

**BOARD OF TECHNICAL EDUCATION, GOA STATE**  
**PROGRAMME STRUCTURE- 28 MEDICAL ELECTRONICS**

| Sr. No.       | E/C | SUBJ. CODE | SUBJECT NAME                   | SUBJECT HEADS |    |    | EXAMINATION SCHEME |          |        |        |       |
|---------------|-----|------------|--------------------------------|---------------|----|----|--------------------|----------|--------|--------|-------|
|               |     |            |                                | TH            | PR | TW | MAX TH             | MAX TEST | MAX PR | MAX TW | TOTAL |
| SEMESTER I    |     |            |                                |               |    |    |                    |          |        |        |       |
| 1             | C   | GN101      | COMM SKILLS                    | 0             | 1  | 1  | 0                  | 0        | 50     | 50     | 100   |
| 2             | C   | GN102      | ENGG MATHS - I                 | 1             | 0  | 0  | 75                 | 25       | 0      | 0      | 100   |
| 3             | C   | GN103      | APPLIED PHYSICS - I            | 1             | 0  | 1  | 75                 | 25       | 0      | 50     | 150   |
| 4             | C   | GN104      | APPLIED CHEMISTRY              | 1             | 0  | 1  | 75                 | 25       | 0      | 50     | 150   |
| 5             | C   | GN204      | ENGG. DRAWING                  | 0             | 1  | 1  | 0                  | 0        | 50     | 50     | 100   |
| SEMESTER II   |     |            |                                |               |    |    |                    |          |        |        |       |
| 1             | C   | GN105      | COMP. FUND. & APP.             | 0             | 1  | 1  | 0                  | 0        | 50     | 50     | 100   |
| 2             | C   | GN106      | BASIC ENGG SKILLS              | 0             | 1  | 1  | 0                  | 0        | 50     | 100    | 150   |
| 3             | C   | GN201      | ENGG MATHS - II                | 1             | 0  | 0  | 75                 | 25       | 0      | 0      | 100   |
| 4             | C   | GN202      | APPLIED PHYSICS - II           | 1             | 0  | 1  | 75                 | 25       | 0      | 50     | 150   |
| 5             | C   | GN203      | ENVIRONMENTAL STUDIES          | 1             | 0  | 0  | 75                 | 25       | 0      | 0      | 100   |
| 6             | C   | GN205      | ENGG. MATERIALS                | 1             | 0  | 0  | 75                 | 25       | 0      | 0      | 100   |
| SEMESTER III  |     |            |                                |               |    |    |                    |          |        |        |       |
| 1             | C   | CS308      | BASIC ELECTRONICS ENGG.        | 1             | 1  | 1  | 75                 | 25       | 50     | 25     | 175   |
| 2             | C   | CS309      | DIGITAL ELECTRONICS            | 1             | 1  | 1  | 75                 | 25       | 50     | 25     | 175   |
| 3             | C   | CS501      | ENTREPRENEURSHIP DEVELOPMENT   | 0             | 0  | 1  | 0                  | 0        | 0      | 50     | 50    |
| 4             | C   | EN302      | COMP. AIDED PCB DESIGN         | 0             | 0  | 1  | 0                  | 0        | 0      | 50     | 50    |
| 5             | C   | MX302      | BAS. HUM. BIO. FOR ENGINEERS-I | 1             | 0  | 1  | 75                 | 25       | 0      | 25     | 125   |
| 6             | C   | MX303      | MEDICAL INSTRUMENTS - I        | 1             | 0  | 1  | 75                 | 25       | 0      | 25     | 125   |
| SEMESTER IV   |     |            |                                |               |    |    |                    |          |        |        |       |
| 1             | C   | EN403      | CIRCUITS & NETWORKS            | 1             | 0  | 1  | 75                 | 25       | 0      | 25     | 125   |
| 2             | C   | EN405      | ANALOG ELECTRONICS             | 1             | 1  | 1  | 75                 | 25       | 50     | 25     | 175   |
| 3             | C   | MX401      | ELECTRONIC DEVICES & CIRCUITS  | 1             | 0  | 1  | 75                 | 25       | 0      | 25     | 125   |
