BLDE
(DEEMED TO BE UNIVERSITY)

Choice Based Credit System (CBCS)

Curriculum

UG Programme in
Bachelor of Public Health

2020-21

Published by
BLDE
(DEEMED TO BE UNIVERSITY)
Declared as Deemed to be University u/s 3 of UGC Act, 1956

The Constituent College
SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE, VIJAYAPURA
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BLDE(DU)/REG/AHS-BPH/2020-21/ 1874/5 May 12, 2020

NOTIFICATION

Sub: Curriculum for Bachelor of Public Health with Semester Scheme

Ref: 1. Minutes of the meeting of the 5th Standing Committee Academic Council of the University held on 06- 05-2020.
2. Approval of Board of Management dtd.08-05-2020
3. Approval of Hon'ble Vice-Chancellor vide order no.1834, dtd.09-05-2020

In accordance with the Rule-09 (ii) of the Memorandum of Association (MoA) of the Deemed to be University, the Board of Management (BoM) has approved the Curriculum for **'Bachelor of Public Health'** following Choice Based Credit System (CBCS) with Semester Scheme.

The Curriculum shall be effective from the Academic Session 2020-21 onwards, in the Constituent College of the University viz. Shri B. M. Patil Medical College, Hospital and Research Centre, Vijayapura.

REGISTRAR
REGISTRAR
BLDE (Deemed to be University)
Vijayapura-586103. Karnataka

To,
The Dean, Faculty of Allied Health Sciences,
Shri B. M. Patil Medical College,
Hospital and Research Centre,
Vijayapura

Copy to:
- The Secretary, UGC, New Delhi
- The Dean, Faculty of Medicine & Principal
- The Controller of Examinations
- The Dean, Student Affairs
- The Prof. & HoDs of Pre, Para and Clinical Departments
- The Coordinator, IQAC
- PS to the Hon'ble Chancellor
- PS to the Hon'ble Vice-Chancellor

Vision:

- To be a leader in providing quality medical education, healthcare & to become an Institution of eminence involved in multidisciplinary and translational research, the outcome of which can impact the health & the quality of life of people of this region.

Mission:

- To be committed to promoting sustainable development of higher education, including health science education consistent with statutory and regulatory requirements.
- To reflect the needs of changing technology
- Make use of academic autonomy to identify dynamic educational programs
- To adopt the global concepts of education in the health care sector

Scope of Public Health

Public Health is the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of the society. Scientific basis for public health practice is provided by study of epidemiology, bio-statistics, environment, demography, nutrition, and economics, social and biological sciences. While epidemiology plays a central role, social sciences make essential contributions in the study of determinants of health, and in the development and evaluation of effective public health interventions. Public health actions are directed at whole populations so as to provide safe environment, healthier food and accessible health care.

Despite significant achievements over the years, Public Health challenges continue to stretch the existing resources, both in India and in the world. The countries, across the globe, strive towards achieving the Millennium Development Goals, yet the agenda remains unfinished. With the commencement of Sustainable Development Goals (SDG) era, a renewed thrust is required to maintain and improve upon the progress achieved so far.

While old threats continue to challenge health systems, new issues and challenges have appeared, thereby overburdening the health systems. Countries have developed an increased ownership towards the need to create a healthier population. Across the world, governments and voluntary organizations have worked towards strengthening the health systems through multiple approaches. Creation of a dedicated Public Health Cadre has been identified as one of the important pre-requisites in this direction. Public Health professionals help in bridging the gap between the clinical and managerial aspects of the program implementation and provide techno-managerial inputs. Public Health Programs demand a special emphasis on the study of disease epidemiology, various determinants of health & emerging challenges in health, public policy making and program management.

Every discipline has its unique perspective of the world. We believe these perspectives from individual disciplines enrich public health. This course will be an attempt to prepare competent cadre of professionals who have a basic understanding of the various aspects of public health and are able to successfully apply this knowledge towards meeting public health challenges in Indian and global context.

Overall Course Objectives in terms of Skills, Competencies and Learning Outcomes

The course will help candidate to develop skills in the following areas:

- Analytical and assessment skills for collecting and interpreting information
- Policy planning and development skills to address public health challenges
- Communication skills for advocacy, dissemination and evaluation of public health data and information
- Financial planning and management skills for running public health programs in the country
- Leadership skills

Broad Values

At the end of the 4-years program, the public health undergraduates are expected to demonstrate the following Broad Values in the context of Public Health

- Apply contemporary ideas to influence program organization and management, problem solving and critical thinking in public health domain
- Undertake operational research in institutional and field settings
- Work in socially, culturally and economically diverse populations by being attentive to needs of vulnerable and disadvantaged groups and be well versed with existing health systems
- Demonstrate qualities of leadership and mentorship
- Be an effective member of a multidisciplinary health team
- Demonstrate ethics and accountability at all levels (professional, personal and social)
- Practice professional excellence, scientific attitude and scholarship
- Demonstrate social accountability and responsibility
- Be open to lifelong learning

Competencies

- Apply the course learning to the public health system and its challenges
  - Demonstrate adequate knowledge and skills to a wide range of public health topics
  - Critically conduct the situational analysis and develop action plan for identified public health issues
  - Develop workforce for taking public health related responsibilities in defined geographical areas
  - Develop an understanding of the epidemiological transitions of programs specific to each State within the country in order to prioritize public health challenges for policy making
- Develop, implement and evaluate key public health policies
  - Develop a capacity to apply conceptual framework to understand policy processes in health care
  - Understand roles of supply and demand in policy making in health care
  - Develop an understanding to facilitate inter-sectoral coordination and public-private partnership
  - Critically analyse resource allocation for competing public health interests across programs
  - Formulate context appropriate policies and design programs to address public health challenges, effectively
- Develop and demonstrate competency in managing health systems at different levels
  - Identify immediate and long term health program goals at national, State and district levels
  - Prioritize health issues in population
  - Describe various managerial information systems and their application
  - Describe program management plans in health
  - Understand and apply core management principles for human resources in health
  - Understand and apply program budgeting and economic evaluation
  - Understand and apply quality assurance and improvement techniques in health care
- Develop competency in research
  - Understand and apply ethical principles in research, evaluation and dissemination
  - Develop competence to critically evaluate existing information and identify gaps
  - Formulate and test research hypotheses in real world scenario
  - Translate research knowledge for evidence based policy making

Objectives of BPH Programme

The program is designed to focus on the acquisition of knowledge and skills applicable to a career in Public Health, for catalysing the "Health for all" revolution**.**

Upon completion of the programme, the postgraduate will be able to:

- Describe the origin and evolution of public health;
- Understand and assess the health status of populations, determinants of health and illness;
- Describe the factors contributing to health promotion and disease prevention;
- Understand epidemiological principles and statistical techniques;
- Plan, implement and evaluate health and development programme;
- Understand the influences of social, cultural, biochemical and socio psychological factors on health and disease;
- Apply the principles of health promotion in health and development strategies;
- Conduct empirical studies, by formulation of a question of social relevance, collection of reliable and valid data, documentation of the findings, preparing project proposals and its management;
- Contribute to the public health profession through sound professional public health attitudes, values, concepts and ethical practices
- Professionally manage a health/development system.
- Apply principles of environmental health sciences (exposure assessment, toxicology, environmental epidemiology) and risk assessment to evaluate environmental and occupational factors that impact health
- Analyze health policy using sound policy analysis procedure
- Analyze the social and behavioural factors affecting health of individuals and populations
- Apply critical thinking and systems thinking to analysis of public health problems;
- Demonstrate team building, negotiation, and conflict management skills and use of collaborative methods for achieving organizational and community health goals
- Build community capacity to solve public health problems through designing effective public health programs and collaborations.

Eligibility

Candidates for admission to BPH course should have completed higher secondary level (10 +2) or pre-university college in any stream, preference shall be given to science stream students with physics, chemistry and biology as main Courses.

(Note: candidates from other than science stream will undergo a bridge course of 2 months in college, where there will be no university exams for this)

Or

Candidates completing a 3 year Diploma in Allied Health Sciences after 10th /SSLC

Or

Candidates completing 2 years Diploma in Allied Health Sciences after pre-university college (10+2)

Or

Equivalent course established under law considered equivalent thereto by RGUHS.

Example of Diploma course that are eligible (not limited to below list)

- Diploma in Medical Laboratory Technology.
- Diploma in X-Ray Technology.
- Diploma in Health Inspector.
- Diploma in Medical Records Technology.
- Diploma in Operation Theatre Technology.
- Diploma in Dialysis Technology.
- Diploma in Ophthalmic Technology.
- Diploma in Dental Mechanics.
- Diploma in Dental Hygiene
- Diploma in Community Health

Candidate should have obtained a Minimum 45% mark in qualifying examination. In case of SC/ST candidates minimum of 35 % marks.

Lateral entry: Candidates who have completed 3 years Diploma in any health sciences, or diploma in public health/community medicine can join 3rd semester directly provided they have undergone training in minimum of three Courses mentioned in semester 1 and 2 of BPH curriculum of RGUHS or any equivalent topics related to public health.

Candidates who have completed 3 years Diploma after 12th /10 +2/PUC are eligible to 2nd year (3rd Semester) directly.

Candidates eligible for lateral entry should undergo an entrance test (MCQ) conducted by the affiliated colleges.

For passing the test, the candidate has to obtain minimum of 50% marks.

Medium of Instruction

English shall be the medium of instruction for the Courses of study as well as for the examination.

Duration of study Programme

The duration of the Programme shall be on full time basis for a period of four years Eight Semesters) + 6 Months Internship from the commencement of the academic term.

Course of study Programme

The course shall be pursued on full time basis. No candidate shall be permitted to work in a health care facility or a related organization or laboratory or any other organizations outside the institution while studying the course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of study.

Credit System (CS)

The BPH program shall follow Credit System

Andragogy Approaches

Books are the best teachers, but experience makes man perfect. The proficient and lively theory classes shall be equally blended with various practical applications and group activities such as:

1. Assignment
2. Group Discussions
3. Role Plays
4. Case Studies
5. Seminar Presentations
6. Management Games
7. Extempore Sessions
8. Self-assessment and Transactional analysis
9. Negotiations
10. Lab experiments
11. Workshop
12. Field Studies
13. Quiz
14. In basket exercises
15. Brain Storming

All these aimed for the overall development of the emerging health system administrators, especially in decision making, critical analysis and assessment of situations, creative thinking and proactive measures towards system management.

Table – I. Courses prescribed for the eight semesters

	Semester 1		
Code	**Course**	**IA Marks**	**Assignment Marks**
BPH 1.1	Introduction to Public Health	25	15
BPH 1.2	Human Biology 1(Anatomy, Physiology & Biochemistry)	25	15
BPH 1.3	Human Biology 2 (Microbiology , Pathology and Parasitology)	25	15
BPH 1.4	Epidemiology 1	25	15
	Semester 2		
Code	**Course**	**IA Marks**	
BPH 2.1	Basic Biostatistics	25	15
BPH 2.2	Demography	25	15
BPH 2.3	Environmental Health	25	15
BPH 2.4	Social & Behavioral Health	25	15
	Semester 3		
Code	**Course**	**IA Marks**	
BPH 3.1	Epidemiology 2	25	15
BPH 3.2	Occupational Health	25	15
BPH 3.3	Infectious Diseases	25	15
BPH 3.4	Health Education and Communication	25	15
BPH 3.5	Basic Research Methodology (Subsidiary Course)	NA	NA
	Semester 4		
Code	**Course**	**IA Marks**	
BPH 4.1	Women's Health	25	15
BPH 4.2	Child & Adolescent Health	25	15
BPH 4.3	Health Systems Management	25	15
BPH 4.4	Chronic Diseases	25	15
BPH 4.5	Rural, Tribal and Urban Health(Subsidiary Course)	NA	NA

	Semester 5		
Code	**Course**	**IA Marks**	
BPH 5.1	Aging Population	25	15
BPH 5.2	Public Health Policy	25	15
BPH 5.3	Health Economics	25	15
BPH 5.4	Public Health Informatics	25	15
BPH 5.5	Financial Management (Subsidiary Course)	NA	NA
	Semester 6		
Code	**Course**	**IA Marks**	
BPH 6.1	Global Health	25	15
BPH 6.2	Public Health Ethics and Law	25	15
BPH 6.3	Healthcare Organization Management	25	15
BPH 6.4	Public Health Nutrition	25	15
	Semester 7		
Code	**Course**	**IA Marks**	
BPH 7.1	Disaster & Emergency Management	25	15
BPH 7.2	Monitoring & Evaluation in Public Health	25	15
BPH 7.3	Public Health Project Management	25	15
BPH 7.4	Public Health Leadership	25	15
	Semester 8		
Code	**Course**	**IA Marks**	
BPH 8.1	Recent Advances in Public Health (Subsidiary Course)	NA	NA
BPH 8.2	Life Skills Education (Subsidiary Course)	NA	NA
BPH 8.3	Field Experience	NA	NA

Teaching hours

The teaching hours for first to seventh semesters are shown in Table II.

Teaching hours

The BPH program follows the credit system, and it involves a total of
127 credit hours. Each course is assigned with certain number of credit hours depending on lecture, laboratory, and practical hours. Each credit hour is equivalent to 15 hours of lecture, laboratory, and practicum per week

Calculation of credit hours: For example, Theory
3 hours per week X 4 weeks X 5 months = 60 hours (4 Credits)

Practical
2 hours per week X 4 weeks X 5 months = 40 hours

4 Courses per semester for 7 semester, + final semester project/field experience

Credit Hours by Semester (theory and Practical)
Semester I (16 Credits) + Semester II (16 Credits) + Semester III (16 Credits) + Semester IV (16 Credits) + Semester V (16 Credits) + Semester VI (16 Credits) + Semester VII (16 Credits) + Semester VIII (15 Credits) = 127 Credits. **1 credit hour = 15 hours**

Total 1720 + 1345 = 3065 hours

Semester	Theory	Healthcare organization/practi cal training / Field Visit	Total
First	240	160	400
Second	240	160	400
Third	240	160	400
Fourth	240	160	400
Fifth	240	160	400
Sixth	240	160	400
Seventh	240	160	400
Eighth	40	225	265
Total	1720	1345	3065

Table II. Distribution of Teaching hours for Theory, Hospital/organization / Practical training and Field Visit

Theory*:* 12 hours of theory classes per week and 8 hours of practical per week.

Practical exposure

Healthcare organization/ Community centres / Practical training:

The students shall spend 2 hours per day training. All candidates shall undergo training in various PHC's, NGO's, and Government Healthcare Organizations. They will prepare a report at the end of each posting and the same should be evaluated by the faculty. Practical hours may be used also for interactive sessions, seminars and symposia.

