

MINISTRY OF SCIENCE AND EDUCATION OF THE REPUBLIC OF AZERBAIJAN
WESTERN CASPIAN UNIVERSITY

I approve:
Executive Vice-Rector of
Western Caspian University R.H. Bagirov

Code and name of the specialty: 060505 – Biology
Name of specialization: Molecular biology

Duration of study :2 year (4 semester)

“ ” 2022

CURRICULUM
(for Master's level)
I. TEACHING PROCESS SCHEDULE

| - s - | September | | | | October | | | | November | | | | Dekabr | | | | January | | | | February | | | | March | | | | April | | | | May | | | | June | | | | July | | | | August | | | |
|-------|-----------|---|--|--|---------|--|--|--|----------|--|--|--|--------|--|--|--|---------|----|----|----|----------|---|---|---|-------|---|---|---|-------|---|---|---|-----|----|----|----|------|----|---|---|------|---|---|---|--------|---|--|--|
| I | = | = | | | | | | | | | | | | | | | :: | :: | :: | :: | :: | = | = | | | | | | | | | | | :: | :: | :: | :: | :: | = | = | = | = | = | = | = | = | | |
| II | = | = | | | | | | | | | | | | | | | :: | :: | :: | :: | :: | = | = | x | x | x | x | x | x | x | x | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |

| | | | | | |
|--------------------|-------------------|---------------|--------------|-------------------------|--------------|
| CONDITIONAL SIGNS: | THEORETICAL STUDY | EXAM SESSION | INTENSHIP | FINAL STATE ATTESTATION | VACATION |
| | <div></div> | <div>::</div> | <div>X</div> | <div>//</div> | <div>=</div> |

II. TEACHING PROCESS PLAN

| № | Subject code | Subject name | Number of credits | Total hours | Out-of-class Activity hours | Auditorium hours | O cümlədən | | | Code of prerequisite subjects | Semester in which the subject is intended to be taught (fall or spring) | Weekly workload |
|----|--------------|--|-------------------|-------------|-----------------------------|------------------|------------|-------------------|------------|-------------------------------|---|-----------------|
| | | | | | | | Lecture | Seminar, training | Laboratory | | | |
| | MHF – B00 | Humanities | 14 | 420 | 315 | 105 | 35 | 70 | | | | |
| 1 | MHF – B01 | Foreign language | 6 | 180 | 135 | 45 | | 45 | | | 1-payız | 3 |
| 2 | MHF – B02 | Higher school pedagogy | 4 | 120 | 90 | 30 | 15 | 15 | | | 3-payız | 2 |
| 3 | MHF – B03 | Psychology | 2 | 60 | 45 | 15 | 10 | 5 | | | 2-yaz | 1 |
| 4 | MHF – B04 | Major Elective Subject: 1.Economy 2. Philosophy | 2 | 60 | 45 | 15 | 10 | 5 | | | 3-payız | 1 |
| | MİF – B00 | Speciality (specialization) subjects | 10 | 300 | 225 | 75 | 40 | 35 | | | | |
| 5 | MİF-B01 | Modern problems of biology | 4 | 120 | 90 | 30 | 15 | 15 | | MİF-B02 | 1-payız | 2 |
| 6 | MİF-B02 | History and methodology of biology | 2 | 60 | 45 | 15 | 10 | 5 | | | 1-payız | 1 |
| 7 | MİF – B03 | AMTSF: Methods of Structural Biology | 4 | 120 | 90 | 30 | 15 | 15 | | | 2-yaz | 2 |
| | MİF-B04 | Major Specialization subjects-MSS | 42 | 1260 | 945 | 315 | 195 | 105 | | | | |
| 8 | MİF-B04.01 | Molecular evolution | 6 | 180 | 135 | 45 | 30 | 15 | | | 1-payız | 3 |
| 9 | MİF-B04.02 | Genetic and protein engineering | 4 | 120 | 90 | 30 | 15 | | 15 | | 2-yaz | 2 |
| 10 | MİF-B04.03 | Genomics | 6 | 180 | 135 | 45 | 30 | 15 | | | 2-yaz | 3 |
| 11 | MİF-B04.04 | Molecular biology of photosynthesis | 6 | 180 | 135 | 45 | 30 | 15 | | | 1-payız | 3 |
| 12 | MİF-B04.05 | Proteomics | 6 | 180 | 135 | 45 | 30 | 15 | | | 1-payız | 3 |
| 13 | MİF-B04.06 | Biostatistics | 6 | 180 | 135 | 45 | 30 | 15 | | | 2-yaz | 3 |
| 14 | MİF-B04.07 | Research methods of molecular biology | 8 | 240 | 180 | 60 | 30 | 30 | | | 3-payız | 4 |
| | MİF-B05 | Elective subject-ES | 24 | 720 | 540 | 180 | 90 | 90 | | | | |
| 15 | MİF-B05.01 | I block: - Structural and functional mechanisms of biological macromolecules - Protein–protein interaction mechaisms | 8 | 240 | 180 | 60 | 30 | 30 | | | 2-yaz | 4 |
| 16 | MİF-B05.02 | II block: - Mechanisms of regulation of the expression of genetic information - Epigenetics and gene regulation | 8 | 240 | 180 | 60 | 30 | 30 | | | 3-payız | 4 |
| 17 | MİF-B05.03 | III block: - Molecular mechanisms of biological signal transduction - Molecular phytopathology | 8 | 240 | 180 | 60 | 30 | 30 | | | 3-payız | 4 |
| | | Total | 90 | 2700 | 2025 | 675 | 360 | 300 | 15 | | | |

1 week of the internship period is 1.5 credits.

III. TIME FOR TRAINING

| Academic year | Theoretical training | Exam session | Internship | Final state attestation | Vacation |
|---------------|----------------------|--------------|------------|-------------------------|----------|
| I | 30 | 10 | | | 10 |
| II | 15 | 5 | 8 | 12 | 4 |
| Total: | 45 | 15 | 8 | 12 | 14 |

| | I semester | II semester | III semester | IV semester |
|-------------------|------------|-------------|--------------|-------------|
| Weekly workload | 15 | 15 | 15 | - |
| Number of Exams | 7 | 6 | 5 | - |
| Number of credits | 30 | 30 | 30 | 30 |

NOTE: The curriculum prepared based on the educational program approved in 2012 has been adapted to the "Rules for the Organization of Education with the Credit System at the Bachelor's and Master's Levels of Higher Education Institutions" approved by the Resolution No. 348 of the Cabinet of Ministers of the Republic of Azerbaijan dated December 24, 2013.

Vice-Rector for Academic Affairs:

« » 2022

It was approved at the meeting of Scientific Council of WCU
" " dated 2022 (Protocol No.)