

Sharath NSTITUTE OF HIGHER EDUCATION AND RESEARCH



(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

Date: 04.07.2021

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "Spring framwork" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course "Spring framework" -Reg in our campus premises on 11.07.2021, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 1:30 PM to 4:30 PM(AN)

Submitted to Principal for approval to organize this value-added course.

DEAN ENGINEERING

HEAD OF DEPARTMENT

Department of Computer Scie & Engg.,

Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennai-600 073. INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

04.07.2021

The School of computing, BharathInstitute of Higher Education and Research is planned to conduct a certification value added course on "Spring Framework "for the benefit of II, III and IV year students. This course is scheduled from 11.07.2021 for 30 hours which includes theory and practical. The timings are I:30PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course

SNo	Name of the Faculty	Designation
1	Mr.K.Sivaraman	Assistant Professor
2	Mr.B.Sundarrajan	Assistant Professor

Copy to CSE

Copy to IT

To

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA

neau or Department



CERTIFICATE COURSE ON SPRING FRAMEWORK

Date of Introduction of the Course: 11.07.2021

COURSE SYLLABUS

1. Basics of Spring

What is Spring-Spring Modules -Spring Application -Spring with IDE -Spring in Myeclipse-Spring in Eclipse.

2. Understanding IOC and Dependency Injection

Constructor Injection -CI Dependent object-CI with collection -CI with Map-CI Inheriting Bean -Setter Injection-SI Dependent Object-SI with Collection -SI with Map-CI vs SI Auto wiring -Factory Method.

3. Spring AOP

AOP Terminology - AOP Implementations - Pointcut-Advices.

4. Spring JDBC

Jdbc Template Example –Prepared Statement –Result Set Extractor –Row Mapper –Name Parameter –Simple Jdbc template.

5. Spring with ORM

Spring with Hibernate –Spring with JPA.

6. SpEL

SpEL Examples -operators in SpEL- Variable in SpEL.

7. Spring 3 MVC Remoting with Spring

Spring with RMI –Http Invoker –Hessian –Burlap – Spring with JMS.

8. OXM Frameworks

Spring with JAXB- Spring with Xstream - Spring with Castor.

COURSE OBJECTIVES

Getting the student to be well trained in JAVA Programming skills for an easy entry in the IT industry

Specifically, the course has the following objectives:

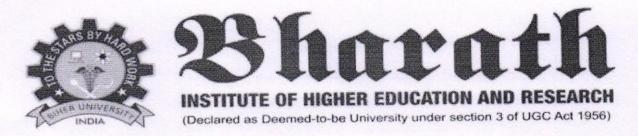
Students will learn

- 1) Make J2EE easier to use
- 2) Eliminate need for middle tier "glue"
- 3) Provide the best Inversion of Control solution
- Provide a pure Java AOP implementation, focused on solving common problems in J2EE
- 5) Fully portable across application servers

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
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Chennal-600 073. INDIA



CERTIFICATE COURSE ON SPRING FRAMEWORK

Date of Introduction of the Course: 11.07.2021

The timings are 1:30 PM to 4:30 PM

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	11-07-2021(AN)	1.Basics of Spring
-,-		What is Spring -Spring Modules -Spring
		Application
3,4	15-07-2021(FN)	2.IDE
-,-		Spring with IDE -Spring in Myeclipse -Spring in
		Eclipse.
5,6	16-07-2021(AN)	3.Understanding IOC
		Constructor Injection -CI Dependent object-CI with
	16 07 2021(AN)	collection –CI with Map-CI Inheriting.
7,8	16-07-2021(AN)	4. Dependency Injection SI Dependent Object-SI with Collection –SI with
	and the second	Map-CI vs SI Auto wiring –Factory Method
		Wap-Ci vs 51 Auto willing Tuctory Methodis
9,10	22-07-2021(AN)	5. Spring AOP
2,10		AOP Terminology -AOP Implementations
		-Pointcut-Advices.
11,12	23-07-2021(FN)	6.Spring JDBC
,		Jdbc Template Example –Prepared Statement
13,14	23-07-2021(AN)	7.Extractor
		Result Set Extractor –Row Mapper –NameParameter
		-Simple Jdbc template.
15,16	29-07-2021(AN)	8.Spring with ORM
	20.07.2021(137)	Spring with Hibernate –Spring with JPA.
17,18	30-07-2021(AN)	9.SpEL SpEL Examples –operators in SpEL- Variable in
		SpEL Examples -operators in SpEL- variable in SpEL.
10.20	30-07-2021(FN)	10. Spring 3 MVC
19,20	30-07-2021(111)	Spring with RMI –Http Invoker
21,22	05-08-2021(AN)	11.Remoting with Spring
21,22	13 00(-2.1)	Hessian –Burlap – Spring with JMS.
23,24	06-08-2021(AN)	12.OXM Frameworks
,		Spring with JAXB- Spring with Xstream -Spring
		with Castor.
25,26	06-08-2021(AN)	13. Dependency Injection
		SI Dependent Object-SI with Collection -SI with
		Map-CI vs SI Auto wiring –Factory Method

27,28	12-08-2021(FN)	14.Spring AOP AOP Terminology –AOP Implementations –Pointcut-Advices.
29,30	13-08-2021(AN)	15. OXM Frameworks Spring with JAXB- Spring with Xstream -Spring with Castor.

COURSE COORDINATOR

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Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
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Chennal-600 073, INDIA



CERTIFICATE COURSE ON SPRING FRAMEWORK Date of Introduction of the Course: 11.07.2021

School of Computing Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS001	AADHITYA MALLIKA ARJUN
2	U14CS003	ABDUL RAHIM.M
3	U14CS004	ABDUL RAZVI .M.K
4	U14CS006	ABHIKAMALI .A
5	U14CS007	ABHISHEK MANDURI
6	U14CS008	AJAY.D
7	U14CS009	AKASH CHANDRA AMBASTHA
8	U14CS010	AKHIL REDDY.G
9	U14CS012	AMAR BASUMATARY
10	U14CS013	ANDREW JOSEPH.V
11	U14CS015	ANKITA
12	U14CS016	ANNILKRISHNAN .K
13	U14CS017	ASHUTOSH SRIVASTAVA
14	U14CS019	ARAMBAKAM,YASWANTH
15	U14CS021	AREEF SYED
16	U14CS022	ARUN KUMAR SINGH
17	U14CS023	ASIF NAZIR WANI
18	U14CS024	ATUL ANAND
19	U14CS025	BACHU HARISH
20	U14CS027	BALAJI SINGH. T
21	U14CS029	BALAKRISHNAN.T
22	U14CS031	BISHAL BANIK
23	U14CS033	BOORAGADDA VAMSI KRISHNA
24	U14CS034	BOYAPATI VINAY
25	U14CS035	BYSANI VENKAT SANDEEP

26	U14CS038	CHIDIRALA.SAI SHANKAR
27	U14CS040	CHINTAPANTI SRIKANTH
28	U14CS041	CHINTLA VENKATESH
29	U14CS042	CHUDAAMANI.V
30	U14CS045	DEEPAKSANKAR REDDY.M
31	U14CS046	DEVARAPALLI HIMAKAR
32	U14CS047	DEVULAPALLY NAGARAJU
33	U14CS048	DIVYA RUPINI.B

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA





CERTIFICATE OF PARTICIPATION

This certificate is presented to

DIVYA RUPINI.B

For actively participating in the value added course on "Spring Framework"

Conducted by School of Computing, BIHER from 11.07.2021 to 13.08.2021.

COURSE COORDINATORS DIRECTOR

COURSE FEEDBACK FORM

Anada	mic Year			2021	-20	22					
	mic rear			2021	- 20						
Term	Number				WE SE						
Course		-		0. 0.		0					
			5	Pri	ng	rrame	WOYLC			SHEET	
Number of Credits Type of Course Regular					Elec	tive		Add-on	T	_	
Type	of Course	Keg	guiai		Lice	itive		Aud-on			
I.	Informati	on on th	e Respondent: (T	Fick (sh	Annro	nriately)					
1.	Imormati	on on th	e Respondent: (1	ick (v)	Аррго	priately)					
1.	Percentag	e of clas	ses attended								
	0-20		20-40		40)-60	60-80	0	80-		
									100		
2.	Number o	of hours	per week spent o	n the c	ourse (Other than)			
	0-2		2-4		4-	-6	6-8		8-1	0	-
	1.										
3.	-		he course by the								
	(i)		lone part of this co					NO			
	(ii)			rior exposure to the prerequisites elevant additional topics through concurrent study **C S							
	(iii)						ncurrent study	xcs			
	(iv)	Have r	o exposure to the	backgr	ound m	aterial		NO			
4.	The expe	ctations	for taking the co	urse by	the stu	udent are:					
	(a)		ce by skill base in				Yes				
	(b)		posed to a relevan								
	(c)	Curios	ity	70							
	(d)	Better	Employment Opp	ortunit	y		Yø				
	(e)	Compl	ete Course require								
	(f)	-	prove CGPA				. 70				
Abou	t the Instruct	or: Info	rmation on the R	espond	dent: (T	Tick (√) App					
					A	В		C	D		E
1.	Pace of th	e Teachi	ing/lecture								
2.	Comment				/						
3.		Clarity of expression			~						
4.	Level of p	oreparati	on			/					
5.	Level of i				/						
6.	Accessibi	lity outs	ide the class			~					
7.	Others (p	lease spe	cify								
A: Ex	cellent		B: Very Good		C:	1	D:			E:	
					Good		Satis	sfactory	1	Poor	

COURSE FEEDBACK FORM

Acade	nic Year 2021 - 2022								
Term									
Cours	e Number								
Cours	e Title		spri	ng	Frame	WOYLC			
Numb	er of Credits			0					
Туре	of Course	Regular		Ele	ctive		Add-on	し	
I.	Informati	on on the Respond	ent: (Tick (√) Appr	opriately)				
1.		ge of classes attend	ed		0.60	(0.80		100	
	0-20	20-40		4	0-60	60-80	/	100	
								100	
2.	Number	of hours per week s	nent on the	course	(Other than le	ecture hours)			
2.	0-2	2-4	pent on the		-6	6-8		8-10	
	0-2								
3.	Preparat	ion for the course b	y the stude	nt:					
	(i)	Have done part of	this course	earlier		1	10		
	(ii)	Has adequate prio	r exposure to	o the pre	requisites		NO		
	(iii)	Had to pickup relevant additional topics through concurrent study							
	(iv)	Have no exposure	to the backs	ground n	naterial		Yes		
	1, 4						10		
4.	The expe	ctations for taking	the course l	by the st	udent are:				
	(a)	Enhance by skill base in the area of specializations							
	(b)	Get exposed to a relevant subject							
	(c)	Curiosity		40					
	(d)	Better Employme	nt Opportun						
	(e)	Complete Course	requirement						
	(f)	To Improve CGP.	A			,	10		
Abou	t the Instruc	tor: Information or	the Respon	ndent: (Tick (√) Appr	opriately)			
				A	В	(D	E
1.	Pace of th	ne Teaching/lecture		~				ST THE ST	
2.	Commen	t of the Subject							
3.	Clarity of	expression	*	/					
4.	Level of	oreparation							
5.	Level of	nteraction		~					
6.	Accessibility outside the class								
7.	Others (p	lease specify							
A: E	xcellent	B: Very (Good	C:		D:		E:	
				Good	1	Satisf	actory	Poo	r





INSTITUTE OF HIGHER EDUCATION AND RESEARCH



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

From

Date: 05.07.2021

Dr. K.P.Kaliyamurthie, Professor & Head, Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Windows 10 Mobile Application development and training" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Windows 10 Mobile Application development and training" in our campus premises on 11/07/2021.

52 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HOD/CSE

DEAN ENGINEERING

HEAD OF DEPARTMENT
Department of Computer Scik & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Department to be University US-3 of IDD Act, 1956)



CIRCULAR

09.07.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Windows 10 Mobile Application Development &Training** for the benefit of II, III and IV year students. This course is scheduled from 11.07.2021 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM:

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Mrs.C.Anuradha	Assistant.Professor
2	Dr.C.Rajabhushanam	Professor

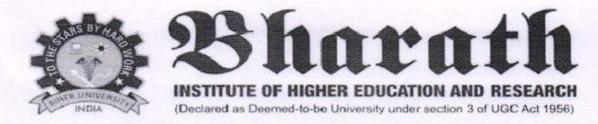
To

Copy to CSE

Copy to IT

Head of Department

HEAD OF DEPARTMENT
Department of Computer Scit. A Engg.,
Bhorath Institute of Higher Education. & Research
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Chempal-600 073, INDIA



CERTIFICATE COURSE ON WINDOWS 10 MOBILE APPLICATION DEVELOPMENT AND TRAINING

Date of Introduction of the Course:11.07.2021 The timings are 1:30 PM to 4:30 PM

Time Table& Lesson plan

CLASS	DATE	TOPIC					
1,2	11.07.2021(AN)	Introduction - Course Welcome, Introduction to the Universal Windows10 Platform					
3,4	15.07.2021(AN)	2.Windows Phone 10 Application Lifecycle					
5,6	3.Planning Application - UI Basics, Responsive vs. Adaptive UI.						
7,8 16.07.2021(AN) 4.Designing Application - for Difference Factors							
9,10	22.07.2021(AN)	5.Data Binding - Data Entry and Local Data Stor Introduction to XAML Data Binding.					
11,12	23.07.2021(FN)	6.Application Lifecycle Management - Suspension, Resume and Termination, Storing and, Retrieving App Data, Splash Screens, Alternative Launch Scenarios.					
13,14	23.07.2021(AN)	7.MVVM - Intro to MVVM, Creating Models, Views and ViewModels, Implementing MVVM Class Interactions.					
15,16	29.07.2021(AN)	8.Commands - Navigation, and User Interaction Design, Navigation Commands and CommandBars, Context Menus and ContextDialog Controls.					
17,18	30.07.2021(FN)	9.File Storage - Adding File Access Controls, Implementing File Pickers.					
19,20	19,20 30.07.2021(AN) 10.Publishing Your App - App Testing WACK, Monetization, Creating an App Pacing Deploying an App.						

21,22	05.08.2021(AN)	11.Maps and Location (H/W Drives) in Windows 10
23,24	06.08.2021(FN)	12.Network Communication, Push Notifications, Background Agents
25,26	06.08.2021(AN)	13.Tiles and Lock Screen Notifications
27,28	12.08.2021(AN)	14.Windows 10 Mobile App to App Communication.
29,30	13.08.2021(FN)	15.A Glimpse at the Future

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie A Engg.,
Bharath institute of Higher Education & Research
(Declared as Deamed to be University US 3 of USC Act, 1956)
(Chennal-600 073, INDIA



CERTIFICATE COURSE ONWINDOWS 10 MOBILE APPLICATION DEVELOPMENT AND TRAINING

Date of Introduction of the Course:11.07.2021

COURSE SYLLABUS

- 1. Introduction Course Welcome, Introduction to the Universal Windows10 Platform
- 2. Windows Phone 10 Application Lifecycle
- 3. Planning Application UI Basics, Responsive vs. Adaptive UI
- 4. Designing Application for Different Form Factors.
- Data Binding Data Entry and Local Data Storage, Introduction to XAML Data Binding
- Application Lifecycle Management Suspension, Resume and Termination, Storing and, Retrieving App Data, Splash Screens, Alternative Launch Scenarios
- MVVM Intro to MVVM, Creating Models, Views and ViewModels, Implementing MVVM Class Interactions
- Commands Navigation, and User Interaction Design, Navigation Commands and CommandBars, Context Menus and ContextDialog Controls
- 9. File Storage Adding File Access Controls, Implementing File Pickers
- Publishing Your App App Testing and the WACK, Monetization, Creating an App Package and Deploying an App.
- 11. Maps and Location (H/W Drives) in Windows 10
- 12. Network Communication, Push Notifications, Background Agents
- 13. Tiles and Lock Screen Notifications
- 14. Windows 10 Mobile App to App Communication.
- 15. A Glimpse at the Future

COURSE OBJECTIVES

- 1. Describe those aspects of mobile programming that make it unique from programming for other platforms,
- 2. Critique mobile applications on their design pros and cons,
- Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces,
- 4. Program mobile applications for the Android operating system that use basic and advanced phone features, and

5. Deploy applications to the Android marketplace for distribution.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scil. Research
Bharath Institute of Higher Education & Research
Bharath Institute of Higher Education & Research
(Declared as Decimal to be university U/S 3 of UGC Act, 1956)
(Declared as Decimal FG00 073, INDIA)



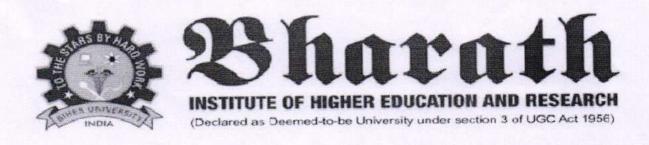
CERTIFICATE COURSE ON Windows 10 Mobile Application Development & Training Date of Introduction of the Course: 11.07.2021 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS048	DIVYA RUPINI.B
2	U14CS049	EVELIN JUGI.R
3	U14CS050	FAZIL AHAMED.J
4	U14CS051	GANESH RAJ .L
5	U14CS052	GARLAPATI HEMA SAI KRISHNA
6	U14CS053	GODJSELA SRINATH
7	U14CS054	GONTLA KARTHIK
8	U14CS055	GOTTIPATI KARTHIK
9	U14CS702	S.KUMARAN
10	U14CS709	RAGUL TIGER
11	U14CS220	KARTHIKEYAN SURESH
12	U14CS231	GYANA PRASANNA
13	U14CS235	SATHISH RAJ
14	U14CS105	MOOTHI LAKSHMI PRASANNA
15	U14CS106	MUGANTH.R.
16	U14CS107	MUGUNTHANATHAN.G
17	U14CS108	MURALI .S
18	U14CS109	N.UMA VENKATA MAHESHWARA SWAMY
19	U14CS110	NAGA TEJA.K
20	U14CS148	RAMYA.B

21	U14CS177	K.SIVA SUBRAMANIAN			
22	U14CS222	M.GANESH RAJAN			
23	U14CS225	ARJHUN KUMAR.K			
24	U14CS229	INDHU GOPALAKRISHNAN			
25	U14CS703	VASANTHAN.N			
26	U14CS705	SHABEEK ABUTHAHIR.S			
27	U14CS710	SHOPMINISTER			
28	U14CS160	SANDEEP INGUVA			
29	U14CS161	SANJAY KUMAR YADAV			
30	U14CS162	SANTHOSH KUMAR.N			
31	U14CS163	SASHAANK.S			
32	U14CS164	SAURAV KUMAR			
33	U14CS165				
34	U14CS224	SAURAV SINGH			
35	U14CS228	R.SINDHU			
36	U14CS230	ELACATI JAGANNADHA HARSHITHA			
		MARAM REDDY RAJASEKHAR			
37	U14CS234	DANDU MOHAN RAJENDRA VARMA			
38	U14CS706	RAFTEN WANCHU			
39	U14CS707	ARNISHA DAS			
40	U14CS708	SUSMITA MOG			
41	U14CS213	AKULA MOHITH			
42	U14CS214	PRASANTH KUMAR .P			
43	U14CS215	PRANJAL BHASHKAR			
44	U14CS216	SUNDAR.V.			
45	U14CS217	CHILLIMUNTA VENKATESH			
46	U14CS218	MAKKAPTI SIDDHARDHA			
47	U14CS223	ARUN			
48	U14CS226	SARAVANAN.B			
49	U14CS227	LSUKAPATLA AVINASH			
50	U14CS237	CHARAN KUMAR			
51	U14CS701	BALAJI			
	U14CS232	BALAJI B.BALAKUMARAN			

HEAD OF THE DEPARTMENT Engg.,
Department of Higher Education & Research
Bhorath Institute of Higher Education & Research
(Declared as Doesned to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON SOFTWARE PROJECT MANAGEMENT



COURSE COORDINATOR



CERTIFICATE OF PARTICIPATION

This certificate is presented to

S.KUMARAN

For actively participating in the value added course "Windows 10 Mobile Application Development &Training*

Conducted by School of Computing, BIHER from 11.07.2021 to 13.08.2021.

COURSE COORDINATORS

DIRECTOR

COURSE FEEDBACK FORM

Academic Year			2	2021-2022								
Term				odd sem								
Course	e Number			1 December -								
Course	e Title		Wind	laus 10	molile	Applica	in arl	Training				
Numb	er of Credits		00			, ,,	^ '					
Туре	of Course	Regular		Elective		Add	-on					
I.	Informa	tion on the Respond	dent: (Tick (√) Appropria	tely)							
1	Dougont	ntage of classes attended										
1.	0-20	20-40	ieu	40-60		60-80	80-					
	0-20	20-40		40-00		00-00	100					
							1 1 1 1 1 1					
2.	Number	of hours per week	spent on the	course (Othe	r than lecture	e hours)						
	0-2 2-4			4-6		6-8	L 8-	10				
3.	Prepara	tion for the course	by the stude	nt:								
	(i)	Have done part o				yes						
	(ii)	Has adequate prior exposure to the prerequisites										
	(iii)	Had to pickup relevant additional topics through concurrent study										
	(iv)	(iv) Have no exposure to the background material										
		The expectations for taking the course by the student are:										
4.		The state of the s				,	1.1					
	(a)	Enhance by skill			cations	- (Jes					
	(b)	Get exposed to a	relevant subj	Subject Y.S.								
	(c)	Curiosity		- yy								
	(d)	Better Employme	A CONTRACTOR OF THE CONTRACTOR	equirements								
	(e)	Complete Course										
	(f)	To Improve CGF			h							
Abou	t the Instru	ctor: Information o	on the Respon			C C	D	E				
	1			A	В	-	ь	E				
1.		the Teaching/lecture										
2.		nt of the Subject										
3.		Clarity of expression										
4.		Level of preparation			V							
5.	Level of interaction				~							
6.		Accessibility outside the class			5							
7.	Others (please specify				1						
	xcellent	B: Very	Good	C:		D:		E: _				
A . F	rcellent			- 1 F- 1								

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bhorath Institute of Higher Education & Research
(Declared as Decared to be University US 3 of USC Act, 1956)
Chennal-600 073, INDIA

COURSE FEEDBACK FORM

Academic Year			2	2021 - 2022								
Term	1			odd sm								
Cour	rse Numb	er										
Cour	rse Title		lu	mindous 10 Molite Application Development & Training								
Num	ber of Ci	redits										
Type	of Cour	se Regular		Elective		Ad	d-on					
I.	Inform	nation on the R	espondent: (Tic	k (√) Appropriate	ly)							
1.	Percentage of classes attended											
	0-20	Tinge or emisses	20-40	40-60	0	60-80		80-100				
	0 20		1 -0 .0									
2.	Numb	er of hours per	week spent on	the course (Other	than lecture h	ours)						
	0-2		2-4	4-6		6-8	~	8-10				
3.	•		ourse by the stu	Application								
	(i)		rt of this course			ye	5					
	(ii)	Has adequate prior exposure to the prerequisites										
	(iii)	Had to pickup relevant additional topics through concurrent study										
	(iv)	Have no exposure to the background material										
4.	The ex	The expectations for taking the course by the student are:										
	(a)	Enhance by skill base in the area of specializations										
	(b)	Get exposed	to a relevant sub	ject		e	111		THE PERSON NAMED IN			
	(c)	Curiosity					10					
	(d)	Better Emplo	yment Opportun	ity			30					
	(e)	Complete Co	urse requirement	ts		1/	20					
	(f)		To Improve CGPA									
Abo	ut the Ir	structor: Infor	mation on the F	Respondent: (Tick	(√) Appropria	ately)						
				A	В	C	D		E			
1.	Pace o	of the Teaching/l	ecture		N							
2.	Comn	Comment of the Subject			10							
3.	Clarit	y of expression			10	Mr Tell						
4.	Level	of preparation			10							
5.	Level	of interaction										
6.	Acces	sibility outside t	he class									
7.	Other	s (please specify										
A: l	Excellent	В	: Very Good	C: Good		D: Satisfactor	y	E: Poo	r			

HEAD OF THE DEPARTMENT

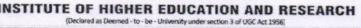
HEAD OF DEPARTMENT

Department of Computer Scil. A Engg.,
Bharath Institute of Righer Education. Susearch
(Declared as Desmand to be University 078-3 of the Auty 1958)

Chennal-600 073. INDIA



Bharath





BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY
No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

Date:07.07.2021

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "Developing Business Applications using Web services" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on ""Developing Business Applications using Web services" in our campus premises on 11.07.2021, students would be participating in this course. We request you kindly to give permission to organize this event.

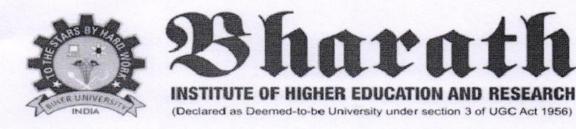
Venue: CSE Smart Room

Timing 2.00PM to 4:00 PM

Submitted to Principal for approval to organize this value-added course.

DEAN ENGINEERING

HOD HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
Bharath Institute of Higher Education & Research
Chennal-600 073. INDIA



CIRCULAR

07.07.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Developing Business Applications using Web Services** for the benefit of II, III and IV year students. This course is scheduled from 11.07.2021 for 28hours which includes theory and practical. The timings are 2:00 PM to 4:00

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	D.JeyaPriya	Assistant Professor
2	C.Geetha	AssistantProfessor

Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Scie. & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON DEVELOPING BUSINESS APPLICATIONS USING WEB SERVICES Date of Introduction of the Course: 11.07.2021

The timings are 2.00 PM to 4: PM

Time Table & Lesson plan

CLASS	DATE	TOPIC
1,2	11-07- 2021(AN)	1. Introductions to web services, Course mechanics, .NET Overview, CLR, Assemblies (monolithic vs. component-based applications
3,4	12-07- 2021(AN)	2. Introduction to HTML: HTML, JavaScript, CSS, DOJO, Jquery, DOJO, OpenDesigns, Introduction to C#: Types and program structure
5,6	13-07- 2021(AN)	3. Development Environment Setup, ISS, SQL Server and Visual Studio, Advanced C#: OOP, Delegates, Events, Attributes, unsafe code, .NET Interop
7,8	14-07- 2021(AN)	4. NET Framework Class Library (FCL): Elements, Implicit JSP Objects, Declaring Variables and Methods, Sharing Data Between JSP pages, Users Passing Control and Data between Pages, JSP application design with JDBC, JSP Application Design with MVC.
9,10	15-07- 2021 (AN)	5 .System, Collections: I/O, Networking, Threading, Transactions, Databases and Data Access using ADO.NET & LINQ
11,12	18-07- 2021 (AN)	6. Introduction to ASP.NET programming model, server controls, data binding ASP.NET state management, tracing, caching, error handling, security, deployment, user and custom controls, DotNetNuke;

13,14	19-07- 2021(AN)	7. Exposing and consuming ASP.NET Web Services, XML, Content Management Systems (CMS), Windows SharePoint Services and DotNetNuke models
15,16	20-07- 2021(AN)	8. Execution Model: Client-Side vs. Server-Side Programming, Web Technologies . Context Parameters, Handling Http Request & Responses, Using Cookies-Session Tracking, Servlet with JDBC
17,18	21-07- 2021(AN)	9. Restful, Soap, Disco, Uddi Continue with Web Services, Developing Securi Web ServicesWeb Servers and Servlets: Tomcat wel server, Introduction to Servlets: Servlets,
19,20	22-07- 2021(AN)	10. The Advantage of Servlets over "Traditional CGI: Basic Servlet Structure, Simple Servlet Generating Plain Text, Compiling and Installing the Servlet Invoking the Servlet, Lifecycle of a Servlet, The Servlet API, Reading Servlet parameters, Reading Initialization parameters,

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1955)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON DEVELOPING BUSINESS APPLICATIONS USING WEB SERVICES

Date of Introduction of the Course: 11.07.2021

COURSE SYLLABUS

- Introductions to web services, course mechanics, .NET Overview, CLR, Assemblies (monolithic vs. component-based applications
- Introduction to HTML: HTML, JavaScript, CSS, DOJO, Jquery, DOJO, OpenDesigns, Introduction to C#: Types and program structure
- 3. Development Environment Setup, ISS, SQL Server and Visual Studio, Advanced C#: OOP, Delegates, Events, Attributes, unsafe code, .NET Interop

4.NET Framework Class Library (FCL):

Elements, Implicit JSP Objects, Declaring Variables and Methods, Sharing Data Between JSP pages, Users Passing Control and Data between Pages, JSP application design with JDBC, JSP Application Design with MVC.

5. System, Collections:

I/O, Networking, Threading, Transactions, Databases and Data Access using ADO.NET & LINQ

6.Introduction to ASP.NET

programming model, server controls, data binding ASP.NET state management, tracing, caching, error handling, security, deployment, user and custom controls, DotNetNuke;

7. Exposing and consuming ASP.NET Web Services, XML,

Content Management Systems (CMS), Windows SharePoint Services and DotNetNuke models

8, Execution Model:

Client-Side vs. Server-Side Programming, Web Technologies . Context Parameters, Handling Http Request & Responses, Using Cookies-Session Tracking, Servlet with JDBC.

9 .Restful, Soap, Disco, Uddi

Continue with Web Services, Developing Secure Web ServicesWeb Servers and Servlets: Tomcat web server, Introduction to Servlets: Servlets,

10. The Advantage of Servlets over "Traditional" CGI:

Basic Servlet Structure, Simple Servlet Generating Plain Text, Compiling and Installing the Servlet, Invoking the Servlet, Lifecycle of a Servlet, The Servlet API, Reading Servlet parameters, Reading Initialization parameters,

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Web services, and an in-depth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects that will utilize existing public cloud tools. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

Students will learn

- 1) The fundamental ideas behind Image processing, the evolution of the paradigm, its applicability; Benefits, as well as current and future challenges;
- 2) The basic ideas and principles in data centre design; Image processing techniques and computer vision;
- 3) Different CPU, memory and I/O virtualization techniques that serve in offering software, computation and storage services on the cloud; Software Defined Networks (SDN) and Software Defined Storage (SDS);

4) The variety of programming models and develop working experience in several of them.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scie & Engg.,
Bhorath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
(Chennai-600 073, INDIA



CERTIFICATE COURSE ON DEVELOPING BUSINESS APPLICATIONS USING WEB SERVI

Date of Introduction of the Course: 11.07.2021

School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U16CS001	SANTOSH B
2	U16CS002	APARNA V M
3	U16CS003	NALAMOTHU SRIKANTH
4	U16CS004	ABDUL KHADIR L
5	U16CS006	SARAVANAN R
6	U16CS007	SANAM NAGA VENKATA SAI KRISHNA
7	U16CS008	CHEEMIREDDIGARI ANKITHAREDDY
8	U16CS009	RITIK RAJ
9	U16CS010	JOHAN KIRUBHAHAR P P
10	U16CS011	RAVURI MOUNIKA
11	U16CS012	FAYAZ AKIL S
12	U16CS013	SURYA SUNDARRAJ SRIRAM
13	U16CS014	SOMA BHARATH KUMAR
14	U16CS015	B J JAISON
15	U16CS016	SARAVANAKUMAR S
16	U16CS001	SANTOSH B
17	U16CS002	APARNA V M
18	U16CS003	NALAMOTHU SRIKANTH
19	U16CS004	ABDUL KHADIR L
20	U16CS006	SARAVANAN R
21	U16CS007	SANAM NAGA VENKATA SAI KRISHNA
22	U16CS008	CHEEMIREDDIGARI ANKITHAREDDY
23	U16CS009	RITIK RAJ
24	U16CS010	JOHAN KIRUBHAHAR PP
25	U16CS011	RAVURI MOUNIKA
26	U16CS012	FAYAZ AKIL S

COURS	E COORDINATOR	HEAD OF THE DEPARTMENT
	SAL	K W W
36	U16CS055	MEGANATHAN G
35	U16CS054	M KAUSHIK SUDHAN
34	U16CS053	ANIL MAURYA
33	U16CS052	D SURYA PRABHAKAR
32	U16CS051	YEDDULA SAIRAKESH
31	U16CS050	HRITHIK KUMAR
30	U16CS016	SARAVANAKUMAR S
29	U16CS015	B J JAISON
28	U16CS014	SOMA BHARATH KUMAR
27	U16CS013	SURYA SUNDARRAJ SRIRAM

Department of Computer Scie & Engg.,
Bharath institute of Higher Education & Research
(Declared as Decimeo to English W/S 3 of UGC Act, 1956)
Chennai-600 0



CERTIFICATE OF PARTICIPATION

This certificate is presented to

APARNA V M

For actively participating in the value added course "Developing web services using Web Applications" Conducted by School of Computing, BIHER from 11.07.2021 to 22.07.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Acade	emic Year	1	2021-2022									
Term				ODD !	SEM							
Cours	e Number											
Cours	e Title		(Devel	oping 6	usiness	Applica	tion using	g Web	serives		
Numb	er of Credits	S			1 0							
Type	of Course	Regu	lar		Electiv	ve		Add-on	-			
I.	Informa	tion on the	Respondent	: (Tick (\) Approp	riately)						
1.		age of classe										
	0-20		20-40		40-6	50	60-8	0	80-			
									100			
2.	Number	of hours n	or wook enou	nt on the	course (O	thar than	lecture hours					
2.	0-2	T Hours pe	2-4	lit on the	4-6	ther than	6-8	. 1	8-10			
	0-2		2-4		14-0		0-0		1 0-10			
3.	Prepara	tion for the	course by t	he studen	t:							
	(i)		ne part of this						ye	8		
	(ii)	Has adequate prior exposure to the prerequisites										
	(iii)	Had to pickup relevant additional topics through concurrent study										
	(iv)	-	exposure to					Yes				
4.	The expectations for taking the course by the student are:											
	(a)	Enhance by skill base in the area of specializations								1		
	(b)	Get expo	sed to a rele	a relevant subject								
	(c)	Curiosity	/	Opportunity Yes								
	(d)	Better Er	mployment C									
	(e)	Complete	e Course req	uirements					Yes			
	(f)	To Impro	ove CGPA						Ce.	1		
Abou		ctor: Inforn	nation on th	e Respon	dent: (Tic	k (√) Apj	propriately)					
					A	В		C	D	E		
1.	Pace of	the Teaching	g/lecture			V						
2.	Commer	nt of the Sub	ject				V					
3.	Clarity o	Clarity of expression				6	-					
4.	Level of	Level of preparation				V	V					
5.	Level of interaction						L	-				
6.	Accessibility outside the class					-						
7.	Others (please specif	fy			~						
A: E	ccellent	В	3: Very Good	d	C:		D:		E:			
					Good		Satis	factory	Po	or		

HEAD OF THE DEPARTMENT

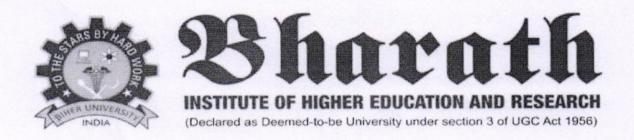
HEAD OF DEPARTMENT
Department of Computer Scic & & Engg.,
Bharath institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073, INDIA

COURSE FEEDBACK FORM

Academic Year				2021 - 2022							
Term				ODDS							
Course	e Number										
Course	e Title		-	Develo	Pride	busines	ss App	ication i	ung u	oeb Services	
Numb	er of Credits			A	1 0				1		
Туре	of Course	Reg	gular		Electi	ve		Add-on	C	7	
I.	Informa	tion on th	e Responden	t: (Tick () Approp	oriately)					
1.	Percenta	age of clas	ses attended								
	0-20		20-40		40-	60	60-80		80- 100		
2.	Number	of hours	ner week spe	nt on the	course (C	ther than lect	ure hours)				
	0-2		2-4		4-6		6-8		8-10		
3.	Prepara	Preparation for the course by the student:									
	(i)	Have de	one part of th	is course e	course earlier fes						
	(ii)	Has adequate prior exposure to the prerequisites									
	(iii)	Had to pickup relevant additional topics through concurrent study									
	(iv)	Have n	o exposure to	the backg	round ma	erial				Tes	
4.	The expectations for taking the course by the student are:										
									Yes		
	(b)			elevant subject Yes Yes							
	(c)	Curiosi	ity								
	(d)	Better I	Employment								
	(e)	Comple	ete Course rec								
	(f)		rove CGPA						,	yes	
Abou	t the Instru	ctor: Infor	rmation on th	ne Respon		ck (√) Approp					
					A	В	C	J	0	E	
1.		the Teachin									
2.		nt of the Su									
3.		Clarity of expression					V				
4.	Level of preparation					_					
5.	Level of interaction										
6.	Accessibility outside the class					-					
7.	Others (please spec	eify								
A: Ex	cellent		B: Very Goo	od	C: Good		D: Satisfa	ctory	E:	oor	

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute at Higher Education & Research
(Declared as Decimed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON DEVELOPING BUSINESS APPLICATION USING WEB SERVICES

Date of Introduction of the Course: 11.07.2021

School of Computing





INSTITUTE OF HIGHER EDUCATION AND RESEARCH



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY
No.173, Agharam Road, Selaiyur, Chennai, T.N. - 600 073.

Requisition Letter

From

Date: 20.06.2021

Dr. K.P Kaliyamurthie Professor & Head, Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir,

Subject: Request of Permission to conduct a value added course on "Advanced PHP" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Advanced PHP" in our campus premises from 11.07.2021 for 38hours

Ourinternal Professorswould deliver lecture for the above mentioned course. About 40 students would be participating in this course. We request you kindly to give permission to organize this.

Venue: CSEClass room

Timing: 1:30 PM to 4:30 PM

9.00 PM to 4.00 PM

Submitted to Principal for approval to organize this value added course.

HOD/CSE

DEAN ENGINEERING

of Computer Sciu A Engg., lute of Higher Education & Recearch emed to be University U/S 3 etc.



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

08.07.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Advanced PHP** for the benefit of IV year students. This course is scheduled from 11.07.2021 for 38 hours which includes theory and practical. The timings are 1:30 PM to 4:30

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

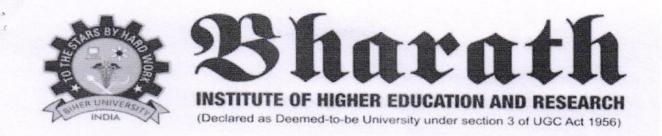
To

Copy to CSE

Copy to IT

Head of Department

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON ADVANCED PHP

Date of Introduction of the Course: 11.07.2021

COURSE OBJECTIVE

PHP focuses on speed and scalability of web applications. With our Advanced PHP training, unleash the power of the PHP to build efficient server-side scripts and command line scripts. You also master the skills to develop desktop applications. Our Advanced PHP course includes Cloudlabs integration so you gain in-depth hands-on experience developing RESTful web-services. Also, learn to extend the capabilities of PHP with PEAR and the techniques to build a fast and capable dynamic web application using Ajax. By the end of our PHP deep dive training, you will also have a sound understanding of industry best practices of PHP development from our expert.

WHAT TO EXPECT

- learn functions, date and time, debugging and logging
- Discover code reuse, feeding a function, return data from a function
- Learn how to do string manipulation
- Runtime error handling using PHP exception handling mechanism
- · Discover database connectivity methods
- Send e-mail using SMTP
- Learn the PHP extension and application repository PEAR
- Web services will be discussed including SOAP, NU SOAP, and WSDL
- · Learn about Smarty Templates
- · Discover popular frameworks including CakePHP, Yii, Zend and Codelgniter

COURSE SYLLABUS

1. Introduction to PHP

- ✓ Evaluation of Php
- ✓ Basic Syntax
- ✓ Defining variable and constant
- ✓ Php Data type
- ✓ Operator and Expression

2. Handling Html Form With Php

- ✓ Capturing Form Data
- ✓ Dealing with Multi-value filed
- √ Generating File uploaded form
- ✓ Redirecting a form after submission

3. Decisions and loop

- ✓ Making Decisions
- ✓ Doing Repetitive task with looping
- ✓ Mixing Decisions and looping with Html

4. Function

- ✓ What is a function
- ✓ Define a function
- ✓ Call by value and Call by reference
- ✓ Recursive function

5. String

- ✓ Creating and accessing String
- ✓ Searching & Replacing String
- ✓ Formatting String
- ✓ String Related Library function

6. Array

- ✓ Anatomy of an Array
- ✓ Creating index based and Associative array
- ✓ Accessing array Element
- ✓ Looping with Index based array
- ✓ Looping with associative array using each() and foreach()
- √ Some useful Library function

7. Working with file and Directories

- ✓ Understanding file& directory
- ✓ Opening and closing a file
- ✓ Coping ,renaming and deleting a file
- ✓ Working with directories
- ✓ Building a text editor
- √ File Uploading & Downloading
- ✓ Mini Project (With file Handling)

8. State management

- ✓ Using query string(URL rewriting)
- ✓ Using Hidden field
- ✓ Using cookies
- ✓ Using session

9. String matching with regular expression

- ✓ What is regular expression
- ✓ Pattern matching in Php
- ✓ Replacing text
- ✓ Splitting a string with a Regular Expression

10. Generating Images with PHP

- ✓ Basics of computer Graphics
- ✓ Creating Image
- ✓ Manipulating Image
- ✓ Using text in Image

11. Advance PHP

- ✓ Introduction to OOPS
- ✓ Introduction
- √ Objects
- ✓ Declaring a class
- ✓ The new keyword and constructor
- ✓ Destructor
- ✓ Access method and properties using \$this variable
- ✓ Public ,private, protected properties and methods
- ✓ Static properties and method
- ✓ Class constant

12. Inheritance

- ✓ Inheritance & code reusability
- ✓ Polymorphism
- ✓ Parent:: & self:: keyword
- ✓ Instanceof operator
- ✓ Abstract method and class
- ✓ Interface
- ✓ Final

13. Exception Handling

- ✓ Understanding Exception and error
- ✓ Try, catch, throw

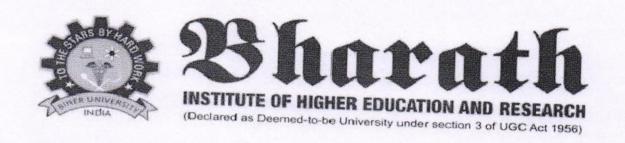
14. Database Connectivity with MySql

- ✓ Introduction to RDBMS
- ✓ Connection with MySql Database
- ✓ Performing basic database operation(DML) (Insert, Delete, Update, Select)
- ✓ Setting query parameter
- ✓ Executing query
- ✓ Join (Cross joins, Inner joins, Outer Joins, Self joins.)

