

課程大綱及進度表

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| 開課系所 | 數學所一二 |
| 開課學年 | 100 |
| 開課學期 | 1 |
| 課程名稱(中文) | 代數通論(一) |
| 課程名稱(英文) | General algebra (1) |
| 課程碼 | L150410 |
| 分班碼 | |
| 先修科目或先備能力 | |
| 學分數 | 3 |
| 開課教師 | 黃世昌 |
| e-mail | shua3@mail.ncku.edu.tw |
| 電話 | (06) 2757575 ext:65142 |
| Office Hours | By Appointment |
| 課程概述 | 這是一學期代數學的課程。本課程將更深入探討代數學的理論，內容會包括群、環、體的重要理論。 |
| 教學目標 | 本課程的目的在使學生了解代數中群、環與體的基本性質與定理，並強化解題及證明之能力。 |
| 授課課程大綱明細 | <ol style="list-style-type: none"> 1. Revision of basic concepts, theory and examples of groups. 2. The isomorphism theorems for groups. 3. Group action on sets and their applications. 4. Sylow theorems and applications. |

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| | <p>5. Fundamental theorem of abelian groups.</p> <p>6. Normal structure, composition series and the Jordan-Holder theorem.</p> <p>7. P-groups, nilpotent and solvable groups.</p> <p>8. Rings and field.</p> |
| 參考書目 | David S. Dummit and Richard M. Foote, <u>Abstract algebra</u> (3 rd Edition) |
| 課程要求 | Each student should select a paper, read it during the semester, and present it at the end of the semester. |
| 評量方式 | <p>1. Homework (15%)</p> <p>2. Presentation (15%)</p> <p>3. Term test (35%) and final exam (35%)</p> |
| 課程網址 | |
| 助教資訊 | |
| 備註 | |