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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p align="center"><b>Bachelor of Science (B.Sc.) - Operation Theatre Technology</b><br/> <b>[3 Years Regular/4 Years (Honours/Honours with Research)]</b></p>                                       |  |
| <p align="center"><b>Faculty of Medicine</b></p>                                                                                                                                                    |  |
| <p align="center"><b>Parul University</b></p>                                                                                                                                                       |  |
| <p align="center"><b>Teaching and Examination Scheme for Batch 2023-24</b></p>                                                                                                                      |  |
| <p>(NOTE: A credit is a unit by which the coursework is measured. It determines the number of hours of instruction required per week over the duration of a semester (Minimum 15 weeks/90 days)</p> |  |
| <p>1. 1 Theory Credit = 15 hours of academic activity engagement in a semester</p>                                                                                                                  |  |
| <p>2. 1 Credit of (Practical/Internship/workshop-based activity/ Self-Learning-Online/Offline) = 30 Hours of engagement in a semester</p>                                                           |  |
| <p>3. 1 Credit of Experiential learning (Field Visit/ Industry Visit)/ Assignments = 40-45 hours of engagement in a semester.</p>                                                                   |  |
| <p>4. Research Project/Dissertation: Entire Seventh &amp; Eighth Semesters (12 Credits)</p>                                                                                                         |  |
| <p align="center"><b>T = Theory , P = Practical , CE = Continuous Evaluation</b></p>                                                                                                                |  |
| <p align="center"><b>Bachelor of Science in Operation Theatre Technology with Minor in</b></p>                                                                                                      |  |
| <p align="center">1. Anesthesia and Critical Care</p>                                                                                                                                               |  |
| <p align="center">2. AIML in Health Care</p>                                                                                                                                                        |  |
| <p align="center">3. Nanotechnology in Health Care</p>                                                                                                                                              |  |

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## Semester 2

|                   |              |                                                                        |        | Teaching Scheme (Hours / Week) |     |     | Internal Marks |    |     | External Marks |    | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|-------------------|--------------|------------------------------------------------------------------------|--------|--------------------------------|-----|-----|----------------|----|-----|----------------|----|-----------------------------|---------------------------|-------------|
| NCrF Credit Level | Code         | Subject                                                                | Credit | Lect                           | Lab | Tut | T              | P  | CE  | T              | P  | Int.+Ext.                   | Int.+Ext.                 |             |
| 4.5               |              | Major (Discipline Specific Course)                                     |        |                                |     |     |                |    |     |                |    |                             |                           |             |
|                   | 19010902DS01 | Basics of Surgical Procedures (T)                                      | 3      | 3                              | -   | -   | 20             | -  | 20  | 60             | -  | 40                          | -                         | 100         |
|                   | 19010902DS02 | Basics Of Surgical Procedures (P)                                      | 1      | -                              | 2   | -   | -              | 20 | -   | -              | 30 | -                           | 20                        | 50          |
|                   | 19010002DS01 | Anatomy & Physiology-II (T)                                            | 4      | 4                              | -   | -   | 20             | -  | 20  | 60             | -  | 40                          | -                         | 100         |
|                   | 19010002DS02 | Anatomy & Physiology -II (P)                                           | 2      | -                              | 4   | -   | -              | 20 | -   | -              | 30 | -                           | 20                        | 50          |
|                   |              | Minor -2 / Interdisciplinary Course (Select any one)                   |        |                                |     |     |                |    |     |                |    |                             |                           |             |
|                   | 19011302AC01 | Anesthesia and Critical Care: Basic Techniques of Anaesthesia (T)      | 3      | 3                              | -   | -   | 20             | -  | 20  | 60             | -  | 40                          | -                         | 100         |
|                   | 19011302AC02 | Anesthesia and Critical Care: Basic Techniques of Anaesthesia (P)      | 1      | -                              | 2   | -   |                | 20 | -   | -              | 30 | -                           | 20                        | 50          |
|                   | 03010502AM01 | AIML in Healthcare: Artificial Intelligence (T)                        | 3      | 3                              | -   | -   | 20             | -  | 20  | 60             | -  | 40                          | -                         | 100         |
|                   | 03010502AM02 | AIML in Healthcare: Artificial Intelligence (P)                        | 1      | -                              | 2   | -   | -              | 20 | -   | -              | 30 | -                           | 20                        | 50          |
|                   | 03011302NT01 | Nanotechnology in Healthcare: Nanomaterials in Biomedical Applications | 4      | 3                              | -   | 1   | 20             |    | 20  | 60             | -  | 40                          | -                         | 100         |
|                   |              | University Electives -2 (Multidisciplinary course ) (Select any one)   |        |                                |     |     |                |    |     |                |    |                             |                           |             |
|                   | 10010102UE01 | Introduction to Gender, Health, and Rights                             | 4      | 4                              | -   | -   | 20             | -  | 20  | 60             | -  | 40                          | -                         | 100         |
|                   | 19010202UE01 | Public Health Nutrition                                                |        | 3                              | 2   | -   | 20             | 20 | 20  | 60             | 30 | 40                          | 20                        | 150         |
|                   | 15010402UE01 | Human Psychology                                                       |        | 4                              | -   | -   | 20             | -  | 20  | 60             | -  | 40                          | -                         | 100         |
|                   |              | Skill Enhancement Course -2                                            |        |                                |     |     |                |    |     |                |    |                             |                           |             |
|                   | 00019102SE01 | Mathematical Aptitude                                                  | 2      | 2                              | -   | -   | 20             | -  | 20  | 60             | -  | 40                          | -                         | 100         |
|                   |              | Value Added Course-2                                                   |        |                                |     |     |                |    |     |                |    |                             |                           |             |
|                   | 00019302VA01 | IPDC including History and Culture of India and IKS-I                  | 2      | 2                              | -   | -   | -              | -  | 100 | -              | -  | 40                          | -                         | 100         |

