

# ENTOMOPATHOGENIC NEMATODES

<b>1</b>	Course Title:	ENTOMOPATHOGENIC NEMATODES	
<b>2</b>	Course Code:	BIT5022	
<b>3</b>	Type of Course:	Optional	
<b>4</b>	Level of Course:	Second Cycle	
<b>5</b>	Year of Study:	1	
<b>6</b>	Semester:	2	
<b>7</b>	ECTS Credits Allocated:	6.00	
<b>8</b>	Theoretical (hour/week):	3.00	
<b>9</b>	Practice (hour/week):	0.00	
<b>10</b>	Laboratory (hour/week):	0	
<b>11</b>	Prerequisites:	None.	
<b>12</b>	Language:	Turkish	
<b>13</b>	Mode of Delivery:	Face to face	
<b>14</b>	Course Coordinator:	Prof. Dr. İSMAİL ALPER SUSURLUK	
<b>15</b>	Course Lecturers:	-	
<b>16</b>	Contact information of the Course Coordinator:	susurluk@uludag.edu.tr (0 224) 294 15 79 Bursa Uludağ Üniversitesi, Ziraat Fakültesi, Bitki Koruma Bölümü	
<b>17</b>	Website:		
<b>18</b>	Objective of the Course:	The scope, it aims to explain the importance of entomopathogenic nematodes in biological control and their mechanisms of action.	
<b>19</b>	Contribution of the Course to Professional Development:	Students taking this course learn the importance of Entomopathogenic nematodes in their professional lives and their place in the fight against them.	
<b>20</b>	Learning Outcomes:		
		1	Gain information about beneficial nematodes.
		2	The student has knowledge about the systematics of entomopathogenic nematodes.
		3	The student gains knowledge about the morphology of entomopathogenic nematodes.
		4	The student gains knowledge about the biology of entomopathogenic nematodes.
		5	The student learns about the mechanism of action of entomopathogenic nematodes.
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<b>21</b>	Course Content:		
		<b>Course Content:</b>	
Week	Theoretical	Practice	
<b>1</b>	Definition and application methods of biological control.		
<b>2</b>	Beneficial organisms used in biological control.		

<b>3</b>	Definition of microbial control and organisms used.	
<b>4</b>	Description and characteristics of entomopathogenic nematodes	
<b>5</b>	Description and characteristics of entomopathogenic nematodes	
<b>6</b>	General Evaluation of Topics	
<b>7</b>	Biology of entomopathogenic nematodes	
<b>8</b>	Mechanisms of action of entomopathogenic nematodes	
<b>9</b>	Relationships of entomopathogenic nematodes with symbiont bacteria.	
<b>10</b>	Relationships of entomopathogenic nematodes with symbiont bacteria.	
<b>11</b>	In vivo production techniques of entomopathogenic nematodes	
<b>12</b>	In vitro production techniques of entomopathogenic nematodes	
<b>13</b>	Commercial production and formulations of entomopathogenic nematodes	
<b>14</b>	The importance of entomopathogenic nematodes in biological control.	
<b>22</b>	Textbooks, References and/or Other Materials:	Nematodes as Biocontrol Agents, P.S. Grewal, R.U. Ehlers, D.I. Shapiro-Ilan  Entomopathogenic Nematology, R. Gaugler,  Quality Control of Entomopathogenic Nematodes, J.M. Grunder.
<b>23</b>	Assesment	
<b>TERM LEARNING ACTIVITIES</b>		<b>NUMBER</b>
		<b>WEIGHT</b>
Midterm Exam		0
Quiz		0
Home work-project		0
Final Exam		1
Total		1
Contribution of Term (Year) Learning Activities to Success Grade		0.00
Contribution of Final Exam to Success Grade		100.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		The evaluation is done as a final exam.
<b>24</b>	<b>ECTS / WORK LOAD TABLE</b>	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	10	5.00	50.00
Homeworks	1	25.00	25.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	0	0.00	0.00
Final Exams	1	60.00	60.00
Total Work Load			177.00
Total work load/ 30 hr			5.90
ECTS Credit of the Course			6.00

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	1	2	2	3	2	3	4	3	3	3	4	4	1	2	2	2
ÖK2	1	2	1	1	2	2	2	2	3	3	1	1	1	2	2	2
ÖK3	1	4	2	3	1	2	2	2	3	2	2	1	1	2	1	2
ÖK4	2	2	2	2	3	3	2	2	3	3	3	2	2	3	2	1
ÖK5	3	3	3	5	3	4	5	5	2	2	4	2	2	2	3	3
<b>LO: Learning Objectives    PQ: Program Qualifications</b>																
<b>Contribution Level:</b>	<b>1 very low</b>			<b>2 low</b>			<b>3 Medium</b>			<b>4 High</b>			<b>5 Very High</b>			