



Annexure-4

**MGM SCHOOL OF BIOMEDICAL SCIENCES**  
**(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES)**

(Deemed University u/s 3 of UGC Act 1956)

Grade “A” Accredited by NAAC

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**CHOICE BASED CREDIT SYSTEM (CBCS)**

**(Academic Year 2018 - 19)**

**Curriculum for**

**B.Sc. Allied Health Sciences**

**B.Sc. Perfusion Technology**

| OUTLINE OF COURSE CURRICULUM               |  |              |              |               |                   |              |              |               |            |                     |               |            |
|--|--|--------------|--------------|---------------|-------------------|--------------|--------------|---------------|------------|---------------------|---------------|------------|
| B.Sc. Perfusion Technology                 |  |              |              |               |                   |              |              |               |            |                     |               |            |
| Semester I                                 |  |              |              |               |                   |              |              |               |            |                     |               |            |
| Code No.                                   | Core Subjects  | Credits/Week |              |               |                   | Hrs/Semester |              |               |            | Marks               |               |            |
|  |  | Lecture (L)  | Tutorial (T) | Practical (P) | Total Credits (C) | Lecture (L)  | Tutorial (T) | Practical (P) | Total hrs. | Internal Assessment | Semester Exam | Total      |
| <b>Theory</b>                              |  |              |              |               |                   |              |              |               |            |                     |               |            |
| BPT 101 L                                  | Human Anatomy Part I   | 3            | -            | -             | 3                 | 45           | -            | -             | 45         | 20                  | 80            | 100        |
| BPT 102 L                                  | Human Physiology Part I  | 3            | -            | -             | 3                 | 45           | -            | -             | 45         | 20                  | 80            | 100        |
| BPT 103 L                                  | General Biochemistry Nutrition   | 3            | 1            | -             | 4                 | 45           | 15           | -             | 60         | 20                  | 80            | 100        |
| BPT 104 L                                  | Introduction to National Health Care System<br>(Multidisciplinary/ Interdisciplinary)      | 3            | -            | -             | 3                 | 45           | -            | -             | 45         | 20                  | 80            | 100        |
| <b>Practical</b>                           |  |              |              |               |                   |              |              |               |            |                     |               |            |
| BPT 101 P                                  | Human Anatomy Part I   | -            | -            | 4             |                   | -            | -            | 60            | 60         | -                   | -             | -          |
| BPT 102 P                                  | Human Physiology Part I  | -            | -            | 4             |                   | -            | -            | 60            | 60         | -                   | -             | -          |
| BPT 103 P                                  | General Biochemistry   | -            | -            | 4             |                   | -            | -            | 60            | 60         | -                   | -             | -          |
| BPT 105 P                                  | Community Orientation & Clinical Visit (Including related practicals to the Parent course) | -            | -            | 8             |                   | -            | -            | 120           | 120        | -                   | -             | -          |
| <b>Ability Enhancement Elective Course</b> |  |              |              |               |                   |              |              |               |            |                     |               |            |
| AEC 001 L                                  | English & Communication Skills   | 3            | -            | -             | 3                 | 45           | -            | -             | 45         | 100                 | -             | 100        |
| AEC 002 L                                  | Environmental Sciences   |              |              |               |                   |              |              |               |            |                     |               |            |
| <b>Total</b>                               |  | <b>15</b>    | <b>1</b>     | <b>20</b>     | <b>16</b>         | <b>225</b>   | <b>15</b>    | <b>300</b>    | <b>540</b> | <b>180</b>          | <b>320</b>    | <b>500</b> |

