

*BIOLOGY 2020*

*Registrar's Office*

**GRANDE PRAIRIE REGIONAL COLLEGE**  
**ZOOLOGY-2020 DEVELOPMENTAL BIOLOGY**  
**WINTER 1994 : 3(3-0-3)**

**INSTRUCTOR:** Paul Lemay, Office: J224, Phone 539-2863

**LABORATORY TECHNICIAN:** Rick Scott, Office: J121, Phone 539-2953

**TEXTBOOK:** Gilbert, Scott F. (1991) Developmental Biology, 3<sup>rd</sup> Edition. Sinauer.  
Gallin, W. J. (1992) Zoology 202 Lab Manual, U. of A.

**COURSE DESCRIPTION:** (Formerly: BI 302 and Biology 2020)

An introduction to the basic principles and processes of development of vertebrates and invertebrates. The course examines molecular, cellular and tissue interactions in the formation of organs and the development of the egg into the embryo.

Prerequisite: Zoology 1200;

Prerequisite or corequisite: Zoology 1200 or Biology 2010.

<b>EVALUATION:</b>	Midterm	20%
	Essay - presentation	10%
	Final	40%
	Lab Term	10%
	Final	20%

## ZO 2020 COURSE SYLLABUS

HOURS	TOPIC	TEXT CHAPTER
1	Introduction	1
<b>ANIMAL DEVELOPMENT</b>		
2	Fertilization	2
2	Cleavage	3
1	Gastrulation	4
1	Neurulation and Ectoderm Development	5
1	Mesoderm Development	6
1	Endoderm Development	6
2	Cytoplasmic Determination	7
4	Progressive Determination	
	- Cell - cell interactions	8
	- Cell surface	15
	- Proximate tissues - induction	16
2	Pattern Formation	17
	- Including nervous system	
2	Hormones in development	19
3	Genomic equivalence	
	- Embryological	9
	- Molecular	10
2	Transcriptional Control in Development	11 & 12
1	Development of the nervous system	
1	Spiral Cleavage in Molluscs	
2	Drosophila Development and Metamorphosis	18
1	Sex Determination	21
1	Gametogenesis	22

### Schedule of Labs for Zoology 2020 ~ 1994

Lab. # * <sup>1</sup>	Date	Title
1	January 12, 1994	Introduction Basic Histology and the use of the Microscope
3	January 19	Amphibian Cleavage and Early Development
7	January 26 February 2	Effect of Thyroid Hormone, on Amphibian Metamorphosis
2	February 9 February 16	Fertilization of Sea Urchin Eggs Lab Exam Fertilization of Sea Urchin Eggs
4	March 2	Preparing Chick Embryo Wholemounts
5	March 9	Observation of Wholemounts and sections
6	March 16	Drosophila segmentation Mutants
8	March 23	Bone and Heart Explantation
9	March 30	Bone Explantation and Review
10	April 6	Lab Exam

\*1 Zoology 202 Animal Developmental Biology Department of Zoology 1993 (Prof. Warren J. Gallin)