Attendance

Every candidate shall have attended at least 80% of the total number of theory and field visit /practical training classes conducted from the date of commencement of the term to the last working day as notified by university in each of the Courses prescribed for that semester separately, in theory and field visit/practical training. Only such candidates are eligible to appear for the university examination in their first attempt. A candidate lacking the prescribed percentage of attendance in any Courseeither in theory or field visit/practical training in the first appearance will not be eligible to appear for the University Examination in that particular Course.

Monitoring Progress of Studies

Work Diary/Record Book- Every candidate shall attend symposia, seminars, conferences, journal review meetings and lectures during each semester as prescribed by the department and not absent him/her from work without valid reasons. Every candidate shall maintain a work diary and record of his/her participation in the training programme. Special mention may be made of the presentations by the candidate as well as details of field visit/practical training work conducted by the candidate. The work diary and record shall be scrutinized and certified by the concerned faculty members.

Minimum requirement for Institutions to offer BPH course

BPH course shall be offered only by a separate public health college that has been registered and recognized by Government of Karnataka, not by any department of other colleges.

There shall be a separate principal and teaching staff for the said college.

Infrastructure required

1. Principal room -1
2. Staff room-1
3. Office room-1
4. Class rooms Minimum -3
5. Library /Central Library-1
6. Public Health Practice Lab-1
7. Students lounge -1

Teaching Faculty

Qualification and Experience required for appointment as teachers on full time basis for BPH course

For an intake of 10 - 40 students:

Total Minimum staff strength of Five (5) full time faculties are required, among whom one should be the Principal.

The second faculty should be at least at the level of Associate Professor /Assistant Professor

The third and fourth should be at least at the level of lecturer /Assistant Professor

Composition of Faculty may be as follows

Principal - 1
Professor or Associate Professor -1 Assistant Professor /Lecturer - 3

Table III : Qualification of Teachers

Sl No	Staff Description	Minimum Qualification
1	Principal	MPH with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) from an Indian University, or an equivalent degree from an accredited foreign university. Minimum of 10 years work/teaching experience in relevant field. **Or** PhD in relevant Coursewith 8 years of work or teaching experience. **(Note: A professor is eligible to become a principal)**
2	Professor	MPH with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) from an Indian University, or an equivalent degree from an accredited foreign university. Minimum of 10 years work/teaching experience in relevant field. **Or** PhD in relevant Coursewith 8 years of work or teaching experience. **Or** MD community medicine with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) from an Indian University, or an equivalent degree from an accredited foreign university. Minimum of 10 years of work or teaching experience
3	Associate professor	MPH with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) from an Indian University, or an equivalent degree from an accredited foreign university. Minimum of 7 years work/teaching experience in relevant field. **Or**

		MD community medicine with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) from an Indian University, or an equivalent degree from an accredited foreign university. Minimum of 7 years work/teaching experience in relevant field. **Or** PhD in relevant Coursewith 5 years of work or teaching experience.
4	Assistant Professor	MPH with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) from an Indian University, or an equivalent degree from an accredited foreign university. Minimum of 2 years work/teaching experience in relevant field. **Or** MD community medicine with at least 55% marks (or an equivalent grade in a point scale wherever grading system is followed) from an Indian University, or an equivalent degree from an accredited foreign university. Minimum of 2 years work/teaching experience in relevant field. or PhD in relevant Course.
5	Lecturer	MPH/MD community medicine

Note: For specialized Courses faculty with minimum of Master's Degree in area of specialization can teach the Courses such as biostatistics, epidemiology, public health nutrition, health informatics, demography etc

Project Supervisor/Academic Advisors

Qualified teaching staff at level of assistant professor or above grade is eligible as Project Supervisors/Academic Advisors

Change of Project Supervisor/Academic Advisors

In the event of project supervisor/Academic Advisors leaving the Institute/ college due to any reason or in the event of death of the supervisor or any other valid reasons, project supervisor/academic advisors may be changed, a note should be sent to the concerned university authorities.

Scheme of Examinations

The University conducts two examinations in a year at an interval of not less than five to six months.

Internal Assessment

Theory: 25 marks per Course

Institutions running the course shall conduct two tests for each Coursein each semester for Internal Assessment. The second test shall be conducted one month prior to the university examination so that it also serves as preparatory examination. Average of the marks obtained in the two tests shall be computed for internal assessment and shall be sent to the university as per the notification issued by Registrar (Evaluation) before each university examination.

Assignment/Practical training: 15 marks are allotted for assignment each Course/ field visit /various academic activities/ practical training and every candidate shall prepare a brief report on the visit that shall be included in assignment marks.

Assignment Records and marks obtained in tests will be maintained by the college and made available to the university when required. Marks of periodic tests shall be signed by the students before it is sent to the university

If a candidate is absent from a test due to genuine and satisfactory reason, such a candidate may be given a re-test within a fortnight.

Distribution of Assignment marks

To be eligible to appear for the university examination the student should get minimum 50% marks in internal assessment in each Course.

Internal assessment marks and assignment marks shall be added to University Examination marks for final calculation of grades

University examination

i. University conducts two examinations in a year at an interval of not less than four to six months.
ii. Number of examiners for viva voce shall be two, comprising of one internal and one external examiner appointed by the university.
iii. Qualification and teaching experience required for appointment as an examiner for viva shall be the same as that of Professor or Associate Professor.
iv. Theory papers will be evaluated by Courseexperts who are on the approved panel of examiners in RGUHS.

Eligibility to appear in university examination: A candidate shall be eligible to appear for first university examination at the end of six months from the commencement of the course and for subsequent year university examination at an interval of six months provided he/she has satisfactorily completed the prescribed course and fulfilled the prescribed attendance at the end of each semester.

Theory (Written) examination: Theory examination shall be conducted at the end of every semester. The theory papers each will be of three hours duration. Each paper shall carry 100 marks.

The question paper pattern shall be as follows: Long essays – 3 questions of 10 marks each and Short essay – 10 questions of 5 marks each (1 choice) and 10 objective type questions (MCQs, one word, true or false or one sentence) of 2 marks each.

Viva- voce: (100 marks). This shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills. Both internal and external examiners shall conduct the viva- voce. A detailed viva voce examination comprising of syllabi and discussion on the project work shall be conducted after the eight/final semester completion by a panel of two university appointed examiners, of whom one will be internal and the other external examiner.

Comprehensive Exam: At the end of eight semesters a comprehensive exam shall be conducted at the college level. Comprehensive exam shall be MCQs adopted from all the Courses of the seven semesters. Maximum of two questions from each Coursecarrying 1 mark each, total 60 questions and 1 question from subsidiary Course(3 hours duration). Note: there shall be no university exam, but however clearing the exam with minimum of 40% is essential for the student to appear for viva.

Table- V. Coursewise Distribution of Marks for Theory and Viva Voce Examinations

SEMESTER	No of Theory Papers	QP Code	Course	Theory Marks	Viva Marks	Total
SEMESTER- 1	Paper 1	BPH 1.1	Introduction to Public Health	100	NA	400
	Paper 2	BPH 1.2	Human Biology 1(Anatomy, Physiology & Biochemistry)	100	NA	
	Paper 3	BPH 1.3	Human Biology 2 (Microbiology , Pathology and Parasitology)	100	NA	
	Paper 4	BPH 1.4	Epidemiology 1	100	NA	
SEMESTER-2	Paper 1	BPH 2.1	Basic Biostatistics	100	NA	400
	Paper 2	BPH 2.2	Demography	100	NA	
	Paper 3	BPH 2.3	Environmental Health	100	NA	
	Paper 4	BPH 2.4	Social & Behavioral Health	100	NA	
SEMESTER- 3	Paper 1	BPH 3.1	Epidemiology 2	100	NA	400
	Paper 2	BPH 3.2	Occupational Health	100	NA	
	Paper 3	BPH 3.3	Infectious Diseases	100	NA	
	Paper 4	BPH 3.4	Health Education and Communication	100	NA	
SEMESTER-4	Paper 1	BPH 4.1	Women's Health	100	NA	400
	Paper 2	BPH 4.2	Child & Adolescent Health	100	NA	
	Paper 3	BPH 4.3	Health Systems Management	100	NA	
	Paper 4	BPH 4.4	Chronic Diseases	100	NA	
SEMESTER -5	Paper 1	BPH 5.1	Aging Population	100	NA	400
	Paper 2	BPH 5.2	Public Health Policy	100	NA	
	Paper 3	BPH 5.3	Health Economics	100	NA	
	Paper 4	BPH 5.4	Public Health Informatics	100	NA	
SEMESTER-6	Paper 1	BPH 6.1	Global Health	100	NA	400
	Paper 2	BPH 6.2	Public Health Ethics and Law	100	NA	
	Paper 3	BPH 6.3	Healthcare Organization Management	100	NA	
	Paper 4	BPH 6.4	Public Health Nutrition	100	NA	
SEMESTER-7	Paper 1	BPH 7.1	Disaster & Emergency Management	100	NA	400
	Paper 2	BPH 7.2	Monitoring & Evaluation in Public Health	100	NA	
	Paper 3	BPH 7.3	Public Health Project Management	100	NA	
	Paper 4	BPH 7.4	Public Health Leadership	100	NA	
SEMESTER-8			Field Experience	NA	NA	
			Viva-Voce	NA	100	100
			Total	**2800**	**100**	**2900**

Declaration of pass

For I to VII semester a candidate shall secure a minimum of 40 marks out of 100 marks in university examination. And secure minimum 50% in university examination, internal assessment, and assignment added together in aggregate to be declared as pass. In case of VIII semester a candidate shall secure a minimum of 50% marks in viva voce to be declared as pass. A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in subsequent examination after paying fresh fee to the university. Anyone who has secured "F" Grade shall be declared as failed.

Marks cards shall consist of only GRADES scored in respective Courses. However, Letter grade shall be displayed with reference percentage

Grades shall be declared for the examinations on the basis of aggregate marks secured by a candidate at each of these examinations.

Percentage	**Letter Grade**	**Grade Point**
85% to 100%	A (Excellent)	4
70% to 84%	B (Very Good)	3
56% to 69%	C (Average)	2
50% to 55%	D (Pass)	1
Less than 50%	F (Fail)	0

(Note: No marks shall be displayed in marks card, Only SGPA and CGPA secured by the student shall be displayed in marks card)

A successful candidate obtaining Grade point "4" of the grand total aggregate in the first attempt shall be declared to have passed these Courses in high distinction

A successful candidate obtaining Grade point "3 to 3.9" of the grand total aggregate (SGPA/CGPA) in the first attempt shall be declared to have passed these Courses in distinction.

A successful candidate obtaining Grade point "2.5 to 2.9" of the grand total aggregate (SGPA/CGPA) in the first attempt shall be declared to have passed these Courses in first class

A successful candidate obtaining Grade point "1 to 2.4" of the grand total aggregate (SGPA/CGPA) in the first attempt shall be declared to have passed these Courses in second class.

A candidate who passes an examination in more than one attempt shall be placed in Pass Class irrespective of the percentage of marks secured

Carry over

Candidates can carryover only two Courses at a given time. However a candidate has to clear all Courses to be eligible to receive the degree

Number of attempts

A candidate is permitted not more than three attempts (actual appearance) to pass the examination or within two academic years from the year of first appearance of particular semester examination whichever is earlier. However, the candidates have to complete the full course of eight semesters within eight years from the date of admission, even if his three attempts are not completed in any Courses. A candidate will not be allowed to continue the course if he/she fails to comply with the above stipulation.

Maximum duration for completion of course: A candidate shall complete the course within eight years from date of admission failing which the candidate will be discharged.

Eligibility for award of degree

A candidate shall have passed in all the Courses of first to fourth year (All 8 semesters) to be eligible for award of degree

Credit System (CS) and Grade Point Average (GPA)

This BPH curriculum is competency based and follows Credit system and GPA for assessing and grading candidates. The total minimum credit points for BPH program shall be not less than 127 credits.

Credit: A unit by which the course work is measured.

Credit Hours: Credit hours or unit represent a mathematical summarization of all work completed, and are not the same as the actual classroom contact or instructional hours. One credit is equivalent to 15 hours of study. It could be 3 hours of per week of scheduled class/seminar time and 4 hours of student preparation time. Most of the courses are awarded 4 credit hours. Over an entire semester, it's nearly 60 hours of class time per Courseand 120 hours of student preparation on an average.

Cumulative Grade Point Average (CGPA)

It's a measure of overall cumulative performance of a student in various courses in all semesters and the sum of the total credits of all courses in all semesters. It is expressed and rounded up to two decimal places.

Semester Grade Point Average (SGPA): It is a measure of performance of work done in a semester. It is ratio of total credit points secured by the student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.

Letter Grades and Grade Points

Grade Point: It is a numerical weight allotted to each letter grade on a 4- point scale.

Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by letters A, B, C, D, and F.

Percentage	Letter Grade	Grade Point
85% to 100%	A (Excellent)	4
70% to 84%	B (Very Good)	3
56% to 69%	C (Average)	2
50% to 55%	D (Pass)	1
Less than 50%	F (Fail)	0

For non-credit courses 'Satisfactory' or 'Unsatisfactory' shall be indicated instead of the letter grade and this will not be counted for computation of SGPA/CGPA.

Academic Assessment

The assessment would be a continuous process throughout the semester; students must pass in all the assessment process. Equal importance shall be given to all the activities and assignments given in the institution. The academic assessment of student's performance comprises of three components .Weight and percentage allotted for components for each Courseis listed below.

Component	Percentage allotted
Assignment/Projects	15%
Internal Assessment	25%
Final Semester Exams	60%
Total percentage for each Course	100%

For GPA calculation marks obtained in Assignment + Internal assessment + 60% of marks obtained in Final semester exam shall be calculated**.**

Computation of SGPA and CGPA

The SGPA is the ratio of sum of product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all courses undergone by a student, i.e.

$$\mathbf{SGPA = \sum(Ci \times Gi) / \sum Ci}$$

Where Ci is the number of credits of the ith course and Gi is the grade point scored by the student in the ith course.

The CGPA is also calculated in the same manner taking into account all the courses undergone by a student overall the semesters of the program, i.e.

$$\mathbf{CGPA = \sum(Ci \times Si) / \sum Ci}$$

Where Si is the SGPA of the ith semester and Ci is total number of credits in that semester.

The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcript.