| 4             | C   | MX402      | BAS. HUM. BIO. FOR ENGINEER-II | 1             | 0  | 1  | 75                 | 25       | 0      | 25     | 125   |
| 5             | C   | MX403      | MEDICAL INSTRUMENTS - II       | 1             | 1  | 1  | 75                 | 25       | 50     | 25     | 175   |
| 6             | C   | MX404      | PROG.OF 8051 MICROCONTRO. IN C | 0             | 1  | 1  | 0                  | 0        | 50     | 50     | 100   |
| SEMESTER V    |     |            |                                |               |    |    |                    |          |        |        |       |
| 1             | C   | IT501      | INDUSTRIAL TRAINING            | 0             | 1  | 1  | 0                  | 0        | 30     | 70     | GRADE |
| 2             | C   | MX501      | MEDICAL INSTRUMENTS-III        | 1             | 0  | 1  | 75                 | 25       | 0      | 25     | 125   |
| 3             | C   | MX502      | MEDICAL IMAGING                | 1             | 0  | 1  | 75                 | 25       | 0      | 25     | 125   |
| 4             | C   | MX503      | EMBEDED LAB.                   | 0             | 0  | 1  | 0                  | 0        | 0      | 50     | 50    |
| 5             | E1  | MX511      | MEDICAL EQUIPMENT MAINTENANCE  | 1             | 1  | 1  | 75                 | 25       | 25     | 25     | 150   |
| 6             | E1  | MX512      | BIOTELEMETRY                   | 1             | 1  | 1  | 75                 | 25       | 25     | 25     | 150   |
| 7             | E1  | MX513      | BIOSTATISTICS                  | 1             | 1  | 1  | 75                 | 25       | 25     | 25     | 150   |
| ANY ONE OF E1 |     |            |                                |               |    |    |                    |          |        |        |       |
| SEMESTER VI   |     |            |                                |               |    |    |                    |          |        |        |       |
| 1             | C   | CS602      | BUSINESS COMMUNICATION         | 0             | 1  | 1  | 0                  | 0        | 50     | 50     | 100   |
| 2             | C   | MX601      | HOSPITAL MANAGEMENT            | 1             | 1  | 1  | 75                 | 25       | 25     | 25     | 150   |
| 3             | C   | MX602      | MEDICAL INSTRUMENTS-IV         | 1             | 1  | 1  | 75                 | 25       | 25     | 25     | 150   |
| 4             | C   | MX603      | MEDICAL ELECTRONICS PROJECT    | 0             | 1  | 1  | 0                  | 0        | 50     | 50     | 100   |
| 5             | E2  | EN611      | PROGRAMMABLE LOGIC CONTROLLER  | 1             | 1  | 1  | 75                 | 25       | 25     | 25     | 150   |

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|                      |    |       |                                |   |   |   |    |    |    |    |     |
|----------------------|----|-------|--------------------------------|---|---|---|----|----|----|----|-----|
| 6                    | E2 | EN612 | INTERNET TECH. & WEB DESIGN    | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 7                    | E2 | EN613 | ADVANCED MICROCONTROLLERS      | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 8                    | E2 | EN614 | E-COMMERCE                     | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 9                    | E2 | EN615 | CONSUMER ELECTRONICS           | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 10                   | E2 | ME617 | MARKETING MANAGEMENT           | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 11                   | E2 | MX611 | NUCLEAR MEDICINE               | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 12                   | E2 | MX612 | VENTILATOR MANAGEMENT          | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 13                   | E2 | MX613 | TELEMEDICINE                   | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 14                   | E2 | MX614 | PRIN. & PRAC. OF LAB. MEDICINE | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| 15                   | E2 | IE6** | INSTITUTIONAL ELECTIVE         | 1 | 1 | 1 | 75 | 25 | 25 | 25 | 150 |
| <b>ANY TWO OF E2</b> |    |       |                                |   |   |   |    |    |    |    |     |