

**GURUKULA KANGRI (Deemed to be University), HARIDWAR**  
**Faculty of Engineering & Technology**  
**Computer Science & Engineering**

B.Tech. I Year

Semester - I

Code	Subject	Periods			Evaluation Scheme			Total Marks	Credits	
					Continuous Internal Assessment		CIA Total			ESE
		L	T	P	CT	TA				
BAC-C101	Engineering Chemistry	3	1	0	20	10	30	70	100	4
BEM-C101	Engineering Mathematics– I	3	1	0	20	10	30	70	100	4
BME-C101	Fundamental of Mechanical Engineering	3	1	0	20	10	30	70	100	4
BCE-C101 BCE-C201	Problem Solving Through 'C'	3	1	0	20	10	30	70	100	4
BHU-S101	Vedic Science & Engineering	2	0	0	20	10	30	70	100	2
BEN-A101	Environmental Studies	2	0	0	20	10	30	70	100	2
BAC-C151	Engineering Chemistry Lab	0	0	2	20	10	30	70	100	2
BME-C151	Basic Mechanical Engineering Lab	0	0	2	20	10	30	70	100	2
BCE-C151 BCE-C251	Computer Programming Lab	0	0	2	20	10	30	70	100	2
BME-C153	Engineering Graphics	0	0	2	20	10	30	70	100	2
BSP-S151	Physical Training & Yoga	0	0	2	0	0	30	70	100	0
TOTAL		16	4	10	200	100	300	700	1000	28

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**Computer Science & Engineering**

B. Tech. I Year

Semester - II

Code	Subject	Periods			Evaluation Scheme			Total marks	Credit	
					Continuous Internal Assessment		CIA Total			ESE
		L	T	P	CT	TA				
BAP-C201	Engineering Physics	3	1	0	20	10	30	70	100	4
BEM-C201	Engineering Mathematics–II	3	1	0	20	10	30	70	100	4
BEE-C201	Basic Electrical Engineering	3	1	0	20	10	30	70	100	4
BET-C201	Basic Electronics Engineering	3	1	0	20	10	30	70	100	4
BME-C202	Basic Manufacturing Process	3	1	0	20	10	30	70	100	4
BAP-C251	Engineering Physics Lab	0	0	2	20	10	30	70	100	2
BEE-C251	Basic Electrical Engineering Lab	0	0	2	20	10	30	70	100	2
BET-C251	Basic Electronics Engineering Lab	0	0	2	20	10	30	70	100	2
BME-C252	Workshop Practice	0	0	2	20	10	30	70	100	2
BEG-A251	Technical Communication	0	0	2	20	10	30	70	100	2
TOTAL		15	5	10	200	100	300	700	1000	30

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B.Tech. II Year

Semester - III

Code	Subject	Periods			Evaluation Scheme				Total Marks	Credits
					Continuous Internal Assessment		CIA Total	ESE		
		L	T	P	CT	TA				
BCE-C301/ BCE-C405	Data Structure-I	3	1	0	20	10	30	70	100	4
BEM-C301	Engineering Mathematics-III	3	1	0	20	10	30	70	100	4
BCE-C302	Computer Architecture	3	1	0	20	10	30	70	100	4
BET-C302	Digital Electronics	3	1	0	20	10	30	70	100	4
BCE-C303	Software Engineering	3	1	0	20	10	30	70	100	4
BEE-C302/ BEE-C403	Network Analysis & Synthesis	3	1	0	20	10	30	70	100	4
BCE-C351/ BCE-C454	Data Structure-I Lab	0	0	2	20	10	30	70	100	2
BCE-C353	Simulation Lab	0	0	2	20	10	30	70	100	2
BCE-C352	Computer Architecture Lab	0	0	2	20	10	30	70	100	2
BET-C352	Digital Electronics Lab	0	0	2	20	10	30	70	100	2
	<b>TOTAL</b>	<b>18</b>	<b>6</b>	<b>8</b>	<b>200</b>	<b>100</b>	<b>300</b>	<b>700</b>	<b>1000</b>	<b>32</b>

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**BCE 101**      Semester  
0, 5 & 6 stands for Theory, Practical & Seminar / Project respectively  
Paper Code

