

COURSES OF STUDIES

(Under CBCS)

For B.A. Integrated Programme in Health Economics

(Syllabus of Courses Effective from the Academic Year: 2023-24)



Syllabus of Courses to be Offered

DEPARTMENT OF REGIONAL ECONOMICS

**MAHATMA JYOTIBA PHULE
ROHILKHAND UNIVERSITY, BAREILLY
(U.P.) INDIA**

DEPARTMENT: -

The Department of Regional Economics at MJP Rohilkhand University came into existence in 1985 and is among premier Economics departments in India. It has established its reputation as one of the leading centers of Economics education and research. The department is having faculty members who have an active research agenda in various sub-disciplines in economics including economic theory, macroeconomics, development economics, environmental economics, international trade, labour economics, public economics, regional economics etc.

VISION, MISSION & STRENGTHS: -

Through teaching and research, the department is always committed to giving a better understanding of global, national, and local economic issues that will face our society today and in the future.

To produce scholars for:

- Development administration and planning services at national and state levels.
- Making a career in applied Socio-economic research.
- Attaining success in the national and state level competitive examinations.
- Inculcating skills for being absorbed in the emerging private sector and MNCs.
- Committed and Skilled faculty.
- Committed to the cause of Nation's Economic Growth and Development.
- Deep concern with Social and Economic issues.
- Conflict-less amicable academic environment.
- Best academic record of the teachers and meritorious students.
- Department has undertaken various activities to create awareness about socioeconomic phenomena in our students.

PROGRAMME DETAILS: -

1. B.A. Integrated Programme in Health Economics

It's a four-year full-time course divided into 8 semesters with an intake of 40 seats.

Programme Structure: -

B.A. Health Economics will be a full time Four- years programme to be covered in Eight (I, II, III, IV, V, VI, VII, VIII) semesters, each of six months duration.

Part	Year	Semester	Semester
Part- I	First Year	Semester-I	Semester-II
Part- II	Second Year	Semester-III	Semester-IV
Part- III	Third Year	Semester-V	Semester-VI
Part- IV	Fourth Year	Semester-VII	Semester-VIII

- The duration of the programme shall be Five Years and the minimum duration of the programme, i.e., Four years.
- Each semester is comprising with 15 credits and for the completion of program one can need to clear 120 credits in minimum eight semester and maximum ten semesters.
- In the first semester there will be a non-credit paper and to become graduate with the programme, students need to be clear any of semester during the programme.
- In the third, fourth, and eight semesters, there will be a provision of market survey report and viva, comprehensive viva voce and viva voce is on project respectively.
- The programme is comprising with 29 core papers and 11 elective/optional papers (which are chosen from 24 elective/optional pool).
- There will be a Dissertation in VIII Semester.
- Each paper is of 100 Marks (3 Credits).
- 30% of the evaluation shall be internal (Continuous Assessment (C.A.)) and 70% is based on exams.

Internal Assessment (C.A.)					Exams	Total Marks
Test I	Test II	Assignment	Attendance	Marks	Marks	
7.5	7.5	10	05	30	70	100

Note: - If a student fails to score passing marks in the internal, that is 50 per cent of 30 marks, then he/she will be given one chance to score in the same semester. The student must produce a valid medical certificate or must explain genuine reason for his/her absence from the test.

- The syllabus for the theory and practical examination as prescribed by the Board of Studies in Regional Economics, MJP Rohilkhand University, Bareilly.
- As per UGC guideline four kinds of courses: Core Course, elective course, and viva-voce
The details are as follows:

Core Courses: - The core course of every semester is the course which is compulsory for the student to complete the requirement of the programme.

Open Elective: - Elective course is chosen by the students as per each semester requirements.

COURSE CREDIT SCHEME- CONSOLIDATED

Semester	Core Course			Elective Course			Non-Credit	TOTAL
	No. of papers	Credits (L/P)	Total credits	No. of papers	Credits (L/P)	Total credits		
I	5	3	15	-	-	-	1	15
II	5	3	15	-	-	-	-	15
III	3	3	9	2	3	6	-	15

IV	4	3	12	1	3	3	-	15
V	2	3	6	3	3	9	-	15
VI	3	3	9	2	3	6	-	15
VII	3	3	9	2	3	6	-	15
VIII	4	3	12	1	3	3	-	15
TotalNo of Credits And Papers	29	24	87	11	24	33	1	120

ADMISSION TO THE COURSE: -

The admissions will be made based on the university policy decided time to time and the admission of the aspirants in the first semester of Four Years Integrated Programme in Health Economics will be governed by the admission committee of the University. Selected candidates, before being permitted to attend any class, shall have to fill the admission form, and submit it to the department with a prescribed fee, failing which he/she shall not be allowed to attend the classes.

ELEGIBILITY: - The candidates who have passed their 10+2 exams in any stream with 60% marks are eligible to apply (There will be a relaxation of 5% in the case of OBC, and SC/ST).

ATTENDENCE: - The Student whose attendance is less than 75% attendance is compulsory for a student to appear in the semester examination. In specific conditions 15% relaxation in attendance may be given by Head of the department to a candidate to appear in semester examination (based on genuine reason and production of evidence of it).

ENROLLMENT: - Admitted candidates shall be required to get him/her enrolled with the University if he/she is not already enrolled as a student at this University. They will be required to submit their migration certificate along with the enrolment form and prescribed fee.

FEE STRUCTURES: For Indian Nationals: Rs. 5,000 per Semester + Examination Fee.
For Foreign Nationals: Rs. 8,000 Per Semester + Examination Fee.

PROPOSED SHEETS FOR THE PROGRAMME: 30

Condition for a Pass and Promotion to Next Semester/Year: - For each course, each student must appear in at least two tests one assignment and end semester examination: otherwise, the student will be awarded an “Fail/Absent (F/A)” grade. The total marks obtained in the end-semester examination, the two tests and one assignment under Continuous Assessment (C.A.) will be considered to decide the grade in that course. In addition, a student also must get valid credits for Human Value and Ethics courses and grades as per university rules. The grading will be made on a 10-point scale as follows:

Letter Grade	Grade Points	Description	Range of marks (%)
O	10	Outstanding	95% or above
A+	9	Excellent	85-94%
A	8	Very Good	75-84%
B+	7	Good	65-74%
B	6	Above average	55-64 %
C	5	Average	45-54%
P	4	Pass	36-44%
F	0	Fail	Below 36%
Ab	0	Absent	Absent

For passing the examination in each semester, a candidate must have secured a minimum of 36% marks (“P” Grade: 4 Grade Points) in the course. If the marks obtained by the student in a course are less than the minimum cut-off Percentage of marks, then “F” grade will be awarded. If a student obtains an “F” or “Ab” Grade in any course, he/she will be treated to have failed in the course.

The decision of the teacher regarding the evaluation and the grade shall be final. However, a student submitsin writing for a review of his Marks /Grade to the Head/Director who will place the case before the board of comprehensive viva voce. The decision of the board will be final. The result of the review will be declared by the concerned Head/Director. Review is effective only when the grade improves. The review will be allowed only if-

- The Prescribed fee is paid.
- The candidate applies within 7 days of declaration of the grade in that course.
- Grace point to pass a course (paper)/year semester/year will be as per university rule.
- In matters not covered under this ordinance, general rules of the University shall beapplicable.
- **In case of any dispute/ambiguity, the decision of the Vice-Chancellor shall be final abiding by both student and the Department.**

A student can be promoted to next academic year if he/she fails in up to the maximum courses (papers) including both semesters. The paper/papers in which a student fail shall be considered as back paper. In case a student having back in more than five

papers can be promoted to next year and will be treated to have **year back**. The student will be treated as ex-student. In case student want to take readmission by paying approved tuition fee for which recommendation of HOD/Dean will be essential in this case student can appear in all papers and practical and he/she will be eligible to get internal marks/ practical marks as a fresh.

GENERAL RULES:

These will be the same as applicable for other Four Years Undergraduate programmes of the University.

CONVERSION OF MARKS INTO GRADES:

- Grade Points: Grade point table as per university examination rule.
- YGPA (Year Grade Point Average): Calculation as per University Examination rule.
- CGPA (Cumulative Grade Point Average): Calculation as Per University Examination rule.
- Grade Point conversion into Marks: Calculation as per university rule.

UPGRADATION AND MODIFICATION OF SYLLABUS: -

- Up-gradation and Modification of the syllabus shall be proposed by the Board of Studies (BOS) and shall be approved by the Academic Council time-to-time, as and when required.

COURSE STRUCTURE

Four Years Integrated Undergraduate Programme in Health Economics

SEMESTER-I

Sr./No.	COURSE CODE	NATURE OFCOURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						CONTNEOUS ASSESMENT (C.A)	SEM END EXAMS	TOTAL
1.	HE 101	CORE	MICROECONOMICS	3-0-0	3	30	70	100
2.	HE 102	CORE	INTRODUCTION TO HEALTH ECONOMICS	3-0-0	3	30	70	100
3.	HE 103	CORE	INTRODUCTION TO STATISTICS	3-0-0	3	30	70	100
4.	HE 104	CORE	USE OF COMPUTER IN HEALTH ECONOMICS RESEARCH	0-2-1	3	30	70	100
5.	HE 105	CORE	SEMINAR	3-0-0	3	30	70	100
6.	HE 106	NON-CREDITED	HUMAN VALUE AND ETHICS					100

SEMESTER-II

Sr./No.	COURSE CODE	NATURE OFCOURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						CONTNEOUS ASSESMENT (C.A)	SEM END EXAMS	TOTAL
1.	HE 201	CORE	MACROECONOMICS	3-0-0	3	30	70	100
2.	HE 202	CORE	INTRODUCTION TO RESEARCH METHODOLOGY	3-0-0	3	30	70	100
3.	HE 203	CORE	HEALTHCARE FINANCING AND INSURANCE	3-0-0	3	30	70	100

4.	HE 204	CORE	HEALTH ISSUES AND INDIAN ECONOMY	3-0-0	3	30	70	100
5.	HE 205	CORE	COMPREHENSIVE VIVA	0-0-3	3	30	70	100

SEMESTER-III

Sr./No.	COURSE CODE	NATURE OF COURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						CONTINUOUS ASSESSMENT (C.A)	SEM END EXAMS	TOTAL
1.	HE 301	CORE	PUBLIC FINANCE	3-0-0	3	30	70	100
2.	HE 302	CORE	MARKET SURVEY REPORT AND VIVA	3-0-0	3	30	70	100
3.	HE 303	CORE	HEALTH INFORMATICS	3-0-0	3	30	70	100
4.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100
5.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100

SEMESTER-IV

Sr./No.	COURSE CODE	NATURE OF COURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						CONTINUOUS ASSESSMENT (C.A)	SEM END EXAMS	TOTAL
1.	ECO 101	CORE	ECONOMICS OF POPULATION	3-0-0	3	30	70	100
2.	ECO 102	CORE	LEGAL ISSUES IN HEALTH CARE	3-0-0	3	30	70	100
3.	ECO 103	CORE	INTRODUCTION TO ECONOMETRICS	3-0-0	3	30	70	100
4.	ECO 104	CORE	COMPREHENSIVE VIVA	0-0-3	3	30	70	100
5.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100

SEMESTER-V

Sr./No.	COURSE CODE	NATURE OF COURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						CONTNEOUS ASSESMENT (C.A)	SEM END EXAMS	TOTAL
1.	ECO 101	CORE	INTERNATIONAL TRADE	3-0-0	3	30	70	100
2.	ECO 102	CORE	ECONOMIC EVALUATION OF HEALTH CARE	3-0-0	3	30	70	100
3.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100
4.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100
5.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100

SEMESTER-VI

Sr./No.	COURSE CODE	NATURE OF COURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						INTERNAL ASSESMENT	SEM END EXAMS	TOTAL
1.	ECO 101	CORE	DEVELOPMENT ECONOMICS	3-0-0	3	30	70	100
2.	ECO 102	CORE	START-UP AND INCUBATION	1-0-2	3	30	70	100
3.	ECO 103	CORE	ENVIRONMENT, HEALTH, AND SUSTAINABLE DEVELOPMENT	3-0-0	3	30	70	100
4.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100
5.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100

SEMESTER-VII

Sr./No.	COURSE CODE	NATURE OF COURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						CONTNEOUS ASSESMENT (C.A)	SEM END EXAMS	TOTAL
1.	ECO 101	CORE	ADVANCE RESEARCH METHODOLOGY	3-0-0	3	30	70	100
2.	ECO 102	CORE	PUBLICATION ETHICS	3-0-0	3	30	70	100
3.	ECO 103	CORE	HEALTHCARE MARKET ANALYSIS AND COMPETITION	3-0-0	3	30	70	100
4.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100
5.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100

SEMESTER-VIII

Sr./No.	COURSE CODE	NATURE OF COURSE	COURSE TITLE	L-P-T	CREDIT	MARKS		
						CONTNEOUS ASSESMENT (C.A)	SEM END EXAMS	TOTAL
1.	ECO 101	CORE	HEALTH CARE AND PUBLIC POLICY	3-0-0	3	30	70	100
2.	ECO 102	CORE	ECONOMIC DISPARITIES AND HEALTH EQUITY	3-0-0	3	30	70	100
3.	ECO 103	CORE	RESEARCH PROJECT/DISSERTATION	0-1-2	3	30	70	100
4.		CORE	VIVA OF RESEARCH PROJECT/DISSERTATION	0-0-3	3	30	70	100
5.		OPTIONAL	OPTIONAL	3-0-0	3	30	70	100

Available Optional Papers for Each Semester

Sr/No.	COURSE CODE	COURSE TITLE	Status	Credit	C.A.	Exam	Total
		THIRD SEMESTER COURSES					
1.	HE 304	Introduction to Mathematical Economics	Optional	3	30	70	100
2.	HE 305	Economic System	Optional	3	30	70	100
3.	HE 306	Introduction to Medical Statistics	Optional	3	30	70	100
4.	HE 307	Entrepreneurship Development	Optional	3	30	70	100
		FOURTH SEMESTER COURSES					
1.	HE 405	Money and Banking	Optional	3	30	70	100
2.	HE 406	Project in Waste Economics	Optional	3	30	70	100
3.	HE 407	Environmental Economics	Optional	3	30	70	100
4.	HE 408	Project Analysis	Optional	3	30	70	100
		FIFTH SEMESTER COURSES					
1.	HE 503	Epidemiology	Optional	3	30	70	100
2.	HE 504	History of Economic Thought	Optional	3	30	70	100
3.	HE 505	Applied Econometrics	Optional	3	30	70	100
4.	HE 506	Economics of Education	Optional	3	30	70	100
		SIXTH SEMESTER COURSES					
1.	HE 604	Indian Economy	Optional	3	30	70	100
2.	HE 605	Economics of Innovation	Optional	3	30	70	100
3.	HE 606	Social Factors and Health	Optional	3	30	70	100
4.	HE 607	Applied Health Economics	Optional	3	30	70	100

		SEVENTH SEMESTER COURSES					
1.	HE 704	Overview of Health	Optional	3	30	70	100
2.	HE 705	Pharmacoeconomics and healthcare Industry	Optional	3	30	70	100
3.	HE 706	Health Sciences	Optional	3	30	70	100
4.	HE 707	Public Health	Optional	3	30	70	100
		EIGHTH SEMESTER COURSES					
1.	HE 805	Behavioral Economics and Health Decision Making	Optional	3	30	70	100
2.	HE 806	Cost-Effectiveness Analysis in Healthcare	Optional	3	30	70	100
3.	HE 807	Health Administration and Management	Optional	3	30	70	100
4.	HE 808	Health Sector Reforms in India	Optional	3	30	70	100
Optional Courses for All Eight Semesters (Total Available Credits)				72			

Note: For Third Semester, Out of Four Course only Two need to be opted, For Forth Semester, Out of Four Courses only One need to be opted, For the Fifth Semester, Out of Four Courses, three need to be opted, For the Sixth Semester, Out of Four Courses only Two need to be opted, For Seventh Semester, Out of Four Courses only Two need be opted, and For Eight Semester, Our of Four Courses only One need to be opted.