Illustration of Computation of SGPA and CGPA

Example: Student "XYX". Marks score in Semester 1

Course	**Assignment Maximum Marks :15**	**Internal Assessment Maximum Marks : 25**	**Final Semester Exam Maximum Marks 100**
Course1	14	23	85
Course2	10	20	70
Course3	13	20	60
Course4	10	12	55

Calculation of marks for grading

Course	**Assignment Maximum Marks :15**	**Internal Assessment Maximum Marks :25**	**Final Semester Exam Maximum Marks(60% of marks obtained out 100)**	**Total Marks**
Course1	14	23	51	88
Course2	10	20	42	72
Course3	13	20	36	69
Course4	10	12	33	55

Illustration for SGPA

Course	**Credit**	**Grade**	**Grade Point**	**Credit Point** **(Credit x Grade)**
Course1	4	A	4	12
Course2	4	B	3	15
Course3	4	C	2	10
Course4	4	D	1	3
Total	16			40

Thus, SGPA = 40/16 = 2.5

Illustration for CGPA

Semester 1	**Semester 2**	**Semester 3**	**Semester 4**
Credit: 16	Credit: 16	Credit: 16	Credit: 16
SGPA: 2.5	SGPA: 3	SGPA :4	SGPA: 3
Semester 5	**Semester 6**	**Semester 7**	**Semester 8**
Credit: 16	Credit: 16	Credit: 16	Credit: 4
SGPA: 2.2	SGPA: 3.6	SGPA :4	SGPA: 3

Thus, CGPA= (16 x 2.5 +16 x 3+ 16 x 4+ 16 x 3 + 16 x 2.2 + 16 x 3.6 +
16 x 4 + 4 x 3)/(16+16+16+16+16+16+16+4)= 3.4

Therefore as per calculation Student “XYX” CGPA is 3.4

Courses

The Courses and number of hours to be perused during the eight semesters are shown in Table VI

Semester	Code	Course	Number of Hours		
			Theory	**Practical**	**Total**
Semester 1	BPH 1.1	Introduction to Public Health	60	40	100
	BPH 1.2	Human Biology 1(Anatomy, Physiology & Biochemistry)	60	40	100
	BPH 1.3	Human Biology 2 (Microbiology , Pathology and Parasitology)	60	40	100
	BPH 1.4	Epidemiology 1	60	40	100
Semester 2	BPH 2.1	Basic Biostatistics	60	40	100
	BPH 2.2	Demography	60	40	100
	BPH 2.3	Environmental Health	60	40	100
	BPH 2.4	Social & Behavioral Health	60	40	100
Semester 3	BPH 3.1	Epidemiology 2	60	40	100
	BPH 3.2	Occupational Health	60	40	100
	BPH 3.3	Infectious Diseases	60	40	100
	BPH 3.4	Health Education and Communication	60	40	100
	BPH 3.5	Basic Research Methodology (Subsidiary Course)	60	40	100
		Exposure visits			
Semester 4	BPH 4.1	Women's Health	60	40	100
	BPH 4.2	Child & Adolescent Health	60	40	100
	BPH 4.3	Health Systems Management	60	40	100
	BPH 4.4	Chronic Diseases	60	40	100
	BPH 4.5	Rural, Tribal and Urban Health(Subsidiary Course)	60	40	100
		Exposure visits			

Semester	Code	Course		Number of Hours	
			Theory	**Practical**	**Total**
Semester 5	BPH 5.1	Aging Population	60	40	100
	BPH 5.2	Public Health Policy	60	40	100
	BPH 5.3	Health Economics	60	40	100
	BPH 5.4	Public Health Informatics	60	40	100
	BPH 5.5	Financial Management (Subsidiary Course)	60	40	100
		Exposure visits	60		
Semester 6	BPH 6.1	Global Health	60	40	100
	BPH 6.2	Public Health Ethics and Law	60	40	100
	BPH 6.3	Healthcare Organization Management	60	40	100
	BPH 6.4	Public Health Nutrition	60	40	100
		Exposure visits	60		
Semester 7	BPH 7.1	Disaster & Emergency Management	60	40	100
	BPH 7.2	Monitoring & Evaluation in Public Health	60	40	100
	BPH 7.3	Public Health Project Management	60	40	100
	BPH 7.4	Public Health Leadership	60	40	100
Semester 8	BPH 8.1	Recent Advances in Public Health (Subsidiary Course)	20	NA	20
	BPH 8.2	Life Skills Education (Subsidiary Course)	20	40	60
	BPH 8.3	Field Experience		225	225
		Total	2000	1505	3405

SEMESTER -1
BPH 1.1 Introduction to public health

Course description

This course provides the students with broad overview of public health and its various activities, foundational knowledge of public health, historical contributions; key terms and concepts.

Objectives

At the conclusion of the course, the student will be able to:

- List and describe the vision, mission, functions and essential services of public health
- Discuss the development in the field of public health
- Demonstrate understanding of key public health concepts, processes, methods, and data that are essential in understanding a public health problem and the approaches essential to public health practice
- Understand health disparities
- Identify factors that influence health and determine ways in which health status is measured
- Identify public health's core functions and discuss how these are translated into practice

Contents

- **Basics of public health**
  - What is public health (MK)
  - History and Evolution of public health (DK)
  - Public health as a system (MK)
  - Features of public health(MK)
  - Scope of public health (MK)
  - Difference between community health, medical care, and clinical medicine, public health (MK)
  - Changing concepts in public health (Mk)
  - Social control of medicine (DK)

- **Concept of health, illness and diseases**
  - Concept of health: Biomedical concept, Ecological concept, psychosocial concept and holistic concept.(MK)
  - Dimensions of health and disease (MK)
  - Determinants of health and disease(MK)
  - Concept of disease (MK)
  - Natural history of disease (MK)
  - Concept of causation (MK)
  - Ecology of health(MK)
  - Measure health- Indicators of health(MK)
  - Concept of prevention(MK)
  - Modes of intervention(MK)
  - Changing pattern of diseases; transitions(MK)
- **Measuring health and disease**
  - Morbidity and Mortality measures(MK)
  - Comparisons of health indicators of selected developed and developing countries (such as USA, UK, China, India,) (DK)
  - Assessing the health needs: Health status assessment, Health needs assessment, and Health impact assessment (MK)
  - Community Diagnosis(MK)
- **Core function of public health practices**
  - Relationship between public health and medical care system (MK)
  - Role of public health in global society (DK)
  - Impact of health disparities on public health(MK)
  - Economic dimension of health outcomes(MK)
- **Orientations to Public health problems**
  - Communicable diseases (DK)
  - Non communicable diseases (DK)
  - Preventable diseases (DK)

- **Resources of public health**
  - Infrastructure of public health (MK)
  - Human resources in public health (MK)
  - Organizations- resources (MK)
  - Challenges in public health (MK)
- **Indian public health system**
  - Public health hospital system (MK)
  - Indian public health standards (MK)
  - Primary care system (MK)
  - Overview of Health programs(MK)
- **International health**
  - History of International health(NK)
  - International health agencies- WHO, UNICEF,World Bank, UN, UNDP, ILO and other agencies (DK)

Practicum

Visits to sub centres, anganwadi, primacy health centre, community health centers, district hospitals to observe their functions, structure and identify problems

Reference

- Burnord J, Turnock ; Public health: What it is and how it works, -, Jones and Bartlet Publishers
- Elena Andreson, Erin DeFries Bouldin ;Public Health Foundations: Concepts and Practices
- Theodore H Tulchinsky, Elena A Varavikona; The NewPublic Health
- Oxford Textbook of Public Health
- Oxford Handbook of Public Health
- K.Park ; Park's Textbook of Preventive and social Medicine, -, Banarsidas Bhanot (publishers)
- Relevant websites and research articles

BPH 1.2 Human Biology 1 (Anatomy, Physiology and Biochemistry) Course description

This course provides basic concept and knowledge on Anatomy, Physiology and Biochemistry. The course focus on the basic biological concepts of structure and function of the human body and the mechanisms of maintaining homeostasis within it

Objectives
At the conclusion of the course, the student will be able to:

- Recognize body parts and functions.
- Demonstrate understanding of body mechanics
- Explain the structures and functions of different system of human body, relation to health and disease andactions

Course Content

- **Introduction to human anatomy and physiology:**
  - Introduction to human body and its functional organization. (MK)
  - Levels of structural organization and body systems (MK)
  - Basic life process: Homeostasis (MK)
  - Anatomical positions, body cavities and terminologies (DK)
  - Units of Body :Cells , Tissues , Organs , Organ Systems (MK)
  - Cell reproduction and genetic control(MK)
  - Transport of substance through cell (MK)
- **Anatomy and physiology of Organ system: Identify parts and its functions**
  - Integumentary System : Structure, types, and functions of skin. (MK)
  - The Musculoskeletal system: Bone tissue, structure, function of bones and skeletal system, types of bones, features and their function, Joints and types, Movements, muscular tissue, types and mechanism of contraction and relaxation. (MK)
  - Central Nervous System: Organization and Functions of nervous system; Nerve tissue- transmission and signal, neurotransmitters, sensory receptors; Spinal cord- Functions and reflexes; Brain and cranial nerves- functions; autonomic nervous system; Sensory organs- structure and its functions. (MK)
  - Gastro intestinal system: Overview of digestive system, structure, parts and function; Digestion and absorption; Metabolism of carbohydrates, proteins, lipids, vitamins and minerals; Liver and gall bladder – structure and functions; (MK)

- Respiratory system: Structure and function; pulmonary ventilation; transportation of oxygen and carbon dioxide in blood and body tissues, Respiration process and its regulation(MK)
- Blood: Components, formation; blood vessels, structure, function, properties; blood types, haemostatic and blood coagulation. (MK)
- Cardiovascular system: Structure and function of health; circulation; cardiac cycle; valve and sounds. (MK)
- Urinary and Reproductive system: Structure, organization and function; nephron; urine formation, tubular absorption and secretion; acid base regulation and balance; body fluids, water, electrolytes balance. (DK)
- Male and female reproductive system- structure and function, foetal development. (MK)
- Endocrine system: Endocrine glands; Hormones and its roles- secretion, transport; Functions of glands; mechanism of action of hormones; Basic measurements; pituitary gland, thyroid, adrenal cortex, insulin. (DK)

Reference

- Tortora Gerard J. Tortora , Bryan H. Derrickson ; Principlesof Anatomy and Physiology
- John E. Hall ; Guyton and Hall Textbook of Medical Physiology (Guyton Physiology)
- Kim E. Barrett , Susan M. Barman, Scott Boitano , Heddwen L. Brooks; Ganong's Review of Medical Physiology
- Richard Drake ,A. Wayne Vogl, Adam W. M. Mitchell; Gray’s Anatomy

BPH 1.3 Human Biology 2 (Microbiology and Pathology) Course description

This course designed to serve as an introduction to the basic principles of pathology, microbiology, virology, microbial parasitology, infection, pathogenicity, and host immunity

Course Objectives:
Content:

Introduction to pathology

- Basic definitions and terminologies in pathology

General Pathology

- Cell injury and cellular adaptation: Cell injury(etiology, pathogenesis, morphology , cell death, autolysis, necrosis apoptosis and gangrene); Cellular adaptation (atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia) (MK)
- Immunopathology: components of immune system, diseases of immunity (AIDS, autoimmune disorder, transplant rejection), (MK) amyloidosis. (DK)
- Haemodynamic disorders: water and electrolyte balance, acid base balance, pressure gradients and fluid exchange; oedema- types and pathogenesis, over hydration, dehydration, disturbance of electrolytes, haemorrhage, shock, thrombosis, ischaemia, infarction. (MK)
- Inflammation and healing: acute inflammation, regulation of inflammation, causes, systemic effects, chronic inflammation. ; Healing- regeneration, repair, wound healing. (MK)
- Neoplasia: classification, characteristics of tumors, mechanism, grading and stages, diagnosis. (DK)

Systemic Pathology

- Arteries: arteriosclerosis, atherosclerosis, aneurysm, (DK) varicose veins, lyphoedema. Ischaemic heart disease, (MK) angina pectoris, acute myocardial infarction, rheumatic fever and rheumatic heart disease, (MK)
- Erythropoiesis: anaemia, leukaemia, haemorrhage. (MK)
- Respiratory :pneumonia, COPD, Pulmonary tuberculosis (MK)
- Liver: Jaundice, (MK) hepatitis, (MK) hydatid disease, cirrhosis. (DK)
- Diabetes Mellitus and Hypertension (MK)

Infectious and parasitic diseases

- Diseases caused by bacteria(plague, anthrax, whooping cough, staphylococcal infection; streptococcal, clostridial disese) (MK)
- Diseases of fungus (candiadis and mycosis) (DK)
- Disease of virus(Varicella zoaster, herpes, Viral Haemorrhagic Fever, SARS, Rabies (MK)
- Diseases of Parasites(amaebiasis, malaria, filaria) (MK)

Microbiology

- Introduction :Morphology and physiology of bacteria, virus, fungus, parasites (DK)
- Sterilization and Disinfection (MK)
- Antimicrobial agents: Therapy and resistance. (DK)
- Immunology: types of immunity, antigen, antibodies, antigen-antibody reaction, immune response, hypersensitivity, (MK)
- Infection and nosocomial infections. (MK)

Parasitology : life cycle of common parasites and its control meseasures.- Protozoa, helminths, arthropods, E-coli, malaria, hookworm, ascarias lumbricoides, filaria. (DK)

Reference

- Textbook of pathology by Harsh Mohan
- Robbin's pathology,
- Textbook of microbiology by Ananthanarayan and paniker
- Textbook of medical parasitology by K.D Chatterjee.

BPH 1.4 Epidemiology 1

Course description

This course introduces the basic principles, concepts, methods of epidemiology with emphasis on critical thinking, epidemiological investigations and its application in public health practice.

Objectives
At the conclusion of the course, the student will be able to:

- Describe and apply epidemiological concepts and strategies in planning and implementing health programs
- Understand the basic epidemiological methods and study designs
- Learn the basic concepts of screening and outbreak investigations.
- Able to critically review published epidemiological studies.

