

I YEAR B.Tech. (4YDC)  
Common To All Branches (Admission year 2021 and Onwards)

**Semester - A**

| S.No.        | Subject Category | Subject Code | Subject                                               | Periods per Week*                 |   |    | Th.    | Pr.    | Maximum Marks |     |     |     |       |
|--------------|------------------|--------------|-------------------------------------------------------|-----------------------------------|---|----|--------|--------|---------------|-----|-----|-----|-------|
|              |                  |              |                                                       | L                                 | T | P  | Credit | Credit | Th.           | CW  | SW  | Pr. | Total |
| 1            | BSC              | MA10001      | Mathematics - I                                       | 4                                 | 1 | -  | 4      | -      | 70            | 30  | -   | -   | 100   |
| 2            | BSC              | PH10006      | Physics                                               | 4                                 | 1 | 2  | 4      | 1      | 70            | 30  | 20  | 30  | 150   |
| 3            | ESC              | CE10003      | Fundamentals of Civil Engineering & Applied Mechanics | 4                                 | - | 2  | 3      | 1      | 70            | 30  | 20  | 30  | 150   |
| 4            | ESC              | ME10149      | Engineering Graphics                                  | 3                                 | - | 4  | 2      | 2      | 70            | 30  | 40  | 60  | 200   |
| 5            | ESC              | EE10005      | Fundamentals of Electrical Engineering                | 4                                 | - | 2  | 3      | 1      | 70            | 30  | 20  | 30  | 150   |
| 6            | MC               | HU           | Induction Program                                     | 3 weeks in the begening of I Year |   |    |        |        |               |     |     |     |       |
| <b>TOTAL</b> |                  |              |                                                       | 19                                | 2 | 10 | 16     | 5      | 350           | 150 | 100 | 150 | 750   |

**Semester - B**

| S.No.        | Subject Category | Subject Code   | Subject                                | Periods per Week*                 |   |    | Th.    | Pr.    | Maximum Marks |     |     |     |       |
|--------------|------------------|----------------|----------------------------------------|-----------------------------------|---|----|--------|--------|---------------|-----|-----|-----|-------|
|              |                  |                |                                        | L                                 | T | P  | Credit | Credit | Th.           | CW  | SW  | Pr. | Total |
| 1            | BSC              | MA10501        | Mathematics – II                       | 4                                 | 1 | -  | 4      | -      | 70            | 30  | -   | -   | 100   |
| 2            | BSC              | CH10506        | Chemistry                              | 4                                 | 1 | 2  | 4      | 1      | 70            | 30  | 20  | 30  | 150   |
| 3            | HSMC             | HU10651        | Technical English                      | 4                                 | - | 2  | 3      | 1      | 70            | 30  | 20  | 30  | 150   |
| 4            | ESC              | CO10504        | Computer Programming                   | 4                                 | - | 2  | 3      | 1      | 70            | 30  | 20  | 30  | 150   |
| 5            | ESC              | <b>ME10652</b> | Fundamentals of Mechanical Engineering | 4                                 | - | -  | 3      | -      | 70            | 30  | -   | -   | 100   |
| 6            | ESC              | IP10581        | Manufacturing Practices                | -                                 | 1 | 4  | -      | 3      | -             | -   | 40  | 60  | 100   |
| 7            | MC               | HU             | Induction Program                      | 3 weeks in the begening of I Year |   |    |        |        |               |     |     |     |       |
| <b>TOTAL</b> |                  |                |                                        | 20                                | 3 | 10 | 17     | 6      | 350           | 150 | 100 | 150 | 750   |

**SHRI G. S. INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**  
**II B.TECH.(4YDC) COMPUTER SCIENCE & ENGINEERING**

Scheme 2021-22

**Semester: III**

| S.No.        | Subject Category | Subject Code | Subject                             | Periods per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |     |     |     | Total |
|--------------|------------------|--------------|-------------------------------------|-------------------|---|----|------------|------------|---------------|-----|-----|-----|-------|
|              |                  |              |                                     | L                 | T | P  |            |            | Th.           | CW  | SW  | Pr. |       |
| 1            | BSC              | MA24003      | Mathematics-III                     | 4                 | 1 | -  | 4          | -          | 70            | 30  | -   | -   | 100   |
| 2            | PCC              | CO24057      | Object Oriented Programming Systems | 4                 | 1 | 2  | 4          | 1          | 70            | 30  | 40  | 60  | 200   |
| 3            | PCC              | CO24009      | Computer Architecture               | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 4            | ESC              | EC24010      | Analog & Digital Electronics        | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 5            | HSMC             | HU24005      | Economics for Engineers             | 4                 | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 6            | LC               | CO24497      | Programming Practices               | -                 | 1 | 2  | -          | 2          | -             | -   | 40  | 60  | 100   |
| 7            | ESC/LC           | EC24498      | Electronics Workshop                | -                 | - | 2  | -          | 1          | -             | -   | 40  | 60  | 100   |
| <b>Total</b> |                  |              |                                     | 20                | 3 | 10 | 17         | 6          | 350           | 150 | 200 | 300 | 1000  |

