

Department of Information Technology

ACTION TAKEN ON STAKEHOLDERS FEEDBACKS 2018-19

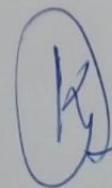
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CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A)
DEPARTMENT OF INFORMATION TECHNOLOGY

Feedback given by students on Curriculum of BE(IT) 2018-19

S.No	Roll No	Name	IT Curriculum is useful for your Employment	Suggestions for improvement of Curriculum
1	160115737003	Anjana Bytha	Needs to be updated	Python can be included
2	160115737004	D. Anjani	Yes	Labs, Faculty availability
3	160115737005	G. Aparna	Good	Lab for cloud computing as mandatory subject
4	160115737006	V. Apoorva	Very good	More Focus on Industry requirements
5	160115737007	P Ashritha	Can be improved	Can be updated to current technologies.
6	160115737009	Brahmani Thota	Practical knowledge is lacking	Python, Block chain development can be included.
7	160115737010	B. Charitha reddy	Very useful	None
8	160115737014	M. Jyothsna	3	Should remove all the subjects and labs in the final semester.
9	160115737020	E. Preethi	Excellent	Can add .Net and Python
10	160115737024	Sai Tejaswi	So far it has been quite useful. Having studied AI, ML, Distributed	Introduce group projects >6 students
11	160115737028	Ogety Shreya	Good	Real time coding challenges.
12	160115737036	Annam Chakravarthy	Good	Need to add more Technologies
13	160115737037	Mandapati Chandrabas	Present curriculum would do but needs to be	Instead of labs, encourage students to develop project in
14	160115737038	Deekshith Ganapuram	Needs to be updated	None
15	160115737040	Ch. Eswar	Satisfactory	Remove topics not related to IT and implement more core
16	160115737042	Koushik	Good with the present	Using new Technologies
17	160115737046	G. Pavan Raj	Good	Real time coding challenges.
18	160115737049	Kadavari Rohith	Good	Real time coding challenges.
19	160115737050	Jagannath	DS, Java, C, C++, SE,	Include real time application
20	160115737053	Siddarth P	Subjects like DS are	VLSI, VHDL might be skipped
21	160115737059	Vishal anand	Satisfactory. Would like	
22	160115737309	M. Kishore	Good	Should teach realtime
23	160115737061	Akhila Jakkam	Useful when we work in	Add extra sessions for different
24	160115737062	A. A. Ananya	Very useful	More of practical
25	160115737063	Gajja Anusha		More of practical
26	160115737064	B. Deepika		More of practical
27	160115737065	Indrani Budigem	Very useful we worked	



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Professor & Head
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2018-19 (IT1)					
S.No	Roll No	Name	IT Curriculum is useful for your Employment	Suggestions for improvement of Curriculum	Actions Taken
1	160115737003	Anjana Bytha	Needs to be updated	Python can be included	Introduced in R18 Syllabus
2	160115737004	D. Anjani	Yes	Labs, Faculty availability	is supported with faculty and Technocal staff
3	160115737005	G. Aparna	Good	Lab for distributing, soft, mobile computing as mandatory or elective subject	
4	160115737006	V. Apoorva	Very good	More Focus on Industry requirements	technologies are incororaed while guiding /doing Mini
5	160115737007	P Ashritha	Can be improved	Can be updated to current	
6	160115737009	Brahmani Thota	Practical knowledge is lacking	Python, Block chain development can be included.	Introduced in R18 Syllabus
7	160115737010	B. Charitha reddy	Very useful	None	
8	160115737014	M. Jyothsna	3	Should remove all the subjects	are introduced in R18/R20 Syllabus
9	160115737020	E. Preethi	Excellent	Can add .Net and Python	Web Technology course has been

10	160115737024	Sai Tejaswi	So far it has been quite useful. Having studied AI, ML, Distributed Systems helped a lot	Introduce group projects >6 students	
11	160115737028	Ogety Shreya	Good	Real time coding challenges.	Students are advised to participate in Hackathons , SIHand other coding
12	160115737036	Annam Chakravarthy	Good	Need to add more Technologies	
13	160115737037	Mandapati Chandrahas Reddy	Present curriculum would do but needs to be updated	Instead of labs, encourage students to develop project in that field	
14	160115737038	Deekshith Ganapuram	Needs to be updated	None	
15	160115737040	Ch. Eswar	Satisfactory	Remove topics not related to IT and implement	
16	160115737042	Koushik Gadapale	Good with the present curriculum	Using new Technologies	
17	160115737046	G. Pavan Raj	Good	Real time coding challenges.	
18	160115737049	Kadavari Rohith	Good	Real time coding challenges.	