Contents

- **Introduction to Epidemiology**
  - Definitions, scope and uses of epidemiology (MK)
  - Historical development of epidemiology (NK)
- **Dynamics of Disease Transmission**
  - Definition of health and disease (MK)
  - Spectrum of diseases (MK)
  - Determinants of health and disease (MK)
  - Natural history of disease (MK)
  - Causation (MK)
  - Epidemiological triad (MK)
  - Modes of transmission (MK)
  - Epidemic, Endemic and Pandemic (MK)

- **Measures of frequency of diseases or disease occurrence**
    - Measures of morbidity: incidence, prevalence , rate, ratio, proportions,, Relationship between incidence and prevalence (MK)
    - Measures of mortality : mortality rates: death rates, crude death rate,specific death rate, birth rate, infant mortality rate, maternal mortality, (MK) case fatality rate, proportional mortality, standardization.(DK)
    - Disability : YPLL, DALYs (DK)
- **Measures of Risk**
    - Risk Ratio (DK)
    - Odds Ratio (DK)
- **Association and causation**(MK)
- **Introduction to epidemiological studies** (MK)
- **Bias, Confounding factors, Errors, Precision.** (MK)

Reference

- Leon Gordis , Epidemiology,
- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers
- Oleckno, William, Essential Epidemiology: Principles and Applications , Waveland Press, Inc., 2002
- Ann Aschengrau, Essentials of Epidemiology in Public Health, Jones & Bartlett Publishers

BPH - FIRST SEMESTER (THEORY EXAMINATION) QUESTION PATTERN

Duration: 3 Hours
Maximum Marks: 100 Marks

Type of Questions	No. of Questions	Marks for each question	Total Marks
Long Essays	3	10	30
Short Essays**	10	5	50
Objective type***	10	2	20

** Students are required to attempt 10 out of 11 Short Essay type
***Objective Type questions can be combination of fill in blanks, true or false, multiple choice questions and one or two sentence answers.

SEMESTER - II

BPH 2.1 Biostatistics

Course Description

This course provides students with basic statistical concepts and techniques that are used in public health.

Objectives

At the conclusion of the course, the student will be able to:

- Understand the basic concepts in biostatistics
- Apply statistical knowledge to designing research studies.
- Determine the proper method to be used in analyzing data sets

Contents

- **Introduction**
  - Basic concepts of biostatistics (DK)
  - Definition, scope and uses (DK)
  - Role of statistics in public health and health sciences research (MK)
  - Basic types of Research Studies(MK)

- **Collection and Compilation of data**
  - Definition and types of data: Qualitative and Quantitative (MK)
  - Variable and types(MK)
  - Measurement and measurement scale(MK)
  - Methods of data collection, its merits and demerits(MK)
  - Tools for data collection(MK)
  - Tabulation of data(MK)
    - Frequency distribution
    - Multiple classification

- Graphical representation of data(MK)

- **Summarization of data**

  - Measures of central tendency (MK)
    - Mean, Median and Mode
    - Calculation of Measures of Central tendency
  - Measures of Dispersion (MK)
    - Range, Quartiles, percentiles
    - Mean deviation
    - Variance and standard deviation
    - Coefficient of variation
    - Skewness

- **Probability concepts** (DK)
  - Basic concepts of probability
  - Elementary properties of probability
  - Independent and disjoint events
  - Probability rules and properties

- Introduction to Probability distribution
  - Normal distribution and itsapplication
  - Binomial distribution and itsapplication
  - Poison distribution and itsapplication

- **Introduction to Sampling** (MK)
  - Sampling Distribution
    - Population
    - Sample
    - Criteria for a good sample
    - Application of sampling in public health
  - Sampling techniques (MK)
    - Convenience sampling
    - Simple random sampling
    - Systematic sampling
    - Stratified random sampling
    - Cluster sampling
    - Calculation of sample
    - Errors in sample surveys

- **Comparing sample estimates** (DK)
  - Estimation Versus Hypothesis testing
  - Point estimates
  - Confidence intervals

- **Basics of Hypothesis testing** (MK)
  - Sampling variation
  - Null and Alternative hypothesis
  - Concepts and steps in testing of hypothesis
  - Type I and Type II errors
  - Parametric tests (DK)
    - Single population mean
    - Paired comparisons- paired-t test
    - Two population mean- unpaired t test
    - Analysis of Variance
    - Analysis of Co-variance
  - Introduction to Non Parametric Tests (DK)
    - Chi Squared test
    - Test of goodness of fit
    - Test of independence
    - Test of homogeneity

- **Simple liner regression and correlation** (DK)

Reference

- Rao NSN, Applied statistics in health sciences, JP publishers
- Mahajan B.K, Methods of biostatistics, Kothari book depot, A.D Marg, Bombay
- Wayne W. Daniel and Chad L. Cross, Biostatistics: A Foundation for Analysis in the Health Sciences, JohnWiley & Sons, Inc
- Chap T Le, Introductory biostatistics, Wiley Inter science

BPH 2.2 Demography

Course description

This course introduces the students to demography, basic techniques of demographic analysis. Students will familiarize in source of data available for demographic research, how population is changed by fertility, mortality and migration and how these affect population structure of a country.

Course Objectives:
At the conclusion of the course, the student will be able to:

- Identify appropriate sources of data
- Perform basic demographic analysis
- Compare population and projections, interpret data using demographic methods.

Contents

- **Introduction to demography** (MK)
  - Definition , concept and importance, Scope of demography
  - Population studies: nature and scope
  - Development of population studies
  - Development of population studies in India
  - Population growth and consequences – at global and national level.
- **Sources of Population data** (MK)
  - Population data- scope, objectives, and importance
  - Sources of data : Census, vital statistics/ registration of vital events , sample surveys, dual report system, population registries.
  - Advantages and disadvantages of various sources of data
  - Collection and processing of demographic data
  - Demographic transition
- **Population theories** (MK)
  - Malthusian Theory
  - Theory of demographic transition
  - Baby boom syndrome

- **Population structure and characteristics** (MK)
    - Population size and structure
    - Population distribution using demographic characteristics such age, sex, race, marital status, education, economic status.
    - Sex ratio
- **Demographic measures and methods** (MK)
    - Mortality and its measures (crude rates, age specific, cause specific, standardized, life table, survival rates)
- **Fertility** (MK)
    - Basic terminologies: Fertility, Fecundity, Sterility, family size, birth order, parity conception, natural fertility, family planning
    - Fertility and social norms
    - Physiological factors and fertility
    - Social and cultural factors and fertility,
    - Family planning indication and methods
- **Migration and Urbanization** (MK)
    - Migration and types
    - Sources of data and factors affecting migration
    - Estimate net migration using different assumptions
    - Indicators of migration
    - Urbanization
    - Urban and rural distribution
    - World, India and other countries
- **Population Policy (DK)**
    - Evolution of population policy in India
    - Population policy and policy making
    - Population change: past, present and future
    - National population policy (MK)

Practicum

Survey, estimating various rates and trends, census data , NFHS questionnaire

Reference

- Bouge Donald: Principles of Demography, Johnwiley & Sons, New York
- Srivastava S.C: Studies in Demography, Jai Prakashnath & Co, Subash Bazar, Meerut, India
- Asha A Bhende & Thara Kanitkar : Principles of population studies, Himalaya Publishing Hse.
- Agarwal S.N: India's population problems, Tata McGrew Hill, New Delhi
- Rao NSN: Elements of health statistics, Tata book agency, Varanasi
- Neelakantan N: A modern treatise in preventive medicine & Community health, Neela publishers, Venu Vilas, Poojapura, Thiruvanathapuram
- Park K: Text book of preventive and social medicine, M/s Banarasidas, Jabalpur
- Barclay G.W.: Techniques of population analysis, Wiley, New York

BPH 2.3 Environmental Health

Course Description

This course will provide students a broad introduction to the scientific basis of environmental health from a public health perspective. The course intends to address the issues in environmental health, using tools, concepts & methods used in environmental health. Students on completion will be able develop skills on critical analysis of current environmental health problems.

Objectives
At the conclusion of the course, the student will be able to:

- Learn the basic concepts of environmental health sciences and key environmental health issues.
- Understand the risk assessment concepts, used to describe, asses, control and make decision about the environmental health issues.
- Develop skills in analyzing, managing and community about environmental health issues.
- Identify some of the major environmental health hazard.

Contents

- **Introduction to environmental health**
  - Ecosystem, (MK)
  - Climate, (DK)
  - biomes, (DK)
  - Links between environment and human health. (DK)
- **Water:** (MK)
  - Introduction
  - Properties of water
  - Hydrological cycles
  - Uses of water
  - Water resources- Sources of water supply
  - Water and health
  - Water shortage and scarcity
  - Water consumption and management
  - Sources of drinking water
  - Water pollution
  - Types of pollution, sources of pollution
  - Water treatment
  - Purification of water

- Water quality – critical and standards
- Surveillance of drinking waterquality.

- **Waste water disposal and treatment** (MK)
  - Sewage system
  - Sewage disposal
  - Biological oxygen Demand
  - Public health aspects of sewage
  - Types of disposal
  - Pits privies, septic systems etc
  - Municipal sewage treatment- modern sewage treatment, sulabh souchalay etc
- **Solid and hazardous waste** (MK)
  - Definition and characterization of municipal solid waste
  - Sources of waste/ refuse
  - Collection and disposal of solid waster
  - Types of latrines
  - Management of solid waste
  - Dumpi8ng, landfills, incinerator, composting manure pits, burial etc
  - Hazardous waste, - sources of hazardous waste
  - Management and disposal of hazardous waste
  - Sanitation and excreta disposal in fairs, festivals and public gathering
  - Excreta disposal- public health importance
- **Air, Noise and Radiation**
  - Air- Composition (DK)
  - Atmosphere and methods of dispersion (DK)
  - Chemical and physical characteristics (DK)
  - Health implications of air pollution (MK)
  - Air pollution- air pollutants (MK)
  - Outdoor and indoor air pollution (MK)
  - Prevention of air pollution (MK)
  - Ventilation (MK)
  - Noise- properties, health effects of noise, control, and regulations (MK)
  - Light (MK)
  - Radiation- sources, types, and health effects of radiations. (MK)
  - Public health importance of air, noise, light, ventilation and radiation(MK)

Reference:

1. Essential Environmental Health by Fries, Jones & Bartlett Publishers – 2007

2. Living with the Earth- Concepts of Environmental Health Science- Gary S Morare- Lavis Publications

3. Environmental Science- Toward a Sustainable future - Richard T Wright, Dorothy F Boors

PHI learning Private ltd- New Delhi, Pearson Education

4. Environmental Health by Moeller D.W, Harward University press.

5. Park's Textbook of Preventive and Social Medicine, K.Park. Banarsidas Bhanot publishers.

BPH 2.4 Social and Behavioural Health

Course description

This course provides students with basics in behavioral and social science theory, research, and interventions pertaining to public health. Course will provide exposure to a broad range of theories, including the theoretical foundations of social science applications.

Objectives
At the conclusion of the course, the student will be able to:

- Understand the behavioral, social, and cultural factors associated with health and illness.
- Apply relevant social and behavioral theories to diagnose and understand individual, social network, organizational, community, and policy-maker behaviors associated with the planning, implementation, evaluation, and maintenance of community-based primary health care programs

Contents

- **Introduction to Social and Health Behavioural Health**
  - Importance of social and behavioural factors in public health (MK)
  - Historical perspectives on population and diseases (DK)
- **Health behavior: role of behavior factors in disease and disorders**
  - Health behavior, health habits, Illness behavior (MK)
  - Practicing and changing health behavior (MK)
  - Barrier to modify poor health behavior (MK)
  - Intervening with children, adolescents, adults and at risk (MK)
  - Social determinants of Health (MK)
  - Changing health habits (DK)
- **Basic concepts of society, community and family**
  - Society: features and types (DK)
  - Concept of culture: characteristics, elements, variability (DK)
  - Social institutions: marriage and family (DK)

Health Behaviour Models

- Social Epidemiology (MK)
- Health belief model (MK)
- Theory of planned behavior (MK)
- Transtheoritical Model and change process (MK)
- Social network theory (MK)
- Diffusion of innovation (MK)

- Social reaction to diseases (MK)
- Comparative health cultures (MK)
- Health disparities, (MK)

Reference

- Social and Behavioural – Foundations of public health- by Jeannie Coreil
- Essentials of health behavior: Social and behavioural theory in public health by Mark Edberg (Jones and Bartlettpublishers
- Foster and Anderson: Medical Anthropology, Wiley, New York
- Related web resource
- Green LW and MW Kreuter. Health Promotion Planning. Mayfield Publishing Company (ISBN: 0767405242, Hardcover 3rd edition, February 1999).
- Anderson & Taylor, Sociology: Understanding a Diverse Society.
- Neubeck and Glasberg, Selected Material from Sociology: Diversity, Conflict, and Change.

BPH – SECOND SEMESTER (THEORY EXAMINATION) QUESTION PATTERN

Duration: 3 Hours
Maximum Marks: 100 Marks

Type of Questions	No. of Questions	Marks for each question	Total Marks
Long Essays	3	10	30
Short Essays**	10	5	50
Objective type***	10	2	20

** Students are required to attempt 10 out of 11Short Essay type
***Objective Type questions can be combination of fill in blanks, true or false, multiple choice questions and one or two sentence answers.

SEMESTER -III

BPH 3.1 Epidemiology-2

Course description

This course is designed to introduce the students to epidemiological concepts and methods used to evaluate the distribution and determinants of health and disease in population. Emphasis is placed on the principles and methods of epidemiologic investigation, appropriate summaries and displays of data, and the use of classical statistical approaches to describe the health of populations.

Objectives
At the conclusion of the course, the student will be able to:

- Demonstrate a basic understanding of epidemiologic methods and study design.
- Combine appropriate epidemiological concepts and statistical methods
- Discuss the ethical issues in epidemiological research.
- Learn the basic concepts of screening and outbreak investigations.

Contents

- **Epidemiological Methods** (MK)
  - Descriptive studies
  - Ecological studies
  - Cross-sectional studies
  - Case control studies
  - Cohort studies
  - Randomized control trials
- **Disease Out breaks** (MK)
  - Framework for investigation of disease outbreak
  - Epidemic curve
  - Types of outbreak
  - Managing outbreaks

- **Screening of diseases** (MK)
    - Concept of screening (MK)
    - Types screening (MK)
    - Criteria and uses (DK)
    - Accuracy of screening tests (DK)
    - Sensitivity and specificity (MK)
    - Ice berg phenomenon (MK)
- **Surveillance** (MK)
    - Types of surveillance (MK)
    - Surveillance methods (MK)
    - Importance of surveillance (MK)
- **Filed Epidemiology** (DK)

Practicum

- Investigation of epidemic
- Designing epidemiologic study
- Survey and field visits
- Orientation to Epi info and other statistical instruments

Reference

- Oleckno, William, Essential Epidemiology: Principles and Applications , Waveland Press, Inc., 2002
- Leon Gordis , Epidemiology,
- Ann Aschengrau, Essentials of Epidemiology in Public Health, Jones & Bartlett Publishers
- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers

BPH 3.2 Occupational Health

Course description

The course provides an introduction to basic core concepts of occupational health. Work-related health disorders and diseases that arise in their working environment. Students will be introduced to major occupational health related diseases including those of the musculoskeletal system, the lungs, and the skin, as well as accidents. Overall, this course is intended to allow students to understand the interaction of the workplace and environment on the health and well-being of the workforce.