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B.Tech. II Year

Semester - IV

Code	Subject	Periods			Evaluation Scheme				Total Marks	Credit
					Continuous Internal Assessment		CIA Total	ESE		
		L	T	P	CT	TA				
BCE-C401	Software Project Management	3	1	0	20	10	30	70	100	4
BEM-C401	Discrete Mathematics	3	1	0	20	10	30	70	100	4
BCE-C402	Operating System	3	1	0	20	10	30	70	100	4
BEM-C402	Numerical Analysis	3	1	0	20	10	30	70	100	4
BCE-C403	Database Management System	3	1	0	20	10	30	70	100	4
BCE-C404/ BCE-C506	Object Oriented Programming Using C++	3	1	0	20	10	30	70	100	4
BKT-E401	Bhartiya Gyan Parampara	3	1	0	20	10	30	70	100	0
BCE-C451	DBMS Lab	0	0	2	20	10	30	70	100	2
BCE-C452/ BCE-C554	Object Oriented Programming Lab	0	0	2	20	10	30	70	100	2
BEM-C452	Numerical Analysis Lab	0	0	2	20	10	30	70	100	2
BCE-C453	Operating System Lab	0	0	2	20	10	30	70	100	2
	TOTAL	18	6	8	200	100	300	700	1000	32

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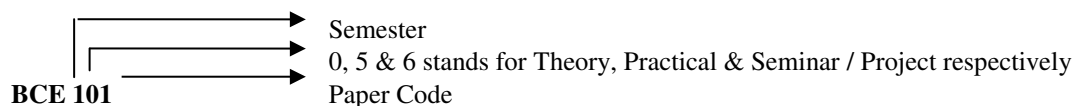
B.Tech. III Year

Semester - V

Code	Subject	Periods			Evaluation Scheme				Total Marks	Credit
					Continuous Internal Assessment		CIA Total	ESE		
		L	T	P	CT	TA				
BCE-C501	Java Programming	3	1	0	20	10	30	70	100	4
BCE-C505	Cloud Computing	3	1	0	20	10	30	70	100	4
BCE-C502	Design Analysis of Algorithm	3	1	0	20	10	30	70	100	4
BET-C505/ BET-C402/ BET-C605	Microprocessor and Microcontroller	3	1	0	20	10	30	70	100	4
BCE-C503	Computer Graphics	3	1	0	20	10	30	70	100	4
BCE-C504	Computer Networks	3	1	0	20	10	30	70	100	4
BCE-C551	Java Programming Lab	0	0	2	20	10	30	70	100	2
BET-C553/ BET-C451/ BET-C654	Microprocessor and Microcontroller Lab	0	0	2	20	10	30	70	100	2
BCE-C552	Cloud Computing Lab	0	0	2	20	10	30	70	100	2
BCE-C560	Project/Seminar	0	0	2	20	10	30	70	100	2
	TOTAL	18	6	8	200	100	300	700	1000	32

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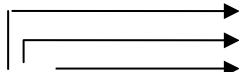
B.Tech. III Year

Semester - VI

Code	Subject	Periods			Evaluation Scheme				Total Marks	Credit
					Continuous Internal Assessment		CIA Total	ESE		
		L	T	P	CT	TA				
BCE-C601	Theory of Computation	3	1	0	20	10	30	70	100	4
BCE-C602	Enterprise Computing with Java	3	1	0	20	10	30	70	100	4
BCE-C603	Distributed System	3	1	0	20	10	30	70	100	4
BCE-C604	Data Structure-II	3	1	0	20	10	30	70	100	4
BCE-C605	Artificial Intelligence	3	1	0	20	10	30	70	100	4
BCE-C606	DSC53-.net Technologies	3	1	0	20	10	30	70	100	4
BCE-C651	Enterprise Computing with Java Lab	0	0	2	20	10	30	70	100	2
BCE-C652	.net Technologies Lab	0	0	2	20	10	30	70	100	2
BCE-C653	Distributed System Lab	0	0	2	20	10	30	70	100	2
BCE-C654	Data Structure-II Lab	0	0	2	20	10	30	70	100	2
	<b>TOTAL</b>	<b>18</b>	<b>6</b>	<b>8</b>	<b>200</b>	<b>100</b>	<b>300</b>	<b>700</b>	<b>1000</b>	<b>32</b>

