| BIOLOGY OF SPIDERS |  |  |  |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|--|--|
| 1                  | Course Title:  | BIOLOGY OF SPIDERS   |  |  |  |  |  |  |  |
| 2                  | Course Code:   | BIO5521  |  |  |  |  |  |  |  |
| 3                  | Type of Course:  | Optional   |  |  |  |  |  |  |  |
| 4                  | Level of Course:   | Second   | Cycle  |  |  |  |  |  |  |
| 5                  | Year of Study:   | 1  |  |  |  |  |  |  |  |
| 6                  | Semester:  | 1  |  |  |  |  |  |  |  |
| 7                  | ECTS Credits Allocated:                                    | 6.00   |  |  |  |  |  |  |  |
| 8                  | Theoretical (hour/week):                                   | 3.00   |  |  |  |  |  |  |  |
| 9                  | Practice (hour/week):                                      | 0.00   |  |  |  |  |  |  |  |
| 10                 | Laboratory (hour/week):                                    | 0  |  |  |  |  |  |  |  |
| 11                 | Prerequisites:   |  |  |  |  |  |  |  |  |
| 12                 | Language:  | Turkish  |  |  |  |  |  |  |  |
| 13                 | Mode of Delivery:  | Face to face   |  |  |  |  |  |  |  |
| 14                 | Course Coordinator:  | Dr. Ögr. Üyesi RAHŞEN KAYA   |  |  |  |  |  |  |  |
| 15                 | Course Lecturers:  | Dr. Öğr. Üyesi Rahşen S. KAYA  |  |  |  |  |  |  |  |
| 16                 | Contact information of the Course<br>Coordinator:          | Dr. Oğr. Üyesi Rahşen S. KAYA<br>Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Biyoloji Bölümü<br>e-posta: rkaya@uludag.edu.tr<br>Telefon: 0 (224) 294 2868<br>Uludag University, Faculty of Arts and Science, Department of<br>Biology<br>e-mail: rkaya@uludag.edu.tr<br>Phone: 0 (224) 294 2868   |  |  |  |  |  |  |  |
| 17                 | Website:   |  |  |  |  |  |  |  |  |
| 18                 | Objective of the Course:                                   | An introduction to the evolution, anatomy, physiology, behavior, and<br>ecology of spiders and other arachnids. Special topics include the<br>action of spider venoms, the composition and uses of silk, courtship<br>and mating; predation, social behavior, and the role of spiders in<br>natural and agricultural ecosystems. Biology of spiders (Order<br>Araneae) including; functional anatomy, senses and perception,<br>behavior, webs and web-building, identification, classification and<br>relationships, field techniques, and ecology. |  |  |  |  |  |  |  |
| 19                 | Contribution of the Course to<br>Professional Development: | An introduction to the evolution, anatomy, physiology, behavior, and ecology of spiders and other arachnids.   |  |  |  |  |  |  |  |
| 20                 | Learning Outcomes:   |  |  |  |  |  |  |  |  |
|                    | •  | 1  | Learning of the orders of Arachnida and phylogenetic relationships |  |  |  |  |  |  |
|                    |  | 2  | He/she learns the anatomical structures and systems of the spiders |  |  |  |  |  |  |
|                    |  | 3  | He/she learns the ecology and biodiversity of spiders              |  |  |  |  |  |  |
|                    |  | 4  | He/she learns the systematics and phylogeny of spiders             |  |  |  |  |  |  |
|                    |  | 5  |  |  |  |  |  |  |  |
|                    |  | 6  |  |  |  |  |  |  |  |
|                    |  | 7  |  |  |  |  |  |  |  |
|                    |  | 8  |  |  |  |  |  |  |  |
|                    |  | 9  |  |  |  |  |  |  |  |

|                 |  | 10                |                               |                                 |                           |  |  |  |  |  |  |  |
|-----------------|--|-------------------|-------------------------------|---------------------------------|---------------------------|--|--|--|--|--|--|--|
| 21              | Course Content:  |                   |                               |                                 |                           |  |  |  |  |  |  |  |
|                 | Course Content:  |                   |                               |                                 |                           |  |  |  |  |  |  |  |
| Week            | Theoretical  |                   | Practice                      |                                 |                           |  |  |  |  |  |  |  |
| 1               | An introduction to the classification o<br>arachnid orders with emphasis on sp<br>harvestmen, scorpions, and solfugids | f<br>iders,<br>s. |                               |                                 |                           |  |  |  |  |  |  |  |
| 2               | The morphological structures of spid   | ers               |                               |                                 |                           |  |  |  |  |  |  |  |
| 3               | The digestive, respiratory and vascul systems of spiders   | ar                |                               |                                 |                           |  |  |  |  |  |  |  |
| 4               | The muscles and locomation of spide  | ers               |                               |                                 |                           |  |  |  |  |  |  |  |
| 5               | Neurobiology and senses of spiders   |                   |                               |                                 |                           |  |  |  |  |  |  |  |
| 6               | The courtship, mating behaviours an<br>development in spiders  | d                 |                               |                                 |                           |  |  |  |  |  |  |  |
| 7               | The internal and external sexual orga spiders  | ans in            |                               |                                 |                           |  |  |  |  |  |  |  |
