

**.. Bachelor in Computer Application (BCA)
(NEP Aligned)**

Syllabus As Per NEP 2020



**SRI SRI
UNIVERSITY**
LEARN • LEAD • SERVE

**Faculty of Engineering & Technology (FET)
Sri Sri University**

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| Bachelor in Computer Application (BCA) | | | | | |
|---|---|----------|----------|----------|-----------|
| 1st Year | | | | | |
| Course code | Semester – I | L | T | P | Cr |
| Major Courses | | | | | |
| TBC101 | Programming in ‘C’ | 3 | 0 | 0 | 3 |
| TBC102 | Programming in ‘C’ Lab | 0 | 0 | 1 | 1 |
| TBC103 | Database Management System | 3 | 0 | 0 | 3 |
| TBC104 | Database Management System Lab | 0 | 0 | 1 | 1 |
| TCA101 | Fundamentals of Information Technology | 2 | 0 | 0 | 2 |
| TCA102 | Fundamentals of Information Technology LAB | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMG101 | Entrepreneurship Development | 4 | 0 | 0 | 4 |
| Multidisciplinary Courses | | | | | |
| | Foundational Mathematics | 3 | 0 | 0 | 3 |
| Ability enhancement course | | | | | |
| TAE101 | IT Primer | 2 | 0 | 0 | 2 |
| TAE102 | IT Primer | 0 | 0 | 1 | 1 |
| Skill enhancement course | | | | | |
| TSE113 | Ex. - CISCO Networking (Foundation) | 2 | 0 | 0 | 2 |
| TSE114 | CISCO Networking (Foundation) Lab | 0 | 0 | 1 | 1 |
| Value added course | | | | | |
| | Happiness Connect | 0 | 0 | 2 | 2 |
| TVA101 | Sustainable Development Goals | 0 | 0 | 1 | 1 |
| General proficiency | | | | | |
| TGP101 | <u>General proficiency - I</u> General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 1 | 1 |
| Optional | | | | | |
| TOP101 | Emerging IT Courses (Physical/ Hybrid) (AIML/Data Science/ Cyber Security) | 3 | 0 | 0 | 3 |

Total Credit in 1st Semester – 28

| Bachelor in Computer Application (BCA) | | | | | |
|---|---|----------|----------|----------|-----------|
| 1st Year | | | | | |
| Course code | Semester – II | L | T | P | Cr |
| Major Courses | | | | | |
| TCA103 | Multimedia Applications | 1 | 0 | 0 | 1 |
| TCA104 | Multimedia Applications Lab | 0 | 0 | 1 | 1 |
| TCS104 | Data Structure using 'C' | 3 | 0 | 0 | 3 |
| TCS105 | Data Structure using 'C' Lab | 0 | 0 | 1 | 1 |
| TBC105 | Core Java | 3 | 0 | 0 | 3 |
| TBC106 | Core Java Lab | 0 | 0 | 1 | 1 |
| TBC107 | Web Development Technologies | 3 | 0 | 0 | 3 |
| TBC108 | Web Development Technologies Lab | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMG102 | Design Thinking | 3 | 0 | 0 | 3 |
| TMG103 | Design Thinking Lab | 0 | 0 | 1 | 1 |
| Multidisciplinary Courses | | | | | |
| TCS211 | Discrete Mathematics | 3 | 0 | 0 | 3 |
| Ability enhancement course | | | | | |
| TAE103 | Professional Communication | 2 | 0 | 0 | 2 |
| TAE104 | Professional Communication Lab | 0 | 0 | 1 | 1 |
| Skill enhancement course | | | | | |
| TSE115 | Ex. - CISCO Networking (Advanced) | 2 | 0 | 0 | 2 |
| TSE116 | CISCO Networking (Advanced) Lab | 0 | 0 | 1 | 1 |
| Value added course | | | | | |
| | Green Governance | 2 | 0 | 0 | 2 |
| General proficiency | | | | | |
| TGP102 | General proficiency - II General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 0 | 1 |
| Optional | | | | | |
| TOP102 | Emerging IT Courses (Physical/ Hybrid) (AIML/Data Science/ Cyber Security) | 3 | 0 | 0 | 3 |