COURSE COORDINATOR

HEAD OF THE DEPARTMENT Engg. Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennal-600 073, INDIA



CERTIFICATE COURSE ON ADVANCED PHP

Date of Introduction of the Course:11.07.2021

The timings are 1:30 PM to 4:30 PM

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	11-07-2021	Evaluation of Php
-,-	11 07-2021	Basic Syntax
		Defining variable and constant
		Php Data type
		Operator and Expression
3,4	15-07-2021	Capturing Form Data
3,4	13-07-2021	Dealing with Multi-value filed
		Generating File uploaded form
5,6	16-07-2021	Redirecting a form after submission
5,0	10-07-2021	Making Decisions
		Doing Repetitive task with looping
		Mixing Decisions and looping with Html
7,8	22-07-2021	What is a function
7,0	22-07-2021	Define a function
		 Call by value and Call by reference
		Recursive function
9,10,	23-07-2021	Creating and accessing String
	23-0/-2021	Searching & Replacing String
11,12		Formatting String
		String Related Library function

13,14	29-07-2021	Anatomy of an Array
		Creating index based and Associative array
		Accessing array Element
15,16,	30-07-2021	Looping with Index based array
		Looping with associative array using each() and
17,18		foreach()
		Some useful Library function
		Understanding file& directory
		Opening and closing a file
		Coping ,renaming and deleting a file
		Working with directories
10.20	05-08-2021	Building a text editor
19,20	05-06-2021	File Uploading & Downloading
		Mini Project (With file Handling)
		Using query string(URL rewriting)
		Using Hidden field
		Using cookies
		Using session
	06.00.004	What is regular expression
21,22,	06-08-2021	Pattern matching in Php
23,24		Replacing text
		Splitting a string with a Regular Expression
2226	12 00 2021	Basics of computer Graphics
25,26	12-08-2021	Creating Image
		Manipulating Image
		Using text in Image
	12.00.2021	Introduction to OOPS
27,28,	13-08-2021	Introduction
29,30		Objects
		Declaring a class
		The new keyword and constructor
		Destructor
		Access method and properties using \$this variable
		Public ,private, protected properties and methods

		Static properties and methodClass constant
31,32	19-08-2021	 Inheritance & code reusability Polymorphism Parent:: & self:: keyword Instanceof operator Abstract method and class Interface Final
33,34, 35,36	20-08-2021	 Understanding Exception and error Try, catch, throw Introduction to RDBMS Connection with MySql Database Performing basic database operation(DML) (Inser Delete, Update, Select) Setting query parameter
37,38	26-08-2021	 Executing query Join (Cross joins, Inner joins, Outer Joins, Sel joins.)

Course coordinator

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sciu & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of USC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON ADVANCED PHP Date of Course Introduction 11/07/2021 School Of Computing

Registered Students List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS055	GOTTIPATI KARTHIK
2	U14CS702	S.KUMARAN
3	U14CS709	RAGUL TIGER
4	U14CS220	KARTHIKEYAN SURESH
5	U14CS231	GYANA PRASANNA
6	U14CS235	SATHISH RAJ \
7	U14CS107	MUGUNTHANATHAN.G
8	U14CS108	MURALI .S
9	U14CS109	N.UMA VENKATA MAHESHWARA SWAMY
10	U14CS110	NAGA TEJA.K
11	U14CS148	RAMYA.B
12	U14CS177	K.SIVA SUBRAMANIAN
13	U14CS222	M.GANESH RAJAN
14	U14CS225	ARJHUN KUMAR.K
15	U14CS229	INDHU GOPALAKRISHNAN
16	U14CS703	VASANTHAN.N
17	U14CS705	SHABEEK ABUTHAHIR.S
18	U14CS710	SHOPMINISTER
19	U14CS163	SASHAANK.S
20	U14CS164	SAURAV KUMAR
21	U14CS165	SAURAV SINGH
22	U14CS224	R.SINDHU
23	U14CS228	ELACATI JAGANNADHA HARSHITHA
24	U14CS230	MARAM REDDY RAJASEKHAR
25	U14CS234	DANDU MOHAN RAJENDRA VARMA
26	U14CS706	RAFTEN WANCHU
27	U14CS707	ARNISHA DAS
28	U14CS708	SUSMITA MOG
29	U14CS226	SARAVANAN.B
30	U14CS227	I.SUKAPATLA AVINASH
31	U14CS237	CHARAN KUMAR
32	U14CS701	BALAJI
33	U14CS232	B.BALAKUMARAN
34	U14CS233	P.UPENDRA VARMA
35	U14CS236	M.RAVISANKAR
36	U14CS223	ARUN

Course Coordinator

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE OF PARTICIPATION

This is Presented to

MR. SATHISH RAJ

For actively participating in value added course on

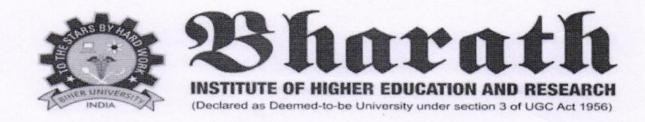
"Advanced PHP" conducted by School Computing,

BIHER from 11/07/2021 to. 26/08/2021

Coordinator

HOD

DRECTOR



CERTIFICATE COURSE ON ADVANCED PHP

Date of Course Introduction 11/07/2021

School of Computing



Course co ordinator

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Seclared as Geomed to be University US 3 of USC Act, 1956)
Chemnal-600 073, INDIA

COURSE FEEDBACK FORM

Acader	nic Year			2021	-22)						
Term				-								
Course	Number			-								
Course	Title		1	Adva	incec	d F	HP					
Numbe	er of Credits											
Type o	f Course	Regu	ılar		Electiv	re e		Add	-on	~		
I.	Informati	ion on the	Respondent: (7	Γick (√) A	Approp	riately)						
1.		ge of class	es attended		140.4			60.00	T	T 00	_	
	0-20		20-40		40-6	0		60-80		80-		
										100		
2.	Number	of hours n	er week spent o	n the cor	irse (O	her than	lecture	hours)				
	0-2	T Hours p	2-4		4-6			6-8		8-10		
3.	Preparati	ion for the	course by the s	tudent:								
	(i)	Have do	ne part of this co	his course earlier N 0								
	(ii)	Has adec	quate prior expos	sure to the	e prereq	uisites		CN				
	(iii)	Had to p	ickup relevant a	dditional	topics t	hrough co	oncurrent	study 409				
	(iv)	Have no	exposure to the	backgrou	ind mate	erial		NO				
4.	The expe		or taking the cou									
	(a)		by skill base in		of specia	alizations	X	0				
	(b)	Get expo	osed to a relevan	t subject			7	109				
	(c)	Curiosity						10				
	(d)	Better E	mployment Opp	ortunity			y	03				
	(e)	Complet	e Course require	ements			4	0				
	(f)	To Impr	ove CGPA				7	0				
About	the Instruct	or: Inform	nation on the R	esponde	nt: (Tic	k (√) Ap	propriat	ely)				
				A		В		C	1	D		E
1.	Pace of th	e Teaching	g/lecture	V								
2.	Comment	of the Sub	oject	-								
3.	Clarity of	expression	n	V								
4.	Level of p	preparation										
5.	Level of i	nteraction										
6.			e the class	(
7.	Others (pl	lease speci	fy									
				1 1						1=		
A: Exc	cellent	I	3: Very Good		C: .	V		D:		E		
					Good			Satisfactor	У	P	oor	108248

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA

COURSE FEEDBACK FORM

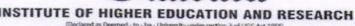
`Acade	emic Yea	r		2021 - 2022-						
Term										
Cours	se Numbe	er								
Cours	se Title			Advar	red	P	HP			
Numl	ber of Cr	edits		7 1000 000						
Type	of Cours	e Regular		Ele	ective			Add-on		
I.	Inform	ation on the Res	pondent: (Ti	ck (√) Appro	priately)					
1.	Dorgon	tage of classes at	tanded							
1.	0-20	tage of classes at	20-40		40-60		60-80		80-100	
	0-20		20-40		40-00		00-80		80-100	
2.	Numbe	er of hours per w	eek spent on	the course (Other tha	n lecture	hours)			
	0-2		2-4		4-6	/	6-8		8-10	
3.	Preparation for the course by the student: (i) Have done part of this course earlier									
	(i)							No		
	(ii)	Has adequate p						yes		
	(iii)	Had to pickup r				current st	tudy	'yes		
	(iv)	Have no exposi	are to the back	ground mate	rial			yes.		
4.	The ex	pectations for ta	king the cour	se by the stu	ıdent are:			•		
	(a)	Enhance by ski						Yes		
	(b)	Get exposed to	a relevant sub	ject				yes		
	(c)	Curiosity						Yes		
	(d)	Better Employr	nent Opportur	nity				yes.		
	(e)	Complete Cour	se requiremen	ts				yes		
	(f)	To Improve CG	iPA					res		
Abou	at the In	structor: Inform	ation on the l	Respondent:	(Tick (√)	Appropr	riately)	1		
				A		В	C	D		E
1.	Pace of	f the Teaching/lec	ture			1				
2.	Comm	ent of the Subject				1				
3.	Clarity	of expression				1	75			
4.	Level	of preparation				1				
5.	Level	of interaction				1				
6.	Access	ibility outside the	class	-						
7.	Others	(please specify								
A: E:	xcellent	B: V	Very Good	C: G	Good		D: Satisfac	ctory	E: Poo	r

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Special to 2 University US 3 of USC Act. 1956).
Chemoal-600 073. INDIA



Bharath





Date: 21.01.2021

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No. 173, Agharam Road, Setalyur, Chennat, T.N - 600 073.

Requisition Letter

From Dr. K.P Kaliyamurthie

Professor & Head, Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir,

Subject: Request of Permission to conduct a value added course on "Network Forensics" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Network Forensics" in our campus premises from 08.08.2021 for 30 hours

Ourinternal Professorswould deliver lecture for the above mentioned course. About60 students would be participating in this course. We request you kindly to give permission to organize this.

Venue: CSEClass room

Timing: 1:30 PM to 4:30 PM

9.00 PM to 4.00 PM

Submitted to Principal for approval to organize this value added course.

HOD/CSE

DEAN ENGINEERING

Dep Bho (Da and OF DEPARTMENT

Lof Computer Scil.

Little of Higher Education

Loemed to be University U.S.

Chennal-600 073. USA 2.2.



CIRCULAR

05.08.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Network Forensics** for the benefit of IV year students. This course is scheduled from 08.08.2021 for 30 hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course

S.NO.	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr. G. Michael	Professor

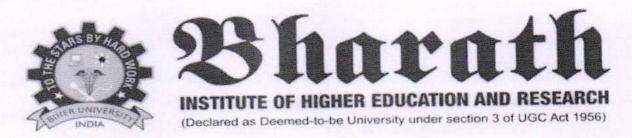
Head of Department

To

Copy to CSE

Copy to IT

Department of Computer Science & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Decimed to be University U.S.3 of BOX Act., 1968)
Chennel-600-073, INDIA



CERTIFICATE COURSE ON NETWORK FORENSICS

Date of Introduction of the Course: 08.08.2021 <u>COURSE OBJECTIVE</u>

Teaches the basics of how computers and networks function, how they can be involved in crimes as well as used as a source of evidence.

WHAT TO EXPECT

Although many concepts of network forensics are similar to those of any other digital forensic investigation, the network in of itself presents many nuances that require special attention. This course will teach digital forensics and incident response to network-based evidence. This course will also acclimate the student to the basic tools and techniques of the trade.

COURSE SYLLABUS

Introduction: Investigative Process, Analysis Methodologies, Tools and Techniques, File Systems

Networking overview: Windows Networks, Users and Groups, Introduction to Network investigations

Windows and Linux servers: Server roles, Server analysis, Windows Registry, Event logs

IIS and Microsoft Exchange server: IIS server, Mailserver, Windows rootkits, Compromised server analysis

SQL server and Data bases: Microsoft SQL server, SQL server permission and encryption,

SQL server Forensics Acquisition and analysis: SQL server forensics and traditional windows forensics, SQL server artifacts, Resident and non-resident artifact's Collecting SQL data bases, Creating an analysis database, Importing evidence, Activity Reconstruction, Data recovery, SQL server rootkits

Linux Forensics: Linux File systems, Linux server configurations, Linux artifacts, Apache server forensics, LAMP forensics, SMB and Linux file shares

Network Traffic Analysis: Network addressing, DNS poisoning, ARP table analysis, DHCP analysis, Wireshack analysis

Network Device Forensics: management of switches and routers, Diagramming physical networks, Securing and isolating physical devices, Collecting Volatile/Non-volatile evidences from the routers, Volatile/Non-volatile.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

(Declared as Deemed to be University U/S 3 of UCS Act, 1956 Chennal-600 073, INDIA



CERTIFICATE COURSE ON NETWORK FORENSICS

Date of Introduction of the Course:08.08.2021 The timings are 1:30 PM to 4:30 PM from Friday (AN) and Saturday (FN&AN)

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	12.08.2021	Introduction: Investigative Process, Analysis Methodologies, Tools and Techniques, File SystemsNetworking overview: Windows Networks, Users and Groups, Introduction to Network investigations
3,4, 5,6, 7,8, 9,10, 11,12, 13,14, 15,16,17	13.08.2021 19.08.2021 20.08.2021	Windows and Linux servers: Server roles, Server analysis, Windows Registry, Event logs IIS and Microsoft Exchange server: IIS server, Mailserver, Windows rootkits, Compromised serveranalysis SQL server and Data bases: Microsoft SQL server, SQL server permission and encryption, SQL server Forensics Acquisition and analysis: SQL server forensics and traditional windows forensics, SQL server artifacts, Resident and non-resident artifact's Collecting SQL data bases, Creating ananalysis database, Importing evidence, Activity Reconstruction, Data recovery, SQL server rootkits
18, 19,20, 21,22,	26.08.2021 27.08.2021	Linux Forensics: Linux File systems, Linux server configurations, Linux artifacts, Apache server forensics, LAMP forensics, SMB and Linux file shares Network Traffic Analysis: Network addressing, DNS poisoning, ARP table analysis, DHCP analysis, Wireshack analysis
23,24, 25,26, 27,28, 29,30	02.09.2021 03.09.2021	Network Device Forensics: management of switches and routers, Diagramming physical networks, Securing and isolating physical devices, Collecting Volatile/Non-volatile evidences from the routers, Volatile/Non-volatile

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sci. A Engg.,
Bharath Institute of Higher Education in Research
(Declared as Deciminal to be University U/S 3 of UGC Act., 1956)
Chennal-600 073. INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH

CERTIFICATE COURSE ON NETWORK FORENSICS Date of Introduction of the Course: 08.08.2021

School of Computing Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT				
1	U14CS003	ABDUL RAHIM M				
2	U14CS004	ABDUL RAZVI .M.K				
3	U14CS005	ABDUR RASEED				
4	U14CS006	ABHIKAMALI .A				
5	U14CS007	ABHISHEK MANDURI				
6	U14CS008	AJAY.D				
7	U14CS009	AKASH CHANDRA AMBASTHA				
8	U14CS010	AKHIL REDDY.G				
9	U14CS014	ANGELIN .R				
10	U14CS015	ANKITA				
11	U14CS016	ANNILKRISHNAN .K				
12	U14CS017	ASHUTOSH SRIVASTAVA				
13	U14CS107	MUGUNTHANATHAN.G				
14	U14CS108	MURALI .S				
15	U14CS109	N.UMA VENKATA MAHESHWARA SWAMY				
16	U14CS110	NAGA TEJA.K				
17	U14CS148	RAMYA.B				
18	U14CS177	K.SIVA SUBRAMANIAN				
19	U14CS094	MANISH SHARMA				
20	U14CS096	MD. ARSHAD				
21	U14CS097	MEDARAMETLA BRAHMA RAC				
22	U14CS098	MEDIGA UDAYA KUMAR				
23	U14CS099	MEKA VIVEK REDDY				
24	U14CS113	NALLAJARLA CHAKRADHAR				
25	U14CS114	NANDALA SWETHA				
26	U14CS115	NANDIPALLI MOUNICA				
27	U14CS116	NAYANA.P. BALA CHANDRAN				
28	U14CS117	NEERAJAN SAHA				
29	U14CS128	PENAGALAPATI MARUTHI RAO				
30	U14CS129	PIYALI CHAKRABORTHY.M				
31	U14CS130	POOJA KUMARI				

32	U14CS131	PRAGYA ADITI
33	U14CS132	PRASHANTH.B
34	U14CS133	PRATEEP ANAND
35	U14CS134	PRINCE RAJ
36	U14CS160	SANDEEP INGUVA
37	U14CS161	SANJAY KUMAR YADAV
38	U14CS162	SANTHOSH KUMAR.N
39	U14CS163	SASHAANK.S
40	U14CS164	SAURAV KUMAR
41	U14CS165	SAURAV SINGH
42	U14CS224	R.SINDHU
43	U14CS169	SHAIK YASMIN
44	U14CS170	SHANKAR KUMAR GUPTA
45	U14CS171	SHARSHI KANT PRASAD
46	U14CS172	SHASHI BHUSHAN BHAGAT
47	U14CS183	SULEKHA KUMARI
48	U14CS184	SUNITA.S
49	U14CS185	SURENDAR.K
50	U14CS186	SURIYA.A.
51	U14CS187	SURYA.A
52	U14CS196	TUMU SRINIKHIL
53	U14CS197	TWINKLE
54	U14CS198	VADLAMUDI KOWSHIK
55	U14CS199	VAMMARVALLI RAJA
56	U14CS200	VARSHITH REDDY.T
57	U14CS201	VASI KARTHIK

Course COORDINATOR

HEAD OF THE DEPARTMENT



Short ath INSTITUTE OF HIGHER EDUCATION AND RESEARCH (Declared as Deemed-to-be University under section 3 of UGC Act 1956)

Certificate of Participation

Ms. RAMYA.B

For actively participating in value added course on

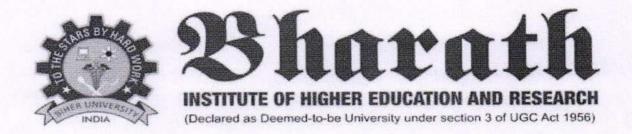
"NETWORK FORENSICS" conducted by School Computing,

BIHER from 08/08/2021 to 03/09/2021

Coordinator

HOD

Department of Computer Set. A Engs., Biggoth Institute of Biggor Education. Assemble Declared in Decemble to the University US 2 or 550 Act, 1988). Chemnal-600, 073, INDIA DIRECTOR



CERTIFICATE COURSE ON NETWORK FORENSICS

Date of Introduction of the Course: 08.08.2021 School of Computing



Course co ordinator

HEAD OF THE DEPARTMENT

Dapeth .

Engg., search s. 1986)

COURSE FEEDBACK FORM Academic Year 2021 -2022 Term Course Number Network Foreneils Course Title Number of Credits Add-on Elective Regular Type of Course Information on the Respondent: (Tick ($\sqrt{\ }$) Appropriately) Percentage of classes attended 1. 60-80 780-100 20-40 40-60 0-20 Number of hours per week spent on the course (Other than lecture hours) 2. 8-10 6-8 4-6 0-2 2-4 Preparation for the course by the student: 3. Have done part of this course earlier NO Has adequate prior exposure to the prerequisites yes (ii) Had to pickup relevant additional topics through concurrent study res (iii) Have no exposure to the background material (iv) NO The expectations for taking the course by the student are: 4. Enhance by skill base in the area of specializations (a) es Get exposed to a relevant subject (b) Curiosity (c) Better Employment Opportunity (d) es Complete Course requirements (e) To Improve CGPA (f) About the Instructor: Information on the Respondent: (Tick ($\sqrt{\ }$) Appropriately) E C D B A Pace of the Teaching/lecture 1. Comment of the Subject 2. Clarity of expression 3. Level of preparation 4. Level of interaction 5.

Accessibility outside the class

B: Very Good

C: Good

Others (please specify

6.

7.

A: Excellent

HEAD OF THE DEPARTMENT

D: Satisfactory

E: Poor

COURSE FEEDBACK FORM

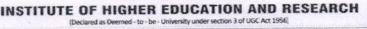
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Cour	se Numb	per										
Cour	se Title			Neto	work	F	Fores	181018				
Jum	ber of C	redits						213-9				
уре	of Cour	se Regular		Elec	etive	ASSESSMENT OF THE PROPERTY OF		Add-on	1			
	Inform	nation on the Res	spondent: (T	ick (√) Approj	oriately)							
	Percei	ntage of classes a	ttended									
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	l Nr. 1						<u> </u>					
		er of hours per v		the course (C		lecture h	DE STILL STEEL	1				
W.	0-2		2-4		4-6		6-8	1/	8-10			
	Prepa	ration for the cou	irse by the st	udent:								
	(i)	Have done part	of this course	e earlier			No					
	(ii)	Has adequate prior exposure to the prerequisites										
	(iii)	Had to pickup relevant additional topics through concurrent study										
	(iv)	Have no exposure to the background material										
	The ex	The expectations for taking the course by the student are:										
	(a)	Enhance by skill base in the area of specializations										
	(b)	Get exposed to	a relevant sub	oject				Yes				
	(c)	Curiosity						Yes				
	(d)	Better Employr	nent Opportu	nity				res				
	(e)	Complete Cour	se requiremen	nts				yes				
	(f)	To Improve CG	PA					yes				
boı	at the In	structor: Inform	ation on the	Respondent: (Tick (√) Ap	propria	tely)	/				
				A	Е		C	D		E		
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		y of expression										
		el of preparation										
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		ibility outside the	class		1							
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HEAD OF THE DEPARTMENT

PIEAD OF DEPARTMENT
Department of Computer Sci. Engg.,
Bharath Institute of Minher Education 2 Assaurch
(Declared as Joseph of the Computer Sci. 1965)



Bharath





BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY
No.173, Agharam Road, Selalyur, Chennai, T.N - 600 073.

Requisition Letter

Date: 05.08.2021

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "C#Programming" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course "C#Programming" -Reg in our campus premises on 08.08.2021, students would be participating in this course. We request you kindly to give permission to organize this event.

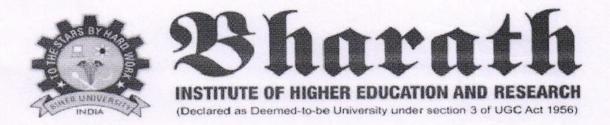
Venue: CSE Smart Room

Timing: 2:00 PM to 4:00 PM

Submitted to Principal for approval to organize this value-added course.

нов

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073, INDIA



CIRCULAR

05.08.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **C# Programming** for the benefit of II, III and IV year students. This course is scheduled from 08.08.2021 for 20hours which includes theory and practical. The timings are 2:00 PM to 4:00 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	R.MuthuVenkataKrishnan	Assistant Professor
2	S.Sangeetha	AssistantProfessor

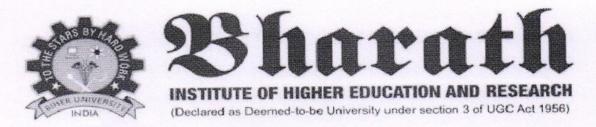
Head of Department

To

Copy to CSE

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HEAD OF DEPARTMENT
Department of Computer Scie A Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA



CERTIFICATE COURSE ON C# PROGRAMMING

Date of Introduction of the Course: 08.08.2021

COURSE SYLLABUS

01. Introducing C#

Introducing C#, Understanding .NET, overview of C#, Literals, Variables, Data Types.

02. Operators

Operators, checked and unchecked operators, Expressions, Branching, Looping, Methods, implicit and explicit casting.

03. Array in C#

Constant, Arrays, Array Class, Array List, String, String Builder, Structure, Enumerations, boxing and unboxing.

04. Class and Objects in C#

Class, Objects, Constructors and its types, inheritance, properties, indexers, index overloading.

05. Polymorphism using C#.

Polymorphism, sealed class and methods, interface, abstract class, abstract and interface, operator overloading.

06. String Manipulator.

Strings and Regular Expressions - Generics - Collections - Memory Management.

07. Pointers in C#.

Pointers - Errors and Exceptions - Reflection.

08. C# in Advanced Features.

Delegates – Lambdas – Lambda Expressions – Events – Event Publisher – Event Listener – Generics.

09. Window based Applications.

Window based applications - Core ASP.NET- ASP.NET Web forms -Windows Communication Foundation (WCF).

10. Web Services.

Web Services - Windows Service - Windows Workflow Foundation (WWF) - Activities - Workflows.

COURSE OBJECTIVES

In this course we plan to give students an overviewof the field of C# Programming, and an indepth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects that will utilize existing public cloud tools. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

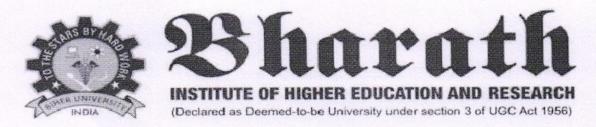
Students will learn

- 1) Develop deep understanding of C# language features.
- 2) Build strong concepts of OOP's and implement the same in C#.
- Create and manage strings, arrays, collections and enumerators using .NET framework library.
- 4) Perform file input and output operations read and write data streams, serialize and de-serialize an object graph.
- 5) Build on applications using N-Tier architecture having Data, DAO and Business classes.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073, INDIA



CERTIFICATE COURSE ON C# PROGRAMMING

Date of Introduction of the Course: 08.08.2021

The timings are 2.00 PM to 4: PM

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	08-08-2021(AN)	01. Introducing C# Introducing C#, Understanding .NET, overview of C#, Literals, Variables, Data Types.
3,4	03-08-2021(AN)	02. Operators Operators, checked and unchecked operators, Expressions, Branching, Looping, Methods, implicit and explicit casting.
5,6	17-08-2021(AN)	03. Array in C# Constant, Arrays, Array Class, Array List, String, String Builder, Structure, Enumerations, boxing and unboxing.
7,8	22-08-2021 (AN)	04. Class and Objects in C# Class, Objects, Constructors and its types, inheritance, properties, indexers, index overloading.
9,10	24-08-2021 (AN)	05. Polymorphism using C#. Polymorphism, sealed class and methods, interface, abstract class, abstract and interface, operator overloading.
11,12	29-08-2021 (AN)	06. String Manipulator. Strings and Regular Expressions – Generics – Collections – Memory Management.
13,14	31-08-2021 (AN)	07. Pointers in C#. Pointers – Errors and Exceptions – Reflection.
15,16	08-09-2021 (AN)	08. C# in Advanced Features. Delegates – Lambdas – Lambda Expressions – Events – Event Publisher – Event Listener – Generics.

17,18	12-09-2021 (AN)	09. Window based Applications. Window based applications – Core ASP.NET-ASP.NET Web forms -Windows Communication Foundation (WCF).				
19,20	14-09-2021 (AN)	10. Web Services. Web Services - Windows Service - Windows Workflow Foundation (WWF) - Activities - Workflows.				

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Department of Computer Scie & Engg.,
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Chennai-600 073. INDIA



CERTIFICATE COURSE ON C# PROGRAMMING Date of Introduction of the Course: 08.08.2021

		School of Computing					
Registered Students Name List							
S.NO	REG.NO	NAME OF THE STUDENT					
1	U16CS001	SANTOSH B					
2	U16CS002	APARNA V M					
3	U16CS003	NALAMOTHU SRIKANTH					
4	U16CS004	ABDUL KHADIR L					
5	U16CS006	SARAVANAN R					
6	U16CS007	SANAM NAGA VENKATA SAI KRISHNA					
7	U16CS008	CHEEMIREDDIGARI ANKITHAREDDY					
8	U16CS009	RITIK RAJ					
9	U16CS010	JOHAN KIRUBHAHAR P P					
10	U16CS011	RAVURI MOUNIKA					
11	U16CS012	FAYAZ AKIL S					
12	U16CS013	SURYA SUNDARRAJ SRIRAM					
13	U16CS014	SOMA BHARATH KUMAR					
14	U16CS015	B J JAISON					
15	U16CS016	SARAVANAKUMAR S					
16	U16CS017	VARUN KANNA A					
17	U16CS018	JUPAKA SAIVARUN					
18	U16CS019	PYDI VENKATA PRITHEESH NIHAR					
19	U16CS020	R MAHESH					
20	U16CS021	DHRUBAJYOTI MAJI					
21	U16CS024	SRIMATHI S					
22	U16CS025	SANTHOSHKUMAR S					
23	U16CS026	AJAY KUMAR R					
24	U16CS027	GARLAPATI RAGHURAM					
25	U16CS028	PADILAM JAYANTH YADAV					

26	U16CS029	MOHAMMED KHIZER HUSSAIN N	
27	U16CS030	JEEVAMEDHA M	
28	U16CS031	SYED HAFEEZ HUSSAIN	
27	U16CS030	JEEVAMEDHA M	
28	U16CS031	SYED HAFEEZ HUSSAIN	
29	U16CS032	MUGESH P	
30	U16CS033	POOJALAKSHMI N	
31	U16CS034	GUNDU NIKITHA REDDY	
34	U16CS035	RESHMA R	
32	U13CS035	RESHMA R	
33	U16CS036	LAKSHMI NARAYANAN A	
34	U16CS037	PALLE NAZEER VALI	
35	U16CS038	GOLUSULA SAI KUMAR	
36	U16CS039	PATTAN FEROZ KHAN	
37	U16CS040	MOHAMMAD AHAMAD ALIKHAN	
38	U16CS041	LAAVANYA GA	
39	U16CS042	MD NOORUL ISLAM	
40	U16CS043	RAVI KUMAR	
41	U16CS044	ADARSH BARANWAL	
42	U16CS045	RAHUL TIWARI	

COURSE COORDINAT

HEAD OF THE DEPARTMENT

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Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA

COURSE FEEDBACK FORM

Acad	cademic Year			2021-22								
Term			1		~~							
Cours	se Numbe	er										
Course Title		C	C# Programming									
Numl	ber of Cro	edits		H	-	((8					
Туре	of Cours	e Regu	ılar		Electiv	e		A	dd-on	i-on		
I.	Inform	ation on the R	espondent:	nt: (Tick (√) Appropriately)								
1.		tage of classes										
	0-20 20		20-40)-40		-60 60-80		0-80	80-100			
2.	Numbe	er of hours ner	week snen	t on the	course (Oth	er than lectu	re hours)					
-	0-2	or indurs per	2-4		e course (Other than lecture hours)			6-8	8-10			
3.	Preparation for the course by the student:											
	(i)	i) Have done part of this course earlier										
	(ii)											
	(iii)	(iii) Had to pickup relevant additional topics through concurrent study										
	(iv)	(iv) Have no exposure to the background material										
4.	The ex	nectations for	taking the	course b	ov the studen	t are:						
	(a)	Enhance by skill base in the area of specializations										
	(b)	(h) Get exposed to a relevant subject										
	(c)	(c) Curiosity										
	(d)	Better Emplo	yment Oppo	ent Opportunity 40								
	(e)	Complete Con	urse require	ments	40							
	(f)	To Improve C	Land Market Comment						- Superies			
Abou	it the Ins	structor: Infor	mation on	he Resp	ondent: (Tie		opriately)					
					A	В		С	D		E	
1.	Pace of the Teaching/lecture											
2.	Comme	Comment of the Subject										
3.	Clarity	Clarity of expression			/							
4.	Level of preparation											
5.	Level of interaction				/							
6.	Accessibility outside the class											
7.	Others	(please specify										
A: E:	xcellent	B: V	ery Good		C: Good		D: Satisfa	ictory		E: Poor		

HEAD OF THE DEPARTMENT

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Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
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Chennal-600 073. INDIA

COURSE FEEDBACK FORM Academic Year 2021-22 Term Course Number C # Programming Course Title Number of Credits Add-on Elective Regular Type of Course Information on the Respondent: (Tick $(\sqrt{\ })$ Appropriately) I. Percentage of classes attended 1. 80-100 60-80 40-60 20-40 0-20 Number of hours per week spent on the course (Other than lecture hours) 2. 8-10 6-8 4-6 2-4 0-2 Preparation for the course by the student: 3. Have done part of this course earlier NO Has adequate prior exposure to the prerequisites (ii) NO Had to pickup relevant additional topics through concurrent study (iii) yes Have no exposure to the background material NO (iv) The expectations for taking the course by the student are: 4. Enhance by skill base in the area of specializations (a) yes Get exposed to a relevant subject (b) Yes Curiosity (c) 40) Better Employment Opportunity (d) 10 Complete Course requirements (e) 70 To Improve CGPA 40 (f) About the Instructor: Information on the Respondent: (Tick ($\sqrt{\ }$) Appropriately) E C D B A Pace of the Teaching/lecture 1. Comment of the Subject 2. Clarity of expression 3.

i

C: Good

Level of preparation

Level of interaction

Others (please specify

Accessibility outside the class

B: Very Good

4.

5.

6.

A: Excellent

HEAD OF THE DEPARTMENT

D: Satisfactory

E: Poor

Department of Computer Scic & Engg.,
Bhurath Institute of Higher Education & Research
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Chennal-600 073. INDIA





CERTIFICATE OF PARTICIPATION

This certificate is presented to

RESHMA .R

For actively participating in the value added course "C# PROGRAMMING" Conducted by School of Computing, BIHER from 08.08.2021 to 14.09.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

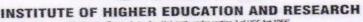
Degian pent of Capacita 52

DIRECTOR





Bharath





Date: 05.09.2021

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

From

Dr. K.P.Kaliyamurthie, Professor & Head, Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Cyber Security Professional" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Cyber Security Professional" in our campus premises on 12/09/2021.

42 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

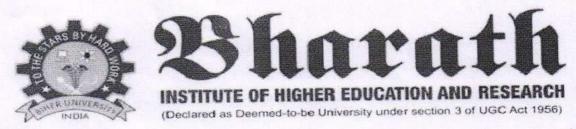
Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HOD/CSE

Department of Computer Scie. A Engg.Department of Computer Scie. A Engg.Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act. 1956)
(Chennal-600 073. INDIA

DEAN ENGINEERING



CIRCULAR

CHIEN

09.09.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to on CYBER course value added certification conduct PROFESSIONAL for the benefit of II, III and IV year students. This course is scheduled from 12.09.2021 for 30hours which includes theory and practical. The timings are 3:00 PM to 5:00 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	C.Rajabhushanam	Assistant Professor
2	E.Fathima	Assistant Professor

To

Copy to CSE

Copy to IT

Head of Department

HEAD OF DEPARTMENT Department of Computer Sciu Engg. Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennai-600 073, INDIA



CERTIFICATE COURSE ON CYBER SECURITY PROFESSIONAL

Date of Introduction of the Course: 12.09.2021

COURSE SYLLABUS

1. INTRODUCTION TO CYBER CRIME

Introduction, Forgery, Hacking, Software Piracy, Computer Network intrusion - Category of Cybercrime - Cybercrime Mobile & Wireless devices - Tools and Methods used in Cybercrime - Phishing & Identity Theft.

2. CYBER LAW

Power of Arrest without Warrant under the IT act, 2000: A Critique - Cyber Crime and CriminalJustice: Penalties, Adjudication and Appeals – Jurisdiction in the cyber world – Battling CyberSquatters and Copyright Protection.

3. E - COMMERCE PROTECTION

E-Commerce taxation – Digital signatures, certifyingauthorities and E-Governance – Indian Evidence Act – Protection of Cyber Consumers in India.

4. CYBER AND INFORMATION SECURITY POLICY

Cyber governance issues – Cyber user issues – Cyber conflict issues – Cyber management issues – Cyber infrastructures issues.

5.POLICIES AND MANAGEMENT PROCESS

Introduction - Corporate policies - Tier 1, Tier 2 and Tier 3 policies - process management - planning and preparation - developing policies - assetclassification policy - developing standards.

6. SECURING CYBERSPACE

The private sector role in securing cyberspace - National governments and their role in securing cyberspace - International law's role in securing cyberspace .

7.CYBER WAR

Privacy, surveillance and the lawCyber War and Strategy - Authentication and Identity - Current legislative and policy initiatives.

8. ORGANIZATIONAL AND HUMAN SECURITY

Organizational and Human Security: Adoption of Information Security Management Standards, Human Factors in Security - Role of information security profession.

9. INFORMATION SECURITY CONCEPTS

Information Security Overview - Information Security Services - Types of Attacks - Goals for Security - E-commerce Security - Computer Forensics - Steganography - Security Engineering.

10.SECURITY THREATS AND VULNERABILITIES

Overview of Security threats - Hacking Techniques - Password Cracking - Insecure - Network connections - Malicious Code - Programming Bugs - Cyber crime and Cyberterrorism - Information Warfare and Surveillance.

11. CRYPTOGRAPHY

Introduction to Cryptography - Symmetric key Cryptography - Asymmetric key –
Cryptography - Message Authentication and Hash functions - Digital Signatures - Public
Key infrastructure - Diffe-Hellman key exchange proptocol - Applications of Cryptography.

12. SECURITY MANAGEMENT PRACTICES

Overview of Security Management - Information Classification Process - Security Policy - Risk Management - Security Procedures and Guidelines - Business Continuity and Disaster Recovery.

13.SECURITY LAWS AND STANDARDS

Security Assurance - Security Laws - International Standards - Security Audit - OCTAVE approach - SSE-CMM.

14.SERVER MANAGEMENT AND CYBER SECURITY FIREWALLS

User Management - DNS Routing and Load Balancing - Overview of Firewalls- Types of Firewalls - DMZ and firewall features.

15.SECURITY FOR VPN AND NEXT GENERATION NETWORKS

VPN Security - Security in Multimedia Networks - Fax Security - Link Encryption-Devices.

COURSE OBJECTIVES:

- Upon completion of this course, the students will be able to
- · Explain the basic information on cybercrime.
- · Describe cyber laws for various crime activities.
- · Identify the security policies for cyber issues.
- Analyze the role of organization for securing cyberspace.
- · Explain the need for security in organizations.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Beclared as Deemed to be University U/S 3 of USC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON CYBER SECURITY PROFESSIONAL

Date of Introduction of the Course:12.09.2021

The timings are 3 PM to 5 PM

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	12.09.2021	1. INTRODUCTION TO CYBER CRIME Introduction, Forgery, Hacking, Software Piracy, Computer Network intrusion - Category of Cybercrime — Cybercrime Mobile & Wireless devices - Tools and Methods used in Cybercrime -Phishing & Identity Theft.
3,4	16-09-2021(AN)	2. CYBER LAW Power of Arrest without Warrant under the IT act, 2000: A Critique - Cyber Crime and CriminalJustice: Penalties, Adjudication and Appeals – Jurisdiction in the cyber world – Battling CyberSquatters and Copyright Protection.
5,6	17-09-2021(FN)	3. E – COMMERCE PROTECTION E-Commerce taxation – Digital signatures, certifyingauthorities and E-Governance – Indian Evidence Act – Protection of Cyber Consumers in India.
7,8	17-09-2021(AN)	4. CYBER AND INFORMATION SECURITY POLICY Cyber governance issues – Cyber user issues – Cyber conflict issues – Cyber managementissues – Cyber infrastructures issues.