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### Semester 3

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## Semester 4

|                   |              |                                                                          |        | Teaching-Scheme-<br>(Hours-/-Week) |     |     | Internal-Marks |    |    | External-Marks |    | Passing-Marks-<br>(Theory-<br>+-CE) | Passing-Marks-<br>(Practical) | Total-Marks |
|-------------------|--------------|--------------------------------------------------------------------------|--------|------------------------------------|-----|-----|----------------|----|----|----------------|----|-------------------------------------|-------------------------------|-------------|
| NCrF-Credit-Level | Code         | Subject                                                                  | Credit | Lect                               | Lab | Tut | T-             | P  | CE | T              | P  | Int.+Ext.                           | Int.+Ext.                     |             |
| 5.0               |              | <b>Major (Discipline Specific Course)</b>                                |        |                                    |     |     |                |    |    |                |    |                                     |                               |             |
|                   | 19010904DS01 | Principles Of Operation Theatre Management (T)                           | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010904DS02 | Principles Of Operation Theatre Management (P)                           | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 19010004DS01 | Microbiology & Pathology-II(T)                                           | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010004DS02 | Microbiology & Pathology-II(P)                                           | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 19010004DS03 | Applied Medicine & Pharmacology-I(T)                                     | 4      | 4                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010004DS04 | Applied Medicine & Pharmacology-I(P)                                     | 2      | -                                  | 4   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   |              | <b>Minor -3 / Interdisciplinary Course<br/>(Select any one)</b>          |        |                                    |     |     |                |    |    |                |    |                                     |                               |             |
|                   | 19011304AC01 | <b>Anesthesia and Critical Care:</b><br>Essentials of Anesthesia – I (T) | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19011304AC02 | <b>Anesthesia and Critical Care:</b><br>Essentials of Anesthesia – I(P)  | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 03010504AM01 | <b>AIML in Health Care:</b> Data<br>Science for AI (T)                   | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 03010504AM02 | <b>AIML in Health Care:</b> Data<br>Science for AI (P)                   | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 03011304NT01 | <b>Nanotechnology in<br/>Healthcare:</b> Nanofabrication<br>Techniques   | 4      | 3                                  | -   | 1   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   |              | <b>Skill Enhancement Course -4</b>                                       |        |                                    |     |     |                |    |    |                |    |                                     |                               |             |
|                   | 19010004SE01 | Health Informatics &<br>Personalised Medicine                            | 2      | 2                                  | -   | -   | 20             |    | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   |              | <b>Value Added Course-4/ Physical<br/>Education (Select anyone)</b>      |        |                                    |     |     |                |    |    |                |    |                                     |                               |             |
|                   | 19010204VA01 | Positive Mental Health                                                   | 2      | 2                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 00019404VA01 | <b>Physical Education:</b> Yoga                                          |        | 1                                  | 2   | -   | 20             | 20 | 20 | 60             | 30 | 40                                  | 20                            | 150         |
|                   | 00019404VA02 | <b>Physical Education:</b> Sports                                        |        | 1                                  | 2   | -   | 20             | 20 | 20 | 60             | 30 | 40                                  | 20                            | 150         |