Objectives
At the conclusion of the course, the student will be able to:

- Understand the occupational environment and diseases related to it.
- Appraise the role of Public Health professionals in occupational health risk assessment
- Understand and describe occupational hazards and itsprevention

Contents

- **Fundamentals of Occupational health and work safety**
  - Meaning and Scope (MK)
  - Evolution (DK)
  - Basic principles in the application of Occupational Health and Safety at the workplace (MK)
  - Promotion of healthy and safe workplaces, (MK)
  - Prevention of diseases, (MK)
  - Protection of workers' health and well being and early diagnosis of work related disorders and diseases.(MK)
  - Taking an Occupational History from a Worker or Patient with case examples. (MK)
  - Basic concepts in screening of occupational diseases are presented. (MK)

- Occupations hazards and Diseases
    - Occupational Lung Diseases (pneumoconioses (asbestosis, silicosis and coal worker's pneumoconiosis); asthma, hypersensitivity pneumonitis, byssinosis and inhalation fevers.) (MK)
    - **Occupational Cancers and Occupational Exposure to Solvents**
    - Basic concepts of carcinogenesis, major occupational cancers. (MK)
    - **Metals in the Workplace**
    - Exposure and toxicity from major workplace metals. (MK)
    - Sick Building Syndrome vs. Building- related Illness. (MK)
    - Idiopathic Environmental Intolerance and other Courseive syndromes. (MK)
    - **Hazardous Materials and Chemical Emergencies**
    - Exposure to hazardous materials and acute health effects from exposures. (MK)
    - Chemical emergencies at the workplace. (MK)
    - Emergency measures and first aid. (MK)
    - Basic initial treatment of chemical emergencies. (MK)
    - **Cardiovascular Diseases and Workplace Health & Productivity**
    - How does the working environment influence the risk of cardiovascular diseases? (MK)
    - What occupations and occupational factors have been associated with a higher risk for cardiovascular diseases? (MK)
    - Health productivity management (MK).
    - Definition of absenteeism and presenteeism. (MK)
    - Justification for workplace health promotion activities. (DK)
    - Popular workplace health promotion programs: preventive screenings, smoking cessation, fitness, weight management, disease management. (MK)

- **Occupational Dermatology and Shift Work and Sleep Disorders** and Work
- Occupational noise exposure and hearing loss. (MK)
- Exposure to and health effects from extremes of temperature, pressure, vibration, radiation, etc. (MK)
- **Musculoskeletal Disorders**
- Low back pain, neck pain, cumulative trauma disorders, rotator cuff disorders, epicondylitis, carpal tunnel syndrome. (MK)

Reference

- Current Occupational & Environmental Medicine, 4th Edition, 2007, by Joseph Ladou
- Occupational Health: Recognizing and Preventing Work-Related Disease and Injury, 5thEdition, 2006, by Barry S. Levy (Editor), David H. Wegman (Editor)
- A Practical Approach to Occupational and Environmental Medicine, 3rd Edition, by Robert J. McCunney (Editor-inChief)
- Textbook of Clinical and Environmental Medicine, 2nd Edition, 2004, by Linda Rosenstock, Mark Cullen, Carl Brodkin, and Carrie Redlich
- Environmental & Occupational Medicine, 4th Edition, 2007, by William N. Rom (Editor)
- Clinical Environmental Health and Toxic Exposures, 2nd Edition, 2001 (Lippincott Williams &Wilkins), by John B. Sullivan, and Gary R. Krieger

BPH 3.3 Infectious Disease

Course description

The course is designed to provide students with competencies in addressing critical problems in control and prevention of infectious diseases

Objectives:

At the conclusion of the course, the student will be able to:

- Understand the disease burden and impact of infectious disease in the society.
- Understand the modes of transmission and pathogenesis of infectious disease and the host, environment relationship.
- Understand and discuss the strategies for diagnosis, prevention and control of diseases
- Familiarize with certain infectious diseases.

Contents

- **Introduction to health and disease** (MK)
  - Classification of diseases
  - Disease burden
  - Diseases transmission
- **Epidemiology of infectious diseases**
  - Respiratory infections (Small pox, chicken pox, measles, rubella, mumps, influenza, diphtheria, whooping cough, meningococcal meningitis, acute respiratory infections, SARS, Tuberculosis.) (MK)
  - Intestinal infections (Poliomyelitis, viral hepatitis, acute diarrheal diseases, Cholera, typhoid fever, food poisoning, amoebiasis, ascariasis, hookworm infection) (MK)
  - Arthropod-borne infections (Dengue, malaria, filariasis,) (MK)
  - Zoonoses (Rabies, yellow fever, Japanese encephalitis, chickungunya fever, leptospirosis, plague, salmonellosis(MK)
  - Rickettsial diseases (MK)
  - Parasitic zonoosis- (hydatid diseases, leishmaniasis) (MK)
  - Other infection (Tetanus, leprosy, STD, AIDS) (MK)

Practicum

- Visit to infectious disease hospitals
- Outbreak investigation
- Survey of Communicable Diseases

Reference

- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers
- Preventive and community medicine by Mathur
- Davidson's Medicine text book

BPH 3.4 Health Education and Communication

Course Description

This course has been designed to introduce students to fundamental concepts of health education and communication. The course provides conceptual framework for health education practice. Students will be able to apply the theoretical foundations of health education in schools, communities, work site and hospital settings as well as deal with practical problems associated with it.

Objectives
At the conclusion of the course, the student will be able to:

- Identify the role of health education and communication in public health.
- Describe the tools used in health education
- Design effective health education program for community, school and work place.

Content

- **Introduction to health education**
  - Health education: historical development (DK)
  - Aims and basic principles, approach to health education (MK)
  - Targets for health education (MK)
  - Health education settings (MK)
  - Role of health educator (MK)

- **Health Promotion**
  - Concept, definition, objective and strategies of health promotion (MK)
  - International perspective of health promotion(MK)
  - Ottawa charter, Jakarta declaration, SEARO charter on health development. (MK)

- **Approach in health education**
  - Interpersonal propagandist approach (MK)
  - Pedagogy Vs Andragogy approach (MK)
  - Behaviour change approach (MK)
  - Social marketing approach (MK)
  - Child to child approach (MK)
  - Education and propaganda (MK)

- **Health and human behavior** (MK)
    - Concept, definition of human behaviour and change process other related terms (MK)
    - Factors affecting human behaviours
    - Effects of human behaviour: cognitive, affective and psychomotor domain and their relationship with educational process
    - Role of human behaviour for prevention of diseases
    - EM Roger, Adoption process and its application health education.
- **Working with communities**
    - Community: Definiton, concept of community participation (DK)
    - Benefits of community participation (DK)
- **Health communication** (MK)
    - Communication: Definition, scope and requirements
    - Types of communication
    - Components of communication
    - Communication stages
    - Common communication approach
    - Methods of communication
    - Characteristics of effective communication
    - Barriers of effective communication
- **Health education methods and materials** (MK)
    - Education methods
    - Individual, group, mass methods
    - Principles, theories and criteria for selection , and use of appropriate methods of health education
    - Types of health education media (posters, flash cards, flip charts, hand puppets, handbills, pamphlets, slide, skits, films, video, models, hoardings, folk media, songs, story, radio, television, internet, newspapers etc.)
    - Advantages and disadvantages of each methods

Role of agencies in health education and promotion (DK)

- NGOs
- Government
- Professional health organizations
- Private agencies etc

Reference

- Ramachandran & Dharmalingam: Health education – a new approach, Vikas publishing
- Park K, Park's Textbook of preventive and social medicine, M/s Banarasidas, Jabalpur
- Banerji D, Poverty, class and health promotion and protection WHO, Copenhagen
- Health education: creating strategies for school and community health By Glen Gordon Gilbert, Robin G. Sawyer
- Randall R.Cottrell, James T.Girvan and James F.Mc Kenzine: Principles and foundation of health promotion.
- J.Thomas Butlers: Principles of health education and health promotion: Wadsworth Publishing.

BPH 3.5 Subsidiary CourseBasics of Research Methodology

Course description

This course will introduce students to the characteristics and various approaches to designing and conducting research projects in public health and health services research.

Objectives
At the conclusion of the course, the student will be able to:

- To become familiar with the characteristics, language and logic of research methods.
- To understand the available techniques for designing a research study;
- To understand the available techniques for qualitative data analysis;
- To be able to recognize and assess quality and rigor in evaluating a research study.

Introduction –

- **Meaning - Objectives**
  - Types of Research
  - Research Approaches
  - Research methods Vs Research Methodology
  - Steps in Research
  - Defining the Research Problem
  - Meaning - Selecting the Problem
  - Techniques involved in defining the problem
- **Research Design**
  - Meaning - Need –
  - Features –Important concepts relating to Research Design
  - Types of Research Design –
  - basic Principles of Experimental Designs

Sampling and Data collection

- Sampling - Meaning - Need
- Sampling Designs
- Probability Sampling
- (Simple Random - Systematic - Stratified - Cluster – Area Multistage - Sequential Sampling Methods) –
- Data Collection and Processing Collection of Primary data
- Collection of data through Questionnaire & Schedules
- Secondary data – Qualitative techniques of data collection
- Interview, Observation
- Tabulation of Data

- **Analysis and Report**
  - Analysis and Interpretation of Data and Research Reporting –
  - Meaning of Interpretation – Technique of Interpretation –
  - Significance of Report writing –
  - Steps - Layout of the Research Report - Types of Reports –
  - Precautions while writing Research Reports.
- **Ethics in research**

Reference

- O.R. Krishna Swamy, Research Methodology
- CR. Kothari, Research Methodology
- Wilkinson & Bhandarkar, Methodology and Techniques of Social Research
- Sadhu Singh, Research Methodology in social science
- V.P. Michael, Research Methodology in Management
- William M.K. Trochim, Research Methods, Bizantra
- Kapoor, V.K., operations Research, New Delhi : Sultan chand & Sons. Khandelwal M.C., Gupta & Quantitative Techniques.

BPH – THIRD SEMESTER (THEORY EXAMINATION) QUESTION PATTERN

Duration: 3 Hours
Maximum Marks: 100 Marks

Type of Questions	No. of Questions	Marks for each question	Total Marks
Long Essays	3	10	30
Short Essays**	10	5	50
Objective type***	10	2	20

** Students are required to attempt 10 out of 11Short Essay type
***Objective Type questions can be combination of fill in blanks, true or false, multiple choice questions and one or two sentence answers.

SEMESTER- IV

BPH 4.1 Women's Health

Course Description

This course provides an overview of key women's health issues in entire life span of women. Health issues starting from birth, childhood, adolescence, reproductive life and old age will be dealt focusing on programs, services and polices as well.

Objectives
At the conclusion of the course, the student will be able to:

- To introduce students to critical health issues affecting women globally.
- Understand and analyse women's health problem in relation to public health practice
- Identify major health problem that affect women.
- Discuss reproduction and related health issues of women
- Describe historical background and contemporary trends in women's health.
- Understand women's health programs, policies and practices

Content

- **Introduction**
  - Basic anatomy and physiology of female body: orientation (DK)
  - Define women's health : what and why (NK)
  - Women's development: physical, mental and social (NK)
  - Childhood, adolescence, adulthood, old age (NK)
- **Reproduction and Sexual health**
  - Menarche (MK)
  - Marriage- preconception, conception, pregnancy (MK)
  - Pregnancy its social health issues. (MK)
  - Parity, gravida, birth order, birth spacing (MK)
  - Antenatal care (MK)
  - Child birth(DK)
  - Post partum care (MK)
  - Breast feeding (MK)
  - Abortion, MTP Act (MK)
  - Reproductive tract infections (DK)
  - Contraception and family planning methods (MK)
  - Maternal mortality : Medical and social issues (DK)

- **Women Issues**
  - Women's health poverty and rights (DK)
  - Women and human rights (DK)
  - Childhood: unequal access to nutrition, healthcare and education and its consequences (DK)
  - Adolescence: Early childbearing and early marriage and its consequences (MK)
  - Reproductive choice: Women's access to contraception and choices (MK)
- **Violence against women**
  - Domestic violence (MK)
  - Honor killing(MK)
  - Dowry death(MK)
  - Trafficking(MK)
  - Conflict situation and refugee(MK)
- **Women's health policies in India**
  - Women and MDG (DK)
  - MCH,RCH, RMNCHA+

Reference

- Radhika Ramasubban, Shiren J.Jyebhoy, Women's Reproductive health in India, Rawat Publications.
- Anthony R. Meashan, Richard: India's Family Welfare Program.
- Venkatachalam P.S. Nutrition for mother and child, ICMR, New Delhi.
- Murray, Anne Firth, From Outrage to Courage: Women TakingAction for Health and Justice
- Dutta Textbook of Gynaecology and Obstetrics

BPH 4.2 Child and Adolescent Health

Course Description

This course provides an overview of key child and adolescent health issues including growth and development, childhood illness, child health practices, risk groups, nutritional services. This course will focus on health conditions, epidemiological implications, disparities, determinants of health and diseases in relation to programs, services and policies of child and adolescent population.

Objectives
At the conclusion of the course, the student will be able to:

- Understand the growth and development from infancy to adolescence
- Describe major health conditions that affect children and adolescence.
- Understand social determinants, policies that impact child health
- Understand the relationship between nutrition and growth and development during childhood and adolescence
- Become familiar with nutritional interventions, programs, policies that impact on children health.

Contents

Basic introduction to Child and Adolescent health (MK)

- **New born care**
  - Principles of new born care
  - Care at birth
  - Post natal care
  - Low birth weight babies
  - Premature babies
  - Infant mortality: definition causes and trends, policies and prevention.
  - Birth defects/ childhood disabilities: causes, types, prevention, policy and social determinants of childhood disabilities

- **Child hood and illness**(MK)
  - Common infectious diseases of public health importance such as diarrhoea, fevers, malaria, dengue, measles, poliomyelitis, typhoid, etc
  - Malnutrition
  - Growth and development disorders : normal development and abnormal development
  - Immunization
  - Child immunization schedule
  - Universal immunization program
- **Childhood and adolescence nutrition** (MK)
  - Nutritional needs of children and adolescence
  - Breast milk and weaning
  - Early feeding habits
  - Eating habits of children and adolescent
  - Factors influencing eating behaviour
  - Midday meal program
  - Programs and policy: IDD, ICDS etc
- **Adolescent Health** (MK)
  - Definition, phase in life
  - Social and emotional development aspects of adolescent
  - Epidemiology of adolescent health issues
  - Role of education, poverty, family relations, environment, social, culture and politics on adolescent health
- **Sexual health** (MK)
  - Physiological and pathological
  - Sexual behavior
  - Early pregnancy and early marriage
  - Sex education
  - Adolescent and health issues related to Lesbian, Gay, Bisexual and Transgender community

- **Substance abuse and social crime (DK)**
- **Mental health (DK)**
- **Adolescent and special children. (DK)**

Reference

- Berk, Laura (2008). Exploring Lifespan Development (First Edition). Boston: Allyn and Bacon, a division of Pearson Education, Inc.
- Ghai Essential Paediatrics

BPH 4.3 Health Systems Management

Course Description

This course provides a broad overview of health system and its management.