9,10	23-09-2021(AN)	5.POLICIES AND MANAGEMENT PROCESS
		Introduction - Corporate policies - Tier 1, Tier 2 and Tier 3
		policies - process management - planning and
		preparation - developing policies - assetclassification
		policy - developing standards.
11,12	24-06-2021(FN)	6. SECURING CYBERSPACE
		The private sector role in securing cyberspace - National
		governments and their role in securingcyberspace -
		International law's role in securing cyberspace.
13,14	24-09-2021(AN)	7.CYBER WAR
		Privacy, surveillance and the lawCyber War and Strategy
		- Authentication and Identity - Current legislative and
		policy initiatives.
15,16	30-09-2021(AN)	8. ORGANIZATIONAL AND HUMAN SECURITY
		Organizational and Human Security: Adoption of
		Information Security Management Standards, Human
		Factors in Security - Role of information security
		profession.
17,18	01-10-2021(FN)	9. INFORMATION SECURITY CONCEPTS
		Information Security Overview - Information Security
		Services - Types of Attacks - Goals for Security - E-
		commerce Security - Computer Forensics -
		Steganography - Security Engineering.
19,20	01-10-2021(AN)	10.SECURITY THREATS AND
		VULNERABILITIES
		Overview of Security threats - Hacking Techniques -
		Password Cracking – Insecure - Network connections -
		Malicious Code - Programming Bugs - Cyber crime and
		Cyberterrorism - Information Warfare and Surveillance.
21,22	07-10-2021(AN)	11. CRYPTOGRAPHY
		Introduction to Cryptography - Symmetric key
		Cryptography - Asymmetric key - Cryptography -
		Message Authentication and Hash functions - Digital

		Signatures - Public Key infrastructure - Diffe-Hellman key exchange proptocol - Applications of Cryptography.
23,24	08-10-2021(FN)	12. SECURITY MANAGEMENT PRACTICES Overview of Security Management - Information Classification Process - Security Policy - Risk Management - Security Procedures and Guidelines - Business Continuity and Disaster Recovery.
25,26	08-10-2021(AN)	13.SECURITY LAWS AND STANDARDS Security Assurance - Security Laws - International Standards - Security Audit - OCTAVE approach - SSE- CMM
27,28	14-10-2021(AN)	14.SERVER MANAGEMENT AND CYBER SECURITY FIREWALLS User Management - DNS Routing and Load Balancing - Overview of Firewalls - Types of Firewalls - DMZ and firewall features.
29,30	15-10-2021(FN)	15.SECURITY FOR VPN AND NEXT GENERATION NETWORKS VPN Security - Security in Multimedia Networks - Fax Security - Link Encryption - Devices.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scir. & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deamed to be Dalversity U/S 3 of UGC Act, 1056)
Chennal-600 073, INDIA



CERTIFICATE COURSE ON CYBER SECURITY PROFESSIONAL

Date of Introduction of the Course: 12.09.2021 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT			
1	U14CS033	BOORAGADDA VAMSI KRISHNA			
2	U14CS035	BYSANI VENKAT SANDEEP			
3	U14CS089	MADIYAL ANJAY			
4	U14CS090	MAL REDDY GANESH REDDY			
5	U14CS092	MANDELA SAIKIRAN			
6	U14CS151	RAVIPATI SUBBARAYUDU			
7	U14CS153	RONU SHARMA			
8	U14CS155	TAMMINANA SAGAR			
9	U14CS157	SAJJA. SURENDRA PRASAD			
10	U14CS166	SHAFAN HASIM.N			
11	U14CS170	SHANKAR KUMAR GUPTA			
12	U14CS178	SK MD TAUQEER			
13	U14CS181	SOURABH PRIYADARSHI			
14	U14CS185	SURENDAR.K			
15	U14CS199	VAMMARVALLI RAJA			
16	U14CS207	VIVEK KUMAR			
17	U14CS210	YELLALA SANTHOSH REDDY			
18	U14CS217	CHILLIMUNTA VENKATESH			
19	U15CS144	OMPRAKASH YADAV			
20	U15CS147	PALEPU SIVA MANIKANTA CHARI			
21	U15CS148	PARTHIBAN S			
22	U15CS710	JAYANTHIS			
23	U15CS502	DANIEL BRITTO			
24	U15CS194	SHAIK SABIR			
25	U15CS196	SHARYARAI.S			
26	U15CS197	SHATRUGHAN SUHAN.S			
27	U15CS199	SIRI GIRI HAREESH			
28	U15CS201	SMITHA C.S			
29	U15CS255	ADITYA			
30	U15CS701	PRAVEEN RAJ.V			
31	U15CS702	GOWTHAMAN.S			
32	U16CS025	SANTHOSHKUMAR S			
33	U16CS099	GANGUMALLA GANGA SUNIL			
34	U16CS101	NITHISHVAR S			

35	U16CS109	CHITTALA HARIKA			
36	U16CS147	PREM KUMAR MISHRA			
37	U16CS152	NALLAPU RAJESH			
38	U16CS162	YEMIREDDY SRINIVASA REDDY			
39	U16CS169	RAVILLA HARSHITHA			
40	U16CS192	GANTLA VASU			
41	U16CS197	PRAVEENRAJ R M			
42	U16CS210	TANIRU SATISH			

COURSE COORDINATOR

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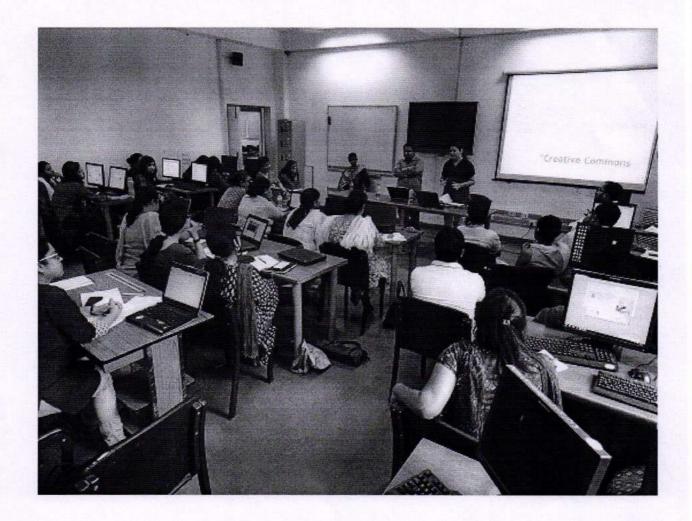
HEAD OF DEPARTMENT
Department of Computer School School,
Bhoroth Institute of Higher Education and Justice
(Declared as Duemos to be Convently U.S.) of Unit Act, 1915)
Chennal-600 073, INDIA



23 harath Institute of Higher Education and Research

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON CYBER SECURITY PROFESSIONAL



COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie A Engg.,
Bharath Institute of Higher Education & Research
(Declared as Department to be University WS 3 of UGC Act, 1956)
Chemnal-600-073 INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

RONU SHARMA (REG NO:U14CS153)

For actively participating in the value added course "CYBER SECURITY PROFESSIONAL" Conducted by School of Computing, BIHER from 12.09.2021 to 15.10.2021

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Acad	emic Ye	ar	2.	221 -202	!2.					
elem				0dd	Sem					
our	se Numb	oer								
our	se Title		a	fler see	witer	Pr	obssion	1		
luml	ber of C	redits		go c)		0			
ype	of Cour	se Regular		Electiv	re		Ad	d-on	M	
	7.6					A L				
	Intern	nation on the Ke	spondent: (Tick	(V) Appropri	ately)					
	Percentage of classes attended									
	0-20		20-40	40	-60	.1	60-80		80-100	
		er of hours per	week spent on th	2 2 2 2		cture ho				
	0-2		2-4	4-	6	()	6-8		8-10	
	Prepa	ration for the co	urse by the stud	ent:						
	(i)	Have done par	t of this course ea	rlier	y	1				
	(ii)	Has adequate p	orior exposure to	the prerequisit	20 4	ses				
	(iii)	Had to pickup	relevant addition	al topics throu		4	yes			
	(iv)	Have no expos	ure to the backgr	ound material		ye	1			
	Th.		1: 0	has the aturdan		0				
	(a)		aking the course	A STATE OF THE STA	- Inni-en	54				
	(b)	The state of the s	d to a relevant subject							
	(c)	Curiosity	a resevant subject			Jes .		3/15	-	-
	(d)		ment Opportunity	v		Jes .		-		
	(e)		rse requirements			yes				
	(f)	To Improve CO				yes				
bou	t the In	structor: Inform	nation on the Re	spondent: (Ti	ck (√) App	propriate	ely)			
				A	В		C	D		E
	Pace o	f the Teaching/lea	cture			1	1			
	Comment of the Subject					No.	5			
	Clarity	of expression				V				
	Level of preparation				E		5			
	Level	of interaction					V			
		sibility outside th	e class				w			
	Others	(please specify								
	xcellent	1 1-	Very Good	C: Good		-1-	Satisfactory		t: Poor	

HEAD OF THE DEPARTMENT

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Department of Computer Scile 4 Engg.,
Bharath Institute of Higher Education, & Research
(Declared as Departed to be University U.S. 3 of UGC Act, 1956)
Chennal-600 073, INDIA

COURSE FEEDBACK FORM

Acad	demic Yea	ır	20	21-2022					
Academic Year 2021-2022 Term odd Sem.									
Cou	rse Numb	er							
	rse Title		Cu	yber Seu	inity	Profes	sional		
	ber of Cr	100000							
Туре	of Cours	se Regular		Elective			Add-on		
I.	Inform	nation on the l	Respondent: (Tick	(√) Appropriat	ely)				
1.	Percen	tage of classe	s attended						
	0-20		20-40	40-6	50	60-8	0	80-100	
2.	Numbe	ou of house no	r week spent on th	o source (Other	than lastur	o house)			
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	(ii)	Has adequat	e prior exposure to	the prerequisites			Yes		. SIRVES - SA
	(iii)	Had to picku	ip relevant addition	al topics through	concurrent	study	yes		
	(iv)	Have no exp	osure to the backgr	ound material			yes		
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•		70	taking the course skill base in the are	Water State of State					
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HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Soic of Engg.,
Bharath Institute of Higher Education & Research
(Declared as Geometric to be University Urs 3 of UGC Act, 1856)
Chennal-600 073, INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH



(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY
No.173, Agharam Road, Selaiyur, Chennai, T.N - 600 073.

Requisition Letter

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Oracle Database 11g:Implement Database value Release 2" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Oracle Database 11g:Implement Database value Release 2" in our campus premises on 12/09/2021.

52 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HOD/CSF

DEAN ENGINEERING

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Sharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chephal-600 073, INDIA



CIRCULAR

08.09.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Oracle Database 11g: Implement database**Vault Release 2 for the benefit of II, III and IV year students. This course is scheduled from 12.09.2021 for 30 hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr. G.Michael	Professor
2	Dr.C.Rajabhushanam	Professor

To

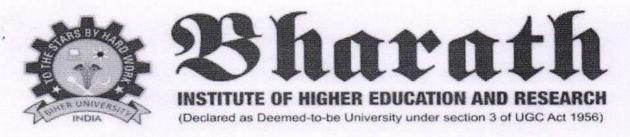
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Copy to IT

Head of Department

HEAD OF DEPARTMENT Department of Computer Sei, thoroth Institute of Wigher Educations

Engg. orearch



CERTIFICATE COURSE ON ORACLE DATABASE 11G: IMPLEMENT DATABASE VAULT RELEASE 2

Date of Introduction of the Course: 12.09.2021

COURSE SYLLABUS

1. Introduction.

Database Vault elements and functionality, Component relationships

2. Overview of Database Vault

Database Vault example, Database Vault effects

3. Database Administrator

Database Vault Administration (DVA) -Reporting and monitoring -Database Vault API -Managing Database Vault databases using Enterprise Manager

4. Configuring Database Vault

Enabling Oracle Database Vault -Configuring an Oracle database for Database Vault - Database parameters altered during configuration -Logging into DVA

5. Database Vault Account

Database roles-Database Vault accounts-Database Vault schemas

6. Configuring Realms

Realms: Concepts-Creating and editing realms-Deleting realms-The realm algorithm-Examples of realms-Delivered realms-Realm views-Monitoring and reporting of realms

7. Defining Rule Sets

Rule sets: Concepts-Creating and editing rule sets-Deleting rule sets-Reusing rules-Auditing rule sets

8. Database Event Handlers

Custom event handlers-Using rule sets with realms-Rule set examples

9. Configuring Command Rules

Command Rules: Concepts-Creating and editing command Rules-Delivered command rules-DBA_DV_COMMAND_RULE view-Command rule report-Command rule API

10. Extending Rule Sets

Factors: Concepts-Factor scenarios-Creating and editing factors.

11. Managing factors

Identities: Concepts-Purpose of identities-Creating an identity-Managing identities

12. Configuring Secure Application Roles

Secure application roles: Concepts-Creating and editing secure application roles-Deleting secure application roles-Secure application roles: Examples-Managing secure application roles.

13. Viewing Database Vault Reports-1 and Viewing Database Vault Reports-2

Monitoring Database Vault - Configuration reports - Auditing reports - Security reports.

Object privilege reports-Accounts and roles reports-Privilege summary reports-System privileges reports

14. Implementing Best Practices

Identifying your security requirements-Suggested naming convention-Separation of duty best practices

15. Identifying your security requirements

Audit all violations-Connection pooling considerations-Enforcing connections from application server-Performance considerations.

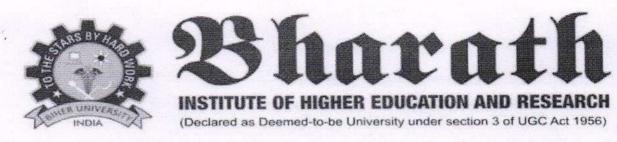
COURSE OBJECTIVES

- 1. Identify the features and benefits of Oracle Database Vault
- 2. Install and Configure Oracle Database Vault Audit Database Vault activities
- Configure Oracle Database Vault components (such as Realms, Identities, and Factors) to implement security
- 4. Use attributes such as time of day and IP address to determine users' privileges
- 5. Use the Database Vault administration browser interface
- 6. Use PL/SQL APIs to perform Database Vault functionality
- 7. Access Database Vault views to see security information
- 8. Incorporate best practices into database vault configuration

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTME
Department of Computer Squ
Bharath Institute of Higher Education
(Declared as occupants)



CERTIFICATE COURSE ON ORACLE DATABASE 11G: IMPLEMENT DATABASE VAULT RELEASE 2

Date of Introduction of the Course: 12.09.2021 The timings are 1:30 PM to 4:30 PM

Time Table & Lesson plan

CLASS	DATE	TOPIC
1, 2	12.09.2021 (AN)	Introduction - Database Vault elements and functionality , Component relationships
3, 4	16.09.2021 (AN)	Overview of Database Vault - Database Vault example ,Database Vault effects
5, 6	17.09.2021 (FN)	3. Database Administrator - Database Vaula Administration (DVA) -Reporting and monitoring Database Vaula databases using Enterprise Manager
7, 8	17.09.2021 (AN)	4. Configuring Database Vault - Enabling Oracle Database Vault -Configuring an Oracle database for Database Vault -Database parameters altered during configuration -Logging into DVA
9, 10	23.09.2021 (AN)	5. Database Vault Account - Database roles Database Vault accounts-Database Vault schemas
11, 12	24.09.2021 (FN)	6. Configuring Realms - Realms: Concepts-Creating and editing realms-Deleting realms-The realmalgorithm-Examples of realms-Delivered realms Realm views-Monitoring and reporting of realms
13, 14	24.09.21 (AN)	7. Defining Rule Sets - Rule sets: Concepts-Creating and editing rule sets-Deleting rule sets-Reusing rules-Auditing rule sets
15, 16	30.09.2021 (AN)	8. Database Event Handlers - Custom even handlers-Using rule sets with realms-Rule set examples

17, 18	01.10.2021 (FN)	9. Configuring Command Rules - Command Rules: Concepts-Creating and editing command Rules- Delivered command rules- DBA_DV_COMMAND_RULE view-Command rule report-Command rule API. 10. Extending Rule Sets - Factors: Concepts-Factors
19, 20	01.10.2021 (AN)	scenarios-Creating and editing factors.
21, 22	07.10.2021 (AN)	11. Managing factors - Identities: Concepts-Purpose of identities-Creating an identity-Managing identities
23, 24	08.10.2021 (FN)	application roles: Concepts-Creating and editing secure application roles-Deleting secure application roles-Secure application roles: Examples-Managing secure application roles.
25, 26	08.10.2021(AN)	13. Viewing Database Vault Reports-1 and Viewing Database Vault Reports-2 - Monitoring Database Vault-Configuration reports-Auditing reports Security reports. Object privilege reports-Account and roles reports-Privilege summary reports System privileges reports
27, 28	14.10.2021 (AN)	14. Implementing Best Practices - Identifying you security requirements-Suggested naming convention-Separation of duty best practices.
29, 30	15.10.2021 (FN)	15. Identifying your security requirements - Audit all violations-Connection pooling considerations Enforcing connections from an application server Performance considerations

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scil. A Engg.,
Bhoroth Institute of Higher Education & Research
(Beclared as December to be Deversity 0.53 of 000 Mrt. 1858)
Chestoni-600, 673, 1904



Certificate Cources on Oracle Database 11g: Implement Database Vault Release 2 Date of Introduction of the Course: 12.09.2021

School of Computing Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS166	SHAFAN HASIM.N
2	U14CS167	SHAIK AATIKA
3	U14CS168	SHAIK MEERA SHARIF
4	U14CS169	SHAIK YASMIN
5	U14CS170	SHANKAR KUMAR GUPTA
6	U14CS171	SHARSHI KANT PRASAD
7	U14CS056	GOUTHAM KALYAN KUMAR .R
8	U14CS057	GOVIND KUMAR
9	U14CS058	HARI TEJA.G
10	U14CS059	HARISH.V
11	U14CS060	JASIMKHAN.J.
12	U14CS061	JENNIFER.S
13	U14CS062	JERIPOTHULA SURESH GOUD
14	U14CS063	JOHN DALTON .H
15	U14CS064	K. LAKSHMIKANTH REDDY
16	U14CS065	K. LAKSHMI NARAYANA REDDY
17	U14CS111	NAGINENI SRIKANTH CHOWDARY
18	U14CS112	NAGIREDDY MOHAN KRISHNA REDDY
19	U14CS113	NALLAJARLA CHAKRADHAR
20	U14CS114	NANDALA SWETHA
21	U14CS115	NANDIPALLI MOUNICA
22	U14CS223	ARUN
23	U14CS226	SARAVANAN.B
24	U14CS227	I.SUKAPATLA AVINASH
25	U14CS237	CHARAN KUMAR
26	U14CS701	BALAJI

27	U14CS232	B.BALAKUMARAN
28	U14CS233	P.UPENDRA VARMA
29	U14CS236	M.RAVISANKAR
30	U15CS001	ABHIJEET KUMAR
31	U15CS002	ABHIJIT KUMAR GUPTA
32	U15CS003	ABHISHEK KUMAR SINGH
33	U15CS004	ALLU SAI SIVA PRIYANKA NAIDU
34	U15CS005	AMBIKE KUMAR SINGH
35	U15CS006	ANBUMANI S
36	U15CS007	ANJAR ALI
37	U15CS008	ANKAM MANJUNATH
38	U15CS009	ANNADI DHANUSH
39	U15CS011	ANUMOLU YESWANTH
40	U15CS064	INJE RAVI TEJA
41	U15CS065	INNURU SWATHI
42	U15CS066	JAGADEESH K
43	U15CS067	JAGADEESWARA RAO JADDU
44	U15CS068	JAICHAND KUMAR
45	U15CS069	JANAKI RAMAN V
46	U15CS071	JOHN PARAM JYOTHI JYOTHULA
47	U15CS073	K THULASIRAM
48	U15CS074	KADALI VINAYNARASIMHA
49	U15CS075	KADUMU MOUNIKA
50	U15CS191	SEETAPTI HEMA SEKHAR
51	U15CS192	SESHA SRUJAN.B
52	U15CS193	SHAIK AFRIDI

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie Cangg.,
Bhorath Institute of Higher Education & Research
(Declared as Departed to be University U.S.3 of URG Act, 1959)
Chennal-600, 073. INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON ORACLE DATABASE 11g:IMPLEMENT DATABASE VAULT REALEASE 2



COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

ABDUL RAHIM.M

For actively participating in the value added course "oracle Database 11g: Implement Database Vault Release 2

Conducted by School of Computing, BIHER from 12.09.2021 to 15.10.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academic Year			2021 -2022							
Term			+	gold sem						
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2.	Number	of hours per week s	pent on the	course (Other	han lecture	hours)			THE STATE OF	
	0-2	2-4		4-6		6-8		8-10		
3.	Prepara	Preparation for the course by the student:								
	(i)	Have done part of this course earlier								
	(ii)	Has adequate prior exposure to the prerequisites								
	(iii)	Had to pickup relevant additional topics through concurrent study								
	(iv) Have no exposure to the background material									
	T					9-				
4.	The expectations for taking the course by the student are:									
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	(b)	Get exposed to a relevant subject								
	(c)	Curiosity								
	(d)	Better Employment Opportunity								
	(e)	Complete Course		30)					//	
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HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sci. Research
Sharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1958)
Chennal-600 073, INDIA

COURSE FEEDBACK FORM

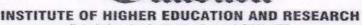
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	(i)	Have done part of this course earlier								
	(ii)	Has adequate prior exposure to the prerequisites								
	(iii)	Had to pickup relevant additional topics through concurrent study								
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	(b)	Get exposed to a relevant subject								
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HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic Regg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University UIS 3 of UIC Act, 1956)
Chennal-600 073. INDIA



Bharath





BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selalyur, Chennal , T.N - 600 073.

Requisition Letter

From

Date: 05.09.2021

Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Introduction to Python Data Types" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Introduction to Python Data Types" in our campus premises on 12/09/2021.

55 students would be participating in this course. We request you kindly to give permission to organize this event.

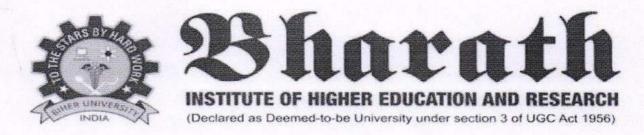
Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HOD/CSE

Department of Computer Sciu & Engg., Bharath Institute of Higher Education & Research Declared as Deemed to be University U/S 3 of UGC Act, 1956) Chennal-600 073. INDIA DEAN ENGINEERING



CIRCULAR

08.09.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on Introduction to Python Data Types for the benefit of II, III and IV year students. This course is scheduled from 12.09.2021 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.G.Michael	Professor

Head of Department

To

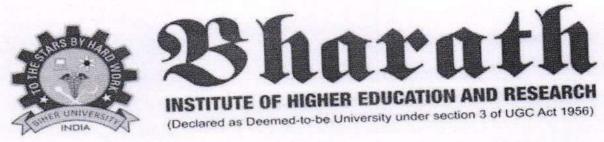
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HEAD OF DEPARTMENT

Department of Computer Scit A English Computer Sci A Engli

Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UCC Act, 1958) Chennal-600 073. INDIA



CERTIFICATE COURSE ON INTRODUCTION TOPYTHON DATATYPES

Date of Introduction of the Course: 12-09-2021

COURSE SYLLABUS

1. Introduction to Python Syllabus

An Introduction to The Python Programming Language. History of Python, Evolution Introduces Python's Basic Datatypes, Files, Functions, And Error Handling.

2. Beginning Python Basics

The Print Statement, Comments, Python Data Structures & Data Types, String operations in Python, Simple Input & Output, Simple Output Formatting, Operators in Python

3. Variables in Python- Global and Static Variables

Creating and Declaring Python Variable, Re-Declaring a Variable, Local variable, Global variable, Deleting a variable, Concatenating Variables, Constants

4. Python Program Flow

Indentation, The If statement and its' related statement, an example with it and its related statement, the while loop, the for loop, the range statement, Break & Continue, Assert Examples for looping

5. Functions and Modules

Create your own functions, Functions Parameters, Variable Arguments, Scope of a Function, Function Documentations, Lambda Functions& map, Exercise with functions Create a Module, Standard Modules.

6. Python Data types

Python Data Types: An Overview, Mutable Data Types, Immutable Data Types, Numbers, Strings, Lists, Tuples, Sets, Dictionaries.

7. Python Numerical

Categories of Number Data Type, Integers in Python, Long Integers, Octal and Hexadecimal in Python, Floating Point in Python, Complex Numbers in Python Number Type Conversion.

8. Strings in Python

Creating String in Python, Accessing Python String Characters, Updating and Deleting a String in Python, Python String Operators, Built-in Python String Methods and Python String Functions.

9. List in Python

Creating Lists in Python, Creating Multi-dimensional lists in Python, Python Lists Extension, Accessing Lists in Python.

Python List Comprehension 10.

List Comprehension- Syntax, Condition, Expression, Nested Loop in List Comprehension.

Common List Operation in Python 11.

Slicing Python Lists, Update or Add Elements in a Python List, Update or Add Elements in a Python, remove elements from list in python, remove duplicates from lists in python, Sorting Lists in Python, Reverse a List in Python.

Python Lists Functions and Methods

Predefined List Functions in List, Built-in Methods using List/Array.

Tuples in Python 13.

Creating Tuple in Python, Accessing Python Tuple Elements - Indexing, Reverse Indexing, Slicing Operator, Operations in Python Tuples-Modifying Element in Python Tuple, Deleting Python Tuple Elements

Set in Python 14.

Instantiate a set in Python, Python set Operation, Common Python Set Methods.

Dictionary in Python 15.

Create a Dictionary in Python, Access Items in Dictionary, Operations in Dictionary, Common Python Dictionary methods.

COURSE OBJECTIVES

In this course we plan to give students an overview of basic concepts and terminology related to Python and its Data Types. This Python for beginners training course leads the students from the basics of writing and running Python scripts to more advanced features such as file operations, regular expressions, working with binary data, and using the extensive functionality of Python modules. Extra emphasis is placed on features unique to Python, such as tuples, array slices, and output formatting.

Specifically, the course has the following objectives:

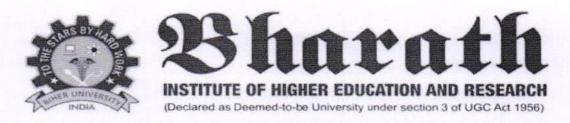
Students will learn

- 1. Explain basic principles of Python programming language
- 2. Implement object oriented concepts,
- 3. Implement database and GUI applications

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT



CERTIFICATE COURSE ON INTRODUCTION TO PYTHON DATA TYPES

Date of Introduction of the Course:12-09-2021

Time Table& Lesson plan

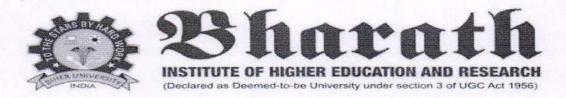
CLASS	DATE	TOPIC
1,2	12-09-2021(AN)	1.Introduction to Python Syllabus
		An Introduction To The Python
		Programming Language. History Of Python,
		Evolution Introduces Python's Basic Datatypes,
		Files, Functions, And Error Handling.
3,4	16-09-2021(AN)	2. Begining Python Basics
		ThePrint Statement, Comments, Python Data
		Structures & Data Types, String Operations in
		Python, Simple Input & Output, Simple Output
	47.00.004.777	Formatting, Operators in Python
5,6	17-09-2021(FN)	3. Variables in Python- Global And Static
		Variables
		Creating and Declaring Python Variable, Re-
		Declaring a Variable, Local variable, Global
	WELLING BEGIN	variable, Deleting a variable, Concatenating Variables, Constants
70	17 00 2021/AND	4. Python Program Flow
7,8	17-09-2021(AN)	Indentation, The If statement and its' related
		statement, An example with if and it's related
		statement, The while loop, The for loop, The
		range statement, Break &Continue, Assert
		Examples for looping
9,10	23-09-2021(AN)	5. Functions and Modules
,,20	20 07 2022(1111)	Create your own functions, Functions
		Parameters, Variable Arguments, Scope of a
		Function, Function Documentations, Lambda
		Functions& map, n Exercise with functions
		Create a Module, Standard Modules.
11,12	24-06-2021(FN)	6. Python Data types
		Python Data Types: An Overview, Mutable Data
		Types, Immutable Data Types, Numbers, Strings,
		Lists, Tuples, Sets, Dictionaries
13,14	24-09-2021(AN)	7. Python Numericals
		Categories of Number Data Type, Integers in
		Python, Long Integers, Octal and Hexadecimal in
		Python, Floating Point in Python, Complex
	The state of the s	Numbers in Python Number Type Conversion.

15,16	30-09-2021(AN)	8. Strings in Python Creating String in Python, Accessing Python String Characters, Updating and Deleting a String in Python, Python String Operators, Built-in Python String Methods and Python String Functions
17,18	01-10-2021(FN)	9.List In Python Creating Lists in Python, Creating Multi- dimensional lists in Python, Python Lists Extension, Accessing Lists in Python
19,20	01-10-2021 (AN)	10.Python List Comprehension List Comprehension- Syntax, Condition, Iterable, Expression, Nested Loop in List Comprehension
21,22	07-10-2021 (AN)	11. Common List Operation in Python Slicing Python Lists, Update or Add Elements in a Python List, Update or Add Elements in a Python, Remove elements from list in python,Remove duplicates from lists in python,Sorting Lists in Python, Reverse a List in Python.
23,24	08-10-2021 (FN)	12. Python Lists Functions and Methods Predefined List Functions in List, Built-in Methods using List/Array.
25,26	08-10-2021 (AN)	
27,28	14-10-2021 (AN)	14. Set In Python Instantiate a set in Python, Python set Operation, Common Python Set Methods.
29,30	15-10-2021 (FN)	15.Dictionary In Python Create a Dictionary in Python, Access Items in Dictionary, Operations in Dictionary, Common Python Dictionary methods

Course coordinator

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sciol & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON INTRODUCTION TO PYTHON DATA TYPES Date of Introduction of the Course: 12.09.2021

School of Computing Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT		
1	U14CS038	ANKAM MANJUNATH		
2	U14CS007	ANKITA		
3	U14CS015	BALA MURUGAN .P		
4	U14CS026	CHIDIRALA.SAI SHANKAR		
5	U14CS047	DEVULAPALLY NAGARAJU		
6	U14CS054	GONTLA KARTHIK		
7	U14CS231	GYANA PRASANNA		
8	U14CS060	JASIMKHAN.J.		
9	U14CS072	KATKURI.KUMAR		
10	U14CS082	KRISHNANDAN YADAV		
11	U14CS094	MANISH SHARMA		
12	U14CS101	MOHAMMAD AADIL SHANHREYAR		
13	U14CS177	K.SIVA SUBRAMANIAN		
14	U14CS703	VASANTHAN.N		
15	U14CS120	NIRUPAMA CHAKRABORTY .S		
16	U14CS129	PIYALI CHAKRABORTHY.M		
17	U14CS138	RAHUL KUMAR		
18	U14CS151	RAVIPATI SUBBARAYUDU		
19	U14CS160	SANDEEP INGUVA		
20	U14CS164	SAURAV KUMAR		
21	U14CS708	SUSMITA MOG		
22	U14CS172	SHASHI BHUSHAN BHAGAT		
23	U14CS183	SULEKHA KUMARI		
24	U14CS192	THARIGOPULA LOKESH		
25	U14CS202	VEMULA ANWAR		

26	U14CS210	YELLALA SANTHOSH REDDY	
27	U14CS223	ARUN	
28	U14CS236	M.RAVISANKAR	
29	U15CS008	ARYAN SAHU	
30	U15CS015	BANDARU RAMESH	
31	U15CS020	BONALA SRIDHAR RAO	
32	U15CS028	DADAM CHAITHRA	
33	U15CS040	GANGARAPU UKESH	
34	U15CS051	GUNDA VINAY KUMAR	
35	U15CS058	JAICHAND KUMAR	
36	U15CS068	KAIPU PRANAY REDDY	
37	U15CS076	KANDULA SRINATH	
38	U15CS085	KONDURU PREM KUMAR	
39	U15CS096	M. DINESH REDDY	
40	U15CS110	MANOJ KUMAR R	
41	U15CS117	KARAM	
42	U15CS704	N SWAPNA RAAGA	
43	U15CS129	NEELA SAI KUMAR	
44	U15CS138	PATNAM VENKATA RAMANA	
45	U15CS150	PRATHI VENKAT RANJITH KUMAR	
46	U15CS162	RAMIREDDY SURENDRA REDDY	
47	U15CS176	SADHOLLA PRANAY REDDY	
48	U15CS185	SANTHOSH RAJ M	
49	U15CS189	SESHA SRUJAN.B	
50	U15CS192	SIRI GIRI HAREESH	
51	U15CS199	TAKKELLA AJITH CHOWDARY	
52	U15CS209	VEMSETTY ARUN SAHADEV	
53	U15CS216	KARAN PRINCY.P	
54	U15CS233	SOMESH.C	
55	U15CS248	PRAVEEN RAJ.V	
55	U15CS701	ABHISHEK MANDURI	

Course coordinator

HEAD OF THE DEPARTMENT

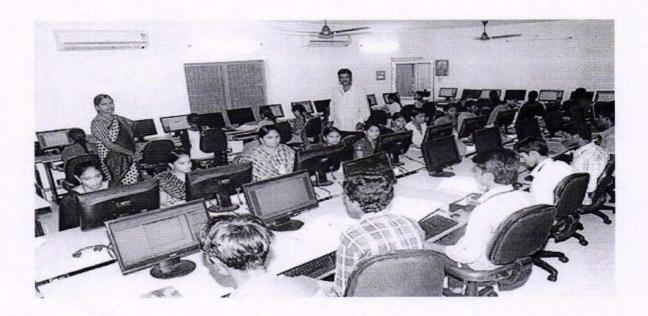
HEAD OF DEPARTMENT
Department of Computer Scie (Lengg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON INTRODUCTION TO PYTHON DATATYPES



Creal **COURSE COORDINATOR**

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT Department of Computer Scit. A Engg.,
Bhurath Institute of Higher Education & Research
(Declared as Decemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

NEELA SAI KUMAR

For actively participating in the value added course "Introduction to Python Data Types" Conducted by School of Computing, BIHER from 12.09.2021 to 15.10.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Acad	lemic Yea	ar 2021	-2022										
Term		- Od	ds	em									
Cour	se Numb	per			MEYER SE	Web Edited							
Cour	se Title	Pry	thon I	nta	Types			THE THE L					
Num	ber of Ci	redits	,		0								
Туре	of Cours	se Regular	Elective	9		Add-on	V	,					
	1												
I.	Intorn	nation on the Respondent: (Tick	(V) Appropria	tely)			1.mu=.						
1.	Percer	ntage of classes attended											
	0-20	20-40	40-	-60	60-80		80-100						
2.	Numb	er of hours per week spent on th	a course (Othe	r than loc	ture hours)								
۷.	0-2	2-4	4-6		6-8	_	8-10						
	0-2		1 770		10-8		8-10						
3.	Prepa	ration for the course by the stud	ent:				III III III						
	(i)	Have done part of this course ea	f this course earlier										
	(ii)	Has adequate prior exposure to the prerequisites											
	(iii)												
	(iv)	Have no exposure to the background material											
4.	The ex	The expectations for taking the course by the student are:											
	(a)		ase in the area of specializations										
	(b)	Get exposed to a relevant subject	elevant subject										
	(c)	Curiosity			S. es								
	(d)	Better Employment Opportunit	it Opportunity										
	(e)	Complete Course requirements			cre	7							
	(f)	To Improve CGPA			- ge	,							
Abo	ut the In	structor: Information on the Re	spondent: (Tic	k (√) App	ropriately)								
			A	В	C	D		E					
1.	Pace o	f the Teaching/lecture			V								
2.	Comm	nent of the Subject			V								
3.		of expression		THE P	7								
4.	1000	of preparation		THE WAY									
5.	1004-77700-10-5515	of interaction					200						
6.		sibility outside the class			V								
7.	Others	(please specify											
A: E	xcellent	B: Very Good	C: Good		D: Satisfa	ctory	E: Poo	ot					

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.
Bharath Institute of Higher Education & Research
(Daciered as Doesned to be University U/O 3 of U/OC Act, 1656)

COURSE FEEDBACK FORM

A . T	Excellent	B: Very	Good	C: Good		D: Satisfa	ectory	E: Po	or					
7.	Others	(please specify												
6.	Acces	sibility outside the clas	s			/	7							
5.	Level	of interaction				V	7							
	Level	of preparation				7								
	Clarity	of expression					2							
	Comm	ent of the Subject				1								
	Pace o	f the Teaching/lecture	WIFE	N THE CO.		5			HANTE					
				A	В	С	D		E					
bo		structor: Information	on the Res	spondent: (Tic	k (√) Appr	opriately)								
	(f)	To Improve CGPA				yes								
	(e)	Complete Course re				yes								
	(d)	Better Employment	Opportunity	7		30			V. T.					
	(c)	Curiosity	c. an subjec			ges-	10 M							
	(b)	99												
	(a)	Enhance by skill base in the area of specializations												
ı.	The ex	rnectations for taking	the course	by the student	are.	0)			-					
	(iv)	Have no exposure to the background material												
	(iii)	Had to pickup relevant additional topics through concurrent study												
	(ii)	Has adequate prior exposure to the prerequisites												
	(i)	Have done part of this course earlier												
	Prepar	Preparation for the course by the student:												
	0-2	2-4		4-0		0-8		0-10						
2.		er of hours per week		e course (Othe		ure hours)		8-10						
	0-20	20-		40-	60	60-80)	80-100						
1.	Percen	Percentage of classes attended												
i.	Inform	nation on the Respond	lent: (Tick	(√) Appropriat	ely)									
JPC	or cours	ic regular		Dictive			True on							
	of Cours			Elective			Add-on	1						
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	lemic Yea	"	2021-2022 Odd Am											

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.
Bharath Institute of Higher Education, & Researce
(Declared as Deemad to be University U/S 3 of U/G. Act, 1997
Chempal-600 073, INDIA





INSTITUTE OF HIGHER EDUCATION AND RESEARCH



Date:

11.10.2021

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

From Dr. K.P.Kaliyamurthie, Professor & Head, Department of CSE, Bharath Institute of Higher Education and Research, Chennai

To The Dean Engineering, Bharath Institute of Higher Education and Research, Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Course on Java Skills and Java Certification" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Course on Java Skills and Java Certification" in our campus premises on 17/10/2021.

55 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

DEAN ENGIN

Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act, 1956) Chennai-600 073. INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

13.10.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on "Course on Core Java Skills and Java Certification" for the benefit of II, III and IV year students. This course is scheduled from 17.10.2021 for 30 hours which includes theory and practical. The timings are 01:30 PM to 04:30 PM

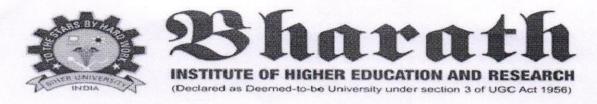
All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	S.Pothumani	Assistant Professor

Head of Department

To

Copy to CSE

Copy to IT



COURSE ONCORE JAVA SKILLS AND JAVA CERTIFICATION

Date of Introduction of the Course: 17.10.2021

COURSE SYLLABUS

1. BASICS OF JAVA

History and Features of Java, C++ vs Java, Hello Java Program, Internal How to set the path?, JDK, JRE, and JVM (Java Virtual Machine), JVM Memory Management, Internal details of JVM, Unicode System, Operators, Keywords, and Control Statements like if-else, switch, For loop, while loop, etc.

2. CLASS, OBJECT, AND TYPES OF CLASSES

Classes, Objects, and Features, Object declaration and initialization, Life cycle of an object, Anonymous object in Java, Classes and Objects in java with Realtime examples

3. PACKAGES IN JAVA

Package naming conventions, Sub packages, Types of packages such as user-defined packages, built-in packages, Importing packages in Java

4. DATA TYPES IN JAVA

Data types in Java - Primitive data types, Non-primitive data types, Memory allocation of primitive and non-primitive data types, etc.

5. VARIABLES, CONSTANTS, AND LITERALS

Variable declaration & initialization - Naming convention, Types of variables such as local variables, instance variables, and static variables, Scope and memory allocation of variables.

6. METHODS IN JAVA

Methods in Java - Use of method in Java, Method declaration, method signature, Types of methods in Java: predefined method, user-defined methods: instance method, static method, Calling of method, Java main method, Return type in Java.

7. CONSTRUCTOR IN JAVA

What is Constructor in Java? ,Types of constructors: Default and Parameterized constructors, Java constructor overloading, Constructor chaining in java, Copy constructor in Java

8. INNER CLASSES AND WRAPPER CLASSES

Introduction, Member Inner Class, Static Inner Class, Local Inner Class, Anonymous Inner Class, Introduction, Byte, Short, Integer, Long, Float, Double, Character, Boolean classes

9. COLLECTION FRAME WORK

Introduction, Util Package interfaces, List, Set, Map, List Interface 7 Its Classes, Set Interface & Its Classes, Map Interface & Is Classes

10. AWT

Introduction, Components, Event-Delegation-Model, Listeners, Layouts, Individual Components Lable, Button, Check Box, Radio Button, Choice, List, Menu, Text Field, Text Area

11. SWING (JFC)

Understanding Session Hijacking, Phases involved in Session Hijacking, Types of Session Hijacking, Session Hijacking Tools -Introduction Diff B/W AWT and SWING, Hierarchy, Individual Swings components J Label, JButton, JTextField, JTextAres

12. WEB SERVER AND APPLICATION SERVER

Tomcat-Introduction, Overview, installation, Configuring Tomcat, Jboss server-Introduction, Overview, Installation and Configuration, Comparison

13. SQL and JDBC

Basics of SQL queries, SQL Joins, JDBC Introduction, JDBC Architecture, Types of Drivers, Statement, Result Set, Read Only Result Set, Updatable Result Set, Forward Only Result Set, Scrollable Result Set, Prepared Statement

14. SERVLETS

Introduction, Web application Architecture, HTTP Protocol & HTTP Methods, Web Server & Web Container, Servlet Interface, HTTPServlet, GenericServlet, Servlet Life Cycle, Servlet Config, Servlet Context, Servlet Communication

15. JSP

Introduction, JSP LifeCycle, JSP Implicit Objects & Scopes, JSP Directives
COURSE OBJECTIVES

This course enables programmers to develop a single application that can run across multiple platforms seamlessly and reliably. In this hands-on course, students gain extensive experience with Java and its object-oriented features. Students learn to create robust console and GUI applications and store and retrieve data from relational databases. Upon completion of the course students should be able to:

- · Build robust applications using Java's object-oriented features
- Create robust applications using Java class libraries
- Develop platform-independent GUIs
- · Read and write data using Java streams
- · Retrieve data from a relational database with JDBC

COURSE CO-ORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scie & EnggBharath Institute of Higher Education & Research
Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chemnal-600 073. INDIA



COURSE ON CORE JAVA SKILLS AND JAVA CERTIFICATION

Date of Introduction of the Course:17.10.2021

Time Table& Lesson plan

CLASS	DATE	TOPIC			
1,2	17-10-2021(AN)	1. BASICS OF JAVA			
		History and Features of Java, C++ vs Java, Hello Java			
		Program, Internal How to set the path?, JDK, JRE, and			
		JVM (Java Virtual Machine),JVM Memory			
		Management, Internal details of JVM, Unicode System			
		Operators, Keywords, and Control Statements like if-else			
		For loop, while loop, etc.			
3,4	21-10-2021(AN)	2. CLASS, OBJECT, AND TYPES OF CLASSES			
		Classes, Objects, and Features, Object declaration and			
		initialization, Life cycle of an object, Anonymous object			
		in Java, Classes and Objects in java with Realtime			
		examples			
5,6	22-10-2021(FN&AN)	3.PACKAGES IN JAVA			
		Package naming conventions, Sub packages, Types of			
		packages such as user-defined packages, built-in			
		packages, Importing packages in Java			
7,8	28-10-2021(AN)	4. DATA TYPES IN JAVA			
		Data types in Java - Primitive data types, Non-primitive			
		data types, Memory allocation of primitive and non-			
		primitive data types, etc.			
9,10	29-10-2021(FN)	5.VARIABLES, CONSTANTS, AND LITERALS			
		Variable declaration & initialization - Naming			
		convention, Types of variables such as local variables,			
		instance variables, and static variables, Scope and			
		memory allocation of variables.			
11,12	29-10-2021(AN)	6. METHODS IN JAVA			
	04-11-2021(AN)	Methods in Java - Use of method in Java, Method			
		declaration, method signature, Types of methods in Java			
		predefined method, user-defined methods: instance			
		method, static method, Calling of method, Java main			
		method, Return type in Java.			
13,14	04-11-2021(AN)	7. CONSTRUCTOR IN JAVA			
	05-11-2021(FN)	What is Constructor in Java? ,Types of constructors:			
		Default and Parameterized constructors, Java constructor			
		overloading, Constructor chaining in java, Copy			
		constructor in Java			

15,16	05-11-2021(AN)	8. INNER CLASSES AND WRAPPER CLASSES Introduction, Member Inner Class, Static Inner Class, Local Inner Class, Anonymous Inner Class, Introduction, Byte, Short, Integer, Long, Float, Double, Character, Boolean classes
17,18	11-11-2021(AN)	9. COLLECTION FRAME WORK Introduction, Util Package interfaces, List, Set, Map, List Interface 7 Its Classes, Set Interface & Its Classes, Map Interface & Is Classes
19,20	12-11-2021(FN)	10. AWT Introduction, Components, Event-Delegation-Model, Listeners, Layouts, Individual Components Lable, Button, Check Box, Radio Button, Choice, List, Menu, Text Field, Text Area
21,22	12-11-2021(AN) 18-11-2021(AN)	11. SWING (JFC) Understanding Session Hijacking, Phases involved in Session Hijacking, Types of Session Hijacking, Session Hijacking Tools - Introduction Diff B/W AWT and SWING, Hierarchy, Individual Swings components J Label, JButton, JTextField, JTextAres
23,24	19-11-2021(FN)	12. WEB SERVER AND APPLICATION SERVER Tomcat-Introduction, Overview, installation, Configuring Tomcat, Jboss server-Introduction, Overview, Installation and Configuration, Comparison
25,26	19-11-2021(AN)	13. SQL and JDBC Basics of SQL queries, SQL Joins, JDBC Introduction, JDBC Architecture, Types of Drivers, Statement, Result Set, Read Only Result Set, Updatable Result Set, Forward Only Result Set, Scrollable Result Set, Prepared Statement
27,28	25-11-2021 (AN) 26-11-2021 (FN)	14. SERVLETS Introduction, Web application Architecture, HTTP Protocol & HTTP Methods, Web Server & Web Container, Servlet Interface, HTTPServlet, GenericServlet, Servlet Life Cycle, Servlet Config, Servlet Context, Servlet Communication
29,30	26-11-2021(AN)	15. JSP Introduction, JSP Life Cycle, JSP Implicit Objects & Scopes, JSP Directives

Creal COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scir. 4 Engg...
Bharath Institute of Higher Education 4 Research
(Declared as Deamed to be University U.S.3 of UGC Act, 1956)
(Chennal-600 073. INDIA



COURSE ON CORE JAVA SKILLS AND JAVA CERTIFICATION Date of Introduction of the Course: 17.10.2021 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS038	CHIDIRALA.SAI SHANKAR
2	U14CS039	CHINTAGUNTA MARUTHI VENKATESWARA REDDY
3	U14CS040	CHINTAPANTI SRIKANTH
4	U14CS041	CHINTLA VENKATESH
5	U14CS042	CHUDAAMANI.V
6	U14CS044	DARA DEEPTHI
7	U14CS045	DEEPAKSANKAR REDDY.M
8	U14CS046	DEVARAPALLI HIMAKAR
9	U14CS047	DEVULAPALLY NAGARAJU
10	U14CS052	GARLAPATI HEMA SAI KRISHNA
11	U14CS053	GODJSELA SRINATH
12	U14CS054	GONTLA KARTHIK
13	U14CS055	GOTTIPATI KARTHIK
14	U14CS102	MOHAMMED AABID
15	U14CS104	MOLUGURI PRADEEP CHANDRA
16	U14CS105	MOOTHI LAKSHMI PRASANNA
17	U14CS106	MUGANTH.R.
18	U14CS107	MUGUNTHANATHAN.G
19	U14CS108	MURALI .S
20	U14CS156	SAGI AKSHAY KUMAR
21	U14CS157	SAJJA. SURENDRA PRASAD
22	U14CS158	SAMPA PARH
23	U14CS159	SANASAM VEDRAJ SINGH
24	U14CS160	SANDEEP INGUVA
25	U14CS161	SANJAY KUMAR YADAV
26	U14CS162	SANTHOSH KUMAR.N
27	U14CS163	SASHAANK.S