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## Semester 5

|                   |              |                                                                           |        | Teaching-Scheme-<br>(Hours-/-Week) |     |     | Internal-Marks |    |    | External-Marks |    | Passing-Marks-<br>(Theory-<br>+-CE) | Passing-Marks-<br>(Practical) | Total-Marks |
|-------------------|--------------|---------------------------------------------------------------------------|--------|------------------------------------|-----|-----|----------------|----|----|----------------|----|-------------------------------------|-------------------------------|-------------|
| NCrF-Credit-Level | Code         | Subject                                                                   | Credit | Lect                               | Lab | Tut | T-             | P  | CE | T              | P  | Int.+Ext.                           | Int.+Ext.                     |             |
| 5.5               |              | <b>Major (Discipline Specific Course)</b>                                 |        |                                    |     |     |                |    |    |                |    |                                     |                               |             |
|                   | 19010905DS01 | Advance Anesthetic Equipment And Drugs (T)                                | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010905DS02 | Advance Anesthetic Equipment And Drugs (P)                                | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 19010005DS01 | Applied Medicine & Pharmacology-II(T)                                     | 4      | 4                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010005DS02 | Applied Medicine & Pharmacology-II(P)                                     | 2      | -                                  | 4   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 19010905DS03 | Basic Anesthetic Techniques (T)                                           | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010905DS04 | Basic Anesthetic Techniques (P)                                           | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   |              | <b>Minor -4 / Interdisciplinary Course<br/>(Select any one)</b>           |        |                                    |     |     |                |    |    |                |    |                                     |                               |             |
|                   | 19011305AC01 | <b>Anesthesia and Critical Care:</b><br>Advanced Anaesthesia Technology   | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19011305AC02 | <b>Anesthesia and Critical Care:</b><br>Advanced Anaesthesia Technology   | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 03010505AM01 | <b>AIML in Healthcare:</b> Machine Learning                               | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 03010505AM02 | <b>AIML in Healthcare:</b> Machine Learning                               | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |
|                   | 03011305NT01 | <b>Nanotechnology in Healthcare</b><br>Nanofabrication Techniques         | 4      | 3                                  | -   | 1   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   |              | <b>Minor -5 / Interdisciplinary Course<br/>(Select any one)</b>           |        |                                    |     |     |                |    |    |                |    |                                     |                               |             |
|                   | 19011305AC03 | <b>Anesthesia and Critical Care:</b><br>Advanced Critical Care Technology | 3      | 3                                  | -   | -   | 20             | -  | 20 | 60             | -  | 40                                  | -                             | 100         |
|                   | 19011305AC04 | <b>Anesthesia and Critical Care:</b><br>Advanced Critical Care Technology | 1      | -                                  | 2   | -   | -              | 20 | -  | -              | 30 | -                                   | 20                            | 50          |