19	160115737050	Jagannath Saragadam	DS, Java, C, C++, SE, AI/ML Useful. There are few unnecessary unrelated subjects.	Include real time application based learning.	
20	160115737053	Siddarth P	Subjects like DS are useful	VLSI, VHDL might be skipped	These courses are shifted to Professional Electives
21	160115737059	Vishal anand CH	Satisfactory. Would like a coding club line in OU for placements		
22	160115737309	M. Kishore	Good	Should teach realtime problems	

2018-19 (IT2)

S.No	Roll No	Name	IT Curriculum is useful for your Employment	Suggestions for improvement of Curriculum	Actions Taken
1	160115737061	Akhila Jakkam	Useful when we work in MNC Companies.	Add extra sessions for different technical languages.	Tutorial Classes are introduced

2	160115737062	A. A. Ananya	Very useful	More of practical implementations would be useful.	Case studies are given as part of Lab Internals and Assignments
3	160115737063	Gajja Anusha		More of practical implementations would be useful.	
4	160115737064	B. Deepika		More of practical implementations would be useful.	
5	160115737065	Indrani Budigem	Very useful we worked on various technologies		
6	160115737066	Kavya Nannapaneni	useful very much because we worked on various technologies	Remove the subjects which are not useful for IT students like engineering workshop and spend more classes on learning different technologies.	Latest Lab courses like AI tools and Techniques are introduced
7	160115737067	Nihitha V	Very useful data structures.	can include more of practical learning than theory	
8	160115737068	Ravali Devi	Very good	Maintain good infrastructure in class room give	
9	160115737069	Rishi Chandana. Ch	useful very much today everything is based in IT technologies	Remove subjects which are not usefugul for the students include emerging technologies. More Practical skills needed.	

10	160115737070	Roshini Pally	Very useful	Improve Practical Learning. More Practical studies	
11	160115737071	Sai Deepa Bhavani Peri	Very good	Internship feasible final year course	
12	160115737072	G. Sai Rishitha	For Placements	Inmprove Practical Learning	
13	160115737073	Sandhya Lingamalla		Improve practical learning rather than focusing	
14	160115737074	Sathya Sri Pasham	It helped me understand various core concepts like datamining, image processing etc.		
15	160115737075	Sahik Kareema		Should include latest	
16	160115737076	B. Shreeshma	Useful for higher studies	Yes, include ongoing technologies	
17	160115737077	B. Shurutha Rathore	Useful if we work in MNC's	Provides sessions for extra curricular activities.	
18	160115737078	P. Sindhu	Useful if we work in MNC's	Provides sessions for extra curricular activities.	
19	160115737079	Sneha Reddy	Useful for understanding any new technology in real time	Include new technology subjects for optional. Let students take NPTEL Courses for optional (More choice and	Encouraged to do MOOC courses and slip tests are introduced through LMS

20	160115737080	Tanishka Vegunta	Helps form basis for understanding emerging technologies.	Include web technologies lab have new technology subjects for optional	
21	160115737081	Varalakshmi	Useful for placement and projects	Include emerging domains	
22	160115737082	T. Vigna Shree	Useful for placement and projects	Include latest technologies in labs	
23	160115737092	V. Anirudh Priyatham	Teach current trending technologies		
24	160115737094	M. Bhargav Reddy		Should teach the cureent technologies	
25	160115737097	L. Jatin	It is very useful has so much scope	can implement new technologies into the curriculum, improving the	
26	160115737098	J. S.Krishna Teja	Not much	Emphasis on student learning rather than going	
27	160115737100	B. Naga Akhil	Not much	Include only It related new	
28	160115737102	Pratik saxena	Need more practice in coding of new technologies.	More tough coding questions atleast for practices.	
29	160115737104	N.K. Ritesh	Just enough	Include programming	