**Semester: IV**

| S.No.        | Subject Category | Subject Code | Subject                                  | Periods per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |     |     |     | Total |
|--------------|------------------|--------------|------------------------------------------|-------------------|---|----|------------|------------|---------------|-----|-----|-----|-------|
|              |                  |              |                                          | L                 | T | P  |            |            | Th.           | CW  | SW  | Pr. |       |
| 1            | PCC              | CO24553      | Discrete Structures                      | 4                 | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 2            | BSC              | MA24554      | Mathematics-IV                           | 4                 | 1 | -  | 4          | -          | 70            | 30  | -   | -   | 100   |
| 3            | PCC              | CO24507      | Data Structures                          | 4                 | 1 | 2  | 4          | 1          | 70            | 30  | 40  | 60  | 200   |
| 4            | PCC              | CO24508      | Operating Systems                        | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 5            | OEC              | EC24509      | Digital Communication                    | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 6            | LC               | CO24992      | Computer Workshop                        | -                 | - | 2  | -          | 1          | -             | -   | 40  | 60  | 100   |
| 7            | LC               | CO24991      | Design Thinking Lab-I                    | -                 | - | 2  | -          | 1          | -             | -   | 40  | 60  | 100   |
| 8            | HSBC             | HU24881      | Values, Humanity and Professional Ethics | -                 | 3 | -  | 2          | -          | -             | 100 | -   | -   | 100   |
| <b>Total</b> |                  |              |                                          | 20                | 5 | 10 | 19         | 5          | 350           | 250 | 200 | 300 | 1100  |

Internship of minimum 2 weeks to be carried out after semester A or semester B but before commencement of III year semester A. Evaluation shall be done in III Year semester A.

\* 1 Period = 50 Minutes

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**  
**III B.Tech.(4YDC) COMPUTER SCIENCE & ENGINEERING**

**SEMESTER - V**

| S.No.        | Subject Category | Subject Code | Subject                                        | Periods per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |     |     |     |       |
|--------------|------------------|--------------|------------------------------------------------|-------------------|---|----|------------|------------|---------------|-----|-----|-----|-------|
|              |                  |              |                                                | L                 | T | P  |            |            | Th.           | CW  | SW  | Pr. | Total |
| 1            | PCC              | CO34002      | Theory of Computation                          | 4                 | 1 | -  | 4          | -          | 70            | 30  | -   | -   | 100   |
| 2            | PCC              | CO34005      | Data Base Management Systems                   | 4                 | 1 | 2  | 4          | 1          | 70            | 30  | 40  | 60  | 200   |
| 3            | PCC              | CO34007      | Computer Networks                              | 4                 | 1 | 2  | 4          | 1          | 70            | 30  | 40  | 60  | 200   |
| 4            | PCC              | CO34014      | Agile Software Methodology                     | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 5            | LC               | CO34451      | Skill Development Lab.                         | -                 | - | 2  | -          | 1          | -             | -   | 20  | 30  | 50    |
| 6            | LC               | CO34452      | Design Thinking Lab.- II                       | -                 | - | 2  | -          | 1          | -             | -   | 20  | 30  | 50    |
| 7            | OEC              |              | Open Elective Course - I                       | 4                 | 1 | -  | 4          | -          | 70            | 30  | -   | -   | 100   |
| 8            | SI               | CO34481      | Evaluation of Industrial Training/Internship-I | -                 | - | -  | -          | 2          | -             | -   | 100 | -   | 100   |
| <b>Total</b> |                  |              |                                                | 20                | 4 | 10 | 19         | 7          | 350           | 150 | 260 | 240 | 1000  |