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## Semester 6

|                   |              |                                                                                       |           | Teaching-Scheme-<br>(Hours-/-Week) |     |     | Internal-Marks |    |     | External-Marks |    | Passing-Marks-<br>(Theory-<br>+-CE) | Passing-Marks-<br>(Practical) | Total-Marks |
|-------------------|--------------|---------------------------------------------------------------------------------------|-----------|------------------------------------|-----|-----|----------------|----|-----|----------------|----|-------------------------------------|-------------------------------|-------------|
| NCrF-Credit-Level | Code         | Subject                                                                               | Credit    | Lect                               | Lab | Tut | T-             | P  | CE  | T              | P  | Int.+Ext.                           | Int.+Ext.                     |             |
| 5.5               |              | <b>Major (Discipline Specific Course)</b>                                             |           |                                    |     |     |                |    |     |                |    |                                     |                               |             |
|                   | 19010906DS01 | Specialized Surgery And Instrumentation (T)                                           | 3         | 3                                  | -   | -   | 20             | -  | 20  | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010906DS02 | Specialized Surgery And Instrumentation (P)                                           | 1         | -                                  | 2   | -   | -              | 20 | -   | -              | 30 | -                                   | 20                            | 50          |
|                   | 19010906DS03 | Electronics And Technology In Surgery (T)                                             | 3         | 3                                  | -   | -   | 20             | -  | 20  | 60             | -  | 40                                  | -                             | 100         |
|                   | 19010906DS04 | Electronics And Technology In Surgery (P)                                             | 1         | -                                  | 2   | -   | -              | 20 | -   | -              | 30 | -                                   | 20                            | 50          |
|                   | 19011306DS05 | Basic And Advanced Anesthesia and Critical Care (Practical)                           | 4         | -                                  | 8   | -   | -              | 40 | -   | -              | 60 | -                                   | 40                            | 100         |
|                   |              | <b>Minor -6 / Interdisciplinary Course (Select any one)</b>                           |           |                                    |     |     |                |    |     |                |    |                                     |                               |             |
|                   | 19011306AC01 | <b>Anesthesia and Critical Care:</b> Basic and Advanced Anaesthesia and Critical Care | 4         | -                                  | 8   | -   | -              | 40 | -   | -              | 60 | -                                   | 40                            | 100         |
|                   | 03010506AM01 | <b>AIML in Healthcare:</b> Natural Language Processing (T)                            | 3         | 3                                  | -   | -   | 20             | -  | 20  | 60             | -  | 40                                  | -                             | 100         |
|                   | 03010506AM02 | <b>AIML in Healthcare:</b> Natural Language Processing (P)                            | 1         | -                                  | 2   | -   | -              | 20 | -   | -              | 30 | -                                   | 20                            | 50          |
|                   | 03011306NT01 | <b>Nanotechnology in Healthcare:</b> Nanocomposites                                   | 4         | 3                                  | -   | 1   | 20             | -  | 20  | 60             | -  | 40                                  | -                             | 100         |
|                   |              | <b>Ability Enhancement Course -5</b>                                                  |           |                                    |     |     |                |    |     |                |    |                                     |                               |             |
|                   | 00019306AE01 | Professional Ethics and Communication                                                 | 2         | 2                                  | -   | -   | -              | -  | 100 | -              | -  | 40                                  | -                             | 100         |
|                   |              | <b>Internship/Mini Project-1</b> (in Major Specific Course)                           | 4         | -                                  | 8   | -   | -              | 40 | -   | -              | 60 | -                                   | 40                            | 100         |
|                   |              | <b>Total</b>                                                                          | <b>22</b> |                                    |     |     |                |    |     |                |    |                                     |                               |             |

**Internship Guidelines:** 30 days (120 Hrs.)

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**Research Project Guidelines:**

Advanced – level disciplinary/interdisciplinary courses related to topic selection and research methodology and initial stage of research will be conducted like: determining the definition of the information needed, determining the methods of collection of qualitative and quantitative data, conducting secondary data analysis etc.

**On-the-Job Training Guidelines:** 45 days (180 Hrs.)

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|--------------------------------------|------------|--|--|--|--|--|--|--|--|--|--|--|
| <b>Total Credit of the Programme</b> | <b>184</b> |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|------------|--|--|--|--|--|--|--|--|--|--|--|

### **Research Project Guidelines:**

The final semester will be devoted to seminar presentation, preparation and submission of research project report/dissertation. The project work/dissertation will be on a topic in the disciplinary programme of study or an interdisciplinary topic.

**On-the-Job Training Guidelines:** 45 days (180 Hrs.)

**Note:** Course Curriculum from 4<sup>th</sup> Semester up to 8<sup>th</sup> semester may undergo revision. Any revision to this effect will be uploaded on the University Website. Students are requested to visit the University Website for any updates related to the revision in the course curriculum or shall contact Dean/HoI/Hod for the same.