Total Credit in 2nd Semester – 30

| Bachelor in Computer Application (BCA) | | | | | |
|---|--|----------|----------|----------|-----------|
| 2nd Year | | | | | |
| Course code | Semester – III | L | T | P | Cr |
| Major Courses | | | | | |
| TCA201 | Financial Management | 3 | 0 | 0 | 3 |
| TCS209 | Operating System | 3 | 0 | 0 | 3 |
| TCS210 | Operating System Lab | 0 | 0 | 1 | 1 |
| TBC201 | Computer System Architecture | 3 | 0 | 0 | 3 |
| TBC202 | Computer System Architecture Lab | 0 | 0 | 1 | 1 |
| TBC203 | Problem Solving Using Python | 3 | 0 | 0 | 3 |
| TBC204 | Problem Solving Using Python Lab | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMR201 | Computer Network & Data Communication | 3 | 0 | 0 | 3 |
| TMR202 | Computer Network & Data Communication Lab | 0 | 0 | 1 | 1 |
| Multidisciplinary Courses | | | | | |
| | Probability & Statistics | 3 | 0 | 0 | 3 |
| Ability enhancement course | | | | | |
| TAE201 | Soft Skill Development | 0 | 0 | 2 | 2 |
| Skill enhancement course | | | | | |
| TSE117 | Skill Courses/ Apprenticeship – III/ Internship – III/ OJT - III | 0 | 0 | 0 | 3 |
| Value added course | | | | | |
| TVA201 | Disaster Management | 0 | 0 | 2 | 2 |
| General Proficiency | | | | | |
| TGP201 | General Proficiency - III General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 0 | 1 |

Total Credit in 3rd Semester – 30

| Bachelor in Computer Application (BCA) | | | | | |
|---|--|----------|----------|----------|-----------|
| 2nd Year | | | | | |
| Course code | Semester – IV | L | T | P | Cr |
| Major Courses | | | | | |
| TCA202 | OOAD Using UML | 2 | 0 | 0 | 2 |
| TCA203 | OOAD Using UML LAB | 0 | 0 | 1 | 1 |
| TCS205 | Analysis & designing of algorithm | 3 | 0 | 0 | 3 |
| TCS206 | Analysis & designing of algorithm Lab. | 0 | 0 | 1 | 1 |
| TBC205 | Formal Languages & Automata Theory | 3 | 0 | 0 | 3 |
| TBC206 | Formal Languages & Automata Theory Lab. | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMR203 | Data Warehousing & Data Mining | 3 | 0 | 0 | 3 |
| TMR204 | Data Warehousing & Data Mining Lab | 0 | 0 | 1 | 1 |
| Ability enhancement course | | | | | |
| TAE106 | Introduction To AI | 2 | 0 | 1 | 3 |
| Skill enhancement course | | | | | |
| TSE118 | Skill Courses/ Apprenticeship – IV/ Internship – IV/ OJT - IV | 0 | 0 | 0 | 3 |
| Value added course | | | | | |
| TVA202 | Constitution of India | 0 | 0 | 2 | 2 |
| General Proficiency | | | | | |
| TGP202 | <u>General proficiency - IV</u> General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 1 | 1 |

Total Credit in 4th Semester – 24

| Bachelor in Computer Application (BCA) | | | | | |
|--|---|----------|----------|----------|-----------|
| 3rd Year | | | | | |
| Course code | Semester – V | L | T | P | Cr |
| Major Courses | | | | | |
| TCA301 | React JS | 2 | 0 | 0 | 2 |
| TCA302 | React JS Lab | 0 | 0 | 1 | 1 |
| TBC301 | Cloud Computing | 3 | 0 | 0 | 3 |
| TBC302 | Cloud Computing Lab | 0 | 0 | 1 | 1 |
| TBC303 | Internet of Things | 3 | 0 | 0 | 3 |
| TBC304 | Internet of Things Lab | 0 | 0 | 1 | 1 |
| TAI201 | Machine Learning | 3 | 0 | 0 | 3 |
| TAI202 | Machine Learning Lab | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMR301 | Software Project Management | 3 | 0 | 0 | 3 |
| TMR302 | Software Project Management Lab | 0 | 0 | 1 | 1 |
| Internship – I/Skill enhancement course | | | | | |
| TSE119 | Skill Courses/ Apprenticeship – V/ Internship – V/ OJT - V | 0 | 0 | 0 | 3 |
| Value added course | | | | | |
| | Vedic Mathematics | 0 | 0 | 1 | 1 |
| General proficiency | | | | | |
| TGP104 | <u>General proficiency - V</u> General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 0 | 1 |

