



**AFYON KOCATEPE UNIVERSITY**  
**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  
**DEPARTMENT OF BIOMEDICAL ENGINEERING**



**MASTER (MSc) PROGRAM**

**FIRST YEAR**

| FIRST SEMESTER |                        |     |                |          |           |           |           |  |
|----------------|------------------------|-----|----------------|----------|-----------|-----------|-----------|--|
| COURSE CODE    | COURSE NAME            | C/E | COURSE CREDIT* |          |           |           |           |  |
|                |                        |     | TH             | AP       | TO        | CR        | EC        |  |
| BMM-5501       | DIRECTED FIELD STUDIES | C   | 8              | 0        | 8         | 0         | 9         |  |
| BMM-5601       | THESIS PREPARATION     | C   | 0              | 1        | 1         | 0         | 1         |  |
|                | ELECTIVE COURSE        | E   | 3              | 0        | 3         | 3         | 5         |  |
|                | ELECTIVE COURSE        | E   | 3              | 0        | 3         | 3         | 5         |  |
|                | ELECTIVE COURSE        | E   | 3              | 0        | 3         | 3         | 5         |  |
|                | ELECTIVE COURSE        | E   | 3              | 0        | 3         | 3         | 5         |  |
|                |                        |     |                |          |           |           |           |  |
| <b>TOTAL</b>   |                        |     | <b>20</b>      | <b>1</b> | <b>21</b> | <b>12</b> | <b>30</b> |  |

| SECOND SEMESTER |                        |     |                |          |           |          |           |  |
|-----------------|------------------------|-----|----------------|----------|-----------|----------|-----------|--|
| COURSE CODE     | COURSE NAME            | C/E | COURSE CREDIT* |          |           |          |           |  |
|                 |                        |     | TH             | AP       | TO        | CR       | EC        |  |
| BMM-5502        | DIRECTED FIELD STUDIES | C   | 8              | 0        | 8         | 0        | 9         |  |
| BMM-5602        | THESIS PREPARATION     | C   | 0              | 1        | 1         | 0        | 1         |  |
| BMM-5701        | SEMINAR                | C   | 0              | 2        | 2         | 0        | 5         |  |
|                 | ELECTIVE COURSE        | E   | 3              | 0        | 3         | 3        | 5         |  |
|                 | ELECTIVE COURSE        | E   | 3              | 0        | 3         | 3        | 5         |  |
|                 | ELECTIVE COURSE        | E   | 3              | 0        | 3         | 3        | 5         |  |
|                 |                        |     |                |          |           |          |           |  |
| <b>TOTAL</b>    |                        |     | <b>17</b>      | <b>3</b> | <b>20</b> | <b>9</b> | <b>30</b> |  |



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**SECOND YEAR**

| THIRD SEMESTER |                        |     |                |          |          |          |           |  |
|----------------|------------------------|-----|----------------|----------|----------|----------|-----------|--|
| COURSE CODE    | COURSE NAME            | C/E | COURSE CREDIT* |          |          |          |           |  |
|                |                        |     | TH             | AP       | TO       | CR       | EC        |  |
| BMM-5503       | DIRECTED FIELD STUDIES | C   | 8              | 0        | 8        | 0        | 9         |  |
| BMM-5603       | THESIS                 | C   | 0              | 1        | 1        | 0        | 21        |  |
| <b>TOTAL</b>   |                        |     | <b>8</b>       | <b>1</b> | <b>9</b> | <b>0</b> | <b>30</b> |  |

| FOURTH SEMESTER |                        |     |                |          |          |          |           |  |
|-----------------|------------------------|-----|----------------|----------|----------|----------|-----------|--|
| COURSE CODE     | COURSE NAME            | C/E | COURSE CREDIT* |          |          |          |           |  |
|                 |                        |     | TH             | AP       | TO       | CR       | EC        |  |
| BMM-5504        | DIRECTED FIELD STUDIES | C   | 8              | 0        | 8        | 0        | 9         |  |
| BMM-5604        | THESIS                 | C   | 0              | 1        | 1        | 0        | 21        |  |
| <b>TOTAL</b>    |                        |     | <b>8</b>       | <b>1</b> | <b>9</b> | <b>0</b> | <b>30</b> |  |



