ECOLOGY & DIVERSITY OF MICROORGANISMS - Course schedule

Date	Activities			
Week 1 - Januar 3 to 9	morning	afternoon	evening	
Monday, January 3	09.00 Welcome and introduction to course 09.30 Lecture 1: Kurt Hanselmann **How diverse are microbes ?** 11.00 **Course research projects**: short presentations by staff	14.00 Lecture 2: Kurt Hanselmann **Concepts in microbial ecology** 15.00 Aquaintance with lab and library facilities 16.00 Preparations for field trip	18.00 Colloqium **Scientific reporting and preparing scientific manuscripts** (Kurt Hanselmann)	
Tuesday, January 4	09.00 Departure for **field trip**: Estuaries along Rio Andalién from Aeropuerto to Talcahuano (Kurt Hanselmann). Take old cloths, sun protection and sampling vials	15.00 Sample storage, microscopy and sample processing (Kurt Hanselmann)	18.00 **Student presentations**	
Wednesday, January 5	09.00 Lecture 3: Maria Angelica Mondaca **Bacteria and heavy metal interactions** 10.30 Lecture 4: Kurt Hanselmann **Designing microbial diets for enrichment and growth**	14.00 Begin **lab work**	21.00 **Volta experiment** at Laguna Chica San Pedro (Kurt Hanselmann) We will meet in front of the Casino Balneario at 20.45 (depending on weather conditions)	
Thursday, January 6	09.00 Lecture 5: Miguel Martinez **Chlorophenol degrading bacteria** 10.30 Lecture 6: Kurt Hanselmann **Ecological determinants**	14.00 Continue **lab work**	18.00 **Student presentations**	
Friday, January 7	All day **Thioploca sampling cruise:** Victor Gallardo & Kurt Hanselmann 08.00 Preparation of equipment for cruise at the lab and departure to Talcahuano 09.00 Boat (Kay Kay)departs from Talcahuano harbor and will stop for sampling (box cores) at stations 4 (26 m) , 7 (34 m) and near station 14 (46 m). Sample preparation on board ship 15.00 Dichato research station, look at samples and enrich physically for Thioploca and Beggiatoa 18.00 Departure for return to Concepción by bus			19.00 Preparation Minisymposium 1
Saturday, January 8	09.00 - 14.00 **Minisymposium 1: Current Aspects of Environmental and Eco-clinical Microbiology** Sandwiches for lunch and drinks will be provided		free	
Sunday, January 9	day off			

Date	Activities		
Week 2 - Januar 10 to 16	morning	afternoon	evening
Monday, January 10	09.00 Lecture 7: Gerardo González **Spreading of antibiotic resistance genes** 10.30 Lecture 8: Kurt Hanselmann **Gene transfer in natural environments**	14.00 Continue **lab work**	18.00 Computer lab: Kurt Hanselmann Microbiology journals and searching the microbiological literature on the Internet
Tuesday, January 11	09.00 Lecture 9: Carlos González **Relationship between bacterial structures and virulence.** 10.30 Lecture 10: Kurt Hanselmann **Applying thermodynamics to microbial ecology**	14.00 Continue **lab work**	18.00 Computer lab: Group 1 Thermodyn: Thermodynamic modelling (Kurt Hanselmann) Group 2 evening off, individual study time
Wednesday, January 12	09.00 Lecture 11: Carlos Smith **Non-specific defence mechanisms in vertebrates** 10.30 Lecture 12: Carlos Smith **Overview of the immune system**	14.00 Continue **lab wor**k	18.00 Computer lab: Group 2 Thermodyn: Thermodynamic modelling (Kurt Hanselmann) Group 1 evening off, individual study time
Thursday, January 13	09.00 Lecture 13: Ricardo Barra **Fate of pollutant chemicals in the environment** 10.30 Lecture 14: Kurt Hanselmann **Geomicrobiology of the sulfur cycle**	14.00 Continue **lab work**	18.00 Computer lab: Group 1 Apply what you know: Solving microbiological problems (Kurt Hanselmann) Group 2 evening off, individual study time
Friday, January 14	09.00 Lecture 15: Apolinaria Garcia **Lipopolysaccharides in bacterial virulence** 10.30 Lecture 16: Kurt Hanselmann **Anoxigenic phototrophic bacteria**	14.00 Continue **lab work** 16.00 Preparation Minisymposium 2	18.00 Computer lab: Group 2 Apply what you know: Solving microbiological problems (Kurt Hanselmann) Group 1 evening off, , individual study time
Saturday, January 15	09.00 - 12.30 **Minisymposium 2** **Current Aspects of Environmental and Food Safety Microbiology** Sandwich lunch and drinks will be provided		free
Sunday, January 16	day off		

Date	Activities		
Week 3 - Januar 17 to 21	morning	afternoon	evening
Monday, January 17	Program change from Friday, January 7. 09.00 Lecture 17: Homero Urrutia **Structure and function of anaerobic biofilms** 10.30 Lecture 18: Kurt Hanselmann **Anaerobic food webs in anoxic sediments** 11.30 **Course photograph** on the steps in front of the Microbiology Department (students, staff, symposium speakers)	14.00 Continue **lab work**	18.00 Turn in **exam paper** Continue **lab work**
Tuesday, January 18	09.00 Lecture 19: Kurt Hanselmann **Oxigenic phototrophs: Cyanobacteria and Prochloron** 10.30 Lecture 20: Kurt Hanselmann **Adaptation to energy gradients in microbial mats and biofilms**	14.00 Continue **lab work**	18.00 Continue **lab work**
Wednesday, January 19	09.00 Lecture 21: Maria Agelica Mondaca **Bacterial chemotaxis** 11.00 Special Lecture 22: Kurt Hanselmann **HOW MICROBES SURVIVE: Evolution of Lifestyles in a Changing World**	15.00 **Course exam**: Staff & course participants, 15 minutes per student	18.00 Finish **lab work** Clean up lab
Thursday, January 20	09.00 Lecture 23: Kurt Hanselmann **Abstraction in microbial ecology** 11.00 Lecture 24: Kurt Hanselmann **Evolution of microbial diversity**	14.00 **Write** report and **prepare** for project presentation	18.00 **Finish** report **Discussion** of report with project leader and questions on the research subject
Friday, January 21	09.00 Turn in written **report** 09.00 Student **project presentations** (15 min. each) 11.30 **Course evaluation**: Leonardo Castro	15.00 **Course graduation**: Leonardo Castro, faculty and invited guests **Course Certificates**	**Fare well party**