

Graduation Requirement (Computer Engineering) Batch-2018

| Sl. No. | Course Code | Course Title | Hours per week | | | Credits | Pre-requisite | Remarks |
|---------|------------------------|--|----------------|---|---|---------|---------------|----------|
| | | | L | T | P | | | |
| 1. | BPP-151 | Waves and Optics and Introduction to Quantum Mechanics | 3 | 1 | 2 | 5 | NIL | New |
| 2. | BPM-143 | Calculus and Linear Algebra | 3 | 1 | 0 | 4 | NIL | New |
| 3. | TEE-104 | Basic Electrical Engineering | 3 | 1 | 2 | 5 | NIL | New |
| 4. | TCE-114 | Engineering Graphics & Design | 1 | 0 | 4 | 3 | NIL | New |
| 5. | BHS-186 | English | 2 | 0 | 2 | 3 | NIL | New |
| 6. | BHS-188 | Industrial Sociology | 3 | 0 | 0 | 3 | NIL | New |
| 7. | BPC-102 | Chemistry-I | 3 | 0 | 3 | 5 | NIL | New |
| 8. | BPM-154 | Multivariable Calculus, Transforms & Ordinary differential equations | 3 | 1 | 0 | 4 | NIL | New |
| 9. | TIT-121 | Programming for Problem Solving | 3 | 0 | 2 | 4 | NIL | New |
| 10. | TIP-103 | Workshop Practices | 1 | 0 | 4 | 3 | NIL | New |
| 11. | BHS-286 | Effective Technical Communication | 3 | 0 | 0 | 3 | NIL | New |
| 12. | TID/ TSW/ TCE/ TME-109 | Environmental Science and Disaster Management | 3 | 0 | 0 | 3 | NIL | Existing |
| 13. | TWP-101 | Work Programme | 0 | 0 | 2 | 1 | NIL | Existing |
| 14. | TEC-301 | Analog Electronic Circuits | 3 | 0 | 2 | 4 | NIL | New |
| 15. | TCT-201 | Data structures | 3 | 0 | 2 | 4 | NIL | New |
| 16. | TCT-202 | Digital Electronics | 3 | 0 | 2 | 4 | NIL | New |
| 17. | BPS-228 | Probability and Statistics | 3 | 1 | 0 | 4 | NIL | New |
| 18. | TCT-203 | Theory of Computing | 3 | 0 | 0 | 3 | NIL | New |
| 19. | TCT-204 | Discrete Mathematics | 3 | 0 | 0 | 3 | NIL | New |
| 20. | TCT-206 | File Organization & Processing | 2 | 0 | 2 | 3 | NIL | New |
| 21. | TCT-207 | Computer Organization & Architecture | 2 | 0 | 2 | 3 | NIL | New |
| 22. | TCT-208 | Microprocessor | 2 | 0 | 2 | 3 | NIL | New |
| 23. | TCT-209 | Design & Analysis of Algorithms | 3 | 0 | 2 | 4 | NIL | New |
| 24. | BHS-100 | Constitution of India | 1 | 0 | 0 | 1 | NIL | New |

| | | | | | | | | |
|-----|-------------------------------------|--|---|---|----|---|-----|-----|
| 25. | TCT-210 | Formal Language & Automata Theory | 3 | 0 | 0 | 3 | NIL | New |
| 26. | TCT-212 | IT Workshop (MATLAB) | 1 | 0 | 2 | 2 | NIL | New |
| 27. | TCT-306 | Computer Communication Systems | 2 | 0 | 2 | 3 | NIL | New |
| 28. | TCT-301 | Programming Languages | 2 | 0 | 2 | 3 | NIL | New |
| 29. | TCT-302 | Software Engineering | 2 | 0 | 0 | 2 | NIL | New |
| 30. | TCT-303 | Database Management Systems | 3 | 0 | 2 | 4 | NIL | New |
| 31. | TCT-304 | System programming | 2 | 0 | 2 | 3 | NIL | New |
| 32. | TCT- | Professional Elective-I | 3 | 0 | 0 | 3 | NIL | New |
| 33. | TCT-307 | Operating Systems | 3 | 0 | 2 | 4 | NIL | New |
| 34. | TCT-308 | Compiler Design | 3 | 0 | 2 | 4 | NIL | New |
| 35. | TCT-316 | Computer Networks | 3 | 0 | 2 | 4 | NIL | New |
| 36. | TCT- | Professional Elective-II | 3 | 0 | 0 | 3 | NIL | New |
| 37. | TCT-309 | Computer & Society | 2 | 0 | 0 | 2 | NIL | New |
| 38. | As per offering Department (OE-I) | Open Elective-I (Preferably From Humanities as per Model Syllabus AICTE) | 3 | 0 | 0 | 3 | NIL | New |
| 39. | TCT-460A | Project-I(Seminar) | 0 | 0 | 6 | 3 | NIL | New |
| 40. | TCT- | Professional Elective-III | 3 | 0 | 0 | 3 | NIL | New |
| 41. | TCT- | Professional Elective-IV | 3 | 0 | 0 | 3 | NIL | New |
| 42. | TCT- | Professional Elective-V | 3 | 0 | 0 | 3 | NIL | New |
| 43. | As per offering Department (OE-II) | Open Elective-II | 3 | 0 | 0 | 3 | NIL | New |
| 44. | TCT-401 | Machine Learning | 2 | 0 | 2 | 3 | NIL | New |
| 45. | TCT-460B | Project-II | 0 | 0 | 12 | 6 | NIL | New |
| 46. | TCT- | Professional Elective-VI | 3 | 0 | 0 | 3 | NIL | New |
| 47. | As per offering Department (OE-III) | Open Elective-III | 3 | 0 | 0 | 3 | NIL | New |
| 48. | As per offering Department (OE-IV) | Open Elective-IV | 3 | 0 | 0 | 3 | NIL | New |

