MEDICAL UNIVERSITY – PLOVDIV
FACULTY OF PUBLIC HEALTH

SYLLABUS

IN

SOCIAL MEDICINE
AND MEDICAL ETHICS

Approved by the Department Council on - Protocol № 5 / 21.02.2024

Confirmed by the Faculty Council - Protocol №5/ 24.04.2024

SOCIAL MEDICINE WITH MEDICAL ETHICS

SYLLABUS

Discipline	Final exam/ semester	Auditorium classes				ECTS non-auditorium classes	ECTS total	Academic hours in years and semesters	
								2nd year	
Social medicine and medical ethics	III	Total	Lectures	Practices	ECTS			III	….
		45	15	30	2.0	2.0	4.0	1/2	….

Discipline: SOCIAL MEDICINE AND MEDICAL ETHICS

Type of discipline according to the uniform state requirements: Mandatory

Level of qualification: Master's degree

Forms of training: Lectures, Practical classes, Self-training

Year of training: 2nd year

Duration of training: One semester

Academic hours: 15-hour lecture course, 30-hour practice course

Technical equipment applied in the training: Multimedia presentations, discussions, case studies, problem-based learning, role-playing exercises, work in small groups, educational movies

Forms of evaluation: Semester monitoring – solving cases (colloquium), writing an essay

Evaluation criteria: The average points obtained over the semester's monitoring are added to the final exam score to determine the final grade

Aspects of evaluation criteria: Engaging in debates, problem-solving, case analysis, attending a statistics colloquium, and composing an essay on ethics

Semester exam: Yes, in the form of an exam test

State exam: No

Lecturer: Habilitated professor from the Department of Social Medicine and Public Health

Department: Social Medicine and Public Health

ANNOTATION

The "Social Medicine and Medical Ethics" course covers scientific knowledge, ethical considerations in professional communication, and medical statistics.

The goal is to introduce students to:

- the types of scientific studies, their components, and methodologies for performing research;
- the professional communication requirements for interaction with patients in a dental workplace.

Utilizing:

- digital libraries;
- role-playing games by placing the student in a simulated environment;
- statistical methods.

PRIMARY OBJECTIVES OF THE CURRICULUM

1. Obtaining knowledge and abilities necessary for writing an essay, a scientific paper, and conducting a literature search.

2. Understanding the key ethical considerations of professional communication in dental practice.

3. Studying statistical analyses suitable for processing research databases.

EXPECTED RESULTS

Upon finishing their education, students should possess the following knowledge and skills:

- Identify different categories of scientific research;
- Define literary sources and perform a literature search;
- Write an essay on a specific topic;
- Understand fundamental ethical principles;
- Analyze ethical dilemmas in clinical practice;

- Understand the ethical standards for professional behavior in dental practice when communicating with patients, dental team members, and colleagues;
- Interpret professional behavior when communicating with governmental and professional institutions;
- Apply basic statistical analyses and choose the appropriate one to solve cases;
- Evaluate a scientific hypothesis.

LECTURES

LECTURE № 1

SOCIAL MEDICINE AS A SCIENCE – HISTORY, SUBJECT, TASKS AND METHODS

1. Evolution of social medicine throughout history
2. Evolution of social medicine in Bulgaria
3. Definition, structure, and purpose of social medicine.
4. Functions of social medicine.
5. Social medicine methodologies
6. Traditional (classic) methods
7. Contemporary (modern) methods

LECTURE № 2

ETHICAL CONSIDERATIONS IN SCIENTIFIC RESEARCH AND CLINICAL PRACTICE

1. Medical ethics' origin and essence
2. Patient autonomy and awareness principle
3. Medical confidentiality principle
4. Principle of nonmaleficence in medical practice
5. Principle of impartiality, fairness, and honesty
6. Implementing principles in dentistry

LECTURE № 3

ETHICAL STANDARDS FOR DENTAL PROFESSIONALS. BEHAVIORAL MODELS OF DENTIST-PATIENT COMMUNICATION

1. The source and fundamental nature of professional ethics
2. Fundamental elements of good medical practice

3. Ethical standards in medical practice
4. Paternalistic Pattern
5. Autonomous model
6. Contract model
7. Business model
8. Application of the different models in dental practice

