

**I YEAR B.Tech. (4YDC)****Common To All Branches****Semester - A**

| S. No.       | Subject Category | Subject Code | Subject Name  | Hours per Week   |          |           | Credits   |          | Maximum Marks |            |            |            |            |
|--------------|------------------|--------------|---|--|----------|-----------|-----------|----------|---------------|------------|------------|------------|------------|
|              |                  |              |   | L  | T        | P         | Th        | Pr       | Theory        |            | Practical  |            | Total      |
|              |                  |              |   |  |          |           |           |          | Th.           | CW         | SW         | Pr.        |            |
| 1            | BSC              | MA 10001     | Mathematics - I                                       | 3  | 1        | 0         | 4         | 0        | 70            | 30         | 0          | 0          | 100        |
| 2            | BSC              | PH10016      | Physics   | 2  | 1        | -         | 3         | -        | 70            | 30         | -          | -          | 100        |
| 3            | ESC              | EE10015      | Fundamentals of Electrical                            | 2  | 1        | -         | 3         | 0        | 70            | 30         | 0          | 0          | 100        |
| 4            | ESC              | CE10013      | Fundamentals of Civil Engineering & Applied Mechanics | 2  | 1        | -         | 3         | 0        | 70            | 30         | 0          | 0          | 100        |
| 5            | ESC              | ME10049      | Engineering Graphics                                  | 2  | -        | -         | 2         | -        | 70            | 30         | -          | -          | 100        |
| 6            | BSC (LC)         | PH10151      | Applied Physics Lab                                   | -  | -        | 2         | -         | 1        | -             | -          | 20         | 30         | 50         |
| 7            | ESC (LC)         | EE10152      | Electrical Engineering Lab                            | -  | -        | 2         | -         | 1        | -             | -          | 20         | 30         | 50         |
| 8            | ESC (LC)         | ME10153      | Engineering Graphics Lab                              | -  | -        | 4         | -         | 2        | -             | -          | 40         | 60         | 100        |
| 9            | HSMC             | HU10191      | Extra /Co curricular Activity                         | -  | -        | 2         | -         | 1        | -             | -          | 50         | 0          | 50         |
| 10           | MC               |              | Induction program & Universal Human Values            | 2-3 weeks in the beginning of I Year & 1 hour per week during semester |          |           |           |          |               |            |            |            |            |
| <b>TOTAL</b> |                  |              |   | <b>11</b>  | <b>4</b> | <b>10</b> | <b>15</b> | <b>5</b> | <b>350</b>    | <b>150</b> | <b>130</b> | <b>120</b> | <b>750</b> |

**Semester - B**

| S. No.       | Subject Category | Subject Code | Subject Name                               | Hours per Week   |          |           | Credits   |          | Maximum Marks |            |            |            |            |
|--------------|------------------|--------------|--|--|----------|-----------|-----------|----------|---------------|------------|------------|------------|------------|
|              |                  |              |  | L  | T        | P         | Th        | Pr       | Theory        |            | Practical  |            | Total      |
|              |                  |              |  |  |          |           |           |          | Th.           | CW         | SW         | Pr.        |            |
| 1            | BSC              | MA 10501     | Mathematics – II                           | 3  | 1        | -         | 4         | -        | 70            | 30         | 0          | 0          | 100        |
| 2            | BSC              | CH10516      | Chemistry                                  | 3  | -        | -         | 3         | -        | 70            | 30         | -          | -          | 100        |
| 3            | HSMC             | HU10551      | Technical English                          | 2  | -        | -         | 2         | -        | 70            | 30         | 0          | 0          | 100        |
| 4            | ESC              | CO10507      | Programming for Problem Solving            | 2  | 1        | -         | 3         | -        | 70            | 30         | 0          | 0          | 100        |
| 5            | ESC              | EC10508      | Basic Electronics Engineering              | 2  | -        | -         | 2         | -        | 70            | 30         | 0          | 0          | 100        |
| 6            | BSC (LC)         | CH10656      | Chemistry Lab                              | -  | -        | 2         | -         | 1        | -             | -          | 20         | 30         | 50         |
| 7            | HSMC (LC)        | HU10653      | Language Lab                               | -  | -        | 2         | -         | 1        | -             | -          | 20         | 30         | 50         |
| 8            | ESC (LC)         | CO10654      | Computer Programming Lab                   | -  | -        | 2         | -         | 1        | -             | -          | 20         | 30         | 50         |
| 9            | ESC (LC)         | IP10655      | Manufacturing Practices                    | -  | -        | 4         | -         | 2        | -             | -          | 40         | 60         | 100        |
| 10           | HSMC             | HU10691      | Extra /Co curricular Activity              | -  | -        | 2         | -         | 1        | -             | -          | 50         | -          | 50         |
| 11           | MC               |              | Induction program & Universal Human Values | 2-3 weeks in the beginning of I Year & 1 hour per week during semester |          |           |           |          |               |            |            |            |            |
| <b>TOTAL</b> |                  |              |  | <b>12</b>  | <b>2</b> | <b>12</b> | <b>14</b> | <b>6</b> | <b>350</b>    | <b>150</b> | <b>150</b> | <b>150</b> | <b>800</b> |