| | | | | | | | | |
|----------------------|----------|--------------------------|---|---|----|--------|-----|------------|
| 49. | TCT-460C | Project-III | 0 | 0 | 12 | 6 | NIL | New |
| 50. | TCT-495A | Industrial Training-I | 0 | 0 | 0 | 4weeks | NIL | New |
| 51. | TCT-495B | Industrial Training-II | 0 | 0 | 0 | 4weeks | NIL | New |
| 52. | TCT-495C | Industrial Training-III | 0 | 0 | 0 | 4weeks | NIL | New |
| 53. | TIP- 454 | Principles of Management | 2 | 0 | 0 | 2 | NIL | Existing |
| 54. | NSS-101 | National Service Scheme | 0 | 0 | 2 | 1 | NIL | Existing |
| 55. | NSS-102 | National Service Scheme | 0 | 0 | 0 | 0 | NIL | Existing |
| 56. | NSS-201 | National Service Scheme | 0 | 0 | 2 | 1 | NIL | Existing |
| 57. | NSS-202 | National Service Scheme | 0 | 0 | 0 | 0 | NIL | Existing |
| Total credits | | | | | | | | 168 |

Note: Those students who have not taken Hindi at the High School or equivalent level will also require to Register the course BHS-105 Elementary Hindi – 2 Credit.

Professional Elective Courses& Open Elective Courses for B.Tech.

Branch/Course: Computer Engineering

L: Lectures

T: Tutorial

P: Practical

C: Credits

R: Remarks

PEC: Professional Elective Course

OEC: Open Elective Course

| Sl. No. | Type | Code | Course Title | Hours per week | | | C | R |
|---------|------|----------|--|----------------|---|---|---|-----|
| | | | | L | T | P | | |
| 1. | PEC | TCT- 411 | Parallel and distributed algorithms | 3 | 0 | 0 | 3 | New |
| | | TCT- 412 | Computational Complexity | 3 | 0 | 0 | 3 | New |
| | | TCT- 415 | Information Theory and Coding | 3 | 0 | 0 | 3 | New |
| | | TCT- 416 | Quantum Computing | 3 | 0 | 0 | 3 | New |
| | | TCT- 417 | Object Oriented Programming | 3 | 0 | 0 | 3 | New |
| 2. | PEC | TCT- 422 | Advanced Computers Architecture | 3 | 0 | 0 | 3 | New |
| | | TCT- 423 | Distributed Systems | 3 | 0 | 0 | 3 | New |
| | | TCT- 424 | Embedded Systems | 3 | 0 | 0 | 3 | New |
| | | TCT- 425 | Fault Tolerant Computing | 3 | 0 | 0 | 3 | New |
| | | TCT- 426 | Real Time System | 3 | 0 | 0 | 3 | New |
| | | TCT- 427 | Ad-hoc & Sensor Networks | 3 | 0 | 0 | 3 | New |
| | | TCT- 428 | Internet of Things | 3 | 0 | 0 | 3 | New |
| 3. | PEC | TCT- 432 | Artificial Intelligence | 3 | 0 | 0 | 3 | New |
| | | TCT- 433 | Data Mining | 3 | 0 | 0 | 3 | New |
| | | TCT- 434 | Soft Computing | 3 | 0 | 0 | 3 | New |
| | | TCT- 435 | Speech and Natural Language Processing | 3 | 0 | 0 | 3 | New |
| | | TCT- 436 | Neural Networks and Deep Learning | 3 | 0 | 0 | 3 | New |
| 4. | PEC | TCT- 461 | Digital Image Processing | 3 | 0 | 0 | 3 | New |
| | | TCT- 463 | Cloud Computing | 3 | 0 | 0 | 3 | New |
| | | TCT- 464 | Human Computer Interaction | 3 | 0 | 0 | 3 | New |
| | | TCT- 465 | Optimization Techniques | 3 | 0 | 0 | 3 | New |
| | | TCT- 466 | Cryptography and Network Security | 3 | 0 | 0 | 3 | New |
| | | TCT- 467 | Computer Graphics & Animation | 3 | 0 | 0 | 3 | New |
| | | TCT- 468 | VLSI System Design | 3 | 0 | 0 | 3 | New |

Tentative OPEN ELECTIVES for Computer Engineering Students from Other Departments

| | | | | | | | | |
|----|---|-------------------|---|---|---|---|---|-----|
| 5. | OEC for Computer Engineering Students | BHS-387 (OE-I) | Soft Skills and Interpersonal Communication | 2 | 0 | 2 | 3 | New |
| | | Number Awaited | Human Resource Development and Organizational Behavior (Tentative Course Title and credit hours as per Model Syllabus of AICTE) | - | - | - | 3 | - |
| | | TCT-481 | Cyber Law and Ethics (Tentative Course Title and credit hours as per Model Syllabus of AICTE) | 3 | 0 | 0 | 3 | New |
| | | Number Awaited | Indian Music System (Tentative Course Title and credit hours as per Model Syllabus of AICTE) | - | - | - | 3 | - |
| | | Number Awaited | History of Science (Tentative Course Title and credit hours as per Model Syllabus of AICTE) | - | - | - | 3 | - |
| | | Number Awaited | Introduction to Art and Aesthetics (Tentative Course Title and credit hours as per Model Syllabus of AICTE) | - | - | - | 3 | - |
| | | Number Awaited | Economic Policies in India (Tentative Course Title and credit hours as per Model Syllabus of AICTE) | - | - | - | 3 | - |