28	U14CS164	SAURAV KUMAR	
29	U14CS165	SAURAV SINGH	
30	U14CS224	R.SINDHU	
31	U14CS234	DANDU MOHAN RAJENDRA VARMA	
32	U14CS706	RAFTEN WANCHU	
33	U14CS166	SHAFAN HASIM.N	
34	U14CS167	SHAIK AATIKA	
35	U14CS168	SHAIK MEERA SHARIF	
36	U14CS169	SHAIK YASMIN	
37	U14CS170	SHANKAR KUMAR GUPTA	
38	U14CS171	SHARSHI KANT PRASAD	
39	U14CS192	THARIGOPULA LOKESH	
40	U14CS193	THEJA.T	
41	U14CS194	THEJAVARMA.B	
42	U15CS018	ATTANTI RAVIKANTH	
43	U15CS019	BANAVATH SUNIL NAIK	
44	U15CS020	BANDARU RAMESH	
45	U15CS021	BATTA SIVA PRASAD	
46	U15CS022	BHARATH K	
47	U15CS167	PULUKURI SASIDHAR	
48	U15CS168	PUPPALLA SANDEEP KUMAR	
49	U15CS169	PUTLURI ANURADHA	
50	U15CS170	RAAVI NARENDRA	
51	U15CS171	RAGILLA SANTHOSH KUMAR	
52	U15CS172	RAJULA SREEVANI	
53	U15CS173	RAKESH RATHI	
54	U15CS174	RAMACHANDRAN J	
55	U15CS175	RAMIREDDY LAKSHMAN AJAY	

Course coordinator

HEAD OF THE DEPARTMENT

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Department of Computer Scic. & Engg.,
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Chennal-600 073, INDIA

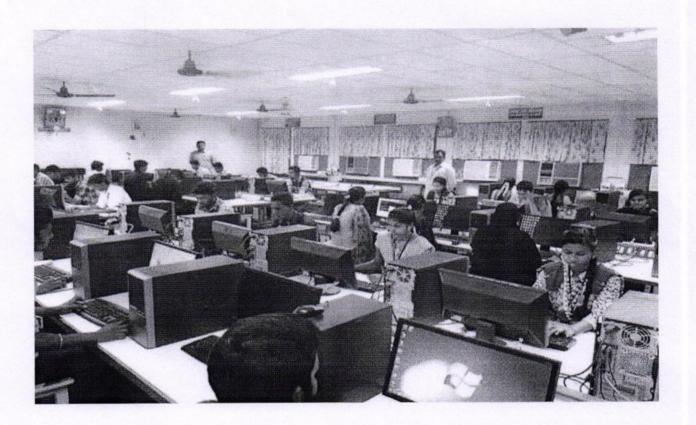


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COURSE ON CORE JAVA SKILLS AND JAVA CERTIFICATION



Creali COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Chennal-600 073. INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

R.SINDHU

For actively participating in the value added course "Core Java Skills and Java Certification"

Conducted by School of Computing, BIHER from 17.10.2021 to 26.11.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academic Year				2021-2022								
Term					ODD SEM							
Cours	se Numb	er										
Cours	se Title			Cous	0Q1	4	core	Agya	8ki	lle a	Add-on.	
Numl	ber of Cr	edits			12	0		0.11			doil	
Туре	of Cour	se	Regular			Elective	e				Add-on	
I.	Inforn	nation on	the Respon	ndent: (Tick (√)	Appropri	ately)						
1.	Percer	itage of c	classes atter	ded								
	0-20			20-40		40-	-60		60-	-80		
2.	Numb	er of hou	ırs per weel	spent on the co	urse (Oth	er than l	lecture l	hours)				
	0-2			2-4	/	4-6	5			6-8		
3.	Prepa	ration fo	r the course	by the student:								
	(i)	Have done part of this course earlier										
	(ii)	Has adequate prior exposure to the prerequisites										
	(iii)	Had to	pickup rele	vant additional to	pics throu	gh concu	rrent stu	dy	yu			
	(iv)	Have n	no exposure	to the background	material				ger			
4.	The ex	pectatio	ns for takin	g the course by t	he studer	nt are:			-			
	(a)	Enhand	ce by skill b	ase in the area of	specializa	tions			yeer			
	(b)	Get ex	posed to a re	elevant subject					Gior			
	(c)	Curios	ity						Jer			
	(d)	Better	Employmen	t Opportunity					yes	_		
	(e)	Compl	ete Course r	equirements					Ger	ALL DESCRIPTION		
	(f)		prove CGPA						Les			
Abou	it the In	structor:	Informatio	on on the Respon	dent: (Ti	ck (√) Ap	propri	ately)	0			
						A		В		C		
1.	Pace o	f the Tea	ching/lecture	•				/				
2.	Comm	ent of the	Subject				-	/				
3.	Clarity	ty of expression										

A: F	Excellent	B: Very Good	C: Good	D: Satisfactory
7.	Others (please sp	pecify		
6.	Accessibility out			
5.	Level of interact			
4.	Level of prepara	tion		

HEAD OF THE DEPARTMENT

Denomina Computer Scie & Engg.,
Bhorath Institute of Impier Education & Research
(Declared as Decimed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA

COURSE FEEDBACK FORM

Academic Year				2021 - 2022									
Term					ODD SEY								
Cour	se Numb	er			-47	32							
Course Title				core Java Skilk and Java Ceartificati									
Num	ber of Cr	redits				-	444	0.4	(W -(I)			- 0	
Type of Course Regular						Elective	e			A	Add-on		
I.	Inform	nation o	n the Respon	ndent: (Ti	ck (√) Ap	propri	iately)					A fair	
1.	Percer	ntage of	classes atter	nded									
	0-20	ge or		20-40			40-	-60	V	60-8	30		
2.	Numb	er of ho	urs per weel	k spent on	the cours	se (Oth	ner than l	lecture	hours)				
	0-2			2-4			4-6	5			6-8		
3.	Prepa	ration fo	or the course	e by the st	udent:								
	(i)	Have done part of this course earlier											
	(ii)	Has ac	dequate prior	exposure	to the pre	requisi	tes			yer			
	(iii)	Had to	pickup rele	vant additi	additional topics through concurrent study								
	(iv)	Have	no exposure	to the back	ground m	aterial				Jer			
4.	The ex	xpectatio	ons for takin	ig the cour	rse by the	stude	nt are:			0			
	(a)	Enhan	ce by skill b	ase in the a	rea of spe	ecializa	itions			yer			
	(b)	Get exposed to a relevant subject											
	(c)	Curio	sity		yer yer								
	(d)	Better	Employmen	t Opportur									
	(e)	Comp	lete Course	requiremen	its					Mer			
	(f)		prove CGPA							Ger			
Abo	ut the In	structor	: Information	on on the l	Responde			ppropi		0			
							A		В		С		
1.	Pace o	of the Tea	aching/lectur	e									
2.	Comm	ent of th	e Subject						/				
3.	Clarity	y of expression											

	Canon (presser	F											
 7. 	Level of interaction Accessibility outside the class Others (please specify												
5.													
4.	Level of prepara	ation											

HEAD OF THE DEPARTMENT

Bhurut and Changler Education & Research (Declared as Deamed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH



27.10.2021

Date:

(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selalyur, Chennal, T.N - 600 073.

Requisition Letter

From

Dr. K.P.Kaliyamurthie,

Professor & Head,

Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Machine Learning and Data Science" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Machine Learning and Data Science" in our campus premises on 01/11/2021.

38 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HOD/CSE

Department of Computer Scie & Engg.,
Department of Higher Education & Research
Bharath Institute of Higher Education & Research

channai-600 073, INDIA

DEAN ENGINEERING



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

31.10.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Machine Learning and Data Science** for the benefit of II, III and IV year students. This course is scheduled from 01.11.2021 for 30 hours which includes theory and practical. The timings are 9:30 AM to 12:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Mrs.C.Anuradha	Assistant Professor

Head of Department

To

Copy to CSE

Copy to IT

Department of Computer Scie. A Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON MACHINE LEARNING AND DATA SCIENCE

Date of Introduction of the Course:01.11.2021

COURSE SYLLABUS

1.Introduction: Machine Learning

Machine Learning Overview, ML Techniques, Validation Techniques (Cross-Validations), Feature Reduction/Dimensionality reduction, Principal components analysis (Eigen values, Eigen vectors, Orthogonality).

2. Supervised Learning

Linear regression, Random forest for classification, Support vector machines.

3. Unsupervised Learning

K-means for clustering problems, Apriori algorithm for association rule learning, Principal Component Analysis.

4. Reinforcement Learning

Reinforcement Learning Algorithms, Positive and Negative Reinforcement Learning, Learning Models of Reinforcement

5. Clustering

Distance measures, Different clustering methods (Distance, Density, Hierarchical), Iterative distance-based clustering, Measures of quality of clustering.

6. Classification

Model Assumptions, Probability estimation, Required data processing, M-estimates, Feature selection: Mutual information, Classifier.

7.K-Nearest Neighbors

Computational geometry; Voronoi Diagrams; Delaunay Triangulations, K-Nearest Neighbor algorithm; Wilson editing and triangulations

8. Support Vector Machines

Linear learning machines and Kernel space, Making Kernels and working in feature space, SVM for classification and regression problems.

9. Association Rule mining

Applications of Association Rule Mining: Market Basket, Recommendation Engines, Association analysis vs. classification, FP-trees.

10. Predictive Modeling

Regression, Classification, Data Preprocessing, Model Evaluation and Ensembles

11. Data Science Introduction

Data Science Overview, Components: Machine Learning, Big Data, Business Intelligence

12. Tools of Data Science

R-Language, Python coding, Hadoop Platform, SQL database/coding.

13. Data Analysis

Getting and Cleaning Data: Static Files, SQL, Web Scraping, APIs and Messy Data

14. Statistical Inference

Event Space, Probability, Distributions and Hypothesis Testing.

15. Summarizing and Visualizing Data

Descriptive Statistics, Univariate and Multivariate Exploratory Data Analysis.

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Machine Learning and Data Science, and an in-depth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects that will utilize existing public cloud tools. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

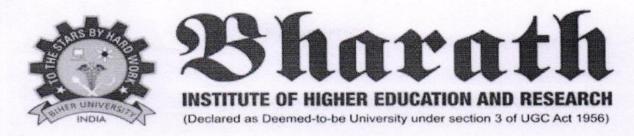
Students will learn

- 1) To introduce students to the basic concepts and techniques of Machine Learning.
- To develop skills of using recent machine learning software for solving practical problems.
- 3) To gain experience of doing independent study and research.
- 4) To develop the ability to build and assess data-based models.
- To apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scic & Engg., Bharath Institute of Higher Education & Research (Declared as Desired to be University WS 3 of UGD Act, 1956 Chemnal-600 073, INDIA



CERTIFICATE COURSE ON MACHINE LEARNING AND DATA SCIENCE

Date of Introduction of the Course: 01.11.2021

Time Table & Lesson plan

CLASS	DATE	TOPIC
1,2	01-11-2021(FN)	1. Introduction: Machine Learning Machine Learning Overview, ML Techniques, Validation Techniques (Cross-Validations), Feature Reduction/Dimensionality reduction, Principal components analysis (Eigen values, Eigen vectors, Orthogonality).
3,4	04-11-2021(FN)	2. Supervised Learning Linear regression, Random forest for classification, Support vector machines.
5,6	05-11-2021 (FN) 05-11-2021(AN)	3. Unsupervised Learning K-means for clustering problems, Apriori algorithm for association rule learning, Principal Component Analysis.
7,8	11-11-2021(FN)	4. Reinforcement Learning Reinforcement Learning Algorithms, Positive and Negative Reinforcement Learning, Learning Models of Reinforcement
9,10	12-11-2021(FN)	5. Clustering Distance measures, Different clustering methods (Distance, Density, Hierarchical), Iterative distance- based clustering, Measures of quality of clustering.
11,12	12-11-2021(AN) 18-11-2021(FN)	6. Classification Model Assumptions, Probability estimation, Required data processing, M-estimates, Feature selection: Mutual information, Classifier.
13,14	19-11-2021(FN)	7. K-Nearest Neighbors Computational geometry; Voronoi Diagrams; Delaunay Triangulations, K-Nearest Neighbor algorithm; Wilson editing and triangulations
15,16	19-11-2021(AN)	8. Support Vector Machines Linear learning machines and Kernel space, Making Kernels and working in feature space, SVM for classification and regression problems.

17,18	25-11-2021(FN) 26-11-2021(FN)	9. Association Rule mining Applications of Association Rule Mining: Market Basket, Recommendation Engines, Association analysis vs. classification, FP-trees.
19,20	26-11-2021(AN)	10. Predictive Modeling Regression, Classification, Data Preprocessing, Model Evaluation and Ensembles
21,22	01-12-2021(FN)	11. Data Science Introduction Data Science Overview, Components: Machine Learning, Big Data, Business Intelligence
23,24	02-12-2021(FN)	12. Tools of Data Science R-Language, Python coding, Hadoop Platform, SQL database/coding.
25,26	02-12-2021(AN)	13. Data Analysis Getting and Cleaning Data: Static Files, SQL, Web Scraping, APIs and Messy Data
27,28	08-12-2021(FN)	14. Statistical Inference Event Space, Probability, Distributions and Hypothesis Testing.
29,30	09-12-2021(FN) 09-12-2021(AN)	15. Summarizing and Visualizing Data Descriptive Statistics, Univariate and Multivariate Exploratory Data Analysis.

C. Amel

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scie & Engg.
Bharath Institute of Higher Education. & Research
(Deciered as Deemed to be University U/S 3 of UGC Act, 1958)
Chennal-600 073, INDIA



CERTIFICATE COURSE ON MACHINE LEARNING AND DATA SCIENCE Date of Introduction of the Course: 01.11.2021 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT	
1	U15CS007	ANJAR ALI	
2	U15CS008	ANKAM MANJUNATH	
3	U15CS009	ANNADI DHANUSH	
4	U15CS011	ANUMOLU YESWANTH	
5	U15CS012	ARAVAPALLI SIVA VINAYA	
6	U15CS013	ARAVINDHAN K R	
7	U15CS014	ARVIND KUMR YADAV	
8	U15CS039	D N S HRUDAY BHARADWAJ	
9	U15CS040	DADAM CHAITHRA	
10	U15CS041	DEEPAK KUMAR SINGH	
11	U15CS117	MANOJ KUMAR R	
12	U15CS118	MANUGUNTA BHARGAVI	
13	U15CS119	MARRIBOYINA GOVARDHAN YADAV	
14	U15CS120	MARRIPUDI KRISHNA CHAITANYA	
15	U15CS154	PERAM ANTONY	
16	U15CS155	PERAM VENKATA KRISHNA REDDY	
17	U15CS189	SANTHOSH RAJ M	
18	U15CS190	SATHISH S	
19	U15CS201	SMITHA C.S	
20	U15CS202	SODISETTY SANDEEP	
21	U15CS203	SUBASH CHANDRAN.V	
22	U15CS204	SUBHAM RAY	
23	U14CS003	ABDUL RAHIM.M	
24	U14CS004	ABDUL RAZVI .M.K	
25	U14CS005	ABDUR RASEED	
26	U14CS006	ABHIKAMALI .A	
27	U14CS032	BODA VEERA VENKATA RAVI TEJA	
28	U14CS033	BOORAGADDA VAMSI KRISHNA	
110000	U14CS085	LAKSHMI PRIYA.A	
30	U14CS086	LOKESHWARAN.A.	
	U14CS088	MADDIPATI BHARAT	
11250	U14CS508	INDHU GOPALAKRISHNAN	
	U14CS710	SHOPMINISTER	
-	U14CS113	NALLAJARLA CHAKRADHAR	
	U14CS114	NANDALA SWETHA	
	U14CS115	NANDIPALLI MOUNICA	
	U14CS701	BALAJI	
_	U14CS232	B.BALAKUMARAN	

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

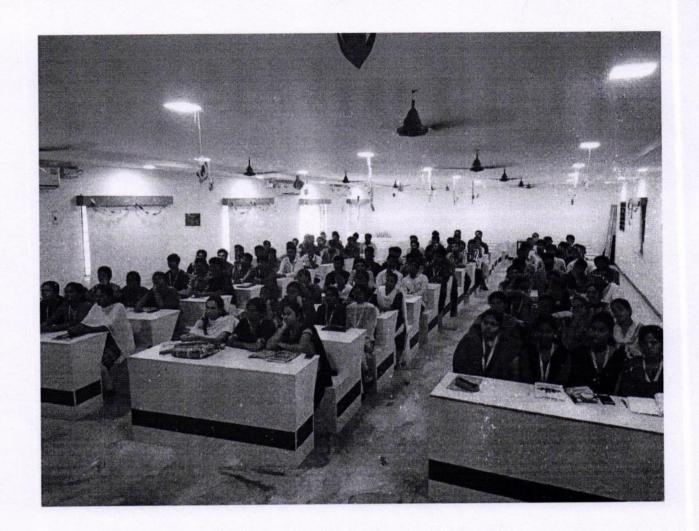


Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON MACHINE LEARNING AND DATA SCIENCE



COURSE CO-ORDINATOR

HEAD OF THE DEPARTMEMNT

Department of Computer Scie & Engg., Bharath Institute of Higher Education & Research Chemnal-500 073, INDIA





CERTIFICATE OF PARTICIPATION

This certificate is presented to

SMITHA C S

For actively participating in the value added course "Machine Learning and Data Science" Conducted by School of Computing, BIHER from 01.11.2021 to 09.12.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Acad	lemic Ye	ear		2021-2022								
Term	1				ODD SEM							
Course Number				4 0.	•							
Course Title				Mae	hine	160	pring	and	Data	Science	ce,	
Num	ber of C	redits					0					
Туре	of Cour	se	Regular			Elective				Add-on	V	
I.	Inform	nation o	n the Responde	ent: (Tick (√) A	ppropr	iately)						
1.	Perce	ntage of	classes attende	d								
	0-20			20-40		40-	60	/	60-80			
2.	Numb	er of hou	urs per week sj	oent on the cou	rse (Otl	ner than le	ecture hou	rs)				
	0-2		2	2-4		4-6			6-8			
3.	Prepa	ration fo	or the course by	the student:								
	(i)	Have o	done part of this	course earlier					yer			
	(ii)	Has ac	dequate prior ex	posure to the pr	erequisi	tes			yer			
	(iii)	Had to	pickup relevan	t additional top	ics throu	igh concur	rent study		Ger			
	(iv)	Have	no exposure to t	he background	material				yer			
4.	The ex	xpectatio	ons for taking t	he course by th	e stude	nt are:						
	(a)			in the area of sp					yes			
	(b)	Get ex	posed to a relev	ant subject					der	-		
	(c)	Curios	sity						Cier			
	(d)	Better	Employment O	pportunity					Her			
	(e)	Comp	lete Course requ	irements					Jel	/		
	(f)	To Im	prove CGPA						1	V		
Abou	ut the In	structor	: Information o	on the Respond	ent: (Ti	ck (√) Ap	propriately	y)	0			
						A	В		С			
1.	Pace o	of the Tea	ching/lecture									
2.	Comm	ent of the	e Subject				/					
3.	Clarity	of expre	ession				/					

A: E	Excellent	B: Very Good	C: Good	D: Satisfactory
7.	Others (please	specify		
6.	Accessibility or			
5.	Level of interac	ction		
4.	Level of prepar	ation		

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg..
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3. oF U/S C. Act, 1956)
Chennai-600 073. INDIA.

COURSE FEEDBACK FORM

Acad	lemic Ye	ear			2021 - 2022								
Tern	1				DDD								
Course Number													
Cour	rse Title				Hackine Learning and sate sue nee						A CONTRACTOR		
Num	ber of C	redits			1 (000)	CHIC	Per l	1	जान	Ja	M O CO	ina	
Туре	of Cour	se	Regular				Electi	U				Add-on	/
I.	Inform	nation or	n the Respon	ndent: (Ti	ck (√) Ap	propri	ately)						
1.	Percei	ntage of	classes atter	nded									
	0-20			20-40			4	0-60		- (60-80		
2.	Numb	er of hou	ırs per weel	k spent on	the cour	se (Oth	er than	lecture	hours)				
	0-2			2-4		·	4	-6			6-8		
3.	Prepa	ration fo	or the course	by the st	udent:								
	(i)	Have o	done part of	this course	earlier					4	W		
	(ii)	Has ad	lequate prior	exposure	to the pre	requisit	es			0	yen		
	(iii)	Had to	pickup rele	vant additi	onal topic	s throu	gh conc	current st	udy		Ger		
	(iv)	Have r	no exposure	to the back	ground m	naterial					ger		
4.	The ex	xpectatio	ns for takin	g the cour	se by the	studer	nt are:				0		
	(a)	Enhan	ce by skill be	ase in the a	rea of spe	ecializa	tions				yer		
	(b)	Get ex	posed to a re	elevant sub	ject						Ger		
	(c)	Curios	sity								Ties		
	(d)	Better	Employmen	t Opportun	nity						ger		
	(e)	Compl	lete Course r	equiremen	ts						des		
	(f)	To Imp	prove CGPA								que	_	
Abou	ut the In	structor:	: Informatio	on on the F	Responde	nt: (Ti	ck (√) A	ppropr	iately)		y		
							A		В		C		
1.	Pace o	f the Tea	ching/lecture	9					V				
2.	Comm	ent of the	Subject						^ -				
3.	Clarity	y of expression											

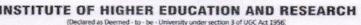
4.	Level of prepar	ration		
5.	Level of interac	ction		
6.	Accessibility or	utside the class		
7.	Others (please	specify		
A: E	Excellent	B: Very Good	C: Good	D: Satisfactory

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



Bharath





BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

Date:21.10.2021

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject:Request of Permission to conduct a value-added course on "Jquery and Advanced Java Script" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Jquery and Advanced Java Script" in our campus premises on 01.11.2021, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Submitted to Principal for approval to organize this value-added course.

HOD HEAD OF DEPARTMENT

Department of Computer Scie & Engg.,

Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennal-600 073. INDIA

DEAN ENCINEEDING



CIRCULAR

27.10.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Jquery and Advanced Java Script** for the benefit of II, III and IV year students. This course is scheduled from 01.11.2021 for 30hours which includes theory and practical. The timings are 3:30 PM to 5:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Sciul & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Decimed to be University U/S 3 of UGC Act, 1956)
Cheppal-600 073 INDIA



CERTIFICATE COURSE ON JQUERY AND ADVANCED JAVA SCRIPT

Date of Introduction of the Course: 01.11.2021

COURSE SYLLABUS

1.Introduction to JavaScript

Introduction to Javascript, JS History, Webkit's Web Inspector, Tracking down errors, JS versions

2. Variable, Value, Data type, Operators and Expressions

Comments, Variables: and let keyword, Statements, Value, JS Keywords, Primitive Data types, Non-Primitive Data types, Type of Operators, Understanding Expressions.

3. Arrays, Decision making and Loops

String, Arrays, If Statement, If-Else Statement, If-Else-IF ladder and Nested If Statements, Switch, Handling repetitive tasks with loops, For Loop, While and Do-While Loop

4. Functions, Variable Scope and Objects

Function, Calling a Function, Parameters and default parameters, Scope of Variables: block level scope, Predefined Functions, Object, Elements and Properties, Accessing an Object's properties and methods, Constructor and this keyword, Date and Math Objects

5. The Browser Environment

BOM (Browser Object Model), Window.* properties, DOM (document object model), Accessing DOM Nodes, Modifying DOM Nodes, Creating and Removing Nodes.

6. Events and Event Handling

Events, Listen to Events, Event Handling, HTML5 Forms and Input tag (form validation), Get and Post methods

7. JQuery

Introduction to Jquery, Structure of jQuery, UsingjQuery and including .js file to HTML, Type of Selectors, Handling Events with jQuery

8. Filtering, Searching and Effects

Selectors Recap, Element and ID Selectors, jQuery DOM Traversal, jQuery DOM Manipulation, jQuery Effects

9. AJAX and JQuery

Introduction to AJAX, Asynchronous access to remote data, GET HTTP request, AJAX Load, Send Data, Callback Handlers, Change AJAX data type, Status Codes, JSON, Accessing and Consuming remote JSON Data

10. HTML5 Forms and JQuery UI

Understanding Forms, Adding Smarts to Your Forms, Form Validation, Updating Database Table Values, Introduction to jQuery UI, Animation and Special Effects

11. Project

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Jquery and Advanced Java script, and an in-depth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

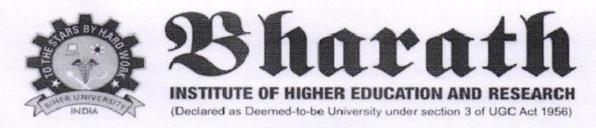
Students will learn to:

- 1) Make communication between the browser and server
- 2) Learn what jQuery is and how to add it to applications
- 3) Develop rich web pages that respond to user interaction
- 4) Become adept at implementing client-side interfaces through the use of the DOM, jQuery and AJAX.
- 5) Become familiar with common libraries and tools that are used in web application development.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Sciu. A Engg.,
Bharath Institute of Higher Education, & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



CERTIFICATE COURSE ON JQUERY AND ADVANCED JAVA SCRIPT

Date of Introduction of the Course: 01.11.2021

The timings are 3:30 PM to 5:30 PM from Monday to Friday

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	01-11-2021	1.Introduction to JavaScript Introduction to Javascript, JS History, Webkit's Web Inspector, Tracking down errors, JS versions
3,4	02-11-2021	2. Variable, Value, Data type, Operators and Expressions Comments, Variables: and let keyword, Statements, Value, JS Keywords, Primitive Data types, Non-Primitive Data types, Type of Operators, Understanding Expressions.
5,6	03-11-2021	3. Arrays, Decision making and Loops String, Arrays, If Statement, If-Else Statement, If- Else-IF ladder and Nested If Statements, Switch, Handling repetitive tasks with loops, For Loop, While and Do-While Loop
7,8	04-11-2021	4. Functions, Variable Scope and Objects Function, Calling a Function, Parameters and default parameters, Scope of Variables: block level scope, Predefined Functions, Object, Elements and Properties, Accessing an Object's properties and methods, Constructor and this keyword, Date and Math Objects
9,10	07-11-2021	4. Functions, Variable Scope and Objects Function, Calling a Function, Parameters and default parameters, Scope of Variables: block level scope, Predefined Functions, Object, Elements and Properties, Accessing an Object's properties and methods, Constructor and this keyword, Date and Math Objects
11,12	08-11-2021	5. The Browser Environment BOM (Browser Object Model), Window.* properties, DOM (document object model), Accessing DOM Nodes, Modifying DOM Nodes, Creating and Removing Nodes.

13,14	09-11-2021	6. Events and Event Handling Events, Listen to Events, Event Handling, HTML5 Forms and Input tag (form validation), Get and Post methods
15,16	10-11-2021	7. JQuery Introduction to Jquery, Structure of jQuery, Using jQuery and including .js file to HTML, Type of Selectors, Handling Events with jQuery
17,18	11-11-2021	8. Filtering, Searching and Effects Selectors Recap, Element and ID Selectors, jQuery DOM Traversal, jQuery DOM Manipulation, jQuery Effects
19,20	14-11-2021	8. Filtering, Searching and Effects Selectors Recap, Element and ID Selectors, jQuery DOM Traversal, jQuery DOM Manipulation, jQuery Effects
21,22	15-11-2021	9. AJAX and JQuery Introduction to AJAX, Asynchronous access to remote data, GET HTTP request, AJAX Load, Send Data, Callback Handlers, Change AJAX data type, Status Codes, JSON, Accessing and Consuming remote JSON Data
23,24	16-11-2021	9. AJAX and JQuery Introduction to AJAX, Asynchronous access to remote data, GET HTTP request, AJAX Load, Send Data, Callback Handlers, Change AJAX data type, Status Codes, JSON, Accessing and Consuming remote JSON Data
25,26	17-11-2021	10. HTML5 Forms and JQuery UI Understanding Forms, Adding Smarts to Your Forms, Form Validation, Updating Database Table Values, Introduction to jQuery UI, Animation and Special Effects
27,28	18-11-2021	10. HTML5 Forms and JQuery UI Understanding Forms, Adding Smarts to Your Forms, Form Validation, Updating Database Table Values, Introduction to jQuery UI, Animation and Special Effects
29,30	21-11-2021	11. Project

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic. & EBharath Institute of Higher Education & Re
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Chennal-600 073. INDIA



CERTIFICATE COURSE ON JQUERY AND ADVANCED JAVA SCRIPT Date of Introduction of the Course: 01.11.2021

School of Computing Registered Students Name List

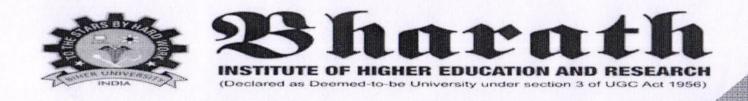
S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS006	ABHIKAMALI .A
2	U14CS007	ABHISHEK MANDURI
3	U14CS008	AJAY.D
4	U14CS009	AKASH CHANDRA AMBASTHA
5	U14CS010	AKHIL REDDY.G
6	U14CS011	AKSHAY.R
7	U14CS060	JASIMKHAN.J.
8	U14CS061	JENNIFER.S
9	U14CS062	JERIPOTHULA SURESH GOUD
10	U14CS063	JOHN DALTON .H
11	U14CS064	K. LAKSHMIKANTH REDDY
12	U14CS065	K. LAKSHMI NARAYANA REDDY
13	U14CS066	KARAN KUMAR CHETTRI
14	U14CS058	KARTHIKEYAN.J
15	U14CS142	RAJA S.V
16	U14CS143	RAJNISH RANJAN PANDEY
17	U14CS144	RAKESH KUMAR
18	U14CS145	RAKHI PRASAD
19	U14CS146	RAM KUMAR PANDEY
20	U14CS173	SHEKH ADNAN NIYARIYA
21	U14CS181	SOURABH PRIYADARSHI
22	U14CS182	SRI DHARSHINI .P
23	U14CS183	SULEKHA KUMARI
24	U14CS198	VADLAMUDI KOWSHIK
25	U15CS012	ARAVAPALLI SIVA VINAYA

26	U15CS024	BIKKI KUMAR SHA
27	U15CS171	RAGILLA SANTHOSH KUMAR
28	U15CS172	RAJULA SREEVANI
29	U15CS173	RAKESH RATHI
30	U15CS180	RAVURI SRIKANTH
31	U15CS182	RICHARD WUMBRAND J
32	U15CS183	S. PUNITHA
33	U15CS184	S. SAI SHRUTHI
34	U15CS191	SEETAPTI HEMA SEKHAR
35	U15CS192	SESHA SRUJAN.B
36	U15CS193	SHAIK AFRIDI
37	U15CS194	SHAIK SABIR
38	U15CS195	SHAIK YASMEEN
39	U15CS196	SHARYARAI.S
40	U15CS197	SHATRUGHAN SUHAN.S
41	U15CS225	VINOTHKUMAR.J
42	U15CS226	V. VEERAVENKATA SATYANARAYANA
43	U15CS227	VUPPALA SUJITH
44	U15CS228	YADIKI VEMANA BUJJI
45	U15CS229	Y. VENKATA RAMANA MURTHY
46	U15CS230	THARAN RAVI CHANDRU
47	U15CS232	NIKITA SHARMA
48	U15CS233	KARAN PRINCY.P
49	U15CS250	MUTHULAKSHMI.M
50	U15CS251	AISHWARYA
51	U15CS252	PAVANI M.J
52	U15CS253	JOEL PRAKASH.J
53	U15CS254	JAGATH RAJAH.R
54	U15CS701	PRAVEEN RAJ.V
55	U15CS702	GOWTHAMAN.S
56	U15CS703	FRANKLIN.S

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Department of Computer Scic A Engg.,
Bharath Institute of Higher Education & Research
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Chennal-600 073. INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

AKHIL REDDY.G

For actively participating in the value added course "Jquery and Advanced Java Script" Conducted by School of Computing, BIHER from 01.11.2021 to 21.11.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academic Year 2021-2022												
Term				DD								
Course	Number											
Course	Title			anory	and	& Adv	anced	Java Sen	\$pt			
Numbe	er of Credits			1 0					'			
Type o	f Course	Regi	ular		Elec	tive		Add-or	1	·	1	
I.	Informat	ion on the	Respondent:	(Tick (√)	Appro	priately)						
	In .											
1.		ge of class	es attended		140	0-60		60-80	1	80-	1	
	0-20		20-40		40	-60		00-80	/	100		
										100	_	
2.	Number	of hours p	er week spen	t on the co	urse (Other than	lecture	hours)				
	0-2				4-		1	6-8		8-10		
3.	Preparat	ion for th	e course by th	e student:								
	(i)	Have do	one part of this	course ear	lier				No			
	(ii)	Has ade	quate prior exp	osure to the	he prer	equisites			No			
	(iii)	Had to p	pickup relevan	t additiona	l topics	s through co	oncurren	t study	Ye	5		
	(iv)	Have no	exposure to the	he backgro	und m	aterial			N	0		
4.	The expe		or taking the									
	(a)		e by skill base			cializations			-	2)		
	(b)	Get exp	osed to a relev	ant subject	t				Ye	>		
	(c)	Curiosit	ty						Y	es		
	(d)		Employment O									
	(e)	Comple	te Course requ	requirements Yes								
	(f)		rove CGPA						'	yes		
About	the Instruc	tor: Infor	mation on the	Respond	ent: (T	ick (√) Ap	propriat					
					A	В		С	I)		E
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2.		t of the Su			1							
3.		expression			1							
4.		preparation				1						
5.		interaction			1							
6.			le the class			1						
7.	Others (p	lease spec	ify									
		1 1	D. V C		C.			D:		E		
A: Ex	cellent		B: Very Good		C:			Satisfactory		UIC STORE		
					Good		Side of	Saustactory		P	oor	

HEAD OF THE DEPARTMENT

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Department of Computer Sciu & Eng
Bhoroth Institute of Higher Education & Roseo
(Declared as Deemed to be University U/S 3 of UGO Act, 19
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COURSE FEEDBACK FORM

Acader	nic Year		2	0.21-	2022						
Term			0	DD							
Course	Number										
Course	Title		7	query	and	e Adv	anced:	Java SG	ipt		
Numbe	er of Credits			, 0					1		
Type o	f Course	Regu	lar		Elective		I	Add-on		\nearrow	
I.	Informa	tion on the	Respondent: (T	ick (√) A	ppropriat	ely)					
	In /										
1.		ige of classe	es attended		140.60		60.90		80-	1	
	0-20		20-40		40-60		60-80	1	100		
									100		
2.	Number	of hours p	er week spent o	n the cou	rse (Other	r than lecti	ure hours)				
	0-2		2-4		4-6	V			8-10		
3.	Prepara	tion for the	course by the s	tudent:							
	(i)	Have do	ne part of this co	urse earlie	er			NO			
	(ii)	Has adec	quate prior expos	ure to the	prerequis	ites		No			
	(iii)	Had to p	ickup relevant ac	lditional t	opics thro	ugh concur	rent study	Yes			
	(iv)	Have no	exposure to the	backgrour	nd materia	l		No			
4.			r taking the cou								
	(a)		by skill base in		f specializ	ations		Yes			
	(b)		osed to a relevant	t subject				Yes			
	(c)	Curiosity		yes							
	(d)	Better E	mployment Oppo	t Opportunity Yes							
	(e)	-	e Course require								
	(f)	-	ove CGPA					yes			
About	the Instru	ctor: Inform	nation on the R			The second secon		'			
				A		В	С		D	E	
1.		he Teaching		~							
2.		nt of the Sub		V							
3.	Clarity of expression			V	_	1					
4.		preparation			_	1					
5.	100000000000000000000000000000000000000	interaction		V		4					
6.		oility outside				1					
7.	Others (please speci	fy								
A. E	a allow t	T 1.	B: Very Good		.		D:		E:		
A: Ex	cellent	1	b. very Good		Good		Satisfa	ctory	100	or	
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HEAD OF THE DEPARTMENT

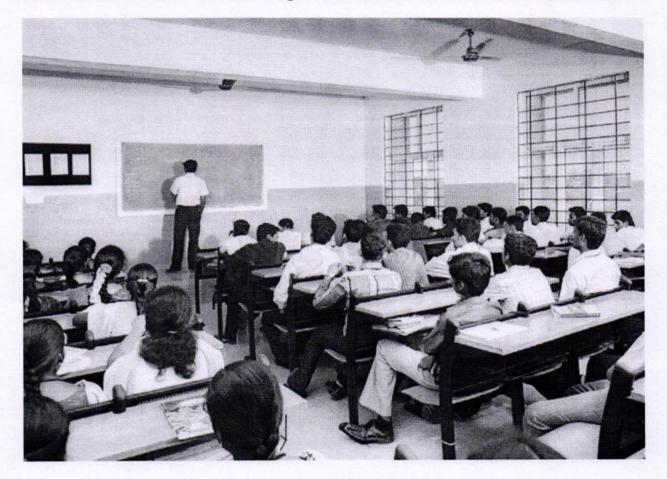


Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON JQUERY AND ADVANCED JAVA SCRIPT



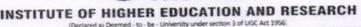
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COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scit & Engg..
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA







Date: 04.12.21

RATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

From

Dr. K.P.Kaliyamurthie,

Professor & Head,

Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Introduction to Artificial Intelligence" -Reg

With reference to above subject, I would like to bring to your kind notice that, our organize value added course on "Introduction to Artificial department interested to Intelligence" in our campus premises on 12/12/2021.

46 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HEAD OF DEPARTMENT Department of Computer Scie & Engg., Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act, 1956) Chennal-600 073. INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH (Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

08.12.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Introduction to Artificial Intelligence** for the benefit of II, III and IV year students. This course is scheduled from 12.12.2021 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM & 9.00 AM to 4.30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	R.Velvizhi	Assistant Professor

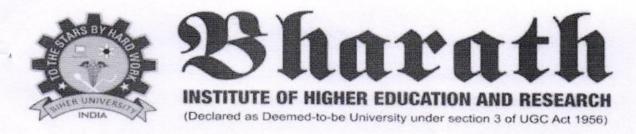
Head of Department

To

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HEAD C
Department of Prof DEPARTMENT
Department of Computer Scie
Bharaths looking to of Higher Education & Research
(Declared a Chemisto be University U/S 3 of UGC Act, 1998)
Chempai-600 073, INDIA



CERTIFICATE COURSE ON INTRODUCTION TO ARTIFICAL INTELLIGENCE

Date of Introduction of the Course: 12.12.2021

COURSE SYLLABUS

1. INTRODUCTION

Introduction-Definition - Future of Artificial Intelligence - Characteristics of Intelligent Agents-

2. INTRODUCTION

Typical Intelligent Agents - Problem Solving Approach to Typical AI problems

3. PROBLEM SOLVING METHODS

Problem solving Methods, Search Strategies

4. PROBLEM SOLVING METHODS

Informed . Heuristics , Local Search Algorithms and Optimization Problems

5. PROBLEM SOLVING METHODS

Uninformed ,Searching with Partial Observations

6. PROBLEM SOLVING METHODS

Constraint Satisfaction Problems , Constraint Propagation, Backtracking Search, Game Playing

7. OPTIMAL DECISIONS

Optimal Decisions in Games, Alpha, Beta Pruning, Stochastic Games

8. KNOWLEDGE REPRESENTATION

First Order Predicate Logic , Prolog Programming, Unification , Forward Chaining, Reasoning with Default Information

9. KNOWLEDGE REPRESENTATION

Backward Chaining, Resolution, Knowledge Representation, Ontological Engineering, Categories and Objects

10. KNOWLEDGE REPRESENTATION

Events, Mental Events and Mental Objects, Reasoning Systems for Categories

11. SOFTWARE AGENTS

Architecture for Intelligent Agents , Agent communication ,systems.

12. SOFTWARE AGENTS

Negotiation and Bargaining, Argumentation among Agents.

13. SOFTWARE AGENTS

Trust and Reputation in Multi, agent.

14. APPLICATIONS

Al applications , Language Models , Information Retrieval, Information Extraction , Natural Language Processing.

15. APPLICATIONS

Machine Translation, Speech Recognition, Robot, Hardware, Perception, Planning, Moving

COURSE OBJECTIVES

In this course we plan to give students an Introduction to Artificial Intelligence, and an indepth study into its enabling technologies and main building blocks. Students will gain basic knowledge in AI and Problem Solving.

Specifically, the course has the following objectives:

Students will learn

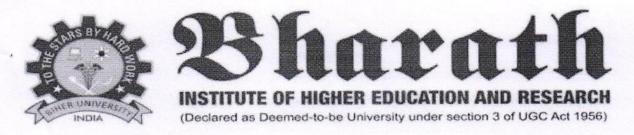
OBJECTIVES:

- To understand the various characteristics of Intelligent agents
- . To learn the different search strategies in Al
- To learn to represent knowledge in solving Al problems
- To understand the different ways of designing software agents
- To know about the various applications of Al

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Department of Computer Scie & Engg.,
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Chennai-600 073. INDIA



CERTIFICATE COURSE ON INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Date of Introduction of the Course: 12.12.2021

The timings are 1:30 PM to 4:30 PM from Friday (AN) and 9.00 AM to 4.30 PM Saturday (FN&AN).

Time Table & Lesson plan

CLASS	DATE	TOPIC
1,2	12-12-2021 (AN)	Introduction Introduction—Definition — Future of Artificial Intelligence — Characteristics of Intelligent Agents—
3,4	16-12-2021 (AN)	2. INTRODUCTION Typical Intelligent Agents – Problem Solving Approach to Typical Al problems
5,6	17-12-2021 (FN)	PROBLEM SOLVING METHODS Problem solving Methods , Search Strategies
7,8	17-12-2021 (AN)	4. PROBLEM SOLVING METHODS Informed . Heuristics , Local Search Algorithms and Optimization Problems
9,10	23-12-2021 (AN)	5. PROBLEM SOLVING METHODS Uninformed ,Searching with Partial Observations
11,12	24-12-2021 (FN)	6. PROBLEM SOLVING METHODS Constraint Satisfaction Problems , Constraint Propagation, Backtracking Search, Game Playing
13,14	24-12-2021 (AN)	7. OPTIMAL DECISIONS Optimal Decisions in Games,Alpha,Beta Pruning,Stochastic Games
15,16	30-12-2021 (FN)	8. KNOWLEDGE REPRESENTATION First Order Predicate Logic , Prolog Programming, Unification , Forward Chaining, Reasoning with Default Information
17,18	31-12-2021 (FN)	9. KNOWLEDGE REPRESENTATION Backward Chaining, Resolution, Knowledge Representation, Ontological Engineering, Categories and Objects
19,20	31-12-2021 (AN)	10. KNOWLEDGE REPRESENTATION Events , Mental Events and Mental Objects ,Reasoning Systems for Categories
21,22	06-01-2022 (FN)	11. SOFTWARE AGENTS Architecture for Intelligent Agents , Agent communication ,systems.
23,24	07-01-2022 (FN)	12. SOFTWARE AGENTS Negotiation and Bargaining , Argumentation among Agents.
25,26	07-01-2022 (AN)	13. SOFTWARE AGENTS Trust and Reputation in Multi,agent.

