



BCA-EC016	Computer Security	BCA-EP016	Computer Security Lab
-----------	-------------------	-----------	-----------------------

The detailed syllabus of the courses are attached in Annexure 3.

(Annexure-3)

**Item No. 4: To consider and adopt the revision of courses offered in 1st year of the BCA program for 2022 batch.**

Based on the comments received from external expert, the Board of Studies members recommended revision of the courses in 2nd year courses of BCA for 2020 batch:

**i) Revision of courses in 1st year of BCA program for 2022 batch in 2022-23 AY**

The members of BoS recommended adopting the curriculum of BCA as approved earlier with changes in the following course(s).

Revision in course curriculum of 1st year of BCA for 2022 batch in 2022-23 AY	
Course Code & Name	Module/ Topics (Added/ Deleted)
<b>2nd semester</b> <u>Course Name &amp; Code:</u> <b>(Data Structures-            BCA-CC202)</b>	<u>Topics Added in following modules:</u> <b>Introduction and Arrays:</b> Sparse Matrix. <b>Trees:</b> B-Trees, B+-Trees. <b>Searching &amp; Sorting:</b> Quick sort, Merge sort, Shell sort.
Revision in course curriculum of 3rd year of BCA for 2021-22 AY	
<b>4th semester</b> <u>Course Name &amp; Code:</u> <b>(Software            Engineering-CC402)</b>	<u>Topics Added in following modules:</u> <b>Introduction:</b> Introduction to Software Engineering <b>Software Maintenance:</b> Quality Assurance

The revised syllabus of the above courses offered in 1st & 6th semesters are mentioned in Annexure 4.

(Annexure 4)

**Item No. 5: To consider & approve the value added courses offered by the Faculty of Computing & Information Technology.**

The members of BoS confirmed the same and approved to be offered in 2022-23 AY.

(Annexure-5)

**Item No. 6: To consider and implement the inputs of the qualitative initiative as per the directions of IQAC.**

The members of BoS recommended adopting the quality initiatives suggested by IQAC.

(Annexure-6)

**Item No. 7: To consider and implement the input recommended by the Academic forum.**

The members of BoS recommended adopting the input recommended by the academic forum.


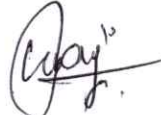
The external expert of BoS authorized the other person of BoS for any kind of revision/change if needed. The meeting ended with thanks to all the members.

Date: 10-06-2022

  
Chairperson

Head  
Computing & IT,  
UMU, Angara, Ranchi-835103

Members with Signature

1. Dr. Sharmistha Roy (Chairperson) 
2. Dr. Kumar Rajnish (External Academic Expert) 


**Copy To:**

- Vice Chancellor, UMU for kind information
- Pro Chancellor, UMU for kind information
- Registrar, UMU for kind information
- All members of the BOS



**Faculty of Computing and Information Technology**

**Minutes of meeting of Board of studies held on 25<sup>th</sup> June 2021**

Ref. UMU/FCIT/2021/01

Date: 25/06/2021

A meeting of the Board of Studies (BoS) of the Faculty of Computing and Information Technology was held on 25-06-2021 at 11.00 am to review the course curriculum of **BCA program** to be effective from 2021-22 AY

Google meet link: <https://meet.google.com/sbf-uyfv-aii>

The following members attended the meeting:

1. Dr. Sharmistha Roy- Chairperson
2. Dr. Kumar Rajnish- External Academic Expert
3. All internal faculty members of the department present on that day

The chairperson of the Board of Studies (BoS) welcomed all of the members and thanked the external expert for his time. The items were covered according to the agenda.

**Item No. 1: To confirm the minutes of the meeting of Board of Studies held on 6<sup>th</sup> July 2020.**

The members of BoS have confirmed the minutes.

*(Annexure-1)*

**Item No. 2: To report the action taken on the minutes of Board of Studies held on 6<sup>th</sup> July 2020.**

The members of the Board of Studies noted the action taken on the decision at the previous meeting and expressed its appreciation for the efforts.