SEMESTER FIRST

COURSE NAME: MICROECONOMICS

COURSE CODE: HE- 101

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. An ability to understand economic theories and functioning of basic microeconomic.
2. To understand the economic behaviour of individuals, firms, and markets.
3. To equip the students in a rigorous and comprehensive understanding with the various aspects of consumer behaviour and demand analysis.
4. To develop a theoretical understanding of strategic behaviour of economic agents. & enhance the ability of decision-making.

Learning Outcomes

At the end of the course students will be:

1. A student will be able to develop a sound understanding of the core microeconomic concepts.
2. Evaluate the factors affecting firm behavior, such as production and costs.
3. The students will be able to develop understanding about the environment where the standard market mechanism fails to generate the desirable outcomes.
4. They will be able to identify and analyze strategic interactions and explain negotiation and exchange between economic agents in game theory models.

Course Contents

Unit-I Micro economics- Scope- Basic concepts in Micro Economics, The basic economic problems Law of Demand , Elasticity of Demand , Capitalism Socialism- Mixed economy.

Unit-II Utility Analysis – Concept and Measurement; Cardinal Utility Analysis ,Total and Marginal Utility The Law of Diminishing Marginal Utility; Consumer Equilibrium; Ordinal Utility Analysis. Consumer's Preference: Indifference Curve, Consumer's Equilibrium, Budget Line, Income, Effect, Substitution Effect, Hicks and Slutsky Methods; Price Effect, Revealed Preference Hypothesis.

Unit-III Theory of Production and Cost Production Function; Laws of Production – Law of Variable Proportions: Law of Returns to Scale,– Isoquants curves Producer's Equilibrium ; Ridge Lines The Concepts of Costs; Opportunity Cost , Private Cost and Social Costs; The Cost Function; Modern Theory of Costs , Concepts of Revenue: Total, Average and Marginal Revenue.

Unit-IV Meaning, Perfect Competition, Monopoly Competition, Monopolistic Competition and Oligopoly Market Structure, Price Output decisions.

Suggested Readings:

- Ahuja, H.L.: Modern Economics
- Koutsoyiannis, A.: Modern Microeconomics
- Misra, S. K. & Puri, V.K.; Microeconomics: Theory and Applications
- Henderson, James M. & Quandt, Richard E.: Microeconomic Theory
- Agarwala, S.K.: Microeconomics
- Prasad, A.R.: A Study on the Theory of Consumer Demand: An Exposition with Simple Mathematics
- Case, K., Fair, R. (2007). Principles of economics, 8th ed. Pearson Education
- Samuelson, P.A. and W.D. Nordaus (1998): Economics, Tata McGraw Hill, New Delhi.
- Bernheim, Douglas B and Whinston, Michael D (2011): Microeconomics, Indian Edition, TMH.

COURSE NAME: INTRODUCTION TO HEALTH ECONOMICS

COURSE CODE: HE - 102

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course is an introduction to the field of health economics.
2. Health economics is an active field of microeconomics with a large and growing literature.
3. In the past three decades, some of the most controversial policies considered by state and federal governments have involved issues that have been analyzed by health economists.
4. The course focuses on health care and related public policy.

Learning Outcomes

At the end of the course students will be:

1. The students will learn different concepts of health economics.
- 2 They will be able to apply economic theory to understand the demand for health care.
3. Market failure in health insurance, economic evaluation of health care programmes, and public policy's role.
4. They will understand the health sector's different aspects of India.

Course Contents

Unit-I State and Scope of Health Economics, Normative Economics and Health, Difference between health and health care, Equity and Efficiency.

Unit-II Microeconomic Foundations of Health Economics Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality.

Unit-III : Evaluation of Health Programs Costing, cost-effectiveness and cost-benefit analysis; burden of disease.

Unit-IV Health Sector in India: An Overview Health Outcomes; health systems; health financing.

Suggested Readings:

- William, Jack, Principles of Health Economics for Developing Countries, World 24 Bank Institute Development Studies, 1999.
- World Development Report, Investing in Health, The World Bank, 1993.
- Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics: Theory and Public Policy, Addison Wesley, 2005.
- Bhattacharya, J., Hyde, T., Tu, P. (2014). Health economics, Palgrave Macmillan.

COURSE NAME: INTRODUCTION TO STATISTICS

COURSE CODE: HE - 103

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This is a course on statistical methods for economics.
2. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference.
3. It then develops the notion of probability, followed by probability distributions of discrete and continuous random variables and of joint distributions.

4. This is followed by a discussion on sampling techniques used to collect survey data.

Learning Outcomes

At the end of the course students will be:

1. The student will understand statistical methods.
2. They know the basics of statistical analysis and inferences.
3. They will understand the notion of probability.
4. They will also understand different sampling techniques.

Course Contents

Unit-I : Introduction and Overview The distinction between populations and samples and between population parameters and sample statistics; the use of measures of location and variation to describe and summarize data; population moments and their sample counterparts. Elementary Probability Theory Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes' rule; independence.

Unit-II : Random Variables and Probability Distributions Defining random variables; probability distributions; expected values of random variables and of functions of random variables; properties of commonly used discrete and continuous distributions (uniform, binomial, normal, Poisson and exponential random variables). 4. Random Sampling and Jointly Distributed Random Variables Density and distribution functions for jointly distributed random variables; computing expected values; covariance and correlation coefficients.

Unit-III : Sampling Principal steps in a sample survey; methods of sampling; the role of sampling theory; properties of random samples.

Unit-IV : Point and Interval Estimation of population parameters using methods of moments and maximum likelihood procedures; properties of estimators; confidence intervals for population parameters.

Suggested Readings:

- Jay L. Devore, Probability and Statistics for Engineers, Cengage Learning, 2010.
- John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
- Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
- William G. Cochran, Sampling Techniques, John Wiley, 2007.

COURSE NAME: USE OF COMPUTER IN HEALTH ECONOMICS

COURSE CODE: HE - 104

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. Introduced computers for basic understanding.
2. Discuss the various types of Data.
3. Analyse the various types of measurements.
4. . Apply SPSS/E-Views on various types of data.

Learning Outcomes

At the end of the course students will be:

1. Able to know about the various aspects of computer.
2. . Distinguish between various types of data.
3. . Gain insight into all the aspect of the measurements.
4. Able to use software packages for data analysis.

Course Contents

Unit-I Introduction of Computer: Basics of Computer: Computer hardwares and softwares, Disk operating systems, Operating system; Windows, and Introduction to MS Office.

Unit-II Types of Data: Different Types of Data: Time-series, Cross-section and Panel, Data Entry, Tabulation and Graphical Representation in Excel, Data Imports and Exports from/to application software Views/SPSS, Data tabulation and graphical representation in Eviews/SPSS.

Unit-III : Data Analysis with SPSS/E-Views: Moments - Mean, Median and Mode, Measures of Dispersion and Skewness, Correlation and Simple Regression, Multiple Regression Analysis.

Unit-IV Introduction to Time-Series Data Analysis with SPSS/E-Views: Stochastic Processes, Autocorrelation Functions and Correlograms
Stationarity: Unit- Root Test, Time- series Regression Analysis – Spurious Regression, Random Walk Model and Introduction to Cointegration Analysis.

Suggested Readings:

- Allen, R.G.D., Statistics for Economics.
- D. Gujarati (2002), Basic Econometrics, 4th Edition, McGraw-Hill/Irwin.
- Enders, W. (2003), Applied Econometric Time Series“, 2nd edition, 2003.
- Eviews Manuals.
- Kerns (1993), Essentials of Microsoft Windows, Word and Excel; Prentice Hall of India, New Delhi.
- Rajaraman, V. (1996), Fundamentals of Computers, Prentice Hall of India, New Delhi.
- SPSS Manuals.

COURSE NAME: SEMINAR

COURSE CODE: HE - 105

NATURE OF COURSE: CORE

The goal of this class is to enlighten the students. The seminar presentation is based on to introduce graduate student to ideas, methods, and techniques that they can use to improve their knowledge, the content and presentation of their subject and to learn by example by providing feedback to each other. They will be able to present their views on different topics, to express themselves in open forum.

COURSE NAME: HUMAN VALUE AND ETHICS

COURSE CODE: HE - 106

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. To introduce students to the fundamental concepts and theories of human values and ethics.
2. To explore the application of ethical principles in various societal contexts, such as the workplace, technology, environment, healthcare, science, and global issues.
3. To enhance students' ethical decision-making skills and moral reasoning abilities.
4. To promote self-reflection and personal development in relation to values, ethical behavior, and responsible citizenship.

Learning Outcomes

At the end of the course students will be:

1. By the end of the course, students will be able to demonstrate a comprehensive understanding of the key concepts and theories related to human values and ethics.
2. Students will be able to analyze and evaluate ethical issues in different societal contexts, identifying the underlying ethical principles and their implications.
3. . Students will develop the ability to apply ethical frameworks and models to make informed and morally sound decisions in real-life situations.
4. Students will demonstrate increased self-awareness, reflective thinking, and personal growth in relation to their own values, ethical behavior, and contribution to society.

Course Contents

Unit-I INTRODUCTION TO HUMAN VALUES AND ETHICS: Definition and Importance of Human Values, Relationship between Human Values and Ethics, Historical Perspectives on Ethics, Ethical Theories and Approaches, Ethical Decision Making and Moral Reasoning.

Unit-II : ETHICAL ISSUES IN SOCIETY: Ethics in the Workplace, Ethical Leadership and Organizational Culture, Professional Ethics and Codes of Conduct, Whistleblowing and Corporate Social Responsibility, Environmental Ethics, Sustainable Development and Stewardship, Climate Change and Ethical Responsibilities.

Unit-III ETHICAL PERSPECTIVES IN DIFFERENT CONTEXTS: Ethical Issues in Healthcare, Patient Autonomy and Informed Consent, Medical Ethics and End-of-Life Care, Ethical Dilemmas in Medical Research, Ethics in Global Context, Cultural Relativism and Universal Ethical Principles, Ethical Considerations in Globalization and International Relations.

Unit-IV PERSONAL VALUES AND ETHICAL DEVELOPMENT: Self-reflection and Values Clarification, Identifying Personal Values and Beliefs, Moral Development and Ethical Awareness, Ethical Leadership and Personal Integrity, Ethical Decision Making and Moral Courage, Developing Moral Courage and Resilience, Ethical Consumerism and Sustainable Living, Ethical Citizenship and Civic Engagement.

Suggested Readings:

- "Ethics: Theory and Practice" by Jacques P. Thiroux and Keith W. Krasemann.
- "Ethics for the Real World: Creating a Personal Code to Guide Decisions in Work and Life" by Ronald A. Howard and Clinton D. Korver.
- "Doing Ethics: Moral Reasoning and Contemporary Issues" by Lewis Vaughn.
- "Ethics: Discovering Right and Wrong" by Louis P. Pojman and James Fieser.
- "The Right Thing to Do: Basic Readings in Moral Philosophy" edited by James Rachels and Stuart Rachels.
- "Practical Ethics" by Peter Singer.
- "Ethics in the Real World: 82 Brief Essays on Things That Matter" by Peter Singer.

SEMESTER SECOND
COURSE NAME: MACROECONOMICS

COURSE CODE: HE - 201

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course aims to introduce the students to the basic concepts of Macroeconomics.
2. Macroeconomics deals with the aggregate economy.

3. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variables.
4. savings, investment, GDP, money, inflation, and the balance of payments.

Learning Outcomes

At the end of the course students will be:

1. The student will understand the basic concept of macroeconomics.
2. They know the measurement of national income accounting.
3. They will understand different concepts of money.
4. They will also understand inflation and its causes.

Course Contents

Unit-I Introduction to Macroeconomics and National Income Accounting Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure, and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts.

Unit-II Money Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.

Unit-III Inflation and its social costs; hyperinflation.

Unit-IV The Closed Economy in the Short Run Classical and Keynesian systems; simple Keynesian model of income determination; IS-LM model; fiscal and monetary multiplier

Suggested Readings:

- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
- N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010.
- Olivier Blanchard, Macroeconomics, Pearson Education, Inc., 5th edition, 2009.
- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
- Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
- Errol D 'Souza, Macroeconomics, Pearson Education, 2009.
- Paul R. Krugman, Maurice Obstfeld and Marc Melitz, International Economics, Pearson Education Asia, 9th edition, 2012.

COURSE NAME: INTRODUCTION TO RESEARCH METHODOLOGY

COURSE CODE: HE - 202

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. The aim of this course is to give thorough knowledge about the research methods.
2. The techniques which could be applied to conducting the research.
3. The course would also enable the students to handle the time series and cross-section data sets.
4. The course focuses on the use of software and statistical packages to analyze the data.

Learning Outcomes

At the end of the course students will be:

1. This paper enables students to understand the basics of research methods, concepts, and types of research.
2. It also includes various research designs and steps in research.
3. It familiarizes students with quantitative techniques of data collection and its actual process.
4. The importance of methodology in overall research can be understood.

Course Contents

Unit-I Definition of Research, Aims, objectives and Scope of social research, Assumptions, Operations and Aims of Scientific Research, Steps in Research , Formulation of a research problem.

Unit-II Definition and need of research design, Experimental and Non-experimental research design.

Unit-III Level of measurement, Reliability, Random and non-random errors.

Unit-IV Data collection and analysis of quantitative data.

Suggested Readings:

- Kothari, CR (1995) Research Methodology: Methods and Techniques, Wishwa Prakashan (Wiley Eastern Ltd), New Delhi.

- Good and Hattt, (1979) Methods in Social Research, Tata-Mc Graw Hill, New Delhi.
- Kumar, Ranjit (2014) Research Methodology: A Step-by-Step Guide for Beginners, SAGE Publications Pvt. Ltd.

COURSE NAME: HEALTHCARE FINANCING AND INSURANCE

COURSE CODE: HE - 203

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. Understand the fundamental concepts and principles of healthcare financing and insurance.
2. Examine different healthcare financing models, including social health insurance, national health insurance, and private health insurance systems.
3. Analyze healthcare financing and insurance policies, including regulation, reform, and strategies for cost containment.
4. Explore current issues and emerging trends in healthcare financing and insurance, considering equity, access, and ethical considerations.

