



Key Indicator – 1.3 Curriculum Enrichment
(50)

1.3.1 Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment & Sustainability and other value framework enshrined in Sustainable Development goals and National Education Policy – 2020 into the Curriculum
(15)

Criterion 1 – Curricular Aspects
(150)

SCHOOL OF HEALTH SCIENCES			
Category	Name of the Course	Relevance/Description of Courses	Activites
Environment and sustainability	Environmental Sciences – Theory_BP206T	The prime objective of this course is to make the undergraduate students acquainted with the fundamental concepts of environmental Science.	<ul style="list-style-type: none"> • Herbal Garden Visit - Amrit Udyan at Rashtripati Bhawan. • Debate on Traditional Plants vs. New Medicine Techniques.
	Environmental Science_EVS2111	The prime objective of this course is to make the undergraduate students acquainted with the fundamental concepts of environmental Science.	<ul style="list-style-type: none"> • Herbal Garden Visit - Amrit Udyan at Rashtripati Bhawan. • Debate on Traditional Plants vs. New Medicine Techniques. • Case Study Presentation.
Human Values	Soft-Skills_SS151	To develop effective communication, teamwork, and problem-solving skills for professional and personal growth.	<ul style="list-style-type: none"> •Expert Session for Students. •One-on-One Interview Sessions •Role Play for Improving Skills. •Online Webinar.
Human Values	Medical Ethics And Legal Aspects_BMLT203	Medical ethics involves examining a specific problem, usually a clinical case, and using values, facts, and logic to decide what the best course of action should be taken.	<ul style="list-style-type: none"> • Industry Visits : Modern Diagnostic and Research Center. • Case Study Presentations on Legal Aspects. • Hands-on Training on medico cases of lab.
Human Values	Medical Ethics And Legal Aspects_23BMRIT2005	The prime objective of this course is to provide students with a fundamental understanding of medical ethics, patient rights, and legal aspects relevant to radiology.	<ul style="list-style-type: none"> •Students Visited to Prajnam Center to observe Medico Legal Cases. •Expert Session at Jamia Hospital on medical ethics. •Case Study Presentation.
Human Values	Public Health & Community Optometry_BOPT506	To equip students with knowledge of public health and community optometry for preventing and managing visual health issues.	<ul style="list-style-type: none"> •Patient Screening at Sushant Eye Care. •Awareness regarding eye health for patients at Silver Line Lab. • Awareness regarding eye health at the optometry department of Arunodaya Hospital.



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Human Values	Low Vision & Rehabilitation- I_MOPT103	To provide foundational knowledge on low vision assessment and rehabilitation strategies for visually impaired individuals.	<ul style="list-style-type: none"> • Awareness Camp on Eye Health for faculties and student at Sushant University. • Patient Screening at Sushant Vision Eye Care. • Awareness and screening camp in collaboration with Arunodaya Hospital on World Glaucoma Day.
Human Values	Life Skill Education: Application And Training_BCP107	Major emphasis of this course is to help students learn how real world works so this course emphasised on as to how NGOs and various other organisations work.	<ul style="list-style-type: none"> • Students visited to Earth Foundation Saviour for Social Awareness. • Students visited to IMA Gulabi pankh for social awareness.
Human Values	Biomedical Ethics And Legal Aspect_BOPT203	To introduce students to the ethical and legal principles governing biomedical practices and patient care.	<ul style="list-style-type: none"> • Students learned about legal laws and ethics at Arunodaya Hospital. • Case Study Presentation.
Human Values	Quality Assurance & Radiation Safety (Aerb Guide Line) In Diagnostic Radiology-II_BMRIT6001	To provide students with knowledge of quality assurance protocols and radiation safety guidelines in diagnostic radiology.	<ul style="list-style-type: none"> • Nukkad Natak on Radiation Awareness. • Clinical knowledge and hands-on training at Max Hospital. • Attended a session on patient safety at a conference in Sushant University
Human Values	Social Psychology_BCP106	The objective of this course is to explore how social influences shape individual behavior, attitudes, and interactions within groups.	<ul style="list-style-type: none"> • Expert Sessions by Doctors from IMA on social awareness at Sushant University • Students Visited Earth Foundation(NGO) for Social awareness.
Human Values	Introduction To Quality And Patient Safety_BOPT105	The objective of this course is to introduce students to the fundamental concepts of quality improvement and patient safety in healthcare settings.	<ul style="list-style-type: none"> • Quality Test of Machines by Jaggi brother at Sushant Vision Eye Care. • Patient care practice at Sushant Vision Eye care • Patient screening at Arunodaya hospital.
Human Values	Soft Skill-III_SS351	The objective of this course is to enhance students' communication, teamwork, and leadership skills for professional and personal development.	<ul style="list-style-type: none"> • Expert Session on Effective Communication. • One-on-One Sessions • Role Play and Debates