30	160115737105	Rohit sai		Non-Core some subjects can be	
31	160115737106	Sai Kiran Charan	Yes it to be useful	Should include latest	
32	160115737107	P. Sai Kranthi Kiran	Good gives fundamentals	Including ML, Python, etc. increase practicals decrease classes.	
33	160115737115	Suraj B	Good	Emove ECE related subjects like comp., VLSI(minimize Course). Remove Lab in 4-2. student clubs must be encouraged for overall personality development.	
34	160115737120	T. Akshitha Reddy	Good more practicals would be better	teach current technologies and reduce syllabus.	
35	160115737318	E. Prem Raj	Good	Remove other branches subjects	


 Head Dept. of IT
 CBIT, Hyderabad

CHAITANYABHARATHI INSTITUTE OF TECHNOLOGY(A)
Choice Based Credit System (with effect from 2019-20)
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	16IT C31	Embedded Systems and Internet of Things	3	-	3	30	70	3
2	16IT C32	Distributed Systems	3	-	3	30	70	3
3	16IT C33	Information Security	3	-	3	30	70	3
4	16IT C34	Big Data Analytics	3	-	3	30	70	3
5		Elective -IV	3	-	3	30	70	3
6		Elective -V	3	-	3	30	70	3
PRACTICALS								
7	16IT C35	Big Data Analytics Lab	-	3	3	25	50	2
8	16IT C36	Embedded Systems and IoT Lab	-	3	3	25	50	2
9	16IT C37	Project Seminar	-	3	-	50	-	2
		TOTAL	18	9	-	280	520	24

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

P: Practical
SEE-Semester End Examination

Elective-IV		
S.No.	Subject Code	Subject Name
1.	16IT E10	Human Computer Interaction
2.	16IT E11	Soft Computing
3.	16IT E12	VLSI Technology

Elective -V		
S.No.	Subject Code	Subject Name
1.	16IT E13	Natural Language Processing
2.	16IT E14	Mobile Computing
3.	16IT E15	Business Intelligence

16ITC 31**EMBEDDED SYSTEMS AND INTERNET OF THINGS**

Instruction	3L Hours per week
Duration of End Examination	3 Hours
Semester End Examination	70 Marks
CIE	30 Marks
Credits	3

Course Objectives: This course is introduced to

1. Explore theoretical aspects of the design and development of an embedded system.
2. Provide an overview of basic concepts, structure and development of embedded systems using 8051.
3. Familiarize students with programming using 8051 and advanced processors.
4. Facilitate the Internet of Things, building blocks of IoT and the real world applications
5. Acquire knowledge of Raspberry Pi device, its interfaces and Django Framework.
6. Comprehend on domain specific applications of IoT.

Course Outcomes: After successful completion of this course, student will be able to

1. Acquire knowledge and skill in development of embedded systems.
2. Design and develop embedded systems using 8051.
3. Demonstrate real-time and advanced processor concepts.
4. Describe the role of things and Internet in IoT and determine the IoT levels for designing an IoT system.
5. Learn design methodology for IoT system design.
6. Describe about the Raspberry Pi board and interfacing sensors with Raspberry Pi and work with python based web application framework called Django.

Course Prerequisites: Digital Electronics and Logic Design (16ITC04), Computer Organization (16ITC11)

UNIT-I

Embedded Computing: Introduction, Complex Systems and Microprocessor, Embedded System Design Process. The 8051 Architecture: Introduction, 8051



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		
			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	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

18IT C29

INTERNET OF THINGS

Instruction	3 Hours per week
Duration of SEE	3 Hours
SEE	70 Marks
CIE	30 Marks
Credits	3

Course Objectives:

1. To provide an overview of Internet of Things, building blocks of IoT and real-world applications.
2. To explore various IoT enabling technologies.
3. To facilitate with Python scripts.
4. To identify steps in IoT design Methodology.
5. To introduce about the Raspberry Pi device, its interfaces and Django Framework.

Course Outcomes:

Upon successful completion of this course, students will be able to:

1. Outline the terminology, protocols, Communication models and Communication APIs of IoT.
2. Define the various IoT enabling technologies, Levels, Domain specific Applications and differentiation between M2M and IoT.
3. Make use the basics of Python Programming for developing IoT applications.
4. Infer the steps involved in IoT platform design methodology and interpret physical devices like Raspberry Pi3.
5. Analyze Data with Physical servers and develop web applications using Django frame work.

