

# SUMANDEEP VIDYAPEETH

(Declared as Deemed to be University under Section 3 of the UGC Act 1956)

Accredited by NAAC with a CGPA of 3.53 out of four-point scale at 'A' Grade

At & Post Piparia, Tal: Waghodia 391760 (Gujarat) India.

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## CURRICULUM

### Doctor of Medicine (M.D.) COMMUNITY MEDICINE

Attested CTC

*Sharaney*  
15/2/2021

Vice-Chancellor

Sumandeep Vidyapeeth

An Institution Deemed to be University

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Dist: Vadodara-391 760. (Gujarat)

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## Post graduate Degree course in Community medicine, MD (C.M.)

Community Medicine is the branch of Medicine which deals with the identification of factors which causes the disease and factors that predisposes persons to disease causation at individual and community level and finding out solution to prevent the disease occurrence. Sanitation, statistics, epidemiology , nutrition are branches of it which help to understand the disease process.

### Programme outcome : MD

The purpose of MD education is to create specialists who would provide high quality health care and advance the cause of science through research & training. The goal of postgraduate medical education shall be to produce competent specialists and/or Medical teachers.

### Programme specific outcome : MD

**POS 1.** Scholars shall recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy.

**POS 2.** Scholars shall have acquired the basic skills in teaching of the medical and paramedical professionals.

**POS 3.** Practice the specialty concerned ethically and in step with the principles of primary health care.

**POS 4.** Demonstrate sufficient knowledge of the basic sciences relevant to the concerned specialty.

**POS 5.** Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.

**COURSE OUTCOME (CO):** At the end of the course the student shall acquire competencies in the following areas

1. Basic knowledge in application of principles of Public Health, Community Medicine and applied epidemiology, contributing meaningfully in formulating National Health Policies & Programmes with a systems approach for overall human development.
2. Scholars acquire basic skill to standardize the teaching & training approaches at post-graduate level, for Community Medicine
3. Research: To formulate research questions, do literature search, conduct study with an appropriate study design and study tool; conduct data collection and management, data analysis and report.

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## AIM

- 1.1 To train medical graduates as to ensure higher competence in both general and special areas of community Medicine.
- 1.2 To prepare a candidate for teaching, research and clinical abilities, including prevention and after care in community Medicine.
- 1.3 To prepare the candidate to practice Evidence Based Community Medicine

## **OBJECTIVE**

The main object of the course is to train the medical graduates to acquire excellent technical knowledge and proficiency in application of the knowledge in the field of Community Medicine and to train them in Public Health administration.

At the end of the course the candidate should have acquired skills in different areas which inter alia include the following:

1. should possess sound professional knowledge in the discipline and should be in a position to apply it judiciously.
2. should be able to investigate and manage epidemics of infectious diseases and to institute the control / preventive measures .
3. should be in a position to organize curative, preventive , promotive and rehabilitative services in a community in ordinary situation and during natural and manmade calamities.
4. should have accurate proficiency in the modern methods of teaching to medical/ Para Medical students in teaching institutions.
5. should be able to organized health education activities in a community.
6. should be in a position to carryout research activities independently and be able to guild in research projects.
7. Should be able to practice the principles of evidence based medicine.
8. should have developed administrative skill to be utilized at various levels such as departmental and institutional levels and state, district and local levels.
9. should have developed the skills to function as team leader member in various situation when need arises.
10. should be able to take work from and to guide the subordinate staff working under him/ her.
11. Should be able to meet with any emergency situation affecting the health of the people
12. Should have sufficient knowledge of computer application in the field of medical science and public health.
13. Upon completion of the evidence based education, the trainee should be able to:
  - i. Demonstrate significance of Evidence Based community medicine
  - ii. Demonstrate awareness of epidemiologically-based needs assessments through research and systematic reviews of research evidence.
  - iii. Contribute to the appraisal process.
  - iv. Understand quality assurance in the delivery of Primary Health care

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**Post graduate degree course curriculum√**