Objectives
At the conclusion of the course, the student will be able to:

- Understand modern concepts, principles of management
- Understand various health systems
- Analyse the problem, issues in health systems management at various levels of care

Contents

- Introduction to health systems (MK)
  - Concept of health system development /management
  - Principles of health systems management
  - Evolution of health system in India and selected developed and developing countries.
- Healthcare delivery system in India (MK)
  - Components of health services
  - Primary health care
  - Urban areas
  - Rural areas
  - Service models
  - AYUSH systems
  - Voluntary health agencies
  - Public health services
  - Private health services

Organizational structure of health care (MK)

- Centre, stage, district and local government or panchayat raj

Planning in health services/ programs(MK)

- Planning: elements of planning (MK)
- Methods of planning: top down, bottom up planning process (MK)
- Setting objectives (MK)
- Strategy formulation (MK)
- Staffing aspects (MK)
- Budgeting (MK)
- Needs assessment (MK)
- Proposal writing, (MK)
- Five year plans (DK)

Health schemes (MK)

- Various health schemes (Rastriya Swasthya Bima Yojana, Pradhan mantra swasthya yojana, janani suraksha yojana etc)
- Public Private Partnership
- Accreditation of health systems (NABH, JCI)Health

programs (MK)

- National health programs
- NRHM
- NUHM
- MDG and SDG

- Health insurance and types (MK)
- Healthcare reforms (MK)
- Decentralization (MK)
- Universalization of health (MK)
- Accessibility of health care services (MK)

- Disparity in health care services (MK)
- Resource allocation (MK)
- Role of international organization in health systems. (MK)

Reference

- Jugal Kishore; National Health Programs of India; Century publication, New Delhi.
- H.Peters et.al; Health Systems for India's Poor. World Bank.
- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers

BPH 4.4 Chronic Diseases

Course Description

This course introduces the major chronic diseases, their risk factors, challenges, and disease management**.**

Course Objectives
At the conclusion of the course, the student will be able to:

- Understand the disease burden and impact of Chronic disease in the society
- Discuss the multi-factorial disease etiology and pathophysiology of the major chronic diseases
- Understand the risk factors for various chronic diseases
- Describe the epidemiology, etiology, symptoms and treatment of chronic diseases of public health importance.

Content

- Introduction to Chronic Diseases (MK)
- Risk factors(MK)
- Social determinants of Chronic Diseases(MK)
- Chronic Disease burden in World and India(MK)
- Current issues and challenges in chronic diseases prevention and control (MK)
- Chronic disease surveillance(MK)
- Role of Health care system in Chronic diseases prevention and control(MK)
- Chronic diseases and economic impact (MK)
- Substance abuse(MK)
- Respiratory diseases (MK)
- Cardiovascular diseases (MK)
- Obesity(MK)

Hypertension(MK)

Cancer(MK)

- Mental disorders and Mental health(MK)
- Neurological disorder(MK)

- Musculoskeletal diseases(MK)
- Chronic Liver diseases (MK)
- Chronic Kidney diseases(MK)
- Accidents (MK)

Reference

- Patrick L Remington, Ross C Brownson, Mark V Wegner; Chronic Diseases Epidemiology, Prevention and Control; APHA Press.
- Brian R. Walker, Nicki R Colledge ; Davidson's Principles and Practice of Medicine; Elsevier.
- Dennis Kasper et al, Dan L. Longo, Anthony S. Fauci, Dennis L. Kasper, Stephen L. Hauser, J. Larry Jameson, Joseph Loscalzo ;Harrison's Principles Of Internal Medicine.
- Other web resources and research articles.

BPH 4.5 Rural, Tribal and Urban Areas (Subsidiary Course) Course Description

This course introduces students to the issues of public health in Rural and Urban areas. Students will be exposed to rural and urban community, its people, the health care issues they face, and the practice of public health in rural and urban communities

Course Objectives
At the conclusion of the course, the student will be able to:

- To introduce students issues of public health in rural, tribal and urban areas
- Understand the role of socio cultural factors in public health
- To impart the knowledge on various determinants of tribal and rural health
- To orient the students to different issues of tribal and rural health

Rural

- Socio-political system and Strategies for building coalition in rural communities (MK)
- Health assessment in rural areas (DK)
- Access to healthcare in rural areas (DK)
- Public health challenges in rural areas. (MK)
- Case studies on: Curtiba-Brazil, Jamkhed and Gadchiroli-India, Kakamega-Kenya (DK)

Tribal

- Tribal ethnography (DK)
- Classification of tribes – linguistic, ethnic, economic, cultural (DK)
- Policies and programs of Government (State & Centre) for tribal health and development (DK)
- Determinants of tribal health (MK)
  - Social - lifestyle, marriage, family, substance abuse and food habits, (MK)
  - Biological (genetic) (NK)
  - Environmental (hygiene & sanitation, proximity to animals, etc) (NK)
- Concepts and challenges of tribal health care delivery (DK)

Urban

- Urban health services (DK)
- Migration (MK)
- Urbanizations : Infectious diseases and chronic diseases (MK)
- Crime, violence and public health in urban life. (MK)
- Water sanitations, environment and transportation(MK)
- Migration

Reference

- Rural Public Health: Best Practices and Preventive Models by Jacob.C Warren
- Just and Lasting Change by Daniel Taylor Ide and Carl E.Taylor
- Urban Health: Global Perspectives by David I
- Handbook of Urban Health: Populations, Methods, and Practice by Galea, Sandro, Vlahov, David
- Web resources and research articles

BPH - FOURTH SEMESTER (THEORY EXAMINATION) QUESTION PATTERN

Duration: 3 Hours
Maximum Marks: 100 Marks

Type of Questions	No. of Questions	Marks for each question	Total Marks
Long Essays	3	10	30
Short Essays**	10	5	50
Objective type***	10	2	20

** Students are required to attempt 10 out of 11Short Essay type
***Objective Type questions can be combination of fill in blanks, true or false, multiple choice questions and one or two sentence answers.

SEMESTER-V

BPH 5.1 Aging of Population

Course Description

This provides an overview of issues related to public health and aging population. The course introduces the study of aging and its implication for individuals and society. There is special focus on demographic and epidemiology of aging population.

Objectives
At the conclusion of the course, the student will be able to

- Understand and describe basic demographic trends in aging population/ older population.
- Describe major health problems and issues for older population and their implication on public health
- Understand the government's role on aging population and their policies

Contents

- **Introduction to Public health and Aging** (MK)
  - Introduction to geriatrics and aging population
  - Phases of aging
  - Domains of public health and healthy aging
  - Public health for aging society
  - Population aging and goals of public health
- **Theories of aging**(MK)
- **Population aging: Demographic and Epidemiology** (MK)
  - Measures of population aging
  - Demographic transition and aging
  - Epidemiologic transition and aging
  - Importance of aging
- **Aging and Public health System**(MK)
  - Health system for aging population
  - Healthcare for aging and healthcare workforce for aging
  - Healthy aging network and support group
  - Community based approach

- **Aging and Health Issues** (MK)
  - Chronic diseases in older adults
  - Disability and functioning
  - Cognitive function in aging: Dementia
  - Nutritional requirements of older population
  - Prevention of injuries and diseases
- **Society and Behavior factors** (MK)
  - Social determinants of health inequities
  - Affective and social function: Suffering, neglect and isolation
  - Behavior risk factors and evidence based intervention
  - Family care giving of older adults
  - Public health infrastructure for aging society
  - Technology and aging
- **Aging population and Quality of Life.** (MK)
- **Policy for old and elderly** (MK)

Reference

- Steven M.), Vicki A. Freedman; Public Health and Aging: Maximizing Function and Well-Being; Spinger Publishing Company.
- Uhlenberg, Peter; International Handbook of Population Aging;
- Suzanne R. Kunkel, J. Scott Brown, & Frank J. Whittington. (2014). Global Aging: Comparative Perspectives on Aging and the Life Course. Springer Publishing Company
- Susan A. McDaniel, & Zachary Zimmer. (Eds.). (2013). Global Ageingin the Twenty-First Century: Challenges, Opportunities and Implications. Ashgate Publishing, Surrey
- Vern L. Bengtson, Richard Settersten; Handbook of Theories of Aging; Springer Publishing Company
- Tattwamasi Paltasingh,Renu Tyagi, Caring for the Elderly Social Gerontology in the Indian Context

BPH 5.3 Health Economics

Course Description

This course introduces students to basic concepts of economics important for the study in health economics, microeconomics that covers a variety of topics concerning the determinants of health, the supply and demand for health care services, , the role of government in health, emergence and impact of insurance on the demand for health care services.

Objectives

At the conclusion of the course, the student will be able to:

- Understand conceptual tools and theoretical ideas of economics for better understanding of issues in health care systems
- Understand the demand for health, supply of health & health care, costs, cost-effectiveness, health insurance, markets, market imperfections and failure

Contents

- Introduction: the relevance of economics in health and medical care
  - Basics of economics (MK)
  - Definition, concepts and framework of healtheconomics(MK)
  - Significance of health economics inplanning(MK)
- Health care spending(MK)
  - Trends-patterns, (MK)
  - Spending growth Vs Spending levels(MK)
  - Models of spending(MK)
  - Economic models in health care: Demand Side and Supply side(MK)
  - Health care expenditure(MK)
- Introduction to micro and macro approach in health economics
  - Application of micro and macro economics in health(MK)
  - Demand and supply consumption (MK)
  - National income accounts: GNP, GDP, NNP, and Inflation. (MK)
  - Real Vs Nominal price (MK)

- Health care markets: Introduction, developing country and developed country (DK)
    - Analysis of health care markets with economist perspective
    - Demand for health care, health insurance
    - Supply: health care professionals, hospital services
- Government role in health economics (MK)
- Health care cost concept (MK)
    - Capital cost, recurrent cost, opportunity cost, analysis, direct and indirect cost, fixed and variable cost, marginal, average and total cost, unit cost etc.
- Economic evaluation (MK)
    - Cost benefit, cost effectiveness, cost effective analysis in health
    - Cost utility analysis.

Reference

Sherry Glied and Peter.C Smitt; The Oxford Handbook of Health Economics; Oxford University Press.

Mark V.Panly, Thomas G Mequire, Pedro P. Barros; Handbook of Health Economics.

BPH 5.2 Public Health Policy

Course Description

This course provides an overview of health policy making and analysis. Course also describes Indian Health policy and its implications on public health.

Objectives

At the conclusion of the course, the student will be able to:

- Understand the policy development process
- Critically access and analyse policy
- Understand social and political dimensions of decision making in policy development

Contents

- **Introduction to health policy**
  - Health policy : definition, scope and types (MK)
  - Evolution of health policy (MK)
- **Methods to assess the need for policy development**
  - Policy development process (MK)
  - Evidence based policy(MK)
  - Systems thinking(MK)
  - Policy categorization(MK)
  - Policy making process(MK)
  - Policy analysis (DK)
  - Policy interventions(DK)
  - Political process(DK)
  - Rules/ law makers(DK)
  - Timeframes(DK)
- **Policy analysis framework**
  - Health for all 2000(DK)
  - Health committees(DK)
  - National health policies(DK)
- **Policy related to healthcare**
  - IPH standards (MK)
  - Women and Child policy (DK)
  - National Nutrition policy(DK)
  - New born and child health policy(DK)
  - Immunization policy (MK)
  - National Population policy (MK)

- National AIDS Prevention and Control policy(MK)
- National Blood policy(MK)
- National policy for older persons(MK)
- National policy for persons with disability (DK)
- National policy on Indian systems of medicine and homeopathy (NK)

Reference

- Jugal Kishore; National Health Programs of India; Century publication, New Delhi.
- H.Peters et.al; Health Systems for India's Poor. World Bank.
- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers
- Kent Buse, Nicolas Mays and Gill Watt: Making Health policy: Tata McGraw Hill, New Delhi edition.

BPH 5.4 Public Health Informatics

Course Description

This course introduces students to the field public health informatics; as well examine the impact of information technology upon the practice of healthcare and public health. It will look at the entire process, from systems conceptualization and design, to project planning and development, to system implementation and use

Objectives

At the conclusion of the course, the student will be able to

- Understand basics of public health informatics
- Identify, evaluate, and utilize health care and public healthdata and information sources and resources
- Describe issues related to information ethics, including privacy, confidentiality, security, and data and information
- Design, development , and implementation of public health information systems
- Develop skills to evaluate and manage information systems projects

Contents

Introduction to Public Health Informatics

- Origins and definition of public health informatics (DK)
- Scope and importance (MK)
- Public Health Informatics Competencies (MK)
- sub disciplines within informatics (MK)

Fundamentals of computers

- Introduction to Computer system (MK)
- Basic computer organization (MK)
- Computer peripheral devices Basic elements of computer system-CPU, Input devices, Output devices, hardware, software etc (MK)
- Storage devices(MK)
- Introduction to computer networks(MK)
- Internet and world wide web(DK)

Basics of Database Management System

- **Basics of Public health Informatics**
  - Data, information, knowledge (MK)
  - Privacy, confidentiality and security of public health information(MK)
  - Data standards in public health informatics(MK)
  - Informatics project planning and programmes(MK)
- **Application of public health informatics**
  - Geographic information systems(MK)
  - Telemedicine: role in delivering health care. (MK)
  - Electronic health record (EHR) (DK)
  - Public health information systems (registries, disease surveillance) (DK)

Practicum Basic computers

Reference

- Patric.W.O'Carroll et al ;Public health informatics and Information systems,; Springer's publishers
- Fances Wickham Lee, Karen A Wager; Health care information system- A practical approach for health care management;
- E-health care information systems
- Peter Norton ;Introduction to computers, , Tata McGraw-Hill
- Ramakrishnan Raghu ; Database Management system

BPH – FIFTH SEMESTER (THEORY EXAMINATION) QUESTION PATTERN

Duration: 3 Hours
Maximum Marks: 100 Marks

Type of Questions	No. of Questions	Marks for each question	Total Marks
Long Essays	3	10	30
Short Essays**	10	5	50
Objective type***	10	2	20

** Students are required to attempt 10 out of 11Short Essay type
***Objective Type questions can be combination of fill in blanks, true or false, multiple choice questions and one or two sentence answers.

