|    | LABORATORY SAFETY                                       |  |                                      |  |  |  |  |  |  |
|----|---|--|--------------------------------------|--|--|--|--|--|--|
| 1  | Course Title:   | LABORA   | ATORY SAFETY                         |  |  |  |  |  |  |
| 2  | Course Code:  | OTP1003  |                                      |  |  |  |  |  |  |
| 3  | Type of Course:   | Compulsory   |                                      |  |  |  |  |  |  |
| 4  | Level of Course:  | First Cycle  |                                      |  |  |  |  |  |  |
| 5  | Year of Study:  | 1  |                                      |  |  |  |  |  |  |
| 6  | Semester:   | 1  |                                      |  |  |  |  |  |  |
| 7  | ECTS Credits Allocated:                                 | 2.00   |                                      |  |  |  |  |  |  |
| 8  | Theoretical (hour/week):                                | 1.00   |                                      |  |  |  |  |  |  |
| 9  | Practice (hour/week):                                   | 0.00   |                                      |  |  |  |  |  |  |
| 10 | Laboratory (hour/week):                                 | 0  |                                      |  |  |  |  |  |  |
| 11 | Prerequisites:  |  |                                      |  |  |  |  |  |  |
| 12 | Language:   | Turkish  |                                      |  |  |  |  |  |  |
| 13 | Mode of Delivery:                                       | Face to f  | ace                                  |  |  |  |  |  |  |
| 14 | Course Coordinator:                                     | Doç.Dr. I  | NABİ ALPER KUMRAL                    |  |  |  |  |  |  |
| 15 | Course Lecturers:                                       |  | Hakan Çelik<br>Yasemin Şahan         |  |  |  |  |  |  |
| 16 | Contact information of the Course Coordinator:          | Doç. Dr. Nabi Alper KUMRAL akumral@uludag.edu.tr<br>224-2941576<br>Uludağ Üniversitesi Ziraat Fakültesi Biitki Koruma Bölümü<br>Nilüfer/Bursa              |                                      |  |  |  |  |  |  |
| 17 | Website:  |  |                                      |  |  |  |  |  |  |
| 18 | Objective of the Course:                                | The purpose of this course is to give students basic laboratory safety rules; physical, chemical and biological threats at laboratory and risk management. |                                      |  |  |  |  |  |  |
| 19 | Contribution of the Course to Professional Development: |  |                                      |  |  |  |  |  |  |
| 20 | Learning Outcomes:                                      |  |                                      |  |  |  |  |  |  |
|    |   | 1  | Learn safety rules at laboratory     |  |  |  |  |  |  |
|    |   | 2  | Learn threats or risk at laboratory. |  |  |  |  |  |  |
|    |   | 3  | Learn to generate personal safety    |  |  |  |  |  |  |
|    |   | 4  | Learn laboratory safety organization |  |  |  |  |  |  |
|    |   | 5  |                                      |  |  |  |  |  |  |
|    |   | 6  |                                      |  |  |  |  |  |  |
|    |   | 7  |                                      |  |  |  |  |  |  |
|    |   | 8  |                                      |  |  |  |  |  |  |
|    |   | 9  |                                      |  |  |  |  |  |  |
|    |   | 10   |                                      |  |  |  |  |  |  |
| 21 |   |  |                                      |  |  |  |  |  |  |
|    |   | Co   | ourse Content:                       |  |  |  |  |  |  |
|    | Theoretical   |  | Practice                             |  |  |  |  |  |  |
| 1  | Course description                                      |  |                                      |  |  |  |  |  |  |
| 2  | Secure laboratory environment; safe caution signs       |  |                                      |  |  |  |  |  |  |
| 3  | Personal safety precautions (Laboratules)               | tory   |                                      |  |  |  |  |  |  |