Human Values	Soft Skill IV_SS451	The objective of this course is to enhance students' communication, teamwork, and leadership skills for professional and personal development.	<ul style="list-style-type: none"> • Expert Session on Effective Communication. • One-on-One Sessions • Role Play and Debates
Human Values	Professionalism And Value_BMLT201	This module will deliver the concepts of what it means to be a professional and how a specialized profession is different from a usual vocation.	<ul style="list-style-type: none"> • Role Play by Students. • Online Webinar • Poster Presentation at Sushant University
Human Values	Introduction To Quality And Patient Safety_BCVT105	The objective of this course is to introduce students to the key concepts of quality management and patient safety in healthcare practices.	<ul style="list-style-type: none"> • Sanar Hospital Visit: Hands-on training. • BLS and ACL Training at Conference • Model Presentation on Cardiac Awareness:
Human Values	Medical Ethics And Legal Aspects_BCVT204	The objective of this course is to provide students with an understanding of medical ethics and legal principles in healthcare, ensuring ethical and lawful practices in patient care.	<ul style="list-style-type: none"> • Attended Expert Session on Legal cases in conference at Medanta Hospital. • Case Presentation .
Professional Ethics	Pharmaceutical Jurisprudence_BP505T	The objective of this course is to provide students with knowledge of the legal and regulatory framework governing the practice of pharmacy and pharmaceutical industries.	<ul style="list-style-type: none"> • Industry Visit on Rules and Regulations at the Workplace. • Case Study Presentation • Hands-on Training at Hamdard Hospital.
Professional Ethics	Quality Assurance & Radiation Safety (Aerb Guide Line) In Diagnostic Radiology-II_BMRIT6001	To provide students with knowledge of quality assurance protocols and radiation safety guidelines in diagnostic radiology.	<ul style="list-style-type: none"> • Nukkad Natak on Radiation Awareness. • Max Hospital Visit for Hands-on Training on Patient safety • Attended a session on radiation safety at a conference in Sushant University.



Professional Ethics	Medical Ethics And Legal Aspects_BMLT203	Medical ethics involves examining a specific problem, usually a clinical case, and using values, facts, and logic to decide what the best course of action should be taken.	<ul style="list-style-type: none"> • Discussions on ethics during an industry visit to Modern Diagnostic and Research Center. • Case Study Presentations on Legal Aspects. • Debate on medico-legal cases.
Professional Ethics	Introduction To Quality And Patient Safety_BMLT105	The objective of this course is to introduce students to the principles of quality assurance and patient safety in healthcare services.	<ul style="list-style-type: none"> • Max Hospital Visit for Hands-on Training on patient safety protocol. • Industry Session on Quality Control. • Case Study Presentation on patient safety and equipment standards
Professional Ethics	Biomedical Ethics And Legal Aspect_BOPT203	To introduce students to the ethical and legal principles governing biomedical practices and patient care.	<ul style="list-style-type: none"> • Hospital Visit- Students learned about legal laws and ethics in eye care. • Case Study Presentation.
Professional Ethics	Introduction To National Health Care Delivery System In India (Workshop)_BMRIT2006	The objective of this course is to familiarize students with the structure, functions, and components of the national healthcare delivery system in India.	<ul style="list-style-type: none"> • Visit to Max Hospital to observe the healthcare system. • Healthcare Camp at University for faculties and Students. • Expert session attended.
Professional Ethics	Medical Ethics And Legal Aspects_23BMRIT2005	The prime objective of this course is to provide students with a fundamental understanding of medical ethics, patient rights, and legal aspects relevant to radiology.	<ul style="list-style-type: none"> • Discussion on ethics during Visit to Prajnam Hospital. • Exposure to Medico-Legal Case Ethics : Max Hospital Visit • Case Study Presentation
Professional Ethics	Quality Control and Patient Safety _23BMRIT4004	Quality Assurance (QA) of medical diagnostic x-ray equipment means systematic actions necessary to provide adequate confidence to the end-user.	<ul style="list-style-type: none"> • Max Hospital Visit for Hands-on Training on patient safety protocol. • Attended a session on Quality Control at a conference in Sushant University. • Case Study Presentation on patient safety and equipment standards.



