| ENZYMOLOGY | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|
| 1 | Course Title: | ENZYMO | DLOGY | | | | | | |
| 2 | Course Code: | MBG4107 | | | | | | | |
| 3 | Type of Course: | Optional | | | | | | | |
| 4 | Level of Course: | First Cyc | le | | | | | | |
| 5 | Year of Study: | 4 | | | | | | | |
| 6 | Semester: | 7 | | | | | | | |
| 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: | None | | | | | | | |
| 12 | Language: | Turkish | | | | | | | |
| 13 | Mode of Delivery: | Face to face | | | | | | | |
| 14 | Course Coordinator: | Prof. Dr. SEZAİ TÜRKEL | | | | | | | |
| 15 | Course Lecturers: | Prof.Dr. Sezai Türkel | | | | | | | |
| 16 | Contact information of the Course Coordinator: | sturkel@uludag.edu.tr | | | | | | | |
| 17 | Website: | | | | | | | | |
| 18 | Objective of the Course: | To teach structural features of an Enzymes. To teach enzyme kinetics and reaction mechanisms of an enzymes. To teach application of an enzymes in different industrial fields. | | | | | | | |
| 19 | Contribution of the Course to Professional Development: | | | | | | | | |
| 20 | Learning Outcomes: | | | | | | | | |
| | | 1 | Knows enzyme structure and functions | | | | | | |
| | | 2 | Knows key features of enzyme reactions | | | | | | |
| | | 3 | Knows enzyme classifications | | | | | | |
| | | 4 | Knows application fields of an enzymes | | | | | | |
| | | 5 | | | | | | | |
| | | 6 | | | | | | | |
| | | 7 | | | | | | | |
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| | | 9 | | | | | | | |
| 04 | Course Content | 10 | | | | | | | |
| 21 | Course Content: Course Content: | | | | | | | | |
| Week | Theoretical | | Practice | | | | | | |
| 1 | Introduction to course and course ma historical perspective on the develop enzymology from past to present, dis the key inventions in the field of enzy | ment of scussion | | | | | | | |
| 2 | Biochemical features of an enzymes proteins | as | | | | | | | |
| 3 | specificity of enzyme action, reaction coditions of seleceted enzymes |) | | | | | | | |

| 4 | | Ionomeric and oligomeric enzymes and its ignificance in enzyme catalyzed reactions | | | | | | | | | | | | | | | |
|-------------------|---|--|-----|------|-----|--------|-------------|---|------|-----------------|----------|------------|---------------------------|----------|----------|------|------|
| 5 | Enzy | nzyme catalysis | | | | | | Т | | | | | | | | | |
| | | asic definitions in enzyme kinetics, roduction to enzyme kinetics I | | | | | | | | | | | | | | | |
| 7 | Enzy | zyme kinetics II | | | | | Т | | | | | | | | | | |
| 8 | Cont | ntrol mechanisms of an enzyme activities | | | | | | | | | | | | | | | |
| 9 | Mid t | d term exam | | | | | | | | | | | | | | | |
| 10 | Meta | tabolic significance of allosteric enzymes | | | | | | | | | | | | | | | |
| | | ustrial enzymes I | | | | | | | | | | | | | | | |
| | | dustrial enzymes II | | | | | | | | | | | | | | | |
| 13 | | oplication of enzymes in pharmaceutical | | | | | | | | | | | | | | | |
| | Revi | eviwe of course contents, discussion of udent projects | | | | | | | | | | | | | | | |
| | | | - | | | | | | | | | <i>,</i> - | | <u> </u> | - | | |
| 22 | Textbooks, References and/or Other Materials: | | | | | | 2- C | Lecture notes from Prof.Dr. Sezai Türkel Enzymes, Biochemistry, Biotechnology, clinical Chemistry. Authors: Trevor Palmer, Philip Bonner. | | | | | | | | | |
| | | | | | | | | 3- Biochemistry, G. Zubay | | | | | | | | | |
| Activites | | | | | | Number | | | Dura | Duration (hour) | | | Total Work Load (hour) | | | | |
| Theore | Theoretical | | | | | | 14 40 00 | | | 3.00 | 3.00 | | | 42.00 | | | |
| Midtern | Midterm Exam 1 Practicals/Labs | | | | | 4 | | | | | 0.00 | | | 0.00 | | | |
| | | | | | | | | | | 7.00 | | | 98.00 | | | | |
| | Self study and preperation | | | | | | | | | | _ | 0.00 | | | 0.00 | | |
| | | | | | | | | | | | | 0.00 | | | 0.00 | | |
| Project: Total | Id Studies | | | | | | 1 | | | | _ | 0.00 | | | 0.00 | | |
| 0011110 | | | | | | | <u></u> | 1 | | | 15.00 | | | 15.00 | | | |
| Others | CEBS CARDE | | | | | | | 0 | | | 0.00 | | | 0.00 | | | |
| | | | | | | | | | | | 25.00 | | | 25.00 | | | |
| | Exams | | | | | | 11 | 100.00 | | | 20.00 | | | 180.00 | | | |
| | otal Work Load | | | | | | Ч | | | | | | | 6.00 | | | |
| | S Credit of the Course | | | | | | | | | | | | | 6.00 | | | |
| | | | | uise | | | | | | | | | | | | 0.00 | |
| 25 | 25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS | | | | | | | | | | | | | | | | |
| | F | PQ1 | PQ2 | PQ3 | PQ4 | PQ5 | PQ6 | PQ7 | PQ | B PQ9 | PQ1 0 | PQ11 | PQ12 | PQ1 3 | PQ14 | PQ15 | PQ16 |
| ÖK1 | 1 | 1 | 1 | 1 | 3 | 5 | 1 | 1 | 5 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK2 | 2 | 2 | 3 | 2 | 2 | 5 | 1 | 1 | 1 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK3 | 3 | 3 | 1 | 2 | 3 | 5 | 2 | 2 | 5 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK4 | 1 | 1 | 2 | 2 | 2 | 5 | 3 | 3 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| | LO: Learning Objectives PQ: Program Qualifications | | | | | | | | | | alifica | | | | | | |

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