

**ANNA UNIVERSITY, CHENNAI**  
**AFFILIATED INSTITUTIONS**  
**B.E. AERONAUTICAL ENGINEERING**  
**REGULATIONS – 2017**  
**CHOICE BASED CREDIT SYSTEM**  
**I TO VIII SEMESTERS CURRICULA AND SYLLABI**

**SEMESTER I**

| SL. NO            | COURSE CODE | COURSE TITLE                                      | CATEGORY | CONTACT PERIODS | L         | T        | P         | C         |
|-------------------|-------------|---------------------------------------------------|----------|-----------------|-----------|----------|-----------|-----------|
| <b>THEORY</b>     |             |                                                   |          |                 |           |          |           |           |
| 1.                | HS8151      | Communicative English                             | HS       | 4               | 4         | 0        | 0         | 4         |
| 2.                | MA8151      | Engineering Mathematics - I                       | BS       | 4               | 4         | 0        | 0         | 4         |
| 3.                | PH8151      | Engineering Physics                               | BS       | 3               | 3         | 0        | 0         | 3         |
| 4.                | CY8151      | Engineering Chemistry                             | BS       | 3               | 3         | 0        | 0         | 3         |
| 5.                | GE8151      | Problem Solving and Python Programming            | ES       | 3               | 3         | 0        | 0         | 3         |
| 6.                | GE8152      | Engineering Graphics                              | ES       | 6               | 2         | 0        | 4         | 4         |
| <b>PRACTICALS</b> |             |                                                   |          |                 |           |          |           |           |
| 7.                | GE8161      | Problem Solving and Python Programming Laboratory | ES       | 4               | 0         | 0        | 4         | 2         |
| 8.                | BS8161      | Physics and Chemistry Laboratory                  | BS       | 4               | 0         | 0        | 4         | 2         |
| <b>TOTAL</b>      |             |                                                   |          | <b>31</b>       | <b>19</b> | <b>0</b> | <b>12</b> | <b>25</b> |

**SEMESTER II**

| SL. NO            | COURSE CODE | COURSE TITLE                                                             | CATEGORY | CONTACT PERIODS | L         | T        | P        | C         |
|-------------------|-------------|--------------------------------------------------------------------------|----------|-----------------|-----------|----------|----------|-----------|
| <b>THEORY</b>     |             |                                                                          |          |                 |           |          |          |           |
| 1.                | HS8251      | Technical English                                                        | HS       | 4               | 4         | 0        | 0        | 4         |
| 2.                | MA8251      | Engineering Mathematics - II                                             | BS       | 4               | 4         | 0        | 0        | 4         |
| 3.                | PH8251      | Materials Science                                                        | BS       | 3               | 3         | 0        | 0        | 3         |
| 4.                | BE8253      | Basic Electrical, Electronics and Instrumentation Engineering            | ES       | 3               | 3         | 0        | 0        | 3         |
| 5.                | GE8291      | Environmental Science and Engineering                                    | HS       | 3               | 3         | 0        | 0        | 3         |
| 6.                | GE8292      | Engineering Mechanics                                                    | ES       | 5               | 3         | 2        | 0        | 4         |
| <b>PRACTICALS</b> |             |                                                                          |          |                 |           |          |          |           |
| 7.                | GE8261      | Engineering Practices Laboratory                                         | ES       | 4               | 0         | 0        | 4        | 2         |
| 8.                | BE8261      | Basic Electrical, Electronics and Instrumentation Engineering Laboratory | ES       | 4               | 0         | 0        | 4        | 2         |
| <b>TOTAL</b>      |             |                                                                          |          | <b>30</b>       | <b>20</b> | <b>2</b> | <b>8</b> | <b>25</b> |