Professional Ethics	Regulatory Requirements In Diagnostic Radiology and Imaging - BMRIT5004	The objective of this course is to provide students with an understanding of the regulatory guidelines and compliance requirements in diagnostic radiology and imaging practices.	<ul style="list-style-type: none"> • Aarvy Hospital Visit for Hands-on Training. • Nukkad Natak on Radiation Awareness • Case Presentation on radiation safety.
Professional Ethics	Introduction To National Health Care Delivery System In India_BOPT106	The objective of this course is to familiarize students with the structure, functions, and components of the national healthcare delivery system in India.	<ul style="list-style-type: none"> • Visit to Max Hospital to observe the healthcare system. • Healthcare Camp at University for faculties and Students. • Case Presentation.
Professional Ethics	Introduction To National Health Care Delivery System In India_BMLT106	The objective of this course is to familiarize students with the structure, functions, and components of the national healthcare delivery system in India.	<ul style="list-style-type: none"> • Visit to Max Hospital to observe the healthcare system. • Healthcare Camp at University for faculties and Students. • Case Presentation.
Professional Ethics	Public Health & Community Optometry_BOPT506	To equip students with knowledge of public health and community optometry for preventing and managing visual health issues.	<ul style="list-style-type: none"> • Patient Screening at Sushant Eye Care. • Awareness regarding eye health for patients at Silver Line Lab. • Awareness regarding eye health at the optometry department of Arunodaya Hospital.
Professional Ethics	Soft Skill-III_SS351	The objective of this course is to enhance students' communication, teamwork, and leadership skills for professional and personal development.	<ul style="list-style-type: none"> • Expert Session on Effective Communication. • One-on-One Sessions • Role Play and Debates
Professional Ethics	Soft Skill IV_SS451	The objective of this course is to enhance students' communication, teamwork, and leadership skills for professional and personal development.	<ul style="list-style-type: none"> • Expert Session on Effective Communication. • One-on-One Sessions • Role Play and Debates

Professional Ethics	Professionalism And Value_BMLT201	This module will deliver the concepts of what it means to be a professional and how a specialized profession is different from a usual vocation.	<ul style="list-style-type: none"> • Role Play by Students. • Poster Presentation at Conference in Sushant University. • Expert Session.
Professional Ethics	Social Psychology_BCP106	The objective of this course is to explore how social influences shape individual behavior, attitudes, and interactions within groups.	<ul style="list-style-type: none"> • Expert Sessions by Doctors from IMA on social awareness at Sushant University • Students Visited Earth Foundation(NGO) for Social awareness.
Professional Ethics	Introduction To Quality And Patient Safety_BOPT105	The objective of this course is to introduce students to the fundamental concepts of quality improvement and patient safety in healthcare settings.	<ul style="list-style-type: none"> • Quality Test of Machines by Jaggi brother at Sushant Vision Eye Care. • Patient care practice at Sushant Vision Eye care • Patient screening at Arunodaya hospital.
Professional Ethics	Medical Ethics And Legal Aspects_BCVT204	The objective of this course is to provide students with an understanding of medical ethics and legal principles in healthcare, ensuring ethical and lawful practices in patient care.	<ul style="list-style-type: none"> • Attended Expert Session on Legal cases in conference at Medanta Hospital. • Case Presentation .
Professional Ethics	Introduction To Quality And Patient Safety_BCVT105	The objective of this course is to introduce students to the key concepts of quality management and patient safety in healthcare practices.	<ul style="list-style-type: none"> • Sanar Hospital Visit: Hands-on training. • BLS and ACL Training at Conference • Model Presentation on Cardiac Awareness



BP 206 T. ENVIRONMENTAL SCIENCES (Theory)

30 hours

Sushant University <i>soaring high</i>		School of Health Sciences	
		Bachelor of Pharmacy	
Course Title: ENVIRONMENTAL SCIENCES			
Semester: II	Course code: BP 206 T	Credits: 3	Core / Elective: Core
No. of lectures/ tutorials: 3/week		No. of practical hours: 0/week	
Course Pre-requisites: None			

COURSE OUTCOMES (COs):

Upon completion of the course the student shall be able to:

CO 01: Create the awareness about environmental problems among learners.

CO 02: Impart basic knowledge about the environment and its allied problems.

CO 03: Develop an attitude of concern for the environment.

CO 04: Motivate learner to participate in environment protection and environment improvement.

CO 05: Acquire skills to help the concerned individuals in identifying and solving environmental problems.

Mapping	PO 01	PO 02	PO 03	PO 04	PO 05	PO 06	PO 07	PO 08	PO 09	PO 10
CO 01	L	M	H	M	L	L	L	L	L	L
CO 02	L	M	H	H	L	L	L	L	L	L
CO 03	M	M	H	M	M	L	L	L	M	L
CO 04	M	L	H	M	M	L	L	L	L	L
CO 05	L	L	H	H	L	L	L	L	L	L

Unit-I

Course content:



10 hours

The Multidisciplinary nature of environmental studies

Natural Resources

Renewable and non-renewable resources:

Natural resources and associated problems

a) Forest resources; b) Water resources; c) Mineral resources; d) Food resources; e) Energy resources; f) Land resources: Role of an individual in conservation of natural resources.

Unit-II

10hours

Ecosystems


- Concept of anecosystem.
- Structure and function of anecosystem.
- Introduction, types, characteristic features, structure and function of the ecosystems: Forest ecosystem; Grassland ecosystem; Desert ecosystem; Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit-III

10hours

Environmental Pollution: Air pollution; Water pollution; Soil pollution



		Sushant School of Health Sciences BMRIT			
Course Title: Environmental Science					
Semester: I		Course EVS2111	code:	Credits:02	Core
No of sessions Lectures / Tutorial: 40			No of practical hours:		
Course Prerequisites:			Number of sessions: 40		

Course Introduction

Environmental Studies is a multidisciplinary subject and hence requires a comprehensive knowledge on various subjects, which primarily include general science, social science, law and management practices. The prime objective of this course is to make the undergraduate students acquainted with the fundamental concepts of environmental science and to adopt eco-friendly technologies to facilitate conservation and regeneration of natural resources.

