A. Programme Mission and Objective:

The aim of JSS University in starting Masters in Public Health is to create Public Health professionals for delivering better health care. It is one among the most widely recognized profession with credentials for leadership in Public Health. MPH caters to the increasing demand for Public Health graduates in National and International Public Health Organizations, public and private health research institutes, Non-Governmental Organizations (NGOs).

The dichotomy of medicine into two major branches namely curative medicine, and public health/preventive medicine was evident at the close of the 19th Century. Public health was largely a matter of sanitary legislation and sanitary reforms aimed at the control of man's physical environment such as water supply, sewage disposal, etc. Clearly these measures were not aimed at the control of any specific disease. However, they vastly improved the health of the people.

At the beginning of the 20th century, a new concept of "health promotion" began to take shape. It was realized that public health had neglected the citizen as an individual, and that the government had a direct responsibility for the health of the individual. Consequently, in addition to disease control activities, one more goal was added to public health, that is, health promotion of individuals. It was initiated as personal health services such as mother and child health services, school health services, industrial health services, mental health and rehabilitation services.

With the advances in preventive medicine and practice of public health, the pattern of disease began to change in the developed world. Many of the acute illness problems have been brought under control. However, as old problems were solved, new health problems in the form of chronic diseases began to emerge, e.g., cancer, diabetes, cardiovascular diseases, alcoholism and drug addiction etc. especially in the high socio-economic societies. These problems could
not be tackled by the public health measures such as isolation, immunization and disinfection nor could these be explained on the basis of the germ theory of disease. A new concept, the concept of "risk factors" as determinants of these diseases came into existence. These problems brought new challenges to public health which needed reorientation more towards social objectives. Social and behavioral aspects of disease and health were given a new priority. Public health moved into the preventive and rehabilitative aspects of chronic diseases and behavioral problems.

**Public Health** refers to all organized measures to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases. Thus, public health is concerned with the total system and not only the eradication of a particular disease.

**Public Health Activities**

Health Surveillance, Monitoring and Evaluation of National Health Programs, Investigation of disease outbreaks & Epidemics, designing and managing Health Promotion and Disease Prevention Programs, enabling and empowering communities to promote health and reduce inequalities, creating and sustaining intra-sectoral and inter-sectoral partnerships to improve health workforce, ensuring the effective performance of public health services to meet goals in improving health, preventing disease and reducing inequalities. In recent years, public health programs providing vaccinations have made incredible strides in promoting health, including the eradication of smallpox and the recent polio eradication, diseases that plagued mankind for years.
(a) **Rationale :** The main reason for offering this programme are:

- **Public health is an exciting and growing field:** Public Health is an emerging field of opportunities as the era has shifted from just treating a disease to controlling and preventing it in the community. The field enriches the research activities and health promotion activities.

- **Public health is a diverse and dynamic field:** Public health field is open for students from varying educational backgrounds such as Medical, Dental, Ayurveda, Homeopathy, Pharmacy, Physiotherapy, Nursing (BSc, MSc), Nutrition (MSc) and Sociology (MA).

- **Public health is a field geared towards serving Community:** The field challenges its professionals to confront complex health issues, such as improving access to health care, control and prevention of communicable and non-communicable disease, and reducing environmental hazards, violence, substance abuse by sensitizing the community. The field of public health offers great personal fulfillment working towards improving people’s health and well being.

(b) **Goals and objectives:**

- To provide a career for students as Program Manager, Project Coordinator, Epidemiologist, and Research Assistants in Government health organizations, Health Mission, Health Resource Centre and Public Health Research Institutes.

