

### **Module description**

**-Module title:** Bioinformatics– practical part.

**-Module code:** BCH 436

**-Year:** first semester 1442 H.

**-Mark distribution:**

Total mark is 30:

- 3 marks for weekly exercise.
- 5 marks for homework.
- 9 marks for mid-term exam.     **Date: 25/2/1442H –12/10/2020**
- 13 marks for final exam.       **Date: 8/4/1442H – 23/11/2020**

**-Module labs:**

1. NCBI overview and searching in PubMed database.
2. Nucleotides and Gene databases.
3. Practicing ENSEMBL genome browser.
4. Introduction to BLAST suite and BLASTN.
5. Designing PCR primers (PRIMER 3Plus) and in-silico PCR (USCS).
6. Protein databases (NCBI, Uniprot, and IHOP)
7. Protein sequence search (BLASTP)
8. Protein sequence alignment and ExPASy Tools and Structure visualization using jmol.

**-Book Reference:**

Michael Agostino (2013) Practical Bioinformatics (first edition), Garland Science, Taylor & Francis Group, New York & London.