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**REPUBLIC OF TURKEY**

**ISTANBUL MEDIPOL UNIVERSITY**

**INTERNATIONAL SCHOOL OF MEDICINE**



**EVIDENCE BASED MEDICINE**

**2021-2022**

**EVIDENCE BASED MEDICINE**

# CLERKSHIP DESCRIPTION

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| **Education Period** | Year 5 |
| **Clerkship Duration** | 2 weeks |
| **Training Place** | Istanbul Medipol University Kavacık South Campus |
| **Instructors** | * Prof. Osman HAYRAN * Prof. Mehmet KOÇAK * Prof.Dr. Abdulbari BENER * Asst. Prof. Hüseyin KÜÇÜKALİ * Asst. Prof. Ömer ATAÇ * Asst. Prof. Perihan TORUN * Teach. Asst. Ayşe Seval PALTEKİ |
| **The Head Instructor** | * Teach. Asst. Ayşe Seval PALTEKİ |

# OBJECTIVES

The purpose of Evidence-Based Medicine clerkship is to make students comprehend the importance of using the most valid scientific evidence in line with personal clinical experience and patient values and expectations during medical practice; to teach the ways to access recent and up-to-date evidence required for evidence-based practices, and the methods of producing evidence when necessary.

# METHODS

* Theoretical Lectures (Online)
* Practice – Group work
* Oral Exam – Presentation and interpretation of an article

# LECTURES

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| **Lecture** | **Objectives** | **Duration**  **(T/P)** |
| Evidence-Based Medicine: Introduction and Basic Concepts | Defines the Evidence-Based Medicine. | 4/0 |
| Explains the difference between evidence, data, information, knowledge. |
| Lists the ways of production of and access to evidence. |
| Follows the up-to-date literature knowing its importance while practicing medicine. |
| Evidence Hierarchy | Sorts different types of studies by the value of the evidence they provide. | 2/0 |
| Compares the advantages and disadvantages of different types of research. |
| Evidence Production: Observational Studies | Counts the types of observational studies used to produce evidence. | 4/3 |
| Plans an observational study. |
| Evidence Production: Experimental Studies | Lists the types of experimental research used to produce evidence. | 4/3 |
| Plans an experimental study. |
| Accessing the Evidence: Using Evidence-Based Medicine Databases | Accesses and uses international evidence-based medical databases. | 4/3 |
| Finds the most up-to-date evidence needed during medical practice. |
| Accessing the Evidence: Systematic Reviews | Describes the logic of the systematic review. | 4/3 |
| Interprets systematic review articles. |
| Accessing the Evidence: Meta-analysis | Describes the logic of meta-analysis | 4/3 |
| Interprets the articles of studies conducted as meta-analysis. |
| Using Evidence: Evaluating the Risk | Defines measures related to health and disease. | 4/3 |
| Interprets measures related to health and disease. |
| Performs common risk calculations. |
| Using Evidence: Evaluating Sensitivity, Specificity, Predictive Value | Defines sensitivity, specificity, and predictive value. | 4/3 |
| Interprets sensitivity, specificity, and predictive value. |
| Calculates the accuracy values of diagnostic tests. |
| Using Evidence: Validity, Reliability, and Errors in Research | Critically appraises research methods. | 4/3 |
| Identifies errors in the studies. |
| Article Presentation | Explains the meaning of the scientific terms in medical studies. | 0/3 |

# SUCCESS CRITERIA

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| **Exam** | **Percentage** |
| Oral Exam – Presentation and interpretation of an article | 100% |

# RECOMMENDED RESOURCES

1. Cochrane Collaboration. Cochrane Library, 2021. <http://www.cochranelibrary.com>
2. Hayran O, Özbek H. Sağık Bilimlerinde Araştırma ve İstatistik Yöntemler (SPSS Uygulama Örnekleri ile Genişletilmiş 2. Baskı) Nobel Tıp Kitabevleri, İstanbul, 2017
3. Straus SE, Glasziou P, Richardson WS, Haynes RB. Evidence-Based Medicine: How to Practice and Teach EBM. 5th ed., 2018.
4. Goodman MS. Biostatistics for Clinical and Public Health Research. Routledge, New York, 2017.
5. Bruce N. Quantitative Methods for Health Research: a practical interactive guide to epidemiology and statistics. Second ed., NJ:Wiley, 2018.
6. GreenhalMS T. How to read a paper: the basics of evidence-based medicine. Wiley, 2014.