- To train students with required skills as human resource in public health domain

**B. Relevance of the programme with HEI’s Mission and Goals :**

The programme is entirely in line with the JSS Universities strategic goals as well as its Mission to provide superior professional education, nurturing translational and transformational research in health care sector for the benefit of the society. The programme is also consistent with Higher Education vision 2020 to transform society towards knowledge society and making education an imperative tool to realize knowledge, economy and society.
C. **Nature of prospective target group of learners**:

- A Bachelor’s degree in Medical, Dental, Ayurveda, Physiotherapy, Pharmacy, Nursing from any statutory university in the country or abroad.
- A Post graduate degree holder with M.Sc (Nutrition), M.Sc (Nursing), M.Sc (Home Science) Master of Social Work and MA Sociology.

The degree should have been obtained from a university recognized by UGC, established by law in India and the medium of instruction for the degree should be English. A candidate who has scored a minimum of 50% of the marks in the qualifying examination will be eligible for admission to the MPH Course.

D. **Appropriateness of programme to be conducted in open and distance learning mode to acquire specific skills and competence**

This course is intended for professional’s practitioners, researchers and students from wide range of backgrounds who aim to develop their knowledge and insights pertaining to the Public Health. The course in designed to provide critical and practical skills to analyse, evaluate, design and implement solution and strategies with regards to Public health and its issues.

E. **Instructional Delivery Mechanism**

JSS University follows a modern ICT enabled approach for instruction. The methodology of instruction in JSS University is different from that of the conventional /regular programs. Our system is learner-oriented and the learner is an active participant in the teaching-learning process. Most of the instructions are imparted through online and distance mode. Academic delivery systems of JSS University are:

- **Print Material**: JSS University mainly focuses on Self Learning Material (SLM) and their up gradation by eminent teachers/academicians both from JSS University and other reputed universities/institutions. As text information plays a vital role in distance education, print based instruction has a critical role in JSS University distance learning initiatives.
- **Audio-Visual Material Aids**: The learning package contains audio and video programmes which have been produced by the University for the enhancement of understanding of the
course material given to the student. The video lectures are uploaded in the University website for the student’s access.

- **Online/Virtual Classes:** Delivery of classroom-like lectures will also be available in the student portal for enhanced learning experience.
- **Laboratory facilities:** JSS University has advanced laboratory for practical training for younger minds to get hands on experience in cutting edge techniques.

I) Identification of Media

Print, Audio-Video and Online media will be utilized for the dissemination of knowledge relevant to the program enrolled.

II) Student support system

JSS University provides an exclusive online portal for students to cater to all of their academic related matters such as notification of contact classes, assignment details, course material, and examination schedule. In addition, each student has provision to seek guidance, counseling and career guidance throughout the program.

F. Procedure for admissions, curriculum transaction and evaluation

Admission to all the programs is through notification in newspaper and on University website. The admission procedure involves submission of filled application by the candidates after paying the prescribed fees. The admission scrutiny committee evaluates all the submitted applications and recommend the eligible candidates. The selected candidates are notified through admissions office and also on the University website. The selected candidates are expected to report within the stipulated timeframe for provisional admission to the program.

Curriculum transaction for the program is through the designated online student portal as detailed above in Section E.

### Basic Structure and Distribution of Courses

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Study Component</th>
<th>Papers x credit</th>
<th>CIA Marks</th>
<th>University Examinations</th>
<th>Total Marks</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>Core paper</td>
<td>10 x 4</td>
<td>25</td>
<td>75</td>
<td>400</td>
<td>40</td>
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<tr>
<td>02.</td>
<td>Core Practical</td>
<td>6 x 4</td>
<td>25</td>
<td>75</td>
<td>600</td>
<td>24</td>
</tr>
<tr>
<td>03.</td>
<td>Elective</td>
<td>1 x 4</td>
<td>25</td>
<td>75</td>
<td>100</td>
<td>04</td>
</tr>
<tr>
<td>04.</td>
<td>Projects and VIVA</td>
<td></td>
<td></td>
<td></td>
<td>400</td>
<td>16</td>
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<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>84</strong></td>
</tr>
</tbody>
</table>

Total 2000 |
Evaluation: Evaluation will be done as follows:

- University end semester examination: 75 marks for each subject
- Internal Assessment: 25 marks for each subject (theory test, seminars, assignments)
- Independent Project work (for PG and PGD programs): 350 marks
- Project Viva Voce (for PG and PGD programs): 150 marks

G. Requirement of the Laboratory support and the library resources

The University has designated laboratory space to meet the curriculum requirements of all the programs.

