

Module title: Natural Products Chemistry

Term: First Term 1398-99

Lecturer: A. Einali (assistant prof.)

Assessments: 25% mid-term 1 exam
25% mid-term 2 exam
40% final exam
10% Quiz

References:

1. Biochemistry and Molecular Biology of Plants, 2nd Edition, 2015

Bob B. Buchanan , Wilhelm Gruissem, Russell L. Jones

2. Plant Physiology, 2002

Lincoln Taiz and Eduardo Zieger

Module subjects:

1. Natural compounds

1st week: Introduction, definition of primary and secondary metabolism, classification of natural compounds

2. Terpenoids

2nd week: Biosynthetic pathways of terpenoids precursor

3rd week: Terpenoids biosynthesis, mono and di-terpenoids

4th week: tri- and tetra terpenoids biosynthesis

3. Cyanogenic Glycosides

5th week: Structure, function, and biosynthesis

4. Glucosinolates

6th week: Structure, function, and biosynthesis, *First mid-term exam*

5. Alkaloids

7th week: Structure and types

8th week: Alkaloids biosynthesis, function, *Second mid-term exam*

6. Phenylpropanoids

9th week: Phenolic compounds, Structure and types

10th week: Lignin biosynthesis

11th week: Flavonoids biosynthesis

12th week: Coumarins, function

13th week: Coumarins biosynthesis

14th week: seminars, *Preparation for final exam*