

PHARMACEUTICS

COURSE INFORMATION

Course code	FARM295
Course title	Pharmaceutics
Credits	20
Examination	writing exam

The course covers the basic physicochemical knowledge used in pharmaceutical formulations, the formulation, manufacture and use of different dosage forms (powders, tablets, capsules, emulsions, transdermal etc.), and basic stability testing. The course also includes three-week practice in laboratory. The lab content include power characterisation, granulation, tableting, product testing, and formulations.

Note: This is a tentative schedule so that you can prepare for lectures. The contents of exercises will come after the lectures. If a lecture takes longer or shorter than planned, there will be deviations from the plan.

COMPULSORY READING:

Michael E. Aulton and Kevin M.G. Taylor, AULTON'S PHARMACEUTICS, THE DESIGN AND MANUFACTURE OF MEDICINES, 5th Edition

ADDITIONAL READING:

Alexander T. Florence, and David Attwood, PHYSICOCHEMICAL PRINCIPLES OF PHARMACY, 5th Edition

Yvonne Bouwman-Boer, and V'Iain Fenton-May Paul Le Brun, PRACTICAL PHARMACEUTICS, AN INTERNATIONAL GUIDELINE FOR THE PREPARATION, CARE AND USE OF MEDICINAL PRODUCTS

LECTURES

AP: Aultons Pharmaceutics,

PP: Practical Pharmaceutics (available online, UiB has access to it.)

Theme	Reading
Introduksjon til farmasøytiske kvalitetssystemer	PP Chapter 32 page 707-710 PP Chapter 25 Norske legemiddelstandarder
Materials	AP Chapters 8, 9, 10
Surface/Interface	AP Chapters 4, 5
Rheology	AP Chapter 6
Solution	AP Chapter 3
Stability	AP Chapters 7, 48
Mixing Theory	AP Chapter 11 (Page170-180)
Emulsjonar	AP Chapter 27
Solutions and Suspension	AP Chapters 24, 26; PP Chapter 4
Materials 2	AP Chapters 8, 9, 10
Dissolution	AP Chapter 2
Blanding og granulering	AP Chapter 11 page180-186 AP Chapter 28
Granulering og Tørking	AP Chapters 28, 29
Tablets 1 and 2	AP Chapters 30, 32
Capsules	AP Chapters 33, 34
Controlled release	AP Chapter 31
Topical products	AP Chapter 27
Emulsions and Creams	AP Chapter 27; PP Chapter 12
Packaging	AP Chapter 47 PP Chapter 24
Forlikelighet og stabilitetsstudiar	AP Chapter 48 Florence and Attwood Chapter 11 Norske legemiddelstandarder
Bulkeegenskapar til farmasøytiske pulver	AP Chapter 12 AP Chapter 4 page 55-60

Vet. Formulation	Forelesningsnotater
Rectal and Vaginal	AP Chapter 42; PP Chapter 11
GMP and Documentation	Aktuelle lover og forskrifter: Lovdata.no EudraLex - Volume 4 GMP Guidelines
Microbial contamination	AP Chapters 13-14; PP Chapter 19
Water	PP Chapters 23.3.1 + 27.5.2 + 28.4
Sterilization methods	AP Chapters 15, 16, 17; PP Chapter 30
Aseptic Production	PP Chapter 31
Qualification/validation and monitoring	Eudralex - vol 4, GMP Guidelines Annex 1, Annex 15
Parenteral Preparations	AP Chapter 36
Biopharmaceutics	AP Chapters 18-22