Learning Outcomes

At the end of the course students will be:

1. Knowledge and Understanding: Students will be able to demonstrate a comprehensive understanding of healthcare financing and insurance, including the principles, models, policies, and current issues in the field.
2. Critical Thinking and Analysis: Students will develop the ability to critically analyze healthcare financing models, policies, and strategies, evaluating their strengths, weaknesses, and implications for healthcare access, affordability, and quality.
3. Application and Synthesis: Students will apply their knowledge of healthcare financing and insurance to real-world scenarios, examining case studies and policy examples to propose innovative solutions and strategies for improving healthcare financing systems.
4. Ethical and Social Awareness: Students will develop an understanding of the ethical considerations involved in healthcare financing and insurance, including the allocation of resources, promoting equity, and addressing social determinants of health, fostering a sense of social responsibility and ethical decision-making in the field.

Course Contents

Unit-I Overview of Healthcare Systems: Definition and components of healthcare systems, Types of healthcare systems (e.g., single-payer, multi-payer), Role of financing and insurance in healthcare system, Sources of healthcare financing (e.g., government funding, private insurance).

Unit-II Introduction to Health Insurance: Definition and purpose of health insurance, Types of health insurance plans (e.g., employer-sponsored, government programs), Social Health Insurance Systems, Features, and characteristics of social health insurance.

Unit-III : Healthcare Financing: National Health Insurance Systems, Features and characteristics of national health insurance, Case studies of countries with national health insurance systems, Pros and cons of national health insurance, Features and characteristics of private health insurance, Challenges and issues in private health insurance.

Unit-IV Equity and Access to Healthcare: Disparities in access to healthcare and insurance coverage, Strategies for promoting equity in healthcare financing and insurance, Addressing social determinants of health through insurance model, Ethical challenges in allocating healthcare resources, Balancing individual needs with the collective good.

Suggested Readings:

- Health Economics and Financing" by Thomas E. Getzen and Joel W. Hay.
- "Introduction to Health Care Finance and Accounting" by Carlene Harrison and William P. Harrison.
- "Health Insurance Today: A Practical Approach" by Janet I. Beik.
- "The Economics of Health and Health Care" by Sherman Folland, Allen C. Goodman, and Miron Stano.
- "Health Financing in Low- and Middle-Income Countries: Resource Mobilization, Risk Sharing, and Health Insurance" edited by Akiko Maeda, Guy Carrin, and David B. Evans.
- "Health Insurance: Basic Actuarial Models" by Pietro Parodi, Alessandro De Angelis, and Michele Costa.
- "Healthcare Finance: An Introduction to Accounting and Financial Management" by Louis C. Gapenski.
- "Global Health Financing: A Practical Guide" edited by Joseph Kutzin, Cheryl Cashin, and Melitta Jakab.

COURSE NAME: HEALTH ISSUES AND INDIAN ECONOMY

COURSE CODE: HE - 204

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course basically discusses on basics of health economics like its scope and subject matter.
2. The focus is on micro and macro issues in health care.
3. To provide an understanding of the Indian Economy.
4. To develop ideas of the basic characteristics of the Indian economy, and its potential on natural resources.

Learning Outcomes

At the end of the course students will be:

1. At the end of the course students are expected to have knowledge of what is health economics.
2. They will understand what health expenditure, quality and disability-adjusted life years is, cost-benefit analysis of health care, equity, and efficiency in health care etc.
3. The students will be able to Learn the strategy of economic development undertaken by India.
4. They grasp the importance of planning undertaken by the government of India.

Course Contents

Unit-I : State and Scope of Health Economics, Normative economics, and health. Difference between health and health care, Equity and Efficiency.

Unit-II Preventive and Curative Health care. Public Health and political economy. Socio-economic determinants of health.

Unit-III : Growth, Structural Changes and Challenges of the Indian Economy: Economic growth in India- CSO and national income related aggregates- Contribution of different sectors to GVA, GDP and Employment- Trends in savings and investment since reforms- Migration, diaspora, and remittance - Regional disparity in growth and development. Analysis of poverty, unemployment, and inequality in India.

Unit-IV Economic Planning in India: Planning and economic development- Bottom up and Step-down approaches in planning- Evaluation of Five-Year Plans-NITI Aayog and its Vision Documents- Welfare programmes announced in the last two Union Budgets., Health Expenditure, Health Policies, Latest RBI Reports & current expenditure on Health.

Suggested Readings:

- Uma Kapila (ed): Indian Economy Since Independence- Academic Foundation, New Delhi 2004.
- Vijay Joshi and I. M.D Little: India's Economic Reforms: 1991- 2001- Oxford University Press, New Delhi,1996.
- VM Dandekar and Nilakant Rath: Poverty in India- Indian School of Political Economy, Pune, 1971.
- Dutta Shuvendu Bikash: Health Economics for Hospital Management, Jaypee Brothers Medical Publishers, 2013.
- Utpal Kumar De, et.al.: Issues on Health and Healthcare in India, Springer,2018.

COURSE NAME: COMPREHENSIVE VIVA

COURSE CODE: HE - 205

NATURE OF COURSE: CORE

The objective of the comprehensive viva-voce is to assess the overall knowledge of the student in the relevant field. The main objective of this paper is to develop communication skills of the students. Learners will be able to explore various ideas from the field of Health Economics and related issues and finally it will be a test for students to ensure about their learning and understanding from this course.

SEMESTER THIRD **COURSE NAME: PUBLIC FINANCE**

COURSE CODE: HE - 301

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course is a non-technical overview of government finances with special reference to India.
2. It will investigate the efficiency and equity aspects of the taxation of the Center, States, and Local Governments.
3. It focuses on fiscal federalism and decentralization issues in India.
4. The course provides knowledge of different aspects of public expenditure.

Learning Outcomes

At the end of the course students will be:

1. The students will understand the basic concepts of public finance.
2. They will be able to understand the different approaches to taxation and public expenditure.
3. They will also understand public debt.
4. At the end of the course, they will understand different theories of public finance.

Course Contents

Unit-I Meaning, Nature, Scope and Importance of Public Finance, Difference between private and public finance.

Unit-II Principle of maximum social advantage, Role of state in public finance.

Unit-III Meaning and types of Taxes, Sources of revenue, Canons of taxation, incidence and impact of taxation, Tax evasion, taxable capacity.

Unit-IV : Principle of public expenditure, Principle of public debt and its methods of redemption.

Suggested Readings:

- Musgrave, R.A. and P.B. Musgrave, Public Finance in Theory and Practice, McGraw Hill, 1989.
- Mahesh Purohit, “Value Added Tax: Experience of India and Other Countries”, Gayatri Publications, 2007.
- Kaushik Basu, and A. Maertens (ed.), The Oxford Companion to Economics in India, Oxford University Press, 2007.
- M.M Sury, Government Budgeting in India, Commonwealth Publishers, 1990.
- Shankar Acharya, “Thirty years of tax reform” in India, Economic and Political Weekly, May 2005.
- 6. Government of India, Report of the 13th Finance Commission.
- Economic Survey, Government of India (latest).
- State Finances: A Study of Budgets, Reserve Bank of India (latest).

COURSE NAME: MARKET SURVEY REPORT AND VIVA

COURSE CODE: HE - 302

NATURE OF COURSE: CORE

At the end of the semester, students will be deployed in the various sector of health and related organization to get exposure from the sector and based on it, they must have submit their report and they have to defend it before the panel of internal examiners.

COURSE NAME: HEALTH INFORMATICS

COURSE CODE: HE - 303

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. Discuss the various types of medical records.
2. Explain the information about the diseases and its records.
3. Discuss the role of health responsiveness and its access.
4. Explain the role of various stakeholders in the health sectors.

Learning Outcomes

At the end of the course students will be:

1. Able to know about the various types of medical records.
2. Understand the various types of diseases and keeping their records in the hospitals.
3. Understand about the health systems responsiveness.
4. Able to know about the role various stakeholders in the health sector market.

Course Contents

Unit-I Introduction, electronic health records, formalization of clinical data and medical knowledge, Medical terminologies, coding and classification systems.

Unit-II Health and social inequalities, Social construction of illness and social knowledge, social capital, studies of institutions, health inequalities, social epidemiology of disease, social factors affecting delivery of health services.

Unit-III Health System Responsiveness: Prompt attention, Dignity, Clear communication, Autonomy, Confidentiality, Choice of provider, Quality of basic amenities, Access to social support.

Unit-IV Market for Physicians' Services, Market of Drugs and Pharmaceutical Manufacturers, Overview of National Health Accounts: Concept, Classification of Function, Classification of Providers, Health Financing Schemes, Financing Agents.

Suggested Readings:

- Iles (1997), Really Managing Health Care.
- Strike (1995), Human Resources in Health Care: A Manager's Guide.
- Tabis M., (2001), Hospital and Health Services Administration: Principles and Practice.

SEMESTER FOURTH
COURSE NAME: ECONOMICS OF POPULATION

COURSE CODE: HE - 401

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This is a course on the fundamentals of population studies and the nature of population.
2. The objective of the course is to enrich the knowledge of the students about the nature and scope of population studies.
3. The course focuses on population growth and distribution around the world and India.
4. To enable students about selected theories of population.

Learning Outcomes

At the end of the course students will be:

1. The students will learn the different concepts of population.
2. They will understand the theories of Population.
3. The student will be able to understand the structure of the Indian Population.
4. They will know about basic concepts of fertility, mortality, migration, and urbanization.

Course Contents

Unit-I nature of Population studies, Components of population change - Fertility, Mortality, Migration, and their interrelationships.

Unit-II Size and Growth Rate of Population, Migration, Urbanization, Large sample demographic Surveys-National Family Health Survey

Unit-III The Malthusian Theory of Population, The Optimum Theory of Population.

Unit-IV Interrelationship between population growth, environment and development, Population Policy in India, Health Policy Programmes and Initiatives.

Suggested Readings:

- M. L. Jhingan, B. K. Bhatt, and J. N. Desai, Demography, Vrinda Publications, 3rd edition, 2016.
- Asha A. Bhende and Tara Kanitkar, Principles of Population Studies, Himalaya Publishing House, 2019.
- J. P. Mishra, Demography, Sahitya Bhawan Publications, 2021.
- Government sites.

COURSE NAME: LEGAL ISSUES IN HEALTH CARE

COURSE CODE: HE - 402

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. Analyze tort law and medical malpractice as they affect liability concerns in health care.
2. Explore legal aspects associated with patient rights and responsibilities.
3. Describe legal reporting obligations that affect the health care environment and are of concern to the health care administrator.
4. Utilize legal principles to analyze key components of employee-employer relationships.

Learning Outcomes

At the end of the course students will be:

1. Able to know about the tort law and medical malpractices.
2. . Discuss the legal aspects of patient right and responsibilities.
3. Discuss the legal guidelines and principles into contemporary situations.

4. Understand the key strategies to reduce liability of health professionals.

Course Contents

Unit-I Introduction to legal issues in healthcare, licensing and variances in medical practice, medical malpractice, regulations in healthcare sector, negligence and tort reform, healthcare reforms, regulations (reasons, mechanisms in the healthcare market).

Unit-II Aspects of client-provider and employer-employee relations in the healthcare setting, certificate of need regulation, tort law, medical malpractice, durable power of attorney for health care decisions, living will, confidentiality of patient medical records, and informed consent.

Unit-III Civil Vs criminal negligence & liability (including Consumer Protection Act, 2019), Important judgments relating to medical negligence, Rights of physicians, Special situations- Emergency decision making, dispensing, Laws pertaining to Telemedicine, Medical personnel's anti-violence act

Unit-IV Rights of patients in healthcare, Patient confidentiality & autonomy, Medical errors & redressal, Consumer Protection Act, 2019, IMC Ethics & Regulations, 2002 and Role of NMC in ethics, Consent in medical practice.

Suggested Readings:

- Consumer Protection Act, 2019.
- IMC Ethics & Regulations, 2002.
- Medical personnel's anti-violence act.
- Pozgar, G. (2012). Legal aspects of health care administration (11th ed.). ISBN: 978-0-7637-3927.

COURSE NAME: INTRODUCTION TO ECONOMETRICS

COURSE CODE: HE - 403

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course provides a comprehensive introduction to basic econometric concepts and techniques.
2. It covers statistical concepts of hypothesis testing, estimation, and diagnostic testing of simple and multiple regression models.
3. The course provides knowledge of the specification of the model.
4. It focuses on correlation-related concepts.

Learning Outcomes

At the end of the course students will be:

1. The student will learn basic econometrics and the nature and scope of econometrics.
2. They will be able to understand the econometric model.
3. They will also learn correlation and linear regression models.
4. They will understand the concept of the simple linear regression model.

Course Contents

Unit-I : Definition and scope of econometrics, goals of econometrics, division of econometrics.

Unit-II : Specification of the model, Estimation of the model, Evaluation of the parameter estimates, Evaluation of the forecasting power of the model, and Desirable properties of an econometric model.

Unit-III Measure of Linear Correlation, the correlation coefficient, and limitations of the theory of correlation.

Unit-IV The simple linear regression model, assumptions of the linear stochastic regression model.

Suggested Readings:

- D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, 4th edition, International Edition, 2009.
- Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3rd edition, Indian edition, 2007.
- Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2nd edition, 2008.

- A. Koutsoyiannis, Theory of Econometrics, Palgrave, 2nd edition, 2001.
- G.M.K. Madnani, Introduction to Econometrics Principles and Applications, 8th edition, 2008.

COURSE NAME: COMPREHENSIVE VIVA

COURSE CODE: HE - 404

NATURE OF COURSE: CORE

The objective of the comprehensive viva-voce is to assess the overall knowledge of the student in the relevant field. The comprehensive Viva is meant to assess the student's capacity to do research and problem-solving ability. The main objective of it to develop good communication skills of the students.

SEMESTER FIFTH COURSE NAME: INTERNATIONAL TRADE

COURSE CODE: HE - 501

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. To provide students with a comprehensive understanding of the theories and principles of international trade.
2. To familiarize students with the various policies and regulations governing international trade and their implications on economies, industries, and individuals.
3. To analyze the relationship between international trade and economic development, including its impact on economic growth, poverty alleviation, and income distribution.
4. To explore contemporary issues and challenges in international trade and equip students with the knowledge to address them effectively.

Learning Outcomes

At the end of the course students will be:

1. By the end of the course, students will demonstrate a solid understanding of the fundamental theories, concepts, and principles of international trade.
2. Students will develop the ability to analyze and evaluate the impacts of trade policies and agreements on different stakeholders, including economies, industries, and individuals.
3. Students will enhance their critical thinking skills by examining and interpreting data, case studies, and real-world examples related to international trade, enabling them to make informed judgments and decisions.
4. Students will improve their communication and collaboration skills through group projects, presentations, and class discussions, fostering effective teamwork and the ability to articulate ideas and arguments related to international trade.