| OUTLINE OF COURSE CURRICULUM             |  |              |              |               |                   |              |              |               |            |                     |               |            |
|--|--|--------------|--------------|---------------|-------------------|--------------|--------------|---------------|------------|---------------------|---------------|------------|
| B.Sc. Perfusion Technology               |  |              |              |               |                   |              |              |               |            |                     |               |            |
| Semester II                              |  |              |              |               |                   |              |              |               |            |                     |               |            |
| Code No.                                 | Core Subjects  | Credits/Week |              |               |                   | Hrs/Semester |              |               |            | Marks               |               |            |
|  |  | Lecture (L)  | Tutorial (T) | Practical (P) | Total Credits (C) | Lecture (L)  | Tutorial (T) | Practical (P) | Total hrs. | Internal Assessment | Semester Exam | Total      |
| <b>Theory</b>                            |  |              |              |               |                   |              |              |               |            |                     |               |            |
| BPT 106 L                                | Human Anatomy Part II  | 2            | -            | -             | 2                 | 30           | -            | -             | 30         | 10                  | 40            | 50         |
| BPT 107 L                                | Human Physiology Part II   | 2            | -            | -             | 2                 | 30           | -            | -             | 30         | 10                  | 40            | 50         |
| BPT 108 L                                | General Microbiology   | 3            | -            | -             | 3                 | 45           | -            | -             | 45         | 20                  | 80            | 100        |
| BPT 109 L                                | Basic Pathology & Hematology   | 3            | 1            | -             | 4                 | 45           | 15           | -             | 60         | 20                  | 80            | 100        |
| BPT 110 L                                | Introduction to Quality and Patient safety<br>(Multidisciplinary/ Interdisciplinary)       | 3            | -            | -             | 3                 | 45           | -            | -             | 45         | 20                  | 80            | 100        |
| <b>Practical</b>                         |  |              |              |               |                   |              |              |               |            |                     |               |            |
| BPT 106 P                                | Human Anatomy Part II  | -            | -            | 4             |                   | -            | -            | 60            | 60         | -                   | -             | -          |
| BPT 107 P                                | Human Physiology Part II   | -            | -            | 2             |                   | -            | -            | 30            | 30         | -                   | -             | -          |
| BPT 108 P                                | General Microbiology   | -            | -            | 4             |                   | -            | -            | 60            | 60         | -                   | -             | -          |
| BPT 109 P                                | Basic Pathology & Hematology   | -            | -            | 4             |                   | -            | -            | 60            | 60         | -                   | -             | -          |
| BPT 111 P                                | Community Orientation & Clinical Visit (Including related practicals to the parent course) | -            | -            | 8             |                   | -            | -            | 120           | 120        | -                   | -             | -          |
| <b>Skill Enhancement Elective Course</b> |  |              |              |               |                   |              |              |               |            |                     |               |            |
| SEC 001 L                                | Medical Bioethics & IPR  | 3            | -            | -             | 3                 | 45           | -            | -             | 45         | 100                 | -             | 100        |
| SEC 002 L                                | Human Rights & Professional Values   |              |              |               |                   |              |              |               |            |                     |               |            |
| <b>Total</b>                             |  | <b>16</b>    | <b>1</b>     | <b>22</b>     | <b>17</b>         | <b>240</b>   | <b>15</b>    | <b>330</b>    | <b>585</b> | <b>180</b>          | <b>320</b>    | <b>500</b> |

| OUTLINE OF COURSE CURRICULUM   |   |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
|--------------------------------|---|--------------|--------------|---------------|----------------------------|-------------------|--------------|--------------|---------------|---------------------------|------------|---------------------|---------------|------------|
| B.Sc. Perfusion Technology     |   |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| Semester III                   |   |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| Code No.                       | Core Subjects   | Credits/Week |              |               |                            |                   | Hrs/Semester |              |               |                           |            | Marks               |               |            |
|                                |   | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posting /Rotation | Total Credits (C) | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posting/Rotation | Total hrs. | Internal Assessment | Semester Exam | Total      |
| <b>Theory</b>                  |   |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| BPT 112 L                      | Applied Pharmacology  | 3            | 1            | -             | -                          | 4                 | 45           | 15           | -             | -                         | 60         | 20                  | 80            | 100        |
| BPT 113 L                      | Applied Anatomy and Physiology of Cardiovascular system related to PT | 3            | 1            | -             | -                          | 4                 | 45           | 15           | -             | -                         | 60         | 20                  | 80            | 100        |
| BPT 114 L                      | Basics of Perfusion Technology  | 2            | 1            | -             | -                          | 3                 | 30           | 15           | -             | -                         | 45         | 20                  | 80            | 100        |
| BPT 115 CP                     | PT Directed Clinical Education-III                                    | -            | -            | -             | 24                         | 8                 | -            | -            | -             | 360                       | 360        | 50                  | -             | 50         |
| <b>Practicals</b>              |   |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| BPT 113 P                      | Applied Anatomy and Physiology of Cardiovascular system related to PT | -            | -            | 4             | -                          | 2                 | -            | -            | 60            | -                         | 60         | 10                  | 40            | 50         |
| BPT 114 P                      | Basics of Perfusion Technology  | -            | -            | 4             | -                          | 2                 | -            | -            | 60            | -                         | 60         | 10                  | 40            | 50         |
| <b>Generic Elective Course</b> |   |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| GEC 001 L                      | Pursuit of Inner Self Excellence (POIS)                               | 3            | -            | -             | -                          | 3                 | 45           | -            | -             | -                         | 45         | 100                 | -             | 100        |
| GEC 002 L                      | Organisational Behaviour  |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| <b>Total</b>                   |   | <b>11</b>    | <b>3</b>     | <b>8</b>      | <b>24</b>                  | <b>26</b>         | <b>165</b>   | <b>45</b>    | <b>120</b>    | <b>360</b>                | <b>690</b> | <b>230</b>          | <b>320</b>    | <b>550</b> |