Engineering Certificate shall be awarded after acquiring additional 10 credits out of which 6 credits as 2 Months industrial training within five years

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

**Semester: III**

| S.No.        | Subject Category | Subject Code   | Subject                       | Hours per Week* |   |   | Th. Credit | Pr. Credit | Maximum Marks |           |     |     | Total     |
|--------------|------------------|----------------|-------------------------------|-----------------|---|---|------------|------------|---------------|-----------|-----|-----|-----------|
|              |                  |                |                               | L               | T | P |            |            | Th.           | CW        | SW  | Pr. |           |
| 1            | BSC              | MA25014        | Mathematics-III               | 3               | 1 | - | 4          | -          | 70            | 30        | -   | -   | 100       |
| 2            | PCC              | EC25016        | Electronics Devices           | 3               | - | 2 | 3          | 1          | 70            | 30        | 40  | 60  | 200       |
| 3            | PCC              | EC25017        | Signals and Systems           | 3               | - | - | 3          | -          | 70            | 30        | -   | -   | 100       |
| 4            | PCC              | EE25004        | Network Theory & Analysis     | 3               | - | 2 | 3          | 1          | 70            | 30        | 40  | 60  | 200       |
| 5            | PCC              | EC25018        | Digital System Design         | 3               | - | 2 | 3          | 1          | 70            | 30        | 40  | 60  | 200       |
| 6            | HSMC             | HU25005        | Economics for Engineers       | 3               | - | - | 3          | -          | 70            | 30        | -   | -   | 100       |
| 7            | <b>MC</b>        | <b>ECM2002</b> | <b>Environmental Science*</b> | <b>2</b>        | - | - | -          | -          | -             | <b>50</b> | -   | -   | <b>50</b> |
| <b>Total</b> |                  |                |                               | 20              | 1 | 6 | 19         | 3          | 420           | 230       | 120 | 180 | 950       |

**Semester: IV**

| S.No.        | Subject Category | Subject Code   | Subject                           | Hours per Week* |          |   | Th. Credit | Pr. Credit | Maximum Marks |           |     |     | Total     |
|--------------|------------------|----------------|-----------------------------------|-----------------|----------|---|------------|------------|---------------|-----------|-----|-----|-----------|
|              |                  |                |                                   | L               | T        | P |            |            | Th.           | CW        | SW  | Pr. |           |
| 1            | BSC              | MA25563        | Mathematics-IV                    | 3               | 1        | - | 4          | -          | 70            | 30        | -   | -   | 100       |
| 2            | PCC              | EC25564        | Electromagnetic Waves             | 3               | -        | - | 3          | -          | 70            | 30        | -   | -   | 100       |
| 3            | PCC              | EC25565        | Analog Circuits                   | 3               | -        | 2 | 3          | 1          | 70            | 30        | 40  | 60  | 200       |
| 4            | BSC              | EC25566        | Probability Theory and Stochastic | 3               | -        | - | 3          | -          | 70            | 30        | -   | -   | 100       |
| 5            | PCC              | EC25567        | Analog and Digital Communication  | 3               | -        | 2 | 3          | 1          | 70            | 30        | 40  | 60  | 200       |
| 6            | ESC              | EC25568        | Electronics Workshop              | -               | -        | 4 | -          | 2          | -             | -         | 40  | 60  | 100       |
| 7            | HSMC             | HU25881        | Values, Humanity and Professional | -               | <b>2</b> | - | 2          | -          | -             | 100       | -   | -   | 100       |
| 8            | <b>MC</b>        | <b>HUM2051</b> | <b>Constitution of India*</b>     | <b>2</b>        | -        | - | -          | -          | -             | <b>50</b> | -   | -   | <b>50</b> |
| <b>Total</b> |                  |                |                                   | 17              | 3        | 8 | 18         | 4          | 350           | 300       | 120 | 180 | 950       |