Total Credit in 5th Semester – 24

| Bachelor in Computer Application (BCA) | | | | | |
|---|---|----------|----------|----------|-----------|
| 3rd Year | | | | | |
| Course code | Semester – VI | L | T | P | Cr |
| Major Courses | | | | | |
| TBC305 | Android Application Development | 3 | 0 | 0 | 3 |
| TBC306 | Android Application Development Lab | 0 | 0 | 1 | 1 |
| TCS317 | ASP .Net | 3 | 0 | 0 | 3 |
| TCS318 | ASP .Net Lab | 0 | 0 | 1 | 1 |
| TCA303 | Cyber Security Foundation | 2 | 0 | 0 | 2 |
| TCA304 | Cyber Security Foundation Lab | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMG301 | Industry & Market Research | 4 | 0 | 0 | 4 |
| Ability enhancement course | | | | | |
| TAE107 | Employability Planning & Preparation – I | 1 | 0 | 1 | 2 |
| Project / Dissertation | | | | | |
| TSE301 | Major project (Implementation & Presentation) | 0 | 0 | 6 | 6 |
| Skill enhancement course | | | | | |
| TSE120 | Skill Courses/ Apprenticeship – VI/ Internship – VI/ OJT - VI | 0 | 0 | 0 | 3 |
| Value added course | | | | | |
| TVA301 | Universal Human Values | 0 | 0 | 1 | 1 |
| General proficiency | | | | | |
| TGP302 | General proficiency - VI General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 0 | 1 |

Total Credit in 6th Semester – 28

| Bachelor in Computer Application (BCA) | | | | | |
|---|---|----------|----------|----------|-----------|
| 4th Year | | | | | |
| Course code | Semester – VII | L | T | P | Cr |
| Major Courses | | | | | |
| TBC401 | Soft Computing | 3 | 0 | 0 | 3 |
| TBC402 | Soft Computing Lab | 0 | 0 | 1 | 1 |
| TBC403 | Computer Graphics | 3 | 0 | 0 | 3 |
| TBC404 | Computer Graphics Lab | 0 | 0 | 1 | 1 |
| TBC405 | Introduction to Data Analytics | 3 | 0 | 0 | 3 |
| TBC406 | Introduction to Data Analytics Lab | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMR401 | Advanced Cyber Security | 3 | 0 | 0 | 3 |
| TMR402 | Advanced Cyber Security Lab | 0 | 0 | 1 | 1 |
| Ability enhancement course | | | | | |
| | Research Methodology - I | 2 | 0 | 0 | 2 |
| Skill enhancement course/ Internship | | | | | |
| TSE121 | Skill Courses/ Apprenticeship – VI/ Internship – VI/ OJT - VI | 0 | 0 | 0 | 3 |
| Value added course | | | | | |
| | Indian Knowledge System | 0 | 0 | 1 | 1 |
| General Proficiency | | | | | |
| TGP401 | <u>General Proficiency - VII</u> General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 1 | 1 |

Total Credit in 7th Semester – 23

| Bachelor in Computer Application (BCA) | | | | | |
|---|--|----------|----------|----------|-----------|
| 4th Year | | | | | |
| Course code | Semester – VIII | L | T | P | Cr |
| Major Courses | | | | | |
| TBC407 | Business Process Reengineering | 4 | 0 | 0 | 4 |
| TBC408 | Introduction to Expert Systems | 3 | 0 | 0 | 3 |
| TBC409 | Introduction to Expert Systems Lab | 0 | 0 | 1 | 1 |
| Minor Courses | | | | | |
| TMG401 | Enterprise Resource Planning (ERP) system | 3 | 0 | 0 | 3 |
| TMG402 | Enterprise Resource Planning (ERP) system Lab | 0 | 0 | 1 | 1 |
| Research Project / Dissertation | | | | | |
| TSE401 | Research project in relevant specialization (Only for HONS With Research)) | 0 | 0 | 12 | 12 |
| General Proficiency | | | | | |
| TGP402 | <u>General Proficiency - VIII</u> General Proficiency shall be assessed based on the participation in Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Debate, Hackathon and so on. | 0 | 0 | 1 | 1 |

