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| Course Name | Environmental Science for Biological Resources | | |
| Semester, Year | Second Semester, 2018 | Number of Credits | 2 credits |
| Course level | 1000 | Course Number | 27110 |
| Instructor(s) (Institution) | Fuyuki SATOH 北方生物圏フィールド科学センター (札幌) Takashi SAITOH 北方生物圏フィールド科学センター (札幌) Osamu KISHIDA 北方生物圏フィールド科学センター (苫小牧) Hideaki SHIBATA 北方生物圏フィールド科学センター (札幌) Toshiya YOSHIDA 北方生物圏フィールド科学センター (雨竜) Kentaro TAKAGI 北方生物圏フィールド科学センター (天塩) Masahiro NAKAMURA 北方生物圏フィールド科学センター (和歌山) Takayoshi KOIKE 大学院農学研究院 Shunsuke UTSUMI 北方生物圏フィールド科学センター (札幌) Akio KOIZUMI 大学院農学研究院 | | |
| Course Objectives | To understand the field sciences on ecosystem conservation, sustainable bioproduction, biodiversity, and material cycling in a wide variety of fields including forest, farm, and aquatic environments, and to learn the most advanced field science in each research field. | | |
| Course Goals | To understand both comfortable lives of human due to the rapid progress of scientific technology and serious problems of the global environment, to learn the new subject of field science to solve the problems of bioproduction against global ecosystem conservation, and then to profit for a better understanding of human activity in harmony with natural environments in the global ecosystem. | | |
| Course Schedule | <ol style="list-style-type: none"> 1. Introduction of Field Bioscience in the Northern Biosphere (Y. Hoshino) 2. The effects of snowpack on the water resources of the forest catchments in Hokkaido (F. Satoh) 3. Population dynamics and life history of wild animals (T. Saitoh) 4. Ecosystem functions and services under changing environment (H. Shibata) 5. Taxonomy, morphology and phylogeny of Angiosperm (T. Azuma) 6. Conservation and restoration of plant communities based on field data (H. Fujita) 7. Energy crop and its genetic improvement (T. Yamada) 8. Utilization of cover crops for sustainable crop production (T. Hirata) 9. An introduction to phycology (C. Nagasato) 10. Cellular Evolution in Algae (T. Motomura) 11. Creation of kelp forest and resource management of kelp (N. Yotsukura) 12. Visualization of Marine bioresources (K. Miyashita) 13. Overview of Marine Fisheries Ecology around Japan (J. Yamamoto) 14. Field bioscience using biologging instruments (Y. Mitani) 15. Overall discussion (Y. Hoshino) | | |
| Homework | Preferable to carry out preparations and reviews of each lecture using appropriate books and lecture materials. | | |
| Grading System | Attendance rate must be over 60%. Each lecturer evaluated the reports. The evaluation is based on the participation in class (50%), and reports (50%). | | |
| Textbooks / Reading List | | | |
| Websites | | | |
| Website of Laboratory | | | |
| Additional Information | | | |