Course Contents

Unit-I - Introduction to international trade, Importance and benefits of international trade, Comparative advantage theory, Absolute advantage theory, Factor endowment theory, Trade patterns and trends.

Unit-II Tariffs and non-tariff barriers, Quotas and voluntary export restraints, Subsidies and countervailing duties, Dumping and anti-dumping measures, Trade agreements and regional integration, World Trade Organization (WTO) and its role.

Unit-III - Trade and economic growth, Trade and poverty alleviation, Trade and income distribution, Trade and employment, Trade and environmental sustainability, Trade and technology transfer.

Unit-IV - Global supply chains and value-added trade, Trade in services, Intellectual property rights and trade, Trade disputes and resolutions, Emerging issues in international trade (e.g., digital trade, e-commerce), Prospects and challenges in international trade.

Suggested Readings:

- "International Economics" by Paul Krugman and Maurice Obstfeld
- "International Trade: Theory and Policy" by Paul Krugman, Maurice Obstfeld, and Marc Melitz.
- "The World Trade Organization: A Very Short Introduction" by Amrita Narlikar.
- "Globalization and Its Discontents" by Joseph E. Stiglitz
- "The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger" by Marc Levinson.

- "The New Silk Roads: The Present and Future of the World" by Peter Frankopan.
- "Trade Policy in Developing Countries" by Anne O. Krueger
- "International Trade Law" by Andrew Guzman
- International Economics by Paul Krugman and Maurice Obstfeld.

COURSE NAME: ECONOMIC EVALUATION OF HEALTH CARE

COURSE CODE: HE - 502

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. Recognize the policy implications that may result from economic evaluations.
2. Focus is the development, extension and application of the main issues and techniques for economic evaluation.
3. Coverage of the components of economic evaluation, such as cost data collection and analysis, outcome data analysis, health state valuation in general, economic evaluation alongside clinical trials and discounting issues.
4. Impart the knowledge to understand the alternative methods of economic evaluation.

Learning Outcomes

At the end of the course students will be:

1. Demonstrate an understanding of the relevant issues associated with the appropriate collection and analysis of cost and outcome data.
2. Demonstrate an understanding of the importance of discounting issues and the controversy surrounding the appropriate discount rate to use for costs and benefits within an economic evaluation.
3. Critically appraise several alternative frameworks and modelling approaches that are used in economic evaluation and understand the appropriate presentation of results.
4. Critically review alternative methods to outcome evaluation and their relevance to alternative evaluation approaches.

Course Contents

Unit-I What is Economic evaluation? Counting the costs, Cost benefit analysis, cost effectiveness analysis, evaluation in perspective, economic modelling, and decision analysis, QALY's (Quality adjusted life years) and daily (Disability Adjust life years).

Unit-II Theoretical foundations of economic evaluation in health care, Cost data collection and analysis; discounting; introduction to

bootstrapping; analysis of survival and quality of life data.

Unit-III Measuring benefits of health care interventions, Discounting and sensitivity analysis in economic evaluations of health care, Equity issues in economic evaluation of health care, Using Economic Evaluation to inform research and policy.

Unit-IV Decision rules, willingness to pay for health improvements, practical applications, and critical assessment of economic evaluation studies, economic evaluation, decision making and health policy.

Suggested Readings:

- Drummond, M. F.; Sculpher, M. J.; Claxton, K.; Stoddart, G. L. and Torrance, G. W. (2015). Methods for the economic evaluation of health care programmes, (4th edition), Oxford, Oxford University Press.
- Drummond, M. F. and McGuire, A. (2001). Economic evaluation in health care: merging theory with practice. Oxford, Oxford University Press.
- Gray, A.M., Clarke, P.M., Wolstenholme, J.L., Wordsworth, S. (2011). Applied Methods of Cost-effectiveness Analysis in Healthcare (Handbooks in Health Economic Evaluation). Oxford, Oxford University Press.
- McPake, B, Normand C, Smith S (2013). *Health economics: an international perspective*, (3rd edition), London: Routledge. (You can access the book online through Moodle and also available in the ICH library).

SEMESTER SIXTH

COURSE NAME: DEVELOPMENT ECONOMICS

COURSE CODE: HE -601

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. Understanding the basic facts of economic growth.
2. Discuss economic policies related to investment.
3. To understand of the difference between growth and development.
4. importance of domestic macroeconomic policies, and relevance of planning for faster economic development.

Learning Outcomes

At the end of the course students will be:

1. will be able to understand the issues in the context of development such as infrastructures-linkages.
2. Critically evaluate the role of international trade in fastening Indian economy.
3. . It will provide them with an understanding of how development is financed through domestically mobilized resources.
4. Understanding the interactions of the basic tenets of growth theories and those of debt with the drivers of globalisation.

Course Contents

Unit-I Economic development, Economic growth and development, Basic factors of economic development, Obstacles to economic development, Indicators of economic development - National income, Basic needs approach, PQLI, HDI, GDI, Capital formation and economic development,

Unit-II Theories of Economic Development The Classical Theory, Karl Marx's Theory, Rostow's Stages of Economic Growth Balanced and Unbalanced Growth Theories, Big Push Theory, Dualistic Theories, Theories of Economic Growth The Harrod-Domar Model, Kaldor Model of Income Distribution Endogenous growth models

Unit-III : Poverty and Inequality: Definitions, Measures and Mechanisms Inequality axioms; comparison of commonly used inequality measures; connections between inequality and development; poverty measurement; Vicious circle of poverty, Types of poverty,;

Unit-IV Planning in India :Economic Planning and Techniques, Five Year Plans in India, NITI Ayog.

Suggested Readings:

- Deaton, A. (2013). The great escape: Health, wealth and the origins of inequality. Princeton University Press.
- Piketty, T., Saez, E. (2014). Inequality in the long run, Science, 344. 11. Ray, D. (1998). Development economics. Princeton University Press.
- Debraj Ray, Development Economics, Oxford University Press, 2009.
- Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty, Oxford University Press, 2006.
- M. Romer and D. R. Snodgrass (1992), Economics of Development, (3rdEdition), W.W.Norton, New York. Gimmell
- Dasgupta, P. (2007). Economics: A very short introduction. Oxford University Press.

COURSE NAME: START-UP AND INCUBATION

COURSE CODE: HE - 602

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

- 1.To know about the start-ups and incubation.
2. Understands Government Initiatives for Startups in India.
3. Understand startups Opportunities and Financial Issues of Startups
4. Understand the support extended by Incubators & Major Startups Incubators in India.

Learning Outcomes

At the end of the course students will be:

1. The students will be able to Design and demonstrate the strategic plan for the attainment of organizational goals.
2. Facilitate and empower them for their innovations.
3. Critically evaluate the government initiatives for start-ups.
4. Local and International Employment opportunities for students

Course Contents

Unit-I Introduction, Meaning, Features, Types of Startups, Ideation, Design Thinking, Entrepreneurship Lessons for Startups.

Unit-II Startup Financial issues: feasibility Analysis, The cost & Process of Raising capital, Unique Funding issues of a High tech Ventures, funding with equity, Financing with debt, funding strategies with bootstrapping, Crowdfunding, Venture Capital.

Unit-III Government Initiatives for Startups in India, Pillars to Initiate startup (Handholding, Funding & Incubation).

Unit-IV Skill Developments Activity, Prepare a Business Plan for startups

Suggested Readings:

- Startup India Initiative, www.startupindia.gov.in/
- ASPIRE – https://msme.gov.in/sites/default/files/ASPIRE_EN.pdf

- Mudra Scheme (Sishu, Kishore & Tarun) – <https://www.mudra.org.in/>
- ATAL Innovation Mission – <https://aim.gov.in/>
- MSME Multiplier Grants Scheme – <https://www.meity.gov.in/content/multiplier-grants-scheme>
- Credit Guarantee fund trust for micro & small business – <https://www.cgtmse.in/Home/VS/3>
- Venture Capital Assistance Scheme – <https://www.startupindia.gov.in/content/sih/en/government-schemes/venture-capital-scheme.html>
& <https://taxguru.in/finance/analysis-venture-capital-assistance-scheme-entrepreneurs.html>
- Single Point Registration scheme – <https://www.nsic.co.in/schemes/Single-Point-Registration.aspx>
- M-SIPS – <https://www.msips.in/MSIPS/HomePage>
- Self-Employment & Talent Utilization (SETU) - https://www.startupindia.gov.in/content/sih/en/government-schemes/setu_scheme.html
- Seed Fund – <https://seedfund.startupindia.gov.in/>
- SAMRIDDDHI Scheme.

COURSE NAME: ENVIRONMENT, HEALTH, AND SUSTAINABLE DEVELOPMENT

COURSE CODE: HE - 603

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as

1. Understand the relationship between sustainable development and human health.
2. To understand global environment issues.
3. Assess the impacts that policies and programs have on public health and health status.
4. Discuss the ways in which development health policy is informed and formulated.

Learning Outcomes

At the end of the course students will be:

1. Students will be able to define sustainability.
2. Analyze major sustainability challenges.
3. Explore the policies and programs have on health and health status.

4. Students will have an understanding of the carrying capacity of ecosystems as related to providing for human needs.

Course Contents

Unit-I Environment, development & sustainability.

Unit-II Environmental & Resource Economics, Human Development and Environmental Sustainability, Natural resources: conservation and management.

Unit-III Development and health, Pollution ,health & Sanitation, Health,, Food Culture, and Lifestyles.

Unit-IV Global environmental issues, Environmental policies:, Global Health Governance.

Readings/References:

- Harvard-WEF. (2011). The Global Economic Burden of Non-Communicable diseases. Report set 2011. Session 2: Development
- Sustainable Development Goals. A UNDP booklet web.
https://www.undp.org/content/dam/undp/library/corporate/brochure/SDGs_Booklet_Web_En.pdf United Nations Office of the High Commissioner on Human Rights (OHCHR). Transforming our World: Human Rights in the 2030 Agenda for Sustainable Development Factsheet.
- Bleahu, A., Davies, M., et al. (2012). Shaping cities for health: complexity and the planning of urban environments in the 21st century. Lancet, 379(9831), 2079.
- Cordero, S. H., Pineda, D., et al. (2014). Obesity prevention in Latin America. Current obesity reports, 3(2), 150-155.

SEMESTER SEVENTH

COURSE NAME: ADVANCE RESEARCH METHODOLOGY

COURSE CODE: HE - 701

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This paper acquaints students with qualitative data collection and analysis techniques along with its purpose.
2. Various software for data collection and analysis are introduced in this paper.
3. The introduction of research communication, an important aspect of any research, makes this course extremely important.
4. The course focuses on different steps of research writing.

Learning Outcomes

At the end of the course students will be:

1. The student will learn different concepts of qualitative research.
2. They will also learn qualitative data collection.
3. They will be able to write a report.
4. They will be able to collect data through various software and analysis it.

Course Contents

Unit-I Types of research, Steps in conducting research, Approaches in qualitative research.

Unit-II : Introduction to Qualitative data collection methods.

Unit-III Indexing ,Citation Sampling in qualitative research, Sample size, Sample selection technique.

Unit-IV : Scientific writing, Writing report, Literature review, Reference writing, ANOVA .Chi Square Test , T-Test ,Plagiarism & Turnitin

Readings/References:

- Kothari, CR (1995) Research Methodology: Methods and Techniques, Wishwa Prakashan (Wiley Eastern Ltd), New Delhi.
- Good and Hatt, (1979) Methods in Social Research, Tata-Mc Graw Hill, New Delhi.
- Kumar, Ranjit (2014) Research Methodology: A Step-by-Step Guide for Beginners, SAGE Publications Pvt. Ltd.

COURSE NAME: PUBLICATION ETHICS

COURSE CODE: HE - 702

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course has focused on the basics of the philosophy of science.
2. It provides knowledge of ethics, research integrity, and publication ethics.
3. To identify research misconduct and predatory publications.
4. It focuses on basic knowledge of plagiarism, and fabrication in research.

Learning Outcomes

At the end of the course students will be:

1. At the end of the course, the student will have an awareness of publication ethics and publication misconduct.
2. They will know about the basics of philosophy.
3. The students will understand moral judgement and reactions.
4. They will understand the concepts of falsification, fabrication, and plagiarism.

Course Contents

Unit-I Definition, nature, and scope of Philosophy.

Unit-II Definition of Ethics, moral philosophy, nature of moral judgements and reactions.

Unit-III Misconduct, falsification, fabrication, and Plagiarism.

Unit-IV Definition, introduction, and importance of Publication ethics.

Suggested Readings:

- Nicholas H. Steneck. Introduction to the Responsible Conduct of Research. Office of Research Integrity. 2007. Available at: <https://ori.hhs.gov/sites/default/files/rcrintro.pdf>.
- 2. The Student's Guide to Research Ethics by Paul Oliver Open University Press, 2003.
- Responsible Conduct of Research by Adil E. Shamoo; David B. Resnik Oxford University Press, 2003.

- Ethics in Science Education, Research and Governance Edited by Kambadur Muralidhar, Amit Ghosh Ashok Kumar Singhvi. Indian National Science Academy, 2019. ISBN: 978-81-939482-1-7.
- Anderson B.H., Dursaton, and Poole M.: Thesis and assignment writing, Wiley Eastern 1997.
- Bjorn Gustavii: How to write and illustrate scientific papers? Cambridge University Press.
- Bordens K.S. and Abbott, B.b.: Research Design and Methods, Mc Graw Hill, 2008.
- Graziano, A., M., and Raulin, M., L.: Research Methods – A Process of Inquiry, Sixth Edition, Pearson, 2007.

COURSE NAME: HEALTHCARE MARKET ANALYSIS AND COMPETITION

COURSE CODE: HE - 703

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. Understand the fundamental concepts and principles of healthcare financing and insurance.
2. Examine different healthcare financing models, including social health insurance, national health insurance, and private health insurance systems.
3. Analyze healthcare financing and insurance policies, including regulation, reform, and strategies for cost containment.
4. Explore current issues and emerging trends in healthcare financing and insurance, considering equity, access, and ethical considerations.

Learning Outcomes

At the end of the course students will be:

1. Knowledge and Understanding: Students will be able to demonstrate a comprehensive understanding of healthcare financing and insurance, including the principles, models, policies, and current issues in the field.
2. Critical Thinking and Analysis: Students will develop the ability to critically analyze healthcare financing models, policies, and strategies, evaluating their strengths, weaknesses, and implications for healthcare access, affordability, and quality.
3. Application and Synthesis: Students will apply their knowledge of healthcare financing and insurance to real-world scenarios, examining case studies and policy examples to propose innovative solutions and strategies for improving healthcare financing systems.
4. Ethical and Social Awareness: Students will develop an understanding of the ethical considerations involved in healthcare financing and insurance, including the allocation of resources, promoting equity, and addressing social determinants of health, fostering a sense of social responsibility and ethical decision-making in the field.

Course Contents

Unit-I OVERVIEW OF HEALTHCARE SYSTEMS: Definition and components of healthcare systems, Types of healthcare systems (e.g., single-payer, multi-payer), Role of financing and insurance in healthcare system, Sources of healthcare financing (e.g., government funding, private insurance).