SEMESTER- VI

BPH 6.1 Global Health

Course Description

This course introduces the global context of public health. The course also examines major illness, policies health issues and challenges in global perspectives.

Objectives

At the conclusion of the course, the student will be able to

- Understand strategic developments in global health from a historical perspective.
- Discuss the emergence and re-emergence of infectious diseases
- Assess the international health policies in public health.

Contents (MK)

- Introduction to internal health/ global health
- What is global health?
- World health report
- Millennium Development Goals
- Sustainable Development Goals
- Health determinants
- Global burden of diseases
- Nutrition and global health
- Infectious diseases
- Culture, behaviour and health
- Health care reforms
- Emergencies and disaster globally and its management
- Global cooperation in international public health
- International organizations
- Health and Human rights
- Leadership and public health
- Global health NGOs and challenges
- Partnering with various government agencies and challenges
- Global health challenges
- Future of global health

Reference

- Richard Skolink ; Global Health 101: Essentials Public Health; Jones and Bartlett
- Kathryn H. Jacobsen; Introduction to Global Health ; Jones and Bartlett
- William H. Markle, Melanie A. Fisher, Raymond A. Smego Jr; Understanding Global health ; McGraw-Hill Education

BPH 6.2 Public Health Ethics and Law

Course Description

This course provides an overview of ethical framework, guidelines, moral issues and legal issues relation to public health practice. The course examines the major ethical and legal concepts and their impact in public health practice.

Objectives

At the conclusion of the course, the student will be able to

- Describe and appreciate the value of understanding the history and evolution of health care ethics.
- Demonstrate the understanding of the various philosophical foundations for health care ethics.
- Identify and critically analyze ethical issues in health care.
- Critique various decision making frameworks and formulate one based on ethical philosophical foundations.
- Discuss the application of legal and ethical concepts and principals in his/her capacity and responsibility as a health care professional.
- Recognize the integrative role of organizational ethics in health care facilities

Content

- **Introduction and Basics of Ethics**
  - History of ethics in health practice and research (DK)
  - Introduction to Public health ethics (MK)
  - Moral norms (MK)
  - Relationship between moral norms and public health(MK)
- **Addressing ethical conflicts and Dilemma in public health** (MK)
  - Absolutist and contextual approach
  - Presumptive approach
  - Ethical dimensions of public health decisions
  - Scope of societal values: inclusion of personal values
  - Analyzing ethical issues in particular situation
  - Role of public health code of ethics
- **Balancing probable benefits , cost and risk ethics** (MK)
  - Distributive justice
    - Formal justice and material justice
  - Fair procedure and process
  - Privacy and confidentiality
  - Relationship between law and ethics in public health
  - Role of governing in public health ethics

- **Public Health perspective and ethical issues** (MK)
    - The Ethics of Measuring Health
    - Screening and Surveillance in public health ethical issues
    - Case finding, screening test and contract tracing
    - Immunization protection : Voluntary andmandatory
    - Immunization ethical issues
- **Theories and principles of public health ethics**(MK)
    - Ethical review process
    - IRB . Ethics committee
    - Ethical issues research with special population
    - Ethics in Student and Professional Life
    - Chronic & Long-Term Care
    - End of Life Care
    - Ethical decision making
    - Social Justice and the Right to Health Care
    - Poverty, Power, and HealthInequalities
- **Legislations related to health in India** (DK)
    - **Legislation related to Census, Birth and Death**
        - The Census of India 2001 (Dk)
        - The Registration of Births and Deaths Act 1969 (MK)
    - **Legislation related to Control of Epidemics**
        - The Epidemic Disease Act 1897 (MK)
        - The Maharashtra Prevention of the Infection and
        - Spread of Epidemic Disease (Plague) Regulation 1994

Legislation related to Tobacco and Drug Control

- The Cigarettes and Other Tobacco Products (Prohibition of Trade and Commerce, Production, Supply and Distribution) Act 2003 (MK)
- The Narcotic Drugs and Psychotropic Substances Act 1985 (DK)

Legislation related to Other Public Health Problems (DK)

- The Transplantation of Human Organs Act 1994
- Food safety and standards Act 2006
- The Medical Termination of Pregnancy (MTP) Act 1971
- The Pre-Conception and Pre-Natal Diagnostic Techniques(Prohibition of Sex Selection) Act1994
- The Persons with Disabilities (Equal Opportunity, Protection of Rights and Full Participation) Act 1995

- **Occupational Health & Legislation** (MK)
  - The Factories Act 1948
  - The Employees States Insurance Act 1948 & Regulations 1950
- **Environment Health Legislations** (MK)
  - The Environment (Protection) Act 1986
  - Biomedical Waste (Management & Handling) Rules 1998
  - Municipal Solid Waste (Management & Handling) Rules 2000
  - Hazardous Waste (Management & Handling) Rules 1989 766
  - Chemical Accidents (Emergency Planning, Preparedness and response) Rules 1996

Reference

- Ruth Gaare Bernheim, Kames F Childress, Richard J Bonnie, Alan L Melnick; Essentials of Public Health Ethics; Jones & Bartlett.
- Arima Mishra , Kalyani Subbiah; Ethics in Public Health Practices in India

BPH 6.3 Healthcare Organization Management

Course Description

This course gives an overview principle of management, decision making, planning, and organizational management.

Course Objectives

- **Principles of Management** (DK)
  - Management history
    - Early management
    - Classical Approach
    - Behavriour Approach
    - Quantitative approach
    - Contemporary approach
  - Functions of management (MK)
  - Levels of management (MK)
- **Management Environment**
  - External environment (MK)
  - Internal environment (MK)
  - Global perspective (DK)
- **Organizational culture**
  - Workplace diversity (MK)
  - Social responsibility (MK)
- Managing change and innovation
  - Change process (MK)
  - Types of organizational change (MK)
  - Resistance to change (MK)
  - Stimulation innovation(DK)
- Decision making (MK)
  - Decision making process
  - Types of decision making and different styles
  - Tools of decision making

- **Fundamentals of planning** (MK)
  - Planning process, planning tools and techniques
  - Goals and objectives
  - Types of plans
  - Issues in planning
- Strategic Managementv(MK)
  - Strategic Management process(MK)
  - Corporate strategies (DK)
  - Competitive strategies (DK)
  - Strategic management issues (DK)
- Organization
  - Principles of organization (MK)
  - Types of organization : General and Healthcare(MK)
  - Designing Organizational structures(MK)
- Human Resources Management (MK)
  - Identifying and selection,
  - Providing necessary skills,
  - Retaining competent employees and Challenges.
  - Managing teams: Group dynamics and Challenges, conflict management and interpersonalrelationtionship
- Organizational Behaviour (DK)
  - Attitude, Job performance
  - Personality, perceptions, learning and challenges in Organization Behaviaour.
- Operations Management (DK)
  - Services, managing products, value chain.

Reference

- Stepton P Robbins, Mary Coulter; Management; Pearson publishers
- James A Johnson; Healthcare Organization: Theory , Behavior and Development. Jones & Bartlett Publishers.

BPH 6.4 Public Health Nutrition

Course Description:

This course provides an overview of concepts, principles, and scope of practice of public health nutrition. Course focuses Principles of nutrition in health and disease, provides an integrated overview of the physiological requirements and functions of protein, energy, and the major vitamins and minerals that are determinants of health and diseases in human populations.

Objectives:

At the conclusion of the course, the student will be able to:

- Understand the role of nutrients in the body.
- Explain the importance of food and nutrition in public health.
- Provide an overview of the major macro and micronutrients relevant to human health.

Contents

- **Introduction to basics concepts of food and nutrition**(MK)
  - Basic definitions: Food, Nutrition, Adequate Nutrition, Nutritional Status, Malnutrition, Nutritional care
  - Introduction: the relationship between nutrition, health and disease
  - Importance of food and nutrition
  - Functions of food
  - Functions of nutrients
  - Food composition and Classification of food
- **Recommended Dietary Allowances for Nutrients (DK)**
  - Principles of RDA (formulation)
  - Uses of RDA and Limitations of RDA
  - Estimation of nutrient requirement
  - RDA for respective population (Example -Indian)
  - Balanced Diet
  - **Nutrients** (MK)
  - Carbohydrate: Nature, classification, properties, functions and sources.
  - Proteins and amino acids : Nature , classification , properties, functions and sources
  - Fats and other lipids: Nature , classification , properties, functions and sources
  - Vitamins : Nature , classification , properties, functions and sources
  - Major and Trace Minerals : Nature , classification , properties, functions and sources
  - Water, Fluid, electrolytes, acid base balance

- **Factors influencing food of a community.** (MK)
- **Nutrition requirement Life cycle approach:** Infants, Child, Adolescents, Adults, Pregnancy, Lactating mothers and Breast feeding (MK)
- **Deficiencies of Nutrition** (MK)
    - Deficiencies of Macro nutrients
    - Deficiencies of Micro minerals and trace elements
    - Diet modifications in diseases of public health importance
- Introduction to nutritional assessment (DK)

Practicum

- Nutritional assessment
- Planning a diet for community

References :

- Fundamentals of food and Nutrition : Sumati R. Mudambi, M.V. Rajagopal, V.R. Damodharn, Wiley Eastern Ltd. New Delhi, 1982.
- ICMR: Recommended dietary intake for Indians, New Delhi
- Advanced textbook on food and Nutrition : Dr. M Swaminathan,, The Bangalore Publishing Co. Ltd. Bangalore, 1974
- Perspective in Nutrition : Gordon M. Wardlaw, Paul M. Injel, Time/Mosby College Publishing, St. Louis, 1990.
- Clinical Dietetics and Nutrition, F.P. Antia, Oxford University Press, Delhi, 1993.
- Human Nutrition and Dietetics, J.S. Garrods & W.P.T. James, Churchill Livingstone, London, 1993.
- Nutrition problems and Programmes in South East Asia : Dr. C. Gopalan, World Health Organization, New Delhi, 1987.

BPH - SIXTH SEMESTER (THEORY EXAMINATION) QUESTION PATTERN

Duration: 3 Hours
Maximum Marks: 100 Marks

Type of Questions	No. of Questions	Marks for each question	Total Marks
Long Essays	3	10	30
Short Essays**	10	5	50
Objective type***	10	2	20

** Students are required to attempt 10 out of 11Short Essay type
***Objective Type questions can be combination of fill in blanks, true or false, multiple choice questions and one or two sentence answers.

SEMESTER -VII
BPH 7.1 Disaster and Emergency Management

Course Description

This course introduces students to the process and practice of emergency disaster planning and management. The goal is to create broad experience that includes the many elements of planning as the primary path to preparedness. Students will learn the relationship of emergency planning to the field of disaster management.

Objectives

At the conclusion of the course, the student will be able to

- Describe the history and context of emergency / disaster planning;
- Identify steps in the emergency planning process
- Recognize structures for managing emergency response

Content

Introduction to Disaster management

- Disaster definition, types of disasters (MK)
- Disasters in history (NK)
- Disaster trends (NK)
- Modern disaster management (MK)

Hazards

- Hazards identification and profiling (MK)
- Hazard analysis (DK)

Risk

- Risk and vulnerability (MK)
- Components of risk(MK)
- Risk perception and evaluation (MK)

Mitigation

- Types of mitigation: structural and non structural (MK)
- Obstacles(MK)
- Assessing and selecting mitigation options(MK)
- Emergency response and risk mitigation(MK)

Preparedness

- Overview of disaster preparedness(MK)
- Government Preparedness(MK)
- Public preparedness(MK)
- Media (MK)
- Obstacles(MK)

Response

- What is response (DN)
- Response to emergency, (MK)
- Recognition pre disaster action(MK)
- Recognition –post disaster(MK)
- Provision of water, food, shelter, healthcare(MK)
- Water management(MK)
- Media response(DK)

Recovery

- Effects of disaster on society(MK)
- Components of recovery(MK)
- Types of recovery(MK)

Agencies (DK)

- Role of government in disastermanagement
- Government disaster management agencies
- Organization structure
- International organization
- Bilateral organizations
- Role of NGOs and individuals

Introduction to Emergency Planning (DK)

- Contexts of Emergency Planning.
- Emergency Planning Process: Mandates, Structure and Guidelines. (MK)
- Human Behaviour in Disasters: What a Planner Must Know(MK)
- Emergency Planning Conditions and considerations. (MK)
- Analyzing and Selecting Protective Actions: How to Make Effective Choices. (DK)
- The Content and Format of Emergency Plans (NK)
- Continuity of Operations Plans (NK)
- Population Warning: Behavioral Foundations and Practical Applications. (NK)
- Structures for Managing Emergency Response: Executing Emergency Plan Provisions (NK)

Reference

- Damon coppola: Introduction to Internal Disaster management
- Renold N.Perry, Michael Klindell: Emergency planning.

BPH 7.2 Monitoring and Evaluation

Course Description

This course provides an overview of the key concepts, methods and approaches in the field of monitoring and evaluation with special focus on public health programs. The student will familiarize in different types of monitoring and evaluation programs, needs assessments, process evaluation, monitoring of outputs and outcomes, impact assessments as well as cost analysis.

