	1
8	18EC C19	Linear and Digital Integrated Circuits Lab	-	-	2	2	15	35	1
Total			18	-	04	-	210	490	20
Clock Hours Per Week: 22									

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

P: Practical/Project Seminar/Dissertation

SEE: Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE Model Curriculum with effect from AY 2020-21
B.E (Electronics and Communication Engineering)

List of Courses in Program Elective-I		List of Courses in Open Elective-I	
Course code	Title of the Course	Course code	Title of the Course
18ECE01	Electronic Measurements and Instrumentation	18BT 001	Basics of Biology
18EC E02	Industrial Electronics	18CS 005	Fundamentals of Virtual Reality
18EC E03	Optical Communication	18ME 007	Intellectual Property Rights
18EC E04	Telecommunication Switching Systems	18IT 001	Object Oriented Programming Using Java
		18MT 004	Quantum Computing



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

AICTE Model Curriculum with effect from AY 2020-21

B.E (Electronics and Communication Engineering)

SEMESTER – VI

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	18ECC20	Digital Signal Processing	3	-	-	3	30	70	3
2	18ECC21	Microcontrollers	3	-	-	3	30	70	3
3	18ECC22	Microwave and Radar Engineering	3	-	-	3	30	70	3
4		Program Elective-II	3	-	-	3	30	70	3
5		Program Elective-III	3	-	-	3	30	70	3
6	18MBC01	Engineering Economics and Accountancy	3	-	-	3	30	70	3
PRACTICALS									
7	18ECC23	Digital Signal Processing Lab	-	-	2	2	15	35	1
8	18ECC24	Microcontrollers Lab	-	-	2	2	15	35	1
9	18ECC25	Microwave Engineering Lab	-	-	2	2	15	35	1
Total			18	-	06	-	225	525	21
Clock Hours Per Week: 24									

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

P: Practical/Project Seminar/Dissertation

SEE: Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE Model Curriculum with effect from AY 2020-21
B.E (Electronics and Communication Engineering)

List of Courses in Program Elective-II		List of Courses in Program Elective-III	
Course Code	Title of the Course	Course Code	Title of the Course
18EC E05	Analog and Mixed Signal Design	18EC E10	Coding Theory and Techniques
18EC E06	Mobile Cellular Communication	18EC E11	CPLD and FPGA Architectures
18EC E07	Principles and Applications of AI	18EC E12	Data Analytics for signal processing
18EC E08	Principles of Optimization Techniques	18EC E13	Satellite Communication
18EC E09	System Automation and Control Engineering	18EC E14	Spread Spectrum Communication



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

AICTE Model Curriculum with effect from AY 2021-22

B.E (Electronics and Communication Engineering)

SEMESTER – VII

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	18ECC26	Computer Networks	3	-	-	3	30	70	3
2	18ECC27	VLSI Design	3	-	-	3	30	70	3
3		Program Elective-IV	3	-	-	3	30	70	3
4		Program Elective-V	3	-	-	3	30	70	3
5		Open Elective-II	3	-	-	3	30	70	3
PRACTICALS									
6	18ECC28	Computer Networks Lab	-	-	2	2	15	35	1
7	18ECC29	Electronic Design and Automation Lab	-	-	2	2	15	35	1
8	18ECC30	Electronics Measurement and Simulation Lab	-	-	2	2	15	35	1
9	18ECC31	Project: Part-1	-	-	4	-	50	-	2
Total			15	-	10	-	245	455	20
Clock Hours Per Week: 25									

L: Lecture**D: Drawing****CIE: Continuous Internal Evaluation****T: Tutorial****P: Practical/Project Seminar/Dissertation****SEE: Semester End Examination**



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

AICTE Model Curriculum with effect from AY 2021-22

B.E (Electronics and Communication Engineering)

List of Courses in Program Elective-IV		List of Courses in Program Elective-V		List of Courses in Open Elective-II	
Course Code	Title of the Course	Course Code	Title of the Course	Course Code	Title of the Course
18ECE15	Cryptography and Blockchain Technology	18ECE20	CMOS RF IC Design	18CE O02	Disaster Mitigation and Management
18ECE16	DSP Processors and Architectures	18ECE21	Digital Image Processing	18ME O04	Entrepreneurship
18ECE17	Principles of Computational Electromagnetics	18ECE22	Embedded Systems	18CS O06	Fundamentals of DBMS
18ECE18	Semiconductor Memory Design and Testing	18ECE23	Software Defined Radio	18IT O02	Python Programming
18EC E19	Speech Processing	18EC E24	5G Communications	18EG O01	Technical Writing Skills



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE Model Curriculum with effect from AY 2021-22
B.E (Electronics and Communication Engineering)

SEMESTER – VIII

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1		Program Elective-VI	3	-	-	3	30	70	3
2		Open Elective-III	3	-	-	3	30	70	3
PRACTICALS									
3	18EC C32	Technical Seminar	-	-	3	-	50	-	1
4	18EC C33	Project: Part-2	-	-	10	Viva-Voce	100	100	10
		Total	06	-	13	-	210	240	17
Clock Hours Per Week: 28									

List of Courses in Program Elective-VI		List of Courses in Open Elective-III	
Course Code	Title of the Course	Course Code	Title of the Course
18EC E25	IoT and its Applications	18CS O07	Basics of Cyber Security
18EC E26	Principles of GNSS	18EG O02	Gender Sensitization
18EC E27	Principles of Wireless Sensor Networks	18PY O01	History of Science and Technology
18EC E28	Real Time Operating Systems	18CS O10	Machine Learning using Python
		18ME O01	Robotics

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

P: Practical/Project Seminar/Dissertation

SEE: Semester End Examination



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

IN

COMPUTER SCIENCE & ENGINEERING

(For the batch admitted in 2020-21)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of I Semester of B.E. – Computer Science & Engineering
as per AICTE Model Curriculum 2020-21

B.E. - COMPUTER SCIENCE & ENGINEERING

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C01	Linear Algebra & Calculus	3	-	-	3	40	60	3
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C01	Optics and Semiconductor Physics	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C02	Linear Algebra & Calculus Lab	-	-	2	3	50	50	1
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20PY C03	Optics and Semiconductor Physics Lab	-	-	4	3	50	50	2
8	20CS C02	Programming for problem Solving Lab	-	-	4	3	50	50	2
9	20ME C01	CAD AND DRAFTING	-	1	3	3	50	50	2.5
10	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	1	15	-	460	490	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of II Semester of B.E. – Computer Science & Engineering
as per AICTE Model Curriculum 2020-21

B.E. - COMPUTER SCIENCE AND ENGINEERING

SEMESTER -II

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C03	Differential Equations & Transform Theory	3	-	-	3	40	60	3
2	20CYC01	Chemistry	3	-	-	3	40	60	3
3	20CS C05	Industry 4.0	3	-	-	3	40	60	3
4	20CS C03	Object Oriented Programming	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C04	Differential Equations & Transform Theory Lab	-	-	2	3	50	50	1
6	20CYC02	Chemistry Lab	-	-	4	3	50	50	2
7	20CSC04	Object Oriented Programming Lab	-	-	2	3	50	50	1
8	20ME C02	Workshop / Manufacturing Practice			5	3	50	50	2.5
9	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	-	13	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

SCHEME OF INSTRUCTION AND EXAMINATION Model Curriculum (R-20) with effect from AY 2021-22

B.E. (Computer Science and Engineering)

SEMESTER -III

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
L	T	P/D							
THEORY									
1	20EEC01	Basic Electrical Engineering	3	-	-	3	40	60	3
2	20ECC35	Basic Electronics	3	-	-	3	40	60	3
3	20CSC08	Data Structures	3	-	-	3	40	60	3
4	20CSC09	Discrete Mathematics	3	1	-	3	40	60	4
5	20CSC10	Digital Logic Design	3	-	-	3	40	60	3
6	20EGM02	Indian Traditional Knowledge	2	-	-	2	-	50	No Credit
PRACTICAL									
7	20EEC02	Basic Electrical Engineering Lab	-	-	2	3	50	50	1
8	20ECC36	Basic Electronics Lab	-	-	2	3	50	50	1
9	20CSC11	Data Structures Lab	-	-	4	3	50	50	2
10	20CSI01	MOOCs / Training / Internship	-	-	4	-	-	-	2
11	20ACT	Activity Points	-	-	-	-	-	-	-
		TOTAL	17	1	12	-	350	500	22

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
SCHEME OF INSTRUCTION AND EXAMINATION
Model Curriculum (R-20) with effect from AY 2021-22

B.E. (Computer Science and Engineering)

SEMESTER –IV

SEMESTER - IV

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20MTC13	Mathematical Foundation for Data Science & Security	3	-	-	3	40	60	3
2	20CSC12	Design and Analysis of Algorithms	3	-	-	3	40	60	3
3	20CSC13	Computer Architecture and Microprocessor	3	-	-	3	40	60	3
4	20CSC14	Data Base Management Systems	3	-	-	3	40	60	3
5	20CSC15	Internet & Web Technologies	2	-	-	3	40	60	2
6	20MBC01	Engineering Economics & Accountancy	3	-	-	3	40	60	3
PRACTICAL									
7	20MTC14	Mathematical Foundation for Data Science & Security Lab	-	-	2	3	50	50	1
8	20CSC16	Design and Analysis of Algorithms Lab	-	-	2	3	50	50	1
9	20CSC17	Data Base Management Systems Lab	-	-	2	3	50	50	1
10	20CSC18	Internet & Web Technologies Lab	-	-	4	3	50	50	2
11	20ACT	Activity Points	-	-	-	-	-	-	-
		TOTAL	17	-	10	-	440	560	22

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**SCHEME OF INSTRUCTION AND EXAMINATION
V-Semester of B.E, Model Curriculum
COMPUTER SCIENCE AND ENGINEERING**

SEMESTER-V

Sl.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	18CSC17	Formal Language and Automata Theory	3	0	0	3	30	70	3
2	18CSC18	Operating System	3	0	0	3	30	70	3
3	18CSC19	Design and Analysis of Algorithms	3	0	0	3	30	70	3
4	18CSE XX	Professional Elective-I	3	0	0	3	30	70	3
5	18MTO XX	Open Elective-I	3	0	0	3	30	70	3
PRACTICALS									
6	18CSC20	Operating System Lab	0	0	3	3	25	50	1.5
7	18CSC21	Design and Analysis of Algorithms Lab	0	0	3	3	25	50	1.5
8	18CSE XX	Professional Elective-I Lab	0	0	3	3	25	50	1.5
9	18CSC22	Mini Project	0	0	3	-	50	-	1
TOTAL			15	0	12		275	500	20.5

PROFESSIONAL ELECTIVE-I			OPEN ELECTIVE-I	
Course Code	Title of the Course		Course Code	Title of the Course
18CSE01	Web and Internet Technologies		18MTO 01	Decision Theory
18CSE02	GUI Programming		18MTO 02	Graph Theory
18CSE03	Image Processing		18MTO 03	Number Theory and Cryptography
18CSE04	Mobile Application Development		18MTO 04	Quantum Computing

PROFESSIONAL ELECTIVE-I LAB	
Course Code	Title of the Course
18CSE05	Web and Internet Technologies Lab
18CSE06	GUI Programming Lab
18CSE07	Image Processing Lab
18CSE08	Mobile Application Development Lab

L: Lecture
CIE - Continuous Internal Evaluation

T: Tutorial

D: Drawing
SEE - Semester End Examination

P: Practical

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
SCHEME OF INSTRUCTION AND EXAMINATION
B.E. COMPUTER SCIENCE AND ENGINEERING

SEMESTER –VI

S. No	Course Code	Title of the Course	Scheme of Instruction			Duration of SEE in Hours	Scheme of Examination		
			Hours per Week				Maximum Marks		Credits
			L	T	P/D		CIE	SEE	
THEORY									
1	18CSC23	Data Communication and Computer Networks	3	0	0	3	30	70	3
2	18CSC24	Software Engineering	3	0	0	3	30	70	3
3	18CSC25	Artificial Intelligence	3	0	0	3	30	70	3
4	18CSE XX	Professional Elective-II	3	0	0	3	30	70	3
5	18CSE XX	Professional Elective-III	3	0	0	3	30	70	3
6	18MBC 01	Engineering Economics and Accountancy	3	0	0	3	30	70	3
7	18EEM 01	Indian Traditional Knowledge	2	0	0	2	-	50	0
PRACTICAL									
8	18CSC26	Data Communication and Computer Networks Lab	0	0	3	3	25	50	1.5
9	18CSC27	Case Study	0	0	2	2	50	-	1
		TOTAL	20	00	05		255	520	20.5

PROFESSIONAL ELECTIVE-II	
Course Code	Title of the Course
18CSE09	Internet of Things
18CSE10	Parallel and Distributed Algorithms
18CSE11	Cloud Computing
18CSE12	Computer Vision

PROFESSIONAL ELECTIVE-III	
Course Code	Title of the Course
18CSE13	Soft Computing
18CSE14	Network and System Administration
18CSE15	Mobile Computing
18CSE16	Free and Open-Source Software

L: Lecture T: Tutorial
 CIE - Continuous Internal Evaluation

D: Drawing P: Practical
 SEE - Semester End Examination

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
SCHEME OF INSTRUCTION AND EXAMINATION
VII-Semester of B.E Model Curriculum
COMPUTER SCIENCE AND ENGINEERING

SEMESTER-VII

Sl.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	18BTO01	Basics of Biology	3	0	0	3	30	70	3
2	18CSC28	Compiler Design	3	0	0	3	30	70	3
3	18CSE XX	Professional Elective-IV	3	0	0	3	30	70	3
4	18CSE XX	Professional Elective-V	3	0	0	3	30	70	3
5	18XX OXX	Open Elective-II	3	0	0	3	30	70	3
PRACTICALS									
7	18CSC29	Compiler Design Lab	0	0	3	3	25	50	1.5
8		Professional Elective-IV Lab	0	0	3	3	25	50	1.5
9	18CSC30	Project : PART-1	0	0	4	-	50	-	2
TOTAL			15	0	10		250	450	20

PROFESSIONAL ELECTIVE-IV	
Course Code	Title of the Course
18CSE17	Data Science and Big Data Analytics
18CSE18	Machine Learning
18CSE19	Virtual Reality
18CSE20	Cyber Security

PROFESSIONAL ELECTIVE-V	
Course Code	Title of the Course
18CSE21	Software defined Networks
18CSE22	Human Computer Interaction
18CSE23	Neural Networks and Deep Learning
18CSE24	Devops
18CSE25	Nature Inspired Algorithms

OPEN ELECTIVE-II	
Course Code	Title of the Course
18ECO 01	Remote Sensing and GIS
18ECO 03	Design of Fault Tolerant Systems
18ECO 04	Basics of DSP
18CEO 02	Disaster Mitigation and Management
18EGO 01	Technical Writing Skills