Graduation Requirement (Computer Engineering) Batch-2018

Semester Wise Distribution: First Year

| Semester I (First year I-Semester) | | | | | | |
|---|-------------------------------|--|----------------|---|---|-----------|
| Sl. No. | Course Code | Course Title | Hours per week | | | C |
| | | | L | T | P | |
| 1 | BPP-151 | Waves and Optics and Introduction to Quantum Mechanics | 3 | 1 | 2 | 5 |
| 2 | BPM-143 | Calculus and Linear Algebra | 3 | 1 | 0 | 4 |
| 3 | TEE-104 | Basic Electrical Engineering | 3 | 1 | 2 | 5 |
| 4 | TID/ TSW/ TCE/ TME-109 | Introduction to Environmental Engineering and Disasters | 3 | 0 | 0 | 3 |
| 5 | TIT-121 | Programming for Problem Solving | 3 | 0 | 2 | 4 |
| 6 | TWP-101 | Work Programme | 0 | 0 | 2 | 1 |
| | Induction Programme (2 Weeks) | | - | - | - | - |
| Total Credits | | | | | | 22 |
| Semester II (First year II-Semester) | | | | | | |
| 1 | BPC-102 | Chemistry-I | 3 | 0 | 3 | 5 |
| 2 | BPM-154 | Multivariable Calculus, Transforms & Ordinary differential equations | 3 | 1 | 0 | 4 |
| 3 | TCE-114 | Engineering Graphics & Design | 1 | 0 | 4 | 3 |
| 4 | TIP-103 | Workshop Practices | 1 | 0 | 4 | 3 |
| 5 | BHS-186 | English | 2 | 0 | 2 | 3 |
| 6 | BHS-188 | Industrial Sociology | 3 | 0 | 0 | 3 |
| 7 | TCT495A | Practical Training-I (4 weeks) | - | - | - | - |
| Total Credits | | | | | | 21 |

Semester Wise Distribution: Second Year

| Semester III (Second year I-Semester) | | | | | | |
|--|--------------------|---|-----------------------|----------|----------|-----------|
| Sl. No. | Course Code | Course Title | Hours per week | | | C |
| | | | L | T | P | |
| 1 | TEC- 301 | Analog Electronic Circuits | 3 | 0 | 2 | 4 |
| 2 | TCT-201 | Data structures | 3 | 0 | 2 | 4 |
| 3 | TCT- 202 | Digital Electronics | 3 | 0 | 2 | 4 |
| 4 | BPS-228 | Probability and Statistics | 3 | 1 | 0 | 4 |
| 5 | TCT-203 | Theory of Computing | 3 | 0 | 0 | 3 |
| 6 | TCT-204 | Discrete Mathematics | 3 | 0 | 0 | 3 |
| 7 | NSS-101 | National Service Scheme | 0 | 0 | 2 | 1 |
| Total Credits | | | | | | 23 |
| Semester IV (Second year II-Semester) | | | | | | |
| 1 | TCT-206 | File Organization & Processing | 2 | 0 | 2 | 3 |
| 2 | TCT-207 | Computer Organization & Architecture | 2 | 0 | 2 | 3 |
| 3 | TCT-208 | Microprocessor | 2 | 0 | 2 | 3 |
| 4 | TCT-209 | Design & Analysis of Algorithms | 3 | 0 | 2 | 4 |
| 5 | BHS-100 | Constitution of India | 1 | 0 | 0 | 1 |
| 6 | TCT-210 | Formal Language & Automata Theory | 3 | 0 | 0 | 3 |
| 7 | TCT- 212 | IT Workshop (Sci Lab/MATLAB) | 1 | 0 | 2 | 2 |
| 8 | BHS286 | Effective Technical Communication | 3 | 0 | 0 | 3 |
| 9 | NSS-102 | National Service Scheme | 0 | 0 | 0 | 0 |
| 10 | TCT495B | Practical Training-II (4 weeks) | - | - | - | - |
| Total Credits | | | | | | 22 |

Semester Wise Distribution: Third Year

| Semester V (Third year I-Semester) | | | | | | |
|---|-----------------------------------|--|-----------------------|----------|----------|-----------|
| Sl. No. | Course Code | Course Title | Hours per week | | | C |
| | | | L | T | P | |
| 1 | TCT-306 | Computer Communication Systems | 2 | 0 | 2 | 3 |
| 2 | TCT-301 | Programming Languages | 2 | 0 | 2 | 3 |
| 3 | TCT-302 | Software Engineering | 2 | 0 | 0 | 2 |
| 4 | TCT-303 | Database Management Systems | 3 | 0 | 2 | 4 |
| 5 | TCT-304 | System programming | 2 | 0 | 2 | 3 |
| 6 | TCT- | Professional Elective-I | 3 | 0 | 0 | 3 |
| 7 | NSS-201 | National Service Scheme | 0 | 0 | 2 | 1 |
| Total Credits | | | | | | 19 |
| Semester VI (Third year II-Semester) | | | | | | |
| 1 | TCT-307 | Operating Systems | 3 | 0 | 2 | 4 |
| 2 | TCT-308 | Compiler Design | 3 | 0 | 2 | 4 |
| 3 | TCT-316 | Computer Networks | 3 | 0 | 2 | 4 |
| 4 | TCT- | Professional Elective-II | 3 | 0 | 0 | 3 |
| 5 | TCT-309 | Computer & Society | 2 | 0 | 0 | 2 |
| 6 | As per offering Department (OE-I) | Open Elective-I (Preferably From Humanities as per Model Syllabus AICTE) | - | - | - | 3 |
| 7 | TCT-460A | Project-1(Seminar) | 0 | 0 | 6 | 3 |
| 8 | TCT-495C | Industrial Training-III | 0 | 0 | 0 | 4weeks |
| 9 | NSS-202 | National Service Scheme | 0 | 0 | 0 | 0 |
| Total Credits | | | | | | 23 |

