Prerequisites for participation:
Students should have some basic knowledge in bioinformatics including sequence analysis, basic knowledge of gene and structure prediction methods, being familiar with molecular databases (e.g. EMBL, SwissProt, KEGG).

Intended audience:
Graduates, Ph.D. students, Post-Docs in Life Sciences with interest or need for education in bioinformatics. The course is intended as a tutorial to the recent contributions of bioinformatics to molecular and cell biology as well as genetics and knowledge management.

Fee and registration:
600.-€ double room, 700.-€ single room (including tuition, course material, room and board for the whole duration of the event, but NOT travel expenses - bus-transfer has to be shared after the course ).
Registration: at GSF-Institute for Bioinformatics (Cornelia Canady) or directly at EGF.

Travel to Bertinoro:
Bus-transfer vom Munich to Bertinoro on March, 18th
Bus-transfer vom Bertinoro to Munich on March, 23th

DIRECTORS:
H.W. Mewes (GSF and TU Munchen, GERMANY)

FACULTY:
R. Casadio (Bologna, ITALY), M. Cox (Martinsried, GERMANY), J. Ernst (München, GERMANY),
A. Facius (Neuherberg, GERMANY), D. Frishman (Weihenstephan, GERMANY), A. Kaps
(Martinsried, GERMANY), C. v. Mering (Heidelberg, GERMANY), H.W. Mewes (Neuherberg
GERMANY), J. Müller (München, GERMANY), G. Raetsch (Tübingen, Germany, tentative), T. Rattei
(Weihenstephan, GERMANY), M. Scherf (München, GERMANY), V. Stümpflen (Neuherberg,
GERMANY), A. Tramontano (Roma,ITALY), R. Zimmer (München, GERMANY)

PROGRAM:
Saturday, March 18th – Arrival at the University Residential Centre of Bertinoro

Sunday, March 19th - Sequence and Genome Analysis

**Introduction of the Faculty and the Participants** (short presentations)

**Introduction into the Course** (H.W. Mewes)

**Sequence and Genome Analysis**
Introduction into sequence and genome analysis (H.W. Mewes)
Gene Prediction and Genome Annotation (D. Frishman)
PPInteractions (D. Frishman)
Statistics for Bioinformatics (A. Facius)

Monday, March 20th - Bioinformatics for Biology

**Bioinformatics for Biology**
Functional Modules (C. v. Mering)
Gene Regulation (M. Scherf)
Metabolic and other Networks (R. Zimmer)
Expression Analysis (M. Cox)

Tuesday, March 21th - Structural Biology and Genetics

**Structural Biology**
Membrane Proteins (R. Casadio)
Structure Prediction (A. Tramontano)

**Genetics**
Bioinformatics for Genetics (J. Müller)
Sight-seeing tour

Wednesday, March 22th - Data resources and Information management

**Data resources and information management**
Ressources in Bioinformatics (T. Rattei)
Data Integration (A. Kaps)
Bioinformation Systems (V. Stümpflen)
Introduction into Algorithms (J. Ernst)
BioXM Integration of Services (A. Kaps)

Thursday, March 23th - Systems Biology

**Datamining**
Machine learning and applications in biology (G. Raetsch, tentative)

**Systems Biology**
Bioinformatics and Systems (H.W. Mewes)

**Open Workshop**

**Departure**