# PROGRAM QUALIFICATIONS AND KEY ROLES IN RELATION WITH LEARNING OBJECTIVES

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| **OBJECTIVE** | **PROGRAM QUALIFICATIONS** | **KEY ROLES** | **GENERAL MEDICAL SKILLS** |
| **R1- Medical Doctor**  **R2- Team member**  **R3- Communicator**  **R4- Leader**  **R5- Health Advocate**  **R6- Scientist**  **R7- Professional** | **MS1- Analytical and Critical Thinking**  **MS2- Clinical Inquiry-Reasoning**  **MS3- Problem Solving**  **MS4- Accessing and Using Information**  **MS5- Lifelong Learning**  **MS6- Communication and Teamwork** |
| Defines the Evidence-Based Medicine. | PQ4, PQ5 | R1, R6 | MS1, MS2 |
| Explains the difference between evidence, data, information, knowledge. | PQ5, PQ13 | R3, R6 | MS4, MS5 |
| Lists the ways of production of and access to evidence. | PQ5 | R6 | MS4, MS5 |
| Follows the up-to-date literature knowing its importance while practicing medicine. | PQ4, PQ13, PQ14, PQ15, PQ16, PQ17, PQ20 | R1, R3, R7 | MS4, MS5 |
| Sorts different types of studies by the value of the evidence they provide. | PQ5, PQ13 | R6 | MS1, MS2 |
| Compares the advantages and disadvantages of different types of research. | PQ5, PQ13 | R6 | MS1, MS2 |
| Lists the types of observational studies used to produce evidence. | PQ4, PQ8 | RI, R6 | MS2, MS3 |
| Plans an observational study. | PQ4, PQ5, PQ9 | R1, R6, | MS3, MS6 |
| Counts the types of experimental research used to produce evidence. | PQ4, PQ8 | RI, R6 | MS2, MS3 |
| Plans an experimental study. | PQ4, PQ5, PQ9 | R1, R6 | MS3, MS6 |
| Accesses and uses international evidence-based medical databases. | PQ5, PQ7 | R1, R6 | MS1, MS4, MS5 |
| Finds the most up-to-date evidence needed during medical practice. | PQ5, PQ7 | R1, R6 | MS1, MS4, MS5 |
| Describes the logic of the systematic review. | PQ5 | R6 | MS4, MS5 |
| Interprets systematic review articles. | P4, P5 | R1,R6 | MS1, MS2 |
| Describes the logic of meta-analysis | PQ5 | R6 | MS4, MS5 |
| Interprets the articles of studies conducted as meta-analysis. | P4, P5 | R1,R6 | MS1, MS2 |
| Defines measures related to health and disease. | PQ13 | R1, R3, R6 | MS1, MS4, MS5 |
| Interprets measures related to health and disease. | P4, P5 | R1,R6 | MS1, MS2 |
| Performs common risk calculations. | PQ4, PQ5, PQ9 | R1, R6 | MS3, MS6 |
| Defines sensitivity, specificity, and predictive value. | PQ13 | R1, R3, R6 | MS1, MS4, MS5 |
| Interprets sensitivity, specificity, and predictive value. | P4, P5 | R1,R6 | MS1, MS2 |
| Calculates the accuracy values of diagnostic tests. | PQ4, PQ5, PQ9 | R1, R6 | MS3, MS6 |
| Critically appraises research methods. | PQ13, PQ17 | R1, R3, R6 | MS1, MS2 |
| Identifies errors in the studies. | PQ13, PQ17 | R1, R3, R6 | MS1, MS2 |
| Explains the meaning of the scientific terms in medical studies. | PQ13, PQ17 | R1, R3, R6 | MS1, MS4, MS5 |