Semester Wise Distribution: Forth Year

| Semester VII (Fourth year I-Semester) | | | | | | |
|--|--|---------------------------|----------------|---|----|-----------|
| Sl. No. | Course Code | Course Title | Hours per week | | | C |
| | | | L | T | P | |
| 1 | TCT- | Professional Elective-III | 3 | 0 | 0 | 3 |
| 2 | TCT- | Professional Elective-IV | 3 | 0 | 0 | 3 |
| 3 | TCT- | Professional Elective-V | 3 | 0 | 0 | 3 |
| 4 | As per offering Department (OE-II) | Open Elective-II | 3 | 0 | 0 | 3 |
| 5 | TCT-401 | Machine Learning | 2 | 0 | 2 | 3 |
| 6 | TCT-460B | Project-II | 0 | 0 | 12 | 6 |
| Total Credits | | | | | | 21 |
| Semester VIII (Fourth year II-Semester) | | | | | | |
| 1 | TCT- | Professional Elective-VI | 3 | 0 | 0 | 3 |
| 2 | As per offering Department (OE-III) | Open Elective-III | 3 | 0 | 0 | 3 |
| 3 | As per offering Department (OE-IV) | Open Elective-IV | 3 | 0 | 0 | 3 |
| 4 | TIP-454 | Principles of Management | 2 | 0 | 0 | 2 |
| 5 | TCT-460C | Project-III | 0 | 0 | 12 | 6 |
| Total Credits | | | | | | 17 |

Total Credits 168

**GRADUATION REQUIREMENT FOR B.TECH. COMPUTER ENGINEERING
DIPLOMA (BATCH-2018)**

| Sl.No. | Course No | Course Title | Credit(s) | Pre-requisite |
|--------|----------------------|---|--------------------|----------------------|
| 1. | BPS-218 | PROBABILITY STATISTICS & QUEING MODEL | 2(2-1-0) | NIL |
| 2. | NSS-101 | N.S.S. | 1(0-0-2) | NIL |
| 3. | NSS-102 | N.S.S. | 0 | NIL |
| 4. | NSS-201 | N.S.S. | 1(0-0-2) | NIL |
| 5. | NSS-202 | N.S.S. | 0 | NIL |
| 6. | TCT-200/ TEC-203 | DIGITAL LOGIC & CIRCUITS | 4(3-1-2) | NIL |
| 7. | TCT-205 | DATA STRUCTURES | 3(3-1-0) | NIL |
| 8. | TCT-211 | MICROPROCESSOR | 4(3-0-2) | NIL |
| 9. | TCT-223 | DATA PROCESSING & FILE SYSTEM | 4(3-0-2) | NIL |
| 10. | TCT-224 | COMPUTATIONAL & NUMERICAL ANALYSIS | 2(2-1-0) | NIL |
| 11. | TCT-230 | DISCRETE STRUCTURE | 3(3-1-0) | NIL |
| 12. | TCT-231 | FORMAL LANGUAGES & AUTOMATA THEORY | 3(3-1-0) | NIL |
| 13. | TCT-232 | THEORY OF COMPUTING | 3(3-0-0) | NIL |
| 14. | TCT-240 | COMPUTER ORGANISATION | 3(2-0-2) | NIL |
| 15. | TCT-300 | COMPUTER & SOCIETY | 3(3-0-0) | NIL |
| 16. | TCT-305 | PROGRAMMING LANGUAGES | 3(3-1-0) | TCT-205 |
| 17. | TCT-310 | SYSTEM PROGRAMMING | 4(3-0-2) | TCT-240 |
| 18. | TCT-311 | MICROPROCESSOR BASED SYSTEMS | 2(2-1-0) | TCT-211 |
| 19. | TCT-313 | N.C.MACHINES & ROBOTICS | 2(2-1-0) | NIL |
| 20. | TCT-315 | FUNDAMENTAL OF COMPUTER COMMUNICATION SYSTEM | 4(3-1-2) | NIL |
| 21. | TCT-320 | LANGUAGE PROCESSORS | 3(3-1-0) | TCT-305 |
| 22. | TCT-321 | OPERATING SYSTEMS | 3(3-1-0) | NIL |
| 23. | TCT-323 | DATA BASE MANAGEMENT SYSTEMS | 4(3-0-2) | NIL |
| 24. | TCT-325 | COMPUTER NETWORKS | 3(3-1-0) | TCT-315 |
| 25. | TCT-330 | DESIGN & ANALYSIS OF ALGORITHMS | 3(3-1-0) | TCT-230 & TCT-205 |
| 26. | TCT-335 | OPERATIONS RESERCH | 2(2-1-0) | NIL |
| 27. | TCT-400 | MANAGEMENT INFORMATION SYSTEMS | 3(2-0-2) | NIL |
| 28. | TCT-407 | STATE OF THE ART COMPUTER | 2(1-0-2) | NIL |
| 29. | TCT-421 | SOFTWARE ENGINEERING | 2(2-1-0) | NIL |
| 30. | TCT-443 | COMPUTER GRAPHICS AND ANIMATION | 4(3-0-2) | TCT-205 |
| 31. | TCT-471 | MULTIMEDIA TECHNOLOGY | 3(2-0-2) | TCT-205 |
| 32. | TCT-490 A | PROJECT A | 2 CR. | NIL |
| 33. | TCT-490 B | PROJECT B | 4 CR. | NIL |
| 34. | TCT-491 | PRACTICAL TRAINING | 30 DAYS | NIL |
| 35. | TCT-492 | SEMINAR | 1(0-0-3) | NIL |
| 36. | TEC-220/ TEE-150 | CIRCUIT THEORY | 4(3-1-2) | NIL |
| 37. | TEC-240 / TEE-240 | INSTRUMENTS & MEASUREMENTS | 3(2-1-2) | NIL |
| 38. | TEC-261 | ELECTRONIC DEVICES & CIRCUITS | 4(3-1-2) | TEC-220/ TEE-150 |
| 39. | TEE-300 / TEC-312 | CONTROL SYSTEMS | 4(3-1-2) | TEC-220 / TEE-150 |
| 40. | TIP-454 | PRINCIPLE OF MANAGEMENT | 2(2-2-0) | NIL |
| 41. | TWP-101 | WORK PROGRAMME | 1(0-0-2) | NIL |
| 42. | TCT- | OPEN ELECTIVE - I | 3(2-1-2) | AS PER ELECTIVE |
| 43. | TCT- | OPEN ELECTIVE - II | 3(2-1-2) | |
| 44. | TCT- | OPEN ELECTIVE - III | 3(2-1-2) | |
| | | | 117 CREDITS | |