Library resources: For the enhanced learning opportunities of each of the students enrolled under the open and distance learning mode, JSS University has mobilized the required textbooks, journals and articles for access in the department library. These materials are in addition to the printed study material available for each student.

H. Cost estimate of programme and provisions

Cost estimate of each student/year is as follows:

Certificate Program – Distance Mode = Rs. 10,000

UG Program – Distance Mode = ranges from Rs. 15,000 – Rs. 20,000

PG and PGD Program – Distance Mode= ranges from Rs. 15,000 – Rs. 75,000

The provisions include the following: study material both print and online materials, hiring faculty members for contact program, contact program laboratory charges, TA/DA for faculty members and coordinators, classroom and laboratory hiring charges for the contact program.

I. Quality assurance mechanism and expected programme outcomes

The syllabus is prepared considering the need and expectations from various stakeholders, feedback, and consultation with academicians, industry experts, scholars from relevant field. The teaching and learning methods incorporate contact classes, online and offline methods. Hands-on training is provided for practical orientation and independent project work stimulates problem analysis, techniques for resolving the problem and probable solutions to the same providing opportunities to apply theoretical knowledge to real time problems in organizations. The evaluation incorporates transparency and all activities are carried out according to preplanned academic calendar. The syllabus has clear defined course objective and course outcome for each of the courses.
Program Outcomes:

The MPH degree will provide career opportunities for students as Program Manager, Project Coordinator, Epidemiologist, and Research Assistants in Government health organizations, Health Mission, Health Resource Centre and Public Health Research Institutes.
MPH - Syllabus

COURSE CONTENTS

SEMESTER I

PAPER I: CONCEPTS OF HEALTH & GENERAL EPIDEMIOLOGY

- Concepts of Health & Disease
- Determinants of Health
- Indicators of Health
- Natural History of Disease and its application in planning intervention.
  Dynamics of Disease Transmission
- Measurement of Mortality & Morbidity
- Need and uses of screening tests
- Accuracy and clinical value of diagnostic and screening tests (sensitivity, specificity, & predictive values)
- Epidemiological Study Design:
  - *Cross Sectional Studies*
  - *Cohort Study*
  - *Case Control study*
  - *Experimental Studies*
- Uses of Epidemiological tools
- Bias, Confounding factors
- Association & Causation
- Principal sources of epidemiological data

Practical activity:
1) Short epidemiological study
2) Planning and investigation of an epidemic of communicable diseases in a community setting.
PAPER II: EPIDEMIOLOGY AND CONTROL OF COMMUNICABLE & NON – COMMUNICABLE DISEASES

• Definitions and scope
• Surveillance
• Epidemiology & control of Non Communicable Diseases:
  - Cardiovascular diseases- Hypertension
  - Cancer
  - Diabetes
  - Obesity
  - Stroke
  - Blindness
  - Mental health
  - Accidents
  - Disabilities
• Epidemiology & control of communicable diseases:
  - Focusing on patterns of transmissions, risk factors, preventions and control of HIV/AIDS, STD, Leprosy.
• Epidemiology and control of Vector borne diseases: KFD, Malaria, Filarial, Plague, Yellow fever, Dengue, Chikungunya, Kala Azar, Japanese Encephalitis
• Epidemiology and control of vaccine preventable diseases:
  - Tuberculosis, Diphtheria, Whooping cough, Measles, Tetanus, Poliomyelitis
  - Worm Infestation and Health.