Total Credit in 8th Semester – 25

Major Courses

| Sl. No | Course Code | Core Course | L | T | P | Cr |
|--------|-------------|---|---|---|---|----|
| 1 | TBC101 | Programming in 'C' | 3 | 0 | 0 | 3 |
| 2 | TBC102 | Programming in 'C' Lab | 0 | 0 | 1 | 1 |
| 3 | TBC103 | Database Management System | 3 | 0 | 0 | 3 |
| 4 | TBC104 | Database Management System Lab | 0 | 0 | 1 | 1 |
| 5 | TCA101 | Fundamentals of Information System | 2 | 0 | 0 | 2 |
| 6 | TCA102 | Fundamentals of Information System Lab | 0 | 0 | 1 | 1 |
| 7 | TCA103 | Multimedia Applications | 2 | 0 | 0 | 2 |
| 8 | TCA104 | Multimedia Applications Lab | 0 | 0 | 1 | 1 |
| 9 | TCS104 | Data Structure using 'C' | 3 | 0 | 0 | 3 |
| 10 | TCS105 | Data Structure using 'C' Lab | 0 | 0 | 1 | 1 |
| 11 | TBC105 | Core Java | 3 | 0 | 0 | 3 |
| 12 | TBC106 | Core Java Lab | 0 | 0 | 1 | 1 |
| 13 | TBC107 | Web Development Technologies | 3 | 0 | 0 | 3 |
| 14 | TBC108 | Web Development Technologies Lab | 0 | 0 | 1 | 1 |
| 15 | TCA201 | Financial Management | 2 | 0 | 0 | 2 |
| 16 | TCS209 | Operating System | 3 | 0 | 0 | 3 |
| 17 | TCS210 | Operating System Lab | 0 | 0 | 1 | 1 |
| 18 | TBC201 | Computer System Architecture | 3 | 0 | 0 | 3 |
| 19 | TBC202 | Computer System Architecture Lab | 0 | 0 | 1 | 1 |
| 20 | TBC203 | Problem Solving Using Python | 3 | 0 | 0 | 3 |
| 21 | TBC204 | Problem Solving Using Python Lab | 0 | 0 | 1 | 1 |
| 22 | TCA202 | OOAD Using UML | 2 | 0 | 0 | 2 |
| 23 | TCA203 | OOAD Using UML Lab | 0 | 0 | 1 | 1 |
| 24 | TCS205 | Analysis & designing of algorithm | 3 | 0 | 0 | 3 |
| 25 | TCS206 | Analysis & designing of algorithm Lab. | 0 | 0 | 1 | 1 |
| 26 | TBC205 | Formal Languages & Automata Theory | 3 | 0 | 0 | 3 |
| 27 | TBC206 | Formal Languages & Automata Theory Lab. | 0 | 0 | 1 | 1 |
| 28 | TCA301 | React JS | 2 | 0 | 0 | 2 |
| 29 | TCA302 | React JS Lab | 0 | 0 | 1 | 1 |
| 30 | TBC301 | Cloud Computing | 3 | 0 | 0 | 3 |
| 31 | TBC302 | Cloud Computing Lab | 0 | 0 | 1 | 1 |
| 32 | TBC303 | Internet of Things | 3 | 0 | 0 | 3 |
| 33 | TBC304 | Internet of Things Lab | 0 | 0 | 1 | 1 |
| 34 | TAI201 | Machine Learning | 3 | 0 | 0 | 3 |
| 35 | TAI202 | Machine Learning Lab | 0 | 0 | 1 | 1 |

