<table>
<thead>
<tr>
<th>Testi in italiano</th>
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<tr>
<td><strong>Lingua insegnamento</strong></td>
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The course will address central nervous system embryonic development in vertebrate species, in particular mammals, at genetic, molecular and cellular levels. During the course, the experimental tools necessary for investigating the above topics will be also discussed.

The course is given by prof. Germana Meroni and prof. Antonello Mallamaci; the contents of the course are illustrated here below.

Early vertebrate development, from cleavage to gastrulation, and body axes specification.

Genome editing, forward and reverse genetics, and lineage tracing tools.


### Testi di riferimento
Material provided during the course as Lecture presentations and original research articles and reviews. Suggested support book: Developmental Biology, Gilbert, 9th-11th ed.

### Obiettivi formativi
The aim of this course is to provide the knowledge and understanding of the nervous system organization through the study of the major events of brain and spinal cord embryological development, at the genetic, molecular and cellular level.
The course provides the instruments to understand the experimental genetic approaches that are necessary to undertake neurodevelopment studies (Applying knowledge and understanding).
In addition, students are encouraged to develop their critical reading of the scientific literature that will be proposed during the course (Making judgements) and that will be tested during the final assessment.
During the course, the students will be given the instruments to exploit the literature data and background together with experimental information in order to encourage their development as researchers (Learning abilities).
The presence of an oral part in the final assessment is also intended to improve students’ Communication skills.

### Prerequisiti
Basic knowledge of Molecular Biology, Cellular Biology and Genetics

### Metodi didattici
Traditional lectures integrated with Journal clubs discussing seminal research papers on neurodevelopmental genetics.

### Altre informazioni
Any necessary change in the course modalities due to COVID19 emergency will be published at the Department, Master Programme and Course websites.

### Modalità di verifica dell'apprendimento
Students will be required to take a final examination that consists of: i) a written part with 20 multiple choice questions concerning the entire programme of the course (in 1:30-hour-time); ii) a 30-minute oral interview to discuss both the written test, especially to judge the incorrect or partially incorrect answers (if any), as well as other topics addressed during the course. The final mark is assigned based on the result of the written test and on the discussion during the oral part.

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Obiettivi per lo sviluppo sostenibile

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<tr>
<th>Codice</th>
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<tbody>
<tr>
<td>3</td>
<td>Good health and well-being</td>
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