\* Non Credit Mandatory Subject

Internship 1 2-4 Weeks

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

**SEMESTER - V**

| S.No.        | Subject Category | Subject Code | Subject                              | Hours per Week* |   |   | Th. Credit | Pr. Credit | Maximum Marks |     |     |     |       |
|--------------|------------------|--------------|--------------------------------------|-----------------|---|---|------------|------------|---------------|-----|-----|-----|-------|
|              |                  |              |                                      | L               | T | P |            |            | Th.           | CW  | SW  | Pr. | Total |
| 1            | PCC              | EC35008      | Microprocessors and Microcontrollers | 3               | - | 2 | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 2            | PCC              | EC35009      | Antenna and Wave Propagation         | 3               | - | 2 | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 3            | PCC              | EC35010      | VLSI Design                          | 3               | - | 2 | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 4            | PCC              | EC35011      | Data Communication                   | 3               | - | - | 3          | -          | 70            | 30  | -   | -   | 100   |
| 5            | PEC-1            |              | Program Elective - I                 | 3               | - | 2 | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 6            |                  | EC35481      | Evaluation of Internship-1           | -               | - | - | -          | 2          | -             | -   | 100 | -   | 100   |
| <b>Total</b> |                  |              |                                      | 15              | 0 | 8 | 15         | 6          | 350           | 150 | 260 | 240 | 1000  |

**SEMESTER:VI**

| S.No.        | Subject Category | Subject Code | Subject                           | Hours per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |     |     |     |       |
|--------------|------------------|--------------|-----------------------------------|-----------------|---|----|------------|------------|---------------|-----|-----|-----|-------|
|              |                  |              |                                   | L               | T | P  |            |            | Th.           | CW  | SW  | Pr. | Total |
| 1            | PCC              | EE35510      | Control Systems                   | 3               | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 2            | PCC              | EC35511      | Mobile Communication              | 3               | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 3            | PCC              | EC35513      | Computer Networks                 | 3               | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 4            | PCC              | EC35514      | Applied Digital Signal Processing | 3               | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 5            | PEC-2            |              | Program Elective-II               | 3               | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 6            | ESC              | EC35881      | Electronics design & Simulation   | -               | - | 4  | -          | 2          | -             | -   | 40  | 60  | 100   |
| <b>Total</b> |                  |              |                                   | 15              | 0 | 10 | 15         | 5          | 350           | 150 | 160 | 240 | 900   |

Internship 2 2-4 Weeks

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

| <b>Elective I</b> |                         |                     | <b>SEMESTER - V</b>               |
|-------------------|-------------------------|---------------------|-----------------------------------|
| <b>S.No.</b>      | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>                    |
| 1                 | PEC-I                   | CO35251             | Data Structure & Operating system |
| 2                 | PEC-I                   | EC35252             | Electronics Measurement           |

| <b>Elective II</b> |                         |                     | <b>SEMESTER - VI</b> |
|--------------------|-------------------------|---------------------|----------------------|
| <b>S.No.</b>       | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>       |
| 1                  | PEC-II                  | EC35661             | Embedded Systems     |
| 2                  | PEC-II                  | IT35662             | Intelligent systems  |

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**SEMESTER - VII**

| S.No. | Subject Category | Subject Code | Subject                             | Hours per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |     |     |     |       |
|-------|------------------|--------------|-------------------------------------|-----------------|---|----|------------|------------|---------------|-----|-----|-----|-------|
|       |                  |              |                                     | L               | T | P  |            |            | Th.           | CW  | SW  | Pr. | Total |
| 1     | PCC              | EC45009      | Wireless and Mobile Networks        | 3               | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 2     | PEC-3            |              | Program Elective-III                | 3               | - | 2  | 3          | 1          | 70            | 30  | 40  | 60  | 200   |
| 3     | PEC-4            |              | Program Elective-IV                 | 3               | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 4     | OEC-1            |              | Open Elective - I                   | 3               | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 5     | HSMC             | IP45010      | Industrial Engineering & Management | 3               | - | -  | 3          | -          | 70            | 30  | -   | -   | 100   |
| 6     |                  | EC45481      | Evaluation of Internship-2          | -               | - | 4  | -          | 2          | -             | -   | 100 | -   | 100   |
| 7     |                  | EC45498      | Major Project Phase-I ( AB group)   | -               | - | 8  | -          | 4          | -             | -   | 40  | 60  | 100   |
| 8     |                  | EC45998      | Major Project Phase-II ( BA group)  | -               | - | 8  | -          | 4          | -             | -   | 40  | 60  | 100   |
| Total |                  |              | For AB Group                        | 15              | 0 | 14 | 15         | 7          | 350           | 150 | 180 | 120 | 800   |
|       |                  |              | For BA Group                        | 15              | 0 | 14 | 15         | 7          | 350           | 150 | 180 | 120 | 800   |