PAPER III: OCCUPATIONAL & ENVIRONMENTAL HEALTH

Occupational Health

• Occupational Hazards- scope and prevention
  - Pneumoconiosis
  - Lead Poisoning
  - Occupation Cancers
- Occupational Dermatitis
  - Occupational Hazards of Agricultural Workers
  - Accidents in Industry
  - Sickness Absenteeism
  - Ergonomics
  - Problems of Urbanization & Industrialization

Environment and Health
  - Water and Health
  - Air Pollution
  - Noise Pollution
  - Ventilation and Lighting
  - Housing and Health
  - Waste disposal – Solid and Liquid
  - Radiation
  - Hospital waste management
  - Nuclear hazards
  - Disaster management
  - Climate change, Global warming, Acid rain, Ozone layer depletion
  - Environment Protection Act
  - Human Population and Environment

Practical I

Practical I Epidemiology
  1. Epidemiological Exercises   Spotters related to public health
Semester II

PAPER IV: RESEARCH METHODS AND BIO ETHICS

- Quantitative and Qualitative research methods
  - Overview of quantitative and qualitative research methods
  - Comparing quantitative & qualitative research methods
  - Sampling in research methods
  - Research Instruments: designing and validation of questionnaire, consent forms, standardization of instruments
  - Recruitment in qualitative research
  - Participant observation
  - Logistics of participant observation
  - Data collection in quantitative and qualitative research

- In depth interview

Logistics of interviewing

Interview steps and tips for taking Interview notes

- Focus group Discussion
  - Logistics of focus group discussion
  - Skills of effective moderator and note taker
  - Steps in focus group note taking
  - Steps in moderating a focus groups

- Operational Research

Bio ethics

- General principle on ethical consideration involving human participants
- Ethical guidelines in qualitative research
- International conference on harmonization
- Good Clinical Practice guidelines

PAPER V: BIOSTATISTICS

- Introduction to Biostatistics
- Application of Statistics in Clinical and Public Health Settings
- Data Collection and Presentation - Tables and Graphs
• Classification of Data
• Sampling Designs
• Measures of Central Tendency
• Measures of Dispersion
• Measures of Kurtosis and skewness
• Probability and Probability Distribution
• Binomial, Poisson and Normal Distribution
• Estimation of Parameters
• Testing of Hypothesis:
  - Parametric Tests
  - Z test, T test
  - Analysis of variance – One way & Two way
  - Non Parametric Tests

• Correlation Analysis

• Regression Analysis
  - Simple Regression
  - Multiple Regression
  - Logistic Regression

PAPER VI: HEALTH CARE DELIVERY SYSTEM AND HEALTH EDUCATION

• History of Public Health
  - History of different systems of Medicine
  - Public health events - Sanitary awakening, Germ theory of disease, Rise of Public Health in various countries
  - Health Care Delivery System in Developed & Developing Countries

• Health situation in India:
  - Demography, mortality and morbidity profile and the existing health services.

• Health Care Delivery System in India
  - Organization
  - Administration
  - Delivery
- Challenges
- Quality assurance
- Health Care Delivery by NGO's
- Challenges

- Primary Health Care Approach in Health Care Delivery
- Factors influencing the Health Care Delivery System
- National Health Programs
  - National Rural Health Mission
  - National Vector Borne Disease Control Programme
  - Reproductive And Child Health Programme
  - National AIDS Control Program
  - Revised National Tuberculosis Control Programme
  - National Leprosy Eradication Programme
  - National Program for Control Of Blindness
  - National Programme For Prevention And Control Of Cancer, Diabetes, Cardiovascular Diseases And Stroke
  - Integrated Management Of Neonatal And Childhood Illness

- Evaluation of Health Services
- Socio Economic Status Scales and their implications
- Health Communication
  - Approach
  - Models
  - Contents
  - Principles
  - Practice

**Practical activity:** Monthly Postings to Primary Health Center and Sub Center with assignments

**Practical II**

2. Biostatistics Exercises
3. Introduction to statistical software
4. Critical Appraisal of articles in scientific Journals
Semester III