27,28	20-01-2022 (AN)	14. APPLICATIONS All applications, Language Models, Information Retrieval, Information Extraction, Natural Language Processing.
29,30	21-01-2022 (FN)	15. APPLICATIONS Machine Translation, Speech Recognition, Robot, Hardware, Perception, Planning, Moving

Course coordinator

HEAD OF THE DEPARTMENT

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Department of Computer Scic A Engg.,
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Chennal-600 073. INDIA



CERTIFICATE COURSE ON INTRODUCTION TO ARTIFICIAL INTELLIGENCE Date of Introduction of the Course: 12.12.2021

School of Computing Registered Students Name List

S.NO REG.NO		NAME OF THE STUDENT
1	U14CS201	VASI KARTHIK
2	U14CS202	VEMULA ANWAR
3	U14CS158	SAMPA PARH
4	U14CS164	SAURAV KUMAR
5	U14CS104	MOLUGURI PRADEEP CHANDRA
6	U14CS105	MOOTHI LAKSHMI PRASANNA
7	U14CS084	LAKKAMPALLY SHIVA KUMAR
8	U14CS067	KARTHICK.K
9	U14CS041	CHINTLA VENKATESH
10	U14CS042	CHUDAAMANI.V
11	U14CS044	DARA DEEPTHI
12	U14CS053	GODJSELA SRINATH
13	U14CS231	GYANA PRASANNA
14	U15CS003	ABHISHEK KUMAR SINGH
15	U15CS015	ARYAN SAHU
16	U15CS028	BONALA SRIDHAR RAO
17	U15CS029	BRYAN STEVE PUSHPARAJ I
18	U15CS112	MAILE ARUN KUMAR
19	U15CS113	MAMUNDURU BHARATH KUMAR
20	U15CS124	MOHANKUMAR J
21	U15CS010	DIVYA
22	U15CS149	P.KHAJA KHAN
23	U15CS154	PERAM ANTONY
24	U15CS155	PERAM VENKATA KRISHNA REDDY
25	U15CS156	PERURI V S V KRISHNA MOHAN

26	U15CS184	S. SAI SHRUTHI
27	U15CS185	SADHOLLA PRANAY REDDY
28	U15CS186	SAI RAMANA S M
29	U15CS192	SESHA SRUJAN.B
30	U15CS193	SHAIK AFRIDI
31	U15CS194	SHAIK SABIR
32	U15CS195	SHAIK YASMEEN
33	U15CS218	VETCHA VENKATA KRISHNA TEJA
34	U15CS219	VISNESH.B
35	U15CS240	YUGESH.S
36	U16CS014	SOMA BHARATH KUMAR
37	U16CS015	B J JAISON
38	U16CS033	POOJALAKSHMI N
39	U16CS055	MEGANATHAN G
40	U16CS097	KISHAN KUMAR
41	U16CS099	GANGUMALLA GANGA SUNIL
42	U16CS100	GALLA BHUCHANDRA
43	U16CS158	NIMBAGALLU KURUBA GURUMURTHY
44	U16CS159	JANA ARAVIND KUMAR
45	U16CS189	CHAUHAN MAYANK SUNILKUMAR
46	U16CS204	GADDALA UDAY KIRAN

Course Coordinator

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Department of Computer Scie & Engg.,

Bharath Institute of Higher Education. & Research
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Chennal-600 073. INDIA



CERTIFICATE COURSE ON INTRODUCTION TO ARTIFICIAL INTELLIGENCE



Course coordinator

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Bharath Institute of Higher Education & Research
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Chennal-600 073. INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

CHUDAAMANI.V (U14CSO42)

For actively participating in the value added course "Introduction to Artificial Intelligence" Conducted by School of Computing, BIHER from 12.12.2021 to 21.01.2021.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academ	nic Year			202	1-2	022					
Term				I							
Course	Number										
Course '	Title		Ir	ntro	due	ction	to A	trtificia	Int	ellis	ence
Number	of Credits									(
Type of	Course	Regu	ılar		Elec	ctive		Add-o	n	1	
I.	Informati	ion on the	Respondent: (Ti	ick (√)	Appr	opriately)					
1.		ge of class	es attended								1
	0-20		20-40		40	0-60		60-80	80-		
									100	'	
2.	Number o	of hours n	er week spent on	the co	ourse (Other than	lecture	hours)			
	0-2	l nours p	2-4	· the c	4-		./	6-8	8.	-10	
	0.2		17. 1					100		10	
3.	Preparati	on for the	course by the st	udent	:						
	(i)	Have do	ne part of this cou	irse ea	rlier					NO	
	(ii)	Has adec	quate prior exposu	ire to t	he prer	requisites			THE RESERVE OF THE PARTY OF THE	yes	
	(iii)	Had to p	ickup relevant ad	ditiona	al topic	s through co	ncurren	it study		100	
	(iv)	Have no	exposure to the b	ackgro	ound m	aterial			/	es	
4.	The expec	ctations fo	r taking the cou	rse by	the stu	udent are:					
	(a)	Enhance	by skill base in the	ne area	of spe	cializations			76	D.	
	(b)	Get expo	sed to a relevant	subjec	t				Ye	10.	
	(c)	Curiosity	/						ye	o.	
	(d)	-Better Er	mployment Oppor	rtunity					ye	7.	
	(e)	Complete	e Course requiren	nents					ye	٥.	
	(f)	To Impro	ove CGPA						Ye) .	
About t	he Instruct	or: Inforn	nation on the Re	spond	ent: (T	ick (√) App	propriat	tely)			
					A	В		C	D		E
1.	Pace of the			-	1		1				
2.	Comment						1				
3.	Clarity of	expression	1	·							
4.	Level of p										
5.	Level of in	nteraction			^	_/	1				
6.	Accessibil	ity outside	the class	1							
7.	Others (pl	ease specif	fy	-		-		-	_		-
					_						
A: Exce	ellent	B	3: Very Good		C:			D:		E:	
					Good			Satisfactory		Poor	

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Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
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Chennal-600 073. INDIA

COURSE FEEDBACK FORM

Academic Year 2021-2022											
Term				R							
Cours	se Number			Introduction to AT							
Cours	se Title		T								
Numb	er of Credits	S			D. P. C. ST. ST.				1		
Туре	of Course	Regu	lar		Elective		Add-or				
I.	Informa	ition on the	Respondent: (T	Γick (√) A _l	ppropriately)					
1.		age of classe									
	0-20		20-40		40-60		60-80	80- 100	1		
2.	Number	r of hours pe	er week spent o	n the cour	se (Other th	an lectur	re hours)				
	0-2 2-4				4-6	1./	6-8	8-10			
3.	Prepara	tion for the	course by the s	tudent:							
	(i)	Have done part of this course earlier									
	(ii)	Has adeq	uate prior expos	sure to the	prerequisites				20		
	(iii)	Had to p	ickup relevant ac	dditional to	pics through	concurre	ent study	,	25		
	(iv)	Have no	exposure to the	backgroun	d material				es		
4.	The exp	ectations fo	r taking the cou	arse by the	e student ar	e:					
	(a)	Enhance	by skill base in	the area of	specialization	ons		V	2		
	(b)	Get expo	sed to a relevant	t subject				Ý	60		
	(c)	Curiosity	/					\ \	es		
	(d)	Better Er	mployment Oppo	nt Opportunity							
	(e)	Complete	e Course require	requirements \sqrt{eS} .							
	(f)	To Impro	ove CGPA					- 1			
Abou	t the Instru	ctor: Inforn	nation on the Re	espondent	: (Tick (√) A	ppropria	ately)				
				A		В	C	D	E		
1.	Pace of	the Teaching	/lecture			1					
2.	Commer	nt of the Sub	ject	V							
3.	. Clarity of expression				1						
4.	Level of	preparation									
5.	Level of	interaction			1	1					
6.	Accessit	oility outside	the class		V	1					
7.	Others (please specif	fy	-		-	-	_	-		
A: Ex	cellent	В	: Very Good	C:	ood		D: Satisfactory	E R	e oor		

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bhurath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH



(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

Date: 01.12.2021

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "DATA STRUCTURES" - Reg

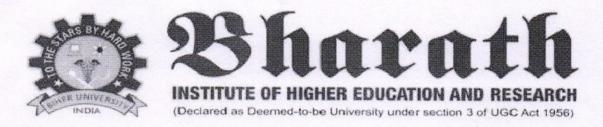
With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "DATA STRUCTURES" in our campus premises on 12.12.2021, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Submitted to Principal for approval to organize this value-added course.

HOD

DEAN ENGINEERING



CIRCULAR

07.12.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **DATA STRUCTURES** for the benefit of II, III and IV year students. This course is scheduled from 12.12.2021 for 30hours which includes theory and practical. The timings are 4:00 PM to 5:00 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Mrs.C.Anuradha	Professor

Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Seice Rengg.,
Bharath Institute of Higher Education. Research
(Deciared as Deemed to be University U/S 3 of UGC Ac., 1956)
Chennai-600 073. INDIA



CERTIFICATE COURSE DATA STRUCTURES Date of Introduction of the Course: 12.12.2021

The timings are

Time Table & Lesson plan

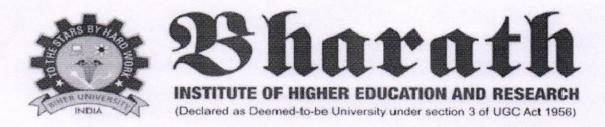
CLASS	DATE	TOPIC
1,2	12.12.2021 13.12.2021	1. MODULE 1: Introduction of data Structures, Data Abstraction and Algorithm Analysis, Data types/objects/structures, Abstract definition of data structures, Representation and implementation Time requirements of algorithms, Space requirements of algorithms.
3,4	14.12.2021 15.12.2021	2. MODULE 2: Review of Linear Data Structures, Array application and representation, Polynomials, Sparse matrices, String-pattern Matching.
5,6	16.12.2021 19.12.2021	3. MODULE 3: Stack and Queues, Needs and justification of the study of the structures, Representation and implementation, multiple stacks and queues, Implementation of recursion using stack.
7,8	20.12.2021 21.12.2021	4. MODULE 4: Linked Lists, Needs for the structure and justification of the study, Representation and Implementation, Doubly linked list Circular linked list.
9,10	22.12.2021 23.12.2021	MODULE 5: Linked list application, Memory Management, Static memory management, Dynamic memory management.
11,12	26.12.2021 27.12.2021	6. MODULE 6: Nonlinear Data Structures, Trees, Definitions, terminologies and properties, Binary tree representation, traversals and applications.
13,14	28.12.2021 29.12.2021	7. MODULE 7: Threaded binary trees, Binary Search Trees, AVL Trees, Mway Search Trees, B-trees, B*-trees.

15,16	30.12.2021 02.01.2022	Optimum binary search trees, Multidimensional binary search tree.
17,18	3.1.2022 4.1.2022	9. MODULE 9: Graphs, Definition, terminologies and properties, Graph representations, Minimum spanning trees.
19,20	5.1.2022 6.1.2022	10. MODULE 10: The searching techniques using for Depth-first search, Breadth-first search, Networks.
21,22	9.1.2022 10.1.2022	11. MODULE 11: The searching techniques using for Priority Queues, Heap Structures, Binomial Heaps, Leftist Heaps.
23,24	11.1.2022 12.1.2022	12. MODULE 12: The sorting techniques using for Sort and Search Algorithms, Heap sort, Merge sort, Quick-sort
25,26	19.1.2022 20.1.2022	13. MODULE 13: Hashing General radix sort Symbol tables Sequential search, l2021y search, Interpolation search, Tries.
27,28	23.1.2022 24.1.2022	14. MODULE 14: XML Parser uses tree algorithms. Decision-based algorithm is used in machine learning which works upon the algorithm of tree. Databases also uses tree data structures for indexing. Domain Name Server (DNS) also uses tree structures.
29,30	25.1.2022 26.1.2022	Some applications of a graph are: Facebook's Graph API uses the structure of Graphs. Google's Knowledge Graph also has to do something with Graph. Dijkstra algorithm or the shortest path first algorithm also uses graph structure to finding the smallest path between the nodes of the graph. PS navigation system also uses shortest path APIs.

HEAD OF THE DEPARTMENT

Department of Computer Sci. . Engg... Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act. 19:16)

Chennal-600 073. INDIA



CERTIFICATE COURSE ON DATA STRUCTURES

Date of Introduction of the Course: 12.12.2021

COURSE SYLLABUS

1. MODULE 1:

Introduction of data Structures, Data Abstraction and Algorithm Analysis, Data types/objects/structures, Abstract definition of data structures, Representation and implementation, Time requirements of algorithms, Space requirements of algorithms.

2. MODULE 2:

Review of Linear Data Structures, Array application and representation, Polynomials, Sparse matrices, String-pattern Matching.

3. MODULE3:

Stack and Queues, Needs and justification of the study of the structures, Representation and implementation, multiple stacks and queues, Implementation of recursion using stack.

4. MODULE 4:

Linked Lists, Needs for the structure and justification of the study, Representation and Implementation, Doubly linked list, Circular linked list.

5. MODULE 5:

Linked list application, Memory Management, Static memory management, Dynamic memory management.

6. MODULE 6:

Nonlinear Data Structures, Trees, Definitions, terminologies and properties, Binary tree representation, traversals and applications.

.7. MODULE 7:

Threaded binary trees, Binary Search Trees, AVL Trees, M-way Search Trees, B+trees, B+trees, B+-trees.

8. MODULE 8:

Optimum binary search trees, Multidimensional binary search tree.

9. MODULE 9:

Graphs, Definition, terminologies and properties, Graph representations, Minimum spanning trees.

10. MODULE 10:

The searching techniques using for Depth-first search, Breadth-first search, Networks.

11. MODULE 11:

The searching techniques using for Priority Queues, Heap Structures, Binomial Heaps, Leftist Heaps.

12. MODULE 12:

The sorting techniques using for Sort and Search Algorithms, Heap sort, Merge sort, Quick-sort

13. MODULE 13:

Hashing General radix sortSymbol tablesSequential search, Binary search, Interpolation search, Tries.

14. MODULE 14:

XML Parser uses tree algorithms. Decision-based algorithm is used in machine learning which works upon the algorithm of tree. Databases also uses tree data structures for indexing. Domain Name Server (DNS) also uses tree structures.

15. MODULE 15:

Some applications of a graph are: Facebook's Graph API uses the structure of Graphs.Google's Knowledge Graph also has to do something with Graph.Dijkstra algorithm or the shortest path first algorithm also uses graph structure to finding the smallest path between the nodes of the graph. PS navigation system also uses shortest path APIs.

COURSE OBJECTIVES

In this course we plan to give students an overview data structures: data abstraction, a survey of linear data structures, nonlinear data structures, a discussion of more advanced internal and external sort and search algorithms, and the trade-offs involved in the use of different data organizations. The algorithm analysis and trade-offs study shall be done. Implementations and their efficiency in either C or C++ shall be considered in the Lab.

Specifically, the course has the following objectives:

Students will learn

Upon completion of this course students should be able to fully understand and apply the following concepts in their computing related work environment.

- 1. Data abstraction and information hiding.
- 2. Linear data structures and their applications in problem solving and programming.
- 3. Nonlinear data structures and their applications in problem solving and programming.
- 4. Internal and external sort and search techniques.
- 5. Graphs, Priority Queues
- 6. Sort and Search applications in problem solving and programming

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer School Engg.,
Bharoth Institute of Higher Education, & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956).
Chennal-600 073. INDIA



CERTIFICATE COURSE ON DATA STRUCTURES Date of Introduction of the Course: 12.12.2021 School of Computing Registered Students Name List

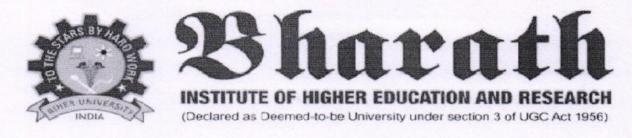
S.NO	REG.NO	NAME OF THE STUDENT	
1	U14CS166	SHAFAN HASIM.N	
2	U14CS167	SHAIK AATIKA	
3	U14CS168	SHAIK MEERA SHARIF	
4	U14CS169	SHAIK YASMIN	
5	U14CS170	SHANKAR KUMAR GUPTA	
6	U14CS006	ABHIKAMALI .A	
7	U14CS007	ABHISHEK MANDURI	
8	U14CS008	AJAY.D	
9	U14CS009	AKASH CHANDRA AMBASTHA	
10	U14CS010	AKHIL REDDY.G	
11	U14CS011	AKSHAY.R	
12	U14CS165	SAURAV SINGH	
13	U14CS224	R.SINDHU	
14	U14CS228	ELACATI JAGANNADHA HARSHITHA	
15	U14CS230	MARAM REDDY RAJASEKHAR	
16	U14CS234	DANDU MOHAN RAJENDRA VARMA	
17	U15CS055	GOLLAPUDI KALYAN KUMAR	
18	U15CS056	GORRE THIRUPATHI REDDY	
19	U15CS057	GUJJETI MAHESH	
20	U15CS058	GUNDA VINAY KUMAR	
21	U15CS121	MD MINHAZ RAZA HASHMI	
22	U15CS123	MOHAMMAD ASLAM SHAREEF	
23	U15CS124	MOHANKUMAR J	
24	U15CS187	SANAYAGARI JAYA CHANDRA REDDY	
25	U15CS188	SANDANAMUDI CHANDRA TEJA	

26	U15CS189	SANTHOSH RAJ M	
27	U15CS254	JAGATH RAJAH.R	
28	U15CS255	ADITYA	
29	U15CS701	PRAVEEN RAJ.V	
30	U16CS001	SANTOSH B	
31	U16CS002	APARNA V M	
32	U16CS003	NALAMOTHU SRIKANTH	
33	U16CS004	ABDUL KHADIR L	
34	U16CS006	SARAVANAN R	
35	U16CS007	SANAM NAGA VENKATA SAI KRISHNA	
36	U16CS110	NARRAVULA TEJASREE	
37	U16CS111	BODAKUNTLA AKHIL	
38	U16CS112	INTURI RAGHU BABU	
39	U16CS113	PALLE SUDHEER KUMAR REDDY	
40	U16CS114	BANGARAPU MANOJ KUMAR REDDY	
41	U16CS115	BHUMIRDDY MAHITHA	
42	U16CS116	YELLAPUREDDY REPARENDAR REDDY	
43	U16CS171	GOGA VAMSI	
44	U16CS172	SEELAM HARITHA SAI PRIYA	
45	U16CS173	NALLATI JAYA LAKSHMI DURGA	
46	U16CS217	K NIVEDITHA	
47	U16CS218	K DIVYA	
48	U16CS219	HARINDRA REDDY	
49	U16CS220	AFREEN	

COURSE COORDINATOR

HEAD OF THE DEPART

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Department of Computer Scil & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deamed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON DATA STRUCTURES



COURSE COORDINATOR

HEAD OF THE DEPARTMENT



CERTIFICATE OF PARTICIPATION

This certificate is presented to

K DIVYA(REG NO:U16CS218)

For actively participating in the value added course "DATA STRUCTURES" Conducted by School of Computing, BIHER from 12.12.2021 to 21.01.2022.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academic Year			2	- 120	-2022				
Term			01	DD					
Cours	e Number								
Course Title			D	ata	Structu	res			
Numb	er of Credits		_	-					
Туре	of Course	Regula	ar	E	lective	Add	-on	V	
I.	Informa	tion on the F	Respondent: (Ti	ick (√) Ap	propriately)				
1.		age of classes			10.60	1 60 00		00	
	0-20		20-40		40-60	60-80	~	80-	
						0.00		100	
2.	Number	of hours pe	r week spent on	the cours	se (Other than le	ecture hours)			
-	0-2		2-4		4-6	6-8		8-10	
3.	Prepara	tion for the	course by the st	udent:					
	(i)	Have done	e part of this cou	ırse earlier			NO		
	(ii)	Has adequ	ate prior exposu	are to the p	rerequisites		NO		
	(iii)	Had to pic	ckup relevant ad	vant additional topics through concurrent study yes					
	(iv)	Have no e	exposure to the b	to the background material					
4.	The eyn	ectations for	taking the cou	rse by the	student are:				
٦.	(a)		by skill base in the				Yes	3	
	(b)			elevant subject Yes					
	(c)	Curiosity	sed to a resevant	Yes					
	(d)		ployment Oppo						
	(e)		Course requirer						
	(f)	To Impro	The second secon	Yes					
Abou				spondent	(Tick (√) Appr	opriately)			
71000	· me mon u			A	В	C	1		E
1.	Pace of t	the Teaching/	lecture /						
2.		nt of the Subj		V					
3.		of expression		V					
4.	-	preparation			V				
5.	The second second	interaction		~					
6. Accessibility outside the class				V					
7.		please specify							
A: Ex	cellent	B	: Very Good	C:		D:		E:	
				Go	od	Satisfactor	у	Poo	r

HEAD OF THE DEPARTMENT

COURSE FEEDBACK FORM

Acade	emic Year		2021	-2022						
Term	erm ODD									
Cours	e Numbe	r								
Course Title Data Structures										
Numb	Number of Credits									
Type	of Course	Regular		Elective		A	Add-on	L		
I.	Information on the Respondent: (Tick (√) Appropriately)									
1.	Dorgani	tage of classes atter	ndad							
1.	0-20		0-40	40-	60	60-80	./	80-100		
	0-20		0-40	140-	00	00-00		80-100		
2.	Numbe	r of hours per wee	k spent on the	course (Othe	r than lectur	e hours)				
	0-2	2	-4	4-6		6-8		8-10		
3.	-	ation for the cours								
	(i)	Have done part of			•	M				
	(ii)	Has adequate prior				N				
	(iii)				opics through concurrent study Yes					
	(iv)	Have no exposure	to the backgro	und material		^	10			
4.	The exp	pectations for takin	ng the course h	y the student	are:					
	(a) Enhance by skill base in the area of				of specializations YeS					
	(b)	Get exposed to a r	elevant subject			Y	es			
	(c)	Curiosity				>	les			
	(d)	Better Employmen	nt Opportunity	ity Yes						
	(e)	Complete Course	requirements	709						
	(f)	To Improve CGPA	1							
Abou	t the Ins	tructor: Informati	on on the Resp	oondent: (Tic	k (√) Approp	oriately)				
				A	В	C	D		E	
1.	Pace of the Teaching/lecture		re	4						
2.	2. Comment of the Subject									
3.	. Clarity of expression			/						
4.	Level of preparation				V					
5.	Level o	f interaction								
6.	Accessi	ibility outside the cl	ass							
7.	Others	(please specify								
A: Ex	cellent	B: Ver	y Good	C: Good		D: Satisfacto	ory	E: Poo	or	

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/3 3 of UGC Act, 1956)
Chennal-600 073. INDIA



Sharath INSTITUTE OF HIGHER EDUCATION AND RESEARCH



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOG No.173, Agharam Road, Selaiyur, Chennai, T.N. - 600 073.

Requisition Letter

Date:07.12.2021

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "Web Designing" - Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Web Designing" in our campus premises on 16.12.2016, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing 1:30 PM to 4:30 PM

Submitted to Principal for approval to organize this value-added course.

HOD

Department of Computer Sciu. & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of U&C Act, 1956)
Chennal-600 073. INDIA

DEAN ENGINEERING



CIRCULAR

13.12.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Web Designing** for the benefit of II, III and IV year students. This course is scheduled from 16.12.2021 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

To

Copy to CSE

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Head of Department

HEAD OF DEPARTMENT
Department of Computer Scic & Engg..
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON WEB DESIGNING

Date of Introduction of the Course: 16.12.2021

COURSE SYLLABUS

1. Basics of Web Designing

How to design a website

- · Creating different themes for different layouts
- · How to design the look and feel of a website
- How to create and design banners, advertisements, etc.
- Learning about the tools and techniques of web design covers using software applications

2. Web Technologies

- How does a website work?
- Web standards and W3C elements
- · Domains and Hosting
- Clients and Server Scripting Languages
- Responsive Web Designing

3. HTML

how HTML elaborates the general structure of a web page design ,tags and the concept of HTML files. hyperlinking and the tools use in a web page design process. HTML 5 with the tools featured on it.

4.CSS

The tools essential for web page designing, cascading style sheets CSS .CSS in adapting a webpage to different environments. CSS3 is replete with features .

5. Java Script

logic-based language in programming and interactive websites with cool tabs, sliders, calls to action and other dynamic features made with JavaScript.

6.Bootstrap

Bootstrap is written in programming languages of HTML, CSS, and JavaScript. What it does turns a website into a responsive one. front-end development framework to furnish a better understanding of both web development as well as web design.

7. Adobe Dreamweaver

Adobe Dreamweaver. What's best about Adobe Dreamweaver. This software is a saviour for those creating multiple website designs at one time.

8. Adobe Flash

The central vector animation tool of Flash animations on a webpage. Adobe Flash isturns a website into an interactive one.

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Web Designing and understand the principles of creating an effective web page, including an in-depth consideration of information architecture. Become familiar with graphic design principles that relate to web design and learn how to implement theories into practice. Develop skills in analyzing the usability of a web site. Understand how to plan and conduct user research related to web usability. Learn the language of the web: HTML and CSS. Learn CSS grid layout and flexbox. Learn techniques of responsive web design, including media queries. Develop skills in digital imaging (Adobe Photoshop.) Develop basic programming skills using Javascriptandj Query. Be able to embed social media content into web pages.

Specifically, the course has the following objectives:

Students will learn

- Students will develop an understanding of the formalistic (aesthetic) aspects of design and visual communication.
- 2. Students will demonstrate cross-platform (web, mobile, broadcast, print) storytelling skills.
- Students will become familiar with graphic design and/or game theory and be able to apply this theory to real world projects.
- Students will develop and understanding of information design and usability as it applies to interactive media projects.
- 5. Students will utilize coding and software tools to analyze and present data in a professional manner that could be translated to web-based or app-based media.
- 6. Students will write at a level suitable for a public audience in an area related to interactive media (e.g., technical writing, game writing, writing for social media, presentation of a CIV)

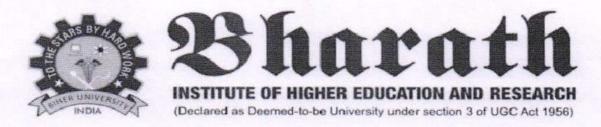
COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scie & Engg.

Bhorath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennal-600 073. INDIA



CERTIFICATE COURSE ON WEB DESIGNING

Date of Introduction of the Course: 16.12.2021

The timings are 1:30 PM to 4:30 PM

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	16-12- 2021 (AN)	1.Basics of Web Designing
		 How to design a website Creating different themes for different layouts How to design the look and feel of a website How to create and design banners, advertisements, etc. Learning about the tools and techniques of web design covers using software applications
3,4	17-12- 2021(FN)	2.Web Technologies
		 How does a website work? Web standards and W3C elements Domains and Hosting Clients and Server Scripting Languages
5,6	17-12-2021 (AN)	3.HTML
		how HTML elaborates the general structure of a web page design ,tags and the concept of HTML files. hyperlinking and the tools use in a web page design process. HTML 5 with the tools featured on it.

23-12-2021 (AN)	3.HTML
	how HTML elaborates the general structure of a web page design ,tags and the concept of HTML files. hyperlinking and the tools use in a web page design process. HTML 5 with the tools featured on it.
24-12-2021 (FN)	4.CSS
	The tools essential for web page designing, cascading style sheets CSS. CSS in adapting a webpage to different environments. CSS3 is replete with features
24-12-2021 (AN)	5.JavaScript
	logic-based language in programming and interactive websites with cool tabs, sliders, calls to action and other dynamic features made with JavaScript.
30-12-2021 (AN)	5.JavaScript
	logic-based language in programming and interactive websites with cool tabs, sliders, calls to action and other dynamic features made with JavaScript.
	(AN) 24-12-2021 (FN) 24-12-2021 (AN)

15,16	31-12-2021 (FN)	6.Bootstrap Bootstrap is written in programming languages of HTML, CSS, and JavaScript. What it does turns a website into a responsive one. front-end development framework to furnish a better understanding of both web development as well as web design.
17,18	31-12-2021 (AN)	7.Adobe Dreamweaver Adobe Dreamweaver. What's best about Adobe Dreamweaver. This software is a saviour for those creating multiple website designs at one time.
19,20	06-01-2022 (FN)	8.Adobe Flash The central vector animation tool of Flash animations on a webpage. Adobe Flash isturns a website into an interactive one

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON WEB DESIGNING Date of Introduction of the Course: 16.12.2021

School of Computing Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT			
1	U14CS010	AKHIL REDDY.G			
2	U14CS011	AKSHAY.R			
3	U14CS012	AMAR BASUMATARY			
4	U14CS013	ANDREW JOSEPH.V			
5	U14CS014	ANGELIN .R			
6	U14CS015	ANKITA			
7	U14CS016	ANNILKRISHNAN .K			
8	U14CS017	ASHUTOSH SRIVASTAVA			
9	U14CS019	ARAMBAKAM, YASWANTH			
10	U14CS021	AREEF SYED			
11	U14CS022	ARUN KUMAR SINGH			
12	U14CS023	ASIF NAZIR WANI			
13	U14CS024	ATUL ANAND			
14	U14CS025	BACHU HARISH			
15	U14CS026	BALA MURUGAN .P			
16	U14CS027	BALAJI SINGH. T			
17	U14CS028	BALAJI.S			
18	U14CS029	BALAKRISHNAN.T			
19	U14CS031	BISHAL BANIK			
20	U14CS032	BODA VEERA VENKATA RAVI TEJA			
21	U14CS033	BOORAGADDA VAMSI KRISHNA			
22	U14CS056	GOUTHAM KALYAN KUMAR .R			
23	U14CS057	GOVIND KUMAR			
24	U14CS058	HARI TEJA.G			
25	U14CS059	HARISH.V			

26	U14CS060	JASIMKHAN.J.
27	U14CS061	JENNIFER.S
28	U14CS062	JERIPOTHULA SURESH GOUD
29	U14CS063	JOHN DALTON .H
30	U14CS064	K. LAKSHMIKANTH REDDY
31	U14CS065	K. LAKSHMI NARAYANA REDDY
32	U14CS111	NAGINENI SRIKANTH CHOWDARY
33	U14CS112	NAGIREDDY MOHAN KRISHNA REDDY
34	U14CS113	NALLAJARLA CHAKRADHAR
35	U14CS114	NANDALA SWETHA
36	U14CS115	NANDIPALLI MOUNICA
37	U14CS116	NAYANA.P. BALA CHANDRAN
38	U14CS117	NEERAJAN SAHA
39	U14CS118	NETHI MUKESH
40	U14CS120	NIRUPAMA CHAKRABORTY .S
41	U14CS121	NITISH SINGH CHAUHAN
42	U14CS133	PRATEEP ANAND
43	U14CS134	PRINCE RAJ
44	U14CS135	RAGAVENDRAN.R
45	U14CS136	RAHUL GOUD.P
46	U14CS137	RAHUL HAWAIBAM
47	U14CS138	RAHUL KUMAR
48	U14CS139	RAHUL KUMAR SINGH
49	U14CS141	RAHUL SARDAR
50	U14CS142	RAJA S.V
51	U14CS143	RAJNISH RANJAN PANDEY
52	U14CS209	YASVAND CUMAAR .S
53	U14CS210	YELLALA SANTHOSH REDDY
54	U14CS213	AKULA MOHITH
55	U14CS214	PRASANTH KUMAR .P
56	U14CS215	PRANJAL BHASHKAR
57	U14CS506	I.SUKAPATLA AVINASH

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bhorath Institute of Higher Education, & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

RAHUL GOUD.P

For actively participating in the value added course "WEB DESIGNING" Conducted by School of Computing, BIHER from 16.12.2021 to 06.01.2022.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

COURSE FEEDBACK FORM

Acad	emic Year		2	2021-2022						
Term				ODD						
Cours	se Number									
Cours	se Title		1	Jeb D	espanina	A				
Numl	oer of Credit	S		0 (
Type	of Course	Regu	ar	I	Elective		Add-on	1		
I.	Informa	ation on the	Respondent: (1	Tick (√) Ap	propriately)					
1.		Percentage of classes attended								
	0-20		20-40		40-60	60-80	0	80-		
								100		
2.	Number	r of hours pe	r week spent o	n the cour	se (Other than	lecture hours)				
	0-2		2-4		4-6	6-8		8-10	1	
3.	Prepara	paration for the course by the student:								
	(i)) Have done part of this course earlier					No			
	(ii)	Has adequate prior exposure to the prerequisites								
	(iii)	Had to pickup relevant additional topics through concurrent study								
	(iv)									
4.		The expectations for taking the course by the student are:								
	(a)	Enhance by skill base in the area of specializations								
	(b)	Get exposed to a relevant subject								
	(c)	Curiosity					yes			
	(d)	Better En	ployment Oppo	ortunity		Yes	Yes			
	(e)		Course require	quirements				yes		
	(f)		ve CGPA	70						
Abou	t the Instru	ctor: Inform	ation on the Re	1	(Tick (√) App					
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2.	The second secon	nt of the Subj	ect	~						
3.		Clarity of expression		1						
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5.	Level of interaction			1	1					
6.	Accessibility outside the class				1			1		
7.	Others (please specif	y							
A. F-	cellent	l D	Very Good	C:		D:		F.		
A. E.	cenent	В	very Good	Go	od	Satisfa	Atom	E:	1	
				G0	ou	Satista	L. Color	Poor	N.	

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education, & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA

COURSE FEEDBACK FORM

Acade	ademic Year 2021-2022									
Term			QQO							
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Cours	e Title		Web 3	Designing	W					
Numb	er of Credits		0 0							
Туре	of Course	Regular		Elective	A	Add-on	1			
I.	Informa	tion on the Respond	ent: (Tick (√) A	Appropriately)						
1.	Percent	age of classes attende	ed							
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2.	Number	of hours per week s	nent on the co	rse (Other than	lecture hours)					
2,	0-2	2-4	pent on the co.	4-6	6-8		8-10			
3.	Prepara	tion for the course b	y the student:							
	(i)	Have done part of	this course earl	ier		Web				
	(ii)	Has adequate prior exposure to the prerequisites								
	(iii)	Had to pickup relevant additional topics through concurrent study								
	(iv)	Have no exposure	to the backgrou	and material		No				
4.	-	The expectations for taking the course by the student are: Enhance by skill base in the area of specializations								
	(a)			of specializations		Yes				
	(b)	Get exposed to a r	elevant subject			Yes				
	(c)	Curiosity			Yes					
	(d)	Better Employmen	Contests that is considered and	- 100						
	(e)	Complete Course	ad a dispersion and a significant			10				
14	(f)	To Improve CGP	The same of the sa		• • • • •	Ye	D			
Abou	t the Instru	ctor: Information on			propriately)	I) E			
-	In c	J. T Li d		В	C	-1	E			
1.		the Teaching/lecture	V							
2.	The state of the s	nt of the Subject	V							
3.		rity of expression		1 1						
4.		Level of preparation Level of interaction		Sale No.						
5.	THE REPORT OF STREET AND STREET									
6.	Accessibility outside the class			1						
7.	Others (please specify								
A: E:	xcellent	B: Very C	and the same of th	C: Good	D: Satisfac	etory	E:			

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie A Engg.,
Bharath Institute of Higher Education & Research
(Declared as Decembed to be University U/S 3 of UGS Act, 1956)
Chennal-600 073, INDIA

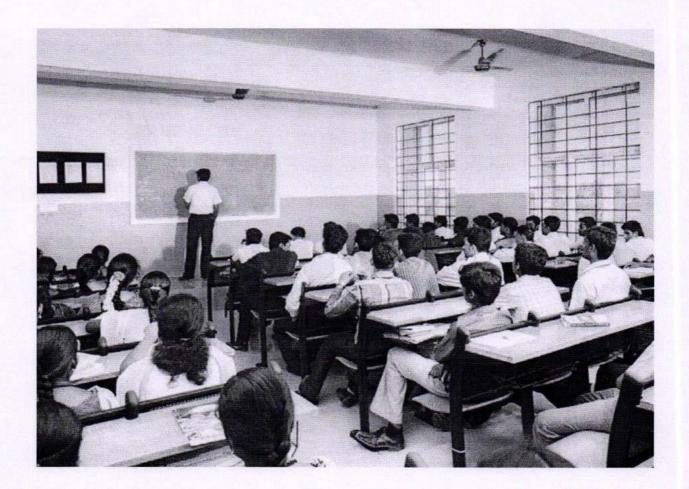


Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON WEB DESIGNING



Coal:

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie. A Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

Date: 14.03.2022

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To The Dean Engineering, Bharath Institute of Higher Education and Research, Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "Security in Google Cloud Platform" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course "Security in Google Cloud Platform" -Reg in our campus premises on 17.03.2022, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM(AN)

Submitted to Principal for approval to organize this value-added course.

HOD

DEAN ENGINEERING

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CIRCULAR

14.03.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Security in Google Cloud Platform** for the benefit of students. This course is scheduled from 17.03.2022 which includes theory and practical. The timings are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM (AN) and Saturday (FN&AN).

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1.	Dr.C.Rajabhushanam	Professor.
2.	Mr.M.Rammamorthi4	Assistant Professor.

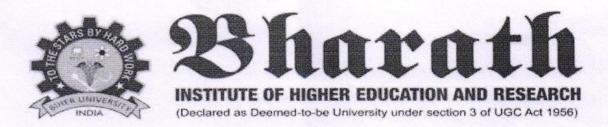
Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Disensed to be University UG 3 of Usin Act, 1915)
Chemnal-600/073. (AUSIA)



CERTIFICATE COURSE ON SECURITY IN GOOGLE CLOUD PLATFORM

Date of Introduction of the Course: 17.03.2022

COURSE SYLLABUS

1. Google Cloud Platform (GCP) Infrastructure

To manage GCP using console and Command Line tool – Cloud Shell, Gcloud, Gsutil. Also, you will learn how to install and configure Cloud SDK

2. GCP Networking Services

The GCP networking concept and how-to setup network topology, how to connect different GCP resources with each other and isolating them using network policies and firewall.

3. GCP IAM and Security Services

To Identity and Access management with several management tools that GCP offers.

4. GCP Compute Services

To create/manage Virtual machines and work with Compute engine.

5. GCP Storage & Database Services

The different data storage services offered by GCP.

6. Containers

To Deploy, manage, and scale containerized applications on Kubernetes.

7. Cloud Dataflow for Data Processing

To develop and execute a variety of data processing patterns using Dataflow processing and how to manage cluster using Dataproc service.

8. GCP APIs & Development Services

To use GCP for application development, deployment, debugging and monitoring.

9. GCP DevOps Services

To use GCP DevOps service for CI/CD using Jenkins and how to do debugging using Stackdriver in DevOps environment.

10. Designing & Implementing GCP Migration

To check different metrics and take decision to migrate to GCP.

11. GCP Cloud Architect Exam Case Studies

The official case studies provided by Google for GCP Architect exam, and practice on these case studies with sample exam problem statements.

COURSE OBJECTIVES

This course helps to understand about Regions, Zones and Projects that make up the GCP environment. It also helps to understand What is Cloud computing, Overview of different cloud computing services, Understand GCP environment Different Compute, Storage, Big Data and AI resources which GCP offers and Google Network Service Offerings with Setup GCP account.

Specifically, the course has the following objectives:

Students will learn

- 1. To understand GCP environment and Setup GCP account.
- 2. To use Cloud Shell to manage GCP environment and Install/Configure cloud SDK.
- 3. To use VPC, Create/Manage VPN, Work with Routes Configure and Deploy Endpoints.
- To understand Identity and Access Management, Create and manage permissions for Google Cloud Platform resources.
- To learn and implement Compute options (vCPU and Memory) specific to workload with Common Compute Engine actions.
- To understand Cloud Storage Nearline, Coldline and Integration with on premises/multi-cloud environment.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic. 2 & Engg.,
Illumination of Computer Education & Research
Is to Loversity U/S 3 of UGC Act, 1956)
In the Computer Scic. 2 & Engg.,
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CERTIFICATE COURSE ON SECURITY IN GOOGLE CLOUD PLATFORM

Date of Introduction of the Course: 17.03.2022

The timings are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM(AN)

Time Table & Lesson plan

CLASS	DATE	TOPIC			
1	17-03-2022(FN) Friday	1. Google Cloud Platform (GCP) Infrastructure To manage GCP using console and Command Line too Cloud Shell, Gcloud, Gsutil. Also, you will learn how to install and configure Cloud SDK			
2	18-03-2022 (AN) Saturday	2. GCP Networking Services The GCP networking concept and how-to setup network topology, how to connect different GCP resources with each other and isolating them using network policies and firewall.			
3,4	20-03-2022 (FN) Monday	3. GCP IAM and Security Services To Identity and Access management with seve management tools that GCP offers			
5	21-03-2022(FN) Tuesday	4. GCP Compute Services To create/manage Virtual machines and work with Compute engine.			
6	22-03-2022 (FN) 22-03-2022 (AN) Wednesday	5. GCP Storage & Database Services The different data storage services offered by GCP			
7,8	23-03-2022 (FN) Thursday	6. Containers To Deploy, manage, and scale containerized applications on Kubernetes.			
9	24-03-2022 (FN) 24-03-2022 (AN) Friday	7. Cloud Dataflow for Data Processing To develop and execute a variety of data processing patterns using Dataflow processing and how to manage cluster using Dataproc service.			

Bharath Institute of Science and Technology Department of Computer Science and Engineering

School of Computing SECURITY IN GOOGLE CLOUD PLATFORM

Registered Students Name List

S.No	RegNo	Student Name
1	U16CS001	SANTOSH B
2	U16CS002	APARNA V M
3	U16CS003	NALAMOTHU SRIKANTH
4	U16CS004	ABDUL KHADIR L
5	U16CS006	SARAVANAN R
6	U16CS007	SANAM NAGA VENKATA SAI KRISHNA
7	U16CS008	CHEEMIREDDIGARI ANKITHAREDDY
8	. U16CS009	RITIK RAJ
9	U16CS010	JOHAN KIRUBHAHAR PP
10	U16CS011	RAVURI MOUNIKA
11	U16CS012	FAYAZ AKIL S
12	U16CS013	SURYA SUNDARRAJ SRIRAM
13	U16CS014	SOMA BHARATH KUMAR
14	U16CS015	B J JAISON
15	U16CS016	SARAVANAKUMAR S
16	U16CS017	VARUN KANNA A
17	U16CS018	JUPAKA SAIVARUN
18	U16CS019	PYDI VENKATA PRITHEESH NIHAR
19	U16CS020	R MAHESH
20	U16CS021	DHRUBAJYOTI MAJI
21	U16CS024	SRIMATHI S
22	U16CS025	SANTHOSHKUMAR S
23	U16CS026	AJAY KUMAR R
24	U16CS027	GARLAPATI RAGHURAM
25	U16CS028	PADILAM JAYANTH YADAV
26	U16CS029	MOHAMMED KHIZER HUSSAIN N
27	U16CS030	JEEVAMEDHA M
28	U16CS031	SYED HAFEEZ HUSSAIN
29	U16CS032	MUGESH P
30	U16CS033	POOJALAKSHMI N

HEAD OF DEPARTMENT
Department of Computer Soil & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Decimed to be University U/S 3 of USC Act, 1956)
Chennal-600 073, INDIA





Bharath UNIVERSITY

-பாரத் பல்கலைக்கழகம்

BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be-University, u/s 3 of the UGC Act, 1956)



CERTIFICATE OF PARTICIPATION



Ms. APARNA V M

For actively participating in the value added course "Security in Google Cloud Platform "Conducted by School of Computing, BIHER on 17.03.2022.