ELECTIVE COURSE

| | | | | |
|-----|---------|---|----------|---------|
| 1. | TCT-410 | VLSI TECHNOLOGY | 3(2-1-2) | TCT-240 |
| 2. | TCT-413 | DIGITAL CONTROL | 3(2-1-2) | TEE-300 |
| 3. | TCT-414 | REAL-TIME SYSTEMS | 3(2-1-2) | TCT-321 |
| 4. | TCT-420 | ARTIFICIAL INTELLIGENCE | 3(2-1-2) | NIL |
| 5. | TCT-430 | SIMULATION & MODELLING | 3(2-1-2) | BPS-218 |
| 6. | TCT-431 | COMPUTER SYSTEMS REALIBILITY | 3(2-1-2) | BPS-218 |
| 7. | TCT-440 | COMPUTER ARCHITECTURE | 3(2-1-2) | TCT-240 |
| 8. | TCT-442 | DISTRIBUTED COMPUTING | 3(2-1-2) | TCT-321 |
| 9. | TCT-444 | PARALLEL COMPUTING | 3(2-1-2) | TCT-240 |
| 10. | TCT-446 | IMAGE PROCESSING | 3(2-1-2) | TCT-443 |
| 11. | TCT-447 | FAULT TOLERANT COMPUTING | 3(2-1-2) | TCT-240 |
| 12. | TCT-448 | SATELLITE COMMUNICATION | 3(2-1-2) | TCT-315 |
| 13. | TCT-449 | DIGITAL SIGNAL PROCESSING | 3(2-1-2) | TCT-445 |
| 14. | TCT-462 | CLIENT SERVER COMPUTING | 3(2-1-2) | TCT-325 |
| 15. | TCT-473 | DATA MINING & WARE HOUSING | 3(2-1-2) | TCT-323 |
| 16. | TCT-474 | MOBILE COMPUTING | 3(2-1-2) | TCT-315 |
| 17. | TCT-477 | COMPUTATIONAL LINGUISTICS & HUMAN COMPUTER INTERFACE | 3(2-1-2) | TCT-231 |
| 18. | TCT-479 | NEURO COMPUTING | 3(2-1-2) | NIL |

Note: Those students who have not taken Hindi at the High School or equivalent level will also require to Register the course BHS-105 Elementary Hindi – 2 Credit.

GRADUATION REQUIREMENT B.TECH.(COMPUTER ENGINEERING)
SEMESTER WISE DISTRIBUTION
(Diploma Batch-2018)

| Sl. No. | Course No. | Name of Course | LTP | Prerequisite |
|---------------------|---------------------|--|-----------|---------------------|
| I SEMESTER | | | | |
| 1. | NSS-101 | N.S.S. | 1(0-0-2) | NIL |
| 2. | TCT-200/ TEC-203 | DIGITAL LOGIC& CIRCUITS | 4(3-1-2) | NIL |
| 3. | TCT-205 | DATA STRUCTURES | 3(3-1-0) | NIL |
| 4. | TCT-230 | DISCRETE STRUCTURES | 3(3-1-0) | NIL |
| 5. | TCT-231 | FORMAL LANGUAGE AND AUTOMATA THEORY | 3(3-2-0) | NIL |
| 6. | TEC-220/ TEE-150 | CIRCUIT THEORY | 4(3-1-2) | NIL |
| 7. | TEC-240 /TEE-240 | INSTRUMENTS AND MEASUREMENTS | 3(2-1-2) | NIL |
| 8. | TWP-101 | WORK PROGRAMME | 1(0-0-2) | NIL |
| | | | 22 | |
| II SEMESTER | | | | |
| 1. | BPS-218 | PROBABILITY STATISTICS & QUEING MODEL | 2(2-1-0) | NIL |
| 2. | TCT-211 | MICROPROCESSOR | 4(3-0-2) | NIL |
| 3. | TCT-223 | DATA PROCESSING & FILE SYSTEM | 4(3-0-2) | NIL |
| 4. | TCT-232 | THEORY OF COMPUTING | 3(3-0-0) | NIL |
| 5. | TCT-240 | COMPUTER ORGANISATION | 3(2-0-2) | NIL |
| 6. | TEC-261 | ELECTRONIC DEVICES & CIRCUITS | 4(3-1-2) | TEC-220/ TEE-150 |
| 7. | TCT-224 | COMPUTATIONAL & NUMERICAL ANALYSIS | 2(2-1-0) | NIL |
| 8. | NSS-102 | N.S.S. | 0 | NIL |
| | | | 22 | |
| III SEMESTER | | | | |
| 1. | TCT-305 | PROGRAMMING LANGUAGES | 3(3-1-0) | TCT-205 |
| 2. | TCT-310 | SYSTEM PROGRAMMING | 4(3-0-2) | TCT-240 |
| 3. | TCT-315 | FUNDAMENTAL OF COMPUTER COMMUNICATION SYSTEM | 4(3-1-2) | NIL |
| 4. | TCT-323 | DATA BASE MANAGEMENT SYSTEMS | 4(3-0-2) | NIL |
| 5. | TCT-335 | OPERATIONS RESEARCH | 2(2-1-0) | NIL |
| 6. | TEC-312/ TEE-300 | CONTROL SYSTEMS | 4(3-1-2) | TEC-220/ TEE-150 |
| 7. | NSS-201 | N.S.S. | 1(0-0-2) | NIL |
| | | | 22 | |