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**BCE 101** 

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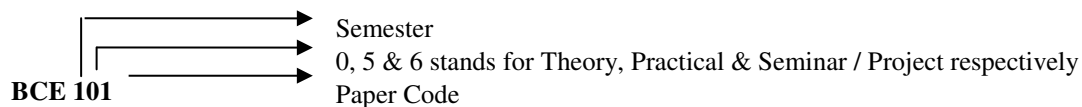
B.Tech. IV Year

Semester - VII

Code	Subject	Periods			Evaluation Scheme				Total Marks	Credit
					Continuous Internal Assessment		CIA Total	ESE		
		L	T	P	CT	T A				
BCE-C701	Compiler Design	3	1	0	20	10	30	70	100	4
BEM-C701	Optimization Techniques	3	1	0	20	10	30	70	100	4
BCE-C702	Cryptography & Network Security	3	1	0	20	10	30	70	100	4
BCE-C703	UNIX	3	1	0	20	10	30	70	100	4
BCE-E7XX	Elective	3	1	0	20	10	30	70	100	4
BCE-C751	UNIX Lab	0	0	2	20	10	30	70	100	2
BCE-C753	Cryptography & Network Security Lab	0	0	2	20	10	30	70	100	2
BCE-C760	Minor Project	0	0	4	20	10	30	70	100	4
	<b>TOTAL</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>160</b>	<b>80</b>	<b>240</b>	<b>560</b>	<b>800</b>	<b>28</b>

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SEMESTER-VII

**Electives for 7<sup>th</sup> Semester**

S. No	Code	SUBJECT
1.	BCE-E704	Visual Programming
2.	BCE-E705	Data Warehousing & Data Mining
3.	BCE-E706	Mobile Computing
4.	BCE-E707	Collaborative development with Version Control
5.	BCE-E708	Application Development using PHP
6.	BCE-E709	Python Programming



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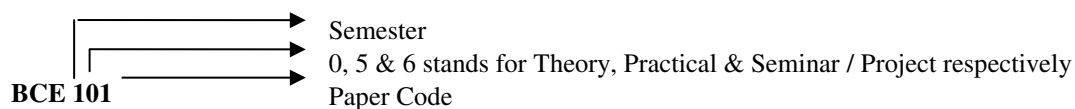
B.Tech. IV Year

Semester - VIII

E-DSE	Course Code	Subject	Periods			Evaluation Scheme				Total Marks	Credit
						Continuous Internal Assessment		CIA Total	ESE		
			L	T	P	CT	TA				
<b>THEORY</b>											
BCE-E		Elective-I	3	1	0	20	10	30	70	100	4
BCE-E		Elective-II	3	1	0	20	10	30	70	100	4
BCE-E		Elective-III	3	1	0	20	10	30	70	100	4
BCE-E		Elective-IV	3	1	0	20	10	30	70	100	4
<b>PRACTICAL</b>											
BCE-C860		Major Project	0	0	8	0	100	100	300	400	8
		<b>TOTAL</b>	<b>12</b>	<b>4</b>	<b>8</b>	<b>80</b>	<b>140</b>	<b>220</b>	<b>580</b>	<b>800</b>	<b>24</b>

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B.Tec. IV Year

Semester - VIII

**Electives for 8<sup>th</sup> Semester**

S. No	CODE	SUBJECT
1.	BCE-E801	Distributed Database Management System
2.	BCE-E802	Advance Computer Network
3.	BCE-E803	Parallel Algorithms
4.	BCE-E804	E-Commerce
5.	BCE-E805	Digital Image Processing
6.	BCE-E806	Industrial Economics & Business Administration
7.	BCE-E807	Natural Language Processing
8.	BCE-E808	Real Time Systems
9.	BCE-E809	Embedded Systems
10.	BCE-E810	Advance Computer Architecture
11.	BCE-E811	Mobile Application Development
12.	BCE-E812	Big Data
13.	BCE-E813	Computer Vision
14.	BCE-E814	Rational Database Management System
15.	BCE-E815	Storage Management
16.	BCE-E816	Open Source Software
17.	BCE-E817	Information Security
18.	BCE-E818	Soft Computing
19.	BCE-E819	Business Intelligence

**NOTE:** Electives will be offered depending upon the availability of teaching staff and minimum thirty students should opt for a particular elective.