Unit-II INTRODUCTION TO HEALTH INSURANCE: Definition and purpose of health insurance, Types of health insurance plans (e.g., employer-sponsored, government programs), Social Health Insurance Systems, Features, and characteristics of social health insurance.

Unit-III HEALTHCARE FINANCING: National Health Insurance Systems, Features and characteristics of national health insurance, Case studies of countries with national health insurance systems, Pros and cons of national health insurance, Features and characteristics of private health insurance, Challenges and issues in private health insurance.

Unit-IV EQUITY AND ACCESS TO HEALTHCARE: Disparities in access to healthcare and insurance coverage, Strategies for promoting equity in healthcare financing and insurance, Addressing social determinants of health through insurance models, Ethical challenges in allocating healthcare resources, Balancing individual needs with the collective good.

Suggested Readings:

- "Health Economics and Financing" by Thomas E. Getzen and Joel W. Hay
- "Introduction to Health Care Finance and Accounting" by Carlene Harrison and William P. Harrison
- "Health Insurance Today: A Practical Approach" by Janet I. Beik.
- "The Economics of Health and Health Care" by Sherman Folland, Allen C. Goodman, and Miron Stano.
- "Health Financing in Low- and Middle-Income Countries: Resource Mobilization, Risk Sharing, and Health Insurance" edited by Akiko Maeda, Guy Carrin, and David B. Evans.
- "Health Insurance: Basic Actuarial Models" by Pietro Parodi, Alessandro De Angelis, and Michele Costa.
- "Healthcare Finance: An Introduction to Accounting and Financial Management" by Louis C. Gapenski.
- "Global Health Financing: A Practical Guide" edited by Joseph Kutzin, Cheryl Cashin, and Melitta Jakab.

SEMESTER EIGHTH
COURSE NAME: HEALTH CARE AND PUBLIC POLICY

COURSE CODE: HE - 801

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course aims to deliver a detailed understanding of the demand for and supply of health care.
2. It is extremely important to understand the underlying economics to analyze the behaviour of different agents in the healthcare market.
3. This course also intends to impart knowledge on health care services.
4. The course focuses on India's healthcare delivery system.

Learning Outcomes

At the end of the course students will be:

1. The students will learn the health care basics and different aspects of health care.
2. They will also understand public policy.
3. They will be able to measure quality of health care.
4. At the end of the of the course the student will understand health care reform.

Course Contents

Unit-I Health Care market and Demand for health care: Health care as an input in health, Notion of need, Supplier Induced demand, Ex-ante, and Ex-post Moral Hazard.

Unit-II Quality of Health Care: Measurement of quality of care, Measurement of health state utilities, QALYs and its alternatives- different approaches of valuing health, multi-attribute utility instruments and their development.

Unit-III Issues related to Health Care Reform, Policy, and Health Care Finance, Experiences of health care reform, Impact of reform, Capital investment, Changes in Health Care Finance, Public and private finance, and provision - Public Private Partnership, Economics of Mental Health.

Unit-IV Health care services and Healthcare Delivery System in India: Primary, Secondary, and Tertiary level, Organization and Management of Public Health Institutions, Economic Evaluation of National Health Programme.

Suggested Readings:

- George R. Palmer, and Stephanie D. Short, Health Care & Public Policy: An Australian Analysis; Macmillan, 1989.
- David Reisman, Health Care and Public Policy: Edward Elgar; 2007.

- Sanjeev Kelkar, India's Public Health Care Delivery: Policies for Universal Health Care; Palgrave Macmillan, 2021.

COURSE NAME: ECONOMIC DISPARITIES AND HEALTH EQUITY

COURSE CODE: HE - 802

NATURE OF COURSE: CORE

Course Objective

The objectives of the course are as:

1. This course will introduce students to the concept of health equity and will provide a broad overview of health disparities.
2. Students will gain a better understanding of research on health disparities.
3. It focuses on interventions to promote health equity through a combination of readings, lectures, reflection papers, and in-class exercises.
4. The course focuses on economic disparities in India.

Learning Outcomes

At the end of the course students will be:

1. By the end of this course, it is expected that students will have developed a rudimentary knowledge of the health disparities literature.
2. Students successfully completing the course will be able to Describe theoretical frameworks that may explain health disparities.
3. They will be able to draw upon methods from social epidemiology to describe and analyze the determinants of health disparities for groups.
4. They will Generate ideas for programs and policies that promote health equity.

Course Contents

Unit-I Economic disparities: meaning and measurement, causes and consequences of economic disparities.

Unit-II Public policies for economic disparities, Economic disparities in India.

Unit-III Meaning of health equity, concept of health disparity, determinants to health disparities.

Unit-IV Social Determinants of Health, Barriers to health equity.

Suggested Readings:

- Molander, P. (2016) The Anatomy of Inequality. Melville House: Brooklyn.
- Arcaya, Arcaya, & Subramanian (2015). Inequalities in health: Definitions, concepts, and theories. Global Health Action, 8(1), 27106. doi 10.3402/gha.v8.27106.

- Braveman, P. (2006). Health disparities and health equity: Concepts and measurement. *Annual Review of Public Health*, 27, 167-194. doi: 10.1146/annual.publhealth.27.021405.102103.
- Braveman, P. (2014). What are health disparities and health equity? We need to be clear. *Public Health Reports*, 129(Suppl 2), 5-8.
- Whitehead, M. (1992). The concepts and principles of equity and health. *International Journal of Health Services*, 22(3), 429-445. doi:10.2190/986L-LHQ6-2VTE-YRRN.

COURSE NAME: RESEARCH PROJECT/DISSERTATION

COURSE CODE: HE - 803

NATURE OF COURSE: CORE

A project is an in-depth study of an issue or topic in public health, health management or international health. It may be in the form of a small-scale research study, a case study, a program evaluation, or a report on a field placement. Although candidates are advised to start planning a project early in their program. The project provides an opportunity for a range of different types of research. Main objective of the project is to encourage students to use various tools and techniques to complete their project/dissertation. During the report writing, they should show that they can identify and define a significant issue relevant to the discipline of the degree, systematically collect relevant up-to-date information about the issue, either directly or from published studies or publicly available data ,Analyze, interpret and discuss the information in accordance with standard academic and health research practice, Draw conclusions and make recommendations relevant to the issue that will contribute to current knowledge and practice in health Economics in last write and present a report in accordance with academic standards at a graduate level.

After completing a research project as part of their degree is an opportunity to learn to read and interpret other people's research critically by doing their own. This gives them an insight into the effects of practical difficulties and theoretical debates on published research, develop and apply the advice they have received in methodology courses such as Epidemiology & Statistics for Public Health, & Behavioral Economics, Qualitative Research Methods, Applied Research Methods for Public Health, and Program Design & Evaluation, submit a paper for peer-reviewed publication. (If successful, this will give a boost to their c.v.) If they wish to go to enroll in a research degree, such as a master's by Research or a PhD.

COURSE NAME: VIVA OF RESEARCH PROJECT/DISSERTATION

COURSE CODE: HE - 804

NATURE OF COURSE: CORE

A Viva Voce is an oral examination where student must orally defend that why he/she have chosen that topic and how he/she have carried out the study. They may have to answer other questions related to the Project Report and the Health Economics programme. While appearing for viva-voce, student must bring his/her copy of the Project Report to the study. You are required to appear for a Viva-Voce as per the dates announced by the University. Submission of Project Report is a prerequisite to attending the Viva-Voce examination. The Project Report carries 100 Marks (minimum pass marks 50) and Viva-voce carries 100 marks.

OPTIONAL PAPERS SEMESTER THIRD

COURSE NAME: INTRODUCTION TO MATHEMATICAL ECONOMICS

COURSE CODE: HE - 304

NATURE OF COURSE:OPTIONAL

Course Objective

The objectives of the course are as:

1. The objective of this sequence is to transmit the body of basic mathematics.
2. It enables the study of economic theory at the undergraduate level.
3. Specifically, the courses on microeconomic theory, macroeconomic theory, statistics, and econometrics are set out in this syllabus.
4. The course provides different concepts of sets, differentiation, and integration.

Learning Outcomes

At the end of the course students will be:

1. The students will learn the basic mathematics concepts.
2. They will be able to illustrate the mathematical models of different economic theories.
3. They will know about sets, equations, identities, and simultaneous equations.
4. At the end of the course, they will be able to do differentiation and integration.

Course Contents

Unit-I sets and set operations; relations; functions and their properties; number systems.

Unit-II Algebraic expression, equations and identities, simultaneous equations, ratio, proportion, and variation.

Unit-III Meaning of first differential coefficient, rules of simple differentiation, partial differentiation.

Unit-IV Rules of simple integration and definite integration, the introduction of the matrix.

Suggested Readings:

- K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
- A. C. Chiang and K. Walnwright, Fundamental methods of Mathematical Economics, Mc GrawHill, 4th edition

COURSE NAME: ECONOMIC SYSTEM

COURSE CODE: HE - 305

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To educate students on the workings of economic systems of to solve basic economic problems of what to produce, how to produce and for whom to produce.
2. To impart the knowledge of economic systems to contemporary issues in India.
3. Proffer solutions to economic problems in different economic system.
4. To educate learners on how to compare the economic system of selected countries of the world.

Learning Outcomes

At the end of the course students will be:

1. Able to understand the various economic systems.
2. Discuss that how one can apply the available systems in India/Indian Economy.
3. Understanding about the solution of various economic problems in India.
4. Able to know the contemporary economic systems.

Course Contents

Unit-I Economic system: both pre- capitalist and capitalist economic share studied. This include Communal, Slave Holding, Feudalism, Capitalism, etc. The major focus is on the basic features of each economic system and a comparative analysis of the different mode of production.

Unit-II The Socialist, Islamic, and mixed economic systems. Emphasis is on the ownership of the means of production, the relations of production and the contradictions or conflicts within each mode of production.

Unit-III Economic problems of society and the approaches for solving them under each of the systems. comparison of economic ownership of resources and decision making.

Unit-IV Economic system of India and other developing countries, economic System of Brazil, Russia, China, and Asian tigers.

Suggested Readings:

- Dale, K. A., (2016). Introduction to Market Economy, a broader perspective, a textbook 1st edition, Saiye Printing Press, Lagos, Nigeria.

- Friedman, T., (2000). The Lexus and the Olive Tree http://en.wikipedia.org/wiki/The_Lexus_and_the_Olive_Tree.
- Elliott, P. & Gant, D., (2013). Comparative Economic Systems, Lecture Notes on Classical and Marxist Theories of Change
- Smriti, C., (2011) Socialism, Features, Merits and Demerits of Socialism Economics <http://www.investopedia.com/terms/c/communism.asp>.

COURSE NAME: INTRODUCTION TO MEDICAL STATISTICS

COURSE CODE: HE - 306

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Identify and understand the various medical statistics tools and techniques.
2. Discuss the history of disease and its epidemiology.
3. Comprehend the ideas about the case studies.
4. Apply regression and analyse its results from medical data.

Learning Outcomes

At the end of the course students will be:

1. Able to understand about the clinical studies.
2. Become familiar with the various methods to analyse the clinical data.
3. Gain insight into some aspect of regression analysis with the health data.
4. Be equipped with understanding of clustering data on epidemiological studies.

Course Contents

Unit-I Data sources, Epidemiology data, Clinical studies/trials, Registers, Reference costs and utility data, Linear programming, Value of information analysis.

Unit-II Measures of disease frequency and exposure effects, classical methods of analysis for cohort studies, classical methods of analysis for case-control studies, unconditional logistic regression.

Unit-III Poisson regression for cohort studies, Survival analysis and proportional hazards regression, Practical issues in study design and analysis.

Unit-IV Conditional logistic regression for case-control studies, clustering of data in epidemiological studies, Strategies of analysis.

Suggested Readings:

- David E Lilienfeld, Paul D. Stolley). Foundation of Epidemiology. Oxford University Press, 1994.
- Leon Gordis. Epidemiology. WB Saunders Company, 1996. 3. MOHFW. Health and Population Sector Programme, 1998-2003, 1998. 4. MOHFW. Conceptual Framework for Health Nutrition and Population Sector Programme 2003-2006, 2003.
- Park and Park. A textbook of public health (6th Edition), 2000.
- Rashid, Khabir, Haider). A textbook of Public Health (3rd Edition), 2000.
- Selim Reza. Public Health, 2000.
- Clayton, David, Michael Hills, and A. Pickles. Statistical models in epidemiology. Vol. 161. Oxford: Oxford university press, 1993. 9. Machin, David, Yin Bun Cheung, and Mahesh Parmar. Survival analysis: a practical approach. John Wiley & Sons, 2006.
- Kirkwood, Betty R., and Jonathan AC Sterne. Essential medical statistics. John Wiley & Sons, 2010.
- Breslow, Norman E., Nicholas E. Day, and Walter Davis. Statistical methods in cancer research. Vol. 2. Lyon: International Agency for Research on Cancer, 1987.

COURSE NAME: ENTREPRENEURSHIP DEVELOPMENT

COURSE CODE: HE -307

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To understand nature and scope or concept of entrepreneurship.
2. To develop entrepreneurial skills and knowledge
3. To understand the concept and process of entrepreneurship
4. Nurturing entrepreneurial talents of youth.

Learning Outcomes

At the end of the course students will be:

1. Further studies in the field of entrepreneurship or management.
2. Innovative and analytical thinking to build successful ventures.
3. Critically analyze the essential techniques, tactics and skills required to open and run a business most effectively.
4. Applying creativity and understanding in problem identification and solving.

Course Contents

Unit-I Meaning and functions of entrepreneur, types of entrepreneur, Creativity and Entrepreneurship, entrepreneurship development concept and scope

Unit-II Entrepreneurial Motivation, Relevance of entrepreneurship to socio economic gain, generating national wealth & Creating Self-employment, micro and small medium enterprises, Contemporary issues in Entrepreneurship

Unit-III Creating Entrepreneurial ventures , Business opportunities, creation of a business plan, project appraisal & feasibility study Angel investors & venture capitalist

Unit-IV , Incubation, pre incubation , Startup India benefits policies, current policies

Suggested Readings:

- Entrepreneurship by Hisrich Robert D/ Peters Micheal, New Delhi / Tata McGraw Hill /2002.
- Entrepreneurial Management by P.N. Singh / J. C. Saboo Dr. P. N. Singh Centre for HRD.
- Government websites.
- Shankar, R., Entrepreneurship Theory and Practice, Tata McGraw Hill.

SEMESTER FOURTH

COURSE NAME: MONEY AND BANKING

COURSE CODE: HE - 405

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. This course exposes students to the theory and functioning of the monetary and financial sectors of the economy.
2. It highlights the organization, structure and role of financial markets and institutions.
3. It also discusses interest rates, monetary management, and instruments of monetary control.
4. Financial and banking sector reforms and monetary policy with special reference to India are also covered.