PROFESSIONAL ELECTIVE-IV LAB	
Course Code	Title of the Course
18CSE26	Data Science and Big data Analytics Lab
18CSE27	Machine Learning Lab
18CSE28	Virtual Reality Lab
18CSE29	Cyber Security Lab

L: Lecture T: Tutorial
 CIE - Continuous Internal Evaluation

D: Drawing P: Practical
 SEE - Semester End Examination

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
SCHEME OF INSTRUCTION AND EXAMINATION
VIII-Semester of B.E Model Curriculum
COMPUTER SCIENCE AND ENGINEERING

SEMESTER-VIII

Sl.No	Syllabus Ref. No	SUBJECT	Scheme of Instruction			Scheme of Examination			Credits
			Periods per Week			Duration Credits of SEE in Hours	Maximum Marks		
			L	T	P/ D		CIE	SEE	
THEORY									
1	18CSE 30/31 /32/33	Professional Elective-VI	3	0	0	3	30	70	3
2	18XX O XX	Open Elective-III	3	0	0	3	30	70	3
PRACTICALS									
3	18CSC31	Technical Seminar	0	0	3	-	50	-	1
4	18CSC32	Project : PART-2	0	0	20	-	100	100	10
		TOTAL	6	0	23		210	240	17

PROFESSIONAL ELECTIVE-VI		OPEN ELECTIVE-III	
Course Code	Title of the Course	Course Code	Title of the Course
18CSE30	Bioinformatics	18PYO01	History of Science and Technology
18CSE31	Speech and Natural Language Processing	18MEO01	Robotics
18CSE32	Social Networking and its Impact	18MEO03	Research Methodologies
18CSE33	Blockchain Technology	18MEO04	Entrepreneurship
		18MEO12	3D Printing

L: Lecture T: Tutorial
 CIE - Continuous Internal Evaluation

D: Drawing P: Practical
 SEE - Semester End Examination



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

IN

**CSE - ARTIFICIAL INTELLIGENCE AND MACHINE
LEARNING**

(For the batch admitted in 2020-21)



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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of I Semester of B.E. – CSE (Artificial Intelligence and Machine Learning) as per AICTE Model Curriculum 2020-21

DEPARTMENT OF CSE (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C01	Linear Algebra & Calculus	3	-	-	3	40	60	3
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C01	Optics and Semiconductor Physics	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C02	Linear Algebra & Calculus Lab	-	-	2	3	50	50	1
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20PY C03	Optics and Semiconductor Physics Lab	-	-	4	3	50	50	2
8	20CS C02	Programming for problem Solving Lab	-	-	4	3	50	50	2
9	20ME C01	CAD AND DRAFTING	-	1	3	3	50	50	2.5
10	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	1	15	-	460	490	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of II Semester of B.E. – CSE (Artificial Intelligence and Machine Learning) as per AICTE Model Curriculum 2020-21

DEPARTMENT OF CSE (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)

SEMESTER -II

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C03	Differential Equations & Transform Theory	3	-	-	3	40	60	3
2	20CY C01	Chemistry	3	-	-	3	40	60	3
3	20CS C05	Industry 4.0	3	-	-	3	40	60	3
4	20CS C03	Object Oriented Programming	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C04	Differential Equations & Transform Theory Lab	-	-	2	3	50	50	1
6	20CY C02	Chemistry Lab	-	-	4	3	50	50	2
7	20CS C04	Object Oriented Programming Lab	-	-	2	3	50	50	1
8	20ME C02	Workshop / Manufacturing Practice			5	3	50	50	2.5
9	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	-	13	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of III Semester of B.E.-Artificial Intelligence & Machine Learning as per AICTE Model Curriculum 2022-23

SEMESTER – III

S. No	CourseCode	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20AMC01	Introduction to Algorithms & Data Structures	3	0	0	3	40	60	3
2	20AMC02	Discrete Mathematical Structures	2	1	0	3	40	60	3
3	20AMC03	Group Theory and Applications	2	1	0	3	40	60	3
4	20AMC04	Digital Logic Design	2	1	0	3	40	60	3
5	20EEC01 (R20)/ 20BTO05 (R22)	Basic Electrical Engineering / Cognitive Neuroscience	2	1	0	3	40	60	3
6	20EGM03	Universal Human Values-II: Understanding Harmony	2	1	0	3	40	60	3
PRACTICAL									
7	20AMC05	Algorithms Lab-1	0	0	3	3	50	50	1.5
8	20AMC06	Introduction to Inference and Interpretation	0	1	3	3	50	50	2.5
9	20AMI01	Internship – I				3	50	50	2
TOTAL			13	6	6	-	390	510	24

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of IV Semester of B.E.-Artificial Intelligence & Machine Learning as per AICTE Model Curriculum 2022-23

SEMESTER – IV

S. No	CourseCode	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Durationof SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20AMC07	Modern Computer System Architecture	3	0	0	3	40	60	3
2	20AMC08	Database Systems	2	1	0	3	40	60	3
3	20AMC09	Linear Regression Modeling for Data Analysis	2	1	0	3	40	60	3
4	21MBC03	Strategic Entrepreneurship	2	1	0	3	40	60	3
5	20EEC38	Signal Processing	2	1	0	3	40	60	3
6	20MEC39	Robotics and Automation	2	1	0	3	40	60	3
PRACTICAL									
7	20MEC40	Robotics and Automation Lab	0	0	3	3	50	50	1.5
8	20AMC10	Database Systems Lab	0	0	3	3	50	50	1.5
9	20AMC11	Building Secure And Reliable Systems	0	2	2	3	50	50	3
TOTAL			13	7	8	-	390	510	24

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

FOR

**CSE - IOT & CYBER SECURITY INCLUDING
BLOCK CHAIN TECHNOLOGY**

(For the batch admitted in 2020-21)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of I Semester of B.E. –CSE (IOT & Cyber Security including
Block Chain Technology)
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CSE (IOT & CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY)

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20MT C01	Linear Algebra & Calculus	3	-	-	3	40	60	3
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C01	Optics and Semiconductor Physics	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C02	Linear Algebra & Calculus Lab	-	-	2	3	50	50	1
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20PY C03	Optics and Semiconductor Physics Lab	-	-	4	3	50	50	2
8	20CS C02	Programming for problem Solving Lab	-	-	4	3	50	50	2
9	20ME C01	CAD AND DRAFTING	-	1	3	3	50	50	2.5
10	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	1	15	-	460	490	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of II Semester of B.E. –CSE (IOT & Cyber Security including
Block Chain Technology)
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CSE (IOT & CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY)

SEMESTER -II

SEMESTER -II									
S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C03	Differential Equations & Transform Theory	3	-	-	3	40	60	3
2	20CYC01	Chemistry	3	-	-	3	40	60	3
3	20CS C05	Industry 4.0	3	-	-	3	40	60	3
4	20CS C03	Object Oriented Programming	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C04	Differential Equations & Transform Theory Lab	-	-	2	3	50	50	1
6	20CY C02	Chemistry Lab	-	-	4	3	50	50	2
7	20CS C04	Object Oriented Programming Lab	-	-	2	3	50	50	1
8	20ME C02	Workshop / Manufacturing Practice			5	3	50	50	2.5
9	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	-	13	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
SCHEME OF INSTRUCTION AND EXAMINATION
Model Curriculum(R-20) 2021-22

B.E. (CSE - IOT & Cyber Security including Blockchain Technology)

SEMESTER -III

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
L	T	P/D							
THEORY									
1	20EEC01	Basic Electrical Engineering	3	-	-	3	40	60	3
2	20ECC35	Basic Electronics	3	-	-	3	40	60	3
3	20CSC08	Data Structures	3	-	-	3	40	60	3
4	20CSC09	Discrete Mathematics	3	1	-	3	40	60	4
5	20CSC10	Digital Logic Design	3	-	-	3	40	60	3
6	20CIC01	Fundamentals of Cyber Security and Tools	2	-	-	3	40	60	2
PRACTICAL									
7	20EEC02	Basic Electrical Engineering Lab	-	-	2	3	50	50	1
8	20CSC11	Data Structures Lab	-	-	4	3	50	50	2
9	20CIC02	Fundamentals of Cyber Security and Tools Lab	-	-	2	3	50	50	1
10	20CII01	MOOCs / Training / Internship	0	0	4	-	-	-	2
11	20ACT	Activity Points	-	-	-	-	-	-	-
		TOTAL	17	1	12	-	390	510	24

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



B.E. (CSE - IOT & Cyber Security including Blockchain Technology)

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MTC13	Mathematical Foundation for Data Science & Security	3	-	-	3	40	60	3
2	20CSC13	Computer Architecture and Microprocessor	3	-	-	3	40	60	3
3	20CSC14	Data Base Management Systems	3	-	-	3	40	60	3
4	20CSC15	Internet & Web Technologies	2	-	-	3	40	60	2
5	20CSC36	Introduction to AI Tools, Techniques and Applications	1	1	-	3	40	60	2
6	20MBC01	Engineering Economics & Accountancy	3	-	-	3	40	60	3
PRACTICAL									
7	20MTC14	Mathematical Foundation for Data Science & Security Lab	-	-	2	3	50	50	1
8	20CSC17	Data Base Management Systems Lab	-	-	2	3	50	50	1
9	20CSC18	Internet & Web Technologies Lab	-	-	4	3	50	50	2
10	20CSC37	Introduction to AI Tools, Techniques and Applications Lab	-	-	2	3	50	50	1
11	20ACT	Activity Points	-	-	-	-	-	-	-
		TOTAL	15	1	10	-	440	560	21

P: Practical

SEE - Semester End Examination



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

FOR

**CSE - IOT & CYBER SECURITY INCLUDING
BLOCK CHAIN TECHNOLOGY**

(For the batch admitted in 2020-21)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

Affiliated to Osmania University

Kokapet Village, Gandipet Mandal, Hyderabad- 500 075. Telangana

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of I Semester of B.E. –CSE (IOT & Cyber Security including
Block Chain Technology)
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CSE (IOT & CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY)

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C01	Linear Algebra & Calculus	3	-	-	3	40	60	3
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C01	Optics and Semiconductor Physics	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C02	Linear Algebra & Calculus Lab	-	-	2	3	50	50	1
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20PY C03	Optics and Semiconductor Physics Lab	-	-	4	3	50	50	2
8	20CS C02	Programming for problem Solving Lab	-	-	4	3	50	50	2
9	20ME C01	CAD AND DRAFTING	-	1	3	3	50	50	2.5
10	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	1	15	-	460	490	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of II Semester of B.E. –CSE (IOT & Cyber Security including
Block Chain Technology)
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CSE (IOT & CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY)

SEMESTER -II

SEMESTER -II									
S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C03	Differential Equations & Transform Theory	3	-	-	3	40	60	3
2	20CYC01	Chemistry	3	-	-	3	40	60	3
3	20CS C05	Industry 4.0	3	-	-	3	40	60	3
4	20CS C03	Object Oriented Programming	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C04	Differential Equations & Transform Theory Lab	-	-	2	3	50	50	1
6	20CY C02	Chemistry Lab	-	-	4	3	50	50	2
7	20CS C04	Object Oriented Programming Lab	-	-	2	3	50	50	1
8	20ME C02	Workshop / Manufacturing Practice			5	3	50	50	2.5
9	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	-	13	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



**SCHEME OF INSTRUCTION AND SYLLABI (R-20)
OF
B.E. III & IV SEMESTERS
IN
ARTIFICIAL INTELLIGENCE
& MACHINE LEARNING**



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of III Semester of B.E.-Artificial Intelligence & Machine Learning as per AICTE Model Curriculum 2022-23

SEMESTER – III

S. No	CourseCode	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20AMC01	Introduction to Algorithms & Data Structures	3	0	0	3	40	60	3
2	20AMC02	Discrete Mathematical Structures	2	1	0	3	40	60	3
3	20AMC03	Group Theory and Applications	2	1	0	3	40	60	3
4	20AMC04	Digital Logic Design	2	1	0	3	40	60	3
5	20EEC01 (R20)/ 20BTO05 (R22)	Basic Electrical Engineering / Cognitive Neuroscience	2	1	0	3	40	60	3
6	20EGM03	Universal Human Values-II: Understanding Harmony	2	1	0	3	40	60	3
PRACTICAL									
7	20AMC05	Algorithms Lab-1	0	0	3	3	50	50	1.5
8	20AMC06	Introduction to Inference and Interpretation	0	1	3	3	50	50	2.5
9	20AMI01	Internship – I				3	50	50	2
TOTAL			13	6	6	-	390	510	24

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of IV Semester of B.E.-Artificial Intelligence & Machine Learning as per AICTE Model Curriculum 2022-23

SEMESTER – IV

S. No	CourseCode	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Durationof SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20AMC07	Modern Computer System Architecture	3	0	0	3	40	60	3
2	20AMC08	Database Systems	2	1	0	3	40	60	3
3	20AMC09	Linear Regression Modeling for Data Analysis	2	1	0	3	40	60	3
4	21MBC03	Strategic Entrepreneurship	2	1	0	3	40	60	3
5	20EEC38	Signal Processing	2	1	0	3	40	60	3
6	20MEC39	Robotics and Automation	2	1	0	3	40	60	3
PRACTICAL									
7	20MEC40	Robotics and Automation	0	0	3	3	50	50	1.5
8	20AMC10	Database Systems Lab	0	0	3	3	50	50	1.5
9	20AMC11	Building Large, Reliable Software Systems	0	2	2	3	50	50	3
TOTAL			13	7	8	-	390	510	24

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

IN

INFORMATION TECHNOLOGY

(For the batch admitted in 2020-21)



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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of I Semester of B.E. – Information Technology
as per AICTE Model Curriculum 2020-21

B.E. –INFORMATION TECHNOLOGY

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C01	Linear Algebra & Calculus	3	-	-	3	40	60	3
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C01	Optics and Semiconductor Physics	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C02	Linear Algebra & Calculus Lab	-	-	2	3	50	50	1
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20PY C03	Optics and Semiconductor Physics Lab	-	-	4	3	50	50	2
8	20CS C02	Programming for problem Solving Lab	-	-	4	3	50	50	2
9	20ME C01	CAD and Drafting	-	1	3	3	50	50	2.5
10	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	1	15	-	460	490	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of II Semester of B.E. – Information Technology
as per AICTE Model Curriculum 2020-21

B.E. –INFORMATION TECHNOLOGY

SEMESTER -II

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20MT C03	Differential Equations & Transform Theory	3	-	-	3	40	60	3
2	20CY C01	Chemistry	3	-	-	3	40	60	3
3	20IT C01	Data Structures and Algorithms	3	-	-	3	40	60	3
4	20IT C02	Object Oriented Programming using Python	2	-	-	3	40	60	2
PRACTICAL									
5	20MT C04	Differential Equations & Transform Theory Lab	-	-	2	3	50	50	1
6	20CYC02	Chemistry Lab	-	-	4	3	50	50	2
7	20IT C03	Data Structures and Algorithms Lab	-	-	2	3	50	50	1
8	20IT C04	Object Oriented Programming using Python Lab	-	-	2	3	50	50	1
9	20ME C02	Workshop / Manufacturing Practice			5	3	50	50	2.5
10	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			11	0	15	-	460	490	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