PAPER VII: MATERNAL AND CHILD HEALTH

- Health Status of Women in General and Reproductive Health
- Determinants of Maternal and Child Health
- Health problems of women across the life span
- Life cycle approach for women’s health
- Indicators of MCH care
- Maternal Mortality: Causes, Preventive and control measures
- Health of the Newborn: Neonatal mortality
- Growth and Development of the child
- Health problems of Under 5 children, school going children & Adolescents
  - School Health Services
- Child health in special circumstances
  - Handicapped
  - Juvenile Delinquency
  - Child labor and child exploitation
  - Child trafficking
- Family Planning: Scope
  - Contraceptive methods
  - Family Welfare Program

PAPER VIII: PLANNING & MANAGEMENT IN PUBLIC HEALTH & HEALTH ECONOMICS

- Introduction to Planning & Management
- Objectives in Planning & Management
- Organizational Structure
- Planning Cycle
- Organizational Concept
- Organizational Behavior
• Modern Management Techniques
• Human Resource Management
• Financial Management:
  - Cost Benefit Analysis
  - Cost Effective analysis
  - Zero Based Budgeting
  - Performance Based Budgeting
• Network analysis: PERT, CPM
• Logistic Management
• Basic steps in Monitoring & Evaluation
• Evaluation of National Health Programs
• Community Need Assessment
• Basic steps in Policy Proposal
• National Health Policy
• National Population Policy
• Public Health Declarations
  - Jakarta Health Declaration
  - Ottawa Charter
  - Alma-Ata Declaration
• Social marketing
• Medical audit
• Social audit – Performance Appraisal
• Health Insurance

**Practical Activity:** Evaluating a National Health Program and services at PHC level

**PAPER IX: PUBLIC HEALTH LAWS & HEALTH INFORMATION SYSTEMS**

• Legislation related to Census, Birth and Death
• Legislation related to Tobacco and Drug Control
• The Transplantation of Human Organs Act 1994
- Legislation for Women Empowerment and Health
- Legislation for Child Protection and Health
- Legislation related to the Welfare and Rehabilitation of Disadvantaged
- Occupational Health Legislations
- Environment Health Legislations
- International Health Regulations
- Information Management in Public Health
- Food safety and Protection Act
- Consumer Protection Act.

**PAPER X: NUTRITION AND DEMOGRAPHY & FAMILY PLANNING**

**Public Health Nutrition**
- Nutritional problems in India
- Role of nutrition in Health and Disease.
- Common sources of various nutrients and special nutritional requirement according to age, sex, activity, physiological conditions.
- Common nutritional disorders: *Protein Energy Malnutrition, Vitamin A deficiency, anemia, iodine deficiency disorders, fluorosis and their control and management.*
- Methods for assessing nutritional status of community
- National Nutritional Policy
- National programs in nutrition and their evaluation
- Food: *Toxins, Adulteration, Enrichment, Fortification*
- Food hygiene, milk and meat hygiene, food poisoning
- Planning, implementation and evaluation of nutritional services

**Demography**
- Definition of demography and its relation to Community Health.
- Stages of the demographic cycle and their impact on population.
- Age pyramid, Sex ratio, Dependency ratio, Density of population, Life expectancy
- Demographic transition
• Fertility & fertility indicators
• Population projections and Dynamics
• Need for population control measures and the National Population Policy.

Elective subjects

ES 1: Human Resource Management in Public Health
• Introduction and objectives
• Human Resource Development (HRD)
• Obtaining suitable human resource
• Effective employment and development
• Communicating with people
• Motivating self and staff
• Leading and supervising the staff
• Building a Health Team

ES 2: Medical Sociology
• Family – definition, types, role in health and disease
• Community
• Socio-cultural practices influencing health
• Acculturation
• Social pathology, Social security, Social assistance
• Socioeconomic status scales
• Role of Medico Social Worker
Semester IV

Practical I Public Health Chemistry
Practical II Public Health Exercises

Dissertation
Selection of topic, Review of literature and Synopsis submission
(Data Collection, data entry and analysis using statistical software, writing and submission of Dissertation, publication of research findings (at least one publication in a peer reviewed journal)

