Letter No- JUT-517/2021/   Ranchi, Dated:

Notification

In pursuance of the decision taken under agenda no. 12 of 12th meeting of Academic Council held on 17-02-2022 (said proceeding of the meeting notified vide letter no. JUT-189/2019/182 Dated- 18.02.2022), it is hereby notified that syllabus and ordinances/regulations of Bachelor of Computer Application (B.C.A.) is being notified herewith.

This shall come into the force with effect from Academic Year 2022-23.

By order of the Vice-Chancellor

Sd/-

Director (Curriculum Development)
Jharkhand University of Technology,
Ranchi.

Letter No.-JUT-517/2021/239   /Ranchi, Dated -02/03/2022

Copy to:

1). P.A./P.S. to Principal Secretary to the Hon'ble Governor cum Chancellor, Governor Secretariat, Raj Bhawan, Ranchi for kind information.

2). P.A./P.S. to Additional Chief Secretary, Department of Higher and Technical Education, Yojana Bhawan, Doranda, Ranchi for kind information.

3). Office of the Vice-Chancellor for kind information / all officers and staff of the Jharkhand University of Technology, Ranchi for kind information and needful, establishment section is directed to upload a copy of said letter to the university website.

02/03/22

Director (Curriculum Development)
Jharkhand University of Technology,
Ranchi.

Letter No- JUT-517/2021/   Ranchi, Dated:

Notification

In pursuance of the decision taken under agenda no. 12 of 12th meeting of Academic Council held on 17-02-2022 (said proceeding of the meeting notified vide letter no. JUT-189/2019/182 Dated- 18.02.2022), it is hereby notified that syllabus and ordinances/regulations of Bachelor of Business Administration (B.B.A.) is being notified herewith.

This shall come into the force with effect from Academic Year 2022-23.

By order of the Vice-Chancellor

Sd/-

Director (Curriculum Development)
Jharkhand University of Technology,
Ranchi.

Letter No.-JUT-517/2021/*240*   /Ranchi, Dated - *02/03/2022*

Copy to:

1). P.A./P.S. to Principal Secretary to the Hon'ble Governor cum Chancellor, Governor Secretariat, Raj Bhawan, Ranchi for kind information.

2). P.A./P.S. to Additional Chief Secretary, Department of Higher and Technical Education, Yojana Bhawan, Doranda, Ranchi for kind information.

3). Office of the Vice-Chancellor for kind information / all officers and staff of the Jharkhand University of Technology, Ranchi for kind information and needful, establishment section is directed to upload a copy of said letter to the university website.

Director (Curriculum Development)
Jharkhand University of Technology,
Ranchi.

Letter No- JUT-517/2021/   Ranchi, Dated:

Notification

    In pursuance of the decision taken under agenda no. 12 of 12th meeting of Academic Council held on 17-02-2022 (said proceeding of the meeting notified vide letter no. JUT-189/2019/182 Dated- 18.02.2022), it is hereby notified that Guidelines for requirement of minimum infrastructure and other teaching facilities and determination of seat intake for granting affiliation by Jharkhand University of Technology, Ranchi for Bachelor of Business Administration (B.B.A.) and Bachelor of Computer Application (B.C.A.) is being notified herewith.

    This shall come into the force with effect from Academic Year 2022-23.

<div align="right">

By order of the Vice-Chancellor

Sd/-
Director (Curriculum Development)
Jharkhand University of Technology,
Ranchi.

</div>

Letter No.-JUT-517/2021/2-41   /Ranchi, Dated -02/03/2022
Copy to:

1). P.A./P.S. to Principal Secretary to the Hon'ble Governor cum Chancellor, Governor Secretariat, Raj Bhawan, Ranchi for kind information.

2). P.A./P.S. to Additional Chief Secretary, Department of Higher and Technical Education, Yojana Bhawan, Doranda, Ranchi for kind information.

3). Office of the Vice-Chancellor for kind information / all officers and staff of the Jharkhand University of Technology, Ranchi for kind information and needful, establishment section is directed to upload a copy of said letter to the university website.

4). Chairman, UGC/AICTE for kind information.

<div align="right">

Director (Curriculum Development)
Jharkhand University of Technology,
Ranchi.

</div>

JHARKHAND UNIVERSITY OF TECHNOLOGY

Jharkhand, Ranchi

Ordinance for

BACHELOR OF COMPUTER APPICATION

(B.C.A) Programme

Program Objectives

1) An ability to apply knowledge of basic mathematics, science and domain knowledge to solve the computational problems.