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**ELECTIVE COURSES**

| COURSE CODE         | COURSE NAME   | C/E          | COURSE CREDIT* |              |              |              |              |
|---------------------|---|--------------|----------------|--------------|--------------|--------------|--------------|
|                     |   |              | TH             | AP           | TO           | CR           | EC           |
| FBE-5001            | SCIENTIFIC RESEARCH PRINCIPLES                                    | C            | 3              | 0            | 3            | 3            | 5            |
| <del>BMM-5001</del> | <del>ADSORPTION PROCESSES</del>                                   | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| BMM-5002            | BIOMEDICAL NANOSTRUCTURES   | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5003            | SELECTED SUBJECTS IN BIOMATERIALS                                 | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5004            | BIOMEDICAL IMPLANT CHARACTERISATION                               | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5005            | FINITE ELEMENT METHOD IN BIOMEDICAL ENGINEERING                   | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5006            | TIME AND FREQUENCY DOMAIN ANALYSIS OF BIOMEDICAL SIGNALS          | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5007            | BIOMEDICAL AND DENTAL GREFT MATERIALS                             | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5008            | BIOMECHANICS MODELLING TECHNIQUES                                 | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5009            | SELECTED SUBJECTS IN BIOMECHANICS                                 | E            | 3              | 0            | 3            | 3            | 5            |
| <del>BMM-5010</del> | <del>BIOSIGNAL ANALYSIS</del>                                     | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| <del>BMM-5011</del> | <del>SURGICAL PLANNING AND MECHANO-SENSITIVE HAPTIC SCIENCE</del> | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| BMM-5012            | DESIGN AND ANALYSIS OF EXPERIMENTS                                | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5013            | FAILURE ANALYSIS OF IMPLANTS                                      | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5014            | PHYSICAL PERFORMANCE TESTS  | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5015            | PHYSIOLOGICAL CONTROL SYSTEMS                                     | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5016            | FUNTIONAL ANATOMY   | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5017            | FUNDAMENTAL MECHANICS FOR BIOMEDICAL ENGINEERS                    | E            | 3              | 0            | 3            | 3            | 5            |
| <del>BMM-5018</del> | <del>SPONGIOUS MATERIALS TECHNOLOGY</del>                         | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| <del>BMM-5019</del> | <del>COMPUTATIONAL MATERIALS SCIENCE</del>                        | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| BMM-5020            | CARDIOVASCULAR ENGINEERING AND BIOMECHANICS                       | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5021            | CONTROLLED DRUG DELIVERY SYSTEM                                   | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5022            | DIGITAL IMAGE PROCESSING WITH MATLAB                              | E            | 3              | 0            | 3            | 3            | 5            |
| <del>BMM-5023</del> | <del>CORROSION MECHANISM AND FAILURES IN METALS</del>             | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| BMM-5024            | MOTION BIOMECHANICS   | E            | 3              | 0            | 3            | 3            | 5            |
| <del>BMM-5025</del> | <del>MOTOR DEVELOPMENT AND PERFORMANCE</del>                      | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| <del>BMM-5026</del> | <del>MOTORICAL PROPERTIES AND EXERCISE TECHNIQUES</del>           | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| BMM-5027            | ARTIFICIAL INTELLIGENCE IN ENGINEERING                            | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5028            | PRODUCTION AND CHARACTERISATION OF NANOMATERIALS                  | E            | 3              | 0            | 3            | 3            | 5            |



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|---------------------|--|--------------|----------------|--------------|--------------|--------------|--------------|
|                     |  |              | TH             | AP           | TO           | CR           | EC           |
| BMM-5029            | OBJECT ORIENTED PROGRAMMING                        | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5030            | PROCESSING OF MEDICAL IMAGES IN DIGITAL MEDIA      | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5031            | STRUCTURES & PROPERTIES OF BONE                    | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5032            | OPTIMIZATION IN DESIGN AND PRODUCTION              | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5033            | THERAPEUTIC MEDICAL DEVICES                        | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5034            | DESIGN OF MEDICAL DEVICES                          | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5035            | ADVANCED TOPICS IN MEDICAL IMAGING                 | E            | 3              | 0            | 3            | 3            | 5            |
| <del>BMM-5036</del> | <del>TISSUE BIOMECHANICS-</del>                    | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| BMM-5037            | TISSUE-BIOMATERIAL INTERACTIONS                    | E            | 3              | 0            | 3            | 3            | 5            |
| <del>BMM-5038</del> | <del>SURFACE ANALYSIS</del>                        | <del>E</del> | <del>3</del>   | <del>0</del> | <del>3</del> | <del>3</del> | <del>5</del> |
| BMM-5039            | BIONANOTECHNOLOGY                                  | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5040            | BIOSENSORS AND BIOMEDICAL APPLICATIONS             | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5041            | DATA MINING APPLICATIONS IN BIOMEDICAL ENGINEERING | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5042            | HOSPITAL MANAGEMENT AND ORGANIZATION               | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5043            | HOSPITAL INFORMATION MANAGEMENT SYSTEM             | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5044            | BIOMEDICAL OPTICS                                  | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5045            | MOBILE APPLICATIONS IN BIOMEDICAL ENGINEERING      | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5046            | BIOCOMPATIBILITY                                   | E            | 3              | 0            | 3            | 3            | 5            |
| BMM-5047            | BIOLOGICAL DATABASES AND BIostatISTICS             | E            | 3              | 0            | 3            | 3            | 5            |