UNIT-I

Introduction: Internet of Things- Definitions & Characteristics of IoT, Physical Design of IoT-Physical Layer, Network Layer, Transport Layer, Application Layer, Things in IoT, IoT Protocols, Logical Design of IoT-IoT Functional Blocks, IoT Communication Models-Request-response, Publisher-Subscriber, Push-Pull, Exclusive Pair, IoT Communication APIs-REST API, Websocket API.

UNIT-II

IOT Enabling Technologies: Wireless Sensor Networks, Cloud Computing, Big Data Analytics, Communication Protocols, Embedded Systems, IoT Levels and Deployment Templates. M2M, Differences and similarities between IoT and M2M, SDN and NFV for IoT. **Domain Specific IoT** – IoT applications for Home Automation, Cities, Environment, Energy, Retail, Logistics, Agriculture, Industry, health and Lifestyle.

UNIT-III

Introduction to Python: Motivation for using Python for designing IoT systems, Language features of Python, Data types- Numbers, Strings, Lists, Tuples, Dictionaries, Type Conversions, Data Structures: Control of flow- if, for, while, range, break/continue, pass functions, modules, packaging, file handling, data/time operations, classes, Exception handling.

UNIT-IV

IoT Platforms Design Methodology: Introduction, IoT Design Methodology Steps-Purpose and Requirements Specification, Process Specification, Domain Model Specification, Information Model Specification, Service Specifications, IoT Level Specification, Functional View Specification, Operational View Specification, Device and Component Integration, Application Development, Case Study on IoT System for Weather Monitoring.

IoT Physical Devices and End Points: Basic building blocks of an IoT device, Raspberry Pi About the Raspberry Pi board, Raspberry Pi interfaces-Serial, SPI, I2C, Other IoT Devices pcDuino, Beagle Bone Black, Cubie board.

UNIT-V

IoT Physical Servers and cloud offerings: Introduction to cloud storage models and communication APIs, WAMP, Xively cloud for IoT, Python Web Application Framework: Django Framework Django Architecture, Designing a RESTful Web API, Amazon web services for IoT. SkyNet IoT messaging platform.

CHAITANYABHARATHI INSTITUTE OF TECHNOLOGY(A)
Choice Based Credit System (with effect from 2019-20)
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	16IT C31	Embedded Systems and Internet of Things	3	-	3	30	70	3
2	16IT C32	Distributed Systems	3	-	3	30	70	3
3	16IT C33	Information Security	3	-	3	30	70	3
4	16IT C34	Big Data Analytics	3	-	3	30	70	3
5		Elective -IV	3	-	3	30	70	3
6		Elective -V	3	-	3	30	70	3
PRACTICALS								
7	16IT C35	Big Data Analytics Lab	-	3	3	25	50	2
8	16IT C36	Embedded Systems and IoT Lab	-	3	3	25	50	2
9	16IT C37	Project Seminar	-	3	-	50	-	2
		TOTAL	18	9	-	280	520	24

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

P: Practical
SEE-Semester End Examination

Elective-IV		
S.No.	Subject Code	Subject Name
1.	16IT E10	Human Computer Interaction
2.	16IT E11	Soft Computing
3.	16IT E12	VLSI Technology

Elective -V		
S.No.	Subject Code	Subject Name
1.	16IT E13	Natural Language Processing
2.	16IT E14	Mobile Computing
3.	16IT E15	Business Intelligence

16ITC 31**EMBEDDED SYSTEMS AND INTERNET OF THINGS**

Instruction	3L Hours per week
Duration of End Examination	3 Hours
Semester End Examination	70 Marks
CIE	30 Marks
Credits	3

Course Objectives: This course is introduced to

- Explore theoretical aspects of the design and development of an embedded system.
- Provide an overview of basic concepts, structure and development of embedded systems using 8051.
- Familiarize students with programming using 8051 and advanced processors.
- Facilitate the Internet of Things, building blocks of IoT and the real world applications
- Acquire knowledge of Raspberry Pi device, its interfaces and Django Framework.
- Comprehend on domain specific applications of IoT.

Course Outcomes: After successful completion of this course, student will be able to

- Acquire knowledge and skill in development of embedded systems.
- Design and develop embedded systems using 8051.
- Demonstrate real-time and advanced processor concepts.
- Describe the role of things and Internet in IoT and determine the IoT levels for designing an IoT system.
- Learn design methodology for IoT system design.
- Describe about the Raspberry Pi board and interfacing sensors with Raspberry Pi and work with python based web application framework called Django.