Course Coordinator

Head of the Department

Director

COURSE FEEDBACK FORM

Acad	Academic Year 2021 - 2022								
Term									
Cours	se Number		-						
Cours	se Title		Sem	rity 1	in Cro	ogle clou	nd Dia	+ for	m
Numl	per of Credits)						
Type	of Course	Regular		Elective		Add	-on	V	
I.	Informa	tion on the Responde	nt: (Tick (√)	Appropri	ately)				
1.		age of classes attended	1	140.60		T 60 80	1 /0	0 [
	0-20	20-40		40-60		60-80	1	0-	
								00	
2.	Number of hours per week spent on the course (Other than lecture hours)								
	0-2	2-4		4-6		6-8		8-10	
3.	Prepara	tion for the course by	the student:						
	(i)	Have done part of this course earlier N ♥							
	(ii)	Has adequate prior exposure to the prerequisites $\sim \mathcal{V}$							
	(iii)	Had to pickup relevant additional topics through concurrent study 70							
	(iv)	v) Have no exposure to the background material							
4.		The expectations for taking the course by the student are:							
	(a)	Enhance by skill base in the area of specializations							
	(b)	Get exposed to a re	elevant subject						
	(c)	Curiosity	76)						
	(d)	Better Employment	t Opportunity 4 (2)						
	(e)	Complete Course re	equirements			403			
	(f)	To Improve CGPA				400			
Abou	it the Instru	ctor: Information on t	he Responde	ent: (Tick	(√) Appropi				
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1.		the Teaching/lecture	_						
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4.	Level of preparation								
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7.	Others (please specify	,						
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HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sciul & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Decimed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA

COURSE FEEDBACK FORM

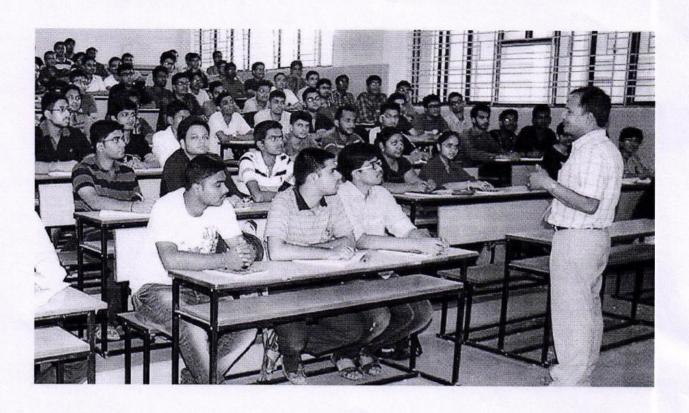
Acad	Academic Year 2021—22										
Term			-								
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Type	of Course	Regular		Ele	ective		Add-on	V			
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1.	Percent	age of classes attended	ı								
	0-20	20-40			40-60	60-80		-80-			
								100			
2.	Number of hours per week spent on the course (Other than lecture hours)										
2.	0-2	2-4	ent on the		4-6	6-8		8-10			
	10-2	2 7				0 0		10.10			
3.	Prepara	ition for the course by	the stude	nt:							
	(i)	Have done part of this course earlier									
	(ii)	Has adequate prior exposure to the prerequisites									
	(iii)	Had to pickup relevant additional topics through concurrent study 7 C3									
	(iv)	Have no exposure t	to the background material								
4.	The exp	ectations for taking tl	ne course	by the s	tudent are:						
	(a)	Enhance by skill ba	Enhance by skill base in the area of specializations								
	(b)	Get exposed to a re	Get exposed to a relevant subject								
	(c)	Curiosity									
	(d)	Better Employment									
	(e)	Complete Course re									
	(f)	To Improve CGPA					10)				
Abou	t the Instru	ctor: Information on	he Respon	ndent: (Tick (√) Ap						
				A	В	C	D		E		
1.	Pace of	the Teaching/lecture		0							
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6.	Accessit										
7.	Others (please specify									
		I I		1-							
A: E	cellent	B: Very Go	od	C:	. /	D:		E:\			
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HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sciu & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA

CERTIFICATE COURSE ON SECURITY IN GOOGLE CLOUD PLATFORM

Introduction of the Course: 17.03.2022



Course Coordinator

Head of the Department

HEAD OF DEPARTMENT
Department of Computer Scit. & Engg.,
Bhorath Institute of Higher Education. & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



Bharath



Date: 27.02.2022

INSTITUTE OF HIGHER EDUCATION AND RESEARCH (Declared as Deermed - to - be - University under section 3 of USC Act 1996)

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selalyur, Chennal, T.N. - 600 073.

Requisition Letter

From
Dr. K.P Kaliyamurthie,
Professor & Head.

Department of CSE

Department of CSE, Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject :Request of Permission to conduct a value added course on "IMAGE PROCESSING FEATURES AND SEGMENTATION" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "IMAGE PROCESSING FEATURES AND SEGMENTATION" in our campus premises on 17/03/2022. Students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 1:30P.M-4.30PM

9.30A.M-4.30PM.

Submitted to Principal for approval to organize this value added course.

HOD

DEAN ENGINEERING

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Blanch Institute of Higher Education & Research
(Declared as Cherchap 600 073, V/RSpt ACC Act, 1956)
Chennai-600 073, INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

14.03.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **IMAGE PROCESSING FEATURES AND SEGMENTATION** for the benefit of II, III and IV year students. This course is scheduled from 17-03-2022 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

Head of Department

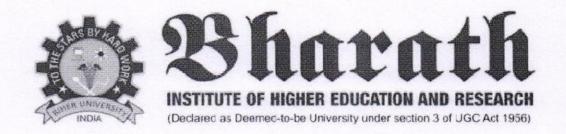
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CERTIFICATE COURSE ON IMAGE PROCESSING FEATURES AND SEGMENTATION

Date of Introduction of the Course: 17-03-2022

COURSE SYLLABUS

1. REVIEW OF DIGITAL IMAGE PROCESSING

Steps in digital image processing-Elements of visual perception- Connectivity and Relations between Pixels.- brightness adaptation, Simple Operations- Arithmetic, Logical, Geometric Operations. Mathematical Preliminaries - 2D Linear Space Invariant Systems - 2D Convolution - Correlation 2D Random Sequence - 2D Spectrum. Mach band effect. Image enhancement in spatial and frequency domain, Histogram equalization.

2. Image transforms

Image 2D Orthogonal and Unitary Transforms-Properties and Examples. 2D DFT- FFT – DCT - Hadamard Transform - Haar Transform - Slant Transform - KL Transform - Properties And Examples.

3. Enhancement Image Transforms

ImageEnhancement:- Histogram Equalization Technique- Point Processing-Spatial Filtering-In Space And Frequency - Nonlinear Filtering-Use Of Different Masks.

4. Image Segmentation

Edge detection, Thresholding, Region growing, Fuzzy clustering, Watershed algorithm, Active contour models, Texture feature based segmentation, Graph based segmentation, Wavelet based Segmentation - Applications of image segmentation.

Line Detection - Curve Detection - Edge Linking And Boundary Extraction, Boundary Representation, Region Representation And Segmentation, Morphology-Dilation, Erosion, Opening And Closing. Hit And Miss Algorithms Feature Analysis

5.FEATURE EXTRACTION

First and second order edge detection operators, Phase congruency, Localized feature extraction -detecting image curvature, shape features, Hough transform, shape skeletonization, Boundary descriptors, Moments, Texture descriptors- Autocorrelation, Co-occurrence features, Runlength features, Fractal model based features, Gabor filter, wavelet features.

6. Image restoration and construction

Image Restoration: Image Observation And Degradation Model, Circulant And Block Circulant Matrices and Its Application In Degradation Model - Algebraic Approach to Restoration-Inverse By Wiener Filtering - Generalized Inverse-SVD And Interactive Methods - Blind Deconvolution-Image Reconstruction From Projections.

7. Image compression

Image Compression: Redundancy And Compression Models -Loss Less And Lossy. Loss Less-Variable-Length, Huffman, Arithmetic Coding - Bit-Plane Coding, Loss Less Predictive Coding, Lossy Transform (DCT) Based Coding, JPEG Standard - Sub Band Coding.

8. Image Segmentation

Edge Detection - Line Detection - Curve Detection - Edge Linking And Boundary Extraction, Boundary Representation, Region Representation And Segmentation, Morphology-Dilation, Erosion, Opening And Closing. Hit And Miss Algorithms Feature Analysis.

9. REGISTRATION

Registration - Preprocessing, Feature selection - points, lines, regions and templates Feature correspondence - Point pattern matching, Line matching, Region matching, Template matching. Transformation functions - Similarity transformation and Affine Transformation. Resampling - NearestNeighbour and Cubic Splines.

10. IMAGE FUSION

Image Fusion - Overview of image fusion, pixel fusion, wavelet based fusion -region based fusion.

11.Image compression & segmentation

Image Compression:Redundancy And Compression Models -Loss Less And Lossy. Loss Less-Variable-Length, Huffman, Arithmetic Coding - Bit-Plane Coding, Loss Less Predictive Coding, Lossy Transform (DCT) Based Coding, JPEG Standard - Sub Band Coding. Image Segmentation: Edge Detection - Line Detection - Curve Detection - Edge Linking And Boundary

Extraction, Boundary Representation, Region RepresentationAnd Segmentation, Morphology-Dilation, Erosion, Opening And Closing. Hit And Miss Algorithms Feature Analysis.

12.Color

Color Image-Processing Fundamentals, RGB Models, HSI Models, Relationship Between Different Models.

13. Multispectral image processing

Multispectral Image Analysis - Color Image Processing Three Dimensional Image Processing-Computerized Axial Tomography-Stereometry-Stereoscopic Image Display-Shaded Surface Display.

14.3D Image Visualization

Sources of 3D Data sets, Slicing the Data set, Arbitrary section planes, The use of color, Volumetric display, Stereo Viewing, Ray tracing, Reflection, Surfaces, Multiple connected surfaces, Image processing in 3D, Measurements on 3D images.

15.Image Quality

Natural scene statistics, quality assessment based on structural and statistical approaches, blind quality assessment

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Image Processing, features and Segmentation will gain hands-on experience in solving relevant problems through projects that will utilize existing public tools monitoring one's progress. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

Students will learn

- 1) The fundamental ideas behind, Image Processing, features and Segmentation, the evolution of the paradigm, its applicability; Benefits, as well as current and future challenges;
- 2) The basic ideas and principles ofImage Processing, features and Segmentationis the subjectivity of consciousness and professional activity.

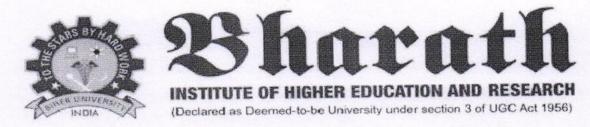
deployment considerations;

- 3) To understand the challenges in extracting objects/regions of interest from a given images providing user-friendly Web interfaces, curriculum materials, and professional development
- 4) Engaging with authentic scientific tools and practices such as controlling remote laboratory experiments or telescopes can build science inquiry skills, improve conceptual understanding, and increase motivation
- 5) The variety of programming models and develop working experience in several of them.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Seic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON IMAGE PROCESSING FEATURES AND SEGMENTATION

Date of Introduction of the Course: 17.03.2022

The timings are 1:30 PM to 4:30 PM from Friday (AN) and Saturday (FN&AN).

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	17-03- 2022(AN)	1. REVIEW OF DIGITAL IMAGE PROCESSING Steps in digital image processing-Elements of visual perception- Connectivity and Relations between Pixels brightness adaptation, Simple Operations- Arithmetic, Logical, Geometric Operations. Mathematical Preliminaries - 2D Linear Space Invariant Systems - 2D Convolution - Correlation 2D Random Sequence - 2D Spectrum. Mach band effect. Image enhancement in spatial and frequency domain, Histogram equalization.
3,4	17-03- 2022(AN) 18-03- 2022(FN)	2. Image transforms Image 2D Orthogonal and Unitary Transforms- Properties and Examples. 2D DFT- FFT – DCT - Hadamard Transform - Haar Transform - Slant Transform - KL Transform -Properties And Examples
5,6	17-03- 2022(FN)	3.Enhancement Image Transforms Image Enhancement:- Histogram Equalization Technique- Point Processing-Spatial Filtering-In Space And Frequency - Nonlinear Filtering-Use Of Different Masks
7,8	17-03-2022 (FN) 17-03- 2022(AN)	4.Image Segmentation Edge detection, Thresholding, Region growing, Fuzzy clustering, Watershed algorithm, Active contour models, Texture feature based segmentation, Graph based segmentation, Wavelet based Segmentation - Applications of image segmentation. Line Detection - Curve Detection - Edge Linking And Boundary Extraction, Boundary Representation, Region Representation And

		Segmentation, Morphology-Dilation, Erosion, Opening And Closing. Hit And Miss Algorithms Feature Analysis
9,10	17-03-2022 (AN)	5.FEATURE EXTRACTION First and second order edge detection operators, Phase congruency, Localized feature extraction -detecting image curvature, shape features, Hough transform, shape skeletonization, Boundary descriptors, Moments, Texture descriptors-Autocorrelation, Co-occurrence features, Runlength features, Fractal model based features, Gabor filter, wavelet features.
11,12	17-03-2022 (AN)	6.Image restoration and construction Image Restoration: Image Observation And Degradation Model, Circulant And Block Circulant Matrices and Its Application In Degradation Model - Algebraic Approach to Restoration- Inverse By Wiener Filtering - Generalized Inverse-SVD And Interactive Methods - Blind Deconvolution-Image Reconstruction From Projections
13,14	17-03-2022 (AN) 18-03-2022 (FN)	7.Image compression Image Compression: Redundancy And Compression Models -Loss Less And Lossy. Loss Less- Variable-Length, Huffman, Arithmetic Coding - Bit-Plane Coding, Loss Less Predictive Coding, Lossy Transform (DCT) Based Coding, JPEG Standard - Sub Band Coding.
15,16	18-03-2022 (FN)	8.Image Segmentation Edge Detection - Line Detection - Curve Detection - Edge Linking And Boundary Extraction, Boundary Representation, Region Representation And Segmentation, Morphology-Dilation, Erosion, Opening And Closing. Hit And Miss Algorithms Feature Analysis.
17,18	18-03-2022 (FN) 18-03-2022 (AN)	9.REGISTRATION Registration - Preprocessing, Feature selection - points, lines, regions and templates Feature correspondence - Point pattern matching, Line matching, Region matching, Template matching.Transformation functions - Similarity transformation and Affine Transformation. Resampling - NearestNeighbour and Cubic Splines.
19,20	18-03-2022 (AN)	10 IMAGE FUSION Image Fusion - Overview of image fusion, pixel fusion, wavelet based fusion -region based fusion.
21,22	18-03-2022 (AN)	11 Image compression & segmentation Image Compression:Redundancy And Compression Models -Loss Less And Lossy. Loss

	18-03-2022 (AN)	Less- Variable-Length, Huffman, Arithmetic Coding - Bit-Plane Coding, Loss Less Predictive Coding, Lossy Transform (DCT) Based Coding, JPEG Standard - Sub Band Coding. Image Segmentation: Edge Detection - Line Detection - Curve Detection - Edge Linking And Boundary Extraction, Boundary Representation, Region RepresentationAnd Segmentation, Morphology-Dilation, Erosion, Opening And Closing. Hit And Miss Algorithms Feature Analysis. 12.Color Color Image-Processing Fundamentals, RGB Models, HSI Models, Relationship Between
	24-03-2022 (FN)	Different Models
25,26	24-03-2022 (FN)	13. Multispectral image processing Multispectral Image Analysis - Color Image Processing Three Dimensional Image Processing- Computerized Axial Tomography-Stereometry- Stereoscopic Image Display-Shaded Surface Display.
27,28	24-03-2022 (FN) 25-03-2022 (AN)	14.3D Image Visualization Sources of 3D Data sets, Slicing the Data set, Arbitrary section planes, The use of color, Volumetric display, Stereo Viewing, Ray tracing, Reflection, Surfaces, Multiple connected surfaces, Image processing in 3D, Measurements on 3D images.
29,30	25-03-2022 (AN)	15.Image Quality Natural scene statistics, quality assessment based on structural and statistical approaches, blind quality assessment

COURSE COORDINATOR

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Department of Computer Scic & Engg.,
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Chennal-600 073. INDIA



CERTIFICATE COURSE ON IMAGE PROCESSING FEATURES AND SEGMENTATION

Date of Introduction of the Course: 17.03.2022

School of Computing Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT	
1	U14CS111	NAGINENI SRIKANTH CHOWDARY	
2	U14CS112	NAGIREDDY MOHAN KRISHNA REDI	
3	U14CS113	NALLAJARLA CHAKRADHAR	
4	U14CS114	NANDALA SWETHA	
5	U14CS115	NANDIPALLI MOUNICA	
6	U14CS116	NAYANA.P. BALA CHANDRAN	
7	U14CS117	NEERAJAN SAHA	
8	U14CS118	NETHI MUKESH	
9	U14CS120	NIRUPAMA CHAKRABORTY .S	
10	U14CS121	NITISH SINGH CHAUHAN	
11	U14CS122	NITYANAND BHARDWAJ	
12	U14CS123	PANKAJ SARKAR	
13	U14CS124	PARVATHA NIRANJAN REDDY	
14	U14CS126	PAYAL SINGH	
15	U14CS127	PELVIN CHRISTY	
16	U14CS128	PENAGALAPATI MARUTHI RAO	
17	U14CS129	PIYALI CHAKRABORTHY.M	
18	U14CS130	POOJA KUMARI	
19	U14CS131	PRAGYA ADITI	
20	U14CS132	PRASHANTH.B	
21	U14CS166	SHAFAN HASIM.N	
22	U14CS167	SHAIK AATIKA	
23	U14CS168	SHAIK MEERA SHARIF	
24	U14CS169	SHAIK YASMIN	

25	U14CS170	SHANIVAD VIIMAD CIIDTA	
26		SHANKAR KUMAR GUPTA	
	U14CS171	SHARSHI KANT PRASAD	
27	U14CS172	SHASHI BHUSHAN BHAGAT	
28	U14CS173	SHEKH ADNAN NIYARIYA	
29	U14CS174	SHIVANI GUPTA.M	
30	U14CS175	SHUBHAM	
31	U14CS176	SIREESHA.M	
32	U14CS178	SK MD TAUQEER	
33	U14CS179	SNEHA ROY	
34	U14CS180	SABUJ BARMAN	
35	U14CS181	SOURABH PRIYADARSHI	
36	U14CS182	SRI DHARSHINI .P	
37	U14CS183	SULEKHA KUMARI	
38	U14CS184	SUNITA.S	
39	U14CS185	SURENDAR.K	
40	U14CS186	SURIYA.A.	
41	U14CS187	SURYA.A	
42	U14CS188	SUSINDHAR .P	
43	U14CS190	SWEETY SHIMAL	
44	U14CS192	THARIGOPULA LOKESH	
45	U14CS193	THEJA.T	

COURSE COORDINATOR

HOD

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Chennai-600 073, INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

Pooja kumari

For actively participating in the value added course "IMAGE PROCESSING FEATURES AND SEGMENTATION

Conducted by School of Computing, BIHER from 17.03.2022 to 25.03.2022

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academic Year				2	022					
Term					en					
Cours	se Number									
Cours	se Title			MAGE	PROCE !	SSING F	PEATURES	x SE	GMEN	TATION
Number of Credits						7.				
Type of Course Regular					Elective		Add-	on		
I.	Informa	ation on	the Respondent:	(Tick (√)	Appropria	tely)				
1.	Percent	age of c	lasses attended							
1.	Percentage of classes attende			40-60			60-80		80-	
	0-20		20-40		40-00		00-80		100	
2.	Number	r of hou	rs per week spen	t on the co	urse (Othe	r than lectu	ire hours)			
	0-2		2-4		4-6		6-8		8-10	
3.	Prepara	ation for	r the course by th	e student:						
	(i)	Have	e done part of this	this course earlier No						
	(ii) Has adequate prior			exposure to the prerequisites NO						
	(iii) Had to pickup relev			vant additional topics through concurrent study						
	(iv)	Have no exposure to the background material No								
4.	-		ns for taking the	•	STURE BUSINESS OF THE STREET					
				ase in the area of specializations elevant subject yes						
		(b) Get exposed to a relevant subject				23				
	(c) Curiosity			Yes						
	(d) Better Employment			n Opportunity yes						
	(f)		mprove CGPA							
Abou	t the Instru	ctor: In	formation on the	-				_		
					A	В	C	D		E
1.			ching/lecture							
2.			Subject		1					
3.	Clarity			·	//					
4.	Level of									
5.				~		1				
6.			tside the class			/				
7.	Others (please s	pecify							
A . F	realler t		D. Vorm Cond		C.		D.	_	F.	
A: E	cellent		B: Very Good		C: Good		D: Satisfactory	. \	E: Poor	

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Chennai-600 073. INDIA

COURSE FEEDBACK FORM

Term Course Number Course Title Number of Credits Type of Course I. Information on the Respondent: (Tick (√) Appropriately) 1. Percentage of classes attended 0-20 20-40 40-60 60-80 2. Number of hours per week spent on the course (Other than lecture hours) 0-2 2-4 4-6 6-8 3. Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites (iii) Had to pickup relevant additional topics through concurrent study	Add-on		NTATION			
Course Title Course Title TMAGE PROCESCING FEAT Number of Credits	Add-on		NTATION			
Number of Credits Type of Course Regular Elective I. Information on the Respondent: (Tick (√) Appropriately) 1. Percentage of classes attended 0-20 20-40 40-60 60-80 2. Number of hours per week spent on the course (Other than lecture hours) 0-2 2-4 4-6 6-8 3. Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites	Add-on		NTATION			
Number of Credits Type of Course Regular Elective I. Information on the Respondent: (Tick (√) Appropriately) 1. Percentage of classes attended 0-20 20-40 40-60 60-80 2. Number of hours per week spent on the course (Other than lecture hours) 0-2 2-4 4-6 6-8 3. Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites	Add-on					
 Information on the Respondent: (Tick (√) Appropriately) Percentage of classes attended 0-20						
1. Percentage of classes attended 0-20		80-				
1. Percentage of classes attended 0-20		T 80-				
2. Number of hours per week spent on the course (Other than lecture hours) 0-2 2-4 4-6 6-8 3. Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites		I 80-				
2. Number of hours per week spent on the course (Other than lecture hours) 0-2 2-4 4-6 6-8 3. Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites	~	80-				
2. Number of hours per week spent on the course (Other than lecture hours) 0-2 2-4 4-6 6-8 3. Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites	V	60-80 80-				
O-2 2-4 4-6 6-8 Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites		100				
O-2 2-4 4-6 6-8 Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites						
Preparation for the course by the student: (i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites		T 0 10 T				
(i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites	~	8-10				
(i) Have done part of this course earlier (ii) Has adequate prior exposure to the prerequisites						
(ii) Has adequate prior exposure to the prerequisites						
(iii)						
(iv) Have no exposure to the background material						
(iv)		110				
4. The expectations for taking the course by the student are:						
(a) Enhance by skill base in the area of specializations						
(b) Get exposed to a relevant subject						
(c) Curiosity	Yes					
(d) Better Employment Opportunity	at Opportunity Yes					
(e) Complete Course requirements	Yes					
(f) To Improve CGPA	Yes					
About the Instructor: Information on the Respondent: (Tick (1) Appropriately)						
A B	C I	D	E			
1. Pace of the Teaching/lecture						
2. Comment of the Subject						
3. Clarity of expression						
4. Level of preparation						
5. Level of interaction						
6. Accessibility outside the class						
7. Others (please specify						
A: Excellent B: Very Good C: D:		E:	1			
A: Excellent B: Very Good C: D: Sqtist						

HEAD OF THE DEPARTMENT

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Department of Computer Science & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Decemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



23 harath INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON IMAGE PROCESSING FEATURES AND SEGMENTATION

Date of Introduction of the Course: 14.03.2022 School of Computing



COURSE CO ORDINATOR

HEAD OF THE DEPARTMENT

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Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073, INDIA







22.08.2022

Date:

HARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073

Requisition Letter

From

Dr. K.P.Kaliyamurthie,

Professor & Head,

Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "IBM AI Engineering" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "IBM AI Engineering" in our campus premises on 28/08/2022.

43 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

DEAN ENGINEERING

(Declared as Deemed to be University U/S 3 of UGC Act, 1956) Chennai-600 073. INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

25.08.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **IBM AI Engineering** for the benefit of II, III and IV year students. This course is scheduled from 28.08.2022 for 30 hours which includes theory and practical. The timings are 9:30 AM to 12:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Mrs.C.Anuradha	Assistant Professor

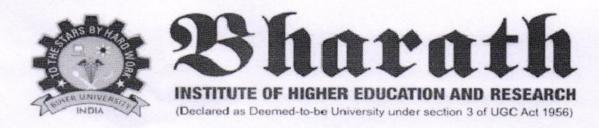
Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Scie. 5 & Engg.,
Rhorath Institute of Higher Education & Research
(Demark as Deemed to be University U/S 3 of UGC Act, 1956)
Changai-500, 0.73, INDIA



CERTIFICATE COURSE ON IBM AI ENGINEERING

Date of Introduction of the Course: 28.08.2022

COURSE SYLLABUS

1.Introduction: Philosophy of AI, Production systems

Introduction to AI-Problem formulation, Problem Definition, Production systems, Control strategies, Search strategies. Problem characteristics, Production system characteristics, Specialized production system.

2. Modeling a Problem as Search Problem, Uninformed Search

Problem solving methods, Problem graphs, Uninformed Search, Divide and Conquer, Greedy, Branch and Bound, Gradient Descent.

3. Heuristic Search, Domain Relaxations

Informed Search, Pure Heuristic Search, Best First Search, A* Search, AO* Search.

4. Local Search, Genetic Algorithms

Local Search Algorithms and Optimization Problems, Hill-climbing search, Simulated annealing search, Local beam search, Genetic algorithms, Ant Colony Optimization, Tabu Search.

5. Adversarial Search

Adversarial Search, Game Types, Problem Formalization, Game Tree, Zero Sum Game.

6. Constraint Satisfaction

Searching with Partial Observations, Constraint Satisfaction Problems, Constraint Propagation, Backtracking Search.

7. Game Playing

Game Playing, Optimal Decisions in Games, Min-Max Games, Alpha - Beta Pruning, Stochastic Games

8. Knowledge Representation

Knowledge representation using Predicate logic, Introduction to predicate calculus, Resolution, Use of predicate calculus, Knowledge representation using other logic, Structured representation of knowledge.

9. Knowledge Inference

Inference Rules, Production based system, Frame based system, Backward chaining, Forward chaining, Rule value approach.

10. Planning

Basic plan generation systems, Strips, Advanced plan generation systems, K strips, Strategic explanations, Why, Why not and how explanations.

11. Uncertainty in AI, Bayesian Networks

Fuzzy reasoning, Certainty factors, Bayesian Theory, Bayesian Network, Dempster - Shafer theory.

12. Markov Decision Processes

Markov Decision Processes, Dynamic programming, Linear programming, FMDP.

13. Expert Systems

Expert systems – Architecture, Roles of expert systems, Knowledge Acquisition, Meta knowledge, Typical expert systems, Expert systems shells.

14.Reinforcement Learning

RL Framework, Tabular methods, Q-networks, Policy Optimization, Model based RL.

15.Introduction to Deep Learning

Introduction to Tensorflow, Deep Neural Network, Recurrent neural networks, Convolutional neural networks, Applications.

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Artificial Intelligence Engineering, and an in-depth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects that will utilize existing public cloud tools. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

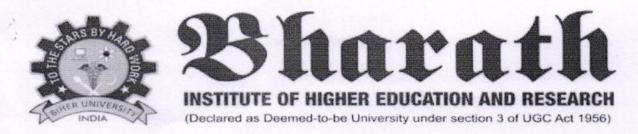
Students will learn

- 1) To have an appreciation for and understanding of both the achievements of AI and the theory underlying those achievements. To have an appreciation for the engineering issues underlying the design of AI systems.
- 2) To have a basic proficiency in a traditional AI language including an ability to write simple to intermediate programs and an ability to understand code written in that language.
- 3) To have an understanding of the basic issues of knowledge representation and blind and heuristic search, as well as an understanding of other topics such as minimax, resolution, etc. that play an important role in AI programs.
- 4) To have a basic understanding of some of the more advanced topics of AI such as learning, natural language processing, agents and robotics, expert systems, and planning.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Chennal-600 073. INDIA



CERTIFICATE COURSE ON IBM AI ENGINEERING

Date of Introduction of the Course: 28.08.2022

The timings are 9:30 AM to 12:30 PM from Friday (AN) and Saturday (FN&AN).

Time Table & Lesson plan

CLASS	DATE	TOPIC
1,2	28-08-2022(FN)	1.Introduction: Philosophy of AI, Production systems Introduction to AI-Problem formulation, Problem Definition, Production systems, Control strategies, Search strategies. Problem characteristics, Production system characteristics, Specialized production system.
3,4	01-09-2022 (FN) 02-09-2022 (FN)	2. Modeling a Problem as Search Problem, Uninformed Search Problem solving methods, Problem graphs, Uninformed Search, Divide and Conquer, Greedy, Branch and Bound, Gradient Descent.
5,6	02-09-2022(AN) 08-09-2022(FN)	3. Heuristic Search, Domain Relaxations Informed Search, Pure Heuristic Search, Best First Search, A* Search, AO* Search.
7,8	09-09-2022(FN) 09-09-2022(AN)	4. Local Search, Genetic Algorithms Local Search Algorithms and Optimization Problems, Hill-climbing search, Simulated annealing search, Local beam search, Genetic algorithms, Ant Colony Optimization, Tabu Search.
9,10	15-09-2022(FN)	5. Adversarial Search Adversarial Search, Game Types, Problem Formalization, Game Tree, Zero Sum Game.
11,12	16-09-2022(FN)	6. Constraint Satisfaction Searching with Partial Observations, Constraint Satisfaction Problems, Constraint Propagation, Backtracking Search.
13,14	16-09-2022(AN)	Game Playing Game Playing, Optimal Decisions in Games, Min- Max Games, Alpha – Beta Pruning, Stochastic Games

15,16	22-09-2022(FN) 23-09-2022(FN)	8. Knowledge Representation Knowledge representation using Predicate logic, Introduction to predicate calculus, Resolution, Use of predicate calculus, Knowledge representation using other logic, Structured representation of knowledge.
17,18	23-09-2022(AN)	9. Knowledge Inference Inference Rules, Production based system, Frame based system, Backward chaining, Forward chaining, Rule value approach
19,20	29-09-2022(FN)	10. Planning Basic plan generation systems, Strips, Advanced plan generation systems, K strips, Strategic explanations, Why, Why not and how explanations.
21,22	30-09-2022(FN)	11. Uncertainty in AI, Bayesian Networks Fuzzy reasoning, Certainty factors, Bayesian Theory, Bayesian Network, Dempster – Shafer theory.
23,24	30-09-2022(FN)	12. Markov Decision Processes Markov Decision Processes, Dynamic programming, Linear programming, FMDP.
25,26	30-09-2022(AN) 06-10-2022(FN)	13. Expert Systems Expert systems – Architecture, Roles of expert systems, Knowledge Acquisition, Meta knowledge, Typical expert systems, Expert systems shells.
27,28	07-10-2022(FN)	14. Reinforcement Learning RL Framework, Tabular methods, Q-networks, Policy Optimization, Model based RL.
29,30	07-10-2022(AN)	15. Introduction to Deep Learning Introduction to Tensorflow, Deep Neural Network, Recurrent neural networks, Convolutional neural networks, Applications.

Course coordinator

HEAD OF THE DEPARTMENT

Department of Computer Scie & Engg., Shareth Institute of Higher Education & Research (Declared as Deamed to be University U/S 3 of UGC Act, 1956) Chennal-600 073, INDIA



CERTIFICATE COURSE ON IBM AI ENGINEERING Date of Introduction of the Course: 28.08.2022 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT			
1	U15CS009	ANNADI DHANUSH			
2	U15CS011	ANUMOLU YESWANTH			
3	u15CS012	A sivavinaya			
4	U15CS013	Aravindhan.KR			
5	U15CS180	RAVURI SRIKANTH			
6	U15CS182	RICHARD WUMBRAND J			
7	U15CS183	S. PUNITHA			
8	U15CS200	SITAROJ SRIKANTH			
9	U15CS201	SMITHA C.S			
10	U15CS202	SODISETTY SANDEEP			
11	U15CS203	SUBASH CHANDRAN.V			
12	U15CS204	SUBHAM RAY			
13	U14CS024	ATUL ANAND			
14	U14CS025	BACHU HARISH			
15	U14CS026	BALA MURUGAN .P			
16	U14CS029	BALAKRISHNAN.T			
17	U14CS055	GOTTIPATI KARTHIK			
18	U14CS702	S.KUMARAN			
19	U14CS514	SATHISH RAJ			
20	U14CS057	GOVIND KUMAR			
21	U14CS058	HARI TEJA.G			
22	U14CS059	HARISH.V			
23	U14CS062	JERIPOTHULA SURESH GOUD			
24	U14CS063	JOHN DALTON .H			
25	U14CS064	K. LAKSHMIKANTH REDDY			
26	U14CS067	KARTHICK.K			
27	U14CS074	KESHAVAPRIYA .S			

28	U14CS075	KEVIN ARNOLD THAKUR				
29	U14CS080	KOVURI BALASUBHAKAR REDDY				
30	U14CS082	KRISHNANDAN YADAV				
31	U14CS086	LOKESHWARAN.A.				
32	U14CS089	MADIYAL ANJAY				
33	U14CS092	MANDELA SAIKIRAN				
34	U14CS102	MOHAMMED AABID				
35	U14CS104	MOLUGURI PRADEEP CHANDRA				
36	U14CS109	N.UMA VENKATA MAHESHWARA SWAMY				
37	U14CS222	M.GANESH RAJAN				
38	U14CS503	ARJHUN KUMAR.K				
39	U14CS508	INDHU GOPALAKRISHNAN				
40	U14CS710	SHOPMINISTER				
41	U14CS113	NALLAJARLA CHAKRADHAR				
42	U14CS114	NANDALA SWETHA				
43	U14CS115	NANDIPALLI MOUNICA				

Course Coordinator

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Science & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of USO Act, 1956)
Chennal-500 073, INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON IBM AI ENGINEERING



Course co-ordinator

HEAD OF THE DEPARTMEMNT

HEAD OF DEPARTMENT
Department of Computer Science Engangement of Computer Science Engangement Institute of Higher Education & Research (Department of Bully U.S.3 of UGC Act, 1958) (Department of Computer Science Institute Computer Institute Computer Science Instit



CERTIFICATE OF PARTICIPATION

This certificate is presented to

RAKESH KUMAR

For actively participating in the value added course "IBM AI Engineering" Conducted by School of Computing, BIHER from 28.08.2022 to 07.10.2022.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Academic Year			2022							
Term			F	-ven						
Course	Number									
Course	Title		IBM AI Engineering							
Numbe	er of Credits									
Type o	f Course	Regular		Elec	tive	Ad	d-on	V		
I.	Information on the Respondent: (Tick ($$) Appropriately)									
1.		e of classes attended		14	2.60	60-80	1	80-		
	0-20	20-40		40	0-60	60-80	V	100		
								100		
2.	Number	of hours per week sp	ent on the	course (Other than	lecture hours)				
2.	0-2	2-4			-6	6-8	V	8-10		
	10-2									
3.	Preparati	on for the course by	the studer	nt:						
	(i)	Have done part of t	his course e	earlier				ye		
	(ii)	Has adequate prior	exposure to	osure to the prerequisites						
	(iii)	Had to pickup relev	ant additio	nal topic	s through co	oncurrent study		Ye)	
	(iv)	Have no exposure t	o the backg	ground m	naterial			yo)	
4.	The expe	ctations for taking t								
	(a)	Enhance by skill ba	ise in the ar	rea of spo	ecializations			Yes		
	(b)	Get exposed to a re	levant subject							
	(c)	Curiosity		Yes						
	(d)	Better Employmen	t Opportuni	Opportunity Yes						
	(e)	Complete Course r	equirement	ements Yes					el	
	(f)	To Improve CGPA						y,	3	
Abou	t the Instruc	tor: Information on	the Respon	ndent: (Γick (√) Ap					
				A	В	C		D	E	
1.	Pace of th	ne Teaching/lecture				V				
2.	Commen	of the Subject					1			
3.	Clarity of	Clarity of expression								
4.	Level of	Level of preparation								
5.	Level of interaction					V				
6.	Accessibility outside the class					V				
7.	Others (p	lease specify								
		1 1	, ,	Ta		D:		E:		
A: E	xcellent	B: Very G	ood	C:		Satisfact	ory C	\Po		
				Good	1	Satisfact	or y	1/2/	0.	

HEAD OF THE DEPARTMENT

Department oputer Scie 4 Engg.,
Bharath Ins. oputer Education & Research
(Declared as Deemon to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA

COURSE FEEDBACK FORM

Acade	mic Year		2022								
Term			E	ven							
Cours	e Number										
Cours	e Title		IBM	IA	ENGI	NEERING					
Numb	er of Credits										
Type	of Course	Regular		Electi	ve	Add-c	on	V			
I.	Informa	tion on the Respon	dent: (Tick (√) Approp	riately)						
1.	Percents	age of classes attend	led								
1.	0-20	20-40	- I	40-	60	60-80		80-			
	0-20	20 10					V	100			
2.	Number	of hours per week	spent on the	course (C	ther than lec	ture hours)					
	0-2	2-4		4-6		6-8	V	8-10			
3.		tion for the course									
	(i)	Have done part o						Yes			
	(ii)		Has adequate prior exposure to the prerequisites								
	(iii)	Had to pickup relevant additional topics through concurrent study									
	(iv)	Have no exposur	e to the back	ground ma	terial			Ye	3		
			Alex sources	by the stud	lant ana						
4.		The expectations for taking the course by the student are:									
	(a)	Enhance by skill base in the area of specializations Get exposed to a relevant subject Ver									
	(b)		relevant subj	ject		Yes					
	(c)	Curiosity	10-1	yes							
	(d)	Better Employme		requirements Yes							
	(e)										
	(f)	To Improve CGF		1				У	es		
Abou	it the Instru	ctor: Information o	n the Respo		CK (√) Appro	C C	D		E		
1	D	the Teaching/lecture		A	В	V	D		L		
1.											
2.		nt of the Subject					12				
4.		Clarity of expression					1	/			
5.	Level of preparation Level of interaction						V	/			
6.	Accessibility outside the class						V				
7.		Others (please specify									
/.	Others (picase specify							HERCELLING.		
A: E	xcellent	B: Very	Good	C:		D:	T .	E:			
				Good		Satisfactory	4	Poor			

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie See Engg.,
Bharath instable of Higher Education & Research
(Declared as Deemed to be University U/S 3 of Unio Act, 1956)
(Chennal-600 073. INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH



08.04.2022

Date:

RATH INSTITUTE OF SCIENCE AND TECHNOLOGY No. 173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

From

Dr. K.P.Kaliyamurthie,

Professor & Head, Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Laptop Assembling and Disassembling" -Reg

With reference to above subject, I would like to bring to your kind notice that, our organize value added course on "Laptop Assembling and department interested to Disassembling" in our campus premises on 15/04/2022.

45 students would be participating in this course. We request you kindly to give permission to organize this event.

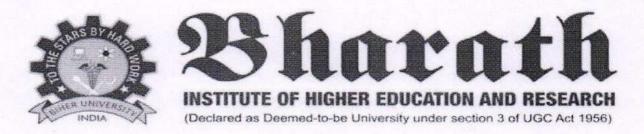
Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

DEAN ENGINEERING

Department of Computer Scie ... & Engg., Bharath Institute of Higher Education & Research (Sectored as Desmed to be University U/S 3 of UGC Act, 1956) Chennai-600 073, INDIA



CIRCULAR

11.04.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on Laptop Assembling And Disassembling for the benefit of II, III and IV year students. This course is scheduled from 15.04.2022 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.KP.Kaliyamurthie	Professor
2	Mrs.C.Anuradha	Assistant Professor

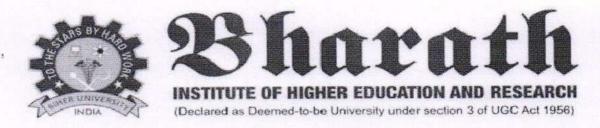
Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Sci. Engg..
Bharath Institute of Higher Education, & Research
(Declared as Deemed to be University Wa 3 of the Act, 1958)
Chennal-600 073, INSTA



CERTIFICATE COURSE ON LAPTOP ASSEMBLING AND DISASSEMBLING

Date of Introduction of the Course: 15-04-2022

COURSE SYLLABUS

- 1. Computer Basics Introduction and History
 - Introduction & Definition of Computer, Block Diagram of computer, Classification of computer, Characteristics of Computers, Types of Languages and language translators, History and Generation of computers, Memory, Computer Software, Types of Softwares.
 - Components and its parts Identifying the Important Hardware Components of PC.i.e., CPU, Motherboard, RAM, HDD, ODD,SMPS, K/B, Mouse, Monitor, Functions of above said components.
 - 3. Tools and Equipment Tools and equipment like brush, screw driver, air blower, voltage tester and pliers required for servicing computer.
 - **4. Fundamentals of Electricity** About AC and DC, How AC is converted into DC in a Computer.
 - SMPS About SMPS, Types of SMPS, Power stored in UPS, Components and Circuits inside the SMPS Unit.
 - 6. UPS (Uninterrupted Power Supply) Types of UPS (Offline/Line Interactive & Online), Working Principle of each type of UPS. Connecting, Maintenance and Troubleshooting.
 - Assembling and dissembling PCs Assembling and Disassembling a PC,
 Precautions to be taken while assembling the PC.
 - 8. Introduction to BIOS / CMOS Setup, POST (Power on Self-Test) Introduction to BIOS/CMOS Setup, POST (Power On Self-Test), Demonstration of BIOS/CMOS Configuration (Date, Time, Enable/Disable Devices), Dual BIOS Feature, BIOS/CMOS Setup, Booting Sequence/Boot Order.
 - 9. Introduction to Operating System Definition and types of Operating Systems MSDOS, Windows 9x/XP/Vista/7/8, Linux, MAC OS, Android, Process of Booting the Operating System, Win XP/Win 7. Activation and Automatic Updating procedures.