Course Objectives

The broad objectives of this course are

- To gain an understanding of the concepts fundamental to environmental science.
- To understand the complexity of ecosystems and possibly how to sustain them.
- To understand the relationships between humans and the environment to understand major environmental problems including their causes and consequences.
- To understand current and controversial environmental issues and possible solutions to environmental problems and their pros and cons.
- To understand the hospital environment in general.

3. Course Learning Outcomes

Upon successful completion of the course, the students should be able to:

CLO1: To gain knowledge on the importance of environmental education and ecosystem.

CLO2: To acquire knowledge about environmental pollution- sources, effects and control measures of environmental pollution.

CLO3: To understand the treatment of wastewater and solid waste management.



CLO5: To be aware of the national and international concern for environment for protecting the environment.

CLO6: To understand the environmental issues arising from different labs of the hospital

The course follows the pedagogy of “learning by doing”. Instructional design is based on creating situations in which the students have opportunities “to do things”. The course would be delivered primarily through presentations and discussions led by students for active learning. The course facilitator would execute the same either by organizing in-class activities or out-of-class projects. A topic would be introduced to the class by the facilitator. Next the students would break off into groups. Group discussions would be conducted to bring in various perspectives on the topic followed by presentations by the students and activities carefully designed around the given theme to achieve the course learning outcomes (CLOs). Performance of and learning demonstrated through the same activities/ presentations would be used for assessment

The class would meet twice in a week for a period of 10 weeks approx.

Definition, scope and importance of multi-disciplinary nature of environment. Need for public awareness.

Natural Resources and associated problems, use and over exploitation, case studies of forest resources and water resources.

Concept of Ecosystem, Structure, interrelationship, producers, consumers and decomposers, ecological pyramids-biodiversity and importance. Hotspots of biodiversity

Definition, Causes, effects and control measures of air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, nuclear hazards, Solid waste management: Causes, effects and control measure of urban and industrial wastes. Role of an individual in prevention of pollution. Pollution case studies, Disaster management: Floods, earthquake, cyclone and landslides.



Module 5 Social blemishes and the Environment

From Unsustainable to Sustainable development, urban problems related to energy, Water conservation, rain water harvesting, water shed management Resettlement and rehabilitation of people; its pros and concerns. Case studies, Environmental ethics: Issues and possible solutions. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies, Wasteland reclamation, Consumerism and waste products. Environment Protection Act, Air (Prevention and Control of Pollution) Act. Water (Prevention and control of pollution) Act. Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation public awareness.

Human Population and the Environment, Population growth, variation among nations. Population explosion—Family Welfare Programme. Environment and human health, Human Rights, Value Education, HIV/AIDS. Women and child Welfare. Role of Information Technology in Environment and human health. **Case studies.**

Module.6 Understanding the environment in the following clinical laboratories:

Microbiology, Biochemistry, Histopathology, Hematology

Module 7 Clinical laboratory hazards to the environment from the following and means to prevent:

Infectious material, Toxic Chemicals, Radioactive Material, Other miscellaneous wastes

Course Assessment

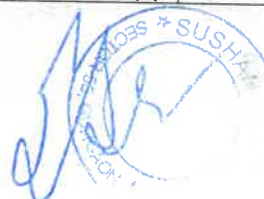
Assessment Scheme

Students would be assessed continuously at four assessment points during the course through the activities and deliverables mentioned in the table in point 4 above. Course assessment is based on a student's activity/ assignments/quizzes (records/ evidence of his/her performing and learning). They could be in the form of PowerPoint Presentations, Videos watched etc. The details of the components of assessment are detailed next.

For a course of 100 marks containing only theory Component:

MID SEMESTER EVALUATION (40) – Theory (40 Marks)

Theory (40)				
Assignment(s)	Continuous Assessment	Mid Semester Examination Theory	Quiz(s), Presentation(s)	Total



			Faculty Student Interaction	
5	5	15	15	40

END SEMESTER EXAMINATION (60)
Theory (60)

Course References

Text Book:

Chawla S., 2012. A Textbook of Environmental Studies, Tata Mc Graw Hill, New Delhi.

Reference Books:

Reference 1: Jadhav, H & Bhosale, V.M., 1995. Environmental Protection and Laws. Himalaya Pub. House, New Delhi.

Reference 2: Gadi R., Rattan, S., 2006. Environmental Studies, KATSON Books, New Delhi.

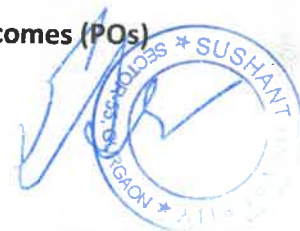
Reference 3: McKinney, M.L. & School, R.M., 1996. Environmental Science Systems & Solutions, Web enhanced edition.

