

**MANGALORE UNIVERSITY**

**Suggested programme structure for the Under Graduate Programmes**

**[BCA, BCA (A.I & M.L), BCA (D.A)]**

Semester	Course 1	Course 2	Course 3	Elective / Optional	Course	Language	Compulsory	Total Credit	Total Working hour
I	5 (3T+2P)	5 (3T+2P)	5 T			3+3	2	23	4+4+4+4+5+4+4+2=31
II	5 (3T+2P)	5 (3T+2P)	5T			3+3	2	23	4+4+4+4+5+4+4+2=31
III	5 (3T+2P)	5 (3T+2P)	5T	2		3+3		23	4+4+4+4+5+4+4+2=31
IV	5 (3T+2P)	5 (3T+2P)	5T	2		3+3	2	25	4+4+4+4+5+2+4+4+2=33
V	8[(2x3T)+2P] ]	8[(2x3T)+2P] ]	8[(2x3T) +2P]				2	26	3+3+4+3+3+4+3+3+4+2=32
VI	3T	3T	3T		3T	Project work 12		24	3+3+3+3+24=36
								<b>144</b>	

**Note:**

- **Course1 and Course2: I to IV Semester: Theory 3 credit=4 contact hours & Practical 2 credit=4 contact hours**
- **Course3: I to IV Semester: Theory 5 credit=5 contact hours**
- **Course1, Course2 and Course3: V and VI Semester: Theory 3 credit=3 contact hours & Practical 2 credit=4 contact hours**
- **Elective/Optional: 2 credit=2 contact hours**
- **Languages: 3 credit=4 contact hours**
- **Compulsory: 2 credit=2 contact hours**

## CURRICULUM STRUCTURE FOR I TO VI SEMETER BCA

Semester I								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SE E	IA	Total Marks	Credits
1		Language-I	Lang	4	80	20	100	3
2		Language-II	Lang	4	80	20	100	3
3	BCA -1.1	Fundamentals of Computers	Core	4	80	20	100	3
4	BCA -1.2	Programming in C	Core	4	80	20	100	3
5	BCA -1.3	Discrete Mathematics for Computer Applications	Core	5	80	20	100	5
6	BCA -1.4	Information Technology Lab	practical	4	40	10	50	2
7	BCA -1.5	C Programming Lab	practical	4	40	10	50	2
8		Constitution/Values	Compulsory	2	40	10	50	2
<b>Sub - Total</b>				<b>31</b>	<b>520</b>	<b>130</b>	<b>650</b>	<b>23</b>

<b>Semester II</b>								
<b>Sl. No</b>	<b>Course Code</b>	<b>Title of the Course</b>	<b>Category of Courses</b>	<b>Teaching Hours per Week</b>	<b>SE E</b>	<b>IA</b>	<b>Total Marks</b>	<b>Credits</b>
<b>1</b>		<b>Language-I</b>	<b>Lang</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>2</b>		<b>Language-II</b>	<b>Lang</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>3</b>	<b>BCA –2.1</b>	Data Structures	<b>Core</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>4</b>	<b>BCA –2.2</b>	Object Oriented Programming using Java	<b>Core</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>5</b>	<b>BCA –2.3</b>	Computational Mathematics	<b>Core</b>	<b>5</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>5</b>
<b>6</b>	<b>BCA –2.4</b>	Data Structures Lab	<b>practical</b>	<b>4</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>7</b>	<b>BCA –2.5</b>	Object Oriented Programming Lab	<b>practical</b>	<b>4</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>8</b>		<b>Constitution/Values</b>	<b>Compulsory</b>	<b>2</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>Sub - Total</b>				<b>31</b>	<b>520</b>	<b>130</b>	<b>650</b>	<b>23</b>

