

UNIS graduate course

University Studies on Svalbard (Svalbard, Norway) will offer AB-325/AB-825 **Biotelemetry & biologging** in the spring term of 2013.

This graduate course offering will run 29 April - 31 May 2013 (it is offered every 2nd year). It is suitable for either MSc students (325) or PhD (825) studies. Additional project work is required at the PhD level.

Students should be actively involved in graduate research work that uses biologging devices or telemetric equipment of some kind in an ecological context.

Topics will include:

- 1) Basic principles for radio signal transmission & antenna theory
- 2) Telemetric technology, regulations and management of frequencies
- 3) Ethics (animal welfare) in biotelemetry/biologging
- 4) Introduction to VHF-based telemetry and GPS-positioning systems in biotelemetry - transmitters applications and limitations
- 5) Telemetry & biologging equipment - a manufacturers perspective
- 6) User "issues" – a manufacturer's perspective – trouble shooting
- 7) Maps, mapping and GPS technology - Practical applications
- 8) Acoustic telemetry - Methods & Science questions
- 9) Range size, habitat use etc. (Storage, and retrieval of data and the integration of animal tracks and terrestrial environmental data)
- 10) An introduction to GIS tools
- 11) Design considerations/limitations in marine mammal biotelemetry
- 12) Biotelemetry and biologging with Svalbard's marine mammals – case studies
- 13) Linking marine mammal telemetry & the environment - MAMVIS & statistical tools
- 14) Remote methods in sea bird research – transponders, photographic methods, light loggers and GPS telemetry
- 15) Fish tracking
- 16) Physiological telemetry -applications and potential
- 17) Looking into the future....

This course will have a strong marine mammal emphasis but will also deal with avian examples and have a module in tracking fish.

Short field modules will highlight current research themes using telemetry in the Svalbard science community. Students must be fit enough to ride a snowmobile (and have a valid driver's licence), as well as being field-hearty enough to enjoy boat and other outdoor work in the High Arctic.

The course starts with a 2-day safety course, with firearms training. This is a required element in all UNIS study programmes. You can read more about the course(s) at :

AB-325 http://www.unis.no/10_STUDIES/1020_Courses/Arctic_Biology/ab_325.htm

AB-825 http://www.unis.no/10_STUDIES/1020_Courses/Arctic_Biology/ab_825.htm

The course will fill on a first-come, first served basis – if students meet the qualifications. You can apply at -

<https://studweb.uit.no/isapi/WebObjects.dll/evuweb?inst=Unis>

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