Reference 4: Wagner K.D., 1998. Environmental Management. W.B. Saunders Co. Philadelphia, USA

Papers:

- Beckerman, W. (1992). Economic growth and the environment: Whose growth? Whose environment? *World Development*, 20(4), 481-496.
- Lorente, D.B., Shahbaz, M., Roubaud, D., Farhani, S. (2018) How economic growth, renewable electricity and natural resources contribute to CO2 emissions? *Energy Policy*, 113(C), 356-367.
- Kumar Reddy D.H., Lee S.M. (2012) Water Pollution and Treatment Technologies, *J Environ Anal Toxicol*, 2(5) e103.
- Dwivedi, A. K. (2017) Researches in Water Pollution: A Review. *International Research Journal of Natural and Applied Sciences*, 4(1) 118-142.

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)



PO Keywords	<i>Knowledge & Expertise of Medical radio-imaging technology</i>	<i>Leadership and mentorship</i>	<i>Problem solving</i>	<i>Ethics and accountability</i>	<i>Communication & presentation skills</i>	<i>Commitment to professional excellence</i>	<i>Research</i>	<i>Lifelong learning</i>	<i>Employability, Entrepreneurship</i>	<i>Organizational Behavior</i>	<i>Ethical, Social and professional understanding</i>
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3
CO3	3	3		1	3	3	1		3	3	3
CO4	3	3	3		3	3		2		3	

1= LOW 2= MEDIUM 3= High

Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Explain indication, contraindication and reactions of contrast media. Demonstrate how to take in minimum numbers of exposures in each special investigation.	PO1, PO2, PO3, PO8, PO9 PO10, PO11
CO2	Demonstrate the positioning and technique of the special studies.	PO1, PO2, PO3, PO9 PO10, PO11
CO3	Explain the technique of all GIT study according to investigation.	PO1, PO2, PO3, PO6, PO7, PO8, PO9 PO10, PO11
CO4	Demonstrate surface anatomy. To be able to know the technique behind the radiography.	PO1, PO4, PO5, PO6, PO8, PO11



Relationship between the Course Outcomes (COs) and Program Outcomes (POs) / Program Specific Outcomes (PSOs)

Matrix 1- Mapping of COs with POs and PSOs

Matrix 1- Mapping of COs with POs and PSOs

Course Outcomes (COs)

Program Outcomes (POs)


	PO1	PO2	PO3	PO4	PO5	PO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M

Course Outcomes (COs)

Program Specific Outcomes (PSOs)

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M



		Sushant School of Health Sciences BMRIT	
Course Title: Soft Skill			
Semester: I	Course code: SS151	Credits:01	Core
No of sessions Lectures / Tutorial: 10		No of practical hours:	
Course Prerequisites:		Number of sessions: 10	

Course Objectives:

- To introduce the topic.
- To make the students confident in written communication skills.
- To make the students learn about good manners and behavior.
- To make the students develop good IPR amongst each other and develop professionalism, etiquettes and ethics.

Course Learning Outcomes

Upon successful completion of the course, the student should be able to-

CLO1: Understood the role of radiographer, role of medical personal in patient communication and interpersonal relationship

CLO2: Understood the importance of empathy and greetings to the patients and their relatives.

CLO3: Understood the importance of mannerism.

CLO4: Understood the importance of various gestures, body language and moods in greeting the patient.

Module 1: Introduction to soft skills

Introduction, definition of soft skills, importance of soft skills, types of soft skills: communication skills, written communication skills, body language, interpersonal skills, presentation skills, stress management, time management, and leadership skills.

Module 2: Letter writing skills



Introduction to letters: informal and formal letters, format of letter writing.

Module 3: Telephone etiquettes

Introduction to telephone etiquettes, need of phone calls, phases of professional calls, basic skills of making calls, basic skills of answering a call; smile, greetings, verbal handshakes, focus, taking messages, closing the calls, general phone etiquettes.

Course Assessment Scheme

Students will be continuously assessed on the basis of presenting themselves in front their teachers and colleagues, class assessments, communication skills, behavior skills and mannerism.

For a course of 100 marks containing only theory Component:

Theory (40)				
Assignment(s)	Continuous Assessment	Mid Semester Examination Theory	Quiz(s), Presentation(s), Faculty Student Interaction	Total
5	5	15	15	40

MID

SEMESTER EVALUATION (40) - Theory (40 Marks)

END SEMESTER EXAMINATION (60)
Theory (60)

Course Reference:

www.slideshare.net

www.wikipedia.co.in

www.information.net



Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	<i>Knowl edge & Exper tise of Medic al radio- imagi ng techn ology</i>	<i>Lead ershi p and ment orshi p</i>	<i>Probl em solvi ng</i>	<i>Ethics and account ability</i>	<i>Comm unicati on & presen tation skills</i>	<i>Com mitm ent to profe ssion al excel lence</i>	<i>Resear ch</i>	<i>Lifelon g learnin g</i>	<i>Empl oyabi lity, Entre pren eursh ip</i>	<i>Organi zation al Behavi or</i>	<i>Ethical, Social and professi onal underst anding</i>
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3
CO3	3	3		1	3	3	1		3	3	3
CO4	3	3	3		3	3		2		3	