*(Annexure-2)*

**Item No. 3: To consider and adopt the New Elective courses (DSE) to be offered from 2021-22 AY**

In addition to the existing elective list, external academic expert have approved the syllabus of the elective courses to be offered in 2021-22 AY for 2019 batch onwards.

**New Discipline Specific Elective Courses (DSE ) to be offered for BCA, 2019 batch in 2021-22 AY**

Elective Course (EC)	Elective -Practical (EP)
----------------------	--------------------------

Code	Title	Code	Title
BCA-EC011	Combinatorial Optimization	BCA-EP011	Combinatorial Optimization Lab
BCA-EC012	Data Mining	BCA-EP012	Data Mining Lab
BCA-EC013	Big Data Analytics	BCA-EP013	Big Data Analytics Lab
BCA-EC014	Soft Computing	BCA-EP014	Soft Computing Lab

The syllabus/ curriculum of the courses are attached in Annexure 3.

(Annexure-3)

**Item No. 4: To consider and adopt the revision of courses offered in 2nd year of the BCA program from 2020 batch onwards to be effective from 2021-22 AY.**

Dr. Rajnish (external academic expert) along with other members of Board of Studies have recommended revision of the courses in 2nd year courses of BCA for 2020 batch:

**i) Revision of courses in 2nd year of BCA program for 2020 batch in 2021-22 AY**

The BoS members recommended adopting the curriculum of BCA as approved earlier with changes in the following course(s).

Revision in course curriculum of 2nd year of BCA for 2020 batch in 2021-22 AY	
Course Code & Name	Module/ Topics (Added/ Deleted)
<b>4th semester</b> <u>Course Name &amp; Code:</u> <b>(Database Management System- BCA-CC403)</b>	<p><b><u>Module Added in the curriculum:</u></b></p> <p><b>Relation Query Language:</b> Relational algebra operators: selection, projection, cross product, various types of joins, Introduction to SQL, Data definition in SQL, Data manipulation in SQL, SQL queries</p> <p><b><u>Topics Added in following modules:</u></b></p> <p><b>Introduction:</b> General introduction to database systems, Database- DBMS Definition, three-schema system architecture of a database, challenges in building a DBMS, various components of a DBMS.</p> <p><b>Entity Relationship (ER) Modeling &amp; Relational Data Model:</b> various types of attributes, relationship types, E/R diagram, concepts of relations, Relational model concepts, relational constraints.</p> <p><b>Database Design:</b> Importance of a good schema design, problems encountered with bad schema design.</p>
Revision in course curriculum of 3rd year of BCA for 2021-22 AY	



<p><b>6th semester</b></p> <p><u>Course Name &amp; Code:</u>  <b>(Theory of Computation- BCA-CC601)</b></p>	<p><b><u>Module Added in the curriculum:</u></b></p> <p><b>Unit V. Recursive and Recursively Enumerable Languages (REL):</b>          Properties of recursive and recursively enumerable languages, Universal Turing Machine, The Halting problem, Chomsky hierarchy, Decidability, Post's correspondence problem (PCP), Undecidability of PCP.</p> <p><b><u>Module Modified:</u></b></p> <p><b>Unit IV. Pushdown Automata and Turing Machines</b>          Pushdown automata, model, acceptance of CFL, Acceptance by Empty stack and its Equivalence, Equivalence of CFG and PDA, Turing Machine as a model of computation, Language acceptability, decidability, TM as acceptors, and TM as a computer of integer functions, Types of TMs.</p>
---	---

The members of BoS recommended the revision of the course curriculum offered in 1st & 6th semesters as mentioned in Annexure 4.

*(Annexure 4)*

**Item No. 5: To consider & approve the value added courses offered by the Faculty of Computing & Information Technology.**

The members of BoS have confirmed the same and the course names are mentioned in Annexure 5.

*(Annexure-5)*

**Item No. 6: To consider and implement the inputs of the qualitative initiative as per the directions of IQAC.**

The members of BoS recommended adopting the quality initiatives suggested by IQAC.

*(Annexure-6)*

**Item No. 7: To consider and implement the input recommended by the Academic forum.**



The members of BoS recommended adopting the input recommended by the academic forum.


