**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 |
| Chemical Engineering Department | 2. University Department/Centre |
| **Engineering Drawing/CHE131** | 3. Course title/code |
| Chemical Engineering Program | 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 24-week regular subjects. | 5. Modes of Attendance offered |
| 1st & 2nd / Academic Year 2017 – 2018 | 6. Semester/Year |
| 90 hrs. / 3 hrs. per week | 7. Number of hours tuition (total) |
| 10/10/ 2017 | 8. Date of production/revision of this specification |
| 9. Aims of the Course   1. Learning the basic principles of engineering drawing. 2. Develop the student’s skills in using tools to draw the engineering shapes. 3. Knowing the types and uses of lines and the difference between them. 4. Understand how to measure, read and put appropriate dimensions and how to distribute dimensions on the shapes inside the sheet. 5. Learning and training students to read the engineering shapes and to dissociate and gather the parts by drawing the projections and sections and then isometric drawing. 6. The ability to grow and small the shapes in suitable scale. 7. Finally, the student being able to bring out an engineering sheet arranged by geometric art assets through implementation of several applications on engineering operations. | |

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| 10· Learning Outcomes  At the end of the class, the student will be able to:   1. Know and understand the basic principles of engineering drawing. 2. Understand and apply the right use of the drawing tools. 3. Read and understand the drawing sheets. 4. Conclude of projections and sections that lead to extend the mind and imagination of students. 5. Gather the parts or projections and sections to reach and find the final design for the shape. 6. Draw perfect engineering drawing sheets. 7. Grow and minimize any part or shape. 8. Have communication skills with references and designers. 9. Implement the panel with all engineering requirements (as a designer) that accepted in the field of work, and that reflect the skills that trains them. |
| Teaching and Learning Methods   1. Lectures. 2. Classwork in the atelier. 3. Homework and assignments. 4. Tests and exams. 5. In-Class questions and discussions. 6. Connection between theory and application. |
| Assessment methods   1. Examinations, tests, and quizzes. 2. Extracurricular activities. 3. Student engagement during lectures. 4. Responses obtained from students. |

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| 11. Course Structure | | | | | |
| Assessment Method | Teaching  Method | Unit/Module or Topic Title | LOs | Hours | Week |
| 1 - 4 | 1 - 6 | Introduction , references, tools | a,b | 3  1 the.  2 draw | 1 |
| 1 - 4 | 1 - 6 | Border and title of the sheet, the kind of lines, symbols | a,b | 3  1 the.  2 draw | 2 |
| 1 - 4 | 1 - 6 | Scales of drawing, letters and numbers, free hand drawing | a,g | 3  1 the.  2 draw | 3 |
| 1 - 4 | 1 - 6 | Engineering process | c,f | 3  1 the.  2 draw | 4 |
| 1 - 4 | 1 - 6 | Engineering process | c,f | 3  1 the.  2 draw | 5 |
| 1 - 4 | 1 - 6 | Engineering process | c,f | 3  1 the.  2 draw | 6 |
| 1 - 4 | 1 - 6 | Engineering process | c,f | 3  1 the.  2 draw | 7 |
| 1 - 4 | 1 - 6 | Dimensions | a,c,f | 3  1 the.  2 draw | 8 |
|  |  | Quarterly exam (1) |  | 3  3 draw | 9 |
| 1 - 4 | 1 - 6 | Projection, conclusion of third dimension | d,f,h,i | 3  1 the.  2 draw | 10 |
| 1 - 4 | 1 - 6 | Projection, conclusion of third dimension | d,f,h,i | 3  1 the.  2 draw | 11 |
| 1 - 4 | 1 - 6 | Projection, conclusion of third dimension | d,f,h,i | 3  1 the.  2 draw | 12 |
| 1 - 4 | 1 - 6 | Projection, conclusion of third dimension | d,f,h,i | 3  1 the.  2 draw | 13 |
| 1 - 4 | 1 - 6 | Sections | d,f,h,i | 3  1 the.  2 draw | 14 |
| 1 - 4 | 1 - 6 | Sections | d,f,h,i | 3  1 the.  2 draw | 15 |
| 1 - 4 | 1 - 6 | Sections | d,f,h,i | 3  1 the.  2 draw | 16 |
| 1 - 4 | 1 - 6 | Sections | d,f,h,i | 3  1 the.  2 draw | 17 |
| 1 - 4 | 1 - 6 | Pictorial drawing (Isometric drawing ) | e,f,h,i | 3  1 the.  2 draw | 18 |
| 1 - 4 | 1 - 6 | Pictorial drawing (Isometric drawing ) | e,f,h,i | 3  1 the.  2 draw | 19 |
| 1 - 4 | 1 - 6 | Pictorial drawing (Isometric drawing ) | e,f,h,i | 3  1 the.  2 draw | 20 |
| 1 - 4 | 1 - 6 | Pictorial drawing (Isometric drawing ) | e,f,h,i | 3  1 the.  2 draw | 21 |
|  |  | Quarterly exam (2) |  | 3  3 draw | 22 |

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| 12. Infrastructure | |
| **Textbook**  Engineering Drawing by Abul-Rasol Alkhaffaf  **References**   1. Boundy, A.W. Engineering Drawing McGraw-Hill. New York.1990. 2. M. B. Shah and B.C. Rana, Engineering Drawing, Sai Print-O-Pac Pvt. Ltd, India, 2009. 3. Er. R. K. Dhawan, A text Book of Engineering Drawing, S. Chand Publishing, 2008.   **Others**   1. Notebook prepared by the instructor of the course. 2. Collection of tutorial sheets of solved and unsolved problems and Exams questions | Required reading:  · CORE TEXTS  · COURSE MATERIALS  · OTHER |
| Available websites related to the subject | Special requirements (include for example workshops, periodicals, IT software, websites) |
|  | Community-based facilities  (include for example, guest  Lectures , internship , field studies) |

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| 13. Admissions | |
|  | Pre-requisites |
|  | Minimum number of students |
| 70 | Maximum number of students |

**Instructor**

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