

**SYMBIOSIS INSTITUTE OF HEALTH SCIENCES**  
**DIPLOMA IN BIOMEDICAL INSTRUMENTATION**  
**PROGRAMME STRUCTURE-2017-18**

- |  |  |
|--|--|
| <b>1. OBJECTIVE</b>                    | The candidate will be able to <ol style="list-style-type: none"> <li>a. Know the construction and use of medical equipments and devices.</li> <li>b. Operate the instruments optimally.</li> <li>c. Handle advanced and complicated equipments.</li> <li>d. Know the operation, principle and working of equipments.</li> <li>e. Understand the applied engineering aspects of the medical instruments and equipments.</li> <li>f. Maintain and handle the routine troubleshooting of equipments.</li> <li>g. Report the appropriate fault to the company engineers.</li> <li>h. Foster competencies of Medical Technologists in an environment of a dynamic and an ever changing technology.</li> </ol> |
| <b>2. DURATION</b>                     | One Year Part Time   |
| <b>3. INTAKE</b>                       | 60 Students  |
| <b>4. RESERVATION</b>                  | NA   |
| <b>5. ELIGIBILITY</b>                  | Candidate should be Std. XII Pass from recognized board or equivalent with Diploma/Degree in Allied Health Technology/ Engineering or equivalent as decided by the competent authority / Work experience for 2 years in related field of Medical Technology<br>OR<br>Students of final year of degree programme in Medical Technology/Allied Health Sciences   |
| <b>6. SELECTION PROCEDURE</b>          | As per eligibility and personal interaction  |
| <b>7. MEDIUM OF INSTRUCTION</b>        | English  |
| <b>8. PROGRAMME PATTERN</b>            | Semester Pattern – 2 Semesters   |
| <b>9. COURSES &amp; SPECIALIZATION</b> | As per Annexure A  |



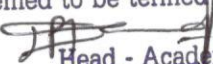
|                |                    |                   |
|----------------|--------------------|-------------------|
| <b>10. FEE</b> | Academic Fee       | Rs. 18,500        |
|                | Institute Deposite | Rs. 5,000         |
|                | <b>Total</b>       | <b>Rs. 23,500</b> |

**11. ASSESSMENT** All internal and external courses will have either 100% internal or external evaluation.  
The programme combines classroom instruction and practical training on-campus and in tertiary care hospitals, equipment industry.

**12. STANDARD OF PASSING** The assessment of the student for each examination is done, based on relative performance. Maximum Grade Point (GP) is 10 corresponding to O (Outstanding). For all courses, a student is required to pass both internal and external examination separately with a minimum Grade Point of 4 corresponding to Grade P. Students securing less than 40% absolute marks in each head of passing will be declared FAIL. The University awards a degree to the student who has achieved a minimum CGPA of 4 out of maximum of 10 CGPA for the programme.

**13. AWARD OF DIPLOMA** **Diploma in Biomedical Instrumentation** will be awarded at the end of semester II examination by taking into consideration the performance of all semester examinations after obtaining minimum 4.00 CGPA out of 10 CGPA.

Programme Structure is approved by the Academic Council subject to its norms & conditions. Any provision in the Programme Structure which violates the basic rules & regulations is deemed to be termed "Null & Void".

  
Head - Academics

**Annexure A  
Semester I**

| Catalog Course Code | Course Code | Course Title   | Teaching Scheme |                   |               | Examination Scheme |           |                    |            |
|---------------------|-------------|--|-----------------|-------------------|---------------|--------------------|-----------|--------------------|------------|
|                     |             |  | Theory Credits  | Practical Credits | Total Credits | Theory             |           | Practical External | Total      |
|                     |             |  |                 |                   |               | Internal           | External  |                    |            |
| T4346               | 040171101   | Introduction to Biomedical Instrumentation                       | 2               | -                 | 2             | 50                 | -         | -                  | 50         |
| T4321               | 040171102   | Principles and Techniques of Measuring and Recording Instruments | 2               | -                 | 2             | 50                 | -         | -                  | 50         |
| T4322               | 040171103   | Medical Electronics, Microprocessors and Microcomputers          | 3               | -                 | 3             | 25                 | 50        | -                  | 75         |
| T4642               | 040171104   | Installation, Maintenance and Servicing                          | 2               | -                 | 2             | 50                 | -         | -                  | 50         |
| <b>Total</b>        |             |  | <b>9</b>        | <b>-</b>          | <b>9</b>      | <b>175</b>         | <b>50</b> | <b>-</b>           | <b>225</b> |

**Semester II**

| Catalog Course Code                             | Course Code | Course Title                            | Teaching Scheme |                   |               | Examination Scheme |           |                    |            |
|---|-------------|---|-----------------|-------------------|---------------|--------------------|-----------|--------------------|------------|
|   |             |   | Theory Credits  | Practical Credits | Total Credits | Theory             |           | Practical External | Total      |
|   |             |   |                 |                   |               | Internal           | External  |                    |            |
| T4804   | 040171201   | Project - Instrumentation               | -               | 4                 | 4             | -                  | -         | 100                | 100        |
| T4329   | 040171202   | Practical - Medical Instrumentation     | -               | 6                 | 6             | -                  | -         | 150                | 150        |
| <b>Choose any one course from the following</b> |             |   |                 |                   |               |                    |           |                    |            |
| T4325   | 040171203   | Intensive Care and Surgical Instruments | 1               | -                 | 1             | -                  | 25        | -                  | 25         |
| T4326   | 040171204   | Analytical and Laboratory Instruments   | 1               | -                 | 1             | -                  | 25        | -                  | 25         |
| T4327   | 040171205   | Radiology Instruments                   | 1               | -                 | 1             | -                  | 25        | -                  | 25         |
| T4328   | 040171206   | Intensive Care and Dialysis Instruments | 1               | -                 | 1             | -                  | 25        | -                  | 25         |
| <b>Total</b>                                    |             |   | <b>1</b>        | <b>10</b>         | <b>11</b>     | <b>-</b>           | <b>25</b> | <b>250</b>         | <b>275</b> |

**Summary**

| Semester     | Internal Credits | External Credits | Total Credits | Total Marks |
|--------------|------------------|------------------|---------------|-------------|
| Semester I   | 06               | 03               | 09            | 225         |
| Semester II  | -                | 11               | 11            | 275         |
| <b>Total</b> | <b>06</b>        | <b>14</b>        | <b>20</b>     | <b>500</b>  |