I General consideration and concept of health & disease

Course contents	Must know	Desirable to know
1. History, concepts and practice of Community Medicine	√	
2. Evolution of medicine and public health services,	√	
3. Principles of Community Medicine.	√	
4. Concept of health & disease	√	
5. Dimensions of health and disease	√	
6. Determinants of health	√	
7. Ecology of health	√	
8. Indicators of health and disease; dynamics of disease transmission.	√	

II Sociology and Health

1. Social and behavioral sciences (sociology, social psychology and social anthropology)	√	
2. Concepts of society and culture	√	
3. family and community structure characteristics and functions	√	
4. group dynamics; leadership patterns;	√	
5. social stratification	√	
6. social changes; urbanization and its problems	√	
7. principles of learning- process of communication	√	
8. cultural factors in relation to health and disease	√	
9. social stress and deviant behavior	√	
10. Medico – social work; hospital sociology; social agencies economics.		√

III-Bio-statistics

1. Bio-statistics and health statistics	√	
2. demography and demography cycle ;demographic variables and trends; population problem in India	√	
3. Census and other sources of data ; collection and presentation of data	√	
4. elementary statistical analysis	√	
5. tests of significance	√	
6. sampling and sampling procedures	√	
7. designing of experimental and community based studies and scope	√	
8. sources and uses of health statistics	√	
9. health statistics and information system in India	√	
10. Measurement of health.		

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IV - Nutrition and health

1. Applied nutrition; principles of nutrition	√	
2. nutritional requirements; balanced diets deficiency disease	√	
3. nutritional assessment	√	
4. ecology of malnutrition and approaches to control malnutrition	√	
5. food toxins	√	
6. food processing and preservation of various food stuffs		√
7. nutritive value of commonly consumed food articles	√	
8. diet and diseases	√	
9. food fortification and enrichment food	√	
10. adulteration and prevention of it	√	
11. National programmes related to nutrition.	√	

V- Environment and Health

1. Personal and environmental health	√	
2. control of physical and biological environments for prevention of diseases and promotion of health	√	
3. water	√	
4. air; humidity; ventilation	√	
5. light; radiation	√	
6. noise and	√	
7. housing and their effect on health and preventive;	√	
8. meteorological environment and measuring equipments	√	
9. Disposal of wastes – types , methods of collection and disposal; disposal of bio-medical waste and related legislation.	√	

VI -Genetics and health

1. Genetics and environmental factors affecting growth and development	√	
2. genetic factors in determination of health	√	
3. population genetics	√	
4. preventive and social measures.		√

VII- Health education

1. Health education – objectives, approaches, principles and methods.	√	
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VIII- Entomology

1. Tropical medicine including medical entomology	√	
2. public health parasitology	√	

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3. microbiology and immunology with special reference to malaria, filarial, plague and kala- azar etc.	√	
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IX -Epidemiology

1. Aims of epidemiology: Epidemiological approaches rates and ratios	√	
2. Measurement of morbidity and mortality :	√	
3. epidemiological methods	√	
4. association and causation	√	
5. infectious disease epidemiology	√	
6. disease transmission : principles and methods of disease control	√	
7. Investigation of epidemics.	√	

X - Immunity and immunizing agents

1. Immunity : active and passive immunity and immunizing agents	√	
2. investigation of case of adverse reaction after vaccination	√	
3. evaluation of vaccine coverage in the community.	√	

XI-Screening for health and diseases

1. Concept of screening for disease : uses of screening : criteria for screening : sensitivity, specificity and predictive values of a screening test	√	
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XII-Epidemiology of specific diseases

1. Epidemiology and prevention of communicable disease-		
2. respiratory	√	
3. intestinal arthropod infections	√	
4. zoonosis : surface infection	√	
5. HIV/AIDS	√	
6. emerging and reemerging infectious diseases etc...	√	
7. Epidemiology and prevention of chronic non-communicable diseases and conditions	√	
8. CHD,	√	
9. Hypertension and stroke	√	
10. RHD	√	
11. cancer	√	
12. diabetes	√	
13. obesity	√	
14. blindness and	√	
15. accidents etc..	√	

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XIII-Maternal and child health