IT Department
R-20 BE (IT)
Scheme & Syllabus of
III-IV Semesters



**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
(AUTONOMOUS)**

**Scheme of Instruction of III Semester of B.E. – Information Technology
as per AICTE Model Curriculum w.e.f: 2021-22**

B.E. –INFORMATION TECHNOLOGY

SEMESTER-III

SEMIESTER III

S. No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1	20ECC34	DC Circuits, Sensors and Transducers	3	-	3	40	60	3
2	20ITC05	Digital Logic and Computer Architecture	3	-	3	40	60	3
3	20ITC06	Discrete Mathematics and Applications	3	-	3	40	60	3
4	20ITC07	Java Programming & Enterprise Frameworks	3	-	3	40	60	3
5	20ITC08	Database Management Systems	3	-	3	40	60	3
6	20EGM01	Indian Constitution and Fundamental Principles	2	-	2	-	50	Non-Credit
7	20EGM02	Indian Traditional Knowledge	2	-	2	-	50	Non-Credit
PRACTICAL								
8	20ITC09	Java Programming & Enterprise Frameworks Lab	-	2	3	50	50	1
9	20ITC10	DBMS Lab	-	2	3	50	50	1
10	20ITC11	IT Workshop	-	2	-	50	-	1
11	20ITC12	Mini Project-1	-	2	-	50	-	1
12	20ITI01	MOOCs/Training/Internship	2-3 weeks/90 hours					2
TOTAL			19	8		400	500	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instruction of IV Semester of B.E. – Information Technology
as per AICTE Model Curriculum, w.e.f: 2021-22**

B.E. – INFORMATION TECHNOLOGY

SEMESTER-IV

S.No	Course code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits L/T
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1	20MTC12	Probability and Queueing Theory	3/1	-	3	40	60	4
2	20ITC13	Software Engineering	3	-	3	40	60	3
3	20ITC14	Automata Theory and Compiler Design	3/1	-	3	40	60	4
4	20ITC15	Design and Analysis of Algorithms	3	-	3	40	60	3
5		Professional Elective – I	3	-	3	40	60	3
6	20MBC01	Engineering Economics & Accountancy	3	-	3	40	60	3
7	20CEM01	Environmental Science	2	-	2	-	50	NC
PRACTICALS								
8	20ITC16	Software Engineering Lab	-	2	3	50	50	1
9	20ITC17	Design and Analysis of Algorithms Lab	-	2	3	50	50	1
10	20ADC03	Artificial Intelligence & Machine Learning Tools, Techniques and Applications	-	2	-	50	-	1
11	20ITC18	Mini Project – II	-	2	-	50	-	1
TOTAL			20/2	8		440	510	24

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

AICTE Model Curriculum (with effect from 2020-21)

B.E. (Information Technology)

SEMESTER– V

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1	18IT C15	Operating Systems	3	-	3	30	70	3
2	18IT C16	Theory of Automata	3	-	3	30	70	3
3	18IT C17	Computer Networks	3	-	3	30	70	3
4	18IT C18	Software Engineering	3	-	3	30	70	3
5		Core Elective - 1	3	-	3	30	70	3
6		Core Elective - 2	3	-	3	30	70	3
PRACTICAL								
7	18IT C19	Operating Systems and Computer Networks Lab	-	2	2	15	35	1
8	18IT C20	Software Engineering Lab	-	2	2	15	35	1
9	18IT C21	Mini Project - III	-	2	-	50	-	1
TOTAL			18	6	-	260	490	21

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE-Continuous Internal Evaluation

SEE-Semester End Examination

Core Elective-1			Core Elective-2		
S.No.	Subject Code	Subject Name	S.No.	Subject Code	Subject Name
1.	18IT E01	Data Warehousing and Data Mining	1	18IT E05	Predictive Analytics with 'R'
2.	18IT E02	Computer Graphics	2	18IT E06	Web Technologies
3.	18IT E03	Principles of Programming Languages	3	18IT E07	Information Retrieval Systems
4.	18IT E04	UNIX and Shell Programming	4	18IT E08	Compiler Design



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

AICTE Model Curriculum (with effect from 2020-21)

B.E. (Information Technology)

SEMESTER– VI

SEMESTER VI								
S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1	18IT C22	Artificial Intelligence	3	-	3	30	70	3
2	18IT C23	Information Security	2	-	2	20	50	2
3		Core Elective – 3	3	-	3	30	70	3
4		Core Elective – 4	3	-	3	30	70	3
5	18MB C01	Engineering Economics and Accountancy	3	-	3	30	70	3
6		Open Elective - 1	3	-	3	30	70	3
7	18EE M01	Indian Traditional Knowledge	2	-	2	-	50	Non - Credit
7	18IT C24	Artificial Intelligence Lab	-	2	2	15	35	1
8	18IT C25	Information Security Lab	-	2	2	15	35	1
9	18IT C26	Mini Project - IV	-	2	-	50	-	1
		TOTAL	19	6	-	250	520	20

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE-Continuous Internal Evaluation

SEE-Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

AICTE Model Curriculum (with effect from 2021-22)

B.E. (Information Technology)

SEMESTER– VII

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1	18IT C27	Big Data Analytics	3	-	3	30	70	3
2	18IT C28	Embedded Systems	3	-	3	30	70	3
3	18IT C29	Internet of Things	3	-	3	30	70	3
4	18IT C30	Distributed Systems	3	-	3	30	70	3
5		Core Elective - 5	3	-	3	30	70	3
PRACTICAL								
6	18IT C31	Big Data Analytics Lab	-	2	2	15	35	1
7	18IT C32	Embedded Systems and IoT Lab	-	2	2	15	35	1
8	18IT C33	Distributed Systems Lab	-	2	2	15	35	1
9	18IT C34	Project Part - 1	-	4	-	50	-	2
		TOTAL	15	10	-	245	455	20

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE-Continuous Internal Evaluation

SEE-Semester End Examination

Core Elective-5		
S.No.	Subject Code	Subject Name
1.	18IT E17	Cloud Computing
2.	18IT E18	Quantum Computing
3.	18IT E19	Natural Language Processing
4	18IT E20	Block Chain Technology



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

AICTE Model Curriculum (with effect from 2021-22)

B.E. (Information Technology)

SEMESTER– VIII

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1		Open Elective - 2	3	-	3	30	70	3
2		Open Elective - 3	3	-	3	30	70	3
PRACTICAL								
3	18IT C35	Technical Seminar	-	2	-	50	-	1
4	18IT C36	Project Part - 2	-	10	-	100	100	10
		TOTAL	6	12	-	210	240	17

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE-Continuous Internal Evaluation

SEE-Semester End Examination

Open Elective- 2		
S.No.	Subject Code	Subject Name
1.	18ME O04	Entrepreneurship
2.	18ME O05	Human Rights and Legislature Procedures
3.	18CE O02	Disaster Mitigation Management
4.	18EG O01	Technical Writing Skills

Open Elective-3		
S.No.	Subject Code	Subject Name
1.	18ME O01	Robotics
2.	18ME O07	Intellectual Property Rights
3.	18ME O10	Introduction to Operations Research
4.	18PY O01	History of Science and Technology



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.E. I & II SEMESTERS

IN

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

(For the batch admitted in 2020-21)



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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of I Semester of B.E. – Artificial Intelligence and Data Science
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C01	Linear Algebra & Calculus	3	-	-	3	40	60	3
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C01	Optics and Semiconductor Physics	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20MT C02	Linear Algebra & Calculus Lab	-	-	2	3	50	50	1
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20PY C03	Optics and Semiconductor Physics Lab	-	-	4	3	50	50	2
8	20CS C02	Programming for problem Solving Lab	-	-	4	3	50	50	2
9	20ME C01	CAD and Drafting	-	1	3	3	50	50	2.5
10	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	1	15	-	460	490	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of II Semester of B.E. – Artificial Intelligence and Data Science
as per AICTE Model Curriculum 2020-21

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

SEMESTER -II

SEMESTER I A									
S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C03	Differential Equations & Transform Theory	3	-	-	3	40	60	3
2	20CYC01	Chemistry	3	-	-	3	40	60	3
3	20IT C01	Data Structures and Algorithms	3	-	-	3	40	60	3
4	20IT C02	Object Oriented Programming using Python	2	-	-	3	40	60	2
PRACTICAL									
5	20MT C04	Differential Equations & Transform Theory Lab	-	-	2	3	50	50	1
6	20CYC02	Chemistry Lab	-	-	4	3	50	50	2
7	20IT C03	Data Structures and Algorithms Lab	-	-	2	3	50	50	1
8	20IT C04	Object Oriented Programming using Python Lab	-	-	2	3	50	50	1
9	20ME C02	Workshop / Manufacturing Practice			5	3	50	50	2.5
10	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			11	0	15	-	460	490	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instruction of III Semester of B.E. - Artificial Intelligence and Data Science
as per AICTE Model Curriculum with effect from 2021-22**

DEPARTMENT OF INFORMATION TECHNOLOGY

SEMESTER - III

SEMESTER - III								
S. No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1	20ECC34	DC Circuits, Sensors and Transducers	3	-	3	40	60	3
2	20MTC09	Probability and Statistics	3/1	-	3	40	60	4
3	20ITC08	Database Management Systems	3	-	3	40	60	3
4	20ADC01	Java Programming	3	-	3	40	60	3
5	20ITC05	Digital Logic and Computer Architecture	3	-	3	40	60	3
6	20EGM01	Indian Constitution and Fundamental Principles	2	-	2	-	50	NC
7	20EGM02	Indian Traditional Knowledge	2	-	2	-	50	NC
PRACTICALS								
8	20ITC10	DBMS Lab	-	2	3	50	50	1
9	20ADC02	Java Programming Lab	-	2	3	50	50	1
10	20ADC03	Artificial Intelligence & Machine Learning Tools, Techniques and Applications	-	2	3	50	50	1
11	20ITC12	Mini Project - I	-	2	-	50	-	1
12	20ADI01	MOOCs/Training/Internship	2-3 Weeks/ 90 Hours		-	-	-	2
TOTAL			20	8		400	550	22

L: Lecture T: Tutorial
CIE – Continuous Internal Evaluation

D: Drawing P: Practical
SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instruction of IV Semester of B.E. - Artificial Intelligence and Data Science
as per AICTE Model Curriculum with effect from 2021-22**

DEPARTMENT OF INFORMATION TECHNOLOGY

SEMESTER - IV

S.No	Course code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
						CIE	SEE	
THEORY								
1	20MTC10	Stochastic Process and Queueing Theory	3	-	3	40	60	3
2	20ITC06	Discrete Mathematics and Applications	3	-	3	40	60	3
3	20ITC15	Design and Analysis of Algorithms	3	-	3	40	60	3
4	20ADC 04	Machine Learning	3	-	3	40	60	3
5		Professional Elective – I	3	-	3	40	60	3
6	20MBC01	Engineering Economics and Accountancy	3	-	3	40	60	3
7	20CEM01	Environmental Science	2	-	2	-	50	NC
PRACTICALS								
8	20MTC11	Stochastic Process and Queueing Theory Lab	-	2	3	50	50	1
9	20ITC17	Design and Analysis of Algorithms Lab	-	2	3	50	50	1
10	20ADC 05	Machine Learning Lab	-	2	3	50	50	1
11	20ITC18	Mini Project – II	-	2	-	50	-	1
TOTAL			21	8	-	440	560	22

L:Lecture

T: Tutorial

P: Practical

CIE – Continuous Internal Evaluation

SEE - Semester End Examination

Professional Elective #1	Image Processing 20ITE01	Data Analysis and Visualization 20ADE01	Mobile Application Development with Android and Kotlin 20ITE02	Fundamentals of Cryptography 20ITE03	Theory of Automata 20ADE02	Data Warehousing and Data Mining 20ITE04
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SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.TECH. I & II SEMESTERS

IN

CHEMICAL ENGINEERING

(For the batch admitted in 2020-21)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

Affiliated to Osmania University

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of I Semester of B.Tech. – Chemical Engineering
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CHEMICAL ENGINEERING

SEMESTER – I

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1	20MT C05	Calculus	3	1	-	3	40	60	4
2	20CYC01	Chemistry	3	-	-	3	40	60	3
3	20CE C01	Engineering Mechanics-I	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	3	-	-	3	40	60	3
PRACTICAL									
5	20CYC02	Chemistry Lab	-	-	4	3	50	50	2
6	20CS C02	Programming for Problem Solving Lab	-	-	4	3	50	50	2
7	20ME C02	Workshop/ Manufacturing Practice	-	-	5	3	50	50	2.5
8	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
TOTAL			12	1	13	-	360	390	21

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of II Semester of B.Tech. – Chemical Engineering
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF CHEMICAL ENGINEERING

SEMESTER -II

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20MT C06	Vector Calculus and Differential Equations	3	1	-	3	40	60	4
2	20EG C01	English	2	-	-	3	40	60	2
3	20PY C07	Physics	3	-	-	3	40	60	3
4	20EEEC01	Basic Electrical Engineering	3	-	-	3	40	60	3
PRACTICAL									
5	20EG C02	English lab	-	-	2	3	50	50	1
6	20PY C10	Physics Lab	-	-	4	3	50	50	2
7	20EEEC02	Basic Electrical Engineering Lab	-	-	2	3	50	50	1
8	20ME C01	CAD and Drafting	-	1	3	3	50	50	2.5
9	20MB C02	Community Engagement	30 field + 2P/W			-	50	-	1.5
TOTAL			11	2	11	-	410	440	20

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions III Sem B.Tech (Chemical Engineering)

As per AICTE Model Curriculum 2020-21

DEPARTMENT OF CHEMICAL ENGINEERING

SEMESTER – III

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20MTC08	Mathematics III(PDE & S)	3	1	-	3	40	60	4
2	20CSC06	Basics of Data Structures	2	-	-	3	40	60	2
3	20CHC01	Chemical Engineering Thermodynamics I	3	-	-	3	40	60	3
4	20CHC02	Fluid Mechanics	3	1	-	3	40	60	4
5	20CHC03	Material and Energy Balance Calculations	3	1	-	3	40	60	4
6	20CHC04	Mechanical Unit Operations	3		-	3	40	60	3
PRACTICAL									
7	20CSC07	Basics of Data Structures Lab	-	-	2	3	50	50	1
8	20CHC05	Fluid Mechanics Lab	-	-	3	3	50	50	1.5
9	20CHC06	Mechanical Unit Operations Lab	-	-	3	3	50	50	1.5
10	20CHI01	MOOCs/Training/ Internship	2-3 weeks/ 90 hours						2
TOTAL			17	03	08	-	390	500	26