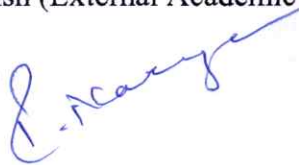

The external expert of BoS has authorized the other person of BoS for any kind of revision/change if needed. The meeting ended with thanks to all the members.

Date: 25-06-2021

  
 Chairperson  
 Head  
 Computing & IT,  
 UJU, Angara, Ranchi-835103

Members with Signature

1. Dr. Sharmistha Roy (Chairperson) 
2. Dr. Kumar Rajnish (External Academic Expert) 

**Copy To:**

- Vice Chancellor, UMU for kind information
- Pro-Vice Chancellor, UMU for kind information
- Registrar, UMU for kind information
- All members of the BOS



**Faculty of Computing and Information Technology**

**Minutes of meeting of Board of studies held on 6<sup>th</sup> July 2020**

Ref. UMU/FCIT/2020/02

Date: 06/07/2020

A meeting of the Board of Studies (BoS) of the Faculty of Computing and Information Technology was held on 06-07-2020 at 11.00 am to review the course curriculum of **BCA program** to be effective from 2020-21 AY

Google meet link: <https://meet.google.com/jfn-kqxm-kpz>

The following members attended the meeting:

1. Dr. Sharmistha Roy- Chairperson
2. Dr. Kumar Rajnish- External Academic Expert
3. Mr. Amitabha Bhattacharjee- External Industry Expert (Joint GM, IT Services, MECON Ltd.)

4. All internal faculty members of the department present on that day

The chairperson of the Board of Studies (BoS) welcomed all of the members and thanked the external expert for their time. The items were covered according to the agenda.

**Item No. 1: To confirm the minutes of the meeting of Board of Studies held on 12<sup>th</sup> June 2019.**

The members of BoS confirmed the minutes.

*(Annexure-1)*

**Item No. 2: To report the action taken on the minutes of Board of Studies held on 12<sup>th</sup> June 2019.**

The Board of Studies members noted the action taken on the decision on the previous meeting and expressed its appreciation for the efforts.

*(Annexure-2)*

**Item No. 3: To consider and adopt the syllabus of New Elective courses (DSE) to be offered in BCA for 2018 batch.**

External experts have approved the syllabus of the elective courses to be offered in BCA from 2018 batch onwards in 2020-21 AY are mentioned below:



**New Discipline Specific Elective Courses (DSE ) to be offered from BCA, 2018 batch in 2020-21 AY**

Elective Courses (EC)	
Code	Title
BCA-EC008	Cloud Computing
BCA-EC009	Numerical Methods
BCA-EC010	System Programming
BCA-EP008	Cloud Computing Lab
BCA-EP009	Numerical Methods Lab
BCA-EP010	System Programming Lab

Members of BoS have recommended the curriculum/ syllabus of the elective courses to be offered in 2020-21 AY as attached in Annexure 3.

*(Annexure- 3)*

**Item No. 4: To consider and adopt the revision of courses offered in 1st year of the BCA program for 2020 batch.**

Based on the suggestions received from external experts of Board of Studies, the following revision has been done in the courses offered in 2nd year courses of BCA for 2018 batch:

**i) Revision of courses in 1st year & 3rd year of BCA program for 2020-21 AY**

The BoS members recommended adopting the curriculum of BCA as approved earlier with changes in the following course(s).