| 8               | The silk and silk glands; webs and w building in spider families.  | eb-               |                               |                                 |                           |  |  |  |  |  |  |  |
| 9               | The venom and venom glands in spi  | ders              |                               |                                 |                           |  |  |  |  |  |  |  |
| 10              | The ecology of spiders; predatory an<br>enemies of spiders   | d                 |                               |                                 |                           |  |  |  |  |  |  |  |
| 11              | Social spiders and communication   |                   |                               |                                 |                           |  |  |  |  |  |  |  |
| 12              | Evolution and phylogeny of spiders   |                   |                               |                                 |                           |  |  |  |  |  |  |  |
| Activit         | es   |                   | Number                        | Duration (hour)                 | Total Work<br>Load (hour) |  |  |  |  |  |  |  |
| Theore          | spiders of Turkey II   |                   | 14                            | 3.00                            | 42.00                     |  |  |  |  |  |  |  |
| Practic         | als/Labs   |                   | 0                             | 0.00                            | 0.00                      |  |  |  |  |  |  |  |
| Self stu        | Materials:<br>dy and preperation   |                   | editiov). Oxford Univ         | ersity Press. 330 p.            | 40.00                     |  |  |  |  |  |  |  |
| Homew           | vorks  |                   | 5                             | 10.00                           | 50.00                     |  |  |  |  |  |  |  |
| Project         | 6  |                   | Evolution of Spiders          | (Araneae). Annual Ke<br>565-592 | U.00 ECOIOGY              |  |  |  |  |  |  |  |
| Field S         | tudies   |                   | 3                             | 5.00                            | 15.00                     |  |  |  |  |  |  |  |
| M <b>23</b> ern | A <del>oxaa</del> ngent  |                   | 0                             | 0.00                            | 0.00                      |  |  |  |  |  |  |  |
| Others          |  |                   | 0                             | 0.00                            | 0.00                      |  |  |  |  |  |  |  |
| Final E         | xams<br>n Exam   | 0                 | oldo                          | 33.00                           | 33.00                     |  |  |  |  |  |  |  |
| Total W         | /ork Load  |                   |                               |                                 | 180.00                    |  |  |  |  |  |  |  |
| Total w         | ork load/ 30 hr<br>work-project  | 5                 | 40.00                         |                                 | 6.00                      |  |  |  |  |  |  |  |
| ECTS (          | Credit of the Course   |                   |                               |                                 | 6.00                      |  |  |  |  |  |  |  |
| Total           |  | 6                 | 100.00                        |                                 |                           |  |  |  |  |  |  |  |
| Contrib         | ution of Term (Year) Learning Activitie  | es to             | 40.00                         |                                 |                           |  |  |  |  |  |  |  |
| Succes          | s Grade  |                   |                               |                                 |                           |  |  |  |  |  |  |  |
| Contrib         | ution of Final Exam to Success Grade   | э                 | 60.00                         |                                 |                           |  |  |  |  |  |  |  |
| Total           |  |                   | 100.00                        |                                 |                           |  |  |  |  |  |  |  |
| Measu<br>Course | rement and Evaluation Techniques Us  | sed in the        | Homework and Final examintion |                                 |                           |  |  |  |  |  |  |  |
| 24              | ECTS / WORK LOAD TABLE   |                   |                               |                                 |                           |  |  |  |  |  |  |  |

| 25   | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME<br>QUALIFICATIONS |     |     |       |     |     |          |     |        |          |             |      |          |      |      |      |
|--|--|-----|-----|-------|-----|-----|----------|-----|--------|----------|-------------|------|----------|------|------|------|
|  | PQ1  | PQ2 | PQ3 | PQ4   | PQ5 | PQ6 | PQ7      | PQ8 | PQ9    | PQ1<br>0 | PQ11        | PQ12 | PQ1<br>3 | PQ14 | PQ15 | PQ16 |
| ÖK1  | 0  | 0   | 0   | 3     | 4   | 4   | 4        | 0   | 4      | 0        | 0           | 0    | 0        | 0    | 0    | 0    |
| ÖK2  | 0  | 0   | 0   | 4     | 5   | 4   | 4        | 0   | 4      | 0        | 0           | 0    | 0        | 0    | 0    | 0    |
| ÖK3  | 0  | 0   | 0   | 4     | 5   | 4   | 4        | 0   | 4      | 0        | 0           | 0    | 0        | 0    | 0    | 0    |
| ÖK4  | 0  | 0   | 0   | 4     | 5   | 4   | 5        | 0   | 5      | 0        | 0           | 0    | 0        | 0    | 0    | 0    |
| LO: Learning Objectives PQ: Program Qualifications |  |     |     |       |     |     |          |     |        |          |             |      |          |      |      |      |
| Contrib<br>ution<br>Level:                         | 1 very low   |     |     | 2 low |     | 3   | 3 Medium |     | 4 High |          | 5 Very High |      |          |      |      |      |