LECTURE №4

PROFESSIONAL COMMUNICATION ETHICS. TYPES OF COMMUNICATION IN DENTAL PRACTICE

1. Communication concept
2. Behavior concept
3. Communication types
4. Ethical considerations in oral and written communication culture
5. Ethical standards regarding the dentist's dress code
6. Physiognomy
7. Suppression of negative emotions associated with personal problems

LECTURE № 5

ETHICAL PROFESSIONAL BEHAVIOR OF DENTISTS IN MANAGING SOURCES OF STRESS IN DENTAL PRACTICE. FEAR, DENTOPHOBIA

1. Sources of stress in dentistry
2. Ethical standards for managing stress in dental practice
3. Defining fear, anxiety, and dentophobia
4. Dentist's ethical behavior when interacting with patients expressing fear or dentophobia.

LECTURE № 6

INTRODUCTION TO MEDICAL STATISTICS

1. Subject of medical statistics
2. Population and sample
3. Systematic and random error
4. Random and representative sample
5. Techniques to select a representative sample

LECTURE № 7

INTRODUCTION TO MEDICAL STATISTICS (PART 2)

1. Variables and scales of measurement
2. Graphical summary of frequency distributions
3. Measures of central tendency and measures of spread – advantages and disadvantages
4. Normal distribution. Skewness and kurtosis
5. Estimation of population parameters. Confidence intervals
6. Sample size calculation

LECTURE № 8

HYPOTHESIS TESTING TESTS

1. Null, alternative and working hypothesis
2. P-value, significance level and power
3. Type I and Type II errors
4. Selection of hypothesis test. Normality check
5. Parametric and non-parametric tests for hypothesis testing

PRACTICAL CLASSES

PRACTICAL CLASS № 1

SCIENTIFIC RESEARCH METHODOLOGY. SCIENTIFIC STUDY TYPES. ELEMENTS. DESIGN OF A SAMPLE PROGRAM FOR SCIENTIFIC RESEARCH

1. Introduction to Research Methodology
2. Types of scientific studies
3. Elements of different types of scientific research
4. Design of a scientific research program by students
5. Selecting a topic for writing an essay

PRACTICAL CLASS № 2

OVERVIEW OF LITERATURE SEARCHING AND REFERENCING. LIBRARY EXPERIENCE - IDENTIFYING SOURCES FOR LITERATURE SEARCH

1. Library Catalog Searching
2. Literature search techniques using Specialized Search Engines

3. How to Reference Your Essay

PRACTICAL CLASS № 3

ETHICAL PRINCIPLES IN CLINICAL PRACTICE

1. Principle of patient autonomy and informed consent
2. Principle of medical confidentiality
3. Principle of non-maleficence in medical practice
4. Principles of impartiality, fairness, and honesty
5. Implementing principles in dentistry
6. Analysis of case studies

PRACTICAL CLASS № 4

DENTISTS' PROFESSIONAL CODE OF ETHICS

1. Discussion of professional ethical standards in dentistry
2. Acquaintance with the professional ethical code of dentists in Bulgaria
3. Analyzing the key aspects of the code.

PRACTICAL CLASS № 5

PROFESSIONAL COMMUNICATION ETHICS. COMMUNICATION SKILLS IN DENTISTRY

1. Analyzing various patient responses using case studies from dental practice.
2. Analyzing various models of doctor-patient behavior using case studies from dental practice.
3. Ethical considerations of non-verbal communication strategies in dental practice.
4. Discussing the ethical professional aspects associated with verbal communication approaches in dentistry practice.

PRACTICAL CLASS № 6

ROLE PLAYING GAMES. DISCUSSION OF THE ETHICAL PROFESSIONAL BEHAVIOR OF DENTISTS IN VARIOUS SIMULATED SCENARIOS

1. Students role-play several scenarios in dental practice in groups using pre-distributed scripts.
2. Comprehensive examination of game models - students analyze the actions of participants in role-playing games and assess them based on specific criteria.