Revision in course curriculum of 1st year of BCA for 2020-21 AY	
Course Code & Name	Module/ Topics (Added/ Deleted)
<b>1st semester</b>  <u>Course Name &amp; Code:</u> <b>(Discrete Structure-            BCA-CC102)</b>	<b><u>Topics Added in following modules:</u></b>  <b>Graph Theory:</b> Minimum Spanning Tree, MST Algorithms (Prims & Kruskals)  <b>Propositional Logic:</b> Proposition, Truth values, Logical equivalence of composite statement (using truth table & without truth table), Contradiction.  <b>Predicate Logic:</b> Proof by Contraposition, Proof by Contradiction  <b>Topics to be removed from the module:</b>  <b>Propositional Logic:</b> Well formed Formulas
Revision in course curriculum of 3rd year of BCA for 2020-21 AY	
<b>6th semester</b>  <u>Course Name &amp; Code:</u> <b>(Computer Graphics-            BCA-CC102)</b>	<b><u>Topics Added in following modules:</u></b>  <b>Introduction:</b> Introduction to Computer Graphics, Display technologies  <b>Fundamental Techniques in Graphics:</b> Clipping algorithms (Sudderland-cohen line clipping)  <b>Geometric Modeling:</b> representing Bazier, B-spline curves  <b><u>Topics to be deleted from following modules:</u></b>  <b>Fundamental Techniques in Graphics:</b> Vanishing points  <b><u>Module to be Added:</u></b>  <b>Graphics Algorithm:</b> Digital Differential Algorithms (DDA), Bresenham's Line Drawing algorithm, Circle and Ellipse drawing  <b><u>Module to be Deleted:</u></b>  <b>Surface rendering:</b> Illumination and shading models. Basic color models and Computer Animation

The members of BoS recommended the revision of the course curriculum offered in 1st & 6th semesters as mentioned in Annexure 4.

(Annexure 4)

**Item No. 5: To consider & approve the value added courses offered by the Faculty of Computing & Information Technology.**

The members of BoS confirmed the same.

(Annexure-5)

**Item No. 6: To consider and implement the inputs of the qualitative initiative as per the directions of IQAC.**

The BoS members recommended adopting the quality initiatives suggested by IQAC.

(Annexure-6)

**Item No. 8: To consider and implement the input recommended by the Academic forum.**

The members of BoS recommended adopting the input recommended by the academic forum.

The external members of BoS authorized the other person of BoS for any kind of revision/change if needed. The meeting ended with thanks to all the members.

Date: 06-06-2018

Members with Signature

1. Dr. Sharmistha Roy (Chairperson)
2. Dr. Kumar Rajnish (External Academic Expert)
3. Mr. Amitabha Bhattacharjee (External Industry Expert (Joint GM, IT Services,

MECON Ltd.))

Copy To:

- Vice Chancellor, UMU for kind information
- Pro-Vice Chancellor, UMU for kind information
- Registrar, UMU for kind information
- All members of the BOS

Chairperson

Head  
Computing & IT,  
UMU, Angara, Ranchi-835103

A Bhattacharjee



**Faculty of Computing and Information Technology**

**Minutes of meeting of Board of studies held on 12<sup>th</sup> June 2019**

Ref. UMU/FCIT/2019/01

Date: 12/06/2019

A meeting of the Board of Studies (BoS) of the Faculty of Computing and Information Technology was held on 12-06-2019 at 10.00 am to review the course curriculum of **BCA program** to be effective from 2019-20 AY

The following members attended the meeting:

1. Dr. Sharmistha Roy                      Chairperson
2. Dr. Abhijit Mustafi-                      External Academic Expert
3. Mr. Amitabha Bhattacharjee- External Industry Expert (Joint GM, IT Services, MECON Ltd.)
4. All internal faculty members of the department present on that day

The chairperson of the Board of Studies (BoS) welcomed all of the members and thanked the external expert for their time. The items were covered according to the agenda.

**Item No. 1: To confirm the minutes of the meeting of Board of Studies held on 6<sup>th</sup> June 2018.**

The members of Board of Studies (BoS) confirmed the minutes.

*(Annexure-1)*

**Item No. 2: To report the action taken on the minutes of Board of Studies held on 6<sup>th</sup> June 2018.**

The members of Board of Studies noted the action taken on the decision on the previous meeting and expressed its appreciation for the efforts.

*(Annexure-2)*

**Item No. 3: To consider and adopt the Syllabus New Core courses offered in 3rd year of the BCA program for 2017 batch.**

Based on the UGC guidelines & CBCS course structure, the BOS members recommended the 3rd year course curriculum of 2017 batch as mentioned in Annexure 3. The courses offered in 5th & 6th semesters are mentioned below.