Course Prerequisites: Digital Electronics and Logic Design (16ITC04), Computer Organization (16ITC11)

UNIT-I

Embedded Computing: Introduction, Complex Systems and Microprocessor, Embedded System Design Process. The 8051 Architecture: Introduction, 8051

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)
Choice Based Credit System (with effect from 2018-19)
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	16ITC16	Principles of Operating Systems	3	-	3	30	70	3
2	16ITC17	Database Systems	3/1	-	3	30	70	4
3	16ITC18	Software Engineering	3	-	3	30	70	3
4	16ITC19	Web Technology	3	-	3	30	70	3
5	16ITC20	Theory of Automata	3/1	-	3	30	70	4
		Elective - I	3	-	3	30	70	3
PRACTICALS								
6	16ITC21	Operating Systems and Web Technology Lab	-	3	3	25	50	2
7	16ITC22	Database Systems Lab	-	3	3	25	50	2
8	16ITC23	Mini Project-III	-	2	-	50	-	1
TOTAL			20	8	-	280	520	25


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

Elective-I

S.No.	Subject Code	Subject Name
1.	16ITE01	Python Programming
2.	16ITE02	UNIX and Shell Programming
3.	16ITE03	Scripting Languages

Dept.of IT , CBIT -Teachers Feedback 2018-19

Name of the Faculty	Email Id (Eg:ksugam)	Name of the Faculty	Actions Taken
Dr B.Veera Jyothi	veerajyothi_it@cbit.ac.in	Good	
Sirisha Alamanda	asirisha_it@cbit.ac.in		
T Prathima	tprathima_it@cbit.ac.in	Options are open to students to excel in domains of their interest; Faculty must be provided hands-on training on latest courses; Faculty must be trained on OBE	More options with many electives subjects are included in the R18 syllabus
Dr M Trupthi	mtrupthi_it@cbit.ac.in	added the edge cutting technologies	
sugamya katta	ksugamya_it@cbit.ac.in	More Electives are included	Included in R18 Syllabus
Satya Kiranmai Tadepa	tskiranmai_it@cbit.ac.in	Good	
U Sairam	usairam_it@cbit.ac.in	Good	
S.Rakesh	srakesh_it@cbit.ac.in	Good	
NVS SRIDEVI KELLA	nvssridevikella@gmail.	Good	
Beri.Surya Samantha	suryasamantha_b@srm	courses on aptitude communication skills can be introduced.	Soft skills classes are conducted by English Deptment
R Govardhan Reddy	rgovardhanreddy_it@c	Good	


Head Dept. of IT
CBIT, Hyderabad

CHAITANYABHARATHINSTITUTE OF TECHNOLOGY(A)
AICTE Model Curriculum (with effect from 2019-20)
B.E. (Information Technology)

Semester– III

S.No	Course Code	Title of the Course	Scheme of Instruction		Scheme of Examination			Credits
			Hours per Week	P/D	Duration of SEE in Hours	Maximum Marks	CIE	
THEORY								
1	18IT C04	Data Structures and Algorithms	3	-	3	30	70	3
2	18IT C05	Discrete Mathematics and Applications	3	-	3	30	70	3
3	18EC C34	Basic Electronics	3	-	3	30	70	3
4	18ME C09	Principles of Management	3	-	3	30	70	3
5	18EE C01	Basic Electrical Engineering	3/1	-	3	30	70	4
6	18CE M01	Environmental Science	2	-	2	-	50	Non-Credit
PRACTICALS								
7	18IT C06	Data Structures and Algorithms Lab	-	2	2	15	35	1
9	18IT C08	Mini Project – I	-	2	-	50	-	1
10	18EC C35	Basic Electronics Lab	-	2	2	15	35	1
11	18EG C03	Soft Skills	-	2	2	15	35	1
12	18EE C02	Basic Electrical Engineering Lab	-	2	2	15	35	1
		TOTAL	17/1	10	-	260	540	21

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

18IT C04**DATA STRUCTURES AND ALGORITHMS**

Instruction 3 Hours per week
Duration of SEE 3 Hours
SEE 70 Marks
CIE 30 Marks
Credits 3

Course Objectives:

- To introduce representation, specification, and applications of various linear and nonlinear data structures.
- To familiarize with asymptotic analysis of iterative and recursive functions.
- To acquaint with various pattern matching algorithms.
- To present different sorting algorithms.
- To introduce hashing and collision handling.

