<table>
<thead>
<tr>
<th>Course title</th>
<th>Training Course for Bioinformatics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
<td>後期 2nd Half</td>
</tr>
<tr>
<td>Credit(s)</td>
<td>1</td>
</tr>
<tr>
<td>The main day</td>
<td>The main period</td>
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<tr>
<td>School/Program</td>
<td>School of Life Science</td>
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<tr>
<td>Department/Program</td>
<td>Common Subjects of Life Science</td>
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<td>Category</td>
<td>Common</td>
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**Instructor**

* SHIGENOBU SHUJI

**Outline**

Mainly focusing on sequence data analyses, both theoretical background and practical skills of basics bioinformatics are introduced through lectures and hands-on tutorials. Also, students can learn how to apply bioinformatics to genome and transcriptome analyses. This is a two-day intensive course.

**Goal**

1. Understand basic principles in biological sequence analyses.
2. Master basic skills for genomic and transcriptomic analyses.
3. Learn the current state of genomics and bioinformatics research, and discuss the prospects for life science in the Big Data era.

**Grading system**

01:Four-grade evaluation (A,B,C,D)

**Grading policy**

In addition to sufficient attendance to the lecture, students must complete an assignment to get credit for the course. Activity in the lectures and tutorials: 50%; An assignment 50%.

**Lecture Plan**

This is the 2-day intensive course.

Schedule: Feb 2–3, 2022 9:15-16:45

Day 1
- #1 Introduction to genomics and bioinformatics
- #2 Biological sequence analysis 1
- #3 Biological sequence analysis 2
- #4 Genome analysis 1

Day 2
- #5 Genome analysis 2
- #6 Transcriptome analysis 1
- #7 Transcriptome analysis 2
- #8 Biological databases and current topics

**Location**

NIBB (It may change to online due to COVID-19 situation)

**Language**

English

**Textbooks and references**

No specific literatures are recommended. Familiarity with basic UNIX command line operations is recommended.

**Keyword**

bioinformatics
genomics
transcriptome
evolution
big data