New Core Courses offered in 3rd year of BCA program for 2017 batch	
	Courses offered in 2019-20 AY

Semester Fifth:	Internet Technologies (BCA-CC501) Internet Technologies Lab (BCA-CP501) Artificial Intelligence (BCA-CC502) Artificial Intelligence Lab (BCA-CP502)
Semester Sixth:	Theory of Computation (BCA-CC601) Computer Graphics (BCA-CC602) Computer Graphics Lab (BCA-CP602)

BoS members recommended adopting the curriculum/ syllabus of 3rd year of the BCA program as mentioned in Annexure 3

(Annexure 3)

**Item No. 4: To consider and adopt the Syllabus of New Elective courses (DSE) to be offered for 2017 batch.**

**New Discipline Specific Elective Courses (DSE ) to be offered for BCA, 2017 batch in 2019-20 AY**

Elective Course (EC)		Elective -Practical (EP)	
Code	Title	Code	Title
BCA-EC001	Information Security	BCA-EP001	Information Security Lab
BCA-EC002	Network Programming	BCA-EP002	Network Programming Lab
BCA-EC003	Microprocessor	BCA-EP003	Microprocessor Lab
BCA-EC004	Computational Linguistics	BCA-EP004	Computational Linguistics Lab
BCA-EC005	Digital Image Processing	BCA-EP005	Digital Image Processing Lab
BCA-EC006	Machine Learning	BCA-EP006	Machine Learning Lab
BCA-EC007	Introduction to Data Sciences	BCA-EP007	Introduction to Data Sciences Lab
BCA-EC015	Project/Dissertation	BCA-EP015	Industrial Tour and Reporting

The syllabus/ curriculum of the elective courses are attached in Annexure 4.

(Annexure-4)

**Item No. 5: To consider and adopt the revision of courses offered in 2nd year of the BCA program for 2018 batch.**

The external academic member of Board of Studies recommended revision of the courses in 2nd year courses of BCA for 2018 batch:

**i) Revision of courses in 2nd year of BCA program for 2018 batch**

The BoS members recommended adopting the curriculum of BCA as approved earlier with changes in the following course(s).

Revision in course curriculum of 2nd year of BCA for 2019-20 AY.	
Course Code & Name	Module/ Topics (Added/ Deleted)
<b>3rd semester</b> <u>Course Name &amp; Code:</u> <b>(Computer Network-            BCA-CC303)</b>	<b>Topics Added in following modules:</b> <b>Introduction to Computer Networks:</b> Networks and Types, Uses of Computer Networks <b>Networks Layer Functions and Protocols:</b> Distance Vector Routing, Link State Routing
<b>3rd semester</b> <u>Course Name &amp; Code:</u> <b>(Computer Network            Lab- BCA-CP303)</b>	<b>Following programs added in the existing syllabus:</b> <ol style="list-style-type: none"> <li>1. Send a PDU from source to destination</li> <li>2. Use of ipconfig, ipconfig /all and ping commands</li> <li>3. Connect the computers in Local Area Network.</li> <li>4. Create Star topology using Hub in CISCO Packet Tracer</li> <li>5. Establish a LAN using switch and demonstrate the difference between hub and switch by simulating in CPT</li> <li>6. Connect two different networks using router and demonstrate the difference between switch and router by simulation in CPT</li> <li>7. Configure TELNET on CISCO router.</li> <li>8. Static routing with CISCO Packet Tracer</li> </ol> <p>Following topics were removed from the program list:</p> <ol style="list-style-type: none"> <li>1. Wireless lab: Node creation &amp; Mobile node position</li> </ol>
<b>4th semester</b> <u>Course Name &amp; Code:</u> <b>(Design and Analysis            of Algorithms Lab-            BCA-CP401)</b>	<b>Following programs added in the existing syllabus:</b> <ol style="list-style-type: none"> <li>1. Write a program to perform Count sort for any given list of numbers.</li> <li>2. Write a program to perform Radix sort for any given list of numbers.</li> <li>3. Write a program to implement Multistage graph using dynamic programming.</li> <li>4. Implement Travelling Salesperson algorithm using dynamic programming and draw its time complexity graph.</li> <li>5. Implement 8-queen problem using backtracking and draw its time complexity graph.</li> </ol>



The members of BoS recommended the curriculum of the courses offered in 3<sup>rd</sup> & 4<sup>th</sup> semester as mentioned in Annexure 5.