<b>Semester III</b>								
<b>Sl. No</b>	<b>Course Code</b>	<b>Title of the Course</b>	<b>Category of Courses</b>	<b>Teaching Hours per Week</b>	<b>SEE</b>	<b>IA</b>	<b>Total Marks</b>	<b>Credits</b>
<b>1</b>		<b>Language-I</b>	<b>Lang</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>2</b>		<b>Language-II</b>	<b>Lang</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>3</b>	<b>BCA –3.1</b>	Database Management System	<b>Core</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>4</b>	<b>BCA -3.2</b>	C# and Dotnet Framework	<b>Core</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>5</b>	<b>BCA –3.3</b>	Computer Networks	<b>Core</b>	<b>5</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>5</b>
<b>6</b>	<b>BCA –3.4</b>	Database Management System Lab	<b>practical</b>	<b>4</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>7</b>	<b>BCA –3.5</b>	C# and Dotnet Framework Lab	<b>practical</b>	<b>4</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>8</b>	<b>BCA –3.6</b>	A) Open Source Tools B) Web Content Management System C) DEVOPS	<b>Elective</b>	<b>2</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>Sub - Total</b>				<b>31</b>	<b>520</b>	<b>130</b>	<b>650</b>	<b>23</b>

<b>Semester IV</b>								
<b>Sl. No</b>	<b>Course Code</b>	<b>Title of the Course</b>	<b>Category of Courses</b>	<b>Teaching Hours per Week</b>	<b>SEE</b>	<b>IA</b>	<b>Total Marks</b>	<b>Credits</b>
<b>1</b>		<b>Language-I</b>	<b>Lang</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>2</b>		<b>Language-II</b>	<b>Lang</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>3</b>	<b>BCA -4.1</b>	Python Programming	<b>Core</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>4</b>	<b>BCA -4.2</b>	Advanced JAVA and J2EE	<b>Core</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>5</b>	<b>BCA -4.3</b>	Operating System Concepts	<b>Core</b>	<b>5</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>5</b>
<b>6</b>	<b>BCA -4.4</b>	Python Programming Lab	<b>practical</b>	<b>4</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>7</b>	<b>BCA -4.5</b>	Advanced JAVA and J2EE Lab	<b>practical</b>	<b>4</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>8</b>	<b>BCA -4.6</b>	A) Distributed Computing B) Object Oriented Analysis & Design C) Digital Image Processing	<b>Elective</b>	<b>2</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>9</b>	<b>BCA -4.7</b>	Internet Basics	<b>Compulsory</b>	<b>2</b>	<b>40</b>	<b>10</b>	<b>50</b>	<b>2</b>
<b>Sub - Total</b>				<b>33</b>	<b>560</b>	<b>140</b>	<b>700</b>	<b>25</b>

Semester V								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1	BCA –5.1	Software Engineering	Core	3	80	20	100	3
2	BCA –5.2	Web Development	Core	3	80	20	100	3
3	BCA –5.3	Design Analysis and Algorithm	Core	3	80	20	100	3
4	BCA –5.4	Statistical Computing and R Programming	Core	3	80	20	100	3
5	BCA –5.5	Cloud Computing	Core	3	80	20	100	3
6	BCA –5.6	Cryptography and Network Security	Core	3	80	20	100	3
7	BCA –5.7	Design Analysis and Algorithm Lab	Practical	4	40	10	50	2
8	BCA –5.8	R Programming Lab	Practical	4	40	10	50	2
9	BCA –5.9	Web Development Lab	Practical	4	40	10	50	2
10	BCA –5.10	Data Analytics using Excel	Compulsory	2	40	10	50	2
Sub - Total				32	640	160	800	26

<b>Semester VI</b>								
<b>Sl. No</b>	<b>Course Code</b>	<b>Title of the Course</b>	<b>Category of Courses</b>	<b>Teaching Hours per Week</b>	<b>SEE</b>	<b>IA</b>	<b>Total Marks</b>	<b>Credits</b>
<b>1</b>	<b>BCA- 6.1</b>	Artificial Intelligence and Applications	<b>Core</b>	<b>3</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>2</b>	<b>BCA- 6.2</b>	Principles Cyber Security	<b>Core</b>	<b>3</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>3</b>	<b>BCA- 6.3</b>	Fundamentals of Data Science	<b>Core</b>	<b>3</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>4</b>	<b>BCA- 6.4</b>	Digital Marketing	<b>Core</b>	<b>3</b>	<b>80</b>	<b>20</b>	<b>100</b>	<b>3</b>
<b>4</b>	<b>BCA- 6.5</b>	Project Work	<b>Project Work</b>	<b>24</b>	<b>300</b>	<b>100</b>	<b>400</b>	<b>12</b>
<b>Sub - Total</b>				<b>36</b>	<b>620</b>	<b>180</b>	<b>800</b>	<b>24</b>