Module title: Plant Developmental Biology

Lecturer: A. Einali (assistant prof.)

Assessments: 40% mid-term exam
50% final exam
10% Quiz

References:
1. Plant Anatomy, 1990
Avraham Fahn
2. Esau's Plant Anatomy: Meristems, Cells, and Tissues of the Plant Body: Their Structure, Function, and Development, 2006
Ray F. Evert, Susan E Eichhorn
3. Plant Morphology, 1953
Arthur W. Haupt

Module subjects:

1. Morphogenesis definition
1st week: Concept of differentiation, dedifferentiation, and redifferentiation
2nd week: Causal factors of differentiation, Polarity
3rd week: Epigenetic mechanisms in differentiation, role of cytoplasm in differentiation

2. Plant Embryogenesis
4th week: Embryogenesis in gymnosperms
5th week: Pinus type embryogenesis
6th week: Embryonic sac, Embryogenesis in monocotyledons
7th week: Embryogenesis in dicotyledons
8th week: Apomixis, *mid-term exam*

2. Meristems
9th week: Types of meristems, types of cell division
10th week: Shoot apical meristem in pteridophyta and gymnosperms
11th week: Shoot apical meristem in angiosperms
12th week: Origins of branches, Origins of leaves
13th week: Root apex in pteridophyta and gymnosperms
14th week: Root apex in angiosperms, secondary meristems

3. Generative meristem
15th week: Origin of flower, ABC model for flowering
16th week: Correlation, *preparation for final exam*