2) To demonstrate knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional practice.

3) To empower students with basic skills of various technologies.

4) To develop the ability to identify and analyze for formulate and develop computer applications.

5) To enable the students to select modern computing tools and techniques and use them with practical expertise.

6) To empower students for challenging roles in the IT industry, Computer Science & Applications, web and mobile development, data analysis, information security etc.,

1. Introduction

The ordinance/regulation herein specified applied to Bachelor of Computer Applications (BCA) programme offered by the Jharkhand University of Technology, Ranchi, Jharkhand. It is a Under Graduate (UG) Programme of 3 years duration (6 semesters). The basic units of time for academic activity for the BCA programme shall be a semester (July to December and January to June).

2. Eligibility for admission

First Semester-

A candidate will be eligible to join First Semester of BCA Course, if he/she has passed 10+2 examinations or Intermediate or any other equivalent examination with a minimum of 45% aggregate in any discipline (Arts, Commerce, Science) with mathematics as one of the subjects. (Note: Passed in mathematics)

<div align="center">OR</div>

Those candidates who have passed their Matriculation examination AND have also passed three-year Diploma in any Trade from Jharkhand University of Technology, Ranchi, Jharkhand or such Examination from any other recognized State Board of Technical Education.

Lateral Entry (Third Semester)

BCA (Lateral Entry): It is a Under Graduate (UG) Programme of 2 years duration (4 semesters)

10+2 or Intermediate or any other equivalent examination with a minimum of 45% aggregate in any discipline (Arts, Commerce, Science) with mathematics as one of the subjects. (Note: Passed in mathematics) with 1 year Diploma in Computer Application / IT (or equivalent) from a recognized University or DIT / DCA level.

3. Scheme of study:

i) **Core Course** (CC) of 4 Credits each of total 15 papers: A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core Courses

ii) **Elective Course** (EC) of 4 Credits each of total 6 papers: A course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or

supportive to the discipline or which provides an extended scope or which enables an exposure to some other discipline/ subject/ domain is called an Elective Course.

iii) **Ability Enhancement Compulsory Course** (AECC) of 3/2 Credits of total 4 papers: AECC are the courses based upon the content that leads knowledge enhancement

iv) **Skill Enhancement Courses** (SEC) of 2 Credits each 4 papers: SEC are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills etc. These courses may be chosen from a pool of courses and should contain both theory and la/hands-on/training/field work. The purpose of these courses is to provide students life-skills in hands-on mode so as to increase their employability.

v) There shall be five theory papers and two practical from first semester to fourth semester.

vi) There will be five theory, two practical and 4-to-6-week industrial training / one live-project in fifth semester. There will be four theory, one practical and one major project in sixth semester.

vii) There shall be at least 90 teaching days in each semester excluding periods of examination and admission etc. for instruction, field work, dissertation and practical work.

4. Examination Assessment

   i. The examination of each paper shall have two components- External evaluation (End Semester University Exam) at the end of the semester carrying 70 marks to be conducted by the university and Internal evaluation of 30 marks to be evaluated by Teachers. Internal evaluation shall comprise written exam carry 20 marks of a paper. Seminars/Cultural activities/NSS be 5 marks and 5 marks for assignment. All sessional Examination and fifth/ sixth semester industrial training viva-voce / project viva-voce will carry 50 marks.

5. Eligibility for Appearing in Semester Examination

   i.   A student shall be eligible in an examination provided he/she pursues a regular course of study and attends at least 75% of class in each theoretical and sessional subject during the semester. The attendance shall be considered from the date of admission of the candidate in the institution.

   ii.   A student who has been absent for short periods on medical ground or due to participation in cultural, sports, other academic/official assignments in the interest of the Department/University with prior written permission of the head of the institution shall be permitted a maximum of additional concession of 10% in attendance and

shall be eligible for appearing in examination with a minimum 65% of attendance in semester.