Course Outcomes: Upon completing this course, students will be able to:

- Provide optimal solutions using linear and nonlinear data structures.
- Analyse time complexity of both iterative and recursive functions.
- Perform pattern matching.
- Understand various sorting algorithms and their performance
- Understand hash functions and collision handling.

UNIT-I


Using Arrays, Storing Game Entries in an Array, Two-Dimensional Arrays. Singly Linked Lists, Implementing a Singly Linked List, Insertion to the front of a Singly Linked List, Removal from the front of a Singly Linked List. Doubly Linked Lists, Insertion into a Doubly Linked List, Removal from a Doubly Linked List, Circularly Linked Lists, Reversing a Linked List. Recursion, Linear Recursion, Binary Recursion, Multiple Recursion, Analysis of Algorithms.

UNIT-II

Stacks, the Stack Abstract Data Type, the STL Stack, A C++ Stack Interface, A Simple Array-Based Stack Implementation, Implementing a Stack with a Generic Linked List, Reversing a Vector Using a Stack, Matching Parentheses and HTML Tags, Queues, the Queue Abstract Data Type, the STL Queue, a C++ Queue Interface, a Simple Array-Based Implementation, Implementing a Queue with a Circularly Linked List. Double-Ended Queues, the Deque Abstract Data Type, the STL Deque, Implementing a Deque with a Doubly Linked List.

Dept.of IT,CBIT. 2018-19

S.No	Alumni Name	Suggestions for improvement of Curriculum
1	Niharika(1601-14-737-019)	Python
2	Ritesh(1601-14-737-049)	Nothing
3	Vanga Shankar reddy	Mini projects on Latest Technologies
4	Chandra Gupta Mourya Kaliki	More credits to Labs and Introduce Machine Learning subject


Head Dept. of IT
CBIT, Hyderabad



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)

AICTE Model Curriculum (with effect from 2020-21)

B.E. (Information 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/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
LABORATORY								
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

With effect from Academic Year 2020-21

Core Elective-3		
S.No.	Subject Code	Subject Name
1.	18IT E09	Social Media Analytics
2.	18IT E10	Virtual Reality
3.	18IT E11	Soft Computing
4.	18IT E12	Mobile Commerce

Core Elective-4		
S.No.	Subject Code	Subject Name
1.	18IT E13	Data Science with Python
2.	18IT E14	Digital Image Processing and Analysis
3.	18IT E15	Artificial Neural Networks and Deep Learning
4.	18IT E16	Cyber Security

Open Elective-1		
S.No.	Subject Code	Subject Name
1.	18BT O01	Basics of Biology
2.	18EG O02	Gender Sensitization
3.	18ME O04	Research Methodologies
4.	18MT O02	Graph Theory

18IT C22

ARTIFICIAL INTELLIGENCE

Instruction	3 Hours per week
Duration of SEE	3 Hours
SEE	70 Marks
CIE	30 Marks
Credits	3

Course Objectives:

1. Learn problem solving through search techniques.
2. Familiarize with knowledge representation and logical reasoning techniques in AI.
3. Learn probabilistic reasoning models on uncertain data.
4. Acquaint with supervised and reinforcement learning.
5. Learn syntax and semantic analysis of the natural language.

Course Outcomes:

Upon successful completion of this course, students will be able to:

1. Understand the basics of AI and analyze various Exhaustive and Heuristic Search Techniques.
2. Apply logical concepts and representation techniques to infer knowledge.
3. Understand quantification of uncertainty and evaluate data using probabilistic reasoning models.
4. Apply the techniques of supervised and reinforcement learning on data.
5. Process Natural Language and perform syntax & semantic analysis.

UNIT-I

Introduction: The Foundations of AI, History of AI. Intelligent agents – Agents and Environments, Good Behavior: The Concept of Rationality, The Nature of Environments, The Structure of Agents.

Solving problems by searching: Problem Solving Agents, Example Problems, Searching for Solutions, Uninformed Search Strategies, Informed Search Strategies, Heuristic Functions.