- 10. Partitioning Partitioning of Hard Drive Primary, Extended, Logical partitions using Partition Tools.
- 11. Installation of Drivers and Software Installation of Operating System Win XP/Win 7, Activation and Automatic Updating procedures, Device Driver Installation, Task Manager, Windows Registry, Control Panel, MS Config Utility, Windows Startup Applications Management, Installation of Application Softwares, Tools, Utilities, Uninstalling Applications / Softwares.
- 12. Mother Board Definition, Architecture, Compatibility with CPU's, Chipsets and Brands, what is Chipset, what is FSB, what is Bus, CPU Sockets, Interface Ports used to connect different Peripherals, I/O Ports (PS/2, Serial, Parallel, USB, VGA, HDMI, Audio, Ethernet, etc.) Identifying Expansion Slots (PCI, AGP etc.), Power Form Factor.
- 13. CPU Definition, Architecture, Speed, Types of CPU (XT and AT technologies) 32/64 Bit, Types processor technologies like Clock speed, Bus speed, Cache memory, Threading technologies, core technologies, IRQ & DMA Technologies Brands (Intel/AMD), CPU Series x86, Pentium Series (4004,8008, 8085, 8086, 8088,80286,80386,80486,P1,P2,P3,P4),
- 14. RAM / ROM Introduction to RAM, ROM, Cache Memory, Buffer Memory, Virtual Memory, Timeline (EDO, NON-EDO, SD, RD, DDR, DDR2, DDR3), Hybrid MemoryComparing and Installing RAM, Memory Module Form Factor.
- 15. Hard Disk Drive Introduction to HDD, Types of HDD, Functioning of HDD, Interface Types (IDE or PATA, SATA, SCSI, SSD, PATA), Data storage technique (Tracks, Sectors, Cylinders, Cluster MBR, FAT Area, DIR Area, Zero Track,).

COURSE OBJECTIVES

In this course we plan to give students an overview of basic concepts and terminology related to Laptop Assembling AndDisassembling and an in-depth study into its enabling technologies to design and implement hardware. The main **objective** of this course is to introduce PC maintenance, upgrading, ... a system to help them determine the cause of a problem and how to **repair** it. ... Optical storage technologies to date; **Laptops** and their Technologies. Ourstudents will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

Students will learn

- 1. 1. Installation of all the Softwares with cope with different operating system.
- 2. Develop computer system configuration
- 3. Conduct diagnostics testing and inspection
- 4. Have Knowledge of hardware components and latest development in the field

5. Conduct repair and maintenance of PC's Carry out installation of operating system and applications and have knowledge of Networking and system connectivity.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sci.
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University 918 3 of 990 Act, 1956)
(Chennal-600 073, INDIA



CERTIFICATE COURSE ON LAPTOP ASSEMBLING AND DISASSEMBLING

Date of Introduction of the Course: 15-04-2022 The timings are 1:30 PM to 4:30 PM from Friday (AN) and Saturday (FN&AN).

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	15-04-2022(AN)	1.Computer Basics – Introduction and History Introduction & Definition of Computer, Block Diagram of computer, Classification of computer, Characteristics of Computers, Types of Languages and language translators, History and Generation of computers, Memory, Computer Software, Types of Softwares.
3,4	21-04-2022(AN)	2. Components and its parts - Identifying the Important Hardware Components of PC. i.e., CPU, Motherboard, RAM, HDD, ODD, SMPS, K/B, Mouse, Monitor, Functions of above said components.
5,6	22-04-2022(FN)	3 Tools and Equipment - Tools and equipment like brush, screw driver, air blower, voltage tester and pliers required for servicing computer
7,8	22-04-2022(AN)	4.Fundamentals of Electricity - About AC and DC, How AC is converted into DC in a Computer.
9,10	28-04-2022(AN)	5.SMPS- About SMPS, Types of SMPS, Power stored in UPS, Components and Circuits inside the SMPS Unit.
11,12	29-04-2022(FN)	6. UPS (Uninterrupted Power Supply) - Types of UPS (Offline/Line Interactive & Online), Working Principle of each type of UPS. Connecting, Maintenance and Troubleshooting.
13,14	29-04-2022(AN)	7 Assembling and dissembling PCs - Assembling and Disassembling a PC, Precautions to be taken while assembling the PC
15,16	05-05-2022(AN)	8 Introduction to BIOS / CMOS Setup, POST (Power on Self-Test) - Introduction to BIOS/CMOS Setup, POST (Power On Self-Test), Demonstration of BIOS/CMOS Configuration (Date, Time, Enable/Disable Devices), Dual BIOS Feature, BIOS/CMOS Setup, Booting Sequence/Boot Order.

17,18	06-05-2022(FN)	9.Introduction to Operating System - Definition and types of Operating Systems - MSDOS, Windows 9x/XP/Vista/7/8, Linux, MAC OS, Android, Process of Booting the Operating System, Win XP/Win 7. Activation and Automatic Updating procedures.
19,20	06-05-2022(AN)	10.Partitioning- Partitioning of Hard Drive - Primary, Extended, Logical partitions using Partition Tools.
21,22	12-05-2022(AN)	11.Installation of Drivers and Software - Installation of Operating System - Win XP/Win 7, Activation and Automatic Updating procedures, Device Driver Installation, Task Manager, Windows Registry, Control Panel, MS Config Utility, Windows Startup Applications Management, Installation of Application Softwares, Tools, Utilities, Uninstalling Applications / Softwares.
23,24	13-05-2022(FN) 13-05-2022(AN)	12.Mother Board - Definition, Architecture, Compatibility with CPU's, Chipsets and Brands, what is Chipset, what is FSB, what is Bus, CPU Sockets, Interface Ports used to connect different Peripherals, I/O Ports (PS/2, Serial, Parallel, USB, VGA, HDMI, Audio, Ethernet, etc.) Identifying Expansion Slots (PCI, AGP etc.), Power Form Factor.
25,26	19-05-2022(AN) 20-05-2022(FN)	13.CPU - Definition, Architecture, Speed, Types of CPU (XT and AT technologies) 32/64 Bit, Types processor technologies like Clock speed, Bus speed, Cache memory, Threading technologies, core technologies, IRQ & DMA Technologies Brands (Intel/AMD), CPU Series - x86, Pentium Series (4004,8008, 8085, 8086, 8088,80286,80386,80486, P1, P2, P3, P4),
27,28	20-05-2022(AN) 26-05-2022(AN)	14.RAM / ROM - Introduction to RAM, ROM, Cache Memory, Buffer Memory, Virtual Memory, Timeline (EDO, NON-EDO, SD, RD, DDR, DDR2, DDR3), Hybrid Memory Comparing and Installing RAM, Memory Module Form Factor
29,30	27-05-2022(FN)	15.Hard Disk Drive - Introduction to HDD, Types of HDD, Functioning of HDD, Interface Types (IDE or PATA, SATA, SCSI, SSD, PATA), Data storage technique (Tracks, Sectors, Cylinders, Cluster MBR, FAT Area, DIR Area, Zero Track,).

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scis & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deamed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON LAPTOP ASSEMBLING AND DISASSEMBLING Date of Introduction of the Course: 15-04-2022 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS004	ABDUL RAZVI .M.K
2	U14CS015	ANKITA
3	U14CS023	ASIF NAZIR WANI
4	U14CS048	DIVYA RUPINI.B
5	U14CS085	LAKSHMI PRIYA.A
6	U14CS106	MUGANTH.R.
7	U14CS229	INDHU GOPALAKRISHNAN
8	U14CS705	SHABEEK ABUTHAHIR.S
9	U14CS114	NANDALA SWETHA
10	U14CS129	PIYALI CHAKRABORTHY.M
11	U14CS137	RAHUL HAWAIBAM
12	U14CS151	RAVIPATI SUBBARAYUDU
13	U14CS175	SHUBHAM
14	U14CS188	SUSINDHAR .P
15	U14CS202	VEMULA ANWAR
16	U15CS093	KM AYUSHI JAISWAL
17	U15CS094	KOLUKULURI ADITHYA RAGHAV VARMA
18	U15CS095	KONATALA PUSHPA
19	U15CS096	KONDURU PREM KUMAR
20	U15CS097	KONGARA KIRAN KUMAR
21	U15CS098	KOPPA SEKHAR SAI VISWAM
22	U15CS099	KOTHAPALLI ARYAN VARMA
23	U15CS100	KOTIPALLI SRI SAI SURYA PRASANTH
24	U15CS154	PERAM ANTONY

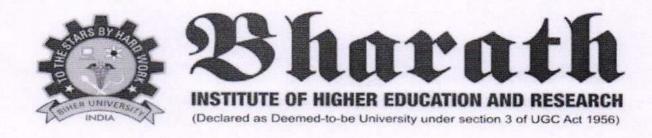
HEAD OF DEPARTMENT
Department of Computer Scie. R. Engg.,
Bhorath Institute of Higher Educations, Suseurch
(Declared as Engree to be unweight 0.5.3 after rect. 1856)
Chemnal-600 073, INDIA

25	U15CS155	PERAM VENKATA KRISHNA REDDY
26	U15CS156	PERURI V S V KRISHNA MOHAN
27	U15CS157	POORVISHA M
28	U15CS159	PRADEEP YADAV
29	U15CS160	PRASAD ABHISHEK KUMAR
30	U15CS161	PRASHANT PATHAK
31	U15CS162	PRATHI VENKAT RANJITH KUMAR
32	U15CS164	PUJALA NARENDRA BABU
33	U15CS165	PULAGAM SAI PRATHAP REDDY
34	U15CS166	PULIMUNI HIMAJA
35	U15CS167	PULUKURI SASIDHAR
36	U15CS168	PUPPALLA SANDEEP KUMAR
37	U15CS169	PUTLURI ANURADHA
38	U15CS214	VEERELLA RUPAS CHOWDARY
39	U15CS215	VEESA SUDDEP
40	U15CS216	VEMSETTY ARUN SAHADEV
41	U15CS217	VERISETTY SUBBARAO
42	U15CS218	VETCHA VENKATA KRISHNA TEJA
43	U15CS219	VISNESH.B
44	U15CS220	VIGNESH KUMAR R.J
45	U15CS221	VIGNESHWARAN.M

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sci. & Engg.,
Bhoroth Institute of Higher Educatio, & Passerch
Declared



CERTIFICATE COURSE ON LAPTOP ASSEMBLING AND DISASSEMBLING



COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Science Engg.,
Bharath Institute of Higher Education, & Research



CERTIFICATE OF PARTICIPATION

This certificate is presented to

BHARATHI.V

For actively participating in the value added course "Laptop Assembling And Disassembling" Conducted by School of Computing, BIHER from 15.04 2022 to 27.05.2022.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

Acade	Academic Year 2 o 2 2									
Term				Even Sem						
Cours	e Number									
Cours	e Title		Lapto	P Asses	nliling on	1 Disasse	meles.			
Numb	er of Credits		*		,					
Type	of Course	Regular		Elective		Add-on				
I.	Information on the Respondent: (Tick (√) Appropriately)									
	Percentage of classes attended									
1.						1 10	30-			
	0-20	20-40		40-60	60-80		00			
							00			
2.	Number	of hours per week sp	ent on the cou	rse (Other th	an lecture hours) — — — — — — — — — — — — — — — — — — —				
	0-2	2-4		4-6	76-8		8-10			
3.	Prepara	tion for the course by	the student:							
	(i)	Have done part of t	his course earli	er	ye	1				
	(ii)	Has adequate prior exposure to the prerequisites								
	(iii)	Had to pickup relevant additional topics through concurrent study								
	(iv)	Have no exposure t	o the backgrou	nd material	y y					
					0					
4.	The exp	The expectations for taking the course by the student are:								
	(a)	Enhance by skill base in the area of specializations Yes								
	(b)	Get exposed to a relevant subject								
	(c)	Curiosity		· Yes						
y 15%	(d)	Better Employment	Opportunity ys							
	(e)	Complete Course re	equirements		ÿ	us				
	(f)	To Improve CGPA								
Abou	t the Instru	ctor: Information on	the Responder	nt: (Tick (√) A						
			A		В	C D	E			
1.		the Teaching/lecture				9				
2.		nt of the Subject				0				
3.		of expression								
4.		Level of preparation			C					
5.	Level of interaction									
6.	- 1	oility outside the class				1				
7.	Others (please specify								
			nd 1	.	D:		E:			
A: E	xcellent	B: Very Ge		Good C	1	factory \	Poor			
	المراساتين			300u	Satis	lactory	1 001			

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic Scienge.
Bharath Institute of Higher Education. & Research
(Declared as Doomed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA

COURSE FEEDBACK FORM

Acade	mic Year		2022	2022							
Term			Even sem								
Course	Number		00		,						
Course	Title		Laptop assembling and Disassembler								
Numbe	er of Credits										
Type o	of Course	Regular	Elec	tive	Add-on						
I.	Informa	tion on the Respondent:	(Tick (√) Appro	priately)							
	12										
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	0-20	20-40	40	-60	60-80	80-					
						100					
2.	Number	of hours per week spen	t on the course (Other than led	cture hours)						
	0-2	2-4	4-		6-8	8-10					
3.	Prepara	tion for the course by th	e student:		,						
	(i)	Have done part of this course earlier Yes									
	(ii)	Has adequate prior exposure to the prerequisites									
	(iii)	Had to pickup relevan	Had to pickup relevant additional topics through concurrent study								
	(iv)	Have no exposure to the background material									
	THE VI				- Grand						
4.	The exp	The expectations for taking the course by the student are:									
	(a)	Enhance by skill base in the area of specializations									
	(b)	Get exposed to a relev	ant subject		yes						
	(c)	Curiosity			ises						
	(d)	Better Employment O	Opportunity								
	(e)	Complete Course requ	quirements								
	(f)	To Improve CGPA			0						
About	the Instru	ctor: Information on the	Respondent: (T	ick (√) Appro	priately)						
			A	В	C	D	E				
1.	Pace of	the Teaching/lecture			7						
2.	Comme	nt of the Subject			<u></u>						
3.	Clarity	of expression			0						
4.	Level of	preparation									
5.	Level of	interaction									
6.	Accessi	oility outside the class									
7.	Others (please specify									
		T - T_	1 1			T					
A: Ex	cellent	B: Very Good	C: Good		D: Satisfactory	Pe	oor				

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scit. 4 Engg.,
Blioralh Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH (Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selaiyur, Chennai, T.N. - 600 073.

Requisition Letter

From

Date:

08.04.2022

Dr. K.P.Kaliyamurthie, Professor & Head,

Department of CSE,

Bharath Institute of Higher Education and Research,

Chennai

To

The Dean Engineering,

Bharath Institute of Higher Education and Research,

Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Computer Vision Basics" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Computer Vision Basics" in our campus premises on 15/04/2022.

50 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HOD/CSE

DEAN ENGINEERING

HEAD OF DEPARTMENT
Department of Computer Scie A Engg.,
Bhorath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA



23 harath Institute of higher education and research

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

11.04.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on "Computer Vision Basics" for the benefit of II, III and IV year students. This course is scheduled from 15.04.2022 for 30 hours which includes theory and practical. The timings are 01:30 PM to 04:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.KP.Kaliyamurthie	Professor
2	S.Pothumani	Assistant Professor

Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Scie. & Engg.,
Bhorath Institute of Higher Education & Research
(Decisted as Domes to be University U.S.3 of UCC Act, 1956
Chempals 500, 073, INDIA



CERTIFICATE COURSE ON COMPUTER VISION BASICS

Date of Introduction of the Course: 15.04.2022

COURSE SYLLABUS

1.Introduction to computer vision

Introduction to Digital Image Processing and Machine Learning, Visualization Techniques, Image Processing and Analysis.

2.Image Formation and Filtering

Cameras and Optics, Image Enhancement and Enlargement, Pixel Representation.

3.Light and Color and Image Filtering

Thinking in Frequency, Image Processing Algorithms, Image Filtering Techniques.

4. Feature Detection and Matching

Interest points and corners, Local image features, Model fitting, Hough Transform, RANSAC and transformations.

5. Multiple Views and Motion

Stereo intro and Camera Calibration, Epipolar Geometry and Structure from Motion, Stereo Correspondence and Optical Flow.

6.Recognition

Machine learning crash course and recognition overview, Recognition and Bag of Words.

7.Large-scale retrieval

Spatial Verification, TF-IDF, Query Expansion, feature encoding, Large-scale category recognition and advanced feature encoding,

8. Detection with sliding windows

Viola Jones, DalalTriggs and Pascal VOC

9.Big Data

Big Data Tools-hadoop, Informatica, Crowdsourcing and Human Computation.

10. Deep Learning

Neural networks Basics and Convolutional Networks, Object Detectors Emerge in Deep Scene CNNs and Deeper Deep Architectures, Structured Output from Deep Network.

11. Image Acquisition

Image Sensing, X-Ray Image, Image acquisition using Radiography application.

12.Image Representation and Analysis

Colour Representation, Colour and Geometric Transformation, Edge Detection,

13. Features and ObjectRecognition

Image Colorization, Objectives of Object Recognition Task, Information Extraction from Image, Recognition of color and object in Image.

14.Image Segmentation

K-means Clustering, Edge and Contour Detection, Background Subtraction for Video.

15.Image Captioning

CNN, RNN, LSTM Implementation for Caption Generation.

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Image Procession and Computer Vision, and an in-depth study into its enabling technologies and main building blocks. Students will gain hands-on experience solving relevant problems through projects that will utilize existing public cloud tools. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

Students will learn

- To be familiar with both the theoretical and practical aspects of computing with images;
- 2) To describe the foundation of image formation, measurement, and analysis;
- 3) To implement common methods for robust image matching and alignment;
- 4) To understand the geometric relationships between 2D images and the 3D world;
- 5) To be exposure to object and scene recognition and categorization from images;
- 6) To grasp the principles of state-of-the-art deep neural networks; and
- 7) To develop the practical skills necessary to build computer vision applications.

ň,

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Sciu & Engg.,
Bharuth Institute of Higher Education & Research
(Declared as Declared to be University Urs 3 of UGC Act, 1956)
Chennal-600 673. INDIA



CERTIFICATE COURSE ON COMPUTER VISION BASICS

Date of Introduction of the Course:15.04.2022

The timings are 01:30 AM to 04:30 PM Friday (AN) and Saturday (FN&AN).

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	15.04.2022 (AN)	1. BASICS OF JAVA History and Features of Java, C++ vs Java, Hello Java Program, Internal How to set the path?, JDK, JRE, and JVM (Java Virtual Machine), JVM Memory Management, Internal details of JVM, Unicode System, Operators, Keywords, and Control Statements like if-else, For loop, while loop, etc.
3,4	21-04-2022(AN)	2. CLASS, OBJECT, AND TYPES OF CLASSES Classes, Objects, and Features, Object declaration and initialization, Life cycle of an object, Anonymous object in Java, Classes and Objects in java with Realtime examples
5,6	22-04-2022(FN)	3.PACKAGES IN JAVA Package naming conventions, Sub packages, Types of packages such as user-defined packages, built-in packages, Importing packages in Java
7,8	22-04-2022 (AN)	4. DATA TYPES IN JAVA Data types in Java - Primitive data types, Non-primitive data types, Memory allocation of primitive and non-primitive data types, etc.
9,10	28-04-2022(AN)	5.VARIABLES, CONSTANTS, AND LITERALS Variable declaration & initialization - Naming convention, Types of variables such as local variables, instance variables, and static variables, Scope and memory allocation of variables.
11,12	29-04-2022(FN)	6. METHODS IN JAVA Methods in Java - Use of method in Java, Method declaration, method signature, Types of methods in Java: predefined method, user-defined methods: instance method, static method, Calling of method, Java main method, Return type in Java.
13,14	29-04-2022(AN) 05-05-2022(AN)	7. CONSTRUCTOR IN JAVA What is Constructor in Java? ,Types of constructors: Default and Parameterized constructors, Java constructor overloading, Constructor chaining in java, Copy constructor in Java

15,16	06-05-2022AN) 12-05-2022(FN)	8. INNER CLASSES AND WRAPPER CLASSES Introduction, Member Inner Class, Static Inner Class, Local Inner Class, Anonymous Inner Class, Introduction, Byte, Short, Integer, Long, Float, Double, Character, Boolean classes
17,18	13-05-2022(FN)	9. COLLECTION FRAME WORK Introduction, Util Package interfaces, List, Set, Map, List Interface 7 Its Classes, Set Interface & Its Classes, Map Interface & Is Classes
19,20	13-05-2022(AN)	10. AWT Introduction, Components, Event-Delegation-Model, Listeners, Layouts, Individual Components Lable, Button, Check Box, Radio Button, Choice, List, Menu, Text Field, Text Area
21,22	19-05-2022(AN)	11. SWING (JFC) Understanding Session Hijacking, Phases involved in Session Hijacking, Types of Session Hijacking, Session Hijacking Tools - Introduction Diff B/W AWT and SWING, Hierarchy, Individual Swings components J Label, JButton, JTextField, JTextAres
23,24	20-05-2022(FN)	12. WEB SERVER AND APPLICATION SERVER Tomcat-Introduction, Overview, installation, Configuring Tomcat, Jboss server-Introduction, Overview, Installation and Configuration, Comparison
25,26	20-05-2022(AN)	13. SQL and JDBC Basics of SQL queries, SQL Joins, JDBC Introduction, JDBC Architecture, Types of Drivers, Statement, Result Set, Read Only Result Set, Updatable Result Set, Forward Only Result Set, Scrollable Result Set, Prepared Statement
27,28	26-05-2022(AN)	14. SERVLETS Introduction, Web application Architecture, HTTP Protocol & HTTP Methods, Web Server & Web Container, Servlet Interface, HTTPServlet, GenericServlet, Servlet Life Cycle, Servlet Config, Servlet Context, Servlet Communication
29,30	27-05-2022(FN)	15. JSP Introduction, JSP Life Cycle, JSP Implicit Objects & Scopes, JSP Directives

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Chennal-600 073. INDIA



CERTIFICATE COURSE ON COMPUTER VISION BASICS Date of Introduction of the Course: 15.04.2022 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS148	RAMYA.B
2	U14CS177	K.SIVA SUBRAMANIAN
3	U14CS222	M.GANESH RAJAN
4	U14CS225	ARJHUN KUMAR.K
5	U14CS229	INDHU GOPALAKRISHNAN
6	U14CS703	VASANTHAN.N
7	U14CS705	SHABEEK ABUTHAHIR.S
8	U14CS710	SHOPMINISTER
9	U14CS047	DEVULAPALLY NAGARAJU
10	U14CS052	GARLAPATI HEMA SAI KRISHNA
11	U14CS053	GODJSELA SRINATH
12	U14CS054	GONTLA KARTHIK
13	U14CS175	SHUBHAM
14	U14CS176	SIREESHA.M
15	U14CS178	SK MD TAUQEER
16	U14CS179	SNEHA ROY
17	U14CS180	SABUJ BARMAN
18	U14CS181	SOURABH PRIYADARSHI
19	U14CS108	MURALI .S
20	U14CS156	SAGI AKSHAY KUMAR
21	U14CS157	SAJJA. SURENDRA PRASAD
22	U14CS158	SAMPA PARH
23	U14CS159	SANASAM VEDRAJ SINGH
24	U14CS160	SANDEEP INGUVA
25	U14CS161	SANJAY KUMAR YADAV
26	U14CS162	SANTHOSH KUMAR.N
27	U14CS163	SASHAANK.S

28	U14CS164	SAURAV KUMAR
29	U14CS165	SAURAV SINGH
30	U14CS224	R.SINDHU
31	U14CS234	DANDU MOHAN RAJENDRA VARMA
32	U14CS706	RAFTEN WANCHU
33	U14CS166	SHAFAN HASIM.N
34	U14CS167	SHAIK AATIKA
35	U14CS156	SAGI AKSHAY KUMAR
36	U14CS157	SAJJA. SURENDRA PRASAD
37	U15CS113	MAMUNDURU BHARATH KUMAR
38	U15CS114	MANCHALA ROHITH
39	U15CS115	MANCHIKANTI RAJITHA
40	U15CS117	MANOJ KUMAR R
41	U15CS118	MANUGUNTA BHARGAVI
42	U15CS119	MARRIBOYINA GOVARDHAN YADAV
43	U15CS120	MARRIPUDI KRISHNA CHAITANYA
44	U15CS121	MD MINHAZ RAZA HASHMI
45	U15CS247	CHIMALAMUDI VINEEL
46	U15CS248	SOMESH.C
47	U15CS249	SUBHAN KUMAR SHAH
48	U15CS250	MUTHULAKSHMI.M
49	U15CS253	JOEL PRAKASH.J
50	U15CS254	JAGATH RAJAH.R

HEAD OF DEPARTMENT
Department of Computer Scit. & Engg.,
Bharath Institute of Higher Education & Rasearch
(Deciared as Deemed to be University U/S 3 of UUC Act, 1966)
(Chempai-600 973, INDIA



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON COMPUTER VISION BASICS



COURSE CO-ORDINATOR

HEAD OF THE DEPARTMEMNT

HEAD OF DEPARTMENT
Department of Computer Scie 4 Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deamed to be University U/S 3 of USC A-1, 1959)
Chennal-600 073, INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

R.MANOJ KUMAR

For actively participating in the value added course "Certificate Course on Computer Vision Basics"

Conducted by School of Computing, BIHER from 15.04.2022 to 27.05.2022.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIPECTOR

COURSE FEEDBACK FORM

Academic Year			2	2022								
Term					Even sem							
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											V	
I.	Inform	nation or	the Respon	dent: (Tick	x (√) Appropr	iately)						
V 18												
1.		ntage of	classes atten			1 10 10		1.00	0.0			
	0-20			20-40		40-60		60-	80			
2.	Numb	er of hou	ırs ner week	spent on th	ne course (Ot	her than lect	ure hours)					
2.	0-2	er or not	irs per week	2-4	re course (Ot	4-6	are nours)		6-8		1705	
3.	Preparation for the course by the student:											
	(i)	Have o	done part of t	his course e	arlier			4				
	(ii)	Has ac	lequate prior	exposure to	the prerequisi	ites		4				
	(iii)	Had to	pickup relev	ant addition	nal topics thro	ugh concurren	it study	4				
	(iv) Have no exposure to the			o the backgr	ne background material							
4.	The e	xpectatio	ns for taking	the course	e by the stude	nt are:						
	(a)	100			ea of specializa			VI.				
	(b)		posed to a re					1				
	(c)	Curios	sity					1				
	(d)	Better	Employment	Opportunit	у			J	Y			
	(e)	Comp	lete Course re	equirements				7	- 10	36		
	(f)	To Im	prove CGPA					4				
Abou	it the In	structor	: Informatio	n on the Re	espondent: (T	ick (√) Appr	opriately)	/				
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7.	Others (please	specify		
6.	Accessibility o	utside the class		
5.	Level of interac	ction	/	
4.	Level of prepar	ration		

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DEPARTMENT
HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Doomed to be University US 3 of USC Act, 1998)
Chennai-600 073. INDIA

COURSE FEEDBACK FORM

Aca	Academic Year				2022						
Term				Even dem							
Course Number								BASS		THE BUT	
Cou	rse Title				compu	tou	Visi	nn			
Nun	nber of C	redits			- Collina		V101	011			
Type of Course Regular					Electiv	e				Add-on	
I.	Infor	mation o	n the Respo	ndent: (Ticl	k (√) Appropr	riately)					
1.	The Committee	ntage of	classes atter								
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2.	Numt	er of ho	urs per weel	k spent on t	he course (Ot	her than	lecture	hours)			
	0-2			2-4		4-6			- 16	5-8	
3.	Prepa	reparation for the course by the student:									
	(i)	Have	done part of	this course e	earlier	hilly			4		
	(ii)				the prerequisi		12-15		4	-511	
	(iii)	Had to	pickup rele	vant addition	dditional topics through concurrent study						
	(iv)	Have	no exposure	to the backg	round material				4		
4.	The ex	xpectatio	ons for takin	g the cours	e by the stude	nt are:					
	(a) Enhance by skill base in the area of specializations										
	(b)	Get ex	sposed to a re	elevant subje	ect		100			7/873	
	(c)	Curios	sity					7444	7	71111	
	(d)	Better Employment Opportunity									
	(e)	Comp	lete Course r	equirements			7 417		7		
	(f) To Improve CGPA										
Abo	ut the In	structor	: Informatio	n on the Re	espondent: (T	ick (√) Ap	propri	ately)			
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A: F	Excellent	B: Very Good	C: Good	D: Satisfactory		
7.	Others (please s	specify				
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HEAD OF THE

DEPARTMENT
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Department of Computer Sci. A Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deamed to be University U.S.3 of UGC Act, 1956)
Chennal-600 073, INDIA



MATITUTE OF HIGHER EDUCATION AND RESEARCH



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selaiyur, Chennai, T.N. - 600 073.

Requisition Letter

Date:08.05.2022

From
Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "Introduction to Tensor flow for Artificial Intelligence, Machine Learning & Deep Learning" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Introduction to Tensor flow for Artificial Intelligence, Machine Learning & Deep Learning" in our campus premises on 12.05.2022, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing 1:30 PM to 4:30 PM(AN)

Submitted to Principal for approval to organize this value-added course.

HOD

DEAN ENGINEERING

HEAD OF DEPARTMENT

Department of Computer Scic & Engg.,

Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennal-600 073. INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

08-05-2022

The School of computing, BharathInstitute of Higher Education and Research is planned to conduct a certification value added course on "Introduction to Tensor flow for Artificial Intelligence, Machine Learning, and Deep Learning " for the benefit of II, Ill and IV year students. This course is scheduled from 12-05-2022 for 30 hours which includes theory and practical. The timings are I :30PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course

SNo	Name of the Faculty	Designation
1	Mr.K.Sivaraman	Assistant Professor
2	Mr,B.Sundarrajan	Assistant Professor

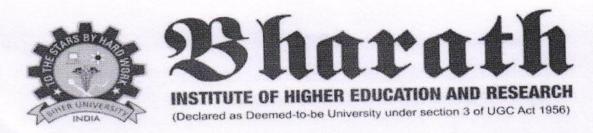
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HEAD OF DEPARTMENT
Department of Computer Scie Engg.,

ileau or Department



CERTIFICATE COURSE ON INTRODUCTION TO TENSOR FLOW FOR ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND DEEP LEARNING

Date of Introduction of the Course: 12.05.2022

COURSE SYLLABUS

1.A New Programming Paradigm

Basics to Mastery of TensorFlow. We're excited you're here! In week 1 you'll get a soft introduction to what Machine Learning and Deep Learning are, and how they offer you a new programming paradigm, giving you a new set of tools to open previously unexplored scenarios. All you need to know is some very basic programming skills, and you'll pick the rest up as you go along. You'll be working with code that works well across both TensorFlow 1.x and the TensorFlow 2.0 alpha. To get started, check out the first video, a conversation between Andrew and Laurence that sets the theme for what you'll study.

2.Introduction to Computer Vision

Machine Learning and Deep Learning is a new programming paradigm. This week you're going to take that to the next level by beginning to solve problems of computer vision with just a few lines of code! Check out this conversation between Laurence and Andrew where they discuss it and introduce you to Computer Vision.

3. Enhancing Vision with Convolutional Neural Networks

Basic Neural Network for Computer Vision. It did the job nicely, but it was a little naive in its approach. This week we'll see how to make it better, as discussed by Laurence and Andrew here.

4. Using Real-world Images

Deep neural network using convolutions. It was a good start, but the data you used was very basic. What happens when your images are larger, or if the features aren't always in the same place? Andrew and Laurence discuss this to prepare you for what you'll learn this week: handling complex images

COURSE OBJECTIVES

This course is part of the upcoming Machine Learning in Tensorflow Specialization and will teach you best practices for using TensorFlow, a popular open-source framework for machine learning.

The Machine Learning course and Deep Learning Specialization from Andrew Ng teach the most important and foundational principles of Machine Learning and Deep Learning. This new deeplearning.ai TensorFlow Specialization teaches you how to use TensorFlow to implement those principles so that you can start building and applying scalable models to real-world problems. To develop a deeper understanding of how neural networks work, we recommend that you take the Deep Learning Specialization.

Specifically, the course has the following objectives:

Students will learn

- Learn best practices for using TensorFlow, a popular open-source machine learning framework
- 2) Build a basic neural network in TensorFlow
- 3) Train a neural network for a computer vision application
- 4) Provide a pure Java AOP implementation, focused on solving common problems in J2EE
- 5) Understand how to use convolutions to improve your neural network

COURSE COORDINATOR

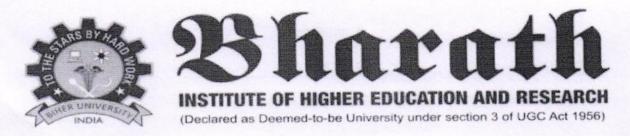
HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT

Department of Computer Scie Rengo.

Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennal-600 073, INDIA



CERTIFICATE COURSE ON INTRODUCTION TO TENSOR FLOW FOR ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND DEEP LEARNING

Date of Introduction of the Course: 12.05.2022

The timings are 1:30 PM to 4:30 PM from Friday (AN) and Saturday (FN&AN).

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	12-05-2022(AN)	1. A New Programming Paradigm
		Basics to Mastery of TensorFlow. We're excited you're here! In week 1 you'll get a soft introduction to what Machine Learning and Deep Learning are, and how they offer you a new programming paradigm, giving you a new set of tools to open previously unexplored scenarios.
3,4	13-05-2022(FN)	2.Basic programming skills
		To get started, check out the first video, a conversation between Andrew and Laurence that sets the theme for what you'll study.
5,6	13-05-2022(AN)	3. Introduction to Computer Vision
		Machine Learning and Deep Learning is a new programming paradigm.
7,8	19-05-2022(AN)	4. Computer Vision This week you're going to take that to the next level by beginning to solve problems of computer vision with just a few lines of code! Check out this conversation between Laurence.

9,10	20-05-2022(AN)	5. introduce you to Computer Vision.
		Andrew where they discuss it and
		introduce you to Computer
		Vision.
11,12	20-05-2022(FN)	6. Enhancing Vision basic Neural Network for Computer Vision. It did the job nicely, but it was a little naive in its approach.
13,14	26-05-2022(AN)	7. Convolutional Neural Networks
		This week we'll see how to make it better, as discussed by Laurence and Andrew here.
15,16	27-05-2022(AN)	8. Using Real-world Images
		deep neural network using convolutions. It was a good start, but the data you used was very basic.
17,18	27-05-2022(AN)	9. Real-world Images . What happens when your images are larger, or if the features aren't always in the same place?
19,20	02-06-2022(FN)	10. complex images Andrew and Laurence discuss this to prepare you for what you'll learn this week: handling complex images
21,22	03-06-2022(AN)	11. programming skills All you need to know is some very basic programming skills, and you'll pick the rest up as you go along.
23,24	03-06-2022(AN)	12. TensorFlow You'll be working with code that works well across both TensorFlow 1.x and the TensorFlow 2.0 alpha.
25,26	09-06-2022(AN)	13. Real-world Images . What happens when your images are larger, or if the features aren't always in the same place?
27,28	10-06-2022(FN)	14. programming skills All you need to know is some very

		basic programming skills, and you'll pick the rest up as you go along
29,30	10-06-2022(AN)	15. Using Real-world Images
		deep neural network using convolutions. It was a good start, but the data you used was very basic.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT

Department of Computer Scie & Engg..

Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/S 3 of UGC Act, 1956)

Chennal-600 073. INDIA



CERTIFICATE COURSE ON INTRODUCTION TO TENSOR FLOW FOR ARTIFICIAL INTELLIGENCE , MACHINE LEARNING , AND DEEP LEARNING

Date of Introduction of the Course: 12.05.2022 School of Computing

Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS001	AADHITYA MALLIKA ARJUN
2	U14CS002	AAVULA DIXITH REDDY
3	U14CS003	ABDUL RAHIM.M
4	U14CS004	ABDUL RAZVI .M.K
5	U14CS005	ABDUR RASEED
6	U14CS006	ABHIKAMALI .A
7	U14CS007	ABHISHEK MANDURI
8	U14CS008	AJAY.D
9	U14CS009	AKASH CHANDRA AMBASTHA
10	U14CS010	AKHIL REDDY.G
11	U14CS011	AKSHAY.R
12	U14CS012	AMAR BASUMATARY
13	U14CS013	ANDREW JOSEPH.V
14	U14CS015	ANKITA
15	U14CS016	ANNILKRISHNAN .K
16	U14CS017	ASHUTOSH SRIVASTAVA
17	U14CS019	ARAMBAKAM, YASWANTH
18	U14CS021	AREEF SYED
19	U14CS022	ARUN KUMAR SINGH
20	U14CS023	ASIF NAZIR WANI
21	U14CS024	ATUL ANAND
22	U14CS025	BACHU HARISH
23	U14CS027	BALAJI SINGH. T
24	U14CS029	BALAKRISHNAN.T

25	U14CS031	BISHAL BANIK			
26	U14CS033	BOORAGADDA VAMSI KRISHNA			
27	U14CS034	BOYAPATI VINAY			
28	U14CS035	BYSANI VENKAT SANDEEP			
29	U14CS038	CHIDIRALA.SAI SHANKAR			
30	U14CS040	CHINTAPANTI SRIKANTH			
31	U14CS042	CHUDAAMANI.V			
32	U14CS045	DEEPAKSANKAR REDDY.M			
33	U14CS046	DEVARAPALLI HIMAKAR			
34	U14CS047	DEVULAPALLY NAGARAJU			
35	U14CS048	DIVYA RUPINI.B			

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA





CERTIFICATE OF PARTICIPATION

This certificate is presented to

DIVYA RUPINI.B

For actively participating in the value added course on "Introduction to Tensor flow for

Artificial Intelligence, Machine Learning and Deep Learning "Conducted by School of

Computing, BIHER from 12.05.2022 to 10.06.2022.

COURSE COORDINATORS DIRECTOR HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bhorath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073, INDIA

COURSE FEEDBACK FORM

Acade	emic Year		2022	(
Term			-								
Cours	e Number										
Cours	e Title		Introd	luction	to Ten	cox flow for	AI &	menchie Lear			
Numb	er of Credits		1	THE PROPERTY.				Deep led			
Туре	of Course	Regular		Elect	ive	Add-c	on				
I.	Informa	tion on the Respond	lent: (Tick () Appro	priately)						
	T	6.1	- 3								
1.		age of classes attend	ea	140	60	60-80	80-				
	0-20	20-40		40	-60	00-80	100				
							100				
2.	Number	of hours per week	spent on the	course (C	Other than le	cture hours)					
-	0-2	2-4		4-0		6-8	8	-10			
					<u> </u>						
3.	Prepara	tion for the course	by the studer	nt:							
	(i)	Have done part of	f this course e	earlier		N	2				
	(ii)	Has adequate price	or exposure to	the prere	equisites	7	v				
	(iii)	Had to pickup rel	evant addition	evant additional topics through concurrent study \(\forall es							
	(iv)	Have no exposure	to the backg	round ma	nterial	7	0				
4.	The exp	ectations for taking	the course b	y the stu	dent are:						
	(a)	Enhance by skill base in the area of specializations									
	(b)	Get exposed to a	relevant subject Yes								
	(c)	Curiosity				ye	2				
	(d)	Better Employme	ent Opportuni	ty		Ye					
	(e)	Complete Course	requirements								
	(f)	To Improve CGP	A			Y	es				
Abou	it the Instru	ctor: Information o	n the Respon	dent: (T	ick (√) Appr	opriately)					
				A	В	C	D	E			
1.	Pace of	the Teaching/lecture		~							
2.	Comme	nt of the Subject		~							
3.	Clarity	of expression			V						
4.	Level of preparation			~							
5.	Level of interaction			V							
6.	Accessibility outside the class		ss								
7.	Others (please specify									
					_	, ,					
A: E	xcellent	B: Very	Good	C:	/	D:		E:			
				Good		Satisfactory		Poor			

HEAD OF THE DEPARTMENT

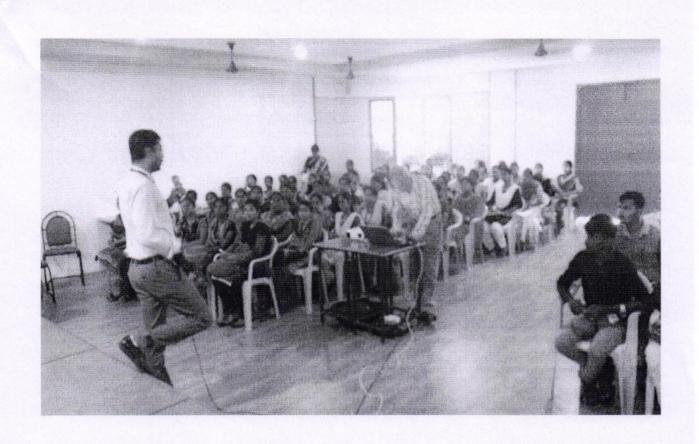
Department of Computer School Engg.

Bherath Institute of Higher Education a tessard (Declared as Decimus to be University U/S 3 of UGC Act, 1956 Chennal-600 073. INDIA

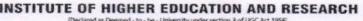
COURSE FEEDBACK FORM

Acade	demic Year 2022											
Term												
Cours	e Number											
Cours	e Title		-	Introduction to Tensor flow for Al & madrie lea							hie leas	
Numb	er of Credits										4	Deeplea
Type	of Course	Reg	ular		Elect	ive		Add	-on		/	
I.	Informa	tion on the	Respondent	(Tick (√)	Appro	priately)						
1	Donagante	age of aloss	ses attended									
1.	0-20	age of class	20-40		40	-60	60	-80		80-		
	0-20		20-40		140	-00	00	-00		100		
2.	Number	of hours p	per week spen	t on the co	urse (Other than	lecture hou	ırs)				
	0-2		2-4		4-6	6	6-	8		8-10)	
3.	Prepara		e course by th									
	(i)		one part of this	The state of the s					NO			
	(ii)	Has ade	equate prior ex	posure to the	ne prere	equisites			NO			
	(iii)	Had to	pickup relevan	t additiona	l topics	through co	oncurrent stu	dy	Yes			
	(iv)	Have no	o exposure to t	to the background material								
4.	-		or taking the									
	(a)			ase in the area of specializations								
	(b)	-	osed to a relev	elevant subject								
	(c)	Curiosi	-						yes			
	(d)		Employment C						yes			
	(e)			se requirements y &								
	(f)		rove CGPA	+					yes			
Abou	t the Instru	ctor: Infor	mation on the				propriately)					
					A	В		C	I)		E
1.		the Teachir										
2.		nt of the Su										
3.		of expression										
4.		f preparatio				1						
5.		finteraction										
6.			de the class		~							
7.	Others (please spec	cify									
			D. V. C		C.		. D			E		
A: E	xcellent		B: Very Good	u	C:	1						
					Good		Si	tisfactor	y	11	oor	

HEAD OF THE DEPARTMENT









BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

Date:30.05.2022

From Dr. K.P.Kaliyamurthie, Professor & Head, Department of CSE, Bharath Institute of Higher Education and Research, Chennai

To The Dean Engineering, Bharath Institute of Higher Education and Research, Chennai

Respected sir

Subject: Request of Permission to conduct a value-added course on "Computational Mathematics with Excel" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Computational Mathematics with Excel" in our campus premises on 06.06.2022, students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

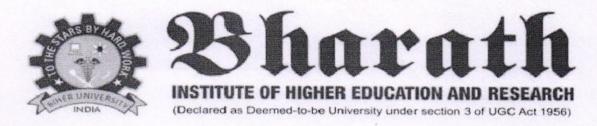
Timing: 3:30 PM to 5:30 PM

Submitted to Principal for approval to organize this value-added course.