Subject References
1. Park’s Textbook of Preventive and Social Medicine by K.Park
4. Epidemiology by Leon Gordis.
6. Essentials of Preventive medicine by Ghai OP
7. Practical Epidemiology by D.J.P Barker
8. Preventive and Community Medicine : Clark & MacMahon
10. Elements of Health Statistics by N S N Rao
11. An Introduction of Biostatistics by Sunder Rao P S S
12. Epidemiology, Principles and Methods by B. MacMahon, D. Trichopoulos
14. Sathe PV and Sath AP Epidemiology and Management for Health Care for All.
15. Text book of Public Health and Community Medicine by Rajvir Bhalwar, AFMC.
16. Community Medicine and its Recent Advances by AH Suryakanth
17. Text Book of Preventive and Social Medicine by Sunderlal
18. Natioanal Health Program by Jugal Kishore
19. Recent Advances in Occupational Health by Harrington
20. All reports and documents related to National Programmes from the Ministry of Health and Family Welfare- Government of India.

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Programme Duration: Course duration is 2 years (4 Semesters).
Faculty and Support Staff Requirement: 
As per the university requirement.

Instructional Delivery Mechanisms:
(II) JSS University follows a modern ICT enabled approach for instruction. The methodology of instruction in JSS University is different from that of the conventional /regular programs. Our system is more learner-oriented and the learner is an active participant in the teaching-learning process. Most of the instructions are imparted through distance. Academic delivery systems of JSS University are:

- **Print Material:** JSS University mainly focuses on Self Learning Material (SLM) and their up gradation by eminent teachers/academicians both from JSS University and other reputed universities/institutions. As text information plays a vital role in distance education, print based instruction has acritical role in JSS University distance learning initiatives.

- **Audio-Visual Material Aids:** The learning package contains audio and video programmes which have been produced by the University for the better clarification and enhancement of understanding of the course material given to the student. The video lectures are uploaded in the University website for the student’s access.

- **Online/Virtual Classes:** Virtual laboratories wherever required.

- **Availability of Laboratory facilities:** JSS University as advanced laboratory for Public Health.
E-Resources: An effort will be made to minimize student efforts by listening to E-Resources under consortium of educational communication in the University website.

(III) Identification of Media:

Print, Audio, Video, online, Computer aided and student support service systems.

(IV) Student support system

JSS University provides counseling facilities at periodic intervals. Each student is assigned to submit assignment on relevant topics as a part on academic exercise.

Medium of delivery: As stated in Instructional delivery mechanism:

E. Procedure for admissions, curriculum transaction and evaluation:

Eligibility: A Bachelor’s degree in Medical, Dental, Ayurveda, Physiotherapy, Pharmacy, Nursing from any statutory university in the country or abroad.
A Post graduate degree holder with M.Sc (Nutrition), M.Sc (Nursing), M.Sc (Home Science) Master of Social Work and MA Sociology.

Updated notification from learners: JSS University notifies its various policy for programme delivery along with the details of the methods and web based tools to be adopted in the official website. All notifications regarding the academic activities to be carried out is provided in the official website. Further the University notify all notification, assignment question paper, results and other related information to examination and evaluation through its official website and registered mobile numbers of the learners.

F. Requirement of the Laboratory support and the library resources:

- Laboratory: JSS University as advanced laboratory for Public Health. The practical classes are scheduled to be conducted during contact classes. The University teachers have been appointed to take classes which enhance the quality of distance education.
- Library: To cater to the needs of students JSS University is planning for digital library systems which can also be utilized by all enrolled students.
G. Quality assurance mechanism and expected programme outcomes:

The MPH degree will provide career opportunities for students as Program Manager, Project Coordinator, Epidemiologist, and Research Assistants in Government health organizations, Health Mission, Health Resource Centre and Public Health Research Institutes.