| IV SEMESTER | | | | |
|--------------------|-----------|--|-----------|--------------------|
| 1. | TCT-300 | COMPUTER AND SOCIETY | 3(3-0-0) | NIL |
| 2. | TCT-311 | MICROPROCESSOR BASED SYSTEMS | 2(2-1-0) | TCT-211 |
| 3. | TCT-313 | NUMERICALLY CONTROLLED MACHINES & ROBOTICS | 2(2-1-0) | NIL |
| 4. | TCT-320 | LANGUAGE PROCESSORS | 3(3-1-0) | TCT-305 |
| 5. | TCT-321 | OPERATING SYSTEMS | 3(3-1-0) | NIL |
| 6. | TCT-325 | COMPUTER NETWORKS | 3(3-1-0) | TCT-315 |
| 7. | TCT-330 | DESIGN & ANALYSIS OF ALGORITHMS | 3(3-1-0) | TCT-205 TCT-230 |
| 8. | TCT-491 | PRACTICAL TRAINING | 30 Days | NIL |
| 9. | NSS-202 | N.S.S. | 0 | NIL |
| | | | 19 | |
| V SEMESTER | | | | |
| 1. | TCT- | OPEN ELECTIVE - I | 3(2-1-2) | |
| 2. | TCT- | OPEN ELECTIVE - II | 3(2-1-2) | |
| 3. | TCT-400 | MANAGEMENT INFORMATION SYSTEMS | 3(2-0-2) | NIL |
| 4. | TCT-443 | COMPUTER GRAPHICS AND ANIMATION | 4(3-0-2) | TCT-205 |
| 5. | TCT-490 A | PROJECT A | 2(0-0-4) | NIL |
| 6. | TCT-492 | SEMINAR | 1(0-0-3) | NIL |
| 7. | TIP-454 | PRINCIPLE OF MANAGEMENT | 2(2-2-0) | NIL |
| | | | 18 | |
| VI SEMESTER | | | | |
| 1. | TCT- | OPEN ELECTIVE-III | 3(2-1-2) | |
| 2. | TCT-407 | STATE OF THE ART COMPUTERS | 2(1-0-2) | NIL |
| 3. | TCT-421 | SOFTWARE ENGINEERING | 2(2-1-0) | NIL |
| 4. | TCT-471 | MULTIMEDIA TECHNOLOGY | 3(2-0-2) | TCT-205 |
| 5. | TCT-490 B | PROJECT B | 4(0-0-8) | NIL |
| | | | 14 | |