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

NC- Non Credit



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions IV Sem B.Tech (Chemical Engineering)

As per AICTE Model Curriculum 2020-21

DEPARTMENT OF CHEMICAL ENGINEERING

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20CHC07	Chemical Reaction Engineering I	3	1	-	3	40	60	4
2	20CHC08	Chemical Technology	3	-	-	3	40	60	3
3	20CHC09	Heat Transfer	3	-	-	3	40	60	3
4	20CHC10	Mass Transfer Operations I	3	-	-	3	40	60	3
5	-----	Professional Elective I	3	-	-	3	40	60	3
6	20EGM01	Indian Constitution & Fundamental Principles	2		-	3	-	50	NC
7	20EEM01	Indian Traditional Knowledge	2	-	-	2	-	50	NC
8	20CEM01	Environmental Science	2	-	-	2	-	50	NC
PRACTICAL									
9	20CHC11	Chemical Reaction Engineering Lab	-	-	3	3	50	50	1.5
10	20CHC12	Heat Transfer Lab	-	-	3	3	50	50	1.5
TOTAL			21	01	06	-	300	500	19

L: Lecture

T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

NC- Non Credit



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

Model Curriculum (with effect from 2019-20)

B.TECH (Chemical Engineering)

SEMESTER – V

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
	THEORY								
1	18CH C10	Chemical Reaction Engineering I	3	-	-	3	30	70	3
2	18CH C11	Mass Transfer I	3	-	-	3	30	70	3
3	18CH C12	Heat Transfer	3	1	-	3	30	70	4
4	18CH C13	Particle and Fluid Particle Processing	3	-	-	3	30	70	3
5		Core Elective I	3	-	-	3	30	70	3
6		Core Elective II	3	-	-	3	30	70	3
	PRACTICALS								
7	18CH C14	Chemical Engineering Lab IA- MUO	-	-	3	3	15	35	1
8	18CHC15	Chemical Engineering Lab IB- FM and HT	-	-	3	3	15	35	1
Total			18	01	06	-	210	490	21

L:Lecture T:Tutorial D:Drawing P: Practical

CIE – Continuous Internal Evaluation

SEE- Semester End Examination

Core Elective I		Core Elective II	
18CH E 01	Water Conservation and Management	18CH E 04	Polymer Science and Technology
18CH E 02	Renewal Energy	18CH E 05	Green Technology
18CH E 03	Experimental and Analytical Techniques	18CH E 06	Catalysis



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

Model Curriculum (with effect from 2019-20)

B.TECH (Chemical Engineering)

SEMESTER – VI

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
	THEORY								
1	18CH C 16	Chemical Reaction Engineering II	3	-	-	3	30	70	3
2	18CH C 17	Mass Transfer II	3	-	-	3	30	70	3
3	18CH C 18	Process Control	3	-	-	3	30	70	3
4		Core Elective III	3	-	-	3	30	70	3
5		Core Elective IV	3	-	-	3	30	70	3
6		Open Elective I	3	-	-	3	30	70	3
	PRACTICALS								
7	18CH C 19	Chemical Engineering Lab IIA-CRE	-	-	3	3	15	35	1
8	18CH C 20	Chemical Engineering Lab IIB-MTO and TD	-	-	3	3	15	35	1
Total			18	-	06	-	210	490	20

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

Core Elective III		Core Elective IV	
18CH E 07	Fluidization Engineering	18CH E 10	Sugar Technology
18CH E 08	Petrochemical Technology	18CH E 11	Pulp and Paper Technology
18CH E 09	Biochemical Engineering	18CH E 12	Food Technology

Open Elective I			
18EE O 05	Waste Management	18ME O 06	Nanomaterials and Technology
18ME O 04	Entrepreneurship	18ME O 07	Intellectual Property Rights
18CS O 09	Basics Of Artificial Intelligence		



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of VII Semester of B.Tech. – Chemical Engineering
as per AICTE Model Curriculum 2021-22**

DEPARTMENT OF CHEMICAL ENGINEERING

SEMESTER – VII

S No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
	THEORY								
1	18CH C 21	Transport Phenomena	3	1	-	3	30	70	4
2	18CH C 22	Process Technology and Economics	3	-	-	3	30	70	3
3	18CH C 23	Process Instrumentation	2	-	-	2	20	50	2
4		Core Elective V	3	-	-	3	30	70	3
5		Open Elective II	3	-	-	3	30	70	3
	PRACTICALS								
6	18CH C 24	Process Instrumentation and Control lab	-	-	3	3	25	50	1.5
7	18CH C 25	Process Modeling and Simulation lab	-	-	3	3	25	50	1.5
8	18CH C 26	Project: Part I	-	-	4	-	50	-	2
Total			14	1	10	-	240	430	20

L: Lecture T: Tutorial D: Drawing P: Practical

CIE – Continuous Internal Evaluation

SEE- Semester End Examination

Core Elective V	
18CH E 13	Mineral Processing Technology
18CH E 14	Corrosion Engineering
18CH E 15	Scale-up Methods

Open Elective II	
18ME O 11	Modern Manufacturing Processes
18EE O 02	Energy Management Systems
18ME O 03	Research Methodologies
18CE O 02	Disaster Mitigation and Management
18CS O 10	Machine Learning using Python



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

Scheme of Instructions of VII Semester of B.Tech. – Chemical Engineering
as per AICTE Model Curriculum 2021-22

DEPARTMENT OF CHEMICAL ENGINEERING

SEMESTER – VIII

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
	THEORY								
1		Core Elective VI	3	-	-	3	30	70	3
2		Open Elective III	3	-	-	3	30	70	3
	PRACTICALS								
3	18CH C 27	Technical Seminar	-	-	2	-	50	-	1
4	18CH C 28	Project: Part II	-	-	20	Viva	100	100	10
Total			6	-	22	-	210	240	17

L: Lecture T: Tutorial D: Drawing
CIE - Continuous Internal Evaluation

P: Practical
SEE - Semester End Examination

Core Elective VI	
18CH E 16	Chemical Process Safety
18CH E 17	Fertilizer Technology
18CH E 18	Chemical Process Synthesis

Open Elective III	
18PYO 01	Histories of Science and Technology
18EG O 02	Gender Sensitization
18EG O 01	Technical writing skills
18CSO 03	IoT and Applications
18CSO 04	Basics of Data Science using R



SCHEME OF INSTRUCTION AND SYLLABI (R-20)

OF

B.TECH. I & II SEMESTERS

IN

BIOTECHNOLOGY

(For the batch admitted in 2020-21)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of I Semester of B.Tech. – Biotechnology
as per AICTE Model Curriculum 2020-21**

DEPARTMENT OF BIOTECHNOLOGY

SEMESTER – I

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P/D		CIE	SEE	
3 WEEKS COMPULSORY INDUCTION PROGRAM									
	THEORY								
1	20MT C21/ 20BT C01	Mathematics-I/ Basics of Biology-1	3	1	-	3	40	60	4
2	20 EG C01	English	2	-	-	3	40	60	2
3	20PY C02	Physics	3	-	-	3	40	60	3
4	20CS C01	Programming for Problem Solving	2	1	-	3	40	60	3
	PRACTICALS								
5	20PY C04	Physics lab	-	-	4	3	50	50	2
6	20EG C02	English lab	-	-	2	3	50	50	1
7	20CS C02	Programming for Problem Solving lab	-	-	4	3	50	50	2
8	20ME C01	CAD & Drafting	-	1	3	3	50	50	2.5
9	20MBC02	Community Engagement	30 field + 2P/W			-	50	-	1.5
Total			10	3	13		410	440	21
Clock Hours Per Week –28									

L: Lecture

T: Tutorial

P: Practical

CIE- Continuous Internal Evaluation

SEE- Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

**Scheme of Instructions of II Semester of B.Tech. - Biotechnology as per AICTE
Model Curriculum 2020-21**

B.TECH. - BIOTECHNOLOGY

SEMESTER – II

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours perweek			Duration of SEE inHours	Maximum Marks		
							CIE	SEE	
	THEORY								
1	20MT C22/ 20BT C02	Mathematics –II/ Basics Of Biology-II	3	1	-	3	40	60	4
2	20CY C01	Chemistry	3	0	-	3	40	60	3
3	20EE C01	Basic Electrical Engineering	3	-	-	3	40	60	3
4	20BT C03	Process Principles and Reaction Engineering	3	-	-	3	40	60	3
	PRACTICALS								
5	20CY C02	Chemistry lab	-	-	4	3	50	50	2
6	20EE C02	Basic Electrical Engineering lab	-	-	2	3	50	50	1
7	20ME C02	Workshop/Manufacturing Practices	-	-	5	3	50	50	2.5
8	20ME C03	Engineering Exploration	90 Hours / 4P			-	50	-	1.5
Total			12	1	11	-	360	390	20
Clock Hours Per Week 26									

L: Lecture

T: Tutorial

P: Practical

CIE-Continuous Internal Evaluation

SEE-Semester End Examination



CHAITANYABHARATHIINSTITUTE OF TECHNOLOGY(A)

Department of Bio-Technology

Scheme of Instructions of III Semester of B. Tech Bio-Technology

as per AICTE Model Curriculum 2021-22

B.Tech(Bio-Technology)

SEMESTER III

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours Per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
	THEORY								
1	20CSC34	OOPS using Python	3	-	0	3	40	60	3
2	20BTC04	Biochemistry	3	-	-	3	40	60	3
3	20BTC05	Microbiology	3	-	-	3	40	60	3
4	20BTC06	Thermodynamics for Biotechnologists	3	-	-	3	40	60	3
5	20BTC07	Cell and Molecular Biology	3	-	-	3	40	60	3
6	20BTC08	Genetics	3	-	-	3	40	60	3
7	20EGM01	Indian Constitution and Fundamental Principles	2	-	-	2	-	50	Non credit
	PRACTICALS								
8	20CSC35	OOPS using Python Lab	-	-	2	3	50	50	1
9	20BTC09	Biochemistry Lab	-	-	2	3	50	50	1
10	20BTC10	Microbiology Lab			2	3	50	50	1
11	20BTI01	MOOCs/Training/ Internship I	2-3 weeks/90hrs						2
Total			19	1	6				23
Clock Hours Per Week-26									

L: Lecture T: Tutorial P: Practical

CIE – Continuous Internal Evaluation

SEE – Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

Department of Bio-Technology

Scheme of Instructions for IV Semester of B. Tech Bio-Technology

as per AICTE Model Curriculum 2021-22

B. Tech (Bio-Technology)

SEMESTER IV

SEMESTER IV

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours Per week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1	20MTC23	Engineering Mathematics for Biotechnologists	3	1		3	40	60	4
2	20BTC12	Bioprocess Engineering	3	-	-	3	40	60	3
3	20BTC13	Immunology & Immunotechnology	3	-	-	3	40	60	3
4	20BTC14	Instrumental Methods in Biotechnology	3	-	-	3	40	60	3
5		Professional Elective - I	3	-	-	3	40	60	3
6	20EGM03	Universal Human Values-II: Understanding Harmony	3	-	-		40	60	3
7	20CEM01	Environmental Science	2	-	-	2	-	50	Non credit
PRACTICALS									
8	20BTC15	Bioprocess Engineering Lab	-	-	2	3	50	50	1
9	20BTC16	Immunology Lab	-	-	2	3	50	50	1
10	20BTC17	Instrumentation Lab	-	-	2	3	50	50	1
Total			20	1	6				22
Clock Hours Per Week –27									

L: Lecture T: Tutorial P: Practical

CIE –Continuous Internal Evaluation SEE – Semester End Examination

Professional Elective – 1	
20BTE01	Environmental Biotechnology
20BTE02	Process Dynamics and Control for Biotechnologists
20BTE03	Intellectual Property Rights and Bioethics
20BTE04	Enzyme technology
20BTE05	Industrial Biotechnology



With effect from the Academic Year 2020-21

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
Scheme of Instructions of V Semester of B.Tech Bio-Technology as per AICTE
Model Curriculum 2020-21
B.Tech (Bio-Technology)

SEMESTER V

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours Per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
	THEORY								
1	18BT C15	Fluid Mechanics and Heat Transfer	3	-	-	3	30	70	3
2	18BT C16	Enzyme Technology	3	-	-	3	30	70	3
3	18BT C17	Genetic Engineering and rDNA Technology	3	-	-	3	30	70	3
4		Core Elective I	3	-	-	3	30	70	3
5		Core Elective II	3	-	-	3	30	70	3
6	18MB C01	Engineering Economics and Accountancy	3	-	-	3	30	70	3
	PRACTICALS								
7	18BT C18	Fluid Mechanics and Heat Transfer Lab	-	-	2	2	15	35	1
8	18BT C19	Enzyme Technology Lab	-	-	2	2	15	35	1
9	18BT C20	Genetic Engineering Lab	-	-	2	2	15	35	1
Total			18	-	6	-	225	525	21
Clock Hours Per Week -24									

L: Lecture T: Tutorial

P: Practical

CIE – Continuous Internal Evaluation

SEE - Semester End Examination

CORE ELECTIVE-I	
18BT E01	Virology
18BT E02	Phytochemicals and Herbal Products
18BT E03	Introduction to Anatomy and Physiology of Humans

CORE ELECTIVE-II	
18BT E04	Environmental Biotechnology
18BT E05	Developmental Biology
18BT E06	Metabolic Engineering



With effect from the Academic Year 2020-21

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

Scheme of Instructions of VI Semester of B.Tech Bio-Technology as per AICTE

Model Curriculum 2020-21

B.Tech (Bio-Technology)

SEMESTER-VI

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours Per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
	THEORY								
1	18BT C21	Fermentation Technology	3	-	-	3	30	70	3
2	18BT C22	Bioinformatics	3	-	-	3	30	70	3
3	18BT C23	Mass Transfer Operations	3	-	-	3	30	70	3
4		Core Elective III	3	-	-	3	30	70	3
5		Core Elective IV	3	-	-	3	30	70	3
6		Open Elective I	3	-	-	3	30	70	3
	PRACTICALS								
7	18BT C24	Fermentation Lab	-	-	2	2	15	35	1
8	18BT C25	Bioinformatics Lab	-	-	2	2	15	35	1
Total			18	-	4	-	210	490	20
Clock Hours Per Week – 22									

L: Lecture **T:** Tutorial

P: Practical

CIE – Continuous Internal Evaluation

SEE - Semester End Examination

Core Elective III	
18BT E07	Medical Biotechnology
18BT E08	Food Biotechnology
18BT E09	Bioprocess Dynamics and Control
18BT E10	Artificial Intelligence in Biology

Open Elective I	
18MT O01B	Numerical Methods
18EC O02	Biomedical Instrumentation
18ME O03	Research Methodologies

Core Elective IV	
18BT E11	Pharmaceutical Biotechnology
18BT E12	Intellectual Property Rights Regulatory Affairs And Clinical Trials
18BT E13	Nanobiotechnology



