

Course Description وصف المقرر دراسي

رقم ورمز المقرر Course Code	اسم المقرر Course Title	الساعات CR	نظري LT	عملي LB	تقارن TU	متطلب سابق Pre-Req	متطلب متزامن Co-Req.
431 همك ME 431	أدوات تصنيع Tool Manufacturing	3	3	-	1	330 همك ME 330	-

محتويات المقرر:

أساسيات أدوات القطع , المرشحات والمثبتات , الازواج , والتوافقات , الشكل الهندسي لأداه القطع , عمر الحد القاطع . اقتصاديات عملية القطع والأمان في تطبيقات تصميم العدة.

Course Contents:

Principles of cutting tools, jigs, fixtures, fit and tolerances, tool cutting geometry, tool life, cost analysis, economics, and safety in tooling design applications.

Course Objectives:

1. Review design dimensioning and tolerance. Application of design dimensioning and tolerance to piece parts.
2. Expose students to tool design principles including tooling, work holding, jig and fixture design, gagging and modular tooling. Application of these principles will be required to evaluate and design for manufacturability.
3. Evaluate projects using team approach. The projects will include the use of project management software, written reports, and formal presentations. The projects include work holding or fixture, cutting tools, machine selection, unit cost calculations, and revisions to enhance manufacturability. The use of the Internet is recommended to find project information.

Evaluation Methods:

1. Midterm exams
2. Term project
3. Assignments
4. Quizzes
5. Seminar
6. Final exam

Text Book and References:

Textbook H. W. Pollack, Tool Design, 2nd Edition, Prentice-Hall, Inc.

- References**
- 1) Fundamentals of Tool Design, Editor, Edward G. Hoffman, Society of Manufacturing Engineers (SME).
 - 2) K. C. Ludema, R. M. Caddell, and A. G. Arkins, Manufacturing Engineering: Economics and Processes, Prentice-Hall, Inc