1. Maternal and child health problems :	√	
2. ante-natal, intra-natal and post-natal problems and care	√	
3. social obstetrics	√	
4. care of infants and children	√	
5. low birth weight	√	
6. infant feeding and weaning : growth and development	√	
7. care of pre-school children; under five clinic	√	
8. rights of a child	√	
9. indicators of MCH care	√	
10. social pediatrics; school health service	√	
11. care of handicapped children	√	
12. behavioral problems in children; child labour etc.	√	

XIV-Geriatrics

1. Preventive Geriatrics : health problems of aged and remedial measures	√	
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XV-Family Welfare

1. Family welfare services – family planning,	√	
2. contraceptive methods	√	
3. MTP	√	
4. approaches in family planning etc.	√	

XVI- Occupational Health

1. Occupational health- physical, chemical, biological and psychological hazards	√	
2. principles of prevention	√	
3. industrial toxicology- lead, arsenic, chromium, mercury and various gases – Sulphur dioxide, carbon monoxide, hydrogen Sulphide and fluorine etc.	√	
4. Health hazards in specific occupations – mines, rubber, dye industries, foundry etc.	√	
5. Occupational dermatitis cancers,	√	
6. accidents in industry ergonomics,	√	
7. factory act, E.S.I.S. act. Rehabilitation services etc.	√	

XVII-Mental health

1. Mental health – types of mental illnesses and prevention; mental health service in India; alcoholism and drug dependence; smoking – hazards and prevention	√	
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XVIII-Public Health administration

1. Principles of administration process-planning,	√	
2. management and evaluation;	√	
3. health policy	√	
4. health economics	√	
5. operational research etc.	√	
6. National health committees and their recommendations.	√	
7. Health man power planning and utilization of health practice research.	√	
8. Health system in India – at centre, state and district level; primary health cre.	√	
9. National health programmes	√	
10. Public health legislation in India	√	
11. International and voluntary health agencies and their role in health sector.	√	

XIX- Recent advances in Public health

1. Recent advances in the field of public health and community medicine.	√	
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**BOOKS RECOMMENDE FOR READING**

- |  |   |
|--|---|
| 1) Maxy and Rosenau:                                   | Public Health and Preventive Medicine               |
| 2) Walter W. Holland:                                  | The Oxford Text Book of Public Health. Vol. I to IV |
| 3) Hannon and Prekett:                                 | Public health administration and Practice           |
| 4) J.S. Garrow, Philips James:<br>and Stanely Davidson | Human Nutrition and Dietetics                       |
| 5) Hobson:   | The Theory and Practice of Public Health            |
| 6) D J P Barker & G. Rose:                             | Epidemiology in Medical Practice                    |
| 7) Abramson J H:                                       | Survey Methods in Community Medicine                |
| 8) K. Park:  | Park's Textbook of Preventive & Social Medicine     |
| 9) PSS Rao:  | An Introduction to Biostatics                       |
| 10) Bancroft H:  | Introduction to Bio statistics                      |
| 11) Mac Mohan and Pugh:                                | Epidemiology: Principles and methods                |
| 12) Topley and Wilson:                                 | Text Book of Microbiology                           |
| 13) Morris J.N.:                                       | Uses of Epidemiology                                |
| 14) S.C. Seal:   | Public Health Administration in India               |
| 15) Niraj Pandit                                       | Sociology and Health                                |

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## Method of Training:

1. Lecture-cum-discussion:
2. Presentation of assigned topics:
3. Case presentation and discussion/ family study, presentation and discussion
4. Journal club
5. Involvement in Undergraduate training
6. Laboratory practices
7. Visit to Institutes of Public Health importance; water works, sewage treatment plant, milk dairy, public health laboratory, Primary health center, community Health center, Infectitious disease hospital, medical record section of hospital, Health center run by NGO, Immunisation clinic etc.
8. Project preparation
9. Posting of candidates in other departments of medical college and places of Public health importance.
10. Seminars-(Incorporation of recent evidences as per the hierarchy of evidences in seminar)
11. Journal club-(Formulation of clinical question to critical appraisal of evidence and decision making as per the principles of Evidence Based Decision Making in journal club)
12. Case presentation-(diagnosis/treatment plan to be supported with higher level of evidences)
13. Interdisciplinary case presentation- (diagnosis/treatment plan to be supported with higher level of evidences)
14. Poster/paper presentation in speciality conference-
15. Short research-
16. Publication in peer review journal-