### SEMESTER III

| SL. NO.          | COURSE CODE | COURSE TITLE                                                     | CATEGORY | CONTACT PERIODS | L         | T        | P         | C         |
|------------------|-------------|------------------------------------------------------------------|----------|-----------------|-----------|----------|-----------|-----------|
| <b>THEORY</b>    |             |                                                                  |          |                 |           |          |           |           |
| 1.               | MA8353      | Transforms and Partial Differential Equations                    | BS       | 4               | 4         | 0        | 0         | 4         |
| 2.               | ME8392      | Manufacturing Technology                                         | PC       | 3               | 3         | 0        | 0         | 3         |
| 3.               | AE8301      | Aero Engineering Thermodynamics                                  | PC       | 3               | 3         | 0        | 0         | 3         |
| 4.               | CE8394      | Fluid Mechanics and Machinery                                    | ES       | 4               | 4         | 0        | 0         | 4         |
| 5.               | CE8395      | Strength of Materials for Mechanical Engineers                   | ES       | 3               | 3         | 0        | 0         | 3         |
| 6.               | AE8302      | Elements of Aeronautical Engineering                             | PC       | 3               | 3         | 0        | 0         | 3         |
| <b>PRACTICAL</b> |             |                                                                  |          |                 |           |          |           |           |
| 7.               | CE8381      | Strength of Materials and Fluid Mechanics & Machinery Laboratory | ES       | 4               | 0         | 0        | 4         | 2         |
| 8.               | AE8311      | Thermodynamics Laboratory                                        | PC       | 4               | 0         | 0        | 4         | 2         |
| 9.               | HS8381      | Interpersonal Skills/Listening & Speaking                        | EEC      | 2               | 0         | 0        | 2         | 1         |
| <b>TOTAL</b>     |             |                                                                  |          | <b>30</b>       | <b>20</b> | <b>0</b> | <b>10</b> | <b>25</b> |

### SEMESTER IV

| SL. NO.          | COURSE CODE | COURSE TITLE                     | CATEGORY | CONTACT PERIODS | L         | T        | P        | C         |
|------------------|-------------|----------------------------------|----------|-----------------|-----------|----------|----------|-----------|
| <b>THEORY</b>    |             |                                  |          |                 |           |          |          |           |
| 1.               | MA8491      | Numerical Methods                | BS       | 4               | 4         | 0        | 0        | 4         |
| 2.               | AE8401      | Aerodynamics - I                 | PC       | 3               | 3         | 0        | 0        | 3         |
| 3.               | AE8402      | Aircraft Systems and Instruments | PC       | 3               | 3         | 0        | 0        | 3         |
| 4.               | PR8451      | Mechanics of Machines            | PC       | 3               | 3         | 0        | 0        | 3         |
| 5.               | AE8403      | Aircraft Structures - I          | PC       | 5               | 3         | 2        | 0        | 4         |
| 6.               | AE8404      | Propulsion - I                   | PC       | 5               | 3         | 2        | 0        | 4         |
| <b>PRACTICAL</b> |             |                                  |          |                 |           |          |          |           |
| 7.               | ME8381      | Computer Aided Machine Drawing   | PC       | 4               | 0         | 0        | 4        | 2         |
| 8.               | AE8411      | Aerodynamics Laboratory          | PC       | 2               | 0         | 0        | 2        | 1         |
| <b>TOTAL</b>     |             |                                  |          | <b>29</b>       | <b>19</b> | <b>4</b> | <b>8</b> | <b>24</b> |

**SEMESTER V**

| SL. NO.          | COURSE CODE | COURSE TITLE                   | CATEGORY | CONTACT PERIODS | L         | T        | P        | C         |
|------------------|-------------|--------------------------------|----------|-----------------|-----------|----------|----------|-----------|
| <b>THEORY</b>    |             |                                |          |                 |           |          |          |           |
| 1.               | AE8501      | Flight Dynamics                | PC       | 5               | 3         | 2        | 0        | 4         |
| 2.               | AE8502      | Aircraft Structures - II       | PC       | 5               | 3         | 2        | 0        | 4         |
| 3.               | AE8503      | Aerodynamics - II              | PC       | 3               | 3         | 0        | 0        | 3         |
| 4.               | AE8504      | Propulsion - II                | PC       | 3               | 3         | 0        | 0        | 3         |
| 5.               | AE8505      | Control Engineering            | PC       | 3               | 3         | 0        | 0        | 3         |
| 6.               |             | Open Elective - I              | OE       | 3               | 3         | 0        | 0        | 3         |
| <b>PRACTICAL</b> |             |                                |          |                 |           |          |          |           |
| 7.               | AE8511      | Aircraft Structures Laboratory | PC       | 4               | 0         | 0        | 4        | 2         |
| 8.               | AE8512      | Propulsion Laboratory          | PC       | 2               | 0         | 0        | 2        | 1         |
| 9.               | HS8581      | Professional Communication     | EEC      | 2               | 0         | 0        | 2        | 1         |
| <b>TOTAL</b>     |             |                                |          | <b>30</b>       | <b>18</b> | <b>4</b> | <b>8</b> | <b>24</b> |