**SEMESTER - VI**

| S.No.        | Subject Category | Subject Code | Subject                            | Periods per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |     |     |     |       |
|--------------|------------------|--------------|------------------------------------|-------------------|---|----|------------|------------|---------------|-----|-----|-----|-------|
|              |                  |              |                                    | L                 | T | P  |            |            | Th.           | CW  | SW  | Pr. | Total |
| 1            | PCC              | CO34553      | Machine Learning                   | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 2            | PCC              | CO34554      | foundation of Information Security | 4                 | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 3            | PCC              | CO34563      | Design & Analysis of Algorithms    | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 4            | PEC              |              | Elective-I                         | 4                 | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 5            | OEC              |              | Open Elective Course - II          | 4                 | 1 | -  | 4          | -          | 70            | 30  | -   | -   | 100   |
| 6            | PCC              | CO34881      | Internet of Things                 | -                 | 1 | 2  | -          | 2          | -             | -   | 40  | 60  | 100   |
| 7            | PROJ             | CO34999      | Major Project Planning & Seminar   | -                 | - | 4  | -          | 2          | -             | -   | 40  | 60  | 100   |
| <b>Total</b> |                  |              |                                    | 20                | 2 | 12 | 16         | 7          | 350           | 150 | 200 | 300 | 1000  |

Internship/ Training of Minimum 2 weeks to be carried out after sem V/ sem VI, Evaluation shall be done in fourth year sem A.

\* 1 Period = 50 Minutes

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**  
**III B.Tech.(4YDC) COMPUTER SCIENCE & ENGINEERING**

| Open Elective Course - I |                  |                | Semester V                      |
|--------------------------|------------------|----------------|---------------------------------|
| S.No.                    | Subject Category | Subject Code   | Subject                         |
| 1                        |                  | CO34298        | Artificial Intelligence         |
| 2                        |                  | <b>HU34299</b> | Advance Entrepreneurship course |
| 3                        |                  |                |                                 |

| Elective I |                  |              | Semester VI                          |
|------------|------------------|--------------|--------------------------------------|
| S.No.      | Subject Category | Subject Code | Subject                              |
| 1          |                  | CO34601      | Data Science and Engineering         |
| 2          |                  |              | Compiler Construction                |
| 3          |                  |              | Wireless and Mobile Networks         |
| 4          |                  | CO34602      | Object Oriented Software Engineering |
| 5          |                  |              | Computer Graphics                    |
| 6          |                  |              | Embedded Systems                     |

| Open Elective Course - II |                  |              | Semester VI                                         |
|---------------------------|------------------|--------------|-----------------------------------------------------|
| S.No.                     | Subject Category | Subject Code | Subject                                             |
| 1                         |                  | CO34701      | Android Application Development                     |
| 2                         |                  |              | Open Source Technologies                            |
| 3                         |                  |              | IT Act                                              |
| 4                         |                  |              | Organization Behavior and Human Resource Management |

\* 1 Period = 50 Minutes

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE****IV B.Tech.(4YDC) COMPUTER SCIENCE & ENGINEERING****SEMESTER - VII**

| S.No. | Subject Category | Subject Code | Subject                            | Periods per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |    |     |     |       |
|-------|------------------|--------------|------------------------------------|-------------------|---|----|------------|------------|---------------|----|-----|-----|-------|
|       |                  |              |                                    | L                 | T | P  |            |            | Th.           | CW | SW  | Pr. | Total |
| 1     | PEC              |              | Elective-II                        | 4                 | - | 2  | 3          | 1          | 70            | 30 | 40  | 60  | 200   |
| 2     | PEC              |              | Elective-III                       | 4                 | - | 2  | 3          | 1          | 70            | 30 | 40  | 60  | 200   |
| 3     | PEC              |              | Elective-IV                        | 4                 | - | 2  | 3          | 1          | 70            | 30 | 40  | 60  | 200   |
| 4     | LC               | CO44401      | System Operations Lab              | -                 | - | 2  | -          | 1          | -             | -  | 40  | 60  | 100   |
| 5     | SI               | CO44481      | Internship Evaluation-II           | -                 | - | -  | -          | 2          | -             | -  | 100 | -   | 100   |
| 7     |                  | CO44498      | Major Project Phase-I ( AB group)  | -                 | - | 4  | -          | 2          | -             | -  | 80  | 120 | 200   |
| 8     |                  | CO44998      | Major Project Phase-II ( BA group) |                   |   |    |            |            |               |    |     |     |       |
| Total |                  |              | For AB Group                       | 12                | 0 | 12 | 9          | 8          | 210           | 90 | 340 | 360 | 1000  |
|       |                  |              | For BA Group                       | 12                | 0 | 12 | 9          | 8          | 210           | 90 | 340 | 360 | 1000  |