Adversarial search: Games, Optimal decisions in games, Alpha-Beta Pruning. Constraint Satisfaction Problems- Defining constraint satisfaction Problems.

UNIT-II

Logic Concepts and Logic Programming: Introduction, Propositional Calculus, Propositional Logic, Natural Deduction System, Axiomatic System, Semantic Tableau System in Propositional Logic, Resolution Refutation in Propositional Logic, Predicate Logic, Logic Programming.

Knowledge Representation: Introduction, Approaches to Knowledge Representation, Knowledge Representation using Semantic Network, Extended Semantic Networks for KR, Knowledge Representation using Frames.

UNIT-III

Quantifying Uncertainty: Acting under Uncertainty, Basic Probability Notation, Inference Using Full Joint Distributions, Independence, Bayes' Rule and its Use.

Probabilistic Reasoning: Representing Knowledge in an Uncertain Domain, The Semantics of Bayesian Networks, Efficient Representation of Conditional Distributions, Exact Inference in Bayesian Networks.

Probabilistic Reasoning over Time: Time and Uncertainty, Inference in Temporal Models, Hidden Markov Models, Kalman Filters.

UNIT-IV

Learning from Examples: Forms of Learning, Supervised Learning, Learning Decision Trees, Evaluating and Choosing the Best Hypothesis, The Theory of Learning, Regression and Classification with Linear Models, Artificial Neural Networks, Nonparametric Models, Support Vector Machines.

Learning Probabilistic Models: Statistical Learning, Learning with Complete Data.

Learning with Hidden Variables: The EM Algorithm

Reinforcement Learning: Passive reinforcement learning, direct utility estimation, adaptive dynamic programming, temporal difference learning, active reinforcement learning-Q learning.

UNIT-V

Natural Language Processing: Language Models, Text Classification, Information Retrieval, Information Extraction.

Natural Language for Communication: Phrase Structure Grammars, Syntactic Analysis, Augmented Grammars and Semantic Interpretation.

Text Books:

1. Stuart Russell, Peter Norvig, "Artificial Intelligence: A Modern Approach" , Prentice Hall, 3rd Edition.
2. Saroj Kaushik, "Artificial Intelligence", Cengage Learning India, 2011.


Suggested Reading:

1. Nilsson, N., "Artificial Intelligence: A New Synthesis", San Francisco, Morgan Kaufmann, 1998.
2. Rich, Knight, Nair: "Artificial intelligence", Tata McGraw Hill, Third Edition, 2009.
3. Tom M. Mitchell, "Machine Learning", McGraw Hill, 1997.
4. Kulkarni, Parag, Joshi, Prachi , "Artificial Intelligence : Building Intelligent Systems", PHI, 2015.
5. Peter Jackson, "Introduction to Expert Systems", Third Edition, Pearson Addison Wesley, 1998.

Web Resources:

1. https://onlinecourses.nptel.ac.in/noc19_cs19/
2. <https://www.coursera.org/learn/ai-for-everyone>

Dept.of Information Technology,CBIT, Employer Survey Responses-2018-19					
Name of the	Name of th	How lon	Name(s) o	Suggest few Courses	Action Taken
Moengage	Moengage	2018	Na	Na	
Dbz bank	DTI	2018	Mukesh Ma	Project management, testing tools, requirements analysis and gathering	In VIII Sem Entrepreneurship


 Head Dept. of IT
 CBIT, Hyderabad

UNIT-IV

Project Management: Definition, Procedure and Objectives of Project Management, Differences between PERT and CPM, Rules for drawing Network diagram, Scheduling the activities, Fulkerson's rule, Earliest and Latest times, Determination of critical path, duration of the project

UNIT-V

Sequencing Models: Introduction, General assumptions, processing 'n' jobs through two machines, processing 'n' jobs through three machines.

Text Books:

1. Hamdy, A. Taha, "Operations Research-An Introduction", Prentice Hall of India Pvt. Ltd., 6th Edition, 1997.
2. S.D. Sharma, "Operations Research", Kedarnath, Ramnath & Co., Meerut, 2009.
3. V.K. Kapoor, "Operations Research", S. Chand Publishers, New Delhi, 2004.