| | | | | | | |
|----|--------|-------------------------------------|---|---|---|---|
| 36 | TBC305 | Android Application Development | 3 | 0 | 0 | 3 |
| 37 | TBC306 | Android Application Development Lab | 0 | 0 | 1 | 1 |
| 38 | TBC307 | ASP .Net | 3 | 0 | 0 | 3 |
| 39 | TBC308 | ASP .Net Lab | 0 | 0 | 1 | 1 |
| 40 | TCA301 | Cyber Security Foundation | 2 | 0 | 0 | 2 |
| 41 | TCA302 | Cyber Security Foundation Lab | 0 | 0 | 1 | 1 |
| 42 | TBC401 | Soft Computing | 3 | 0 | 0 | 3 |
| 43 | TBC402 | Soft Computing Lab | 0 | 0 | 1 | 1 |
| 44 | TBC403 | Computer Graphics | 3 | 0 | 0 | 3 |
| 45 | TBC404 | Computer Graphics Lab | 0 | 0 | 1 | 1 |
| 46 | TBC405 | Introduction to Data Analytics | 3 | 0 | 0 | 3 |
| 47 | TBC406 | Introduction to Data Analytics Lab | 0 | 0 | 1 | 1 |
| 48 | TBC407 | Business Process Reengineering | 4 | 0 | 0 | 4 |
| 49 | TBC408 | Introduction to Expert Systems | 3 | 0 | 0 | 3 |
| 50 | TBC409 | Introduction to Expert Systems Lab | 0 | 0 | 1 | 1 |

Minor Courses (Relevant Discipline Baskets)

| Sl. No | Course Code | Minor Course | L | T | P | Cr |
|--------|-------------|---|---|---|---|----|
| 1 | TMR201 | Computer Network & Data Communication | 2 | 0 | 0 | 3 |
| 2 | TMR202 | Computer Network & Data Communication Lab | 0 | 0 | 4 | 2 |
| 3 | TMR203 | Data Warehousing & Data Mining | 2 | 0 | 0 | 3 |
| 4 | TMR204 | Data Warehousing & Data Mining Lab | 0 | 0 | 4 | 2 |
| 5 | TMR301 | Software Project Management | 2 | 0 | 0 | 3 |
| 6 | TMR302 | Software Project Management Lab | 0 | 0 | 4 | 2 |
| 7 | TMR401 | Advanced Cyber Security | 3 | 0 | 0 | 3 |
| 8 | TMR402 | Advanced Cyber Security Lab | 0 | 0 | 1 | 1 |

General Proficiency

General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, Participation in Events (Conferences/Workshops/ Training/Webinar/Seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.

| Sl. No | Course Code | Minor Courses | L | T | P | Cr |
|--------|-------------|---------------------------|---|---|---|----|
| 1 | TGP101 | General proficiency -I | 0 | 0 | 0 | 1 |
| 2 | TGP 102 | General proficiency – II | 0 | 0 | 0 | 1 |
| 3 | TGP 201 | General proficiency – III | 0 | 0 | 0 | 1 |

| | | | | | | |
|---|---------|----------------------------|---|---|---|---|
| 4 | TGP 202 | General proficiency – IV | 0 | 0 | 0 | 1 |
| 5 | TGP 301 | General proficiency – V | 0 | 0 | 0 | 1 |
| 6 | TGP 302 | General proficiency – VI | 0 | 0 | 0 | 1 |
| 7 | TGP 401 | General proficiency – VII | 0 | 0 | 0 | 1 |
| 8 | TGP 402 | General proficiency - VIII | 0 | 0 | 0 | 1 |

Minor Courses (General Discipline Baskets)

| Sl. No | Course Code | Minor Courses | L | T | P | Cr |
|--------|-------------|---|---|---|---|----|
| 1 | TMG101 | Entrepreneurship Development | 4 | 0 | 0 | 4 |
| 2 | TMG102 | Design Thinking | 3 | 0 | 0 | 3 |
| 3 | TMG103 | Design Thinking Lab | 0 | 0 | 1 | 1 |
| 4 | TMG301 | Industry & Market Research | 4 | 0 | 0 | 4 |
| 5 | TMG401 | Enterprise Resource Planning (ERP) system | 3 | 0 | 0 | 3 |
| 6 | TMG402 | Enterprise Resource Planning (ERP) system Lab | 0 | 0 | 1 | 1 |