*(Annexure 5)*

**Item No. 6: To review the Project/ Dissertation course, its submission timeline and evaluation system.**

Project/ Dissertation (BCA-EC015) is a 6 credit course, which has to be adopted by every students pursuing BCA in 6<sup>th</sup> semester. The topic/title of the Project and the name of the supervisor earmarked shall be approved by an Internal Project Guide from the department. Total marks assigned is 100, where 40 marks has to be given by Project guide based on internal assessment and 60 marks will be evaluated during end semester examination in presence of external examiner.

External academic & industry experts of BOS has approved the suggestion of fixing the timeline for the project submission of 6<sup>th</sup> semester and elaborated the evaluation system as mentioned in Annexure 6.

*(Annexure 6)*

**Item No. 7: To review the Industrial Tour & Reporting course of BCA and its execution process.**

Industrial Tour & Reporting (BCA-EP015) is a 2 credit course, which is offered and taken up by every students of BCA during 6<sup>th</sup> semester. The course is a practical component where every student has to visit reputed industries/organizations to provide insight regarding the internal working of companies. During each visit, the student will interact with industry personnel and observe the technical practices been followed in the organization. Each student has to prepare a report on the observations made by them during the visit. External members of BOS have approved the industrial visit execution process of 6th semester and its evaluation process as mentioned in Annexure 7. The total mark assigned is 100.

*(Annexure 7)*

**Item No. 8: To consider & approve the value added courses offered by the Faculty of Computing & Information Technology.**

The members of BoS confirmed the same.

*(Annexure-8)*

**Item No. 9: To consider and implement the inputs of the qualitative initiative as per the directions of IQAC.**



The members of BoS recommended adopting the quality initiatives suggested by IQAC.

(Annexure-9)

**Item No. 10: To consider and implement the input recommended by the Academic forum.**



The BoS members recommended adopting the input recommended by the academic forum.

The external members of BoS authorized the other person of BoS for any kind of revision/change if needed. The meeting ended with thanks to all the members.

Date: 12-06-2019

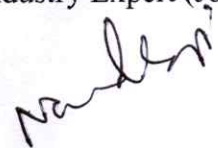
  
Chairperson

Members with Signature

1. Dr. Sharmistha Roy (Chairperson) 
2. Dr. Abhijit Mustafi (External Academic Expert) 
3. Mr. Amitabha Bhattacharjee (External Industry Expert (Joint GM, IT Services,

MECON Ltd.))





Head  
Computing & IT,  
UMU, Angara, Ranchi-835103



**Copy To:**

- Vice Chancellor, UMU for kind information
- Pro-Vice Chancellor, UMU for kind information
- Registrar, UMU for kind information
- All members of the BOS





Faculty of Computing and Information Technology

Minutes of meeting of Board of studies held on 6<sup>th</sup> June 2018

Ref. UMU/FCIT/2018/01

Date: 06/06/2018

A meeting with members of the Board of Studies (BoS) of the Faculty of Computing and Information Technology was held on 06-06-2018 at 1.00 pm to review the course curriculum/ syllabus of BCA program to be effective from 2018-19 AY

The following members attended the meeting:

1. Dr. Sharmistha Roy . Chairperson
2. Dr. Abhijit Mustafi- External Academic Expert
3. Mr. Amitabha Bhattacharjee- External Industry Expert (Joint GM, IT Services, MECON Ltd.)
4. All internal faculty members of the department present on that day

The chairperson of the Board of Studies (BoS) welcomed all of the members and thanked the external expert for their time. The items were covered according to the agenda.

**Item No. 1: To confirm the minutes of the meeting of Board of Studies held on 4<sup>th</sup> August 2017.**

*(Annexure-1)*

The BoS members confirmed the minutes.