1= LOW 2= MEDIUM 3= HIGH



Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Explain indication, contraindication and reactions of contrast media. Demonstrate how to take in minimum numbers of exposures in each special investigation.	PO1, PO2, PO3, PO8, PO9 PO10, PO11
CO2	Demonstrate the positioning and technique of the special studies.	PO1, PO2, PO3, PO9 PO10, PO11
CO3	Explain the technique of all GIT study according to investigation.	PO1, PO2, PO3, PO6, PO7, PO8, PO9 PO10, PO11
CO4	Demonstrate surface anatomy. To be able to know the technique behind the radiography.	PO1, PO4, PO5, PO6, PO8, PO11

Relationship between the Course Outcomes (COs) and Program Outcomes (POs) / Program Specific Outcomes (PSOs)

Matrix 1- Mapping of COs with POs and PSOs


Matrix 1- Mapping of COs with POs and PSOs

Course Outcomes (COs)

Program Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	



 Sushant University <small>Erstwhile Ansal University Gurugram</small>	School of Health Sciences B.Sc. (Psychology)		
Course Title: SOCIAL PSYCHOLOGY			
Semester: I	Course code: BCP106	Credits: 03	Core
No of sessions Lectures / Tutorial: 3		No of practical hours:	
Course Pre-requisites:		Number of sessions: 30	

1. Course Introduction

Social Psychology is the study of social interaction and social influence. As such, it remains one of the most comprehensive and personally relevant areas within the field of psychology. This course has the following objectives.

1. Course Objectives

To expand your knowledge about social psychology and human behavior.

To foster respect for human diversity, particularly with regard to matters of gender, race and ethnicity. To enable students to (a) understand the forces that create group differences in patterns of social behavior, (b) understand and tolerate the behavior of other people, particularly that of members of the diverse array of groups and social categories to which they do not belong (c) recognize the limits in generalizing psychological research to all cultural/gender/ethnic/age groups, and (d) understand the dynamics of intergroup relationships, conflict, and cooperation.

1. Course Outcomes

CO: To develop an understanding of the characteristics of social psychology and contrast it with similar disciplines.

CO: To identify the importance of ethical issues involved in conducting social psychological research.

CO: To classify the process of social perception and the factors that influence it.



Pedagogy:

Lecture based but after completion of topic or module same will be explained with the help of videos.

1. Course contents**MODULE I: Introduction**

- Meaning, Nature and importance of Social Psychology, difference between social psychology and sociology.
- Scope and Development of Social Psychology
- Relationship of Social Psychology with other discipline

MODULE II: Social Perception and Cognition

- Perceiving ourselves: Self-Concept, Self-esteem and Self-Presentation, self awareness
- Perceiving others: Forming impressions and role of verbal and non-verbal cues
- Attribution: Understanding the causes of others' behavior
- Attribution Biases

MODULE III: Interpersonal Attraction

- Understanding attraction
- Concept and Meaning of interpersonal attraction
- Factors affecting interpersonal attraction,
- Theories of interpersonal attraction: Reinforcement Theory, Complementary Theory, Exchange Theory

MODULE IV: Prosocial Behaviour

- Meaning and Nature of pro-social behaviour
- Social exchange theory, Bystander effect
- Determinants of prosocial behavior

MODULE V: Relationships.

- Understanding relationships, need to relate, type of relationships.
- Attraction, love, Relationship and gender.

1. Course Assessment

Assessment Scheme:

	Mid Term Evaluation A+B+C				End term Evaluation D	
Evaluation Component	/Attendance Class Performance	Mid B Term	Assignment C	Total	End Term Examination	Total
weightage	10MM	15MM	15MM	40MM	60MM	100MM

1. Course References

A) Books

- Baran, R.A. & Byrne, D.: Social Psychology. Boston, MA: Pearson Allyn and Bacon.
- Myers, D. G.: Social Psychology (10th Ed). New York: McGraw Hill
- Feldman, R. S.: Social Psychology: Theories, Research and Application. New York: McGraw Hill
- Secord, P.F. & Backman, C. N.: Social Psychology. USA: McGraw-Hill

B) Online Resource.



- <https://www.coursera.org/learn/social-psychology>

MAPPING BETWEEN CO'S PO'S

	Course out comes CO's	MAPPED PROGRAM OUTCOMES
CO 1	To develop an understanding of the characteristics of social psychology and contrast it with similar disciplines.	PO-1,PO-3,PO-4,PO-6,PO-7,PO-10,PO-11,
CO 2	To identify the importance of ethical issues involved in conducting social psychological research.	PO-1,PO-3,PO-5,PO-7,PO-8,PO-9,PO10,PO-11,PO-12
CO3	To classify the process of social perception and the factors that influence it.	PO-2,PO-4,PO-5,PO-7,PO-6,PO-9,PO10,PO-11,PO-12


PO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	H	M	H	H	H	H	H	L	H	H	H	H
CO 2	H	H	H	H	H	H	M	H	M	H	H	L
CO3	H	L	H	M	M	H	L	H	M	H	H	H

H=HIGH.