| OUTLINE OF COURSE CURRICULUM               |                                      |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
|--|--------------------------------------|--------------|--------------|---------------|----------------------------|-------------------|--------------|--------------|---------------|---------------------------|------------|---------------------|---------------|------------|
| B.Sc. Perfusion Technology                 |                                      |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| Semester IV                                |                                      |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| Code No.                                   | Core Subjects                        | Credits/Week |              |               |                            |                   | Hrs/Semester |              |               |                           |            | Marks               |               |            |
|  |                                      | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posting /Rotation | Total Credits (C) | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posting/Rotation | Total hrs. | Internal Assessment | Semester Exam | Total      |
| <b>Theory</b>                              |                                      |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| BPT 116 L                                  | Applied Physiology and Biochemistry  | 2            | 1            | -             | -                          | 3                 | 30           | 15           | -             | -                         | 45         | 20                  | 80            | 100        |
| BPT 117 L                                  | Introduction of Perfusion Techniques | 2            | 1            | -             | -                          | 3                 | 30           | 15           | -             | -                         | 45         | 20                  | 80            | 100        |
| BPT 118 CP                                 | PT Directed Clinical Education-IV    | -            | -            | -             | 30                         | 10                | -            | -            | -             | 450                       | 450        | 50                  | -             | 50         |
| <b>Practicals</b>                          |                                      |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| BPT 116 P                                  | Applied Physiology and Biochemistry  | -            | -            | 4             | -                          | 2                 | -            | -            | 60            | -                         | 60         | 10                  | 40            | 50         |
| BPT 117 P                                  | Introduction of Perfusion Techniques | -            | -            | 4             | -                          | 2                 | -            | -            | 60            | -                         | 60         | 10                  | 40            | 50         |
| <b>Ability Enhancement Elective Course</b> |                                      |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| AEC 003 L                                  | Computer and Applications            | 3            | -            | -             | -                          | 3                 | 45           | -            | -             | -                         | 45         | 100                 | -             | 100        |
| AEC 004 L                                  | Biostats and Research Methodology    |              |              |               |                            |                   |              |              |               |                           |            |                     |               |            |
| <b>Total</b>                               |                                      | <b>7</b>     | <b>2</b>     | <b>8</b>      | <b>30</b>                  | <b>23</b>         | <b>105</b>   | <b>30</b>    | <b>120</b>    | <b>450</b>                | <b>225</b> | <b>210</b>          | <b>240</b>    | <b>450</b> |