With effect from the Academic Year 2021-22

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
Scheme of Instructions of VII Semester of B.Tech Bio-Technology as per AICTE
Model Curriculum 2021-22
B.Tech (Bio-Technology)

SEMESTER-VII

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours Per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
	THEORY								
1	18BT C26	Downstream Processing	3	-	-	3	30	70	3
2	18BT C27	Plant Biotechnology	3	-	-	3	30	70	3
3	18MT C08	Biostatistics	3	-	-	3	30	70	3
4		Core Elective V	3	-	-	3	30	70	3
5		Open Elective II	3	-	-	3	30	70	3
	PRACTICALS								
6	18BT C28	Downstream Processing Lab	-	-	3	3	25	50	1.5
7	18BT C29	Tissue Culture Lab	-	-	3	3	25	50	1.5
8	18BT C30	Project Part 1	-	-	4	-	50	-	2
Total			15	-	10	-	250	450	20
Clock Hours Per Week – 25									

L: Lecture T:Tutorial P:Practical
CIE – Continuous Internal Evaluation SEE - Semester End Examination

Core Elective V	
18BT E14	Animal Biotechnology
18BT E15	Cancer Biology
18BT E16	Computer Applications in Bioprocess
18BT E17	Principles of data analytics

Open Elective II	
18 CS O13	Block chain technologies
18CS O04	Basics of Data Science Using R
18EG O01	Technical Writing
18EE O05	Waste Management



With effect from the Academic Year 2021-22

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
Scheme of Instructions of VIII Semester of B.Tech Bio-Technology as per
AICTE Model Curriculum 2021-22
B.Tech (Bio-Technology)

SEMESTER-VIII

S. No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours Per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
	THEORY								
1		Core Elective VI	3	-	-	3	30	70	3
2		Open Elective III	3	-	-	3	30	70	3
	PRACTICALS								
3	18BT C31	Technical Seminar (On the latest trends and other than project)	-	-	2	-	50	-	1
4	18BT C32	Project Part II	-	-	20	Viva	100	100	10
Total			6	-	22	-	210	240	17
Clock Hours Per Week – 28									

L: Lecture T: Tutorial

P: Practical

CIE – Continuous Internal Evaluation SEE - Semester End Examination

Core Elective VI	
18BT E18	Tissue Engineering
18BT E19	Immunodiagnosics
18BT E20	Genomics and Proteomics

Open Elective III	
18ME 004	Entrepreneurship
18CS 008	Open Source Technology
18CS 001	Python for Bioinformatics

Credit Summary for B. Tech Biotechnology									TOTAL CREDITS
Semester	I	II	III	IV	V	VI	VII	VIII	
Credits	20.5	21.5	20	20	21	20	20	17	160



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
(AICTE Model Curriculum with Effect from the AY 2020 – 2021)
ME (CAD/CAM)

SEMESTER – I to SEMESTER - IV

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)**(AICTE Model Curriculum with Effect from the AY 2020 – 2021)****ME (CAD/CAM)****SEMESTER – I**

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20ME C101	Computer Aided Modeling and Design	3	--	--	3	40	60	3
2	20ME C102	Computer Integrated Manufacturing	3	--	--	3	40	60	3
3		Programme Elective - I	3	--	--	3	40	60	3
4		Programme Elective - II	3	--	--	3	40	60	3
5	20ME M103	Research Methodology and IPR	2	--	--	3	40	60	2
6		Audit Course - 1	2	--	--	2	--	50	Non-Credit
PRACTICALS									
7	20ME C104	Integrated Design and Manufacturing Lab	--	--	4	--	50	--	2
8	20ME C105	Vibrations and Acoustics Lab	--	--	4	--	50	--	2
TOTAL			16	--	8	--	300	350	18

L: Lecture

D: Drawing

CIE - Continuous Internal Evaluation

T: Tutorial

P: Practical/Mini Project with Seminar/Dissertation Phase

SEE – Semester End Examination

Programme Elective – I (3/3)			Programme Elective – II (3/3)		
S No	Subject Code	Name of the Subject	S No	Subject Code	Name of the Subject
1	20ME E101	Advanced Machine Design	1	20ME E104	Automation
2	20ME E102	Advanced Vibrations and Acoustics	2	20ME E105	Design for Manufacturing and Assembly
3	20ME E103	Optimization Techniques	3	20ME E106	Industrial Robotics

Audit Course – I					
S No	Subject Code	Name of the Subject	S No	Subject Code	Name of the Subject
1	20CE A101	Disaster Mitigation and Management	5	20EG A101	English for Research Paper Writing
2	20EE A101	Sanskrit for Technical Knowledge	6	20EG A102	Indian Constitution and Fundamental Rights
3	20EC A101	Value Education	7	20EG A103	Stress Management by Yoga
4	20IT A101	Pedagogy Studies	8	20EG A104	Personality Development through Life's Enlightenment Skills

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)**(AICTE Model Curriculum with Effect from the AY 2020 – 2021)****ME (CAD/CAM)****SEMESTER – II**

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20ME C106	Finite Element Techniques	3	--	--	3	40	60	3
2	20ME C107	Mechanical Design and Analysis	3	--	--	3	40	60	3
3		Programme Elective - III	3	--	--	3	40	60	3
4		Programme Elective - IV	3	--	--	3	40	60	3
5		Audit Course - 2	2	--	--	2	--	50	Non-Credit
PRACTICALS									
6	20ME C108	Computer Aided Engineering Lab	--	--	4	--	50	--	2
7	20ME C206	Computational Fluid Dynamics Lab	--	--	4	--	50	--	2
8	20ME C109	Mini Project with Seminar	--	--	4	--	50	--	2
TOTAL			14	--	12		310	290	18

L: Lecture D: Drawing CIE - Continuous Internal Evaluation
T: Tutorial P: Practical/Mini Project with Seminar/Dissertation Phase
SEE – Semester End Examination

Programme Elective – III (3/3)			Programme Elective – IV (3/3)		
SNO	Subject Code	Name of the Subject	SNO	Subject Code	Name of the Subject
1	20ME E206	Computational Fluid Dynamics	1	20ME E109	Multibody Dynamics
2	20ME E107	Mechanics of Composite Materials	2	20ME E110	Tribology in Design
3	20ME E108	Fracture Mechanics	3	20ME E111	Failure Analysis and Design

Audit Course – 2					
SNO	Subject Code	Name of the Subject	SNO	Subject Code	Name of the Subject
1	20CE A101	Disaster Mitigation and Management	5	20EG A101	English for Research Paper Writing
2	20EE A101	Sanskrit for Technical Knowledge	6	20EG A102	Indian Constitution and Fundamental Rights
3	20EC A101	Value Education	7	20EG A103	Stress Management by Yoga
4	20IT A101	Pedagogy Studies	8	20EG A104	Personality Development through Life's Enlightenment Skills

With effect from academic year 2021-2022



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
SCHEME AND SYLLABUS UNDER R20 CURRICULUM
M.E. (CAD/CAM)

SEMESTER – III

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hrs	Maximum Marks		
			L	T	P/D		CIE	SEE	
THEORY									
1		Programme Elective - V	3	--	--	3	40	60	3
2		Open Elective	3	--	--	3	40	60	3
PRACTICALS									
3	20MEC110	Industrial Project / Dissertation Phase - I	--	--	20	--	100	--	10
TOTAL			6	--	20	--	180	120	16

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation SEE – Semester End Examination

Professional Elective – V (3/3)				Open Elective (3/3)	
NC	Subj. Code	Name of the Subject	S NO	Subj. Code	Name of the Subject
1	20MEE112	Advanced Finite Element Method	1	20CEO101	Cost Management of Engineering Projects
2	20MEE113	Digital Manufacturing and Design	2	20EEO101	Waste to Energy
3	20MEE114	Product Design and Process Planning	3	20CSO101	Business Analytics

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)****SCHEME AND SYLLABUS UNDER R20 CURRICULUM****M.E. (CAD/CAM)****SEMESTER – IV**

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hrs	Maximum Marks		
			L	T	P/D		CIE	SEE	
PRACTICALS									
1	20MEC111	Industrial Project / Dissertation Phase - II	--	--	32	Viva	100	100	16
TOTAL			--	--	32	--	100	100	16

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation SEE – Semester End Examination

Scheme of Instruction, Examination and Syllabi

For

M.E Civil (Structural Engineering)

As Per

AICTE MODEL CURRICULUM

(With effect from the academic year 2020-21)



DEPARTMENT OF CIVIL ENGINEERING

**CHAITANYA BHARATHI INSTITUTE OF
TECHNOLOGY (A), HYD-75**

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
SCHEME OF INSTRUCTION AND EXAMINATION M.E.
(STRUCTURAL ENGINEERING)

(With effect from the academic year 2020-21)

SEMESTER – I

S.No	Course Code	Title of Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20CE C101	Structural Dynamics	3	0	0	3	40	60	3
2	20CE C102	Finite Element Method in Structural Engineering	3	0	0	3	40	60	3
3	Program Specific Elective -I		3	0	0	3	40	60	3
4	Program Specific Elective -II		3	0	0	3	40	60	3
5	20ME M103	Research Methodology and IPR	2	0	0	3	40	60	3
6	Audit Course -I		2	0	0	2	-	50	Pass/Fail
PRACTICALS									
7	20CE C103	Structural Design Lab	0	0	4	-	50	-	2
8	20CE C104	Advanced Concrete Lab	0	0	4	-	50	-	2
TOTAL			16	0	8	-	300	350	19

L: Lecture

T: Tutorial

T: Tutorial

CIE - Continuous Internal Evaluation

SEE - Semester External Evaluation

Course Code	Program Specific Elective -I	Course Code	Program Specific Elective -II
20CE E101	Theory of Thin Plates and Shells	20ME E103	Analytical and Numerical Method for Structural Engineering
20CE E102	Advanced Structural Analysis	20CE E104	Structural Health Monitoring
20CE E103	Theory of Structural Stability	20CE E105	Structural Optimization
Audit Course- I and II			
Course Code	Course		
20EG A101	English for Research Paper Writing		
20CE A101	Disaster Mitigation and Management		
20EE A101	Sanskrit for Technical Knowledge		
20EC A101	Value Education		
20EG A102	Indian Constitution and Fundamental rights		
20IT A101	Pedagogy Studies		
20EG A103	Stress Management by Yoga		
20EG A104	Personality Development through Life Enlightenment Skills		

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
SCHEME OF INSTRUCTION AND EXAMINATION
ME (STRUCTURAL ENGINEERING)
(With effect from the academic year 2020-21)

SEMESTER – II

S.No	Course Code	Title of Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20CE C105	Design of High Rise Structure	3	0	0	3	40	60	3
2	20CE C106	Advanced Solid Mechanics	3	0	0	3	40	60	3
3	Program Specific Elective -III		3	0	0	3	40	60	3
4	Program Specific Elective -IV		3	0	0	3	40	60	3
6	Audit Course -II		2	0	0	2	-	50	Pass/Fail
PRACTICALS									
7	20CE C107	Modal Testing Lab	0	0	4	-	50	-	2
8	20CE C108	Numerical Analysis Lab	0	0	4	-	50	-	2
9	20CE C109	Mini Project with Seminar	0	0	4	-	50	-	2
TOTAL			14	0	12	-	310	290	18

L: Lecture

T: Tutorial

T: Tutorial

CIE - Continuous Internal Evaluation

SEE - Semester External Evaluation

Course Code	Program Specific Elective -III	Course Code	Program Specific Elective -IV
20CE E106	Advanced Steel Design	20CE E109	Design of Advanced Concrete Structure
20CE E107	Repair and Retrofitting of Structure	20CE E110	Advanced Foundation Design
20CE E108	Design of Masonry Structure	20CE E111	Design of Industrial Structure
Audit Course- I and II			
Course Code	Course		
20EG A101	English for Research Paper Writing		
20CE A101	Disaster Mitigation and Management		
20EE A101	Sanskrit for Technical Knowledge		
20EC A101	Value Education		
20EG A102	Indian Constitution and Fundamental rights		
20IT A101	Pedagogy Studies		
20EG A103	Stress Management by Yoga		
20EG A104	Personality Development through Life Enlightenment Skills		

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
SCHEME OF INSTRUCTION AND EXAMINATION
ME (STRUCTURAL ENGINEERING)
 (With effect from the academic year 2020-21)

SEMESTER – III

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	p		CIE	SEE	
THEORY									
1	Program Specific Elective- V		3	0	0	3	40	60	3
2	Open Elective		3	0	0	3	40	60	3
PRACTICALS									
3	20CE C110	Dissertation Phase- I	0	0	20	-	100	-	10
TOTAL			6	0	20	-	180	120	16

L: Lecture T: Tutorial

P: Practical

CIE - Continuous Internal Evaluation SEE - Semester End Examination

Course Code	Program Specific Elective-V
20CE E114	Design of Prestressed Concrete Structures
20CE E115	Design of Bridges
20CE E116	Fracture Mechanics of Concrete Structures
20CE E117	Design of Plates and Shells
OPEN ELECTIVES	
Course Code	Course
20CS O101	Business Analytics
20ME O101	Industrial Safety
20ME O102	Introduction to Optimization Techniques
20CE O101	Cost Management of Engineering Projects
20ME O103	Composite Materials
20EE O103	Waste to Energy

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
SCHEME OF INSTRUCTION AND EXAMINATION
ME (STRUCTURAL ENGINEERING)
(With effect from the academic year 2020-21)

SEMESTER – IV

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
PRACTICALS									
1	20CE C111	Dissertation Phase-II	0	0	32	-	100	100	16
TOTAL			0	0	32	-	100	100	16

L: Lecture T: Tutorial P: Practical

CIE - Continuous Internal Evaluation SEE - Semester End Examination

**SCHEME OF INSTRUCTION AND SYLLABI (R-20) OF
I, II, III & IV SEMESTERS**

IN

**Master of Business Administration
(With effect from Academic Year 2020-21)**



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

**(An Autonomous Institution) Affiliated
to Osmania University**

Kokapet Village, Gandipet Mandal, Hyderabad - 500 075. Telangana

E-Mail: principal@cbit.ac.in; Website: www.cbit.ac.in; Phone Nos.: 040-24193276 / 277 / 279



SCHEME OF INSTRUCTION AND EXAMINATION MBA PROGRAMME

ORIENTATION PROGRAMME

Orientation Program is designed to effectively initiate the Freshers commencing MBA Program, navigating them through the Campus Environment, Academic Scope, Learning Resources, Activities that they can engage themselves; Social, Co and Extra Curricular and other Personality Development Schedules to enable them to efficiently utilize the Opportunities and equip themselves with needed Skills in every Area of Management to address the Challenges that they would be facing in their Careers.

