Updated: 2021-08-02

**BI1302-10087** **Fish and wildlife census techniques**

Start date: 30th August 2021, End date: 28/29th October 2021

Examiners & course leaders: Navinder J Singh (navinder.singh@slu.se)

 Department: Wildlife, Fish, and Environmental Studies, SLU, Umeå.

Course textbook: Sutherland, J.W. 2006. Ecological Census Techniques - A Handbook. Cambridge.

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| **Week** | **Date** | **Day** | **Time** | **Activity** | **Lecturer** | **Tentative Room/Location** | **Lecture** |
| 36 | 2021-08-30 | Monday | 09:00-11:00 | Welcome | Navinder Singh | Sälgen | Introduction Masters programme |
|  | 2021-08-31 | Tuesday | 09:00-11:00 | Lecture | Navinder Singh, John Ball | Sälgen | Introduction to Census techniques  |
|  | 2021-08-31 | Tuesday | 13:00-15:00 | Lecture | Navinder Singh | Sälgen | Project introduction |
|  | 2021-09-01 | Wednesday | 09:00-11:00 | Lab Exercise | Carl Vigren | Datasal 1a & 1b | Introduction to R |
|  | 2021-09-02 | Thursday | 09:00-11:00 | Lecture | Anne-Marit Hekkala | Sälgen | Monitoring Biodiversity Insect and Pollinators  |
|  | 2021-09-03 | Friday | 09:00-11:00 | Lecture | Navinder Singh | Sälgen | Part I - Planning a census & Part II Selecting project species |
|  | 2021-09-04 | Saturday |  |  |  |  |  |
|  | 2021-09-05 | Sunday |  |  |  |  |  |
| 37 | 2021-09-06 | Monday | 09:00-11:00 | Lecture | Petter Axelsson | Sälgen | Monitoring Biodiversity |
|  | 2021-09-06 | Monday | 13:00-15:00 | Lecture | Joris Cromsigt | Sälgen | Experimental Design in Ecology |
|  | 2021-09-07 | Tuesday | 09:00-11:00 | Excursion | Anne-Marit Hekkala | - | Monitoring Biodiversity, Excursion |
|  | 2021-09-08 | Wednesday | 09:00-11:00 | Lecture | Navinder Singh | Aspen | Project seminar: aim and census choice |
|  | 2021-09-09 | Thursday | 13:00-15:00 | Lecture | Per Stenberg, UmU | Aspen | Monitoring Biodiversity using air filters |
|  | 2021-09-10 | Friday | 09:00-11:00 | Excursion | Therese Löfroth | - | Monitoring Biodiversity, Excursion |
|  | 2021-09-11 | Saturday |  |  |  |  |  |
|  | 2021-09-12 | Sunday |  |  |  |  |  |
| 38 | 2021-09-13 | Monday | 09:00-11:00 | Lecture | Gustav Hellström | Sälgen | Animal Biotelemetry |
|  | 2021-09-14 | Tuesday | 09:00-11:00 | Lecture | Anders Alanara | Sälgen | Removal methods, Electrofishing |
|  | 2021-09-15 | Wednesday | 09:00-11:00 | Excursion | Anders Alanara | - | Electrofishing Assignment |
|  | 2021-09-16 | Thursday | 09:00-11:00 | Lab | Anders Alanara | Datasal 1a & 1b | Electrofishing Assignment |
|  | 2021-09-17 | Friday | 09:00-11:00 | Lecture | Tim Hofmeester | Sälgen | Camera Trapping Methods |
|  | 2021-09-17 | Friday | 13:00-16:00 | Field Exercise | Tim Hofmeester | - | Camera Trapping Methods |
|  | 2020-09-18 | Saturday |  |  |  |  |  |
|  | 2020-09-19 | Sunday |  |  |  |  |  |
| 39 | 2021-09-20 | Monday | 09:00-11:00 | Lecture | Kjell Leonardsson | Sälgen | Mark recapture methods |
|  | 2021-09-21 | Tuesday | 09:00-11:00 | Lab | Carl Vigren | Datasal 1a & 1b | Mark recapture methods |
|  | 2021-09-22 | Wednesday | 09:00-11:00 | Group work | Navinder Singh | - | Project Work |
|  | 2021-09-23 | Thursday | 09:00-11:00 | Lab | Carl Vigren | Datasal 1a & 1b | Mark recapture methods |
|  | 2021-09-24 | Friday | 09:00-11:00 | Group work | Navinder Singh | - | Project Work |
|  | 2021-09-25 | Saturday |  |  |  |  |  |
