



**Jharkhand University of Technology, Ranchi**  
**Bachelor of Computer Applications (BCA)**  
**NEP-2020 based Syllabus**

**III<sup>rd</sup> –Semester**

| S.No.               | Course Code | Course Title   | L              | T        | P         | J        | Cr        | FM         | Overall Pass Marks        | Internal        | External        | Categorization        |
|---------------------|-------------|--|----------------|----------|-----------|----------|-----------|------------|---------------------------|-----------------|-----------------|-----------------------|
|                     |             |  | Hours per week |          |           |          |           |            |                           |                 |                 |                       |
| 01                  |             | Computer Organization & Architecture                     | 3              | 0        | 0         | 6        | 3         | 100        | 40                        | 30              | 70              |                       |
| 02                  |             | Data Communication & Computer Network                    | 3              | 0        | 0         |          | 3         | 100        | 40                        | 30              | 70              |                       |
| 03                  |             | Web Technology   | 3              | 0        | 0         |          | 3         | 100        | 40                        | 30              | 70              |                       |
| 04                  |             | Object Oriented Programming through JAVA                 | 3              | 0        | 0         |          | 3         | 100        | 40                        | 30              | 70              |                       |
| 05                  |             | Database Management System                               | 3              | 0        | 0         |          | 3         | 100        | 40                        | 30              | 70              |                       |
| <b>Total</b>        |             |  | <b>15</b>      | <b>0</b> | <b>0</b>  |          | <b>15</b> | <b>500</b> | <b>--</b>                 | <b>--</b>       | <b>--</b>       | <b>--</b>             |
| <b>Practical</b>    |             |  | <b>L</b>       | <b>T</b> | <b>P</b>  |          | <b>Cr</b> | <b>FM</b>  | <b>Overall Pass Marks</b> | <b>Internal</b> | <b>External</b> | <b>Categorization</b> |
| 05                  |             | Web Technology Programming Lab                           | 0              | 0        | 4         |          | 2         | 50         | 25                        | 30              | 20              |                       |
| 06                  |             | Object Oriented Programming through JAVA Lab             | 0              | 0        | 4         |          | 2         | 50         | 25                        | 30              | 20              |                       |
| 07                  |             | Database Management System Lab                           | 0              | 0        | 4         |          | 2         | 50         | 25                        | 30              | 20              |                       |
| <b>Total</b>        |             |  | <b>0</b>       | <b>0</b> | <b>12</b> |          | <b>6</b>  | <b>150</b> | <b>--</b>                 | <b>--</b>       | <b>--</b>       | <b>--</b>             |
| <b>Audit Course</b> |             |  | <b>L</b>       | <b>T</b> | <b>P</b>  |          | <b>Cr</b> | <b>FM</b>  | <b>Overall Pass Marks</b> | <b>Internal</b> | <b>External</b> | <b>Categorization</b> |
| 08                  | AUC301      | Mastering Personal Finance (Basic to Advance Strategies) | 3              | 0        | 0         |          | 0         | 100        | 40                        | 30              | 70              | AUC                   |
| 09                  | AUC302P     | Sports/NCC/NSS/YOGA/Painting/Music/ Classical Dance      | 6              |          |           |          | 0         | 50         | 25                        | 30              | 20              | AUC                   |
| <b>Total</b>        |             |  | <b>3</b>       | <b>0</b> | <b>0</b>  |          | <b>0</b>  | <b>150</b> | <b>--</b>                 | <b>--</b>       | <b>--</b>       | <b>--</b>             |
| <b>Grand Total</b>  |             |  | <b>18</b>      | <b>0</b> | <b>12</b> | <b>6</b> | <b>21</b> | <b>800</b> | <b>--</b>                 | <b>--</b>       | <b>--</b>       | <b>--</b>             |

**Note-**

\* BCA-- Bachelor of Computer Applications; AU- Audit Course; L: Lecture, T: Tutorial, P: Practice.

J- Self learning hours shall not be reflected in the Time table. Self-learning includes micro project/ assignment/ other activities as mentioned in earlier semester.

\*Passing in Audit Course shall be mandatory.