M=MEDIUM.

L=LOW.



 Sushant University <i>soaring high</i>	School of Health Sciences		
	B. Optometry		
Course Title: Introduction to Quality And Patient Safety			
Semester: I	Course code: BOPT105	Credits:02	SEC
No of sessions Lectures / Tutorial: 20		No of practical hours: NIL	
Course Pre-requisites: None		Number of sessions: 20	

1.Course Introduction

As antibiotic resistant strains of bacteria are growing rapidly, making it difficult to cure such patients, the importance of sterilization and proper disposal is the only way to prevent it. Well known sayings, prevention is better than cure, the main objective of this course is to focus mainly on the preventive measures and quality assurance to the patients. This course emphasizes more on risk management principles and safe handling of disposals, basic emergency care and basic life support skills which can prove remedy in emergency cases.

2. Course Objectives: The main objective of this course is to teach students quality measures to provide patients with effective methods of treatment with more focus on proper handling of infected specimens and proper treatment with best sterilized and disinfected means to reduce the cross-infection scenario and nosocomial infections, which occurs due to poor handling of infected specimens and improper disposal means polluting the environment too. Students are made to learn basic concepts of quality in health care and develop skills to implement sustainable quality assurance program. Introducing students to basic emergency care, infection prevention & control with knowledge of biomedical waste management and antibiotic resistance.

3. Course Outcomes: Upon successful completion of the course, the students should be able to:



CO1: Examine quality improvement approaches, NABH, NABL, JCI guidelines which purely focuses on the quality measures and proper handling of disposals providing quality facility to patients.

CO2: Appraise basic life support skills which can save many lives in urgent cases and to have fundamentals of emergency management, disaster preparedness

CO3: Inspect proper disposal of biomedical waste, reducing the risk of infection to waste handling personnel and cross infection which can occur due to improper handling of infected waste polluting surroundings too.

CO4: Apply effective hand hygiene, prevention and control of common healthcare associated infections.

CO and PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1		L		M		L		M		L	H	L
CO2	L	H	L	M	L		L	L		L	H	M
CO3	M	L	M	L		M			L		H	M
CO4	M		L	H		L	M			H	L	L

4. Course Pedagogy

This course will use mixed technique of interactive lectures, digital learning methodologies, regular assignments and power point presentations. Students will be made to prepare project reports by interacting directly with laboratory personnel and visits to hospital to engage the students in strengthening their conceptual foundation and applying the knowledge gained to different day to day real world applications. This course will focus mainly on applying based methodologies, students will not be made limited to theory only, but hands on practices and analyzing every aspect of the module by themselves.

3. Course Contents and Duration (The class will meet for a period of 12 weeks approx.)

Course Contents

Module 1. Quality assurance and Management

Introduction, Quality improvement approaches, standards and norms, quality improvement tools, introduction to NABH guidelines.

Module 2. Basic of Emergency care and Life support skills



Basic life support (BLS) following cardiac arrest, recognition of sudden cardiac arrest and activation of emergency response system, early cardiopulmonary resuscitation (CPR) and rapid defibrillation with an automated external defibrillator (AED)

Module 3. Basic emergency care

First aid, choking, rescue breathing methods, ventilation including use of bag valve master (BVMs)

Module 4. Biomedical Waste Management

Definition, waste minimization, BMW-segregation (Including color coding), Liquid BMW, types of waste, BMW management and methods of disinfection, use of Personal protective equipment (PPE)

Module 5. Infection Prevention and Control

Sterilization, Disinfection, Effective hand hygiene, use of PPE, Prevention and control of common healthcare associated infections, Guidelines (NABH) and JCI for hospital infection control.

Module 6. Disaster preparedness and management

Fundamentals of emergency management

4. Course References

Texts, Materials, and Supplies:

6. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458
7. Required Readings:
8. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458
9. Recommended Readings:
10. Medical Dictionary

Course Assessment Scheme:


Mid-term Theory (40)					End Term (60)	Total
Mid Semester Examination (Theory)	Mid-term Practical Quiz/Roleplay/Presentation	Assignment	Continuous Assessment (Class tests & student interaction)	Total	Theory	
15	15	5	5	40	60	1

Online Resources:



1. disaster management set up in india - opcw.org
- 2.Natural disasters: hospital management | 2015-10-22 ahc
...www.reliasmedia.com/articles/136571-natural-disasters-hospital-management
- 3.Biomedical waste management in India: Critical appraisal - NCBI - NIH
- 4.Vital signs: Understanding what the body is telling us <https://www.coursera.org/learn/vital-signs/>
- 5.Patient Safety and Quality Improvement <https://www.coursera.org/learn/patient-safety>