**Item No. 2: To report the action taken on the minutes of Board of Studies held on 4<sup>th</sup> August 2017.**

*(Annexure-2)*

The members of Board of Studies noted the action taken on the decision on the previous meeting and expressed its appreciation for the efforts.

**Item No.3: To discuss the vision and mission of the Faculty of Computing and Information Technology**

*(Annexure-3)*

The members of BOS have approved the vision and mission of the Faculty of Computing and Information Technology mentioned in Annexure 3.

**Item No.4: To discuss and finalise the PEOs, POs and PSOs for the BCA Program**

*(Annexure-3)*

Page 1 of 5

The members of BOS have BOS has approved the PEOs, POs and PSOs for the BCA Program mentioned in Annexure 3.

**Item No. 5: To consider and adopt the Syllabus of New Core courses offered in 2nd year of BCA program for 2017 batch.**

Based on the UGC guidelines & CBCS course structure, the BOS members recommended the 2<sup>nd</sup> year course curriculum of BCA 2017 batch as mentioned in Annexure 4. The core courses offered in 3<sup>rd</sup> & 4<sup>th</sup> semesters are mentioned below.

New Core Courses offered in 2nd year of BCA program for 2017 batch	
	Courses offered in 2018-19 AY
Semester Third:	Computer System Architecture (BCA-CC301) Computer System Architecture Lab (BCA-CP301) Operating System (BCA-CC302) Operating System Lab (BCA-CP302) Computer Networks (BCA-CC303) Computer Networks Lab (BCA-CP303)
Semester Fourth:	Design and Analysis of Algorithms (BCA-CC401) Design and Analysis of Algorithms Lab (BCA-CP402) Software Engineering (BCA-CC402) Software Engineering Lab (BCA-CP402) Database Management Systems (BCA-CC403) Database Management Systems Lab (BCA-CP403)

BoS members recommended adopting the curriculum/ syllabus of 2nd year of the BCA program as mentioned in Annexure 4.

*(Annexure 4)*

**Item No. 6: To consider and adopt the Syllabus of New Elective courses (GEC & SEC) to be offered in BCA for 2017 batch.**

**New General Elective Courses (GEC) to be offered for BCA, 2017 batch during 2018-19 AY**

1. BCA-GE003- Statistics (Cr 6)
2. BCA-GE004- Operational Research (Cr 6)
3. BCA-GE006- E-Commerce (Cr 6)

**New Skill Enhancement Courses (SEC) to be offered for BCA, 2017 batch during 2018-19 AY**

1. HTML Programming (BCA-SEC001)
2. HTML Programming Lab (BCA-SEP001)
3. Programming in Python (BCA-SEC002)
4. Programming in Python Lab (BCA-SEP002)
5. Android Programming (BCA-SEC003)
6. Android Programming Lab (BCA-SEP003)

The syllabus/ curriculum of the elective courses are attached in Annexure 5.

(Annexure-5)

**Item No. 7: To consider and adopt the revision of courses offered in 1st year of BCA program for 2018 batch.**

Based on the feedback analysis and action taken report, the External Academic members of Board of Studies recommended revision of the courses in 1st year courses of BCA for 2018 batch:

**Revision of courses in 1st year of BCA program for 2018 batch**

The BoS recommended adopting the curriculum of BCA as approved earlier with changes in the following course(s).