| 4   | Personal safety precautions (Laborat threats/risk)                                    | tory       |   |                     |                           |  |  |  |
|---|---|------------|---|---------------------|---------------------------|--|--|--|
| 5   | Chemical threats at laboratory  |            |   |                     |                           |  |  |  |
| 6   | Precautions for chemical threats/risk   |            |   |                     |                           |  |  |  |
| 7   | Chemical waste management at labo   | oratory    |   |                     |                           |  |  |  |
| 8   | Biological threats/risk at laboratory   |            |   |                     |                           |  |  |  |
| 9   | Precautions for biological threats/risk   | (          |   |                     |                           |  |  |  |
| 10  | Biological waste management at labor  | oratory    |   |                     |                           |  |  |  |
| 11  | Physical threats/risk at laboratory and precautions for them (fire, electrical tect.) |            |   |                     |                           |  |  |  |
| 12  | Plans for emergency facts   |            |   |                     |                           |  |  |  |
| 13  | Precautions for explosive and flamma substances; Fire drill                           | able       |   |                     |                           |  |  |  |
| 14  | First-aid for laboratory accident   |            |   |                     |                           |  |  |  |
| Textbooks, References and/or Other Materials: |   |            | www.laboratuvarguvenligi.com  www.labsafety.org  Merck Laboratuvar El Kitabı, 2007 (www.orlab.net/MerckLab.pdf) |                     |                           |  |  |  |
| Activit                                       | es  |            | Number  | Duration (hour)     | Total Work<br>Load (hour) |  |  |  |
| Theore  |   | R          | 14  | 1.00                | 14.00                     |  |  |  |
| Midtorn                                       | als/Labs  | lo.        | 0   | 0.00                | 0.00                      |  |  |  |
| COUIZ   | Idy and preperation   | ٥          | 0   | 1.00                | 14.00                     |  |  |  |
| Homew   | uárk prálod   |            | 0   | 0.00                | 0.00                      |  |  |  |
| Project                                       | xaiii   | I          | 100.00  | 0.00                | 0.00                      |  |  |  |
| Field St                                      |   | ام         | 0   | 0.00                | 0.00                      |  |  |  |
|   | oution or renn (rear) Learning Activitien oxams<br>Is Grade                           | ียร เบ     |   | 0.00                | 0.00                      |  |  |  |
| Others  | s Grade   |            | 0   | 0.00                | 0.00                      |  |  |  |
| Final E                                       | xams  |            | 1   | 30.00               | 30.00                     |  |  |  |
| Total W                                       | /ork Load   |            | 1100 00   |                     | 58.00                     |  |  |  |
| weasur<br>Lotal w                             | rement and Evaluation Techniques Os<br>ork load/ 30 hr                                | sea in the |   |                     | 1.93                      |  |  |  |
|   | Credit of the Course  |            |   |                     | 2.00                      |  |  |  |
| 25  | CONTRIBUTION  |            | RNING OUTCO   | MES TO PROGRAM<br>S | IME                       |  |  |  |

|     | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME  QUALIFICATIONS |                     |   |   |   |   |   |  |  |  |   |  |   |   |  |
|-----|--|---------------------|---|---|---|---|---|--|--|--|---|--|---|---|--|
| PQ1 | PQ2  | PQ3                 | PQ4   | PQ5   | PQ6   | PQ7   | PQ8   | PQ9  | PQ1<br>0   | PQ11   | PQ12  | PQ1<br>3   | PQ14  | PQ15  | PQ16   |
| 2   | 0  | 0                   | 0   | 0   | 0   | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0   | 0   | 0  |
| 2   | 0  | 0                   | 0   | 0   | 0   | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0   | 0   | 0  |
| 2   | 0  | 0                   | 0   | 0   | 0   | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0   | 0   | 0  |
| 2   | 0  | 0                   | 0   | 0   | 0   | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0   | 0   | 0  |
|     | 2 2 2  | PQ1 PQ2 2 0 2 0 2 0 | PQ1         PQ2         PQ3           2         0         0           2         0         0           2         0         0           2         0         0 | PQ1         PQ2         PQ3         PQ4           2         0         0         0           2         0         0         0           2         0         0         0           2         0         0         0           2         0         0         0 | PQ1         PQ2         PQ3         PQ4         PQ5           2         0         0         0         0           2         0         0         0         0           2         0         0         0         0           2         0         0         0         0           2         0         0         0         0 | PQ1         PQ2         PQ3         PQ4         PQ5         PQ6           2         0         0         0         0         0           2         0         0         0         0         0           2         0         0         0         0         0           2         0         0         0         0         0           2         0         0         0         0         0 | PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7           2         0         0         0         0         0         0           2         0         0         0         0         0         0           2         0         0         0         0         0         0           2         0         0         0         0         0         0 | QUAI         PQ1       PQ2       PQ3       PQ4       PQ5       PQ6       PQ7       PQ8         2       0       0       0       0       0       0       0         2       0       0       0       0       0       0       0         2       0       0       0       0       0       0       0         2       0       0       0       0       0       0       0 | QUALIFIC           PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7         PQ8         PQ9           2         0         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0 | QUALIFICATIO           PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7         PQ8         PQ9         PQ1           2         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0 | QUALIFICATIONS           PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7         PQ8         PQ9         PQ1         PQ11           2         0         0         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0         0 | QUALIFICATIONS           PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7         PQ8         PQ9         PQ1         PQ11         PQ12           2         0         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0         0         0           2         0         0         0         0         0         0         0         0         0         0 | QUALIFICATIONS           PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7         PQ8         PQ9         PQ1         PQ11         PQ12         PQ13           2         0 | QUALIFICATIONS           PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7         PQ8         PQ9         PQ1         PQ11         PQ12         PQ1         PQ14           2         0 | QUALIFICATIONS           PQ1         PQ2         PQ3         PQ4         PQ5         PQ6         PQ7         PQ8         PQ9         PQ1         PQ11         PQ12         PQ1         PQ14         PQ15           2         0 |

LO: Learning Objectives PQ: Program Qualifications

| Contrib | 1 very low | 2 low | 3 Medium | 4 High | 5 Very High |
|---------|------------|-------|----------|--------|-------------|
| ution   |            |       |          |        |             |
| Level:  |            |       |          |        |             |