

**BALIKESIR UNIVERSITY**  
**NECATİBEY EDUCATION FACULTY**  
**UNIVERSITY ELECTIVE COURSE PROPOSAL FORM**

|                                                   |                                                                                                                                                                                                                                                                                                                            |                |                                          |          |          |                         |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------|----------|----------|-------------------------|
| Department/Program                                | Mathematics and Science Education/Mathematics Education                                                                                                                                                                                                                                                                    |                |                                          |          |          |                         |
| Course unit title                                 | Origami and Mathematics                                                                                                                                                                                                                                                                                                    |                |                                          |          |          |                         |
| Semester                                          | 3                                                                                                                                                                                                                                                                                                                          |                |                                          |          |          |                         |
| Language of instruction                           | Turkish                                                                                                                                                                                                                                                                                                                    |                |                                          |          |          |                         |
| Credit                                            | 2                                                                                                                                                                                                                                                                                                                          |                |                                          |          |          |                         |
| Number of ECTS credits                            | 3                                                                                                                                                                                                                                                                                                                          |                |                                          |          |          |                         |
| Mode of delivery                                  | Face to Face                                                                                                                                                                                                                                                                                                               |                |                                          |          |          |                         |
| Objectives of the course                          | The practical skill of the learner and the individual design ability will improve                                                                                                                                                                                                                                          |                |                                          |          |          |                         |
| Course content                                    | What is origami? What are the types? History Folding Techniques Basic Forms<br>What is classic origami? applications What is modular origami? applications<br>What is wet folding? Wet origami samples What is Krigami? applications<br>Origami and mathematics education Developmental and educational benefits of origin |                |                                          |          |          |                         |
| Prerequisites and co-requisites                   |                                                                                                                                                                                                                                                                                                                            |                |                                          |          |          |                         |
| Name of lecturer                                  | Prof. Dr. Hülya GÜR                                                                                                                                                                                                                                                                                                        |                |                                          | e-mail:  |          |                         |
| Assistants                                        |                                                                                                                                                                                                                                                                                                                            |                |                                          | e-mail:  |          |                         |
| Internship                                        | ---                                                                                                                                                                                                                                                                                                                        |                |                                          |          |          |                         |
| Resources                                         | Gür, H. (2015). Matematik ve Origami. Nobel Yayıncılık: Ankara.                                                                                                                                                                                                                                                            |                |                                          |          |          |                         |
| Type of course unit                               |                                                                                                                                                                                                                                                                                                                            |                |                                          |          |          |                         |
| Planning learning activities and teaching methods |                                                                                                                                                                                                                                                                                                                            |                |                                          |          |          |                         |
| Assessment methods and criteria                   |                                                                                                                                                                                                                                                                                                                            |                | ECTS allocated based on student workload |          |          |                         |
| In-term studies                                   | Quantity                                                                                                                                                                                                                                                                                                                   | Percentage (%) | Activities                               | Quantity | Duration | Total work load (hours) |

|                                                      |                                                  |                                                                                 |                            |    |               |           |
|------------------------------------------------------|--------------------------------------------------|---------------------------------------------------------------------------------|----------------------------|----|---------------|-----------|
| Mid-terms                                            |                                                  | 40                                                                              | Course duration            | 14 | 2             | 28        |
| Quizzes                                              |                                                  |                                                                                 | Hours for off-the-c.r.stud | 14 | 2             | 28        |
| Assignment                                           |                                                  |                                                                                 | Mid-terms                  | 1  | 2             | 2         |
| Attendance                                           |                                                  |                                                                                 | Final exams                | 1  | 2             | 2         |
| Practice                                             |                                                  |                                                                                 | Total work load (hours):60 |    |               |           |
| Project                                              |                                                  |                                                                                 | Number of ECTS credits: 3  |    |               |           |
| Final exam                                           |                                                  | 60                                                                              |                            |    |               |           |
| Learning outcomes                                    |                                                  | 1 To fold the basic shapes with origami.                                        |                            |    |               |           |
|                                                      |                                                  | 2 Gain awareness in terms of educational and developmental benefits of origami. |                            |    |               |           |
|                                                      |                                                  | 3 Design a course using origami in Mathematics / Geometry teaching.             |                            |    |               |           |
| Weekly detailed course contents                      |                                                  |                                                                                 |                            |    |               |           |
| Weeks                                                | Topics                                           |                                                                                 |                            |    | Prerequisites | Resources |
| 1                                                    | What is origami? What are the types? History     |                                                                                 |                            |    |               |           |
| 2                                                    | Folding Techniques                               |                                                                                 |                            |    |               |           |
| 3                                                    | Basic Forms                                      |                                                                                 |                            |    |               |           |
| 4                                                    | What is classic origami? applications            |                                                                                 |                            |    |               |           |
| 5                                                    | classic origami applications                     |                                                                                 |                            |    |               |           |
| 6                                                    | What is modular origami? applications            |                                                                                 |                            |    |               |           |
| 7                                                    | Modular origami applications                     |                                                                                 |                            |    |               |           |
| 8                                                    | modular origami applications                     |                                                                                 |                            |    |               |           |
| 9                                                    | What is wet folding? Wet origami samples         |                                                                                 |                            |    |               |           |
| 10                                                   | What is Krigami? applications                    |                                                                                 |                            |    |               |           |
| 11                                                   | What is Krigami? applications                    |                                                                                 |                            |    |               |           |
| 12                                                   | Origami and mathematics education                |                                                                                 |                            |    |               |           |
| 13                                                   | Developmental and educational benefits of origin |                                                                                 |                            |    |               |           |
| 14                                                   | Developmental and educational benefits of origin |                                                                                 |                            |    |               |           |
| Contribution of learning outcomes to program outcome |                                                  |                                                                                 |                            |    |               |           |