<b>Revision in course curriculum of 1<sup>st</sup> year of BCA for 2018-19 AY.</b>	
<b>Course Code &amp; Name</b>	<b>Module/ Topics (Added/ Deleted)</b>
<b>1<sup>st</sup> semester</b> <u>Course Name &amp; Code:</u> <b>(Programming Fundamentals using C- BCA-CC101)</b>	<b>The following module has been added to the existing syllabus</b>  <b>Derived Data Types (Structures and Unions):</b> Limitation of array. Need of derived data types (structure and union). Basic difference between implementation of structure and union. Declaration of structure and union. Accessing data members of structure and union. Initialization of data members of structure and union. Passing and returning structure to / from the function. Nesting of structure. Structure with union as a member. Union with structure as a member.
<b>1<sup>st</sup> semester</b> <u>Course Name &amp; Code:</u> <b>(Programming Fundamentals using C Lab- BCA-CP101)</b>	<b>Following programs added in the existing syllabus:</b> <ol style="list-style-type: none"> <li>1. Write a program to create a structure 'STUDENT' with the attributes Roll, Name, Gender and Marks in 5 different subjects. Take input the values of a student and display them.</li> <li>2. Write a program to create a structure 'STUDENT' with the attributes Roll, Name, Gender and Marks in 5 different subjects. Take input the values for 5 students and display them.</li> <li>3. Write a program to define a structure 'EMPLOYEE' having data members name, address, age and salary. Take the data for n employees in an array and find the average salary.</li> </ol>

<p><b>2nd semester</b></p> <p><u>Course Name &amp; Code:</u> <b>(Programming in JAVA- BCA-CC201)</b></p>	<p><b>Topics Added in following modules:</b></p> <p><b>Module I- Introduction to Java:</b> History of Java, Java installation and setting the path, JVM Memory Management, Control Statements like if-else, switch, for loop, and while loop</p> <p><b>Module III- Classes, Objects and Methods</b> Types of Constructors in Java, Constructor overloading, Copy constructor, Access modifiers, Types of Access Modifiers (public, private, default and protected), Encapsulation in Java, Garbage Collection, Static keyword in Java</p>
<p><b>2nd semester</b></p> <p><u>Course Name &amp; Code:</u> <b>(Programming in JAVA Lab- BCA-CP201)</b></p>	<ol style="list-style-type: none"> <li>1. Write a program to find the largest 2 numbers and the smallest 2 numbers in the array initialized by the user.</li> <li>2. Write a program to print the element of an array that has occurred the highest number of times Eg) Array -&gt; 10,20,10,30,40,100,99 O/P:10</li> <li>3. Write a program to add all the values in each number and check if the sum is prime number or not. Ex: 1234-&gt;10, not prime.</li> <li>4. Create a class named 'Animal' which includes methods like eat () and sleep (). Create a child class of Animal named 'Bird' and override the parent class methods. Add a new method named fly (). Create an instance of Animal class and invoke the eat and sleep methods using this object. Create an instance of Bird class and invoke the eat, sleep and fly methods using this object.</li> <li>5. Write a Java program to create an abstract class named Shape that contains two integers and an empty method named print Area (). Provide three classes named Rectangle, Triangle, and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method print Area () that prints the area of the given shape.</li> </ol>

The members of the BoS recommended the revision of the course curriculum offered in 1st & 2nd semester as mentioned in Annexure 6.

*(Annexure 6)*

**Item No. 8: To consider & approve the value added courses offered by the Faculty of Computing & Information Technology.**

The members of BoS confirmed the same.

*(Annexure-7)*

**Item No. 9: To consider and implement the inputs of the qualitative initiative as per the directions of IQAC.**

The members of BoS recommended adopting the quality initiatives suggested by IQAC.

(Annexure-8)

**Item No. 10: To consider and implement the input recommended by the Academic forum.**

The members of BoS recommended adopting the input recommended by the academic forum.

The external experts of the BoS committee authorized the other person of BoS for any kind of revision/change if needed.


The meeting ended with thanks to all the members.

Date: 06-06-2018

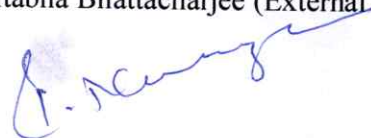
  
Chairperson

Computing & IT,  
UMU, Angara, Ranchi-835103

Members with Signature

1. Dr. Sharmistha Roy (Chairperson) 

2. Dr. Abhijit Mustafi (External Academic Expert) 

3. Mr. Amitabha Bhattacharjee (External Industry Expert (Joint GM, IT Services, MECON Ltd.)) 

  
A. Bhattacharjee

**Copy To:**

- Vice Chancellor, UMU for kind information
- Pro-Vice Chancellor, UMU for kind information
- Registrar, UMU for kind information
- All members of the BOS