



塑性加工學

SPECIAL TOPICS IN PLASTIC FORMING

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基本素養 Basic Literacy

- 專業倫理與人文素養
Demonstrated professional ethical and humanitarian behaviour.
- 誠信負責與務實素養
Developed sense of professional integrity.
- 永續環境與社會關懷
Developed sense of environmental sustainability and social responsibility.
- 多元文化與國際視野
Developed multicultural and international perspective.

核心能力 Competence

- 機械工程之專業知識
Developed mechanical engineering skills and knowledge.
- 規劃與執行專題研究之能力
Ability to plan and execute research projects.
- 專業論文與報告之撰寫和表達能力
Ability to write professional reports / papers and prepare presentations.
- 創新思考與獨立研究之能力
Ability to perform independent research and demonstrate innovative thinking.
- 解決問題與協調整合之能力
Ability to solve problems in a coordinated and integrated manner.
- 前瞻宏觀的國際視野
Developed international and "forward thinking" perspective.
- 領導、管理及組織團體之能力

開課系所 Department/Institute: 機械所
Mechanical Engineering

開課教師 Instructor: 李榮顯

開課學年 Academic Year: 0110

開課學期 Semester: 2

開課序號 Serial Number: 077

課程屬性碼 Course No (Attribute Code): ME 7510

課程系統碼 Course System Number: N181800

分班碼 Class Code:

學分數 No. of Credits: 3

課程語言 Medium of Instruction: 中文
Chinese

課程網址 Course Website:

先修課程或先備能力

Prerequisite Course(s):

教師聯絡資訊 Contact with Teacher

ext 62147

email:mersl@mail.ncku.edu.tw

助教資訊 Contact with Tutor

學習規範 Course Policy

評量方式 Grading

Ability to organize, manage and act in a position of leadership.

□ 自我成長之能力(人文素養與服務精神、專業倫理與終身學習)

Developed sense of "self improvement" (with regard to professional ethics, social responsibility and lifelong learning).

課程概述 Course Description

使學生熟悉金屬成形之系統模式、製程模式、力學應用及可成形性理論與試驗。

According to the course of the semester.

課程學習目標 Course Objectives

- 學生了解金屬成形製程分類與參數。
- 塑性力學在塑性加工之應用。
- 塑性加工製程模擬與可成形性評估。

課程進度 Progress Description

	進度說明 Progress Description
1	簡介(範疇與應用) Introduction (Scope and application)
2	金屬成形系統 Metal forming system
3	金屬成形製程模式 Metal forming process models
4	金屬成形製程模式 Metal forming process models
5	金屬成形製程模式 Metal forming process models
6	金屬成形力學 Mechanics of metal forming
7	金屬成形力學 Mechanics of metal forming
8	金屬成形力學 Mechanics of metal forming
9	金屬成形力學 Mechanics of metal forming
10	金屬成形力學 Mechanics of metal forming
11	可成形性理論與試驗 Formability theory and testing

方法	百分比%
作業 Assignments	30
個人書面報告 Projects	40
期末考 Term exam	30

教學方法 Teaching Strategies

方法	百分比%
講授 Lecture	60
個案研討 Case study	20
討論 Discussion	10
實作 Workshop	10

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課程教材 Course Material

Lecture notes, ppt.

李榮顯，塑性加工學，三民書局

參考書目 References

李榮顯，塑性加工學，三民書局。

William F. Hosford, Robert M. Caddell, Metal Forming: Mechanics and Metallurgy, Prentice-Hall, 1983.

Kurt Lange, Handbook of Metal Forming, McGraw-Hill, 1985.

Taylan Altan, Soo-Ik Oh, Harold L. Gegel, Metal forming: fundamentals and applications, American Society for Metals, 1983.

12	可成形性理論與試驗 Formability theory and testing
13	金屬成形之模擬與可製造性評估 Simulation and manufacturability evaluation in metal forming
14	金屬成形之模擬與可製造性評估 Simulation and manufacturability evaluation in metal forming
15	金屬成形之模擬與可製造性評估 Simulation and manufacturability evaluation in metal forming
16	精微成形 Micro-forming
17	金屬成形智慧化 , intelligent metal forming
18	金屬成形智慧化 , intelligent metal forming

以上每週進度教師可依上課情況做適度調整。The schedule may be subject to change.

課程是否與永續發展目標相關調查

Survey of the content relevant to SDGs

本課程與SDGs相關項目如下：

This course is relevant to these items of SDGs as following:

- 就業與經濟成長 (Decent work and Economic growth)
- 工業、創新與基礎建設 (Industry Innovation and infrastructure)
- 責任消費與生產 (Responsible consumption and production)

有關課程其他調查 Other Surveys of Courses

1.本課程是否規劃業界教師參與教學或演講? 否

Is there any industry specialist invited in this course?

How many times? No

2.本課程是否規劃含校外實習(並非參訪)? 否

Are there any internships involved in the course?

How many hours? No

3.本課程是否可歸認為學術倫理課程? 否

Is this course recognized as an academic ethics

Leo Alting, Manufacturing Engineering Processes, Marcel Dekker Inc, 1982.

備註 Remarks

course? In the course how many hours are regarding academic ethics topics? No

4.本課程是否屬進入社區實踐課程? 否

Is this course recognized as a Community engagement and Service learning course? Which community will be engaged? No