Suggested Reading:

1. Harvey M. Wagner, "Principles of Operations Research", 2nd Edition, Prentice Hall of India Ltd., 1980.
2. R. Paneer Selvam, "Operations Research", Second Edition, PHI Learning Pvt. Ltd., New Delhi, 2008
3. Nita H. Shah, Ravi M. Gor, Hardik Soni, "Operations Research", PHI Learning Private Limited, 2013

16ME O01

ENTREPRENEURSHIP
(Open Elective - II)

Instruction	3L Hours per week
Duration of End Examination	3 Hours
Semester End Examination	70 Marks
CIE	30 Marks
Credits	3

Course Objectives: Student will understand

1. The environment of industry and related opportunities and challenges
2. Concept and procedure of idea generation
3. Elements of business plan and its procedure
4. Project management and its techniques
5. Behavioral issues and Time management

Course Outcomes: After completing this course, students will be able to:

1. Identify opportunities and deciding nature of industry
2. Brainstorm ideas for new and innovative products or services
3. Analyze the feasibility of a new business plan and preparation of Business plan
4. Use project management techniques like PERT and CPM
5. Analyze behavioural aspects and use time management matrix

UNIT-I

Indian Industrial Environment: Competence, Opportunities and Challenges, Entrepreneurship and Economic growth, Small Scale Industry in India, Objectives, Linkage among small, medium and heavy industries, Types of enterprises, Corporate Social Responsibility.

UNIT-II

Identification and Characteristics of Entrepreneurs: First generation entrepreneurs, environmental influence and women entrepreneurs, Conception and evaluation of ideas and their sources, Selection of Technology, Collaborative interaction for Technology development.

UNIT-III

Business Plan: Introduction, Elements of Business Plan and its salient features, Technical Analysis, Profitability and Financial Analysis, Marketing Analysis, Feasibility studies, Executive Summary.

UNIT-V

Project Management: During construction phase, project organization, project planning and control using CPM, PERT techniques, Human aspects of project management, Assessment of tax burden

UNIT-V

Behavioral Aspects of Entrepreneurs: Personality, determinants, attributes and models, Leadership concepts and models, Values and attitudes, Motivation aspects, Change behavior

Time Management: Approaches of time management, their strengths and weaknesses. Time management matrix and the urgency addiction

Text Books:

1. Vasant Desai, "Dynamics of Entrepreneurial Development and Management", Himalaya Publishing House, 1997.
2. Prasanna Chandra, "Project-Planning, Analysis, Selection, Implementation and Review", Tata Mcgraw-Hill Publishing Company Ltd. 1995.
3. S.S. Khanka, "Entrepreneurial Development", S. Chand & Co. Pvt. Ltd., New Delhi

Suggested Reading:

1. Robert D. Hisrich, Michael P. Peters, "Entrepreneurship", 5/e, Tata Me Graw Hill Publishing Company Ltd., 2005.
2. Stephen R. Covey and A. Roger Merrill, "First Things First", Simon and Schuster Publication, 1994.
3. Sudha G.S., "Organizational Behavior", National Publishing House, 1996.

16ME O03

HUMAN RIGHTS AND LEGISLATURE PROCEDURES
(Open Elective - II)

Instruction	3L Hours per week
Duration of End Examination	3 Hours
Semester End Examination	70 Marks
CIE	30 Marks
Credits	3

Course Objectives: To help students

1. To understand the value of human rights
2. To understand the Lawful rights available to him and others
3. To create understanding the rights of under privileged and respect them
4. To understand role of an individual in the Civil Society
5. To understand the safety aspects while using technology and to understand the role of NGO's in protecting human rights and environment.

Course Outcomes: At the end of the course student

1. will understand the process of evolution of human rights
2. Will understand constitutional protection available
3. Will understand the conditions of under privileged persons and will adopt a positive attitude towards.
4. Will understand the role of Law in protecting environment and will recognize right to life.
5. Will understand the safe means of using advanced technology and become part of NGO's in protecting human rights and environment.

UNIT-I

Meaning and Concept of Human Rights: Notion and classification of Rights, Moral and Legal Rights, Three generations of rights (Civil, and Political Rights, Economic Social and Cultural Rights, Collective/Solidarity Rights), Indian Bill of Rights and Sarodaya, Preamble of Indian Constitution, Fundamental Rights-Directive Principles-Fundamental Duties

UNIT-II

Human Rights Enforcement Mechanism: Human Rights Act, 1993, Judicial organs-Supreme Court (Art 32) and High Court (Art 226), Human Rights