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### **Practical training:**

1. Using and Handling various Audio-visual aids available in the department and used for teaching of Undergraduate students.
2. Using and Handling various equipments and Instruments available in the department and used routinely or for research purpose.
3. Training of PG in Undergraduate teaching – Taking lecture / practical, conducting demonstration carry out field training etc.
4. Statistical exercises: calculation of various vital rates and ratios, fertility statistics.
5. Measurement of morbidity and mortality-Incidence and prevalence rates
6. Statistical methods-up to coefficient of correlation
7. Sample size and its use in medical research.
8. Planning of survey, Designing of Performa-field testing, Organisation of survey, collection of data, analysis and presentation of data, drawing inference and report writing.
9. Steps in investigation of an outbreak.
10. Computer training – required for the data entry, analysis, statistical test application, interpretation of data, report writing, graphical presentation, application of Epi-info, SPSS, etc.
11. Common Laboratory procedures, culture, identification of organisms, various vaccines and their use in public health, evaluation of vaccine coverage
12. Tools and techniques for the evaluation of various National Health Programmes.
13. OPD and Camp approach to learn diagnosis and treatment of common diseases in rural set up

### **EBES Integration:**

1. All post graduates after enrolment will be exposed to organized evidence searching skills lectures along with teaching of clinical epidemiology, biostatistics and research methodology.
2. All the post graduate Journal Clubs will be carried out on a prescribed Evidence Based format with emphasis on critical appraisal. A designated teacher/facilitator will assess every post graduate student for each JC presentation.
3. All PG seminars will have evidence embedded in the presentation and all references relating to the subject matter will be incorporated. AT the end of the seminar all the references will be listed and the seminar will be assessed by the facilitator.
4. In the Practical Skills, every post graduate student will be exposed to at least one encounter of role modeling in which a facilitator after raising a relevant query will search for its evidence and demonstrate evidence searching methodologies, its importance and utility to the student.

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Posting of Student in Institute of Public Health Importance

Place of Posting	Duration of posting	Learning
Microbiology department	2 weeks	Culture media, technique of inoculation, colony characteristics, identification of organisms by slide examination, samples of body fluids, secretions, excretions collection, preservation and transportation procedures, common laboratory procedures, precautions in the laboratory, common serological tests, bio-medical waste collection, storage and disposal, immunology and immunological tests etc.
Paediatric department	2 week	Identification common childhood problems, special clinics, ORS corner, Growth monitoring and recording, neonatal care, infant care, care of pre-school children, care of disadvantaged children, breast feeding, at risk children
Obstetrics department	2 week	Identification common problems of pregnant women, at risk mothers, special clinics, Family welfare activities. PP Unit.
Medicine department	2 weeks	Learning method of history taking, clinical examination, prescription of investigation and treatment of common ailments / diseases, interpretation of investigation result, attending special clinics (diabetic care, Cardio Vascular, geriatric etc)
Public Health laboratory Food and drug testing Water testing	6 days	Water chemistry, tests to identify water pollution, water quality monitoring, sanitary survey of water supply system, water sample collection, preservation, transportation for bacteriological examination, reading and interpretation of report, identification of food adulteration, food sample collection and procedures to be followed. Legislative provision, tests on milk, record keeping. Food and drug regulations
Water treatment plant	1 day	Sources of water, Water quality monitoring, sanitary survey of water supply system, water sample collection, preservation, and transportation for bacteriological examination, Role during water borne epidemics.
Milk dairy	1 day	Milk hygiene, tests for pasteurization, quality control. Standards for various types of milk, milk products, tests for milk adulteration
Sewage treatment plant	1 day	Sewage and sullage, collection and disposal, tests carried out on sewage, problems related to its disposal.
Immunisation clinic (Included in pediatrics posting)		Critical observation of the various activities carried out at the clinic, record keeping, cold chain maintenance, injection safety, waste disposal
PHC / sub-center	2 weeks	Critical observation of the various activities carried out at PHC,
Community health centre	1 week	To Learn staff, functions of CHC, record keeping
Municipal corporation	1 weeks	Functioning, various bodies and their functions, duties of MOH, critical observations.

