

| Course Code   | Course Name  | Teorical | Practice | Laboratory | Credits | ECTS |
|---|--|----------|----------|------------|---------|------|
| FZK-3009  | Physics of Sports and Games  | 3.00     | 0.00     | 0.00       | 3.00    | 6.00 |
| Course Detail   |  |          |          |            |         |      |
| <b>Course Language</b>                                  | : Turkish  |          |          |            |         |      |
| <b>Qualification Degree</b>                             | : Bachelor   |          |          |            |         |      |
| <b>Course Type</b>                                      | : Optional   |          |          |            |         |      |
| <b>Preconditions</b>                                    | : Not  |          |          |            |         |      |
| <b>Objectives of the Course</b>                         | : Learning the physics of sports and games   |          |          |            |         |      |
| <b>Course Contents</b>                                  | : Sports and games   |          |          |            |         |      |
| <b>Recommended or Required Reading</b>                  | : 'Gold Medal Physics: The Science of Sports', John Eric Goff, The Johns Hopkins University Pres, ISBN-10: 0801893224, (ISBN-13: 978-0801893223), 2009<br>'The Physics of Sports' A.Armenti, American Inst. of Physics, ISBN-10: 0883189461 (ISBN-13: 978-0883189467 ) 1992 'Football Physics: The Science of the Game', T. Gay, B. Belichick, Rodale Books, ISBN-10: 157954911X (ISBN-13: 978-1579549114), 2004 |          |          |            |         |      |
| <b>Planned Learning Activities and Teaching Methods</b> | : Midterm exam (40%), final exam (60%)   |          |          |            |         |      |
| <b>Recommended Optional Programme Components</b>        | : Knowledge of the fundamental physics courses is important.   |          |          |            |         |      |
| <b>Instructors</b>                                      | : Prof. Dr. Kıvanç Sel   |          |          |            |         |      |
| <b>Instructor's Assistants</b>                          | : Assoc. Prof. Dr. Kıvanç SEL  |          |          |            |         |      |
| <b>Presentation Of Course</b>                           | : Face to face   |          |          |            |         |      |

## Course Outcomes

## Upon the completion of this course a student :

- 1 1) Apply the basic science knowledge.
- 2 2) Define the physics of sports and games.
- 3 4) Relate the law's of motion with sports.
- 4 5) Solve the basic dynamic problems of sports

## Preconditions

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## Weekly Contents

|         | Teorical                            | Practice | Laboratory | Preparation Info | Teaching Methods         |
|---------|-------------------------------------|----------|------------|------------------|--------------------------|
| 1.Week  | * Introduction                      |          |            |                  | * Lecture and recitation |
| 2.Week  | * History of sport and game physics |          |            |                  | * Lecture and recitation |
| 3.Week  | *Bowling                            |          |            |                  | * Lecture and recitation |
| 4.Week  | *Basketball                         |          |            |                  | * Lecture and recitation |
| 5.Week  | *Football                           |          |            |                  | * Lecture and recitation |
| 6.Week  | *Baseball                           |          |            |                  | * Lecture and recitation |
| 7.Week  | *Walking                            |          |            |                  | * Lecture and recitation |
| 8.Week  | *Running                            |          |            |                  | * Lecture and recitation |
| 9.Week  | *Marathon                           |          |            |                  | * Lecture and recitation |
| 10.Week | *Athleticism                        |          |            |                  | * Lecture and recitation |
| 11.Week | *Tennis                             |          |            |                  | * Lecture and recitation |
| 12.Week | *Bicycling                          |          |            |                  | * Lecture and recitation |
| 13.Week | * Swimming and sailing              |          |            |                  | * Lecture and recitation |
| 14.Week | * Swimming and sailing              |          |            |                  | * Lecture and recitation |

## Assesment Methods %

1 Md Term Exam 1 : 40.000

2 Final : 60.000

## ECTS Workload

| Activities                      | Count | Time(Hour) | Sum of Workload |
|---------------------------------|-------|------------|-----------------|
| Vize                            | 1     | 2.00       | 2.00            |
| Final                           | 1     | 2.00       | 2.00            |
| Attending lectures              | 14    | 3.00       | 42.00           |
| Individual study before lecture | 14    | 2.00       | 28.00           |
| Individual study after lecture  | 14    | 4.00       | 56.00           |
| Preparation for midterm         | 1     | 20.00      | 20.00           |
| Preparation for final           | 1     | 20.00      | 20.00           |