**SEMESTER VI**

| SL. NO.          | COURSE CODE | COURSE TITLE                         | CATEGORY | CONTACT PERIODS | L         | T        | P         | C         |
|------------------|-------------|--------------------------------------|----------|-----------------|-----------|----------|-----------|-----------|
| <b>THEORY</b>    |             |                                      |          |                 |           |          |           |           |
| 1.               | AE8601      | Finite Element Methods               | PC       | 3               | 3         | 0        | 0         | 3         |
| 2.               | AE8602      | Experimental Aerodynamics            | PC       | 3               | 3         | 0        | 0         | 3         |
| 3.               | AE8603      | Composite Materials and Structures   | PC       | 3               | 3         | 0        | 0         | 3         |
| 4.               | AE8604      | Aircraft Design                      | PC       | 3               | 3         | 0        | 0         | 3         |
| 5.               | AE8605      | Experimental Stress Analysis         | PC       | 3               | 3         | 0        | 0         | 3         |
| 6.               |             | Professional Elective – I            | PE       | 3               | 3         | 0        | 0         | 3         |
| <b>PRACTICAL</b> |             |                                      |          |                 |           |          |           |           |
| 7.               | AE8611      | Aero Engine and Airframe Laboratory  | PC       | 4               | 0         | 0        | 4         | 2         |
| 8.               | AE8612      | Computer Aided Simulation Laboratory | PC       | 4               | 0         | 0        | 4         | 2         |
| 9.               | AE8613      | Aircraft Design Project - I          | EEC      | 2               | 0         | 0        | 2         | 1         |
| <b>TOTAL</b>     |             |                                      |          | <b>28</b>       | <b>18</b> | <b>0</b> | <b>10</b> | <b>23</b> |

**SEMESTER VII**

| SL. NO.          | COURSE CODE | COURSE TITLE                                      | CATEGORY | CONTACT PERIODS | L         | T        | P         | C         |
|------------------|-------------|---------------------------------------------------|----------|-----------------|-----------|----------|-----------|-----------|
| <b>THEORY</b>    |             |                                                   |          |                 |           |          |           |           |
| 1.               | GE8077      | Total Quality Management                          | HS       | 3               | 3         | 0        | 0         | 3         |
| 2.               | AE8751      | Avionics                                          | PC       | 3               | 3         | 0        | 0         | 3         |
| 3.               | ME8093      | Computational Fluid Dynamics                      | PC       | 3               | 3         | 0        | 0         | 3         |
| 4.               |             | Open Elective - II                                | OE       | 3               | 3         | 0        | 0         | 3         |
| 5.               |             | Professional Elective – II                        | PE       | 3               | 3         | 0        | 0         | 3         |
| 6.               |             | Professional Elective – III                       | PE       | 3               | 3         | 0        | 0         | 3         |
| <b>PRACTICAL</b> |             |                                                   |          |                 |           |          |           |           |
| 7.               | AE8711      | Aircraft Systems Laboratory                       | PC       | 4               | 0         | 0        | 4         | 2         |
| 8.               | AE8712      | Flight Integration Systems and Control Laboratory | PC       | 4               | 0         | 0        | 4         | 2         |
| 9.               | AE8713      | Aircraft Design Project - II                      | EEC      | 2               | 0         | 0        | 2         | 1         |
| <b>TOTAL</b>     |             |                                                   |          | <b>28</b>       | <b>18</b> | <b>0</b> | <b>10</b> | <b>23</b> |

**SEMESTER VIII**

| SL. NO.          | COURSE CODE | COURSE TITLE               | CATEGORY | CONTACT PERIODS | L        | T        | P         | C         |
|------------------|-------------|----------------------------|----------|-----------------|----------|----------|-----------|-----------|
| <b>THEORY</b>    |             |                            |          |                 |          |          |           |           |
| 1.               |             | Professional Elective – IV | PE       | 3               | 3        | 0        | 0         | 3         |
| 2.               |             | Professional Elective – V  | PE       | 3               | 3        | 0        | 0         | 3         |
| <b>PRACTICAL</b> |             |                            |          |                 |          |          |           |           |
| 3.               | AE8811      | Project Work               | EEC      | 20              | 0        | 0        | 20        | 10        |
| <b>TOTAL</b>     |             |                            |          | <b>26</b>       | <b>6</b> | <b>0</b> | <b>20</b> | <b>16</b> |

**TOTAL NUMBER OF CREDITS TO BE EARNED FOR AWARD OF THE DEGREE = 185**