The Orientation encompasses but not limited to the following:

S.No.	Activities during the Orientation Program
1.	Autonomous system - Academic Rules, Curriculum, Code of conduct
2.	Learning Resources
3.	Extension Activities
4.	Managerial Skills for Effectiveness
5.	Co-Curricular and Extra-Curricular
6.	Business Games
7.	Mentoring, Human Values and Professional Ethics

I SEMESTER

S. No.	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P		CIE	SEE	
1.	20MBC101	Management and Organization Behaviour	4	-	3	40	60	4
2.	20MBC102	Managerial Economics	4	-	3	40	60	4
3.	20MBC103	Financial Accounting for Management	4	-	3	40	60	4
4.	20MBC104	Marketing Management	4	-	3	40	60	4
5.	20MBC105	Statistics for Management	4	-	3	40	60	4
6.	20MBC106	Digital Technology	3	-	3	40	60	3
7.	20MBC107	Business Communication Lab	-	4	3	50	50	2
8.	20MBC108	Statistics Lab	-	2	3	50	50	1
9.		Open Elective	4	-	3	40	60	4
	20MBO101	Business Environment						
	20MBO102	Corporate Social Responsibility						
	20MBO103	Business Law and Ethics						
			27	6	-	380	520	30

L: Lecture T: Tutorial P: Practical CIE- Continuous Internal Evaluation SEE- Semester End Examination

II SEMESTER

S.No.	COURSE CORE	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P		CIE	SEE	
1.	20MBC201	Human Resource Management	4	-	3	40	60	4
2.	20MBC202	Financial Management	4	-	3	40	60	4
3.	20MBC203	Business Research Methods	4	-	3	40	60	4
4.	20MBC204	Operations Research	4	-	3	40	60	4
5.	20MBC205	Operations Management	4	-	3	40	60	4
6.	20MBC206	Business Analytics	3	-	3	40	60	3
7.	20MBC207	Logistics and Supply Chain Management	3	-	3	40	60	3
8.	20MBC208	Comprehensive Viva Voce- I	-	-	-	-	100	2
9.	20MBSD201	Personality Development and Career Guidance	-	4	3	50	50	2
10.		Open Elective	4	-	3	40	60	4
	20MBO201	E-Business						
	20MBO202	Banking Management						
	20MBO203	Customer Relationship Management						
			30	4		370	630	34

III- SEMESTER

S.No.	COURSE CODE	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P		CIE	SEE	
1.	20MBC301	Strategic Management	4	--	3	40	60	4
2.	20MBC302	Internship				100	-	2
3.	20MBE301 to 20MBE310	FE 1	4	--	3	40	60	4
4.		FE-2	4	--	3	40	60	4
5.		SE-1	4	--	3	40	60	4
6.		SE-2	4	--	3	40	60	4
			20	-		300	300	22

Internship details are given in Academic Rules book

Note: * III semester Electives are given in the separate table

[FE- First Elective SE- Second Elective]

Elective Courses

Student has a choice to choose two Electives from the given list of electives consisting of Marketing, Human Resource, Finance, and Business Analytics/Supply Chain Management.

Note: Student can choose either Business Analytics or Logistics and Supply Chain Management.

The electives will be offered only upon the availability of certain number of students in that Specialization.

Elective wise Course Titles in III semester

Elective	Course Code	Course Title
Finance (F)	20MBE301	Investment Management
	20MBE302	Financial Markets and Services
Human Resource (HR)	20MBE303	Performance and Compensation Management
	20MBE304	Training and Development
Marketing (M)	20MBE305	Product and Brand Management
	20MBE306	Integrated Marketing Communications and Digital Marketing
Business Analytics (BA)	20MBE307	Business Data Mining
	20MBE308	Python Programming
Supply Chain Management (SCM)	20MBE309	Transport Management
	20MBE310	Distribution and Warehouse Management

IV SEMESTER

IV SEMESTER								
S.No.	COURSE CODE	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P		CIE	SEE	
1.	20MBC401	Entrepreneurship Development	4	--	3	40	60	4
2.	20MBC402	Project Work	--	8	--	100	100	4
3.	20MBC403	Comprehensive Viva Voce- II				-	100	2
4.	20MBE401 to 20MBE410	FE-3	4	-	3	40	60	4
5.		FE-4	4	-	3	40	60	4
6.		SE-3	4	--	3	40	60	4
7.		SE-4	4	--	3	40	60	4
			20	8	15	300	500	26

Note: IV semester Electives are given in the separate table

V. List of course titles in each Elective

Elective	Course Code	Course Title
Finance (F)	20MBE401	Financial Risk Management
	20MBE402	Project Appraisal and Financing
Human Resource(HR)	20MBE403	Industrial Relations and Labour Laws
	20MBE404	Strategic Human Resource Management
Marketing (M)	20MBE405	Consumer Behaviour
	20MBE406	Services and Retail Marketing
Business Analytics(BA)	20MBE407	Machine Learning and Artificial Intelligence
	20MBE408	Cloud Computing
Supply Chain Management (SCM)	20MBE409	E-Commerce Logistics
	20MBE410	International Logistics



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

With effect from 2020-21
MCA (Master of Computer Applications)

SEMESTER – I

SEMESTER – I								
S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/S		CIE	SEE	
THEORY								
1	20MCC101	Computer Programming using 'C'	3/1	-	3	40	60	4
2	20MCC102	Computer Organization and Architecture	3/1	-	3	40	60	4
3	20MCC103	Software Engineering	3/1	-	3	40	60	4
4	20MCC104	Mathematical Foundations for Computer Applications	3/1	-	3	40	60	4
5	20MTC27	Probability& Statistics	3/1	-	3	40	60	4
PRACTICALS								
6	20MCC105	Computer Programming Lab using 'C'	-	3	3	50	50	2
7	20MCC106	Python Programming Lab	-	3	3	50	50	2
8	20EG101	Professional Communication in English Lab	-	3	3	50	50	2
TOTAL			20	9	-	350	450	26

L: Lecture **T: Tutorial**
CIE: Continuous Internal Evaluation

P: Practical **S: Seminar**
SEE: Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

With effect from 2020-21
MCA (Master of Computer Applications)

SEMESTER-II

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/S		CIE	SEE	
THEORY								
1	20MCC107	Data Structures and Algorithms	3/1	-	3	40	60	4
2	20MCC108	Artificial Intelligence	3/1	-	3	40	60	4
3	20MCC109	Object Oriented Programming using Java	3/1		3	40	60	4
4	20MCC110	Database Management Systems	3/1	-	3	40	60	4
5	20MCE101/ 20MCE102/ 20MCE103/ 20MCE104	Elective – I	3	-	3	40	60	3
PRACTICALS								
6	20MCC111	Data Structures Lab using C++	-	3	3	50	50	2
7	20MCC112	Object Oriented Programming Lab using Java	-	3	3	50	50	2
8	20MCC113	Database Management Systems Lab	-	3	3	50	50	2
TOTAL			19	9	-	350	450	25

L: Lecture

T: Tutorial

P: Practical

S: Seminar

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

Internship is compulsory after II Semester with 2 credits

Elective- I	
20MCE101	Organizational Behavior.
20MCE102	Entrepreneurship.
20MCE103	Business Intelligence & Analytics.
20MCE104	Software Project Management.



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

With effect from 2020-21
MCA (Master of Computer Applications)

SEMESTER - III

S. No.	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/S		CIE	SEE	
THEORY								
1	20MCC114	Data Communications and Computer Networks	3/1	-	3	40	60	4
2	20MCC115	Data Science and Machine Learning	3/1	-	3	40	60	4
3	20MCC116	Operating Systems	3/1	-	3	40	60	4
4	20MCC117	Web Technologies	3/1	-	3	40	60	4
5	20MCE105/ 20MCE106/ 20MCE107/ 20MCE108	Elective-II	3	-	3	40	60	3
6	20MCA101	Intellectual Property rights and Professional Ethics.	2	-				0
PRACTICALS								
7	20MCC118	Object Oriented System Development Lab	-	3	3	50	50	2
8	20MCC119	Machine Learning Lab using Python	-	3	3	50	50	2
9	20MCC120	Web Technologies Lab	-	3	3	50	50	2
10	20MCI301	Internship	-	1	-	100	-	2
TOTAL			22	10	-	450	450	27

L: Lecture

T: Tutorial

P: Practical

S: Seminar

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

Elective – II	
20MCE105	Cloud Computing
20MCE106	Design and Analysis of Algorithms
20MCE107	Big Data Analytics
20MCE108	Advanced Java Programming



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)

With effect from 2020-21

MCA (Master of Computer Applications)

SEMESTER - IV

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/S		CIE	SEE	
THEORY								
1	20MCE109/ 20MCE110/ 20MCE111/ 20MCE112	Elective-III	3	-	3	40	60	3
2	20MCE113/ 20MCE114/ 20MCE115/ 20MCE116	Elective-IV	3	-	3	40	60	3
3	20MCC121	Major Project Work	-	6	-	100	100	12
TOTAL			6	6	-	180	220	18

L: Lecture

T: Tutorial

P: Practical

S: Seminar

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

Elective – III	
20MCE109	Cyber Security
20MCE110	Social Network Analysis
20MCE111	Block Chain Technology
20MCE112	Deep Learning

Elective – IV	
20MCE113	Cyber Forensics
20MCE114	Computer Vision
20MCE115	Internet of Things
20MCE116	Natural Language Processing

Scheme of Instruction and Syllabi
of
ME I to IV SEMESTERS
of
TWO YEAR PG COURSE
in
POWER SYSTEMS & POWER ELECTRONICS
(AICTE Model Curriculum with effect from AY 2020-21)



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
(Autonomous Institution under UGC, Affiliated to Osmania University)
Department of Electrical and Electronics Engineering

Accredited by NBA and NAAC-UGC,

Chaitanya Bharathi (Post), Gandipet, Hyderabad–500075



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

SCHEME OF INSTRUCTION AND EXAMINATION

OF

MODEL CURRICULUM (R-20)

I-Semester of ME (PS & PE)

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20EEEC101	Real Time Applications for Power Systems	3	-	-	3	40	60	3
2	20EEEC102	Power Electronic Converters	3	-	-	3	40	60	3
3	20EEE10X	Program Specific Elective- I	3	-	-	3	40	60	3
4	20EEE10X	Program Specific Elective- II	3	-	-	3	40	60	3
5	20MEC103	Research Methodology and IPR	2	-	-	2	40	60	2
6	AC-1	Audit Course-I	2	-	-	2	0	50	Non-Credit
PRACTICALS									
7	20EEEC103	Power Systems Lab	-	-	4	-	50	-	2
8	20EEEC104	Power Electronics Simulation Lab	-	-	4	-	50	-	2
TOTAL			16	-	8	-	300	350	18

L: Lecture T: Tutorial P:Practical
CIE - Continuous Internal Evaluation

SEE - Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

SCHEME OF INSTRUCTION AND EXAMINATION

OF

MODEL CURRICULUM (R-20)

II-Semester of ME (PS & PE)

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20EEEC105	Power System Dynamics	3	-	-	3	40	60	3
2	20EEEC106	Advanced Power Electronic Circuits	3	-	-	3	40	60	3
3	20EEEE10X	Program Specific Elective-III	3	-	-	3	40	60	3
4	20EEEE10X	Program Specific Elective-IV	3	-	-	3	40	60	3
5	AC-II	Audit Course-II	2	-	-	2	0	50	Non-Credit
PRACTICALS									
6	20EEEC107	Power Electronics Lab	-	-	4	-	50	-	2
7	20EEEC108	Power Systems Simulation Lab	-	-	4	-	50	-	2
8	20EEEC109	Mini Project with Seminar	-	-	4	-	50	-	2
TOTAL			14	0	12	-	310	290	18

L: Lecture T: Tutorial P: Practical

SEE - Semester End Examination

CIE- Continuous Internal Evaluation



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

SCHEME OF INSTRUCTION AND EXAMINATION

OF

MODEL CURRICULUM (R-20)

III-Semester of ME (PS & PE)

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20EEE10X	Program Specific Elective- V	3	-	-	3	40	60	3
2	OE	Open Elective	3	-	-	3	40	60	3
PRACTICALS									
3	20EEC110	Industrial Project /Dissertation Phase 1		-	20	Viva	100	-	10
TOTAL			6	0	20	-	180	120	16

L: Lecture T: Tutorial P: Practical SEE - Semester End Examination
CIE - Continuous Internal Evaluation

SCHEME OF INSTRUCTION AND EXAMINATION

OF

MODEL CURRICULUM (R-20)

IV-Semester of ME (PS & PE)

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination		Credits
			Hours per week			Maximum Marks		
			L	T	P	CIE	SEE	
PRACTICALS								
1	20EEC111	Industrial Project /Dissertation Phase II	-	-	32	100	100	16
	TOTAL		0	0	32	100	100	16

L: Lecture T: Tutorial P: Practical SEE - Semester End Examination
CIE Continuous Internal Evaluation

List of Program Specific Electives/ Open Electives/ Audit Courses

Course Code	Open Electives
20EEE101	Electrical Power Distribution System
20EEE102	Mathematical Methods for Power Engineering
20EEE103	Restructured Power Systems
20EEE107	Renewable Energy System
20EEE109	Digital Protection of Power System
20EEE110	Power Quality
20EEE114	Smart Grids
20EEE115	High Voltage Engineering

Course Code	Program Specific Electives Group-2
20EEE104	Power Semi Conductor devices & Modelling
20EEE105	Electric Drive Systems
20EEE106	HVDC
20EEE108	Artificial Intelligence Techniques for Power Systems
20EEE111	FACTS and Custom power devices
20EEE112	Switch mode & Resonant Converters
20EEE113	Energy Auditing & Management
20EEE116	Electric and Hybrid Vehicles

Course Code	Open Electives
20CSO 101	Business Analytics
20MEO101	Industrial Safety
20MEO 102	Introduction to Optimization Techniques
20MEO 103	Composite Materials
20CEO 101	Cost Management of Engineering Projects
20EEO 101	Waste to Energy

Course Code	Audit Courses – I & II
20EGA 101	English for Research Paper Writing
20EGA 102	Indian Constitution and Fundamental Rights
20EGA 103	Stress Management by Yoga
20EGA 104	Personality Development through Life Enlightenment Skills
20ECA 101	Value Education
20CEA 101	Disaster Mitigation and Management
20ITA 101	Pedagogy Studies
20EEA 101	Sanskrit for Technical Knowledge



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
AICTE Model Curriculum (with effect from 2020-21)
M.Tech. (Artificial Intelligence and Data Science)

SEMESTER- I

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1		Program Core-1	3	-	3	40	60	3
2		Program Core-2	3	-	3	40	60	3
3		Program Elective-1	3	-	3	40	60	3
4		Program Elective-2	3	-	3	40	60	3
5	20MEM103	Research Methodology and IPR	2	-	3	40	60	2
6		Audit Course-1	2	-	2	-	50	Non-Credit
PRACTICALS								
7		Laboratory-1 (Based on Core-1)	-	2	-	50	-	1
8		Laboratory-2 (Based on Core-2)	-	2	-	50	-	1
9		Laboratory-3 (Based on Elective-2)	-	4	-	50	-	2
TOTAL			16	08	17	350	350	18

