Seminar in Conservation Biology

BIOS 7970

2 credits

**Species Distribution Modeling**

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Suggested Topics

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| **Week** | **Topic** | **Lead** |
| Week 1 (17 Jan) | Introduction and Organization | All |
| Week 2 (24 Jan) | What Determines Species Ranges (Physical Factors, Biotic Factors). What is a Niche | Miles |
| Week 3 (31 Jan) | Environmental Niche Model vs Species Distribution Model | Diego |
| Week 4 (7 Feb) | Role of dispersal and adaptation in shaping distributional ranges - | Miles |
| Week 5 (14 Feb) | Individual Variation, Plasticity, and Species Ranges | Diego |
| Week 6 (21 Feb) | Species range dynamics under Climate Change | Viorel |
| Week 7 (28 Feb) | Theoretical Foundations of Species Distribution Modeling – 1  | V/D |
| Week 8 (6 March) | Theoretical foundations of Species Distribution Modeling – 2 | V/D |
| Week 9 (9 – 13 March) | SPRING BREAK |  |
| Week 10 (16 – 20 March) | Modeling species distributions: Readings – Data Preparation (Rasters, GBIF data, extent). Maxent | Miles |
| Week 11 (23 – 27 March) | Modeling species distributions: readings + R modeling (Model Implementation {crying}) | Viorel |
| Week 12 (30 March – 3 April)  | Modeling species distributions: readings + R modeling (Model evaluation) | Miles |
| Week 13 (6 – 10 April) | Mechanistic approaches to modeling species distributions | Viorel |
| Week 14 (13 – 17 April) | Use of SDM in Conservation Biology | Miles |
| Week 15 (20 – 27 April) | Seminar wrap-up |  |