**SEMESTER - VIII**

| S.No. | Subject Category | Subject Code | Subject                            | Periods per Week* |   |   | Th. Credit | Pr. Credit | Maximum Marks |    |     |     |       |
|-------|------------------|--------------|------------------------------------|-------------------|---|---|------------|------------|---------------|----|-----|-----|-------|
|       |                  |              |                                    | L                 | T | P |            |            | Th.           | CW | SW  | Pr. | Total |
| 1     | PEC              |              | Elective-V                         | 3                 | - | - | 2          | -          | 70            | 30 | -   | -   | 100   |
| 2     | PEC              |              | Elective-VI                        | 3                 | - | - | 2          | -          | 70            | 30 | -   | -   | 100   |
| 3     | SI               | CO44882      | Internship Evaluation-III          | -                 | - | - | -          | 4          | -             | -  | 100 | -   | 100   |
| 4     |                  | CO44998      | Major Project Phase-II ( AB group) | -                 | - | 4 | -          | 2          | -             | -  | 80  | 120 | 200   |
| 5     |                  | CO44498      | Major Project Phase-I (BA group)   |                   |   |   |            |            |               |    |     |     |       |
| Total |                  |              | For AB Group                       | 6                 | 0 | 4 | 4          | 6          | 140           | 60 | 180 | 120 | 500   |
|       |                  |              | For BA Group                       | 6                 | 0 | 4 | 4          | 6          | 140           | 60 | 180 | 120 | 500   |

\*1 Period = 50 Minutes

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE****IV B.Tech.(4YDC) COMPUTER SCIENCE & ENGINEERING****List of Electives**

| <b>Elective II</b> |                         |                     | <b>SEMESTER - VII</b>      |
|--------------------|-------------------------|---------------------|----------------------------|
| <b>S.No.</b>       | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>             |
| 1                  |                         | CO ____             | Computational Intelligence |
| 2                  |                         | CO ____             | Advanced Data Structures   |
| 3                  |                         | CO44242             | Cloud Computing            |
| 4                  |                         | CO ____             | Software Architecture      |
| 5                  |                         | CO ____             | Multimedia System          |
| 6                  |                         | CO ____             | VLSI System Design         |

| <b>Elective III</b> |                         |                     | <b>SEMESTER - VII</b>      |
|---------------------|-------------------------|---------------------|----------------------------|
| <b>S.No.</b>        | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>             |
| 1                   |                         | CO44251             | Deep Learning              |
| 2                   |                         | CO ____             | Advanced Algorithms        |
| 3                   |                         | CO44252             | Big Data                   |
| 4                   |                         | CO ____             | Human Computer Interaction |
| 5                   |                         | CO ____             | Real Time Systems          |
| 6                   |                         | CO ____             | Software Verification      |

| <b>Elective IV</b> |                         |                     | <b>SEMESTER - VII</b>        |
|--------------------|-------------------------|---------------------|------------------------------|
| <b>S.No.</b>       | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>               |
| 1                  |                         | CO ____             | Reinforcement Learning       |
| 2                  |                         | CO ____             | Advanced Databases           |
| 3                  |                         | CO44307             | Cyber Security and Forensics |
| 4                  |                         | CO44308             | Web Technologies             |
| 5                  |                         | CO ____             | Virtual Reality              |
| 6                  |                         | CO ____             | Robotics                     |

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE****IV B.Tech.(4YDC) COMPUTER SCIENCE & ENGINEERING**

## List of Electives

| <b>Elective V</b> |                         |                     | <b>SEMESTER - VIII</b>                       |
|-------------------|-------------------------|---------------------|----------------------------------------------|
| <b>S.No.</b>      | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>                               |
| 1                 |                         | CO ____             | Bioinformatics Computing                     |
| 2                 |                         | CO ____             | High Performance Computing                   |
| 3                 |                         | CO ____             | Machine Learning for Security                |
| 4                 |                         | CO44607             | Game Design                                  |
| 5                 |                         | CO ____             | Digital Signal Processing                    |
| 6                 |                         | CO ____             | Security in Resource Constrained Environment |

| <b>Elective VI</b> |                         |                     | <b>SEMESTER - VIII</b>               |
|--------------------|-------------------------|---------------------|--------------------------------------|
| <b>S.No.</b>       | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>                       |
| 1                  |                         | CO ____             | Natural Language Processing          |
| 2                  |                         | CO ____             | Advanced Operating Systems           |
| 3                  |                         | CO ____             | Network Management & Maintenance     |
| 4                  |                         | CO44706             | Software Project Management          |
| 5                  |                         | CO ____             | Image Processing and Computer Vision |
| 6                  |                         | CO44707             | Block Chain Technology               |