L: Lecture T: Tutorial D: Drawing
CIE - Continuous Internal Evaluation

P: Practical
SEE-Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE Model Curriculum (with effect from 2020-21)
M.Tech. (Artificial Intelligence and Data Science)

SEMESTER-II

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1		Program Core-3	3	-	3	40	60	3
2		Program Core-4	3	-	3	40	60	3
3		Program Elective-3	3	-	3	40	60	3
4		Program Elective-4	3	-	3	40	60	3
5		Audit Course-2	2	-	2	-	50	Non-Credit
PRACTICALS								
6		Laboratory-4 (Based on Core-3)	-	2	-	50	-	1
7		Laboratory-5 (Based on Core-4)	-	2	-	50	-	1
8		Laboratory-6 (Based on Elective-4)	-	4	-	50	-	2
9	20ITC107	Mini Project with Seminar	-	4	-	50	-	2
TOTAL			14	12	14	360	290	18

L: Lecture T: Tutorial D: Drawing
CIE-Continuous Internal Evaluation

P: Practical
SEE-Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
AICTE Model Curriculum (with effect from 2020-21)
M.Tech. (Artificial Intelligence and Data Science)

SEMESTER-III

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
THEORY								
1		Program Elective-5	3	-	3	40	60	3
2		Open Elective	3	-	3	40	60	3
PRACTICALS								
3	20ITC108	Dissertation/Phase-I	-	20	-	100	-	10
TOTAL			6	20	6	180	120	16

SEMESTER-IV

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week		Duration of SEE in Hours	Maximum Marks		
			L/T	P/D		CIE	SEE	
PRACTICALS								
1	20ITC109	Dissertation/Phase-II	-	32	Viva-Voce	100	100	16
TOTAL			-	32	-	100	100	16

L: Lecture T: Tutorial D: Drawing
CIE-Continuous Internal Evaluation

P: Practical
SEE-Semester End Examination

Total No. of Credits: 68

LIST OF COURSES

S.No	Code	Course	Credits
Program Core Courses			
1.	20MTC101	Mathematical Foundations of Data Science	3
2.	20ITC101	Artificial Intelligence	3
3.	20ITC102	Introduction to Data Science	3
4.	20ITC103	Machine Learning	3
Mandatory Courses			
5.	20MEM103	Research Methodology and IPR	2
Program Elective-1, Elective-3 and Elective-5 Courses (without Lab)			
6.	20ITE101	Soft Computing	3
7.	20ITE102	Cloud Computing	3
8.	20ITE103	Information Retrieval Systems	3
9.	20ITE104	Time Series Analysis & Forecasting	3
10.	20ITE105	Social Network Analytics	3
11.	20ITE106	Block Chain Technology	3
12.	20ITE107	Intelligent Bio Informatics	3
13.	20ITE108	Recommender Systems	3
14.	20ITE109	Reinforcement Learning	3
15.	20ITE110	GPU Computing	3
16.	20ITE111	Scalable Algorithms and Systems for Data Analysis	3
Program Elective-2 and Elective-4 Courses (with Lab)			
17.	20ITE112	Digital Image Processing and Analysis	3
18.	20ITE113	Cyber Security	3
19.	20ITE114	Big Data Analytics	3
20.	20ITE115	Augmented and Virtual Reality	3
21.	20ITE116	Predictive Analytics with R	3
22.	20ITE117	Natural Language Processing	3
23.	20ITE118	Robotic Process Automation	3
24.	20ITE119	Deep Learning	3
25.	20ITE120	Internet of Things	3
26.	20ITE121	Advanced Algorithms	3
Audit Course – 1 and 2			
27.	20EGA101	English for Research Paper Writing	0
28.	20CEA101	Disaster Mitigation and Management	0
29.	20EEA101	Sanskrit for Technical Knowledge	0
30.	20ECA101	Value Education	0
31.	20EGA102	Indian Constitution and Fundamental Rights	0
32.	20ITA101	Pedagogy Studies	0
33.	20EGA103	Stress Management by Yoga	0
34.	20EGA104	Personality Development Through Life's Enlightenment Skills	0
Open Elective Courses			
35.	20CSO101	Business Analytics	3
36.	20MEO102	Introduction to Optimization Techniques	3
37.	20CEO101	Cost Management of Engineering Projects	3
38.	20MEO101	Industrial Safety	3
39.	20MEO103	Composite Materials	3
40.	20EEO101	Waste to Energy	3
Labs, Seminars & Projects			
Laboratory-1 and Laboratory-3 (Based on Core Courses)			
41.	20MTC102	Mathematical Foundations of Data Science Lab	1
42.	20ITC104	Artificial Intelligence Lab	1
43.	20ITC105	Introduction to Data Science Lab	1
44.	20ITC106	Machine Learning Lab	1

Laboratory-2 and Laboratory-4			
(Based on Elective-2 and Elective-4 Courses)*			
45.	20ITE122	Digital Image Processing and Analysis Lab	2
46.	20ITE123	Cyber Security Lab	2
47.	20ITE124	Big Data Analytics Lab	2
48.	20ITE125	Augmented and Virtual Reality Lab	2
49.	20ITE126	Predictive Analytics in R Lab	2
50.	20ITE127	Natural Language Processing Lab	2
51.	20ITE128	Robotic Process Automation Lab	2
52.	20ITE129	Deep Learning Lab	2
53.	20ITE130	Internet of Things Lab	2
54.	20ITE131	Advanced Algorithms Lab	2
Seminar and Projects			
55.	20ITC107	Mini Project with Seminar	2
56.	20ITC108	Dissertation Phase-I	10
57.	20ITC109	Dissertation Phase-II	16

* Lab courses for Laboratory-2 and Laboratory-4 must be in one-to-one correspondence with the Elective courses opted in Program Elective-2 and Program Elective-4, respectively.



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
(AICTE Model Curriculum with effect from AY 2020-21)
M.E (Communication Engineering)

SEMESTER – I

S.no	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits	
			Hours per Week			Duration of SEE in Hours	Maximum Marks			
			L	T	P		CIE	SEE		
THEORY										
1	20EC C102	Advanced Digital Signal Processing	3	--	--	3	40	60	3	
2	20EC C104	Wireless and Mobile Communication	3	--	--	3	40	60	3	
3		Program Elective-1	3	--	--	3	40	60	3	
4		Program Elective-2	3	--	--	3	40	60	3	
5	20ME M103	Research Methodology and IPR	2	--	--	3	40	60	2	
6		Audit Course-1	2	--	--	2	--	50	Non-Credit	
PRACTICALS										
7	20EC C106	Advanced Digital Signal Processing Lab	--	--	4	--	50	--	2	
8	20EC C108	Wireless and Mobile Communication Lab	--	--	4	--	50	--	2	
Total			16	--	8	17	300	350	18	
Clock Hours per Week: 24										

L: Lecture**D: Drawing****CIE: Continuous Internal Evaluation****T: Tutorial****P: Practical/Mini Project with Seminar/
Dissertation Phase****SEE: Semester End Examination**



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
(AICTE Model Curriculum with effect from AY 2020-21)
M.E (Communication Engineering)

SEMESTER – II

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20EC C101	Advanced Communication Networks	3	--	--	3	40	60	3
2	20EC C103	Antennas and Radiating Systems	3	--	--	3	40	60	3
3		Program Elective-3	3	--	--	3	40	60	3
4		Program Elective-4	3	--	--	3	40	60	3
5		Audit Course-2	2	--	--	2	--	50	Non-Credit
PRACTICALS									
6	20EC C105	Advanced Communication Networks Lab	--	--	4	--	50	--	2
7	20EC C107	Antennas and Radiating Systems Lab	--	--	4	--	50	--	2
8	20EC C109	Mini Project with Seminar	--	--	4	--	50	--	2
Total			14	--	12	14	310	290	18
Clock Hours per Week: 26									

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

**P: Practical/Mini Project with Seminar/
DissertationPhase**

SEE: Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
(AICTE Model Curriculum with effect from AY 2021-22)
M.E (Communication Engineering)

SEMESTER – III

S.No	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
THEORY									
1		Program Elective-5	3	--	--	3	40	60	3
2		Open Elective	3	--	--	3	40	60	3
3	20EC C110	Industrial Project /Dissertation Phase I	--	--	20	--	100	--	10
Total			6	--	20	6	180	120	16
Clock Hours per Week: 26									

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

**P: Practical/Mini Project with Seminar/
Dissertation Phase**

SEE: Semester End Examination



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
(AICTE Model Curriculum with effect from AY 2021-22)
M.E (Communication Engineering)

SEMESTER – IV

S. no	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per Week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20EC C111	Industrial Project /Dissertation Phase II	--	--	32	Viva - Voce	100	100	16
Total			--	--	32	--	100	100	16
Clock Hours per Week: 32									

Note: Students undergoing internships during the semester, applied through training and placement office are permitted to take up equivalent courses through MOOCs /SWAYAM to earn required credits. However, such students should seek a prior permission from the Chairman, BoS.

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

**P: Practical/Mini Project with Seminar/
Dissertation Phase**

SEE: Semester End Examination

List of Courses for the Programme (ECE) with Specialization**COMMUNICATION ENGINEERING**

S.No	Course Code	Title of the Course
Program Core Courses		
1	20EC C101	Advanced Communication Networks
2	20EC C102	Advanced Digital Signal Processing
3	20EC C103	Antennas and Radiating Systems
4	20EC C104	Wireless and Mobile Communication
Practical Courses / Mini Project with Seminar/ Dissertation		
5	20EC C105	Advanced Communication Networks Lab
6	20EC C106	Advanced Digital Signal Processing Lab
7	20EC C107	Antennas and Radiating Systems Lab
8	20EC C108	Wireless and Mobile Communication Lab
9	20EC C109	Mini Project with Seminar
10	20EC C110	Industrial Project /Dissertation Phase I
11	20EC C111	Industrial Project /Dissertation Phase II
Program Elective Courses		
1	20EC E101	Data and Optical Networks
2	20EC E102	DSP Architecture
3	20EC E103	Global Navigation Satellite Systems
4	20EC E104	High Performance Networks
5	20EC E105	Information Theory and Coding Techniques
6	20EC E106	Internet of Things
7	20EC E107	Microwave and Satellite Communication
8	20EC E108	MIMO Wireless Communications
9	20EC E207	Network Security and Cryptography
10	20EC E109	Pattern Recognition and Machine Learning
11	20EC E110	Remote Sensing
12	20EC E111	Signal Intelligence Systems
13	20EC E112	Software Defined and Cognitive Radio
14	20EC E113	Statistical Decision and Estimation Theory
15	20EC E114	Wireless Sensor Networks
Mandatory Course		
1	20ME M103	Research Methodology and IPR

Audit Courses		
1	20CE A101	Disaster Management
2	20EG A101	English for Research Paper Writing
3	20EG A102	Indian Constitution and Fundamental Rights
4	20IT A101	Pedagogy Studies
5	20EG A104	Personality Development through Life Enlightenment Skills
6	20EE A101	Sanskrit for Technical Knowledge
7	20EG A103	Stress Management by Yoga
8	20EC A101	Value Education
Open Electives Courses		
1	20CS O101	Business Analytics
2	20ME O103	Composite Materials
3	20CE O101	Cost Management of Engineering Projects
4	20ME O101	Industrial Safety
5	20ME O102	Introduction to Optimization Techniques
6	20EE O101	Waste to Energy

Note:

Program Core / Program Elective of one specialization can be Program Elective for other specialization provided the condition for prerequisite is satisfied. However, a prior permission from the Chairman, BoS is to be obtained.



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A) (AICTE Model Curriculum with effect from AY 2020-21)

M.E (Embedded Systems & VLSI Design)

SEMESTER – I

S.no	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20ECC201	Analog and Digital CMOS VLSI Design	3	--	--	3	40	60	3
2	20ECC203	Microcontrollers and Programmable Digital Signal Processors	3	--	--	3	40	60	3
3		Program Elective-I	3	--	--	3	40	60	3
4		Program Elective-II	3	--	--	3	40	60	3
5	20ME M103	Research Methodology and IPR	2	--	--	3	40	60	2
6		Audit Course-I	2	--	--	2	--	50	Non-Credit
PRACTICALS									
7	20ECC205	Analog and Digital CMOS VLSI Design Lab	--	--	4	--	50	--	2
8	20ECC206	Microcontrollers and Programmable Digital Signal Processors Lab	--	--	4	--	50	--	2
Total			16	--	8	17	300	350	18
Clock Hours Per Week: 24									

L: Lecture**D: Drawing****CIE: Continuous Internal Evaluation****T: Tutorial****P: Practical/Mini Project with Seminar/
Dissertation/Phase****SEE: Semester End Examination**



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A) (AICTE Model Curriculum with effect from AY 2020-21)

M.E (Embedded Systems & VLSI Design)

SEMESTER – II

S.no	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20ECC202	Embedded System Design Using RTOS	3	--	--	3	40	60	3
2	20ECC204	VLSI Design Verification and Testing	3	--	--	3	40	60	3
3		Program Elective-III	3	--	--	3	40	60	3
4		Program Elective-IV	3	--	--	3	40	60	3
5		Audit Course-II	2	--	--	2	--	50	Non-Credit
PRACTICALS									
6	20ECC207	RTL Simulation and Synthesis with PLDs Lab	--	--	4	--	50	--	2
7	20ECC208	RTOS and VLSI Design Verification Lab	--	--	4	--	50	--	2
8	20ECC209	Mini Project with Seminar	--	--	4	--	50	--	2
Total			14	--	12	14	310	290	18
Clock Hours Per Week: 26									

L: Lecture**D: Drawing****CIE: Continuous Internal Evaluation****T: Tutorial****P: Practical/Mini Project with Seminar/
Dissertation Phase****SEE: Semester End Examination**



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

(AICTE Model Curriculum with effect from AY 2021-22)

M.E (Embedded Systems & VLSI Design)

SEMESTER – III

S.no	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
							CIE	SEE	
L	T	P							
THEORY									
1		Program Elective-V	3	--	--	3	40	60	3
2		Open Elective	3	--	--	3	40	60	3
3	20ECC210	Industrial Project /Dissertation Phase I	--	--	20	--	100	--	10
Total			6	--	20	6	180	120	16
Clock Hours Per Week: 26									

L: Lecture**D: Drawing****CIE: Continuous Internal Evaluation****T: Tutorial****P: Practical/Mini Project with Seminar/
Dissertation Phase****SEE: Semester End Examination**



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
(AICTE Model Curriculum with effect from AY 2021-22)

M.E (Embedded Systems & VLSI Design)

SEMESTER – IV

S.no	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20ECC211	Industrial Project /Dissertation Phase II	--	--	32	Viva-Voce	100	100	16
Total			--	--	32	--	100	100	16
Clock Hours Per Week: 32									

Note: Students undergoing internships during the semester, applied through training and placement office are permitted to take up equivalent courses through MOOCs /SWAYAM to earn required credits. However, such students should seek a prior permission from the Chairman, BoS.