6. Promotion for next semester / year

Advancement to the next Semester shall be permitted only with a maximum of Two Backlog Papers from the preceding Semester. Further, entry to the next Semester shall be regulated at
the level of 4th, 5th and 6th Semesters as explained under:

    i.   Admission to 4th Semester shall be allowed only after clearing First Semester Backlog Paper(s) during Third Semester.

    ii.   Admission to 5th Semester shall be allowed only after clearing Second Semester Backlog Paper(s) during 4th , Semester.

    iii.   Admission to 6th Semester shall be allowed only after clearing Third Semester Backlog Paper(s) during 5th Semester.

    iv.   Backlog paper(s) of 4th Semester needs to be cleared during 6th Semester.

    v.   Backlog paper(s) of 5th and 6th Semesters need to be cleared during subsequent examinations for these semesters within three consequent examinations of the concerned semester.

7. Results

The Cumulative Grade Point Average (CGPA) will be calculated on the 10-point grading scale as follows:

Grade Point	Parentage of Marks	Grade Symbol (Letter)
10	91 – 100	O (Outstanding)
09	81 –90	A+ (excellent)
08	71 –80	A (Very Good)
07	61 –70	B+ (Good)
06	51 –60	B(Above Average)
05	41 –50	C (Average)
04	33 –40	P (Pass)
00	Below 33	F (Fail or Absent)

For each Semester:

Semester Grade Point Average (SGPA)

Semester Grade Point Average (SGPA)

$$S(j) = \frac{\sum_i C(i).G(i)}{\sum_i C(i)} \qquad (i)$$

Where C(i) denotes the total credits of the ith course. G(i) denotes the grade point earned by a student in i^{th} course and j indicates the semester.

For full course

$$\text{Cumulative Grade Point Average CGPA} = \frac{\sum_j C(j).S(j)}{\sum_j C(j)} \qquad (ii)$$

Where C(j) denotes the total credits of the jth semester. S(j) denotes the SGPA of the jth semester.

Final Result / Grades Description

CGPA	Letter Grade	Result / Class
9.00-10.00	O (Outstanding)	Outstanding
8.00-<9.00	A+ (Excellent)	First Class Exemplary
7.00-<8.00	A (Very Good)	First Class Distinction
6.00-<7.00	B+ (Good)	First Class
5.50-<6.00	B(Above Average)	High Second Class
5.00-<5.50	C (Average)	Second Class
4.00-<5.00	P (Pass)	Pass Class
Below 4.00	F	Fail

8. Provision of review

i. A candidate may apply for Post-publication Review (PPR) of his/her answer-script(s) in the prescribed form and manner and a submission of fees prescribed for the purpose within the date as per notification to be issued by the Controller of Examinations (JUT Ranchi) at the time of publication of result. Such applications must be checked and verified by the college(s) concerned as regards to the eligibility of the candidate(s) applying for review. All such applications must be forwarded by the Principal/Professor-in-Charge of the college concerned.

ii. There shall be no Post-publication Review of MCQ Papers, Practical Papers, Oral examinations and Project Work/Field Work, if any.

iii. A student may apply for review of maximum two theoretical answer scripts in the prescribed form

9. Other

Other provisions not covered under the present ordinance/regulations shall be governed be the ordinance/regulations for Bachelor of Technology (B. Tech.)of the university and may, if needed be reviewed. Any dispute or case not covered under the above regulations shall be referred to the Vice Chancellor whose decision shall be final.

10. Termination from the programme

If a student newly admitted to the first semester remains absent from attending classes for more than the first 15 days continuously without any intimation, her/his admission will stand cancelled.

Course Structure

First Semester

Subject Code	Course Type	Subject Name	Load Allocation			Marks distribution		Total Marks	Credit
			L	T	P	Internal Marks	External Marks		
1CR01	Core	Mathematics-I	4	0	0	30	70	100	4
1CR02	Core	Fundamentals of Computer and IT	4	0	0	30	70	100	4
1CR03	Core	Problem Solving using C/C++	4	0	0	30	70	100	4
1CR04	Core	Digital Electronics	4	0	0	30	70	100	4
1AE01	Ability Enhancement	Professional Communications	3	0	0	30	70	100	3
1CR01-L	Computer Lab-1	Programming Lab C/C++	0	0	2	25	25	50	2
1AE01-L	Ability Enhancement Lab	Language Lab	0	0	2	25	25	50	2
Semester Total			19	0	4	200	400	600	23