|  | 2021-09-26 | Sunday |  |  |  |  |  |
| 40 | 2021-09-27 | Monday | 09:00-16:00 | Lecture | Navinder Singh | Sälgen | Citizen Science |
|  | 2021-09-28 | Tuesday | 09:00-11:00 | Lecture | Navinder Singh | Sälgen | Line Transects |
|  | 2021-09-29 | Wednesday | 09:00-11:00 | Self study | Self study | - | Projects, R etc. |
|  | 2021-09-30 | Thursday | 09:00-11:00 | Field Exercise | Navinder Singh | - | Distance Sampling |
|  | 2021-09-30 | Thursday | 13:00 – 16:00 | Lab | Navinder Singh | Datasal 1a & 1b | Program Distance |
|  | 2021-10-01 | Friday | 09:00-11:00 | Lab | Carl Vigren | Datasal 1a & 1b  | Distance in R, Experimental Design in R |
|  | 2020-10-02 | Saturday |  |  |  |  |  |
|  | 2020-10-03 | Sunday |  |  |  |  |  |
| 41 | 2021-10-04 | Monday | 09:00-11:00 | - | Navinder Singh | - | Distance Sampling - Hand-In |
|  | 2021-10-05 | Tuesday | 09:00-11:00 | Lecture | Kjell Leonardsson | Sälgen | Indexes - CPUE, Gillnet Fishing |
|  | 2021-10-06 | Wednesday |  | - | - | - | Project Work |
|  | 2021-10-07 | Thursday | 09:00-11:00 | Lecture | Kjell Leonardsson | Aspen | Comparing census methods for population estimation |
|  | 2021-10-08 | Friday | 09:00-11:00 | Lecture | Navinder Singh | Aspen | Monitoring of Migratory Species  |
|  | 2021-10-08 | Friday | 12:00-14:00 | Lecture | Göran Spong | Aspen | Genetic Mark Recapture methods |
|  | 2021-10-09 | Saturday |  |  |  |  |  |
|  | 2021-10-10 | Sunday |  |  |  |  |  |
| 42 | 2021-10-11 | Monday | 09:00-11:00 |  | - |  | Project Work |
|  | 2021-10-12 | Tuesday | 09:00-11:00 | Lecture | Frauke Ecke | Sälgen | Small Mammals, Predators and Zoonoses |
|  | 2021-10-12 | Tuesday | 13:00-16:00 | Lecture | Jonas Malmsten | Sälgen | The handling of wild mammals, Animal ethics, laws and regulations |
|  | 2021-10-13 | Wednesday | 09:00-11:00 | Lecture | Jonas Malmsten/Fredrik Stenbacka | Sälgen | The handling of wild mammals, Animal ethics, laws and regulations II |
|  | 2021-10-14 | Thursday | 09:00-11:00 | Lecture | Frauke Ecke | Sälgen | Monitoring biodiversity using Drones |
|  | 2021-10-15 | Friday | 09:00-15:00 | Excursion & Lab | Frauke Ecke | Datasal 1a & 1b | Drone Project Work (Morning Excursion to Beaver system, Noon - Data analyses) |
|  | 2021-10-16 | Saturday |  |  |  |  |  |
|  | 2021-10-17 | Sunday |  |  |  |  |  |
| 43 | 2021-10-18 | Monday | 09:00-11:00 | Lecture | Navinder Singh | Sälgen | Monitoring Biodiversity - A Global Conservation Policy Perspective |
|  | 2021-10-19 | Tuesday | 09:00-11:00 | Lecture | Navinder Singh | Sälgen | Question Session |
|  | 2021-10-20 | Wednesday | 09:00-11:00 | - | - | - | Project Work |
|  | 2021-10-21 | Thursday | 09:00-11:00 | - | - | - | Project Work |
|  | 2021-10-22 | Friday | 09:00-12:00 | Exam | - | Datasal 1a & 1b | Exam |
|  | 2021-10-23 | Saturday |  |  |  |  |  |
|  | 2021-10-24 | Sunday |  |  |  |  |  |
| 44 | 2021-10-25 | Monday | - | - | - | - | Project Work Hand-In |
|  | 2021-10-26 | Tuesday | 09:00-11:00 | Discussions | Navinder Singh | Sälgen | Preparation for Project Seminar |
|  | 2021-10-27 | Wednesday | 09:00-16:00 | Discussions | Navinder Singh | Sälgen | Presentation, project work + Course valuation |
|  | 2021-10-28 | Thursday |  |  |  |  |  |
|  | 2021-10-29 | Friday |  |  |  |  |  |
|  | 2021-10-30 | Saturday |  |  |  |  |  |
|  | 2021-10-31 | Sunday |  |  |  |  |  |

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