L: Lecture

D: Drawing

CIE: Continuous Internal Evaluation

T: Tutorial

**P: Practical/Mini Project with Seminar/
Dissertation/Phase**

SEE: Semester End Examination

**List of Subjects for ME (ECE) Course with specialization in
EMBEDDED SYSTEMS & VLSI DESIGN**

S.no	Course Code	Title of the Course
Program Core Courses		
1	20ECC201	Analog and Digital CMOS VLSI Design
2	20ECC202	Embedded System Design using RTOS
3	20ECC203	Microcontrollers and Programmable Digital Signal Processors
4	20ECC204	VLSI Design Verification and Testing
Practical Courses / Mini Project with Seminar/ Dissertation		
5	20ECC205	Analog and Digital CMOS VLSI Design Lab
6	20EC C206	Microcontrollers and Programmable Digital Signal Processors Lab
7	20ECC207	RTL Simulation and Synthesis with PLDs Lab
8	20ECC208	RTOS and VLSI Design Verification Lab
9	20ECC209	Mini Project with Seminar
10	20ECC210	Industrial Project /Dissertation Phase I
11	20ECC211	Industrial Project /Dissertation Phase II
Program Elective Courses		
1.	20EC E201	Advanced Computer Organization
2.	20EC E202	Communication Buses and Interfaces
3.	20EC E203	Data Acquisition System Design
4.	20EC E204	FPGA & CPLD Architectures
5.	20EC E205	Low Power VLSI Design
6.	20EC E206	Nano-materials and Nanotechnology
7.	20EC E207	Network Security and Cryptography
8.	20EC E109	Pattern Recognition and Machine Learning
9.	20EC E208	Programming Languages for Embedded Software
10.	20EC E209	RF IC Design
11.	20EC E210	SoC Design
12.	20EC E211	System Design with Embedded Linux
13.	20EC E212	VLSI Signal Processing
14.	20EC E213	VLSI Technology and Physical Design Automation
15.	20ECE114	Wireless Sensor Networks
Mandatory Course		
1	20ME M103	Research Methodology and IPR

S.No	Course Code	Audit Courses
1	20CE A101	Disaster Management
2	20EG A101	English for Research Paper Writing
3	20EG A102	Indian Constitution and Fundamental Rights
4	20IT A101	Pedagogy Studies
5	20EG A104	Personality Development through Life Enlightenment Skills.
6	20EE A101	Sanskrit for Technical Knowledge
7	20EG A103	Stress Management by Yoga
8	20EC A101	Value Education
Open Elective Courses		
1	20CS O101	Business Analytics
2	20ME O103	Composite Materials
3	20CE O101	Cost Management of Engineering Projects
4	20ME O101	Industrial Safety
5	20ME O102	Introduction to Optimization Techniques
6	20EE O101	Waste to Energy.

Note: Program Core /Program Elective of one specialization can be Program Elective for other specialization provided the condition for prerequisite is satisfied. However, a prior permission of the Chairman, BoS is to be obtained.

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
M.TECH (CSE)

SCHEME OF INSTRUCTION & EXAMINATIONS

SEMESTER-I

S.No	Course Code	Title Of Course	Scheme Of Instructions			Duration Of SEE In Hours	Scheme Of Examination		
			Hours Per Week				Maximum Marks		Credits
			L	T	P/D		CIE	SEE	
			THEORY						
1	20CSC 101	Mathematical Foundation of Computer Science	3	-	-	3	40	60	3
2	20CSC 102	Advanced Data Structures	3	-	-	3	40	60	3
3	20CSEXXX	Elective -I	3	-	-	3	40	60	3
4	20CSEXXX	Elective -II	3	-	-	3	40	60	3
5	20MEC 103	Research Methodology and IPR	2	-	-	2	40	60	2
6	20XXXXXX	Audit Courses-1	2	-	-	2	-	50	Non Credit
PRACTICAL									
7	20CSC 103	Laboratory 1 (Advanced Data Structures)	-	-	4	-	50	-	2
8	20CSEXXX	Laboratory 2 (Based on Elective-I,III)	-	-	4	-	50	-	2
		Total	16	-	8	-	300	350	18

L: Lecture

T: Tutorial

D: Drawing

P: Practical

CIE - Continuous Internal Evaluation

SEE - Semester End Examination

ELECTIVE-I,III

S.No	Course Code	Title Of Course
1	20CSE101	Machine Learning
2	20CSE102	Internet of Things
3	20CSE103	Introduction to Intelligent Systems
4	20CSE104	Data Preparation and Analysis
5	20CSE105	Secure Software Design & Enterprise Computing (SSDEC)
6	20CSE106	Computer Vision

ELECTIVE -I ,III LAB

S.No	Course Code	Title Of Course
1	20CSE107	Machine Learning Lab
2	20CSE108	Internet of Things Lab
3	20CSE109	Introduction to Intelligent Systems Lab
4	20CSE110	Data Preparation and Analysis Lab
5	20CSE111	SSDE Lab
6	20CSE112	Computer Vision Lab

ELECTIVE -II,IV,V

S.No	Course Code	Title Of Course
1	20CSE113	Data Science & Big Data Analytics
2	20CSE114	Distributed Database Systems
3	20CSE115	Advanced Wireless and Mobile Networks
4	20CSE116	Human and Computer Interaction
5	20CSE117	GPU Computing
6	20CSE118	Digital Forensics
7	20CSE119	Mobile Applications and Services
8	20CSE120	Compiler for HPC
9	20CSE121	Open Source Technologies

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
M.TECH (CSE)
SCHEME OF INSTRUCTION & EXAMINATIONS

II-SEMESTER

S.No	Course Code	Title of the Course	Scheme of Instruction Hours per Week			Duration of SEE in Hours	Scheme of Examination		
			L	T	P		Maximum Marks		Credits
							CIE	SEE	
THEORY									
1	20CSC 104	Advanced Algorithms	3	-	-	3	40	60	3
2	20CSC 105	Soft Computing	3	-	-	3	40	60	3
3	20CSEXXX	Elective -III	3	-	-	3	40	60	3
4	20CSEXXX	Elective -IV	3	-	-	3	40	60	3
5	20XXXXXX	Audit Course 2	2	-	-	2	-	50	Non Credit
PRACTICAL									
7	20CSC 106	Laboratory 3 (AA& Soft Computing)	-	-	4	-	50	-	2
8	20CSEXXX	Laboratory 4 (Based on Electives-III)	-	-	4	-	50	-	2
9	20CSC 107	Mini Projects with seminar	-	-	4	-	50	-	2
TOTAL			14	-	12	-	310	290	18

- Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.

List of Audit Courses -1&2

S.No	Course Code	Title Of Course
1	20EGA101	English for research paper writing
2	20CEA101	Disaster mitigation and management
3	20EEA101	Sanskrit for technical knowledge
4	20ECA101	Value education
5	20EGA102	Indian constitution & fundamental rights
6	20ITA101	Pedagogy studies
7	20EGA103	Stress Management by Yoga
8	20EGA104	Personality Development through Life Enlightenment Skills.

III-SEMESTER

S.No	Course Code	Title of the Course	Scheme of Instruction Hours per Week			Duration of SEE in Hours	Scheme of Examination		
							Maximum Marks		Credits
			L	T	P		CIE	SEE	
THEORY									
1	20CSEXXX	Elective -V	3	-	-	3	40	60	3
2	20CSXXX	Open Elective	3	-	-	3	40	60	3
3	20CSC 108	Dissertation Phase – I	-	-	20	-	100	-	10
TOTAL			6	-	20	-	180	120	16

ELECTIVE-V		
S.No	Course Code	Title Of Course
1	20CSE119	Mobile Applications and Services
2	20CSE120	Compiler for HPC
3	20CSE121	Open Source Technologies
4	NPTEL	Software Project Management
		Natural Language Processing
		Block Chain Architecture Design and Use cases
		Social Networks
		Virtual Reality

Open ELECTIVE -VI		
S.No	Course Code	Title Of Course
1	20CSO 101	Business Analytics
2	20MEO 101	Industrial Safety
3	20MEO 102	Introduction to Optimization Techniques
4	20CEO101	Cost Management of Engineering Projects
5	20MEO103	Composite Materials
6	20EEO101	Waste to Energy
7	20PYO 01	History of Science and Technology

****Students going for Internship / Industrial project, may complete these courses through NPTEL/ MOOCs**

IV-SEMESTER

IV SEMESTER									
S.No	Course Code	Title of the Course	Scheme of Instruction Hours per Week			Duration of SEE in Hours	Scheme of Examination		Credits
							Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20CSC 109	Dissertation Phase – II	0	0	32	3	100	100	16
TOTAL			0	0	32	-	100	100	16



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
(AICTE Model Curriculum with Effect from the AY 2020 – 2021)
ME (Thermal Engineering)

SEMESTER – I to SEMESTER - IV

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)**(AICTE Model Curriculum with Effect from the AY 2020 – 2021)****ME (Thermal Engineering)****SEMESTER – I**

S. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20ME C201	Thermodynamics and Combustion	3	--	- -	3	40	60	3
2	20ME C202	Advanced Fluid Dynamics	3	--	- -	3	40	60	3
3		Programme Elective - I	3	--	- -	3	40	60	3
4		Programme Elective - II	3	--	- -	3	40	60	3
5	20ME M103	Research Methodology and IPR	2	--	- -	3	40	60	2
6		Audit course - 1	2	--	- -	2	--	50	Non-Credit
PRACTICALS									
5	20ME C203	Thermal Systems Lab	--	--	4	--	50	--	2
6	20ME C204	Design of Solar and Wind Systems Lab	--	--	4	--	50	--	2
TOTAL			16	--	8	--	300	350	18

L: Lecture D: Drawing CIE - Continuous Internal Evaluation
T: Tutorial P: Practical/Mini Project with Seminar/Dissertation Phase
SEE – Semester End Examination

Programme Elective – I (3/3)			Programme Elective – II (3/3)		
S. No.	Subject Code	Name of the Subject	S. No.	Subject Code	Name of the Subject
1	20ME E201	Thermal and Nuclear Power Plants	4	20ME E203	Air Conditioning System Design
2	20ME E202	Environmental Engineering and Pollution Control	5	20ME E204	Energy Conservation and Management
3	20ME E103	Optimization Techniques	6	20ME E205	Design of Solar and Wind Systems

Audit Course – 1					
S. No.	Subject Code	Name of the Subject	S. No.	Subject Code	Name of the Subject
1	20CE A101	Disaster Mitigation and Management	5	20EG A101	English for Research Paper Writing
2	20EE A101	Sanskrit for Technical Knowledge	6	20EG A102	Indian Constitution and Fundamental Rights
3	20EC A101	Value Education	7	20EG A103	Stress Management by Yoga
4	20IT A101	Pedagogy Studies	8	20EG A104	Personality Development through Life's Enlightenment Skills

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)

(AICTE Model Curriculum with Effect from the AY 2020 – 2021)

ME (Thermal Engineering)**SEMESTER – II**

S. No.	Course Code	Title of the Course	Scheme of Instruction			Scheme of Examination			Credits
			Hours per week			Duration of SEE in Hours	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	20ME C106	Finite Element Techniques	3	--	--	3	40	60	3
2	20ME C205	Advanced Heat and Mass Transfer	3	--	--	3	40	60	3
3		Programme Elective - III	3	--	--	3	40	60	3
4		Programme Elective - IV	3	--	--	3	40	60	3
5		Audit Course – 2	2	--	--	2	--	50	Non-Credit
PRACTICALS									
6	20ME C108	Computer Aided Engineering Lab	--	--	4	--	50	--	2
7	20ME C206	Computational Fluid Dynamics Lab	--	--	4	--	50	--	2
8	20ME C207	Mini Project with Seminar	--	--	4	--	50	--	2
TOTAL			14	--	12		310	290	18

L: Lecture D: Drawing CIE - Continuous Internal Evaluation
T: Tutorial P: Practical/Mini Project with Seminar/Dissertation Phase
SEE – Semester End Examination

Programme Elective – III (3/3)			Programme Elective – IV (3/3)		
SN	Subject Code	Name of the Subject	SN	Subject Code	Name of the Subject
1	20ME E206	Computational Fluid Dynamics	1	20ME E209	Turbo Machines
2	20ME E207	Refrigeration and Cryogenics	2	20ME E210	Gas Turbines
3	20ME E208	Design of Heat Exchangers	3	20ME E211	Power Plant Control and Instrumentation

Audit Course – 2					
S N O	Subject Code	Name of the Subject	S N O	Subject Code	Name of the Subject
1	20CE A101	Disaster Mitigation and Management	5	20EG A101	English for Research Paper Writing
2	20EE A101	Sanskrit for Technical Knowledge	6	20EG A102	Indian Constitution and Fundamental Rights
3	20EC A101	Value Education	7	20EG A103	Stress Management by Yoga
4	20IT A101	Pedagogy Studies	8	20EG A104	Personality Development through Life's Enlightenment Skills



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
SCHEME AND SYLLABUS UNDER R20 CURRICULUM
M.E. (THERMAL ENGINEERING)

SEMESTER – III

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hrs	Maximum Marks		
			L	T	P/		CIE	SE	
THEORY									
1		Programme Elective - V	3	--	--	3	40	60	3
2		Open Elective	3	--	--	3	40	60	3
PRACTICALS									
3	20ME C208	Industrial Project / Dissertation	--	--	20	--	100	--	10
TOTAL			6	--	20	--	180	120	16

L: Lecture T: Tutorial D: Drawing P: Practical
 CIE - Continuous Internal Evaluation SEE – Semester End Examination

Professional Elective – I (3/3)				Open Elective (3/3)	
S NO	Subj. Code	Name of the Subject	S NO	Subj. Code	Name of the Subject
1	20ME E212	Experimental Methods in Thermal	1	20CE O101	Cost Management of Engineering Projects
2	20ME E213	Fluid Power Systems	2	20EE O101	Waste to Energy
3	20ME E214	Engine Emissions and Pollution Control	3	20CS O101	Business Analytics

With effect from academic year 2021-2022

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)****SCHEME AND SYLLABUS UNDER R20 CURRICULUM****M.E. (THERMAL ENGINEERING)****SEMESTER – IV**

S. No.	Course Code	Title of the Course	Scheme of instruction			Scheme of examination			Credits
			Hours per week			Duration in Hrs	Maximum Marks		
			L	T	P/D		CIE	SEE	
PRACTICALS									
1	20MEC111	Industrial Project / Dissertation Phase - II	--	--	32	Viva	100	100	16
TOTAL			--	--	32	--	100	100	16

L: Lecture T: Tutorial D: Drawing P: Practical

CIE - Continuous Internal Evaluation SEE – Semester End Examination