PRACTICAL CLASS № 7

PRESENTING A SCIENTIFIC PAPER OR MULTIMEDIA REPORT ON A TOPIC RELATED TO DENTAL MEDICINE

PRACTICAL CLASS № 8

DIRECT METHOD OF STANDARDIZATION

1. Statistical Analysis Plan and Program
2. Absolute and relative indicators
3. Intensive and extensive properties
4. Direct method of standardization

PRACTICAL CLASS № 9

CONFIDENCE INTERVAL FOR POPULATION PARAMETERS

1. Data grouping methods
2. Confidence interval for population mean
3. Dichotomous variables
4. Confidence interval for population proportion

PRACTICAL CLASS № 10

STUDENT'S T-TEST FOR COMPARISON OF 2 INDEPENDENT SAMPLES

1. Null, alternative and working hypothesis
2. P-value and significance level
3. Parametric tests for Hypothesis testing
4. Student's t-test for comparison of 2 independent samples

PRACTICAL CLASS № 11

PEARSON'S CHI-SQUARE TEST

1. Normal distribution
2. 3-Sigma Rule
3. Non-parametric tests for Hypothesis testing
4. Pearson's chi-square test

PRACTICAL CLASS № 12

CORRELATION ANALYSIS

1. Correlation and perfect correlation
2. Correlation coefficient for quantitative variables
3. Correlation coefficient for qualitative variables
4. Correlation and causation

PRACTICAL CLASS № 13

REGRESSION ANALYSIS

1. Regression analysis
2. Types of regression models
3. Simple linear regression
4. Least squares method

PRACTICAL CLASS № 14

MEDICAL STATISTICS COLLOQUIUM

PRACTICAL CLASS № 15

SEMINAR

BIBLIOGRAPHY

1. Lecture course in medical ethics.
2. Lecture course in medical statistics.
3. Motulsky H. Essential biostatistics: a nonmathematical approach. Oxford University Press; 2016.
4. Bowers D. Medical statistics from scratch: an introduction for health professionals. Wiley; 2020.
5. Bioethics topics – University of Washington School of Medicine, 2010, https://depts. washington. edu/bioethx/topics/.

CONSPECTUS

1. Bioethics introduction – definition, history, principles
2. Informed consent
3. Parental decision making. Maternal fetal conflict
4. Advance care planning. Advance directives
5. Confidentiality
6. Cross-cultural issues and diverse beliefs with an emphasis in pediatrics
7. Mistakes. Relationship between law and medical ethics
8. Truth-telling and withholding information. Breaking bad news
9. End of life issues. Euthanasia
10. Spirituality and medicine. Futility
11. Models of physician – patient relationship
12. Patients' rights. Professionalism
13. Moral aspects of human reproduction
14. Moral aspects of transplantation
15. Definition of biostatistics. Research programme and plan. Types of variables and scales of measurement
16. Population and sample. Random sample. Representative sample. Random and systematic error. Sampling techniques
17. Direct standardisation
18. Frequency distribution. Data grouping methods. Graphical summaries
19. Measures of central tendency – advantages and disadvantages. Measures of spread – advantages and disadvantages
20. Normal distribution. 3-sigma rule. Central limit theorem
21. Skewness and kurtosis. Left- and right-skewed distributions
22. Normality tests. Kolmogorov-Smirnov test. Coefficient of variation
23. Descriptive and inferential statistics. Estimation of population parameters. Confidence interval. Standard error. Sample size calculation
24. Null, alternative and working hypothesis. P-value. Level of significance. Power. Type I and II errors
25. Parametric tests. Selection of hypothesis test. Student's t-test
26. Non-parametric tests. Rank tests. Pearson's chi-squared test. Fisher's exact test
27. Correlation. Correlation analysis. Correlation coefficient. Coefficient of determination
28. Regression analysis. Types of regression models

29. Simple linear regression. Least squares method