**TEMPLATE FOR COURSE SPECIFICATION**

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**COURSE SPECIFICATION**

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|  **A theoretical material studying the induced stress and deflection analysis in the mechanical parts constricting aircraft body depending on the principles of strength of material and elasticity.** |

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| **University of Baghdad / College of Engineering**  | ***1. Teaching Institution*** |
| **Mechanical Engineering Department** | ***2. University Department/Centre*** |
| **Aircraft structure / ME 310** | ***3. Course title/code& Description*** |
| **Mechanical Engineering ( ME ) Program** | ***4. Program(s) to which it Contributes*** |
| **Lecture in class** | ***5. Modes of Attendance offered*** |
| **1st & 2nd / Academic Year 2016-2017**  | ***6. Semester/Year*** |
| **3 hours a week / 96 hours** | ***7. Number of hours tuition (total)*** |
| **29-10-2017** | ***8. Date of production/revision of this specification*** |
| ***9. Aims of the Course*** |
| **The aim of this course is to learn the student the principal objective of strength of material for engineering and this is given in first semester but in the second semester we deal with the strength of material with different parts of airplane like wings, and fuselage.** |

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| ***11.Teaching and Learning Methods*** |
| 1. Lectures.2. Tutorials.3. Homework and Assignments.4. Lab. Experiments.5. Tests and Exams.6. In-Class Questions and Discussions.7. Connection between Theory and Application.8. Field Trips.9. Extracurricular Activities.10. Seminars.11. In- and Out-Class oral conservations.12. Reports, Presentations, and Posters.  |
| ***12. Assessment Methods***  **Examine the student quick examinations during the year between 10-15 exams and the student will be given 30% of the full mark and 70% in the final exam.** |
| ***13. Grading Policy***1. Quizzes:- There will be a ( 10 – 15 ) closed books and notes quizzesduring the academic year.- The quizzes will count 25 % of the total course grade.2. Tests, 2-3 Nos. and will count 5% of the total course grade.3. Extracurricular Activities, this is optional and will count extramarks ( 1 – 5 % ) for the student, depending on the type of activity.4. Final Exam:- The final exam will be comprehensive, closed books andnotes, and will take place on June 2017 from 9:00 AM - 12:00 PMin rooms ( M12 + M13 )- The final exam will count 70% of the total course grade  |

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| ***14. Course Structure*** |
|  |  |  |  |  | Week |
|  | 3 hours |  |  | **Theory of failure** | 1 |
|  | 3 hours |  |  | **Thin cylinder** | 2 |
|  | 3 hours |  |  | **Thick cylinder** | 3 |
|  | 3 hours |  |  | **=** | 4 |
|  | 3 hours |  |  | **Rotating disk** | 5 |
|  | 3 hours |  |  | **=** | 6 |
|  | 3 hours |  |  | **Torsion of solid sections** | 7 |
|  | 3 hours |  |  | **=** | 8 |
|  | 3 hours |  |  | **Energy methods** | 9 |
|  | 3 hours |  |  | **=** | 10 |
|  | 3 hours |  |  | **Thin plate theory** | 11 |
|  | 3 hours |  |  | **=** | 12 |
|  | 3 hours |  |  | **Structural instability** | 13 |
|  | 3 hours |  |  | **=** | 14 |
|  | 3 hours |  |  | **Principles of stressed skin construction** | 15 |
|  | 3 hours |  |  | **=** | 16 |
|  | 3 hours |  |  | **Bending, shear, torsion of thin-walled beams** | 17 |
|  | 3 hours |  |  | **=** | 18 |
|  | 3 hours |  |  | **=** | 19 |
|  | 3 hours |  |  | **Multi cell tube** | 20 |
|  | 3 hours |  |  | **=** | 21 |
|  | 3 hours |  |  | **Finite element method** | 22 |
|  | 3 hours |  |  | **Theory of elasticity** | 23 |
|  | 3 hours |  |  | **=** | 24 |
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| ***15. Infrastructure*** |
| * Aircraft structures for engineering students by T.H.G.MEGSON 1972
* Mechanics of materials by E. J. HEARN
* Aircraft structures for engineering students by T.H.G.MEGSON 2008
 | Required reading:· CORE TEXTS· COURSE MATERIALS· OTHER |
|  | Special requirements (include for example workshops, periodicals, IT software, websites) |
|  | Community-based facilities(include for example, guestLectures , internship ,field studies) |
| ***16. Admissions*** |
| ME 204 | Pre-requisites |
| 15 | Minimum number of students |
| 20 | Maximum number of students |
| Ass. Prof. Dr. Ahmed Abdul Hussain Mechanical engineering / design University of Baghdad – college of engineering – mechanical department Email : ahmedrobot65@yahoo.com | ***17. Course Instructors*** |

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