

## MesoHABSIM Course Schedule

### Day 1: Introduction and Data Collection

9:00 - 9:15: **Welcome and logistics**

9:15 - 10:30: **Introduction to physical habitat models & MesoHABSIM**

**Objective:** Present the place of MesoHABSIM within the framework of habitat simulation models.

**Topics:**

- Physical habitat models
- MesoHABSIM approach
  - \* survey techniques
  - \* calculations
  - \* results

10:30 – 11:00: **Break**

11:00 - 11:45: **Biophysical templates**

**Objective:** Introduction to ecological underpinnings and the concept of biophysical templates

**Covered topics:**

- Theory of Biophysical templates
- Biological targets and indicators
  - \* Reference fauna
  - \* Existing fish community
  - \* Bioperiods
  - \* Indicators

11:45 – 13:00: **Biological filters**

**Objective:** Demonstrate the process of creating biological filters

**Covered topics:**

- Literature based
- Empirical data
- Sampling
- Multivariate Suitability criteria

13:00 - 14:00: **Break for lunch**

14:00 – 15:00: **Instream Habitat Classification**

**Objective:** Present the concept and procedures of classification

**Covered topics:**

- Spatial Delineation of river sites
- Assessment of physical attributes
- Mapping surveys
- Applying filters
- Defining Suitable and Optimal habitat
- Validation procedures

15:00 - 19:00: **Visit to Field Site**

**Objective:** Demonstrate standard operating procedures of data collection for MesoHABSIM

**Field data collection**

- Equipment demonstration
- Grid Electrofishing
- Invertebrate and mussel sampling
- Map hydromorphologic units (HMU)
- Measure water depth and velocity

**Day 2: Habitat simulation and application**

9:00 - 10:30: **Lecture: Computation of suitability criteria**

**Objective:** Present the procedures for analysis of model training data

**Covered topics:**

- Logistic regression model
- Compute logistic regression with SPSS or R
- Upscaling
- Aggregation across the scales
- Aggregation from species to community habitat
  - \* Biophysical Templates
  - \* Habitat deficit analysis
  - \* Rehabilitation Simulation

Spatial Aggregation

Temporal Aggregation

10:30 – 11:00 **Break**

11:00 - 13:00: **Lecture: Habitat Time Series**

**Objective:** Interpretation and Simulation

**Covered topics:**

- UCUT analysis
- Flow management criteria

13:00 - 14:00: **Break for lunch**

14:00 - 15:00: **Lecture: Interpretation and Management Tools**

**Objective:** Discuss Interpretation and Present Application

**Covered topics:**

- Identify habitat thresholds and management criteria

- ACTograms
- Scenario comparison
- Integrative assessment

15:15 pm - 17:00 pm: **Examples of MesoHABSIM application and SimStream08**

**Covered topics:**

- Examples of projects applying MesoHABSIM
- Other possibilities