

Basic information

Category	Specialized education	Credit	2
Subject	Developmental Biology (molecular mechanism of development)		

Detailed information

Lecture plan / Theme	Molecular mechanism of embryonic development; Basics of the function and transcription regulation of developmental genes, and organogenesis.
Course Description / Objectives	We aim to focus on the function and the transcriptional regulatory mechanism of developmental genes in relation to the molecular mechanism of organogenesis. Emphasis is placed on nurturing the ability to solve problems logically using diverse array of information.
Overview of Each Class	<p>Invertebrate development; <i>Drosophila</i></p> <ol style="list-style-type: none"> 1. ; Maternal factors 2. ; Pattern formation in early embryos 3. ; Somite identity along the anterior-posterior axis <ol style="list-style-type: none"> 4. Invertebrate development; Nematode 5. Invertebrate development; Sea urchin and tunicates 6. Research using tunicates 7. Determination of sex 8. Regulation of gene expression 9. Cell differentiation 10. Stem cells 11. Organogenesis 12. Neural development 13. Development of the gastrointestinal tract in chickens 1 14. Development of the gastrointestinal tract in chickens 2 15. Final examination
Text Book / Reference Books	<p>Text: "Principles of Development", Lewis Wolpert and Cheryll Tickle, Oxford University Press</p> <p>(Preparation is mandatory. Class hours will be used for discussion and short activity.)</p> <p>Handouts will be provided.</p>
Assessment of Achievement	<p>Asking questions 15%, Peer discussion 15% , Short quiz 30% , Final examination 40%</p> <p>*Participation to more than 2/3 of the classes is required.</p>
Requirements for Students	<p>Completion of "General Developmental Biology 1" is recommended.</p> <p>Preparation is mandatory. Class hours will be used for discussion and short activity.</p>
Remarks	