

HISTORY OF MATHEMATICS

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| 1 | Course Title: | HISTORY OF MATHEMATICS | |
| 2 | Course Code: | MAT3036 | |
| 3 | Type of Course: | Optional | |
| 4 | Level of Course: | First Cycle | |
| 5 | Year of Study: | 3 | |
| 6 | Semester: | 6 | |
| 7 | ECTS Credits Allocated: | 5.00 | |
| 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. BASRİ ÇELİK | |
| 15 | Course Lecturers: | | |
| 16 | Contact information of the Course Coordinator: | basri@uludag.edu.tr 0224.2941762 | |
| 17 | Website: | | |
| 18 | Objective of the Course: | Recognize the important events and people in the history of mathematics. | |
| 19 | Contribution of the Course to Professional Development: | | |
| 20 | Learning Outcomes: | | |
| | | 1 | Knows the basic concepts of the history of mathematics. |
| | | 2 | Learns the historical development of the numerals and numbers. |
| | | 3 | Learns the contents of the papyruses Rhind and Moscow understands the importance of them. |
| | | 4 | Learns the historical development of the number Pi. |
| | | 5 | Recognizes the Indian mathematician Aryabhata's works and his roles the developing of the mathematics. |
| | | 6 | Learns to comprehensive information about Diyophant, Euclid and Pythagoras. |
| | | 7 | Learns to approach of Ibn-i Turk to the solution of quadratic equations. |
| | | 8 | Learns to life and mathematical works of Khwarizmi and Omar Khayyam. |
| | | 9 | Learn the history of set theory. |
| | | 10 | |
| 21 | Course Content: | | |
| | | Course Content: | |
| Week | Theoretical | Practice | |
| 1 | Description of course. | | |
| 2 | What is mathematics and history of mathematics? | | |
| 3 | Historical development of numerals and numbers. | | |

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| 4 | The oldest known documents in the history of mathematics: Rhind and Moscow Papyrus. | |
| 5 | Historical developments of the number Pi. | |
| 6 | An ancient Indian mathematician and astronomer: Aryabhata. | |
| 7 | Benefits of Diophant to the world of mathematics. | |
| 8 | Euclidian geometry and benefits of Euclid geometries to the mathematical world. | |
| 9 | Midterm and feedback | |
| 10 | Pythagoras and his era. Approach to the solution of quadratic equations of Ibn-i Turk. | |
| 11 | Khwarizmi's life and contributions to the world of mathematics. | |
| 12 | The history of set theory. | |
| 13 | Math-related works of Omar Khayyam. | |
| 14 | Viewing a documentary about the history of mathematics. | |

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| 22 | Textbooks, References and/or Other Materials: | <p>1)Basri Çelik, İ. Naci Cangül - ders notları-</p> <p>2)Matematik Tarihi, Lütfi Göker, Kültür Bakanlığı Yayınları, Yayın No:1017, 1989, Ankara.</p> <p>3)Bilim Tarihine Giriş, Sevim Tekeli, Esin Kahya, Melek Dosay, Remzi Demir, Hüseyin G. Topdemir, Yavuz Unat.</p> |
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| Activities | | Number | Duration (hour) | Total Work Load (hour) |
|--|---------------|---------------|-----------------|------------------------|
| TERM LEARNING ACTIVITIES | NUMBER | WEIGHT | 3.00 | 42.00 |
| Practicals/Labs | 0 | 0.00 | 0.00 | 0.00 |
| Self study and preparation | 0 | 14 | 5.00 | 70.00 |
| Quiz | 0 | 0.00 | | |
| Homeworks | 0 | 0.00 | 0.00 | 0.00 |
| Projects | 1 | 0 | 0.00 | 0.00 |
| Final Exam | 1 | 60.00 | | |
| Field Studies | 0 | 0.00 | 0.00 | 0.00 |
| Midterm exams | 1 | 4.00 | 4.00 | 4.00 |
| Contribution of Term (Year) Learning Activities to | 14 | 40.00 | | |
| Others | 14 | 2.00 | 28.00 | |
| Final Exams | 1 | 6.00 | 6.00 | 6.00 |
| Contribution of Final Exam to Success Grade | 60.00 | | | |
| Total Work Load | | | | 150.00 |
| Total work load/ 30 hr | | | | 5.00 |
| Measurement and Evaluation Techniques Used in the | | | | |
| ECTS Credit of the Course | | | | 5.00 |

24 ECTS / WORK LOAD TABLE

| 25 | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS | | | | | | | | | | | | | | | |
|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| | PQ1 | PQ2 | PQ3 | PQ4 | PQ5 | PQ6 | PQ7 | PQ8 | PQ9 | PQ10 | PQ11 | PQ12 | PQ13 | PQ14 | PQ15 | PQ16 |
| ÖK1 | 2 | 5 | 1 | 4 | 5 | 1 | 1 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK2 | 3 | 4 | 1 | 2 | 4 | 1 | 2 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK3 | 1 | 5 | 1 | 3 | 4 | 1 | 2 | 3 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK4 | 2 | 4 | 1 | 1 | 4 | 1 | 2 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

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| ÖK5 | 2 | 5 | 1 | 2 | 5 | 1 | 1 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK6 | 1 | 4 | 1 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK7 | 3 | 5 | 1 | 3 | 5 | 1 | 3 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK8 | 1 | 3 | 1 | 2 | 4 | 1 | 3 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ÖK9 | 2 | 4 | 1 | 4 | 4 | 1 | 2 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| LO: Learning Objectives PQ: Program Qualifications | | | | | | | | | | | | | | | | |
| Contribution Level: | 1 very low | | | 2 low | | | 3 Medium | | | 4 High | | | 5 Very High | | | |