

Course Content

Course Outline

Notes

Notes

- ▶ Week 1: Basics of module theory: definition, sub/quotient modules, mapping properties (DF 10.1-10.2).
 - ▶ notes
 - ▶ pdf slides
 - ▶ recommended problems
- ▶ Week 2: More module theory: sums, products, free modules, decomposition (DF 10.3)
 - ▶ notes
 - ▶ pdf slides
 - ▶ recommended problems
- ▶ Week 3: Finitely generated modules over PIDs (DF 12.1)
 - ▶ notes
 - ▶ pdf slides
 - ▶ recommended problems
- ▶ Week 4: Canonical Forms (DF 12.2-12.3)
- ▶ Week 5: Field theory basics: algebraic/transcendental extensions, field degree (DF 13.1-13.2)
- ▶ Week 6: Field extensions: composites, characteristic polynomial, trace, norm, separability (DF 13.5)