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Health Department of Jilla Panchayat	1 week	Functioning, various bodies and their functions, duties of CDHO, critical observations, supervision of SC and PHC, conducting meeting, organizing survey work
District Malaria Unit	3 days	Problem of malaria in the district, various anti-malaria measures, Bionomics of Mosquitoes and their control, activities under National programme. Various insecticides and their use, insecticide resistance, evaluation of programme.
Blood bank	1 day	Blood safety regulations, blood borne diseases and prevention
Bio medical waste disposal	1 day	Hospital waste , generation sources, collection, disposal, Universal work precaution in hospital
Hospital Kitchen	1 day	Food safety, diet planning, various types of diet served to patients in hospital, kitchen hygiene, hygiene of cook and food handlers
IMNCI training	10 days	IMNCI training components, method of training,
District TB Center	4 days	Problem of Tuberculosis, diagnostic tools, RNTCP, category classification, treatment regimen, HIV and TB, Problems in TB control.
Special clinics (geriatrics, diabetes care, cardio vascular preventive clinic, Immunisation, under five, ante-natal, post natal, nutrition clinic,)		Conduction and activities carried out at such clinics (included in pediatric, OG and medicine department posting)
NGO posting	1 week	Working of NGO, observing various activities carried out by it. Understanding its role in health sector,
Medical Record Section	1 day	Record keeping, analysis, use of computer in record keeping, ICD, Death certificate,
Community based activities		Like NID monitoring, school health, camp duty

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**Scheme of Examination (MD Course)**

Degree: **M.D. (Community Medicine)**

University: **Sumandeep Vidyapeeth, Piparia**

**Dissertation:** Community Based Topic will be assigned for dissertation work. After getting approval from the Human Research Review Committee and Institutional Ethics committee, the student is expected to complete and submit it to the University for Assessment Purpose SIX months before the expected date of University Examination.

**Theory Examination: (400 Marks)**

Paper number	Topics	Marks	Time
I	<b>Basic Medical Sciences applied to Community Medicine</b> -[Nutrition, Sanitation including entomology, Bio-statistics, Sociology, Microbiology, Health Education and Genetics etc.]	100	3 Hours
II	<b>Community Medicine-I</b> [MCH, Demography and Family welfare, Occupational health, School Health, Preventive Medicine applied to other specialties, Geriatrics, Mental health, Research methodology]	100	3 Hours
III	<b>Community Medicine-II</b> [Epidemiology-General, specific diseases-communicable and non-communicable, National health programmes, Health Planning, administration, Management and evaluation, Health Economics, National and International Health regulations and health organizations]	100	3 Hours
IV	<b>Recent advances in Community Medicine including Evidence Based Education System</b>	100	3 Hours

**Note:** The distribution of topics in each paper is arbitrary. There may be overlapping of relevant topics in question papers

**Each Paper shall have 5 Questions; all compulsory; no options.**

- Question-1: Long Question (1 or 2 parts) -----20 marks
- Question-2: Long Question (1 or 2 parts) -----20 marks
- Question-3: Long Question (1 or 2 parts) ----- 20 marks
- Question-4: - Long Question (1 or 2 parts) ----- 20 marks
- Question-5: Short notes --(4)-----20 marks

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**Practical Examination: (450 Marks + 150 marks oral including table work)= 600 marks**  
**Duration: Minimum 2 days**

Exercise number	Description	Marks	Time	Assessment
1	Family study / long case	200	1 hour	All Four examiners
2	Short case / Exercises	100	30 minutes for each case and each exercise	Case- I- Pair-I Case-II pair II
	[epidemiological]	025		Epid. + PHA exercise-Pair-I Stat exercise- Pair-II
	[ Public health administration] [ statistical exercise]	025 050		
3	Table exercises (2) based on Public health Laboratory practice	025 025	30 minutes each	Pair-I
4	Viva voce Including Table work (spots-5)	100 050	30 minutes 25 minutes	All Four examiners Pair-II

**Passing standards: Theory and Practical 50 % each separately**

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