Learning Outcomes

At the end of the course students will be:

1. The students will learn the functioning of the monetary sector.
2. They will also learn different concepts of money.

3. They will be able to understand the functioning of the banking sector.
4. They will be understanding monetary policy of India.

Course Contents

Unit-I Money Concept, functions, measurement; theories of money supply determination.

Unit-II Financial Institutions, Markets, Instruments and Financial Innovations a. Role of financial markets and institutions; the problem of asymmetric information – adverse selection and moral hazard; financial crises. b. Money and capital markets: organization, structure, and reforms in India; the role of financial derivatives and other innovations.

Unit-III Banking System: Balance sheet and portfolio management. Indian banking system: Changing role and structure; banking sector reforms.

Unit-IV Central Banking and Monetary Policy Functions, balance sheet; goals, targets, indicators, and instruments of monetary control; monetary management in an open economy; current monetary policy of India.

Suggested Readings:

- F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6th edition, 2009.
- 2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3rd edition, 2009.
- L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011.
- M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7th edition, 2011.
- Various latest issues of R.B.I. Bulletins, Annual Reports, Reports on Currency and Finance and Reports of the Working Group, IMF Staff Papers.

COURSE NAME: PROJECT IN WASTE ECONOMICS

COURSE CODE: HE - 406

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Apply best waste management practices.
2. Knowledge on the people's responsibility in waste management.
3. Understanding on the responsibility of individuals, community and local administration in handling water and wastewater.
4. Awareness on the significance of segregation of waste in waste management.

Learning Outcomes

At the end of the course students will be:

1. Identify, formulate, and design solutions to waste management problems to cater needs of society.
2. . Educate about environmental sustainability.
3. Inculcate ethical thinking.
4. Train to manage projects.

Course Contents

Unit-I Introduction to waste, Circular Economy and Sustainable Waste Management.

Unit-II Modern and innovative Water and Waste Water Technologies, Modern technologies for waste water treatment – DEWATS, planted filter, constructed wetlands, sludge management.

Unit-III Land Resource Management , E-waste Management, Waste Management Regulations and Policies.

Unit-IV Waste Management & Project Management, Project Planning, Implementation, Monitoring, and Evaluation, Environmental Impact Assessment.

Suggested Readings:

- Cheap method of desalination: PTI, San Francisco, The Hindu, 06 Feb 2017 <https://www.thehindu.com/todays-paper/tp-national/IndianAmerican-teen-finds-way-to-turn-seawater-potable/article17200032.ece>.
- D. Sharma, 2009. Ecology and Environment. Rastogi Publications.
- Environmental Engineering Series - Environmental Management by T.V.Rama Chandra & Vijay Kulkarni.

- Textbook of Environmental Studies for Undergraduate Courses by Erach Bharucha.
- Dangers of plastic tanks: <https://www.dawn.com/news/1173628>.

COURSE NAME: ENVIRONMENTAL ECONOMICS

COURSE CODE: HE - 407

NATURE OF COURSE:OPTIONAL

Course Objective

The objectives of the course are as:

1. Discuss Issues related to environmental problems, policies protection and pollution control.
- 2 . Enable the students to know about the environment and economy.
3. Handle with economical tools to evaluate the environmental problems.
4. To provide students with a comprehensive understanding of Environmental valuation.

Learning Outcomes

At the end of the course students will be:

1. Students will be able to analyze environmental problems.
2. to enable the students to protect their own environment and encourage them to develop suitable policies.
3. Manage the common property effectively.
4. Assess the problem with a global perspective.

Course Contents

Unit-I Economy and Environment, , Social Sectors and Environment

Unit-II Environmental Valuation Basic issues of environmental valuation, Revealed Preference Approach- household production function, travel cost, Pareto optimal provision of public goods The Theory of Environmental Policy,

Unit-III Environmental Pollution as Economic Problem, Informal regulation and the new model of pollution control,

Unit-IV , Sustainable Development and Environmental Accounting Concept of sustainable development-sustainable development rules and indicators-measures of sustainable development, Sustainable accounting-economics of green accounting and sustainable resource management, Green Economy

Suggested Readings:

- Books Pearce, D.W. and Turner, R.K. (1991) : Economics of Natural Resources and the Environment, Hemel Hempstead, Harvester-Wheatsheaf.
- Baumol, W.J. and Oates W.E.(1988)
- The Measurement of Environmental and Resource Values: Theory and Methods, Resources for the Future, Washington D.C. Kolstad, C.D. (2000):
- Baumol, W.J. and W.E. Oates (1988), The Theory of Environmental Policy, (2nd Edition), Cambridge University Press, Cambridge.
- How Economists See the Environment,” Don Fullerton and Robert Stavins, Chapter 1 of Economics of the Environment: Selected Readings, edited by Robert Stavins (p. 3-8).

COURSE NAME: PROJECT ANALYSIS

COURSE CODE: HE - 408

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Discuss the totality of project evaluation.
2. Prepare simple project plans/business plans.
3. Evaluate projects submitted to you for consideration.
4. Analyze the profit ratio and social profit of a project.

Learning Outcomes

At the end of the course students will be:

1. Grasp the main issues and questions in project identification, formulation, and design.
2. Understand the processes to follow in formulating projects to identify problems for primary stakeholders and set appropriate project objectives.
3. Ensure that both alternative approaches and alternative means of implementation are fully considered, and appropriate choices made in selecting the best means of achieving given objectives.
4. Know how to formulate logically consistent projects and to specify the key project elements in a clear and precise way.

Course Contents

Unit-I PROJECT MEANING: Project meaning, relation with programme, The Project Cycle, Project Evaluations/Analysis – An Introductory Format, Factors Affecting Location of Projects, Capacity and Production Planning.

Unit-II PROJECT PLANNING AND ANALYSIS: Manpower Planning and Evaluation, Demand Analysis, Supply Analysis, Competition and Marketing Plans, Project Cost Analysis.

Unit-III PROJECT INCOME AND EVALUATION: Projected Income Statement, Projected Cash Flow Statements, Projected Balance Sheets, Project Evaluation Criteria, Introduction to Economic Analyses.

Unit-IV RISK AND COST ANALYSIS: The Evaluation Methods, Concept of Risk in an Organization, Risk and Uncertainty, Assessment of Social Profitability, Cost Benefit Analysis.

Suggested Readings:

- Belli P, Anderson JR, Barnum HN, Dixon JA, Tan J (2001) An overview of economic analysis. In: Economic Analysis of Investment Operations: Analytical Tools and Practical Applications. The World Bank, Washington DC, pp. 1–7.
- Dearden P, Kowalski B (2003) Programme and project cycle management (PPCM): lessons from south and north. Development in Practice 13(5) 501–514.
- DFID (2003) Logical frameworks. In: Tools for Development: a Handbook for those Engaged in Development Activity. UK Department for International Development (DFID), pp. 5.1–5.9. http://www.unssc.org/home/sites/unssc.org/files/publications/tools_for_development_-_a_handbook_for_those_engaged_in_development_activities.pdf
- Potts D (2002) Project identification and formulation. In: Potts D Project Planning and Analysis for Development. Lynne Reinner Publishers, London. pp. 23–46.

SEMESTER FIFTH

COURSE NAME: EPIDEMIOLOGY

COURSE CODE: HE - 503

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. This paper includes Epidemiology to familiarize students with the science.
2. It includes methods and applications of epidemiology.
3. This course focuses on public health decision-making.
4. The objective of the course is to introduce students to different concepts related to epidemiology.

Learning Outcomes

At the end of the course students will be:

1. The students will learn about different concepts of epidemiology.
2. They will also be understanding epidemiological study designs.
3. They understand different tools of epidemiology.
4. They will also know about health measures.

Course Contents

Unit-I Historical aspects, evolution, definition, aim, and uses of epidemiology.

Unit-II Tools of epidemiology: measuring disease frequency (prevalence, incidence, mortality rates, morbidity rate, etc.)

Unit-III : Epidemiological study designs (observation research, experimental research, and qualitative research)

Unit-IV Commonly use health measures such as relative risk, attributable risk, and odds ratio.

Suggested Readings:

- R. Bonita, et.al., Basic Epidemiology, World Health Organization, 2006.
- Mrinal Sarmah, Public Health and Epidemiology, Global Net Publication, 2021.
- Anil Mishra, Basics of Epidemiology- Concepts Made Simple, 2018.

COURSE NAME: HISTORY OF ECONOMIC THOUGHT

COURSE CODE: HE -504

NATURE OF COURSE:OPTIONAL

Course Objective

The objectives of the course are as:

1. To understand the Neo-Malthusian school of economic thought.
2. To understand views of different eminent economists.
3. Work with information: to find, evaluate and use information from various sources,
4. Discuss the development, nature, and approaches of economic thought.

Learning Outcomes

At the end of the course students will be:

1. Students will be able to critically evaluate with different school of economic thoughts such as mercantilism, Indian economic thought and classical economic thought.
2. Explore different important theories of history of economic thought.
3. Critically evaluate the main trends of modern economics, competently lead a discussion about the arguments in favor of each of them; Based on the description of economic processes and phenomena, he can build.
4. Theoretical models, analyze and meaningfully interpret the results obtained.

Course Contents

Unit-I Mercantilism, Physiocracy- their views on Economic Development.

Unit-II Kautilya, , Dada Bhai Naoroji, RC Dutt, Gandhian Economics, JK Mehta, J B Say- Say's law of market.

Unit-III Evolution of Economic science, Theory of Value, Economics & ideology.

Unit-IV David Ricardo, Thomas Robert Malthus- theory of population, Marxism- Approach to economic problem, John Maynard Keynes and the Keynesian revolution, Further developments of new theory.

Suggested Readings:

- Dobb, Maurice- Theories of Value and Distribution since Adam Smith.
- Gide and Rist- History of Economic Doctrines.
- O'Brien- Classical theory of Value and Distribution.

- Schumpeter, J A- History of Economic Analysis.
- Stigler, G J- Essay in the History of Economics.
- Clair, St. Oswald- A Key to Ricardo.
- Meek, RL- Physiocracy.
- Meek, RL- The Labour theory of Value Web References <http://heecontent.upsdc.gov.in/> <https://epgp.inflibnet.ac.in/> <https://swayam.gov.in/> <https://udrc.lkouniv.ac.in/Department/DepartmentDetail/StudyMaterial?dept=5> <https://www.coursera.org/in17> |
- Meek, RL- The Labour theory of Value Web References <http://heecontent.upsdc.gov.in/> <https://epgp.inflibnet.ac.in/> <https://swayam.gov.in/> <https://udrc.lkouniv.ac.in/Department/DepartmentDetail/StudyMaterial?dept=5>.

COURSE NAME: APPLIED ECONOMETRICS

COURSE CODE: HE - 503

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Applications of economic theory need a reasonable understanding of economic relationships.
2. The course provides relevant statistical methods.
3. The econometric theory thus becomes a very powerful tool for the understanding of applied economic relationships and for meaningful research in economics.
4. The course focuses on the application of the regression model.

Learning Outcomes

At the end of the course students will be:

1. The student will learn the basic theory of econometrics.
2. They will understand the relevant applications of the methods.
3. They will also learn econometric methods applicable to different topics in economics.
4. At the end of the course students will be able to apply the econometric model.

Course Contents

Unit-I : Meaning, Objectives, Nature and Scope of Econometrics, Methodology of Econometrics.

Unit-II Simple linear regression model, assumptions of OLS model, The basic two variable model estimation.

Unit-III The test of the goodness of fit with r^2 , tests of significance and confidence of intervals of the parameters.

Unit-IV Properties of OLS estimator, Gauss Markov Theorem (BLUE), Hypothesis testing.

Suggested Readings:

- D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, 4th edition, International Edition, 2009.
- Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3rd edition, Indian edition, 2007.
- Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2nd edition, 2008.
- A. Koutsoyiannis, Theory of Econometrics, Palgrave, 2nd edition, 2001.
- G.M.K. Madnani, Introduction to Econometrics Principles and Applications, 8th edition, 2008.

COURSE NAME: ECONOMICS OF EDUCATION

COURSE CODE: HE - 506

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To understand basic theoretical concepts of microeconomics to the education sector.
2. To understand how economic theory and empirical methods are applied to questions of human capital,
3. Explore production of education, school finance, school disruptions, choice, and accountability,
4. To provide knowledge about the economics of higher education

Learning Outcomes

At the end of the course students will be:

1. Critically Evaluate the educational processes through the perspective of Economics.
2. Able to know about public investment in education.
3. interpret, and synthesize findings in the economics of education.
4. Identify policy implications of findings and insights from economics of education.

Course Contents

Unit-I Introduction to the Economics of Education. The Economic and Non-Economic Returns to Education, Disruptions to learning; On-line learning.

Unit-II Education: Investment in Human Capital Rate of return to education: private and social; quality of education; signaling or human capital, The Human Capital Model, The Economics of Higher Education.

Unit-III Theories of discrimination in India, Education Sector in India: An Overview, Educational Policy, – Special characteristics of education –Implications of economic analysis – Role of the State –Education Productivity and Employment –Investment in education: Costs and benefits.

Unit-IV The Economics of Higher Education, Rationale of government funding and regulation of education –Alternative method of financing education –Resource allocation to primary, secondary and higher education – Efficiency, equity and distributional aspects: Implications for gender and social groups –Role of private and public sectors, Union and State governments – Special programme for education.

Suggested Readings:

- Deming, David J., Sarah Cohodes, Jennifer Jennings, Christopher Jencks (2016). “School Accountability, Postsecondary Attainment and Earnings,” Review of Economics and Statistics.
- Winters, Marcus and Joshua M. Cowen (2012). “Grading New York: Accountability and Student Proficiency in America’s Largest School District,” Educational Evaluation and Policy Analysis, 34(3): 313-327.
- Atteberry, Allison, and Andrew McEachin. (2021). “School's Out: The Role of Summers in Understanding Achievement Disparities,” American Educational Research Journal, 58(2): pp. 239-282
- Theories of discrimination; gender and caste discrimination in India. 6. Education Sector in India: An Overview Literacy rates, school participation, school quality measures. Readings:
- William, Jack, Principles of Health Economics for Developing Countries, World Bank Institute Development Studies, 1999
- World Development Report, Investing in Health, The World Bank, 1993. Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics: Theory and Public Policy, Addison Wesley, 2005.

COURSE NAME: INDIAN ECONOMY

COURSE CODE: HE -604

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Develop ideas of the basic characteristics of Indian economy,
2. Understand agriculture as the foundation of economic growth and development,
3. Analyze the progress and changing nature of agricultural sector and its contribution to the economy.
4. To understand economy of Uttar Pradesh.

Learning Outcomes

At the end of the course students will be:

1. Students will be able to know sources of revenue, how the state government finance its programme.
2. It will result in comprehensive understanding of Indian Economy.
3. To explore the policies of Uttar Pradesh government.
4. Critically evaluate sectoral development.

Course Contents

Unit-I Economic crisis during the late 1980s , Economic Reforms –Critical Analysis Agricultural Production, Growth and Structure, Resource limitations and role of Technical change in Agriculture, Land Reforms, Agricultural Marketing-, Agricultural Produce and Marketing Act (APMC), Agricultural Credit.

