Title: Fundamental Concepts in Developmental Biology [3-0-0-6]

Content *:*

(a) Converting a one-cell embryo into a multi-cell embryo – the geometry of early cell divisions and its role in development of animal embryos (b) Fundamental physical processes that sculpt a mass of cells into a threedimensional animal (c) Fundamental molecular and cellular processes that determine the Front-Back axis of animals (d) Organogenesis – How do organs form in embryos? why do organs form only at certain fixed positions in the animal body? (e) Development of Left-Right asymmetry in organs.

Texts / References:

1. Developmental Biology by Michael J. F. Barresi and Scott F. Gilbert, 2019
2. Principles of Development by Lewis Wolpert, Cheryll Tickle and Alfonso Martinez Arias, 2019
3. https://www.ncbi.nlm.nih.gov/books – for any developmental biology concept of interest, searchable by topic