**TEMPLATE FOR COURSE SPECIFICATION**

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| HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW |

**COURSE SPECIFICATION**

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| This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. |

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| College of Engineering  University of Baghdad | ***1. Teaching Institution*** |
| Mechanical Engineering Department (MED) | ***2. University Department/Centre*** |
| **AIRCRAFT SYSTEMS and performance**  **( Requirement, component; benefits; work principle to aircraft systems) ME411** | ***3. Course title/code & Description*** |
| Mechanical Engineering ( ME ) Programme | ***4. Programme(s) to which it Contributes*** |
| Annual System ; There is only one  mode of delivery, which is a “Day  Program”. The students are full time  students, and on campus. They attend  full day program in face-to-face  mode. The academic year is  composed of 30-week regular  subjects. | ***5. Modes of Attendance offered*** |
| Year | ***6. Semester/Year*** |
| 120 hours (4 hours per week) | ***7. Number of hours tuition (total)*** |
| 10/2017 | ***8. Date of production/revision of this specification*** |
| ***9. Aims of the Course:-1- AIRCRAFT SYSTEMS.2-PERFORMANC*** | |
| **1-The students definition on the mechanical aircraft systems (Requirement, component; benefits this component and work principle all systems)**  **2-Identify the basic principles of the stability and performance of the aircraft ,which include ;gliding flight.climbing.take-off aircraft.landing aircraft.the plane maneuver.about the horizontal plane and vertical plane.longituinal and directional and letral stability.control longitudinal anddirectional and letral aircraft** | |

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| ***10·*** ***Learning Outcomes*** |
| 1. Be able to the Hydraulics system 2. Be able to the Flight controls system 3. Be able to the Fuel system   **aircraft systems**   1. Be able to the Pneumatic system 2. Be able to the Cover of cabin system 3. Be able to the Air condition system 4. Be able to the Fire protection system    1. Able to understand the Characteristics of speed and the A/C and Gliding flight a/c and Introductions-basic concepts    2. *Able to understand the Climb and descent performance A/C and Center of gravity A/C.*   **performance**   * 1. Able to understand the Turning of flight (turning about horizontal plane) and Take-off aircraft .   2. Able to understand the Landing aircraft and Properties of plane maneuver.   3. Able to understand the Turning 0f flight (turning about vertical plane) and   Longitudinal stability(static and dynamic stability).   * 1. Able to understand the Longitudinal control.   2. Able to understand the Lateral stability (static and dynamic stability).   3. Able understand the Lateral control and Directional stability |
| ***11.*** ***Teaching and Learning Methods*** |
| 1. Lectures..  2. Tests and Exams.  3. In-Class Questions and Discussions.  4. Connection between Theory and Application..  5. Extracurricular Activities. |
| ***12. Assessment Methods***  1. Examinations, Tests, and Quizzes.  2. Extracurricular Activities.  3. Student Engagement during Lectures |
| ***13. Grading Policy***  1. Quizzes:  - There will be a ( 20 ) closed books and notes quizzes during the academic year.  - The quizzes will count 24% of the total course grade.  2. Extracurricular Activities, this is optional and will count extramarks ( 6 % ) for the student, depending on the type of activity.  3. Final Exam:  - The final exam will be comprehensive, closed books and  notes, and will take place on January 2017 from 9:00 AM - 12:00 PM  in rooms ( M12 + M13 )  - The final exam will count 70% of the total course grade |

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| ***14. Course Structure*** | | | | | |
| Assessment  Method | Teaching  Method | Unit/Module or  Topic Title | LOs  ( Article  10 ) | Hours | Week |

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| **1-3**  **1-3** | **1-5**  **1-5** | **Hydraulics system.**  Introductions-basic concepts. | A  A | 4 the. | 1 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Hydraulics system.**  Introductions-basic concepts. | A  A | 4 the. | 2 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Hydraulics system.**  Characteristics of speed and altitude of the A/C . | A  A | 4 the. | 3 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Hydraulics system.**  Characteristics of speed and altitude of the A/C. | A  A | 4 the. | 4 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Hydraulics system.**  Gliding flight a/c. | A  A | 4 the. | 5 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Hydraulics system.**  Gliding flight a/c. | A  A | 4 the. | 6 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Hydraulics system.**  Climb and descent performance A/C. | A  B | 4 the. | 7 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Flight control system.**  Climb and descent performance A/C. | B  B | 4 the. | 8 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Flight control system.**  Center of gravity A/C. | B  B | 4 the. | 9 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Flight control system.**  Center of gravity A/C. | B  B | 4 the. | 10 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Flight control system.**  Turning of flight (turning about horizontal plane). | B  C | 4 the. | 11 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Fuel system.**  Turning of flight (turning about horizontal plane). | C  C | 4 the. | 12 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Fuel system.**  Take-off aircraft. | C  C | 4 the. | 13 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Fuel system.**  Take-off aircraft. | C  C | 4 the. | 14 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Fuel system.**  Landing aircraft. | C  D | 4 the. | 15 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Pneumatic system.**  Landing aircraft. | D  D | 4 the. | 16 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Pneumatic system.**  Properties of plane maneuver. | D  D | 4 the. | 17 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Pneumatic system.**  Properties of plane maneuver. | D  D | 4 the. | 18 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Pneumatic system.**  Turning 0f flight (turning about vertical plane). | D  E | 4 the. | 19 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Cover of cabin system.**  Turning 0f flight (turning about vertical plane). | E  E | 4 the. | 20 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Cover of cabin system.**  Turning 0f flight (turning about vertical plane). | E  E | 4 the. | 21 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Cover of cabin system.**  Longitudinal stability(static and dynamic stability). | E  E | 4 the. | 22 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Cover of cabin system.**  Longitudinal stability(static and dynamic stability). | E  E | 4 the. | 23 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Air condition system.**  Longitudinal control. | F  F | 4 the. | 24 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Air condition system.**  Longitudinal control. | F  F | 4 the. | 25 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Air condition system.**  Lateral stability (static and dynamic stability). | F  G | 4 the. | 26 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Air condition system.**  Lateral stability (static and dynamic stability). | F  G | 4 the. | 27 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Fire protection system.**  Lateral control. | G  H | 4 the. | 28 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Fire protection system.**  Lateral control. | G  H | 4 the. | 29 |
| **1-3**  **1-3** | **1-5**  **1-5** | **Fire protection system.**  Directional stability. | G  H | 4 the. | 30 |

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| ***15. Infrastructure*** | | |
| 1-**Maintenance manual to transport and military aircraft**+ **Diagrams**  **2-Internet +my practical experiences** | Required reading:  · CORE TEXTS  · COURSE MATERIALS  · OTHER | |
| 1-Available websites related to the subject  2-Extracurricular activities. | Special requirements (include for example workshops, periodicals, IT software, websites) | |
| 1-Field and scientific visits.  Extra lectures by foreign guest lecturers. | Community-based facilities  (include for example, guest  Lectures , internship , field studies) | |
| ***16. Admissions*** | | |
| ME411 | | Pre-requisites |
| / | | Minimum number of students |
| 14 | | Maximum number of students |
| **Ms.c Maki Hachem Majed**  Mech. Engr. Dept. /Thermo-Fluids  College of Engineering :University of Baghdad  TEL:07713050311  **Maki.hachem@yahoo.com**  **Ms.c Kareem jawad**  Mech. Engr. Dept. /Thermo-Fluids  College of Engineering :University of Baghdad  [**TEL:07708703239**](TEL:07708703239)  **Kareemjawad286@gmail.com** | | ***17. Course Instructors*** |

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