Unit-II Growth and Pattern of Farm Sector, Development of Industrial Sector, Major Policy initiatives of Development. Services Major Industries- Iron and Steel, Cement, Paper and Sugar Industries, Micro, Small and Medium Enterprises (MSMEs), Sources of Industrial Finance, Industrial Policy, Trade Unions.

Unit-III Economic Infrastructure- Energy, Roads, Irrigation. Social Infrastructure- Health and Education.

Unit-IV Major industries in Uttar Pradesh, Pattern of Industrial Development in Uttar Pradesh, Industrial Policy in Uttar Pradesh, Growth pattern of Services sector and Its linkages of other sectors of UP Economy.

Suggested Readings:

- Publications of the Government of Uttar Pradesh.
- Uma Kapila: Indian Economy since independence, Academic Foundation
- Panchanan Das. (2012), Wage Inequality in India - Decomposition by Sector, Gender, and Activity Status, Economic and Political Weekly, 47(50), pp. 58-64
- Kaushik Basu and A. Maertens, Eds, 2013, The New Oxford Companion to Economics, Oxford University Press.
- Dutt & Sundaram, Indian Economy.

COURSE NAME: ECONOMICS OF INNOVATION

COURSE CODE: HE - 605

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To recognize the systemic nature of the innovative process.
2. Understand incentive tools like intellectual property, technology transfer.
3. To understand the driving forces behind innovation at the firm level.
4. Discuss the role that innovation and technical change play in shaping competitiveness and industrial change.

Learning Outcomes

At the end of the course students will be:

1. Discuss the role that innovation and technical change play in shaping competitiveness and industrial change.
2. To recognize the systemic nature of the innovative process.
3. Explore the real meaning of value creation.
4. Discuss the role that innovation and technical change play in shaping competitiveness and industrial change.

Course Contents

Unit-I An overview of innovation ,Types of innovation , Innovation and Economic Growth, Nature of Ideas and Innovation.

Unit-II The Supply of Innovators, Incentives for Innovators: Contracting and Control Rights, Product innovations, process innovations, Licensing, Joint Ventures, Innovation in the Global Economy Innovation.

Unit-III Intellectual Property Rights , Types of IPR, The Strategic Role of Patents, Patents and litigation, Patent pool.

Unit-IV Innovation and public policy, Drivers of innovation- Entrepreneurial Strategy, Current Topics in Innovation Research.

Suggested Readings:

- S. Scotchmer. Innovation and Incentives. Cambridge MA: MIT Press, 2004.
- Atkinson, R.D. and Ezell, S.J., 2012. Innovation economics. Yale University Press.
- . Sharma, Ruchi, A. Paswan, S. Kumar and M. Dhanora, 2018. Impact of Patent Policy Changes on R&D Expenditure by Industries in India. Journal of World Intellectual Property. 21(1-2): 52-69.
- Jha, S.K., Dhanaraj, C. and Krishnan, R.T 2018). Arbitrage to Global Innovation: Evolution of Multinational R&D in Emerging Markets. Management International Review, 58(4): 633-661.
- Forbes, N. (2016), India's National Innovation System: Transformed or Half-formed, No. WP/16/01, CTIER Working Papers
- Fischer, T., J. Henkel. 2012. "Patent Trolls on Markets for Technology—An Empirical Analysis of NPEs' Patent Acquisitions." Research Policy 41(9), 1519–1533.
- Reitzig, M. 2004. "Strategic Management of Intellectual Property." MIT Sloan M.

COURSE NAME: SOCIAL FACTORS AND HEALTH

COURSE CODE: HE -606

NATURE OF COURSE:OPTIONAL

Course Objective

The objectives of the course are as:

- 1.To understand basics of social determinants.
2. Identify the causes of social and behavioral factors that affect health of individuals and populations.
3. To understand the role of social and community factors in both the onset and solution of public health programs.
4. Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice.

Learning Outcomes

At the end of the course students will be:

1. critically evaluate structural interventions that are being used to address social determinants of health.
2. Analyze theories used to understand social determinants of health from multidisciplinary perspectives.
3. Explore how these theories, models, and methodologies could be used to design structural interventions.
4. Comprehend and critique important social determinants of health.

Course Contents

Unit-I Definition of the social determinants of health, Socioeconomic factors. Ways to measure the social determinant, including strengths and weaknesses of existing measures.

Unit-II social structural factors of health, ,Environmental Factors of Health.

Unit-III Health status indicators ,Health status disparities, Income Disparities.

Unit-IV Health and social behaviour, World Health Organization, public health programs. Current issues.

Suggested Readings:

- Drum, K. (2013, January 3). America's real criminal element: lead. Mother Jones. Retrieved January 3, 2013 from: <http://www.motherjones.com/environment/2013/01/lead-crime-link-gasoline>
- Hill, A.B. (1965). The environment and disease: association or causation? Proceedings of the Royal Society of Medicine, 58, 295-300.
- Link, B.G., & Phelan, J. (1995). Social conditions as fundamental causes of disease.
- Journal of Health and Social Behaviour, Spec No, 80-94.
- Rose, G. (1985). Sick individuals and sick populations. International Journal of Epidemiology, 14, 32-38 Session 3: Social Class Facilitated Readings.
- Subramanian, S.V., & Kawachi, I. (2004). Income inequality and health: what have we learned so far? Epidemiologic Reviews, 26, 78-91.
- Hodgins, M., & Fox, F. (2012). 'Causes of causes': ethnicity and social position as determinants of health inequality in Irish traveller men. Health Promotion International, Nov 28. [Epub ahead of print] Session
- Emmons, K.M. (2000). Health behaviors in a social context. In: L.F. Berkman & I. Kawachi (eds), Social Epidemiology. NY: Oxford University Press.
- Goldberg, D.S. (2012). Social justice, health inequalities and methodological individualism in US health promotion. Public Health Ethics, 5, 104-115
- Skipper, R.A.. (2011). Obesity: towards a system of libertarian paternalistic public health intervention. Public Health Ethics, 5, 181-191.
- Scambler, g. (2002) Health and Social Change: A Critical Theory. Buckingham: Open University Press.
- Shaw, M., Dorling, D., Gordon, D. and Davey-Smith, G. (1999) The Widening Gap: Health Inequalities and Policy in Britain. Bristole: The Policy Press.
- Williams,S.J.. (2003) Medicine and the Body. London: Sage. Chapter 2 on "Structuring" bodies : 'emotions, inequalities and health'. 8. Nazroo, J. (2001) Ethnicity, Class and Health. London: PSI.

COURSE NAME: APPLIED HEALTH ECONOMICS

COURSE CODE: HE -607

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To understand the fundamental principles and concepts of health economics and their application in the healthcare sector.
2. To develop the skills to conduct economic evaluations in healthcare, including cost-benefit, cost-effectiveness, and cost-utility analyses.
3. To explore the various health insurance models and financing mechanisms used in healthcare systems and understand their implications for resource allocation and access to care.
4. To analyze health policy and regulation from an economic perspective, considering the impact on healthcare markets, equity, and efficiency.

Learning Outcomes

At the end of the course students will be:

1. Explain the key concepts and theories of health economics and their relevance to the healthcare sector.
2. Apply economic evaluation methods, such as cost-benefit, cost-effectiveness, and cost-utility analyses, to assess the value and efficiency of healthcare interventions.
3. Evaluate different health insurance models and financing mechanisms and their implications for healthcare access, equity, and resource allocation.
4. Analyze health policies and regulations using economic frameworks, considering their impact on healthcare markets, efficiency, and equity.

Course Contents

Unit-I : INTRODUCTION TO HEALTH ECONOMICS: Overview of health economics and its applications, Basic economic principles in healthcare, Health economics frameworks and models, Supply and demand in healthcare, Market failures in healthcare, Role of government in healthcare economics.

Unit-II : ECONOMIC EVALUATION IN HEALTH: Cost-benefit analysis, Cost-effectiveness analysis, Cost-utility analysis, Methods of economic evaluation, Measurement and valuation of health outcomes, Discounting and sensitivity analysis, Decision-making in resource allocation.

Unit-III HEALTHCARE MARKET REGULATION: Healthcare reforms and policy evaluation, Health policy analysis and implementation, Indian Health Market.

Unit-IV: ECONOMIC EVALUATION AND HEALTH EQUITY: Economic evaluation of health policies, Pharmaceutical pricing and regulation, Equity and access in healthcare, Global health economics and policy.

Suggested Readings:

- "Applied Health Economics" by Andrew M. Jones and Nigel Rice.
- "Health Economics" by Charles E. Phelps.
- "The Economics of Health and Health Care" by Sherman Folland, Allen C. Goodman, and Miron Stano
- "Economic Evaluation in Health Care: Merging Theory with Practice" by Michael Drummond, Mark J. Sculpher, Karl Claxton, et al.
- "Health Economics and Financing" by Thomas E. Getzen.
- "Health Economics: Core Concepts and Essential Tools" by Jay Bhattacharya, Timothy Hyde, and Peter Tu.
- "Healthcare Economics Made Easy" by Fahrettin Sumer.

COURSE NAME: OVERVIEW OF HEALTH

COURSE CODE: HE - 704

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To impart the knowledge of Demand and Supply of Health care services in India.
2. Discuss about the linkages between Health, environment, and development.
3. To educate learners about the causal effects of malnutrition.
4. Analyse the objectives of health system and preparedness with respect to COVID-19.

Learning Outcomes

At the end of the course students will be:

1. Having idea about the demand and supply of health care services in India.
2. Able to understand the linkages between Health, environment, and development.
3. Discuss and understand the causal effects of malnutrition.
4. Gain insight about the health system and preparedness with respect to any health issues.

Course Contents

Unit-I Introduction to Economics: Definition, concepts of economy, economic systems, demand (consumer, patients, elasticity), supply (firms, hospitals, physicians), efficiency and opportunity cost, organization, actors of health care market.

Unit-II Link between health, environment and development. Disease Ecology, Health Transitions, Geography of Infectious and Communicable Disease, Geography and Chronic Disease, Population, Environment and Health.

Unit-III Causes and Effects of Malnutrition: Myths about Malnutrition, Reasons for Weak Commitment to Nutrition Program, Vicious Cycle of Nutrition and Malnutrition, Importance of Investment in Nutrition, Benefits and Costs of Nutrition Program.

Unit-IV Stated objectives of the health system, Financial protection and equity, Health outcomes, health service outcomes and quality of care, Transparency and accountability, Health system preparedness with respect to COVID-19.

Suggested Readings:

- Arrow K. (1975), Social Choice and Individual Values.
- Coale A. J, and Hoover E. M., (2015), Population growth and economic development, Princeton University Press.
- Culyer A.J., and Newhouse J.P., (2000), North-Holland Handbook of Health Economics, Elsevier.
- Sakthivel Selvaraj, et.al. (2022), India Health System Review, Health System Transition, Vol. 11, No.1, 2022.
- Folland S., Goodman A.C., and Stano M., (2000), The Economics of health and health Care, Macmillan (3rd edition).
- Jack W., (1999), Principles of Health Economics for Developing Countries, World Bank Institute.

COURSE NAME: PHARMACO ECONOMICS AND HEALTHCARE INDUSTRY

COURSE CODE: HE -705

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Having knowledge of pharmaceutical products and its economics.
2. To educate the learners about the marketing of pharmaceutical products.
3. Discuss the structure of pharmaceutical industry in India.
4. Analyse the pharmaceutical policy in India.

Learning Outcomes

At the end of the course students will be:

1. Able to understand the economics of pharmaceutical products in India.
2. To understand the various strategies of the marketing of pharmaceutical products.
3. Have insight the structure of pharmaceutical industry in India.
4. Able to have knowledge of policies related to pharmaceutical product in India.

Course Contents

Unit-I Introduction: Definition, Scope and Importance of Pharmaceutical Economics, Demand: Demand for Pharmaceutical Products Vis-A-Vis other Commodities, Determinants of Demand of Pharmaceutical Products, Health Insurance Vs Demand for Pharmaceutical Products, Price Discrimination of Pharmaceutical Products, Market Entry of Generic Drugs and Its Impact on Demand of Patent Drugs, And Therapeutic Equivalence and The Generic Competition

Unit-II Promotion (Advertising) And Marketing of Pharmaceutical Products: Marketing of Pharmaceutical Products Vis-A-Vis Other Commodities, Pharmaceutical Promotion Policies, Impact of Aggressive Marketing on Demand, Price and Quality of Pharmaceutical Product.

Unit-III Pharmaceutical Industry, Structure of the Industry, Role of R&D, Product Development Cycle and Patient policies, Vertical and Horizontal Integration of Pharmaceutical Firms. Market structure of Pharmaceutical Products, Pricing of Pharmaceutical Products, Pricing of Pharmaceutical Products: Pharmaceutical Prices and Pricing Models, E.G., Regulation of Mark-Ups in Pharmaceutical Supply and Distribution Chain, Costs Plus Pricing Formula.

Unit-IV Pharmaceutical Policies, The Public Choice Model of Policy Making, Pharmaceuticals, Cross National Price Differences, Drug Policies

and the Politics of Essential Drugs in India. Regulations: Government Regulation and the Drug Administration, Patent Protection, New Drug Introduction, Generic Products Approval of New Drugs, Pricing of New Drugs, Drug policy and the politics of essential drugs in India.

Suggested Readings:

- Ronad J. V., Pharmaceutical Economics and Public Policies.
- Chowdhury Z., Politics of Essential Drugs.
- Sloan F.A., and Hsieh C. R., Health Economics.
- Drummond M.F. and et. al. (2015), Methods of Economic Evaluation of Health Care Programmes, Oxford Medical Publications, Oxford.
- Gold M R and et. al., (1996), Cost-effectiveness in Health and Medicine, Oxford University Press.
- Schweitzer S. (1997), Pharmaceutical Economics & Policy, Oxford University Press.
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COURSE NAME: HEALTH SCIENCES

COURSE CODE: HE -706

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Provide definition of health, disease, and their various causation theories, and ways of prevention.
2. Learn the basic concept and difference between communicable and non-communicable diseases from public health context.
3. Understand the important demographic indicators used to measure the health status of a population.
4. Acquire knowledge on national health programmes such as AYUSH, PMSBY and their importance in improving health status of the country.

Learning Outcomes

At the end of the course students will be:

1. Understand the basic concept of health, disease, and prevention along with their historical background.
2. Identify the socioeconomic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities.
3. Illustrate the importance of demographic indicators for health and how to use them in practice.
4. Explain the current maternal and child healthcare status in India.

Course Contents

Unit-I Concept and definition of health, Disease, Prevention, and their historical background, Health Care Markets: Market Structure, Perfect Competition: Characteristics of Markets and Firms, Monopoly, Monopolistic Competition, Oligopoly, Efficiency in Health Care Market.

Unit-II Socio-economic, Behavioural, Biological, Environmental, and other factors and Human Health, Health Care Financing and Universal Health Coverage: Definition of Health Care Financing, Different Methods of Health Care Financing, Concept of Universal Health Coverage.