**Jharkhand University of Technology, Ranchi**  
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**IV<sup>th</sup> Semester**

| S.No.   | Course Code | Course Title  | L              | T        | P         | J | Cr        | FM         | Overall Pass Marks        | Internal        | External        | Categorization        |
|---|-------------|---|----------------|----------|-----------|---|-----------|------------|---------------------------|-----------------|-----------------|-----------------------|
|   |             |   | Hours per week |          |           |   |           |            |                           |                 |                 |                       |
| 01  |             | Advance Python Programming  | 3              | 0        | 0         | 6 | 3         | 100        | 40                        | 30              | 70              |                       |
| 02  |             | Computer Graphics   | 3              | 0        | 0         |   | 3         | 100        | 40                        | 30              | 70              |                       |
| 03  |             | Cloud Computing   | 3              | 0        | 0         |   | 3         | 100        | 40                        | 30              | 70              |                       |
| 04  |             | Software Engineering  | 3              | 0        | 0         |   | 3         | 100        | 40                        | 30              | 70              |                       |
| 05  |             | PC Assembly & Troubleshooting   | 3              | 0        | 0         |   | 3         | 100        | 40                        | 30              | 70              |                       |
| <b>Total</b>  |             |   | <b>15</b>      | <b>0</b> | <b>0</b>  |   | <b>15</b> | <b>500</b> | <b>--</b>                 | <b>--</b>       | <b>--</b>       | <b>--</b>             |
| <b>Practical</b>  |             |   | <b>L</b>       | <b>T</b> | <b>P</b>  |   | <b>Cr</b> | <b>FM</b>  | <b>Overall Pass Marks</b> | <b>Internal</b> | <b>External</b> | <b>Categorization</b> |
| 06  |             | Advance Python Programming Lab  | 0              | 0        | 4         |   | 2         | 50         | 25                        | 30              | 20              |                       |
| 07  |             | Computer Graphics Lab   | 0              | 0        | 4         |   | 2         | 50         | 25                        | 30              | 20              |                       |
| 08  |             | PC Assembly & Troubleshooting Lab   | 0              | 0        | 4         |   | 2         | 50         | 25                        | 30              | 20              |                       |
| <b>Total</b>  |             |   | <b>0</b>       | <b>0</b> | <b>12</b> |   | <b>6</b>  | <b>150</b> | <b>--</b>                 | <b>--</b>       | <b>--</b>       | <b>--</b>             |
| <b>Audit Course</b>   |             |   | <b>L</b>       | <b>T</b> | <b>P</b>  |   | <b>Cr</b> | <b>FM</b>  | <b>Overall Pass Marks</b> | <b>Internal</b> | <b>External</b> | <b>Categorization</b> |
| 09  | AUC401      | <b>FOREIGN LANGUAGE OR REGIONAL LANGUAGE (ANY ONE)</b><br><b>FOREIGN LANGUAGE</b><br>1. GERMAN<br>2. JAPANESE<br>3. CHINESE<br>4. KOREAN<br>5. SPANISH<br>6. RUSSIAN<br><b>REGIONAL LANGUAGE</b><br>7. MARATHI<br>8. KANNAD<br>9. TAMIL<br>10. TELUGU |                |          | 0         |   | --        | 100        | 40                        | 30              | 70              |                       |
| <p>Students will complete this Audit Paper of 12 weeks duration from NPTEL/SWAYAM. It is mandatory to pass this paper in order to pass this semester. Student may register on NPTEL/SWAYAM at any time from 1<sup>st</sup> to 3<sup>rd</sup> semester but the passing marks and credits will be reflected only in the 4<sup>th</sup> semester.<br/>           The passing marks and certificate shall be forwarded by the institute to Controller of Examination (CoE), JUT, Ranchi timely.</p> |             |   |                |          |           |   |           |            |                           |                 |                 |                       |

|             |         |  |           |   |    |   |     |     |     |    |     |
|-------------|---------|--|-----------|---|----|---|-----|-----|-----|----|-----|
| 10          | AUC402P | Sports/NCC/NSS/YOGA/Painting/Music/<br>Classical Dance | 6         |   |    | 0   | 50  | 25  | 30  | 20 | AUC |
|             |         |  |           |   |    | Student shall participate actively in one of the activities and for Passing of the semester "Participation Certificate" in activity will be mandatory student participation shall be monitored and participation record shall be maintained at institute level. |     |     |     |    |     |
| 11          | INT401P | Summer Internship                                      | 6-8 Weeks |   |    | 2   | --  | --  | 1/0 | -- | INT |
| Total       |         |  | 0         | 0 | 0  | 2   | 150 | --  | --  | -- | --  |
| Grand Total |         |  | 15        | 0 | 12 | 6   | 23  | 800 | --  | -- | --  |

**Note-**

1. **BCA-- Bachelor of Computer Applications; AU- Audit Course; L: Lecture, T: Tutorial, P: Practice, CIE- Continuous Internal Evaluation, SEE- Semester End Evaluation.**
2. **INT- Internship (Completion of internship will be marked as-1; Non-completion of internship will be marked as-0 by the institution; The submitted write up & presentation record shall be kept safely by the institution).**
3. **J- Self learning hours shall not be reflected in the Time table. Self-learning includes micro project/ assignment/ other activities as mentioned in earlier semester.**
4. **Passing in Audit Course shall be mandatory.**