| OUTLINE OF COURSE CURRICULUM |                                    |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
|------------------------------|------------------------------------|--------------|--------------|---------------|---------------------------|-------------------|--------------|--------------|---------------|--------------------------|------------|---------------------|---------------|-------|
| B.Sc. Perfusion Technology   |                                    |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| Semester V                   |                                    |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| Code No.                     | Core Subjects                      | Credits/Week |              |               |                           |                   | Hrs/Semester |              |               |                          |            | Marks               |               |       |
|                              |                                    | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posing /Rotation | Total Credits (C) | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posing/Rotation | Total hrs. | Internal Assessment | Semester Exam | Total |
| <b>Theory</b>                |                                    |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| BPT 119 L                    | Perfusion Technology: Clinical     | 3            | 1            | -             | -                         | 4                 | 45           | 15           | -             | -                        | 60         | 20                  | 80            | 100   |
| BPT 120 L                    | Perfusion technology: Applied      | 3            | -            | -             | -                         | 3                 | 45           | -            | -             | -                        | 45         | 20                  | 80            | 100   |
| BPT 121 CP                   | PT Directed Clinical Education-V   | -            | -            | -             | 30                        | 10                | -            | -            | -             | 450                      | 100        | 50                  | -             | 50    |
| <b>Practicals</b>            |                                    |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| BPT 119 P                    | Perfusion Technology: Clinical     | -            | -            | 4             | -                         | 2                 | -            | -            | 60            | -                        | 60         | 10                  | 40            | 50    |
| BPT 120 P                    | Perfusion Technology: Applied      | -            | -            | 4             | -                         | 2                 | -            | -            | 60            | -                        | 60         | 10                  | 40            | 50    |
| <b>Core Elective Course</b>  |                                    |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| CEC 005 L                    | Basics of Clinical Skills Learning | 3            | -            | -             | -                         | 3                 | 45           | -            | -             | -                        | 45         | 100                 | -             | 100   |
| CEC 006 L                    | Hospital Operation Management      |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| <b>Total</b>                 |                                    | 9            | 1            | 8             | 30                        | 24                | 135          | 15           | 120           | 450                      | 265        | 210                 | 240           | 450   |

| OUTLINE OF COURSE CURRICULUM |   |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
|------------------------------|---|--------------|--------------|---------------|---------------------------|-------------------|--------------|--------------|---------------|--------------------------|------------|---------------------|---------------|-------|
| B.Sc. Perfusion Technology   |   |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| Semester VI                  |   |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| Code No.                     | Core Subjects   | Credits/Week |              |               |                           |                   | Hrs/Semester |              |               |                          |            | Marks               |               |       |
|                              |   | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posing /Rotation | Total Credits (C) | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posing/Rotation | Total hrs. | Internal Assessment | Semester Exam | Total |
| <b>Theory</b>                |   |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| BPT 122 L                    | Perfusion technology: Advanced                        | 3            | 1            | -             | -                         | 4                 | 45           | 15           | -             | -                        | 60         | 20                  | 80            | 100   |
| BPT 123 L                    | Recent advances in Cardiopulmonary bypass & Perfusion | 2            | 1            | -             | -                         | 3                 | 30           | 15           | -             | -                        | 45         | 20                  | 80            | 100   |
| BPT 124 CP                   | PT Directed Clinical Education-VI                     | -            | -            | -             | 30                        | 10                | -            | -            | -             | 450                      | 450        | 50                  | -             | 50    |
| <b>Practicals</b>            |   |              |              |               |                           |                   |              |              |               |                          |            |                     |               |       |
| BPT 122 P                    | Perfusion technology: Advanced                        | -            | -            | 4             | -                         | 2                 | -            | -            | 60            | -                        | 60         | 10                  | 40            | 50    |
| <b>Total</b>                 |   | 5            | 2            | 4             | 30                        | 19                | 75           | 30           | 60            | 450                      | 165        | 100                 | 200           | 300   |

| OUTLINE OF COURSE CURRICULUM |               |              |              |               |                          |                   |              |              |               |                          |            |                     |               |       |
|------------------------------|---------------|--------------|--------------|---------------|--------------------------|-------------------|--------------|--------------|---------------|--------------------------|------------|---------------------|---------------|-------|
| B.Sc. Perfusion Technology   |               |              |              |               |                          |                   |              |              |               |                          |            |                     |               |       |
| Semester VII & Semester VIII |               |              |              |               |                          |                   |              |              |               |                          |            |                     |               |       |
| Code No.                     | Core Subjects | Credits/Week |              |               |                          |                   | Hrs/Semester |              |               |                          |            | Marks               |               |       |
|                              |               | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posing/Rotation | Total Credits (C) | Lecture (L)  | Tutorial (T) | Practical (P) | Clinical Posing/Rotation | Total hrs. | Internal Assessment | Semester Exam | Total |
|                              | PT Internship | -            | -            | -             | 96                       | 32                | -            | -            | -             | 1440                     | 1440       | -                   | -             | -     |
| <b>Total</b>                 |               | 0            | 0            | 0             | 96                       | 32                | 0            | 0            | 0             | 1440                     | 1440       | 0                   | 0             | 0     |