Unit-III Concept of Demography and its indicators for health, Theory of Role of Non-Government Organization in Health, Health Care Financing and Universal Health Coverage: Definition of Health Care Financing, Different Methods of Health Care Financing, Concept of Universal Health Coverage.

Unit-IV Maternal and Child Healthcare issues and status in India, Deductibles, Moral Hazard and adverse selection, Macroeconomics and Health: Investing in Health, Relationship Between Ill Health and Poverty, Health in Other Policies, Sustainable Development Goals.

Suggested Readings:

- Arthur Guyton. Textbook of Physiology. Prism publishers
- Davidson's principles and Practice of Medicine. 19th edition. Churchill Livingstone.
- Fundamentals of Microbiology 7th edition
- Henry Gray. Gray's Anatomy. Churchill Livingstone, 2008.
- MR Choudhury. Immunology and Parasitology.
- Park and Park. Textbook of Community Medicine.
- Rashid Khabir Hydar. Textbook of Community Medicine of Public Health.
- Masters, Susan B., and Anthony J. Trevor. Basic & clinical pharmacology. Edited by Bertram G. Katzung. McGraw-Hill Medical, 2016.
- WHO Report.

COURSE NAME: PUBLIC HEALTH

COURSE CODE: HE -707

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Define public health and learning the difference between individual and population-based strategies for improving health.
2. Understand the goals of public health, and the challenges and opportunities for closing the gap between science and practice.
3. Describe the leading global health problems, including their causes and methods for prevention.
4. Know the core functions of public health and how public health is organized at the local, state, national, and international level.

Learning Outcomes

At the end of the course students will be:

1. Explain the history and philosophy of public health as well as its core values, concepts, and functions across the globe and in society.
2. Identify the methods, and tools of public health data collection, use, and analysis and why evidence-based approaches are an essential part of public health practice.
3. Recognize the basic processes, approaches, and interventions that identify and address the major health-related needs and concerns of populations.
4. Identify the socioeconomic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities.

Course Contents

Unit-I INTRODUCTION TO PUBLIC HEALTH PRINCIPLES AND PRACTICE: Public health: The population health approach, Evidence-based public health, Public health data and communications, Social and behavioral sciences.

Unit-II PUBLIC HEALTH IN A GLOBAL CONTEXT: What is global health: Key concepts, successes and challenges, Gender, wellbeing and global health. The Post-2015 Agenda: Improving health systems.

Unit-III INFECTIOUS DISEASE: Infectious diseases: Global burden, costs, and trends, Vaccine controversies, Public health institutions and systems.

Unit-IV CHRONIC DISEASES AND INJURIES: Chronic disease: Global burden, costs, and trends. The Global Tobacco Epidemic, Injuries disease: Global burden, costs, and trends.

Suggested Readings:

- Breslow, Norman E., Nicholas E. Day, and Walter Davis. Statistical methods in cancer research. Vol. 2. Lyon: International Agency for Research on Cancer, 1987.
- Clayton, David, Michael Hills, and A. Pickles. Statistical models in epidemiology. Vol. 161. Oxford: Oxford university press, 1993.
- David E Lilienfeld, Paul D. Stolley). Foundation of Epidemiology. Oxford University Press, 1994.
- Kirkwood, Betty R., and Jonathan AC Sterne. Essential medical statistics. John Wiley & Sons, 2010.
- Leon Gordis. Epidemiology. WB Saunders Company, 1996. 3. MOHFW. Health and Population Sector Programme, 1998-2003, 1998.
- MOHFW. Conceptual Framework for Health Nutrition and Population Sector Programme 2003-2006, 2003.
- Machin, David, Yin Bun Cheung, and Mahesh Parmar. Survival analysis: a practical approach. John Wiley & Sons, 2006.
- Park and Park. A textbook of Public health (6th Edition), 2000.
- Rashid, Khabir, Haider). A text Book of Public Health (3rd Edition), 2000.
- Selim Reza. Public Health, 2000.
- -Volume 1: Analysis of case-control studies
- -Volume 2: The design and analysis of cohort studies.

COURSE NAME: BEHAVIORAL ECONOMICS AND HEALTH DECISION MAKING

COURSE CODE: HE -805

NATURE OF COURSE:OPTIONAL

Course Objective

The objectives of the course are as:

1. Understand the foundational principles and concepts of behavioral economics and their application in health decision making.
2. Explore the various behavioral biases and decision-making heuristics that influence health-related choices.
3. Examine the role of framing effects, nudging, and choice architecture in shaping health decisions and behaviors.
4. Analyze the implications of behavioral economics for health policy development and implementation.

Learning Outcomes

At the end of the course students will be:

1. **Knowledge and Understanding:** By the end of the course, students will demonstrate a comprehensive understanding of the key principles, theories, and concepts of behavioral economics as they relate to health decision making.
2. **Critical Thinking and Analysis:** Students will be able to critically analyze and evaluate the impact of behavioral biases and decision-making heuristics on health-related choices and apply this understanding to real-world scenarios.
3. **Application and Implementation:** Students will be able to apply the principles of framing effects, nudging, and choice architecture to design effective interventions and strategies for promoting healthy behaviors in various contexts, such as public health campaigns and healthcare settings.
4. **Policy and Ethical Considerations:** Students will develop a nuanced understanding of the ethical implications and limitations of using behavioral economics in health decision making and health policy and be able to assess and propose evidence-based approaches to address health challenges.

Course Contents

Unit-I: INTRODUCTION TO BEHAVIORAL ECONOMICS AND HEALTH DECISION MAKING: Overview of behavioral economics: principles, theories, and concepts, Introduction to health decision making: factors influencing individual choices and behaviors, Behavioral biases and their impact on health decisions, Rational decision making vs. behavioral decision making in the context of health, Case studies and examples illustrating the role of behavioral economics in health decision making.

Unit-II FRAMING EFFECTS AND DECISION BIASES: Framing effects and their relevance in health decision making, Prospect theory and its implications for health choices, Loss aversion and its impact on health-related behaviors, Anchoring and adjustment bias in health decision making, Overconfidence and its influence on health-related choices, Strategies to mitigate framing effects and decision biases in health decision making

Unit-III NUDGING AND CHOICE ARCHITECTURE: Understanding nudges and their application in health decision making, Default options and their role in health-related choices, behavioral interventions to promote healthy behaviors, Ethical considerations and limitations of nudging in health decision making, Evaluation of nudging strategies and their effectiveness

Unit-IV BEHAVIORAL ECONOMICS AND HEALTH POLICY: Behavioral insights in health policy formulation, behavioral economics and public health campaigns, The role of incentives and rewards in promoting health behaviors, Case studies and real-world applications of behavioral economics in health policy.

Suggested Readings:

- "Nudge: Improving Decisions About Health, Wealth, and Happiness" by Richard H. Thaler and Cass R. Sunstein
- 2. "Predictably Irrational: The Hidden Forces That Shape Our Decisions" by Dan Ariely.
- "Thinking, Fast and Slow" by Daniel Kahneman.
- "Misbehaving: The Making of Behavioral Economics" by Richard H. Thaler.
- "Influence: The Psychology of Persuasion" by Robert B. Cialdini.
- "Nudge, Nudge, Think, think: Experimenting with Ways to Change Civic Behaviour" by Peter John, Sarah Cotterill, Lara Montesinos Coleman, and Liz Richardson.
- "The Behavioral Economics of Health and Health Care" by Peter J. Ubel.
-

COURSE NAME: COST-EFFECTIVENESS ANALYSIS IN HEALTHCARE

COURSE CODE: HE -806

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To Understand the fundamental concepts and principles of cost-effectiveness analysis in health.
2. Analyze and interpret cost-effectiveness studies in the context of healthcare decision-making.
3. To Apply appropriate methods and techniques to conduct cost-effectiveness analyses.
4. To Understand the ethical and social implications of resource allocation in healthcare.

Learning Outcomes

At the end of the course students will be:

1. . Understand the fundamental concepts and principles of cost-effectiveness analysis in health.
2. . Analyze and interpret cost-effectiveness studies in the context of healthcare decision-making.
3. . Apply appropriate methods and techniques to conduct cost-effectiveness analysis.
4. Evaluate the strengths and limitations of cost-effectiveness analysis as a tool for resource allocation in healthcare.

Course Contents

Unit-I INTRODUCTION TO COST-EFFECTIVENESS ANALYSIS: Introduction to cost-effectiveness analysis, Concepts and principles of cost-effectiveness analysis, Key components of cost-effectiveness analysis: costs, outcomes, and incremental analysis, Role of cost-effectiveness analysis in healthcare decision-making

Unit-II METHODS AND TECHNIQUES IN COST-EFFECTIVENESS ANALYSIS: Study design and data collection for cost-effectiveness analysis

Measuring costs in cost-effectiveness analysis, Measuring health outcomes and quality-adjusted life years (QALYs), Discounting, time preference, and uncertainty in cost-effectiveness analysis.

Unit-III: ECONOMIC EVALUATION STUDY DESIGNS AND APPLICATIONS: Cost-effectiveness analysis in clinical trials, Decision analytic modeling in cost-effectiveness analysis, Economic evaluations of healthcare technologies and interventions, Case studies and applications of cost-effectiveness analysis.

Unit-IV: ETHICAL AND POLICY ISSUES IN COST-EFFECTIVENESS ANALYSIS: Ethical considerations in cost-effectiveness analysis, Distributional concerns and equity in resource allocation, Incorporating values and preferences in cost-effectiveness analysis, Policy implications of cost-effectiveness analysis

Suggested Readings:

- Drummond MF, Sculpher MJ, Claxton K, et al. Methods for the Economic Evaluation of Health Care Programmes. 4th ed. Oxford University Press; 2015.
- Culyer AJ, editor. Encyclopedia of Health Economics. Elsevier; 2014.
- Ubel PA. Pricing Life: Why It's Time for Health Care Rationing. MIT Press; 2001.
- Briggs A, Claxton K, Sculpher M. Decision Modelling for Health Economic Evaluation. Oxford University Press; 2006.
- Drummond M, McGuire A. Economic Evaluation in Health Care: Merging Theory with Practice. Oxford University Press; 2001.
- Gold MR, Siegel JE, Russell LB, et al. Cost-Effectiveness in Health and Medicine. 2nd ed. Oxford University Press; 2016.
- Neumann PJ, Sanders GD, Russell LB, et al. Cost-Effectiveness in Health and Medicine. 3rd ed. Oxford University Press; 2020.

COURSE NAME: HEALTH ADMINISTRATION AND MANAGEMENT

COURSE CODE: HE - 807

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. To impart the idea about the Hospital Management.
2. To know the various responsibility of Hospital Manager and Management.
3. Having information of various types of Hospital's service delivery.
4. Provide the details of Management Information System (MIS).

Learning Outcomes

At the end of the course students will be:

1. Familiar with the challenges of Hospital Management
2. Undersating the Responsibility of a Manager.
3. Having idea about the various services provided by the Hospital.
4. Able to analyse the role of effective communication in hospital industry.

Course Contents

Unit-I Introduction to Hospital Management: An Epidemiological Perspective for Healthcare Management, Challenges and Strategies in Hospital Management, Functions of Hospital Management. Modern Techniques in Hospital Management: The Feedback Loop, Time Series Analysis, Value Analysis and Queuing Theory, Program Evaluation and Review Techniques (PERT) And Critical Path Method (CPM), Statistical Quality Control and Operations Research, Cost Analysis, Management by Objectives (MBO), Quality Circles and Management Problem Solving Methods.

Unit-II Responsibility of a Manager: Administrative Functions and Healthcare Marketing. Managing Finance: Management accounting techniques and depreciation. Materials Management: Elements of Materials Management, Inventory Control and purchasing.

Unit-III Managing Service Delivery: Principles of Risk Management, Risk Management- a New Paradigm, Legal aspect of Health Care. Managing Support Services: Medical Records and its Computerization, Housekeeping, Hospital Engineering, Ambulance, Optimizing Laboratory Performance, Biomedical Waste Management.

Unit-IV Management Information System (MIS): Effective Communication in Healthcare Organization, Integrated Hospital Information Systems, Patient Care Information Systems, Managing Relations: Public Relation in Hospitals. Quality Issue in Health Care: Managing Quality, Quality from Providers' Perspective, Medical Audit and Quality, Cost Implications of Quality, Quantity Vs. Quality.

Suggested Readings:

- Iles (1997), Really Managing Health Care.
- Strike (1995), Human Resources in Health Care: A Manager's Guide..Tabis M., (2001), Hospital and Health Services Administration: Principles and Practice.

COURSE NAME: HEALTH SECTOR REFORMS IN INDIA

COURSE CODE: HE - 808

NATURE OF COURSE: OPTIONAL

Course Objective

The objectives of the course are as:

1. Orient students various reform and its relevant strategies.
2. Provide every detailing of reform starting from diagnosis to reform.
3. Provide tools to assess the health system performance.
4. Analyse the financing to behaviour.

Learning Outcomes

At the end of the course students will be:

1. Assess health system performance and its reform.
2. Understand the issues in health sector reform in India.
3. Able to discuss the health system performance.
4. Able to understand the key issues in health sector reforms.

Course Contents

Unit-I Introduction to Health System Analysis, the health-reform cycles, Judging health-sector performance, Ethical theory, Political analysis, and strategies, Better Coverage Initiatives: Health for All and Primary Health Care, Essential Services Package, Millennium Development Goals, Universal Health Coverage, Sustainable Development Goals.

Unit-II Goals for evaluating health systems, Assessing health-system performance, From diagnosis to health-sector reform in India, Policy: Situation Analysis, Policy Formulation, India's Health Care Policy, Strategies and Plans.

Unit-III Financing, Payment, Organizations, Regulation, Planning: Principles of Planning, Need for Planning, Steps of Planning, Economic Appraisal/ Sustainability Analysis, Operational Plan, Techniques of Planning: Logical Framework, Linear Programming, Input-Output Model,

Decision Tree, Network Analysis, Activity Analysis

Unit-IV Policy Analysis: Formulation and Implementation, Notions of The Policy Process, Policy Failure, Models of Policy Implementation, Key issues in health sector reform in India Health sector reform, Health Policy of WHO, National Health Policy – NRHM, PMSBY, AYUSHMAN BHARAT, etc.

Suggested Readings:

- Berman, P., 1995. Health sector reform: making health development sustainable. Health policy, 32(1), pp.13-28.
- Cassels, A., 1995. Health sector reform: key issues in less developed countries. Journal of International development, 7(3), pp.329-347.
- J.W. Hinderson (2009) Health economics and Policy, Thomson Learning.
- Einke W., (1988), Health Planning for Effective Management, Oxford, OUP.
- Roberts, Marc, et al. Getting health reform right: a guide to improving performance and equity. Oxford university press, 2003.
- Textbook of Health Economics, Jay Bhattacharya, Timothy Hyde, Peter Tu.
- UN (2000), Millennium Development Goals (MDG).
- V. Raman Kutty (2007), A Premier of health System Economics, Allied Publications, New Delhi.
- World Health Organization, World Health Reports.