**SEMESTER - VIII**

| S.No. | Subject Category | Subject Code | Subject                            | Hours per Week* |   |    | Th. Credit | Pr. Credit | Maximum Marks |    |     |     |       |
|-------|------------------|--------------|------------------------------------|-----------------|---|----|------------|------------|---------------|----|-----|-----|-------|
|       |                  |              |                                    | L               | T | P  |            |            | Th.           | CW | SW  | Pr. | Total |
| 1     | PEC-5            |              | Program Elective-V                 | 3               | - | -  | 3          | -          | 70            | 30 | -   | -   | 100   |
| 2     | OEC-2            |              | Open Elective - II                 | 3               | - | -  | 3          | -          | 70            | 30 | -   | -   | 100   |
| 3     |                  | EC45882      | Evaluation of Internship-3         | -               | 2 | 4  | -          | 4          | -             | -  | 100 | -   | 100   |
| 4     | PROJ             | EC45998      | Major Project Phase-II ( AB group) | -               | - | 8  | -          | 4          | -             | -  | 40  | 60  | 100   |
| 5     | PROJ             | EC45498      | Major Project Phase-I ( BA group)  | -               | - | 8  | -          | 4          | -             | -  | 40  | 60  | 100   |
| Total |                  |              | For AB Group                       | 6               | 2 | 12 | 6          | 8          | 140           | 60 | 140 | 60  | 400   |
|       |                  |              | For BA Group                       | 6               | 2 | 12 | 6          | 8          | 140           | 60 | 140 | 60  | 400   |

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

**List of Electives**

| <b>Program Elective-III</b> |                         |                     | <b>SEMESTER VII</b>            |
|-----------------------------|-------------------------|---------------------|--------------------------------|
| <b>S.No.</b>                | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>                 |
| 1                           |                         | EC45207             | Microwave Devices and Circuits |
| 2                           |                         | EC45208             | Optical Communication          |
| 3                           |                         | <b>EC</b>           | <b>Advanced Antenna Design</b> |

| <b>Program Elective-IV</b> |                         |                     | <b>SEMESTER VII</b>         |
|----------------------------|-------------------------|---------------------|-----------------------------|
| <b>S.No.</b>               | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>              |
| 1                          |                         | CO45251             | Data Science                |
| 2                          |                         | EI45252             | VLSI Technology             |
| 3                          |                         |                     | Moocs/Swayam Online Courses |

| <b>Open Elective - I</b> |                         |                     | <b>SEMESTER VII</b>                |
|--------------------------|-------------------------|---------------------|------------------------------------|
| <b>S.No.</b>             | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>                     |
| 1                        |                         | EC45301             | Internet of Things                 |
| 2                        |                         | EC45302             | Advanced Digital Signal Processing |
| 3                        |                         | <b>BM45303</b>      | Digital Image Processing           |
| 4                        |                         |                     | Moocs/Swayam Online Courses        |

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**List of Electives**

| <b>Program Elective-V</b> |                         |                     | <b>SEMESTER VIII</b>                   |
|---------------------------|-------------------------|---------------------|--|
| <b>S.No.</b>              | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>                         |
| 1                         |                         | EE                  | Industrial and Power Electronics       |
| 2                         |                         | EC45602             | Optical Networks                       |
| 3                         |                         | EC                  | <b>Information Theory &amp; Coding</b> |
| 4                         |                         |                     | Moocs/Swayam Online Courses*           |

| <b>Open Elective - II</b> |                         |                     | <b>SEMESTER VIII</b>                  |
|---------------------------|-------------------------|---------------------|---------------------------------------|
| <b>S.No.</b>              | <b>Subject Category</b> | <b>Subject Code</b> | <b>Subject</b>                        |
| 1                         |                         | EC45759             | Satellite and Radar Communication     |
| 2                         |                         | EC                  | Game Theory in Wireless Communication |
| 3                         |                         | <b>EC45760</b>      | Introduction to Cryptography          |
| 4                         |                         |                     | Moocs/Swayam Online Courses*          |