TOTAL CREDITS - 117

**GRADUATION REQUIREMENT FOR B.TECH. COMPUTER ENGINEERING
B.Sc.(MATHS) (BATCH-2018)**

| Sl.No. | Course No | Course Title | Credit(s) | Pre-requisite |
|--------|---------------------|---|--------------------|----------------------|
| 1 | BPS-218 | PROBABILITY STATISTICS & QUEING MODEL | 2(2-1-0) | NIL |
| 2 | NSS-101 | N.S.S. | 1(0-0-2) | NIL |
| 3 | NSS-102 | N.S.S. | 0 | NIL |
| 4 | NSS-201 | N.S.S. | 1(0-0-2) | NIL |
| 5 | NSS-202 | N.S.S. | 0 | NIL |
| 6 | TCT-200/ TEC-203 | DIGITAL LOGIC & CIRCUITS | 4(3-1-2) | NIL |
| 7 | TCT-205 | DATA STRUCTURES | 3(3-1-0) | NIL |
| 8 | TCT-211 | MICROPROCESSOR | 4(3-0-2) | NIL |
| 9 | TCT-223 | DATA PROCESSING & FILE SYSTEM | 4(3-0-2) | NIL |
| 10 | TCT-224 | COMPUTATIONAL & NUMERICAL ANALYSIS | 2(2-1-0) | NIL |
| 11 | TCT-230 | DISCRETE STRUCTURE | 3(3-1-0) | NIL |
| 12 | TCT-231 | FORMAL LANGUAGES & AUTOMATA THEORY | 3(3-1-0) | NIL |
| 13 | TCT-232 | THEORY OF COMPUTING | 3(3-0-0) | NIL |
| 14 | TCT-240 | COMPUTER ORGANISATION | 3(2-0-2) | NIL |
| 15 | TCT-300 | COMPUTER & SOCIETY | 3(3-0-0) | NIL |
| 16 | TCT-305 | PROGRAMMING LANGUAGES | 3(3-1-0) | TCT-205 |
| 17 | TCT-310 | SYSTEM PROGRAMMING | 4(3-0-2) | TCT-240 |
| 18 | TCT-311 | MICROPROCESSOR BASED SYSTEMS | 2(2-1-0) | TCT-211 |
| 19 | TCT-313 | N.C.MACHINES & ROBOTICS | 2(2-1-0) | NIL |
| 20 | TCT-315 | FUNDAMENTAL OF COMPUTER COMMUNICATION SYSTEM | 4(3-1-2) | NIL |
| 21 | TCT-320 | LANGUAGE PROCESSORS | 3(3-1-0) | TCT-305 |
| 22 | TCT-321 | OPERATING SYSTEMS | 3(3-1-0) | NIL |
| 23 | TCT-323 | DATA BASE MANAGEMENT SYSTEMS | 4(3-0-2) | NIL |
| 24 | TCT-325 | COMPUTER NETWORKS | 3(3-1-0) | TCT-315 |
| 25 | TCT-330 | DESIGN & ANALYSIS OF ALGORITHMS | 3(3-1-0) | TCT-230 & TCT-205 |
| 26 | TCT-335 | OPERATIONS RESERCH | 2(2-1-0) | NIL |
| 27 | TCT-400 | MANAGEMENT INFORMATION SYSTEMS | 3(2-0-2) | NIL |
| 28 | TCT-407 | STATE OF THE ART COMPUTER | 2(1-0-2) | NIL |
| 29 | TCT-421 | SOFTWARE ENGINEERING | 2(2-1-0) | NIL |
| 30 | TCT-443 | COMPUTER GRAPHICS AND ANIMATION | 4(3-0-2) | TCT-205 |
| 31 | TCT-471 | MULTIMEDIA TECHNOLOGY | 3(2-0-2) | TCT-205 |
| 32 | TCT-490 A | PROJECT A | 2 CR. | NIL |
| 33 | TCT-490 B | PROJECT B | 4 CR. | NIL |
| 34 | TCT-491 | PRACTICAL TRAINING | 30 DAYS | NIL |
| 35 | TCT-492 | SEMINAR | 1(0-0-3) | NIL |
| 36 | TEC-220/ TEE-150 | CIRCUIT THEORY | 4(3-1-2) | NIL |
| 37 | TEC-240/ TEE-240 | INSTRUMENTS & MEASUREMENTS | 3(2-1-2) | NIL |
| 38 | TEC-261 | ELECTRONIC DEVICES & CIRCUITS | 4(3-1-2) | TEC-220/ TEE-150 |
| 39 | TEE-300/ TEC-312 | CONTROL SYSTEMS | 4(3-1-2) | TEC-220 / TEE-150 |
| 40 | TIP-454 | PRINCIPLE OF MANAGEMENT | 2(2-2-0) | NIL |
| 41 | TWP-101 | WORK PROGRAMME | 1(0-0-2) | NIL |
| 42 | TCT- | OPEN ELECTIVE - I | 3(2-1-2) | AS PER ELECTIVE |
| 43 | TCT- | OPEN ELECTIVE - II | 3(2-1-2) | |
| 44 | TCT- | OPEN ELECTIVE - III | 3(2-1-2) | |
| 45 | TIP-101 | WORKSHOP PRACTICE | 3(1-0-6) | NIL |
| | | | 120 CREDITS | |

| | | | | |
|----|---------|---|----------|---------|
| 1 | TCT-410 | VLSI TECHNOLOGY | 3(2-1-2) | TCT-240 |
| 2 | TCT-413 | DIGITAL CONTROL | 3(2-1-2) | TEE-300 |
| 3 | TCT-414 | REAL-TIME SYSTEMS | 3(2-1-2) | TCT-321 |
| 4 | TCT-420 | ARTIFICIAL INTELLIGENCE | 3(2-1-2) | NIL |
| 5 | TCT-430 | SIMULATION & MODELLING | 3(2-1-2) | BPS-218 |
| 6 | TCT-431 | COMPUTER SYSTEMS REALIBILITY | 3(2-1-2) | BPS-218 |
| 7 | TCT-440 | COMPUTER ARCHITECTURE | 3(2-1-2) | TCT-240 |
| 8 | TCT-442 | DISTRIBUTED COMPUTING | 3(2-1-2) | TCT-321 |
| 9 | TCT-444 | PARALLEL COMPUTING | 3(2-1-2) | TCT-240 |
| 10 | TCT-446 | IMAGE PROCESSING | 3(2-1-2) | TCT-443 |
| 11 | TCT-447 | FAULT TOLERENT COMPUTING | 3(2-1-2) | TCT-240 |
| 12 | TCT-448 | SATELLITE COMMUNICATION | 3(2-1-2) | TCT-315 |
| 13 | TCT-449 | DIGITAL SIGNAL PROCESSING | 3(2-1-2) | TCT-445 |
| 14 | TCT-462 | CLIENT SERVER COMPUTING | 3(2-1-2) | TCT-325 |
| 15 | TCT-473 | DATA MINING & WARE HOUSING | 3(2-1-2) | TCT-323 |
| 16 | TCT-474 | MOBILE COMPUTING | 3(2-1-2) | TCT-315 |
| 17 | TCT-477 | COMPUTATIONAL LINGUISTICS & HUMAN COMPUTER INTERFACE | 3(2-1-2) | TCT-231 |
| 18 | TCT-479 | NEURO COMPUTING | 3(2-1-2) | NIL |

Note: Those students who have not taken Hindi at the High School or equivalent level will also require to Register the course BHS-105 Elementary Hindi – 2 Credit.

