

Prel lecture plan for KZ 7000, Jan 9, VT-2017

Metabolism and risk assessment of environmental contaminants, 15 HEC

Metabolism och riskbedömning av kemikalier i miljön, 15 hp

Date	9-12 a.m.	13-16 p.m. (lectures) 13-17 p.m. (lab)
Kursvecka 1		
2017-01-16	10.00 Roll call Goals and description of the course, general information (MT, AB, HM)	Metabolism/Toxicology/Risk Introduction (MT)
2017-01-17	Absorption, distribution, excretion (HM)	Individual studies
2017-01-18	Statistics 1 (AB) Introduction, distributions, population and sample, measures of central value, measures of dispersion, outliers	Statistical exercise (individual studies)
2017-01-19	Metabolism (HM) Phase I and II	Toxicology/Risk Exercise (MT); Absorption, distribution, excretion Exercise (HM) ;
2017-01-20	Metabolism (HM) Phase I and II	Individual studies
2017-01-21		
2017-01-22	Kursvecka 2	
2017-01-23	Metabolism Phase I and II lecture/exercise (HM)	Individual studies
2017-01-24	Metabolism lecture/exercise (HM)	Individual studies
2017-01-25	Statistics 2 (AB) Statistical inference, parametric vs non-parametric tests, regression, correlation, statistical power	Statistical exercise (individual studies)
2017-01-26	Chemical properties / Electrophilic reactivity (HM)	Individual studies
2017-01-27	Metabolism exercise, presentations (MT/HM)	Individual studies
2017-01-28		
2017-01-29	Kursvecka 3	
2017-01-30	Statistics 3 (AB) Introduction to Analysis of Variance, Analysis of Covariance	Statistical exercise (individual studies)
2017-01-31	Toxicokinetics (MT) Reaction kinetics, Pharmacokinetics	Metabolism (HM) Enzyme kinetics/Exercise
2017-02-01	Exposure (BP)	Analysis of reactive metabolites (MT)
2017-02-02	Toxicokinetics (MT) Dosimetry	Toxicokinetics (MT) Exercise
2017-02-03	Metabolism and analysis of halogenated aromatic compounds (LA)	Individual studies
2017-02-04		

2017-02-05	Kursvecka 4	
2017-02-06	Statistics 4 (AB) Fundamental experimental design	Statistical exercise (individual studies)
2017-02-07	Toxicokinetics (MT) Exercise Lab A introduction (JA)	(12-15.30) Arbetsmarknadsdag
2017-02-08	Lab A (incl. security issues) (JA)	
2017-02-09	Lab A (JA)	Lab reports (JA)
2017-02-10	Lab reports (JA)	
2017-02-11		
2017-02-12	Kursvecka 5	
2017-02-13		Individual studies/Lab reports
2017-02-14	Statistics 5 (AB) Dose-response modelling and analysis	Statistical exercise (individual studies)
2017-02-15	Introduction (MT) Toxicology/Risk assessment	Individual studies
2017-02-16	Toxicology (DJ) Mutagenicity, carcinogenicity	Risk assessment case (MT) Acrylamide and genotoxic agents Individual studies
2017-02-17	Science and policy in risk assessment (MÅ)	Risk assessment (PA) QSAR in risk assessment processes
2017-02-18		
2017-02-19	Kursvecka 6	
2017-02-20	Contact allergens (IK)	Individual studies
2017-02-21	Endocrine disruptors (JW)	Introduction to Lab B (JA, JG)
2017-02-22	Lab B (JA, JG)	
2017-02-23	Lab B (JA, JG)	
2017-02-24	Lab B (JA, JG)	
2017-02-25		

2017-02-26	Kursvecka 7				
2017-02-27	Lab reports				
2017-02-28	Statistics 6 (AB) Analysis of categorical data, meta-data analysis			Statistical exercise (individual studies)	
2017-03-01	Ecotoxicology Vertebrates (BB)	Ecotoxicology (JS)	Ecotoxicology Developmental and reproductive toxicity (CB)	Developmental neurotoxicity (HV)	Perspective of authority NFA (LAZ)
2017-03-02	Risk assessment case (MN) Metals			Presentation of results of the laboratory exercises	Introduction to group tasks
2017-03-03	Individual studies/Group tasks				
2017-03-04					
2017-03-05	Kursvecka 8				
2017-03-06	Individual studies				
2017-03-07	Statistics follow-up (AB)		Individual studies		
2017-03-08	Individual studies				
2017-03-09	Individual studies				
2017-03-10	Written examination kl. 9.00 – 14.00				
2017-03-11					
2017-03-12	Kursvecka 9				
2017-03-13	Group tasks				
2017-03-14	Group tasks				
2017-03-15	Group tasks				
2017-03-16	Group tasks				
2017-03-17	Presentation of the group tasks				

Literature:Metabolism etc:

Sterner, O., 2010, Chemistry, Health and Environment, Wiley-VCH Verlag, GmbH
(Adlibris 685 SEK, Bokus 658 SEK)

Statistics:

Townend J. Practical Statistics for Environmental and Biological Scientists.

John Wiley & Sons Ltd, England

(Bokus 2002 292 SEK; 2013 E-bok 434 SEK; Adlibris 2015, E-bok 398 SEK)

Alternatively: Diez D M, Barr C D, Cetinkaya-Rundel M (2014) Introductory Statistics with Randomization and Simulation First Edition, 409 p., available for free at openintro.org.

Compulsory: Laborations, statistical exercises, group tasks and group presentations.

Laboratory exercises

A. Analysis of reactive compounds/intermediates

B. Analysis of POP metabolites; distribution

Group task: Critical evaluation and presentation of a published risk assessment from a chemical perspective.

Room: Lectures B233;

Lecturer:

AB	Anders Bignert, NRM	Statistics
BP	Birgit Paulsson, ACES	Exposure
DJ	Dag Jenssen, MBW	Cancer, mutagenicity
HM	Hitesh Motwani, ACES	Metabolism, Reactivity, Enzyme kinetics
IK	Isabella Karlsson, ACES	Contact allergens
JW	Jana Weiss, ACES	Endocrine disruptors
LA	Lillemor Asplund, ACES	Metabolism, analysis
MN	Monica Nordberg, KI	Risk assessment, metals
MT	Margareta Törnqvist, ACES	Metabolism, analysis, risk estimation
MÅ	Marlene Ågerstrand, ACES	Risk policy etc.
PA	Patrik Andersson, UmU	QSAR

Lecturer at Uppsala visit:

Department of Environmental Toxicology, Uppsala University

Björn Brunström (BB), Cecilia Berg (CB), Johan Svensson (JS), Henrik Viberg (HV)

Sw. National Food Administration

Lilianne Abramsson Zetterberg (LAZ)

Assistants:

JA Jenny Aasa, ACES

JG Johan Gustafsson

DL Dennis Lindqvist, ACES

ACES, Dept. of Environmental Science and Analytical Chemistry, Stockholm University, SU

NRM, Sw. Museum of Natural History

MBW, Dept. of Molecular Biosciences and Wenner-Gren Institute, SU

KI, Karolinska Institute

UmU, Umeå University