Second Semester

Subject Code	Course Type	Subject Name	Load Allocation			Marks distribution		Total Marks	Credit
			L	T	P	Internal Marks	External Marks		
2CR01	Core	Database Management System	4	0	0	30	70	100	4
2CR02	Core	Data Structures	4	0	0	30	70	100	4
2CR03	Core	Computer Networks	4	0	0	30	70	100	4
2CR04	Core	Math- II	4	0	0	30	70	100	4
2AE01	Ability Enhancement	Environmental Science	2	0	0	30	70	100	2
2CR01-L	Computer Lab-1	DBMS Lab	0	0	2	25	25	50	2
2CR02-L	Computer Lab-2	Data Structure Lab	0	0	2	25	25	50	2
Semester Total			18	0	4	200	400	600	22

Third Semester

Subject Code	Course Type	Subject Name	Load Allocation			Marks distribution		Total Marks	Credit
			L	T	P	Internal Marks	External Marks		
3CR01	Core	Computer Networks	4	0	0	30	70	100	4
3CR02	Core	Programming in JAVA	4	0	0	30	70	100	4
3CR03	Core	Fundamentals of Statistics	4	0	0	30	70	100	4
3OE01	Elective-I	Open Elective – I	4	0	0	30	70	100	4
3SE01	Skill Enhancement	PC Assembly & Troubleshooting	3	0	0	30	70	100	3
3CR01-L	Computer Lab-1	JAVA Lab	0	0	2	25	25	50	2
3SE02-L	Skill Enhancement -2	PC Assembly & Troubleshooting Lab	0	0	2	25	25	50	2
Semester Total			18	0	4	200	400	600	22

Open Elective-I

1. Operating System
2. Data Mining

Fourth Semester

Subject Code	Course Type	Subject Name	Load Allocation			Marks distribution		Total Marks	Credit
			L	T	P	Internal Marks	External Marks		
4CR01	Core	Programming in Python	4	0	0	30	70	100	4
4CR02	Core	Software Engineering	4	0	0	30	70	100	4
4CR03	Core	Computer System Architecture	4	0	0	30	70	100	4
4OE01	Elective-II	Open Elective – II	4	0	0	30	70	100	4
4OE01	Elective- III	Open Elective – III	3	0	0	30	70	100	3
4CR01-L	Computer Lab-1	Python Lab	0	0	2	25	25	50	2
4OE02-L	Open Elective Lab- 2	Open Elective Lab-II/III	0	0	2	25	25	50	2
Semester Total			18	0	4	200	400	600	22

Open Elective – II

1. Computer Networks
2. Distributed Database Management System

Open Elective – III

1. Web technology
2. Computer Graphics

Fifth Semester

Subject Code	Course Type	Subject Name	Load Allocation			Marks distribution		Total Marks	Credit
			L	T	P	Internal Marks	External Marks		
5CR01	Core	Dot Net Programming	3	0	0	30	70	100	4
5OE02	Elective- IV	Open Elective – IV	4	0	0	30	70	100	4
5OE03	Elective- V	Open Elective – V	4	0	0	30	70	100	4
5SK01	Skill Enhancement	Programming in PHP	4	0	0	30	70	100	3
5AE01	Ability Enhancement	Mini Project	0	0	2	25	25	50	2
5CR01-L	Computer Lab-1	Dot Net Lab	0	0	2	25	25	50	2
5SE02-L	Skill Enhancement Lab- 2	PHP Lab	0	0	2	25	25	50	2
Semester Total			18	0	4	195	355	550	21

Open Elective – IV

1. Internet of Things
2. Artificial Intelligence

Open Elective – V

1. Multimedia & E-Commerce
2. Computer Network Security

Six Semester

Subject Code	Course Type	Subject Name	Load Allocation			Marks distribution		Total Marks	Credit
			L	T	P	Internal Marks	External Marks		
5OE01	Elective- VI	Open Elective – VI	4	0	0	30	70	100	4
5OR02	Elective- VII	Open Elective – VII	4	0	0	30	70	100	4
5OE01	Skill Enhancement	Android Programming	3	0	0	30	70	100	3
5SE01	Ability Enhancement	Mentoring and Professional Development	0	0	2	25	25	50	2
5CR01 -L	Skill Enhancement Lab- 2	Android Programming Lab	0	0	2	25	25	50	2
5CR02 -L	Skill Enhancement Lab- 3	Project Work	0	0	6	25	25	50	6
Semester Total			18	0	10	165	285	450	21

Open Elective – VI

1. Organization Behaviour
2. Principles of Management

Open Elective – VII

1. Business Communication
2. Unix and Shell Programming