Pharmaceutical Technology & Formulations

Course Information

Course code	FARM295
Course title	Pharmaceutical technology & Formulations
Credits	20 (pharmaceutical technology & formulations)
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.

Reading

Compulsory reading:

Michael E. Aulton and Kevin M.G. Taylor, Aulton's Pharmaceutics, The Design and Manufacture of Medicines, Fourth Edition

Additional reading:

Alexander T. Florence, and David Attwood, Physicochemical Principles of Pharmacy, Fifth 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

Lectures

Theme	Reading
Introduksjon til farmasytiske 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
Emulsjonar	AP Chapter 27
Solutions and Suspension	AP Chapters 24, 26; PP Chapter 4
Stability	AP Chapters 7, 48
Packaging	AP Chapter 47
	PP Chapter 24
Forlikelighet og stabilitetsstudiar	AP Chapter 48
	Florence and Attwood Chapter 11
	Norske legemiddelstandarder
Materials 2	AP Chapters 8, 9, 10
Dissolution	AP Chapter 2
Bulkeigenskapar til farmasytiske pulver	AP Chapter 12
	AP Chapter 4 page 55-60
Mixing Theory	AP Chapter 11 (Page170-180)
Blanding og granulering	AP Chapter 11 page180-186
	AP Chapter 28
Granulering og Trking	AP Chapters 28, 29
Tablets 1 and 2	AP Chapters 30, 32
Capsules	AP Chapters 33, 34
GMP and Documentation	Aktuelle lover og forskrifter: Lovdata.no
	EudraLex - Volume 4 GMP Guidelines
Microbial contamination	AP Chapters 13-17, 36, 50
Water	AP Chapters 13-17, 36, 50

	PP Chapters 30, 31
Vet. Formulation	Forelesningsnotater
Rectal and Vaginal	AP Chapter 42; PP Chapter 11
Topical products	AP Chapter 27
Emulsions and Creams	AP Chapter 27; PP Chapter 12
Sterilization methods	EudraLex - Volume 4 GMP Guidelines; Annex 1: Manufacture of sterile medical products Annex 15: Qualification and validation
Aseptic Production	Hugo & Russels Pharmaceutical Microbiology[1]
Qualification/ validation and monitoring	
Biopharmaceutics	AP Chapters 18-22
Controlled release	AP Chapter 31

AP: Aultons Pharmaceutics, PP: Practical Pharmaceutics (available online, UIB has access to it.)