GRADUATION REQUIREMENT B.TECH.(COMPUTER ENGINEERING)
SEMESTER WISE DISTRIBUTION
B.Sc.(MATHS) (BATCH-2018)

| Sl. No. | Course No. | Name of Course | LTP | Prerequisite |
|---------------------|---------------------|--|-----------|---------------------|
| I SEMESTER | | | | |
| 1 | NSS-101 | N.S.S. | 1 (0-0-2) | NIL |
| 2 | TCT-200/ TEC-203 | DIGITAL LOGIC& CIRCUITS | 4(3-1-2) | NIL |
| 3 | TCT-205 | DATA STRUCTURES | 3(3-1-0) | NIL |
| 4 | TCT-230 | DISCRETE STRUCTURES | 3(3-1-0) | NIL |
| 5 | TCT-231 | FORMAL LANGUAGE AND AUTOMATA THEORY | 3(3-2-0) | NIL |
| 6 | TEC-220/ TEE-150 | CIRCUIT THEORY | 4(3-1-2) | NIL |
| 7 | TEC-240 /TEE-240 | INSTRUMENTS AND MEASUREMENTS | 3(2-1-2) | NIL |
| 8 | TWP-101 | WORK PROGRAMME | 1(0-0-2) | NIL |
| | | | 22 | |
| II SEMESTER | | | | |
| 1 | BPS-218 | PROBABILITY STATISTICS & QUEING MODEL | 2(2-1-0) | NIL |
| 2 | TCT-211 | MICROPROCESSOR | 4(3-0-2) | NIL |
| 3 | TCT-223 | DATA PROCESSING & FILE SYSTEM | 4(3-0-2) | NIL |
| 4 | TIP-101 | WORKSHOP PRACTICE | 3(1-0-6) | NIL |
| 5 | TCT-232 | THEORY OF COMPUTING | 3(3-0-0) | NIL |
| 6 | TCT-240 | COMPUTER ORGANISATION | 3(2-0-2) | NIL |
| 7 | TEC-261 | ELECTRONIC DEVICES & CIRCUITS | 4(3-1-2) | TEC-220/ TEE-150 |
| 8 | NSS-102 | N.S.S. | 0 | NIL |
| | | | 23 | |
| III SEMESTER | | | | |
| 1 | TCT-305 | PROGRAMMING LANGUAGES | 3(3-1-0) | TCT-205 |
| 2 | TCT-310 | SYSTEM PROGRAMMING | 4(3-0-2) | TCT-240 |
| 3 | TCT-315 | FUNDAMENTAL OF COMPUTER COMMUNICATION SYSTEM | 4(3-1-2) | NIL |
| 4 | TCT-323 | DATA BASE MANAGEMENT SYSTEMS | 4(3-0-2) | NIL |
| 5 | TCT-335 | OPERATIONS RESEARCH | 2(2-1-0) | NIL |
| 6 | TEC-312/ TEE-300 | CONTROL SYSTEMS | 4(3-1-2) | TEC-220/TEE-150 |
| 7 | NSS-201 | N.S.S. | 1 (0-0-2) | NIL |
| | | | 22 | |

| IV SEMESTER | | | | |
|--------------------|-----------|--|-----------|--------------------|
| 1 | TCT-300 | COMPUTER AND SOCIETY | 3(3-0-0) | NIL |
| 2 | TCT-311 | MICROPROCESSOR BASED SYSTEMS | 2(2-1-0) | TCT-211 |
| 3 | TCT-313 | NUMERICALLY CONTROLLED MACHINES & ROBOTICS | 2(2-1-0) | NIL |
| 4 | TCT-320 | LANGUAGE PROCESSORS | 3(3-1-0) | TCT-305 |
| 5 | TCT-321 | OPERATING SYSTEMS | 3(3-1-0) | NIL |
| 6 | TCT-325 | COMPUTER NETWORKS | 3(3-1-0) | TCT-315 |
| 7 | TCT-330 | DESIGN & ANALYSIS OF ALGORITHMS | 3(3-1-0) | TCT-205 TCT-230 |
| 8 | TCT-491 | PRACTICAL TRAINING | 30 Days | NIL |
| 9 | TCT-224 | COMPUTATIONAL & NUMERICAL ANALYSIS | 2(2-1-0) | NIL |
| 10 | NSS-202 | N.S.S. | 0 | NIL |
| | | | 21 | |
| V SEMESTER | | | | |
| 1 | TCT- | OPEN ELECTIVE - I | 3(2-1-2) | |
| 2 | TCT- | OPEN ELECTIVE - II | 3(2-1-2) | |
| 3 | TCT-400 | MANAGEMENT INFORMATION SYSTEMS | 3(2-0-2) | NIL |
| 4 | TCT-443 | COMPUTER GRAPHICS AND ANIMATION | 4(3-0-2) | TCT-205 |
| 5 | TCT-490 A | PROJECT A | 2(0-0-4) | NIL |
| 6 | TCT-492 | SEMINAR | 1(0-0-3) | NIL |
| 7 | TIP-454 | PRINCIPLE OF MANAGEMENT | 2(2-2-0) | NIL |
| | | | 18 | |
| VI SEMESTER | | | | |
| 1 | TCT- | OPEN ELECTIVE-III | 3(2-1-2) | |
| 2 | TCT-407 | STATE OF THE ART COMPUTERS | 2(1-0-2) | NIL |
| 3 | TCT-421 | SOFTWARE ENGINEERING | 2(2-1-0) | NIL |
| 4 | TCT-471 | MULTIMEDIA TECHNOLOGY | 3(2-0-2) | TCT-205 |
| 5 | TCT-490 B | PROJECT B | 4(0-0-8) | NIL |
| | | | 14 | |

TOTAL CREDITS - 120