INTRODUCTION TO BIOINFORMATICS

1	Course Title:	INTRODUCTION TO BIOINFORMATICS
2	Course Code:	BYL4100
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	8
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. Tolga Çavaş
15	Course Lecturers:	Prof. Dr. Tolga ÇAVAŞ
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi Fen-Edebiyat Fakültesi Biyoloji Bölümü Görükle Kampüsü, Nilüfer/BURSA 16059 e-posta: tcavas@uludag.edu.tr Telefon: 0 224 294 1869 Uludag University Faculty of Arts and Science Department of Biology Gorukle Campus, Nilufer/BURSA 16059 e-mail: tcavas@uludag.edu.tr Phone: 0 224 294 1869
17	Website:	
18	Objective of the Course:	The aims of the course are to give the students the knowledge on the basics of bioinformatics, study areas and tools used in bioinformatic research.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

		1	To be able to use basic computer programs and information technology in bioinformatics
		2	To learn the methods used in biological research, to have the skills to analyze and solve the problems
		3	To be open for scientific innovations and to be able to apply them in the related areas.
		4	
		5	
		6	
		7	
		8	
		9	
		10	

21	Course Content:	
	Course Content:	

Week	Theoretical	Practice
1	Introduction to bioinformatics	
2	What is bioinformatics?	
3	Knowledge web	
4	Databases	
5	Protein databases	
6	Genom databases	
7	Scientific paper databases	
8	DNA sequence analyses	
9	BLAST	
10	Bioinformatics in phylogeny	
11	Bioinformatics in medicine	
12	Microarray analyses	
13	Basic algoritmas	
14	Other analyse packages	
22	Textbooks, References and/or Other Materials:	Barnes, M.R. "Bioinformatics for Geneticists", John Wiley & Sons Lts., (2007). Lesk, A.M "Introduction to Bioinformatics", Oxford University Press, (2002).
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade	40.00	
Contribution of Final Exam to Success Grade	60.00	
Total	100.00	
Measurement and Evaluation Techniques Used in the Course		

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	1	15.00	15.00
Homeworks	0	0.00	0.00
Projects	2	15.00	30.00
Field Studies	0	0.00	0.00
Midterm exams	1	20.00	20.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			133.00
Total work load/ 30 hr			3.77
ECTS Credit of the Course			4.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
ÖK3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low		3 Medium			4 High				5 Very High				