HEAD OF DEPARTMENT Department of Computer Scie

Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act, 1956) Chennai-600 073. INDIA

DEAN ENGINEERING



CIRCULAR

05.06.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Computational Mathematics with Excel**for the benefit of II, III and IV year students. This course is scheduled from 06.06.2022for 30hours which includes theory and practical. The timings are 3:30 PM to 5:30 PM from Monday to Friday.

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

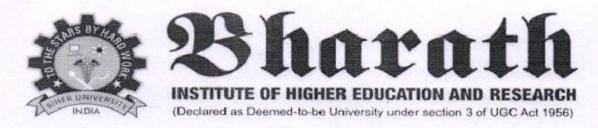
Copy to CSE

Copy to IT

To

Head of Department

HEAD OF DEPARTMENT
Department of Computer Scio & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA



CERTIFICATE COURSE ON COMPUTATIONAL MATHEMATICS WITH EXCEL

Date of Introduction of the Course:06.06.2022

COURSE SYLLABUS

1. Declining Prices, Profits and Graphing

Graphof afunction max/min suits

2. Price Data and Trendlines

Data Fitting, Least squares

3. Price Data for Two Markets and Linear Estimation

Functions of 2variables, Data Fitting in 2variables

4. PropertyAppraisal and Linear Estimation

functions of several variables best fits without graphing

5. Savings Plansand First-Order Finite Differences

Finite Difference equations, Financial Modelling, Exact solution to difference equations

6. Loans and First OrderFinite Differences

Finite Difference equations, Exact solution of a linear difference equation

7. Cooling Modeland Euler Finite Difference Method

Physical Modelling, Differential equationas limit of difference equation, Closed form solution, Equilibrium

8. Population Modelsand Exponential Functions

Population Modeling, Differential equations, Closed-formsolutions, Exponential growth

9. Minimum cost of a display areaand derivatives

Optimization (max/min)constraint, max/min bydifferentiation

10. Profit from 2 markets and partial derivatives

Multivariate Optimization

11. AlcoholBreath Testing and Least Squares Data Fitting

least squares, Critique ofmathematical models

12. Population Growth: Raleigh and Wake County

Population models, Closed formsolutions of differential equationslogs

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of computational mathematics with excel, and an in-depth study into its enabling technologies and main building blocks. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

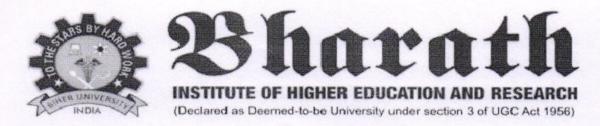
Students will learn

- 1) Basic ways of working with data and mathematical models
- 2) Become competent at using spreadsheets and computer algebra systems
- 3) Solidify their understanding of the concepts in Calculus
- 4) Apply knowledge to real-world problems

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA



CERTIFICATE COURSE ON COMPUTATIONAL MATHEMATICS WITH EXCEL

Date of Introduction of the Course:06.06.2022

The timings are 3:30 PM to 5:30 PM from Monday to Friday

Time Table& Lesson plan

CLASS	DATE	TOPIC		
1,2	06-06-2022	1. Declining Prices, Profits and Graphing Graph of a function max/min suits		
3,4	07-06-2022	2. Price Data and Trendlines Data Fitting, Least squares		
5,6	08-06-2022	3. Price Data forTwo Markets and Linear Estimation Functions of 2 variables, Data Fitting in 2 variables		
7,8	09-06-2022	4. Property Appraisal and Linear Estimation functions of several variables best fits without graphing		
9,10	12-06-2022	5. Savings Plansand First-Order Finite Differences Finite Difference equations, Financial Modelling, Exact solution to difference equations		
11,12	13-06-2022	6. Loans and First OrderFinite Differences Finite Difference equations, Exact solution of a linear difference equation		
13,14	14-06-2022	7. Cooling Modeland Euler Finite Difference Method Physical Modelling, Differential equation as limit of difference equation, Closed form solution, Equilibrium		
15,16	15-06-2022	8. Population Modelsand Exponential Functions Population Modeling, Differential equations, Closed-formsolutions, Exponential growth		

17,18	16-06-2022	9. Minimum cost of a display area and derivatives Optimization (max/min)constraint, max/min bydifferentiation
19,20	19-06-2022	9. Minimum cost of a display area and derivatives Optimization (max/min)constraint, max/min bydifferentiation
21,22	20-06-2022	10. Profit from 2 markets and partial derivatives Multivariate Optimization
23,24	21-06-2022	10. Profit from 2 markets and partial derivatives Multivariate Optimization
25,26	22-06-2022	11. AlcoholBreath Testing and Least Squares Data Fitting least squares, Critique ofmathematical models
27,28	23-06-2022	12. Population Growth: Raleigh and Wake County Population models, Closed formsolutions of differential equationslogs
29,30	26-06-2022	12. Population Growth: Raleigh and Wake County Population models, Closed formsolutions of differential equationslogs

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scio & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of USC Act, 1956)
Chennal-600 073, INDIA



CERTIFICATE COURSE ON COMPUTATIONAL MATHEMATICS WITH EXCEL Date of Introduction of the Course: 06.06.2022

School of Computing Registered Students Name List

S.NO REG.NO		NAME OF THE STUDENT			
1	U14CS056	GOUTHAM KALYAN KUMAR .R			
2	U14CS057	GOVIND KUMAR			
3	U14CS058	HARI TEJA.G			
4	U14CS059	HARISH.V			
5	U14CS060	JASIMKHAN.J.			
6	U14CS061	JENNIFER.S			
7	U14CS062	JERIPOTHULA SURESH GOUD			
8	U14CS063	JOHN DALTON .H			
9	U14CS064	K. LAKSHMIKANTH REDDY			
10	U14CS065	K. LAKSHMI NARAYANA REDDY			
11	U14CS066	KARAN KUMAR CHETTRI			
12	U14CS058	KARTHIKEYAN.J			
13	U14CS067	KARTHICK.K			
14	U14CS069	KARTHIKEYAN.J			
15	U14CS071	KARTIK YADAV			
16	U14CS072	KATKURI.KUMAR			
17	U14CS073	KATTA DINESH KUMAR			
18	U14CS074	KESHAVAPRIYA .S			
19	U14CS075	KEVIN ARNOLD THAKUR			
20	U14CS076	KILARI LAXMI SUDHA			
21	U14CS077	KISHORE KUNAL			
22	U14CS078	KODALI AKHIL			
23	U14CS079	KOUSHIK SUBRAMANIAM.Y			
24	U14CS080	KOVURI BALASUBHAKAR REDDY			
25	U14CS081	KRISHNA SRIVASTAV.S.K			

26	U14CS082	KRISHNANDAN YADAV			
27	U14CS084	LAKKAMPALLY SHIVA KUMAR			
28	U14CS085	LAKSHMI PRIYA.A			
29	U14CS086	LOKESHWARAN.A.			
30	U14CS088	MADDIPATI BHARAT			
31	U15CS127	MUPPALLA SURENDRA			
32	U15CS128	MURARI KUMAR CHAUDHARY			
33	U15CS129	N SWAPNA RAAGA			
34	U15CS130	NAGANNAGARI JAGADISH			
35	U15CS133	NALLURI AKHIL BABU			
36	U15CS134	NAMBURI VIJAY KUMAR			
37	U15CS135	NARENDULA NIREESHA			
38	U15CS136	NARESH K			
39	U15CS138	NEELA SAI KUMAR			
40	U15CS139	NIKHIL KUMAR			
41	U15CS140	NIRANJAN S			
42	U15CS141	NITIN SINGH			
43	U15CS142	NUKALA BHODANANDA CHARAN			
44	U15CS143	OLIVER S			
45	U15CS144	OMPRAKASH YADAV			
46	U15CS001	ABHIJEET KUMAR			
47	U15CS002	ABHIJIT KUMAR GUPTA			
48	U15CS003	ABHISHEK KUMAR SINGH			
49	U15CS004	ALLU SAI SIVA PRIYANKA NAIDU			
50	U15CS005	AMBIKE KUMAR SINGH			
51	U15CS006	ANBUMANI S			
52	U15CS007	ANJAR ALI			
53	U15CS008	ANKAM MANJUNATH			
54	U15CS009	ANNADI DHANUSH			
55	U15CS011	ANUMOLU YESWANTH			
56	U15CS012	ARAVAPALLI SIVA VINAYA			
57	U15CS012	ARAVINDHAN K R			
58	U15CS014	ARVIND KUMR YADAV			
59	U15CS015	ARYAN SAHU			
60	U15CS017	ASHISH RANJAN			

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

HARISH. V

For actively participating in the value added course "Computational Mathematics with Excel" Conducted by School of Computing, BIHER from 06.06.2022 to 26.06.2022.

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

COURSE FEEDBACK FORM

Acade	mic Year		20	2022								
Term				ODD								
Cours	e Number											
Cours	e Title		Co	mputa	tional 1	Valherr	ratics with	Excel				
Numb	er of Credits			1								
Type	of Course	Regula	r	Elective Add-on								
I.	Informa	tion on the R	espondent: (Ti	ck (√) Ap	propriately)							
1.	Percenta	ige of classes	attended									
	0-20	20-40		40-60		60-80	80-	N				
								100				
		61		Alex source	on (Other the	n laatuwa	hours)					
2.	0-2		week spent on	the cours	4-6	in lecture	6-8	8-	10			
	0-2		2-4		4-0	101	0-8	10-	10			
3.	Preparation for the course by the student:											
	(i)	Have done	part of this cou									
	(ii)	Has adequate prior exposure to the prerequisites No										
	(iii)	Had to pickup relevant additional topics through concurrent study										
	(iv)	(iv) Have no exposure to the background material										
4.	The exp	The expectations for taking the course by the student are:										
	(a)		•	in the area of specializations								
	(b)		ed to a relevant									
	(c)	Curiosity						yes				
	(d)		ployment Oppo									
	(e)		Course requirer	equirements Yes								
	(f)	To Improv										
Abou	t the Instru	ctor: Informa	ation on the Re					n	F			
				A		В	C	D	E			
1.		the Teaching/		5		^						
2.		nt of the Subje	ect									
3.		of expression		-								
4.		Level of preparation			1							
5.		Level of interaction Accessibility outside the class										
6.					N							
7.	Others (please specify										
A· E	xcellent	B:	Very Good	C:			D:		E:			
11. 12.		2.	.,	10000	bood		Satisfactory	1	Poor			

HEAD OF THE DEPARTMENT

COURSE FEEDBACK FORM

Acade	Academic Year		2022	2022									
Term				DDD									
Cours	e Number												
Cours	e Title		Com	Puta	tional r	Vathe	matics w	th Ex	cel				
Numb	er of Credits			1									
Type	Type of Course Regular			Elective Add-on									
I.	Informa	tion on the Respon	dent: (Tick	(√) App	propriately)								
	1.		1.1										
1.		age of classes atten	ded		10.60	T	60-80	Lon	-				
	0-20	20-40			40-60		60-80	100		N			
								100	0				
2.	Number	Number of hours per week spent on the course (Other than lecture hours)											
	0-2	2-4			4-6	11	6-8	8	3-10				
						1							
3.	Prepara	tion for the course	by the stud	lent:									
	(i)	Have done part of	of this course	his course earlier No									
	(ii)	Has adequate prior exposure to the prerequisites											
	(iii)	Had to pickup relevant additional topics through concurrent study											
	(iv)	Have no exposure to the background material											
4.	The exp	The expectations for taking the course by the student are:											
	(a)	Enhance by skill base in the area of specializations Yes											
	(b)	Get exposed to a	relevant sul	bject				Ves					
	(c)	Curiosity						Yes					
	(d)	Better Employm	ent Opportu	inity				Ves					
	(e)	Complete Cours	e requireme										
	(f)	To Improve CGI	PA					yes					
Abou	it the Instru	ctor: Information o	n the Resp	ondent:	(Tick (√) A _I	propriat	tely)	1					
				A	В		C	D		E			
1.	Pace of	the Teaching/lecture		V									
2.	Comme	nt of the Subject		N									
3.	Clarity of	of expression		1									
4.	Level of	preparation			1								
5.	Level of	interaction		~									
6.	Accessil	oility outside the cla	ss										
7.	Others (please specify											
A: E	xcellent	B: Very	Good	C:			D:		E:				
				Go	od		Satisfactory		Poor				

HEAD OF THE DEPARTMENT

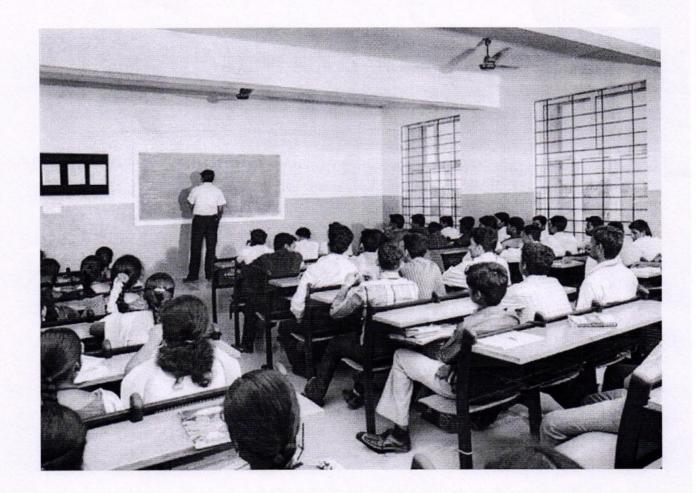


Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON COMPUTATIONAL MATHEMATICS WITH EXCEL

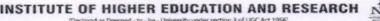


Course coordinator

HEAD OF THE DEPARTMENT

Department of Computer Science & Engg.,
Bhurath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073, INDIA







Date: 31.03.2022

BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Requisition Letter

From Dr. K.P Kaliyamurthie, Professor & Head, Department of CSE, Bharath Institute of Higher Education and Research, Chennai

To The Dean Engineering, Bharath Institute of Higher Education and Research, Chennai

Respected sir

Subject :Request of Permission to conduct a value added course on "TRAINING PROGRAM ON DESKTOP PUBLISHING" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "TRAINING PROGRAM ON DESKTOP PUBLISHING" in our campus premises on 06/06/2022. Students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

Timing: 1:30P.M-4.30PM

9.30A.M-4.30PM.

Submitted to Principal for approval to organize this value added course.

DEAN ENGINEERING

HEAD OF DEPARTMENT Department of Computer Scie A Engg. Bharath Institute of Higher Education & Research (Declared as Deemed to be University U/S 3 of UGC Act, 1956) Chennai-600 073. INDIA





INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CIRCULAR

01.06.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on TRAINING PROGRAM ON DESKTOP PUBLISHING for the benefit of II, III and IV year students. This course is scheduled from 06-06-2022 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.C.Rajabhushanam	Professor

Head of Department

To

Copy to CSE

Copy to IT

(Declared as Deemed to be University U/S 3 of UCC Act, 1956) Chennai-600 073. INDIA



CERTIFICATE COURSE ON TRAINING PROGRAM ON DESKTOP PUBLISHING

Date of Introduction of the Course: 06-06-2022

COURSE SYLLABUS

1. Fundamentals of DTP

Importance and Advantages of DTP, DTP Software and Hardware, Commercial DTP Packages, Page Layout Programs, Introduction to Word Processing, Commercial DTP Package, Difference between DTP Software and Word Processing Software.

2. Computer Graphics

Types of Graphics, Uses of Computer Graphics Introduction to Graphics Programs, Font and Typefaces, Types of Fonts, Creation of Fonts (Photographer), Anatomy of Typefaces, Printers, Types of Printers used in DTP, Plotter, Scanner.

3. Positioning Ruler Guides

History and Versions of Page Maker, Creating a new Page, document setup dialog box, paper size, page orientation, margins, different methods of placing text ad graphics in a document. Master Page, story editor, formatting of text, indent, leading, hyphenation, spelling check, creating index, text wrap, position (Superscript/subscript), control palette.

4. MULTIMEDIA

History, multimedia elements; text, images, sound, animation and video. Text, Concept of plain text and formatted text, RTF & HTML text, image, importance of graphicisin, multimedia, image capturing methods, scanner, digital camera, Sound -sound and its effect in Multimedia, analog and digital sound, animation, basics, principles and use of animation, video, basics of video, analog and digital video.

5. Features for a Multimedia System

Features of multimedia, overview of multimedia, multimedia software tools, multimedia authoring –Production and presentation, graphic file formats, MIDI –Overview, concepts, structure of MIDI, MIDI Devices, MIDI Messages

6. Vector based software

Introduction to Adobe Illustrator-Tools and its Applications18 Hrs.Familiarization of:-Adobe Illustrator for Windows& MAC-Interface-Practice on Tools-Practice on Menus-Practice on Palettes-Practice on Short cuts-Advanced concept of drawing,-Emphasis on design and-composition and experimental techniques in different media-Use of selection Tool-objects attributes-Working with Groups and Layers

7.Introduction PDF

Introduction to PDF Generators-Permission and rights in PDF-Introduction to Abode Acrobat Professional-Protecting file with various rights-Colour separations-Merits and demerits of PDF format filesOther PDF Generators-Downloading free PDF generators-Converting files to different formats8 Hrs.Familiarization of Adobe Acrobat Professional-Familiarization of Freeware PDF-Generatorsand its conversions.-Conversion from PDF to word/word processors and Excel/spread sheets.-Integrating text and graphics in PDF file

8.On Demand Printing

Basic concept ,Digital Press:--Electrostatic, Inkjet and thermal printing from digital Master-PS interpreter & raster image processing (RIP) and its function16 Hrs.Familiarization of:-Adobe In-Design for Windows& MAC-Document setup-Use of rules, guides, snap to guides-Formatting paragraphs, text blocks-Placing graphics, resizing and text wrap-Editing stories and spell checking-Setting of templates and style palettes-Grouping and aligning objects-Mulitple paste with "step & repeat"-Colour libraries and separations-Styles and custom style palettes-Drop caps, page numberring and inserting of special symbols-Printing solutions and PPD's and PDFs

9.Post Script (PS) and Page Description Languages (PDL)

PS printer description file, PS Level 1,2,3-PS resources, imaging text and graphics-vector drawing, character drawing-EPS file, PS colour processing , PS output devices,Difference between PS and PDF

10. Introduction to e-Publishing

Software tools required-Web publishing-Digital distribution platform-Online publishing -Online distribution-Open access (publishing)-Pay-per-view-Print on demand

11. Guidance for preparing a publication

typesetting-proofing-printing-binding a publication.

COURSE OBJECTIVES

In this course we plan to give students an overview of the field of Training Program on Desktop Publishing will gain hands-on experience in solving relevant problems through projects that will utilize existing public tools monitoring one's progress. It is our objective that students will develop the skills needed to become a practitioner or carry out research projects in this domain.

Specifically, the course has the following objectives:

Students will learn

- 1) The fundamental ideas behind, Training Program on Desktop Publishing, it is essential to have in depth knowledge set which enables analyzing the given job and subsequent detail planning. Benefits, as well as current and future challenges;
- 2) The basic ideas and principles of Training Program on Desktop Publishingis the subjectivity of consciousness and professional activity.

deployment considerations;

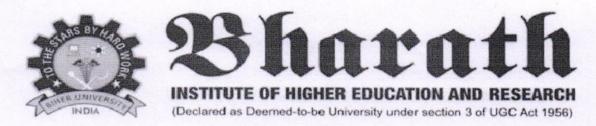
- 3) To understand the challenges in extracting objects/regions of interest from a given task. To transfer skill the practical know how is most important criteria as in ITI system skill is the ultimate requirement. To perform a task/job both theoretical and practical knowledge are very much needed. Thus Trade Technology is regarded as basic/hard skills which are base of all skill based training.
- 4)It is the skills, Knowledge and Attitude which enables comprehending the given job and subsequent planning to complete the task/job.Engaging with authentic scientific tools and practices such as improve conceptual understanding, and increase motivation

5) The variety of programming models and develop working experience in several of them.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA



CERTIFICATE COURSE ON TRAINING PROGRAM ON DESKTOP PUBLISHING

Date of Introduction of the Course: 06.06.2022

The timings are 1:30 PM to 4:30 PM

Time Table& Lesson plan

CLASS	DATE	TOPIC					
1,2	06-06- 2022(AN)	1. Fundamentals of DTP Importance and Advantages of DTP, DTP Software and Hardware, Commercial DTP Packages, Page Layout Programs, Introduction to Word Processing, Commercial DTP Package, Difference between DTP Software and Word Processing Software					
3,4	09-06- 2022(AN) 10-06- 2022(FN)	2. Computer Graphics Types of Graphics, Uses of Computer Graphics Introduction to Graphics Programs, Font and Typefaces, Types of Fonts, Creation of Fonts (Photographer), Anatomy of Typefaces, Printers, Types of Printers used in DTP, Plotter, Scanner.					
5,6	10-06- 2022(FN)	3.Positioning Ruler Guides History and Versions of Page Maker, Creating a new Page, document setup dialog box, paper size page orientation, margins, different methods of placing text ad graphics in a document. Master Page, story editor, formatting of text, indent leading, hyphenation, spelling check, creating index, text wrap, position (Superscript/subscript) control palette					
7,8	10-06-2022 (FN) 10-06- 2022(AN)	4.MULTIMEDIA History, multimedia elements; text, images, sound, animation and video.Text, Concept of plain text and formatted text, RTF & HTML text, image, importanceofgraphics in multimedia, image capturing methods, scanner, digital camera, Sound-sound its effect in Multimedia, analog digital sound, animation, basics, principles and use of animation, video, basicsofvideo, analog, digital video					

9,10	10-06-2022 (AN)	5.Features for a Multimedia System Features of multimedia, overview of multimedia, multimedia software tools, multimedia authoring –Production and presentation, graphic file formats, MIDI –Overview, concepts, structure of MIDI, MIDI Devices, MIDI Messages
11,12	10-06-2022 (AN)	6.Vector based software Introduction to Adobe Illustrator-Tools and its Applications18 Hrs.Familiarization of:-Adobe Illustrator for Windows& MAC-Interface-Practice on Tools-Practice on Menus-Practice on Palettes-Practice on Short cuts-Advanced concept of drawing,-Emphasis on design and-composition and experimentaltechniques in different media-Use of selection Tool-objects attributes-Working with Groups and Layers
13,14	10-06-2022 (AN) 16-06-2022 (FN)	7.Introduction PDF Introduction to PDF Generators-Permission and rights in PDF-Introduction to Abode Acrobat Professional-Protecting file with various rights-Colour separations-Merits and demerits of PDF format filesOther PDF Generators-Downloading free PDF generators-Converting files to different formats.Familiarization of Adobe Acrobat Professional-Familiarization of Freeware PDF-Generatorsand its conversionsConversion from PDF to word/word processors and Excel/spread sheetsIntegrating text and graphics in PDF file
15,16	16-06-2022 (FN)	8.Introduction PDF Familiarization of Adobe Acrobat Professional-Familiarization of Freeware PDF-Generatorsand its conversionsConversion from PDF to word/word processors and Excel/spread sheetsIntegrating text and graphics in PDF file
17,18	16-06-2022 (FN) 16-06-2022 (AN)	9.On Demand Printing Basic concept ,Digital Press:Electrostatic, Inkjet and thermal printing from digital Master-PS interpreter & raster image processing (RIP) and its function16 Hrs.Familiarization of:-Adobe In-Design for Windows& MAC-Document setup-Use of rules, guides
19,20	16-06-2022 (AN)	10.On Demand Printing Formatting paragraphs, text blocks-Placing graphics, resizing and text wrap-Editing stories and spell checking-Setting of templates and style

		palettes-Grouping and aligning objects-Mulitple paste with "step & repeat"-Colour libraries and separations-Styles and custom style palettes-Drop caps, page numberring and inserting of special symbols-Printing solutions and PPD's and PDFs
21,22	16-06-2022 (AN)	11.On Demand Printing Formatting paragraphs, text blocks-Placing graphics, resizing and text wrap-Editing stories and spell checking-Setting of templates and style palettes-Grouping and aligning objects-Mulitple paste with "step & repeat"-Colour libraries and separations-Styles and custom style palettes-Drop caps, page numberring and inserting of special symbols-Printing solutions and PPD's and PDFs
	16-06-2022 (AN) 17-06-2022 (FN)	12.Post Script (PS) and Page Description Languages (PDL) PS printer description file, PS Level 1,2,3-PS resources, imaging text and graphics-vector drawing, character drawing
25,26	17-06-2022 (FN)	13. Post Script (PS) and Page Description Languages (PDL) EPS file, PS colour processing, PS output devices, Difference between PS and PDF
27,28	17-06-2022 (FN) 23-06-2022 (AN)	14.Introduction to e-Publishing Software tools required-Web publishing-Digital distribution platform-Online publishing -Online distribution-Open access (publishing)-Pay-per-view-Print on demand
29,30	23-06-2022 (AN)	15. Guidance for preparing a publication typesetting-proofing-printing-binding a publication.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA



CERTIFICATE COURSE ON TRAINING PROGRAM ON DESKTOP PUBLISHING

Date of Introduction of the Course: 06.06.2022

School of Computing Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT
1	U16CS001	SANTOSH B
2	U16CS002	APARNA V M
3	U15CS007	ANJAR ALI
4	U15CS008	ANKAM MANJUNATH
5	U15CS009	ANNADI DHANUSH
6	U15CS011	ANUMOLU YESWANTH
7	U16CS014	SOMA BHARATH KUMAR
8	U16CS015	B J JAISON
9	U16CS016	SARAVANAKUMAR S
10	U16CS017	VARUN KANNA A
11	U16CS018	JUPAKA SAIVARUN
12	U16CS019	PYDI VENKATA PRITHEESH NIHAR
13	U16CS020	R MAHESH
14	U14CS182	SRI DHARSHINI .P
15	U14CS183	SULEKHA KUMARI
16	U14CS184	SUNITA.S
17	U14CS185	SURENDAR.K
18	U14CS186	SURIYA.A.
19	U14CS187	SURYA.A
20	U14CS188	SUSINDHAR .P
21	U14CS190	SWEETY SHIMAL
22	U14CS192	THARIGOPULA LOKESH
23	U14CS193	тнеја.т
24	U15CS039	D N S HRUDAY BHARADWAJ

25	U15CS040	DADAM CHAITHRA
26	U15CS041	DEEPAK KUMAR SINGH
27	U15CS042	DILLIGANESH V
28	U15CS044	DIVYA VANI T
29	U15CS045	DODDI PUJITHA
30	U15CS046	DOOLIGANTI AKHIL REDDY
31	U15CS047	DUPUGUNTLA BHANU SIVA KASINADH
32	U15CS048	GANDLUR REDDY GREESHMA
33	U15CS049	GANESH BAG
34	U15CS050	GANGARAJU RAHUL
35	U15CS032	CHANDRA KANT CHOUDHARY

COURSE COORDINATOR

HOD HEAD OF DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bhurath Institute of Higher Education, & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA

COURSE FEEDBACK FORM

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2.	Number of hours per week spent on the course (Other than lecture hours)											
	0-2 2-4					4-6		TO THE PARTY OF TH		8-10		
3.	Preparat	ion for th	e course by th	e studer								
	(i)	Have de	one part of this	this course earlier No								
				exposure to the prerequisites								
	(iii)	Had to pickup relevant additional topics through concurrent study										
	(iv)	Have n	o exposure to the									
4.	The expectations for taking the course by the student are:											
						pecialization	is			108		
	(b)			ant subje	ect							
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HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA

COURSE FEEDBACK FORM

Acade	mic Year		2022								
Term							*				
Cours	e Number										
Cours	e Title		TRAIN	VING S	PROGRAM	ON DECKT	op PUBL	ASHIN	9		
Numb	er of Credits										
Type	of Course	Regular		Elective Add-on							
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2.	Number	of hours per week	pent on the	course (Other than l	ecture hours)					
	0-2	2-4		4-	-6	6-8		8-10			
3.	Preparation for the course by the student:										
	(i)	Have done part of	The second secon								
	(ii)	Has adequate prior exposure to the prerequisites									
	(iii)	Had to pickup relevant additional topics through concurrent study									
	(iv)	(iv) Have no exposure to the background material									
	Ton the first the student and										
4.		e expectations for taking the course by the student are:									
	(a)										
	(b)	Get exposed to a	relevant subj	ject							
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				Good		Satisfa	ctory	1 001			

HEAD OF THE DEPARTMENT

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Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

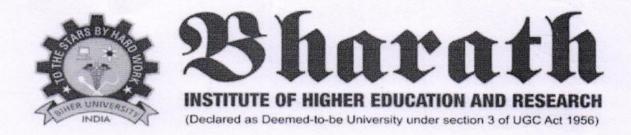
V.DILI GANESH

For actively participating in the value added course "TRAINING PROGRAM ON DESKTOP PUBLISHING" Conducted by School of Computing, BIHER from 06.06.2022 to 23.06.2022

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR



CERTIFICATE COURSE ON TRAINING PROGRAM ON DESKTOP PUBLISHING

Date of Introduction of the Course: 06.06.2022 School of Computing



COURSE CO ORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scie & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH



(Declared as Deemed - to - be - University under section 3 of UGC Act 1956) BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073 Requisition Letter

From

Date:

08.06.2022

Dr. K.P.Kaliyamurthie,
Professor & Head,
Department of CSE,
Bharath Institute of Higher Education and Research,
Chennai

To
The Dean Engineering,
Bharath Institute of Higher Education and Research,
Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on "Data Structures and Algorithms Specialization" -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on "Data Structures and Algorithms Specialization" in our campus premises on 16/06/2022.

35 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: CSE Smart Room

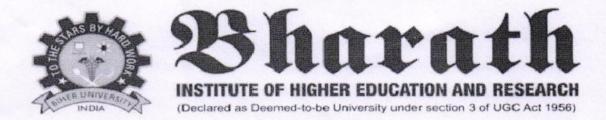
Timing: 9 am to 4.30 pm

Submitted to Principal for approval to organize this value added course.

HOD/CSE

DEAN ENGINEERING

HEAD OF DEPARTMENT
Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of USC Act, 1956)
Cheppai-600 073, INDIA



CIRCULAR

12.06.2022

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **DATA STRUCTURES AND ALGORITHMS SPECIALIZATION** for the benefit of II, III and IV year students. This course is scheduled from 16.06.2022 for 30hours which includes theory and practical. The timings are 3:00 PM to 5:00 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	E.Fathima	Assistant Professor
2	C.Rajabhushanam	Assistant Professor

Head of Department

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT
Department of Computer Sciu. A Engg..
Bharath Institute of Higher Education & Research
(Beclared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennai-600 073. INDIA



CERTIFICATE COURSE ON DATA STRUCTURES AND ALGORITHMS SPECIALIZATION

Date of Introduction of the Course:16.06.2022

COURSE SYLLABUS

1.INTRODUCTION TO OOPS

Introduction to object oriented programming through stacks, queues and linked lists.

2.HASHING TECHNIQUES

Dictionaries: skip-lists, hashing, analysis of collision resolution techniques.

3.TREES

Trees, traversals, binary search trees, optimal and average.

4.BINARY SEARCH TREE

BST's trees and red-black trees.

5.QUEUE

Tries and pattern matching. Priority queues and binary heaps.

6.SORTING AND SELECTION

Sorting: merge, quick, radix, selection, heap.

7.BFS

Introduction to Graphs, Breadth first search and connected components.

8. DFS

Depth first search in directed and undirected graphs and strongly connected components.

9.SPANNING TREES

Prim's and Kruskal's algorithm, union-find datastructure.

10. ACYCLIC GRAPHS

Dijkstra's algorithm for shortest path. shortest path tree. Shortest and longest paths in directed acyclic graphs.

11. GRAPHS

Matrix Representation of Graphs, List Structures, Other Representations of Graphs, Breadth First Search, Depth First Search, Spanning Trees.

12. DIRECTED GRAPHS

Types of Directed Graphs; Binary Relation As a Digraph; Euler's Digraphs; Matrix Representation of Digraphs.

13. SORTING

Divide and Conquer Divide and Conquer Strategy; Binary Search; Max. And Min.; Merge sort; Quick sort.

14. GREEDY ALGORITHM

Greedy Method Greedy Method Strategy; Optimistic Storage on Tapes; Knapsack Problem; Job Sequencing with Deadlines; Optimal Merge Pattern; Single Source Shortlist Paths.

15. DYNAMIC PROGRAMMING

Dynamic Programming Strategy; Multistage Graphs; All Pair Shortest Paths; Travelling Salesman Problems.

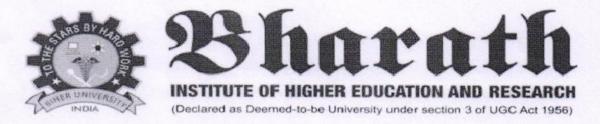
Course Objective:

- 1. To understand the various algorithm design and analysis techniques
- 2. To learn tree data structures lists, stacks, and queues
- 3. To learn different sorting and searching algorithms
- 4. To understand Tree and Graph data structures
- 5. To learn Greedy algorithms and Dynamic programming

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scie 4 Engg.,
Bharath Institute at Higher Education & Research
(Declared as Deamed to be University U/S 3 of UGC Act, 1955)
Chennal-600 073. INDIA



CERTIFICATE COURSE ON DATA STRUCTURES AND ALGORITHMS SPECIALIZATION

Date of Introduction of the Course: 16.06.2022

The timings are 3 PM to 5 PM from Friday (AN) and Saturday (FN&AN).

Time Table& Lesson plan

CLASS	DATE	TOPIC
1,2	16-06-2022(AN)	1.INTRODUCTION TO OOPS
		Introduction to object oriented programming through
		stacks, queues and linked lists.
3,4	17-06-2022(FN)	2.HASHING TECHNIQUES
		Dictionaries: skip-lists, hashing, analysis of collision
		resolution techniques.
5,6	17-06-2022(AN)	3.TREES
		Trees, traversals, binary search trees, optimal and average
7,8	23-06-2022(AN)	4.BINARY SEARCH TREE
		BST's trees and red-black trees.
9,10	24-06-2022(FN)	5.QUEUE
		Tries and pattern matching. Priority queues and binary
		heaps.
11,12	24-06-2022(AN)	6.SORTING AND SELECTION
		Sorting: merge, quick, radix, selection, heap.
13,14	30-06-2022(AN)	7.BFS
		Introduction to Graphs, Breadth first search and
		connected components.

15,16	01-07-2022(FN)	8. DFS
		Depth first search in directed and undirected graphs and
		strongly connected components
17,18	01-07-2022	9.SPANNING TREES
	(AN)	Prim's and Kruskal's algorithm, union-find datastructure.
19,20	07-07-2022	10. ACYCLIC GRAPHS
	(AN)	Dijkstra's algorithm for shortest path. shortest path tree.
		Shortest and longest paths in directed acyclic graphs.
21,22	08-07-2022	11. GRAPHS
	(FN)	Matrix Representation of Graphs, List Structures, Other
	(==)	Representations of Graphs, Breadth First Search, Depth
		First Search, Spanning Trees.
23,24	08-07-2022	12. DIRECTED GRAPHS
	(AN)	Types of Directed Graphs; Binary Relation As a Digraph;
		Euler's Digraphs; Matrix Representation of Digraphs.
25,26	14-07-2022	13. SORTING
	(AN)	Divide and Conquer Divide and Conquer Strategy;
	(-2.1)	Binary Search; Max. And Min.; Merge sort; Quick sort.
27,28	15-07-2022(FN)	14. GREEDY ALGORITHM
	1	Greedy Method Greedy Method Strategy; Optimistic
		Storage on Tapes; Knapsack Problem; Job Sequencing
		with Deadlines; Optimal Merge Pattern; Single Source
		Shortlist Paths.
29,30	15-07-2022(AN)	15. DYNAMIC PROGRAMMING
27,00	(-2.1)	Dynamic Programming Strategy; Multistage Graphs; All
		Pair Shortest Paths; Travelling Salesman Problems.

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT
Department of Computer Scit & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Chennal-600 073. INDIA



INSTITUTE OF HIGHER EDUCATION AND RESEARCH (Declared as Deemed-to-be University under section 3 of UGC Act 1956)

CERTIFICATE COURSE ON DATA STRUCTURES AND ALGORITHMS SPECIALIZATION

Date of Introduction of the Course: 16.06.2022 School of Computing

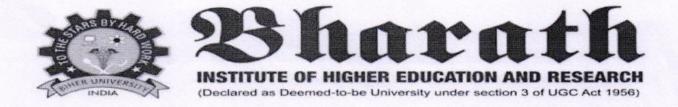
Registered Students Name List

S.NO	REG.NO	NAME OF THE STUDENT					
1	U14CS035	BYSANI VENKAT SANDEEP					
2	U14CS090	MAL REDDY GANESH REDDY					
3	U14CS151	RAVIPATI SUBBARAYUDU					
4	U14CS153	RONU SHARMA					
5	U14CS155	TAMMINANA SAGAR					
6	U14CS157	SAJJA. SURENDRA PRASAD					
7	U14CS166	SHAFAN HASIM.N					
8	U14CS170	SHANKAR KUMAR GUPTA					
9	U14CS178	SK MD TAUQEER					
10	U14CS181	SOURABH PRIYADARSHI					
11	U14CS185	SURENDAR.K					
12	U14CS199	VAMMARVALLI RAJA					
13	U14CS207	VIVEK KUMAR					
14	U14CS210	YELLALA SANTHOSH REDDY					
15	U15CS144	OMPRAKASH YADAV					
16	U15CS147	PALEPU SIVA MANIKANTA CHARI					
17	U15CS148	PARTHIBAN S					
18	U15CS710	JAYANTHIS					
19	U15CS194	SHAIK SABIR					
20	U15CS196	SHARYARAI.S					
21	U15CS197	SHATRUGHAN SUHAN.S					
22	U15CS201	SMITHA C.S					
23	U15CS255	ADITYA					
24	U15CS701	PRAVEEN RAJ.V					
25	U15CS502	DANIEL BRITTO					
26	U15CS702	GOWTHAMAN.S					
27	U16CS025	SANTHOSHKUMAR S					
28	U16CS099	GANGUMALLA GANGA SUNIL					
29	U16CS101	NITHISHVAR S					
30	U16CS152	NALLAPU RAJESH					
31	U16CS162	YEMIREDDY SRINIVASA REDDY					
32	U16CS169	RAVILLA HARSHITHA					
33	U16CS192	GANTLA VASU					
34	U16CS197	PRAVEENRAJ R M					
35	U16CS210	TANIRU SATISH					

COURSE COORDINATOR

HEAD OF THE DEPARTMENT

Department of Computer Scic & Engg.,
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956
Chemoal-600 073, INDIA



CERTIFICATE COURSE ON DATA STRUCTURES AND ALGORITHMS SPECIALIZATION



COURSE COORDINATOR

HEAD OF THE DEPARTMENT

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Department of Computer Scie. 4 Engg.,
Bharath Institute of Higher Education & Research
(Deciared as Deemed to be University U.S.3 of BCC Act, 1858)
Chennal-600 073. INDIA



CERTIFICATE OF PARTICIPATION

This certificate is presented to

S.NITHISTVAR (REG NO:U16CS101)

For actively participating in the value added course "DATA STRUCTURES AND ALGORITHMS SPECIALIZATION" Conducted by School of Computing, BIHER from 16.06.2022 to 15.07.22

COURSE COORDINATORS

HEAD OF THE DEPARTMENT

DIRECTOR

COURSE FEEDBACK FORM

cademic Ye	ademic Year 2022										
Term			odd Sem								
Course Numb	per										
Course Title		Data	Stucky	ires	and	Algon	Itns &	Reighi	ation		
lumber of Ci	redits			,		,					
ype of Cour	se Regular		Elec	ctive		A	dd-on	<u></u>	7		
Inform	Information on the Respondent: (Tick (√) Appropriately)										
Percer	rcentage of classes attended										
0-20		20-40		40-60	IV	7 60-80		80-100			
1	61		1))4h 4h		h					
	er of hours per w		the course (C	4-6	an lecture	7 6-8		8-10			
0-2		2-4		4-0		/ 0-8		0-10			
Prepa	ration for the cou	irse by the st	udent:								
(i)	Have done part of this course earlier										
(ii)	Has adequate prior exposure to the prerequisites										
(iii)	Had to pickup relevant additional topics through concurrent study										
(iv)	Have no exposure to the background material										
The ex	The expectations for taking the course by the student are:										
(a)											
(b)	Get exposed to	a relevant sub	oject			yes					
(c)	Curiosity					Ges					
(d)	Better Employment Opportunity										
(e)	Complete Cour	se requiremen	nts			yes					
(f)	To Improve CC	GPA .				8					
bout the In	structor: Inform	ation on the	Respondent: ((Tick (√) Appropri	iately)					
			A		В	С	D		E		
	of the Teaching/lea					4					
	nent of the Subject	t .				1					
	Clarity of expression										
	Level of preparation										
	of interaction										
	ssibility outside the	e class				V					
Other:	s (please specify										
: Excellent	R.	Very Good	C: G	ood		D: Satisfacto	ry	E: Po	or		

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COURSE FEEDBACK FORM

Acad	emic Year			2022	PASS							
Term				old se	n							
Cours	se Numbe	r										
Cours	se Title		Dal	a Strutus	use	algonis	thm 8	Pecia	lizati			
Numl	ber of Cre	dits						•				
Гуре	of Course	Regular		Elective			Add-on	V				
•	Information on the Respondent: (Tick ($$) Appropriately)											
	Percentage of classes attended											
	0-20		20-40	40-6	0	60-80		80-100				
	Numbe	r of hours per	week spent on	the course (Other	than lectur	e hours)						
	0-2		2-4	4-6		6-8		8-10				
	Proper	ation for the co	ourse by the st	udent:								
	(i)		rt of this course			Yes						
	(ii)						. 0		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	(iii)	Has adequate prior exposure to the prerequisites Had to pickup relevant additional topics through concurrent study										
	(iv)	Have no exposure to the background material Yes										
	The exp	The expectations for taking the course by the student are:										
	(a)											
	(b)	Get exposed to a relevant subject										
	(c)	Curiosity										
	(d)	Better Employ	yment Opportu	nity		40	1					
	(e)	Complete Course requirements										
	(f)	To Improve CGPA										
boi	ut the Ins	tructor: Infor	nation on the	Respondent: (Tick	(√) Approp							
				A	В	С	D		E			
	Pace of	the Teaching/le	ecture									
	Comme	ent of the Subject	ct									
	Clarity	rity of expression										
		l of preparation										
j		el of interaction										
5.		ibility outside th	ne class			-						
7.	Others	(please specify										
	xcellent		Very Good	C: Good		D: Satisfact	tory	E: Po	oor			

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