Honours Courses

| Sl. No | Course Code | Honours Courses | L | T | P | Cr |
|--------|-------------|------------------------------------|---|---|---|----|
| 1 | TBC401 | Soft Computing | 3 | 0 | 0 | 3 |
| 2 | TBC402 | Soft Computing Lab | 0 | 0 | 1 | 1 |
| 3 | TBC403 | Computer Graphics | 3 | 0 | 0 | 3 |
| 4 | TBC404 | Computer Graphics Lab | 0 | 0 | 1 | 1 |
| 5 | TBC405 | Introduction to Data Analytics | 3 | 0 | 0 | 3 |
| 6 | TBC406 | Introduction to Data Analytics Lab | 0 | 0 | 1 | 1 |

Skill Enhancement Courses

| Sl. No | Course Code | Skill Courses | L | T | P | Cr |
|--------|-------------|--|---|---|---|----|
| 1 | TSE101 | Solar panel Technician level -I (Foundation) | 2 | 0 | 0 | 2 |
| 2 | TSE102 | Solar panel Technician level -I Lab | 0 | 0 | 2 | 1 |
| 3 | TSE103 | Solar panel Technician level – II (Advanced) | 2 | 0 | 0 | 2 |
| 4 | TSE104 | Solar panel Technician level – II Lab | 0 | 0 | 2 | 1 |
| 5 | TSE105 | Electronic Technician level -I (Foundation) | 2 | 0 | 0 | 2 |
| 6 | TSE106 | Electronic Technician level -I Lab | 0 | 0 | 2 | 1 |

| | | | | | | |
|----|--------|---|---|---|---|---|
| 7 | TSE107 | Electronic Technician level -II (Advanced) | 2 | 0 | 0 | 2 |
| 8 | TSE108 | Electronic Technician level -II Lab | 0 | 0 | 2 | 1 |
| 9 | TSE109 | Electrician level -I (Foundation) | 2 | 0 | 0 | 2 |
| 10 | TSE110 | Electrician level -I Lab | 0 | 0 | 2 | 1 |
| 11 | TSE111 | Electrician level -II (Advanced) | 2 | 0 | 0 | 2 |
| 12 | TSE112 | Electrician level -II Lab | 0 | 0 | 2 | 1 |
| 13 | TSE113 | CISCO Networking (Foundation) | 2 | 0 | 0 | 2 |
| 14 | TSE114 | CISCO Networking Lab | 0 | 0 | 2 | 1 |
| 15 | TSE115 | CISCO Networking (Advanced) | 2 | 0 | 0 | 2 |
| 16 | TSE116 | CISCO Networking Lab | 0 | 0 | 2 | 1 |
| 17 | TSE117 | Web Development & Management (Foundation) | 2 | 0 | 0 | 2 |
| 18 | TSE118 | Web Development & Management Lab | 0 | 0 | 2 | 1 |
| 19 | TSE119 | Web Development & Management (Advanced) | 2 | 0 | 0 | 2 |
| 20 | TSE120 | Web Development & Management Lab | 0 | 0 | 2 | 1 |
| 21 | TSE121 | Fortinet Network Security Expert Program (Foundation) | 2 | 0 | 0 | 2 |
| 22 | TSE122 | Fortinet Network Security Expert Program Lab | 0 | 0 | 2 | 1 |
| 23 | TSE123 | Fortinet Network Security Expert Program (Advanced) | 2 | 0 | 0 | 2 |
| 24 | TSE124 | Fortinet Network Security Expert Program Lab | 0 | 0 | 2 | 1 |
| 25 | TSE125 | Digital Marketing (Foundation) | 2 | 0 | 0 | 2 |
| 26 | TSE126 | Digital Marketing Lab | 0 | 0 | 2 | 1 |
| 27 | TSE127 | Digital Marketing (Advanced) | 2 | 0 | 0 | 2 |
| 28 | TSE128 | Digital Marketing Lab | 0 | 0 | 2 | 1 |
| 29 | TSE129 | Digital Embedded System (Foundation) | 2 | 0 | 0 | 2 |
| 30 | TSE130 | Digital Embedded System Lab | 0 | 0 | 2 | 1 |
| 31 | TSE131 | Digital Embedded System (Advanced) | 2 | 0 | 0 | 2 |
| 32 | TSE132 | Digital Embedded System Lab | 0 | 0 | 2 | 1 |
| 33 | TSE133 | Mobile Technology | 2 | 0 | 0 | 2 |