Objectives
At the conclusion of the course, the student will be able to

- Understand theoretical approaches and techniques in monitoring and evaluation
- Design and Formulate a conceptual framework for monitoring and evaluation in public health program or intervention.
- Understand the relationship between evaluation and program
- Develop a monitoring and evaluation plan for a public health program.
- Describe the role of monitoring and evaluation in the design of public health programs
- Develop program indicators based on an understanding of program-specific criteria

Contents

- **Introduction to monitoring and evaluation** (MK)
  - Definition, purpose of monitoring and evaluation
  - Principles and paradigm of evaluation
- **Developing monitoring and evaluation system**(MK)
  - Needs assessment/situational analysis
  - Developing problem tree
  - Goals and objectives
  - Activities: input and output
- **Process of Monitoring** (MK)
  - Monitoring mechanism
  - Indicators
  - Program monitoring methods and tools
  - Participatory monitoring: steps and techniques
  - Principles of Monitoring and evaluation systems
  - Project Audit
    - Types of project audit
    - Content and format of project audit
    - Project audit life cycle

- Project monitoring process
- Quality assurance and project
- Types of project monitoring
- Elements of project monitoring

- **Data collection**(MK)
  - Primary and secondary data
  - Advantages and disadvantages
  - Assessing data quality
  - Quantitative and qualitative data
  - Data management
  - Data analysis and reporting
- **Evaluation** (MK)
  - Program evaluation
  - Evaluation output and project cycle
  - Objectives of program evaluation
  - Evaluation steps
  - Evaluation design strategies
  - Pre-implementation assessment
  - Process implementation evaluation
  - Rapid Appraisal
  - Impact evaluation
  - Meta evaluation
  - Types of evaluation
  - Methods of evaluation : data collection
  - Analysis of evaluation data interpretation
- Planning and managing and evaluation(MK)
  - Evaluation approach
  - Relationship between monitoring and evaluation
  - Relationship between evaluation and audit.
- Evaluation standards(MK)
- Reporting(MK)
- Dissemination(MK)

Practicum

- Design Monitoring and Evaluation for public health project/program
- Develop Monitoring and Evaluation tools

Reference

- Patrick Gudda; A Guided to Project Monitoring and Evaluation; Author House
- Nina Frankel and Anastasia Gage; M& E fundamentals ; USAID and MENTOR (MENTOR also includes free downloadable training materials on monitoring and evaluation topics and can be found at http://www.cpc.unc.edu/measure/training/mentor
- Handbook for Monitoring and Evaluation: International Federation of Red Cross and Red Crescent Societies
- Handbook On Planning, Monitoring And Evaluating For Development Results; United Nations Development Programme

BPH 7.3 Public Health Project Management

Course Description

This course provides an overview of theories and practical skills pertaining to public health project or program management. The course focuses on strategic planning, design, organizing, implementing and evaluation of public health programs orprojects.

Objectives

At the conclusion of the course, the student will be able to

- Understand the basic concepts of project cycle and project planning cycle.
- Design a project using logical framework approach
- Develop skills in developing project ideas
- Understand the implementation process and evaluation of project

Contents

- **Project planning** (MK)
  - Concept of project planning
    - Concept of strategic planning for project / programs
      - Need for strategic planning
      - Principles of strategic planning
      - Executive involvement
      - Organizational factors, quantitative and qualitative.
    - Strategic planning marketing
    - Project planning cycle
    - Generation of project ideas
    - Environmental scanning
    - Needs assessment
    - Sources of data
  - **Project feasibility analysis**(MK)
    - Economic and financial feasibility
    - Technical and managerial feasibility
    - Environmental feasibility

- **Functions of project management**
    - Vision communicating vision, motivating people, team building and statement (DK)

Project planning and design process using Logical framework approach (MK)

- Concept of LFA
- Stakeholders analysis
- Problem tree and objectives
- Analysis of strategies
- Fixing project output and activities
- Assumptions, risk monitoring and evaluation indicators

Project Appraisal (MK)

- Concept of project appraisal
- Process of appraisal
- Appraisal techniques: Discounted and non discounted
- Cost
- Cost benefit analysis
- Analysis of risk

Project Implementation (MK)

- Operational planning
- Concept, need of project implementation plan
- Pre requisites
- Project of project implementation planning
- Networking techniques for project
- PERT, CPM Mode, Gantt chart and others
- Project review and control

Budgeting and cost calculation (MK)

Risk management (MK)

- Contingency planning
- Scheduling resources
- Reducing project duration
- Project documentation, procedures
- Team building and human resource planning
- Managing changes to the project
- Quality assurance
- Project closure

Proposal writing(MK)

- Concept note and grant writing.

Reference

- Gopalakrishnan P and V.E.Ramamurthy: Textbook of project management: Mac Millan India Ltd.
- Cedric Saldhana and John Whittle: Using the Logical Framework for sector analysis and project design: A user guide: Asian Development Bank
- David L. Cleland: Project Management –Strategic design and implementation. McGraw Hill Inc
- Ralph L.Klein and Irwin Schudin: Project management practioners handbook:
- Stucken.L.C: The implementation of project management-A professional handbook: Addison-Wesley USA
- Meredith.J.R and Mantel S.J: Project management- a management approach, 6th edition New Delhi Wiley
- Chandra, Prasanna : Project management- planning, analysis selection implementation and review: Tata McGraw Hill. NewDelhi edition.

BPH 7.4 Fundamentals of Public Health Leadership

Course Description

This course provides an introduction and overview to leadership management in health care setting. The students will acquire leadership skills and apply it in managing health care organization at several levels: individual, interpersonal, group, system and inter-organizational levels.

Objectives

At the conclusion of the course, the student will be able to

- Understand and explain the different roles and challenges of leadership and management in healthcare setting
- Understand and demonstrate key organizational behaviour theories and concepts related to leadership
- Develop and understand better personal leadership strengths and areas of improvements

Contents

- **Leadership**
  - Introduction to leadership (DK)
  - Definition (MK)
  - Principles of leadership(MK)
  - Leadership styles and traits
  - Leadership practicess(MK)
  - Levels of leadership(MK)
  - Systems and Systems thinking(MK)
  - Leadership theories(MK)
  - Leadership skills and competencies(MK)
  - Leadership and decision making (MK)
  - Management and leadership(MK)
  - Leading public Health Organization (MK)

Reference

- Luis Rowitz; Essentials of Leadership in Public Health; Jones and Barlett Learning
- Peter.G Northouse ; Leadership Theory and Practice; Sage Publication
- Stuart A. Capper, Perter M.Ginter, Linda E.Swane; Public Health Leadership and Management: Case and Context.; SagePublication.
- Luiz Rowitz; Public Health Leadership: Putting Principles into Practices; Jones and Barlett Learning.
- Robert E Burke :Essentials Of Management And Leadership In Public Health; Jones & Bartlett Learning
- Sharaon B.Buchibinder and Nancy H Shanks; Introduction to Health Care Management; Jones and Barlett Publichers

BPH – SEVENTH SEMESTER (THEORY EXAMINATION)
QUESTION PATTERN

Duration: 3 Hours
Maximum Marks: 100 Marks

Type of Questions	No. of Questions	Marks for each question	Total Marks
Long Essays	3	10	30
Short Essays**	10	5	50
Objective type***	10	2	20

** Students are required to attempt 10 out of 11Short Essay type
***Objective Type questions can be combination of fill in blanks, true or false, multiple choice questions and one or two sentence answers.

SEMESTER -VIII

BPH 8.1 Recent Advance in Public Health (Subsidiary Course)

This course discusses all the latest development in Public health. There will be no University examination for this course. It shall be conducted in seminar mode.

Life Skills Education (Subsidiary Course)

There will be no University examination for this course. It shall be conducted in seminar mode. The respective colleges can decide on the curriculum some of the topics that could be covered are as follows Introduction to Life Skills and life Skills Education

Conceptual Basis of Life Skills: Definition, Need and significance. Evolution and Development of the Concept of Life Skill Education

- Classification of Life Skills - Generic, Problem Specific and Area Specific Skills
- Life Skills Approach in Education and Training
- Theoretical Foundations of Life Skills : Social Learning Theory: Albert Bandura
- Problem- Behaviour Theory: Richard Jessor
- Core Life Skills: Social & Negotiation Skills
- Self-Awareness - Definition, Importance, Dimensions, Components
- Methods and Strategies for nurturing Self-Awareness
- Exploration: Jo-Hari Window, SWOT Analysis
- Empathy: Sympathy, Empathy & Altruism
- Effective Communication: Assertiveness, Effective Listening, Negotiation Techniques & Process, Barriers of Communication, Presentation Skills
- Interpersonal Relationship: Definition, Factors Affecting Relationships
- Thinking Skills: Critical Thinking: Analytical Thinking, Strategiesto enhance Critical Thinking
- Creative Thinking: Out-of-the box thinking, Stages of Creative Thinking, Factors hindering creative thinking, Characteristics of Creative thinkers
- Problem Solving: Definition, Steps in Problem Solving
- Decision Making: Definition, Informed Decision Making, Consequences of Decision Making and Models of DecisionMaking
- Coping with Emotions: Basic Emotions, Models of emotion
- Coping with Stress: Definition, Types, Sources of Stress, Strategies to Manage Stress

- Life skills work in combination- thinking skills, social skills, and coping skills
- Life Skills for Personal Effectiveness
- Values: Punctuality, Honesty, Loyalty, Dependability, Reliability
- Skill of building Self-confidence and Self-Motivation
- Skill of goal Setting: Types, Steps, Personal vision and goal
- Skill of time management
- Study Skills and Memory Techniques
- Concept and strategies to promote Healthy Life Style Skills
- Life Skills for Adolescents and Youth

BPH 8.3 Internship/ Field Experience

Course description:

Bachelor in Public Health students must complete 15 credits of internship. Each credit hour equals 15 hours of field work. Fifteen credits are equal to 225 hours. Students must get their internships objectives and field experience site approved by the principal of the college before starting the Field experience/Internship.

Overview of Undergraduate Internship

What is the purpose of the undergraduate internship?

The purpose of the undergraduate internship is to provide students with a work-related experience designed to integrate theory and practice in an applied setting under supervision. The internship/field experience permits the student to demonstrate her/his ability to apply knowledge of theory and practice to specific activities in a real-world setting.

The internship/field experience provides students with a professional experience where they can apply existing and new skills and become more socialized into the field of community/public health. Existing skills are those the student brings from their life experience and previous education. New skills include those the student has gained through their educational experience.

What does the internship experience involve?

The internship experience typically involves the student working on a health related issue confronting a public, not-for-profit or health services organization. It is an opportunity for the student to relate her/his academic experience to the issue that is the focus of the experience. Typical activities conducted by students in internship settings include public health activities at a not-for-profit, a hospital, state/county health agency, or academic institutions.

The student should spend a minimum of 225 hours of work in the internship experience. This should be conducted during the last semester. During the internship, students are expected to keep a weekly journal of work-related experiences and reflections about the internship. Students should report to their faculty advisor on a periodic basis about their experience. At the end of the internship the student prepares and submits an internship summary report and an internship evaluation report.

Responsibilities of Students, Faculty Advisors and Worksite Supervisors

There is a shared responsibility in selecting, monitoring and evaluating an internship:

Students:

- Articulate the kinds of skills or experiences looking to develop or enhance as a result of the internship.
- Identify possible internship sites to discuss with internship advisor.
- Complete the Application/Learning Contract and return to faculty advisor with the worksite supervisor's signature.
- Provide a copy of the Application/Learning Contract to your worksite supervisor
- Maintain weekly internship journal.
- Fulfill the Learning Contract as specified
- Submit Internship Summary Report and Internship Evaluation Report to internship coordinator advisor, and the option follow- up survey
- Request that worksite supervisor complete the Student Evaluation Form and return to their faculty advisor in the School of Public Health

Internship Advisors:

- Develop internship opportunities through contacts in research, practice and service activities
- Assist student advisee in identifying appropriate internship sites
- Meet with advisee to review the Application/Learning Contract (note: this may require more than one meeting)
- Approve and sign off on advisee's Application/Learning Contract
- Meet or communicate with advisee periodically during their internship experience as needed
- Review the Student Evaluation Form and discuss internship experience with worksite supervisor as needed
- Be available to debrief advisee on their internship experience to review their evaluation results and discuss future career options

Worksite Supervisors:

- Sign the student's Application/Learning Contract and ensure that the learning contract is fulfilled
- Supervise the student throughout the internship experience; confer with the student's internship advisor as necessary
- Complete the Student Evaluation Form and return to the School of Public Health; debrief with internship advisor on student's performance
- Qualification of a worksite supervisor : A senior public health /medical professional having public health work experience and duly approved by the Principal

Description of the Internship Process
When should the internship experience occur?

Students generally are in their final semester or 4th year. The credit requirement helps to ensure that students have sufficient academic experience to use their internship as an integrative and reflective activity.

How do I identify an internship location?
Sites for internships are identified in a number of ways:

- Students' own ideas and contacts
- Announcements of internships posted
- Sites identified in consultation with the internship advisor

Students should discuss their prospective internship site with their faculty advisor early in the term prior to the term when they want to begin their internship. Students MUST get approval from an adviser before registering for an internship.

How do I get permission for the Internship?
Once an internship site has been identified, the student will complete the Application/Learning Contract. The learning contract sets out identifying information about the site, student's learning objectives, and skill requirements. The student, the worksite supervisor, and the internship advisor sign the contract. The internship advisor sees that the signed Application/Learning Contract is placed in the student's academic advising file in the School of Public Health office. Students should provide a copy of the completed Application/Learning Contract to their site supervisor. After a student gets approval from his/her advisor and the contract is signed by the worksite supervisor, the student will need to go to the School of Public Health to get permission for the internship by Principal.

What do I include as the goals and objectives of the internship? The student will have to include a short list of goals and /or objectives that they wish to gain from their internship experience with his/her learning contract. Some sites will provide a detailed list of the student responsibilities and can be submitted.
The goal/objective list may include: (For example)

- To participate in a public health, health education, & health promotion programs being implemented locally.
- Understand how health promotion policies form and/or become law.

What should I do once the internship begins?

As the internship experience begins, students should start a weekly journal of activities and reflections on the experience. The internship experience is meant to provide students with a real life experience. As in real life, sometimes there are problems at the selected site for the internship. Students are encouraged to contact their internship advisor if there is a problem.

Working closely with the worksite supervisor and the internship advisor, most problems can be resolved if addressed early. In rare instances, it may be necessary to find another, more appropriate placement.

How do I complete the internship?

At the end of the internship experience, the student requests to their worksite supervisor to complete the Student Evaluation Form and send the form to the student's internship advisor.

The student's Internship Summary Report and log are submitted to their internship advisor as evidence of completion of the internship requirement by the end of the last week of classes. The report is graded on a pass/no pass basis. If students choose to fill out the optional follow-up survey they should submit it with their summary report.

Guidelines for Internship Summary Report

Section I. Fill out 'Site Information Contract' and attach it to your answers from Section II & III.

Section II. Evaluation of Learning Objectives

Answer the following questions:

1. Did this internship provide you with a good overall learning experience? Why or why not? What experiences were the most helpful? Why? What experiences were the least helpful? Why?
2. Were you able to accomplish your learning objectives?
3. Do you feel you received adequate supervision from your worksite supervisor?
4. What feedback or recommendations do you have to improve the internship experience at this placement site?
5. Would you recommend this internship site to other students? Please explain.
6. Has this internship experience influenced your career goals?
7. Any additional comments.

Section III. Also include your weekly logs.

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