| | | | | | | |
|----|--------|-----------------------------------|---|---|----|----|
| 34 | TSE134 | Mobile Technology Lab | 0 | 0 | 2 | 1 |
| 35 | TSE135 | Software testing | 2 | 0 | 0 | 2 |
| 36 | TSE136 | Software testing Lab | 0 | 0 | 2 | 1 |
| 37 | TSE137 | Multimedia Technology | 2 | 0 | 0 | 2 |
| 38 | TSE138 | Multimedia Technology Lab | 0 | 0 | 2 | 1 |
| 39 | TSE139 | Free and open-source software | 2 | 0 | 0 | 2 |
| 40 | TSE140 | Free and open-source software Lab | 0 | 0 | 2 | 1 |
| 41 | TSE301 | Research Project / Dissertation | 0 | 0 | 6 | 6 |
| 42 | TSE401 | Research Project / Dissertation | 0 | 0 | 12 | 12 |

Multi-disciplinary Courses

| Sl. No | Course Code | Multidisciplinary Courses | L | T | P | Cr |
|--------|-------------|---------------------------|---|---|---|----|
| 1 | | Foundational Mathematics | 3 | 0 | 0 | 3 |
| 2 | TCS211 | Discrete Mathematics | 3 | 0 | 0 | 3 |
| 3 | | Probability & Statistics | 3 | 0 | 0 | 3 |

Ability Enhancement Courses

| Sl. No. | Course Code | Ability Enhancement Courses | L | T | P | Cr |
|---------|-------------|--|---|---|---|----|
| 1 | TAE101 | IT Primer | 2 | 0 | 0 | 2 |
| 2 | TAE102 | IT Primer | 0 | 0 | 1 | 1 |
| 3 | TAE103 | Professional Communication | 2 | 0 | 0 | 2 |
| 4 | TAE104 | Professional Communication Lab | 0 | 0 | 1 | 1 |
| 5 | TAE201 | Soft Skill Development | 0 | 0 | 2 | 2 |
| 6 | TAE202 | Introduction To AI | 2 | 0 | 1 | 3 |
| 7 | TAE301 | Employability Planning & Preparation – I | 1 | 0 | 1 | 2 |
| 8 | | Research Methodology - I | 2 | 0 | 0 | 2 |

Value-Added Courses

| Sl. No | Course Code | Value-added Courses | L | T | P | Cr |
|--------|-------------|-------------------------------|---|---|---|----|
| 1 | | Happiness Connect | 0 | 0 | 2 | 2 |
| 2 | TVA101 | Sustainable Development Goals | 0 | 0 | 1 | 1 |
| 3 | | Green Governance | 0 | 0 | 2 | 2 |
| 4 | TVA202 | Constitution of India | 0 | 0 | 2 | 2 |
| 5 | TVA201 | Disaster Management | 0 | 0 | 2 | 2 |
| 6 | | Vedic Mathematics | 0 | 0 | 1 | 1 |
| 7 | TVA301 | Universal Human Values | 0 | 0 | 1 | 1 |
| 8 | | Indian Knowledge System | 0 | 0 | 1 | 1 |

General Course Structure of BCA

| Sl. No. | Category | Breakup of Credits |
|--------------|---|--------------------|
| 1 | Major Elective | 97 |
| 2 | Minor Elective | 32 |
| 3 | Multidisciplinary | 9 |
| 4 | Ability Enhancement Courses (AEC) | 15 |
| 5 | Internship/ Skill Enhancement Courses (SEC) | 21 |
| 6 | Value Added Courses common for all UG | 12 |
| 7 | General proficiency | 8 |
| 8 | Project / Dissertation | 18 |
| Total | | 212 |