 Sushant University <small>First with the Answer! University Gurugram</small>	School of Health Sciences B. Sc. Cardiovascular Technology		
Course Title: Medical Ethics and Legal Aspects			
Semester: II	Course code: BCVT204	Credits: 2	Core / Elective: Core
No. of lectures/ tutorials: 02/ Week		No. of practical hours: Nil	
Course Pre-requisites: None			

Course Objectives

Medical ethics has developed into a well-based discipline which acts as a "bridge" between theoretical bioethics and the bedside. The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice". Physicians are bound by, not just moral obligations, but also by laws and official regulations that form the legal framework to regulate medical practice. Hence, it is now a universal consensus that legal and ethical considerations are inherent and inseparable parts of good medical practice across the whole spectrum.

Course Outcomes

Upon successful completion of the course, the students should be able to:

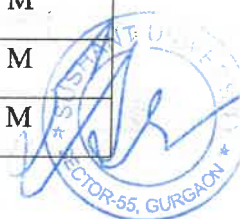
CO1: Classify, recognize, and further categories the ethical and legal principles applicable to health sciences and applied medicine.

CO2: Interpret the ethical-legislative intent and comparative best practices in India and across the world concerning health sciences.

CO3: Examine and further test the present Indian health law regime with the ethical and legal principles prevailing in the global context.

CO4: Develop and formulate a proposed bill integrating 1) ethics, 2) legal principles, 3) evolving best practices in health sciences.

PO KEYWORDS	Human cardiovascular system	Moral values	Cardiovascular disorder	Societal and legal issues	Modern tools and techniques	Lifelong learning and training	Management of CVD
CO1	H	M	M	M	H	L	M
CO2	H	L	M	H	H	M	M
CO3	H	H	M	H	H	L	M



CO4	H	H	L	L	H	M	H
	HIGH – H		MEDIUM- M		LOW – L		


Course Contents

1. Medical ethics - Definition - Goal - Scope
2. Introduction to Code of conduct
3. Basic principles of medical ethics – Confidentiality
4. Malpractice and negligence - Rational and irrational drug therapy
5. Autonomy and informed consent - Right of patients
6. Care of the terminally ill- Euthanasia
7. Organ transplantation
8. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects.
9. Professional Indemnity insurance policy
10. Development of standardized protocol to avoid near miss or sentinel events
11. Obtaining an informed consent.
12. Ethics in the profession of Medical Laboratory Science

Course References

1. Medical Law and Ethics by Bonnie F Fremgen
2. Medical Law and Ethics by Jonathan Herring
3. Medical Law and Ethics, Fifth edition, Bonnie F. Fremgen, Pearson, Copyright 2016
4. Student Handbook, The Pathfinder: <http://www.panola.edu/student-success/documents/pathfinder.pdf>
5. S. V. Jogarao - Current Issues in Criminal Justice and Medical Law
6. Goldsby RA, Kindt TJ, Osborne BA. (2007). Kuby's Immunology. 6th edition W.H. Freeman and Company, New York.



 Sushant University <small>Bestwhile Ansal University Gurugram</small>	School of Health Sciences		
	B. Sc. Cardiovascular Technology		
Course Title: Introduction to Quality and Patient Safety			
Semester: I	Course code: BCVT105	Credits: 3	Core / Elective: Core
No. of lectures/ tutorials: 3/Week		No. of practical hours: Nil	
Course Pre-requisites: None			

Course Introduction:

As the Indian government aims for Universal Health Coverage, the lack of skilled human resource may prove to be the biggest impediment in its path to achieve targeted goals. The benefits of having AHPs in the healthcare system are still unexplored in India. An enormous amount of evidence suggests that the benefits of AHPs range from improving access to healthcare services to significant reduction in the cost of care. The teaching of computer and information science aims to integrate their learning in sync with the understanding of the basic functions of the various setups of the computers and its software; this knowledge will help them gained confidence and give them an edge in their field.

Course Objectives

Students are made to learn basic concepts of quality in health care and develop skills to implement sustainable quality assurance program. Introducing students to basic emergency care, infection prevention & control with knowledge of biomedical waste management and antibiotic resistance.

Course Learning Outcomes:

Upon successful completion of the course, the students should be able to:

CO1: Understand the various hardware and software of the computer system,

CO2: Compare the differences between the various functions of the same (Analyze)

CO3: Learn to apply the knowledge of various fields of the course (Apply & Analyze)

CO4: Augment their learning by making various presentations and graphics (Synthesize, evaluate & create)

PO KEYWORDS	Human cardio vascular	Moral values	Cardi ovascu lar disord er	Societ al and legal	Modern tools and	Lifelo ng learni ng and	Mana gement of CVD
CO1	H	H	L	H	H	L	H
CO2	H	H	M	H	H	M	H



CO3	M	H	M	H	H	L	H
CO4	H	H	M	M	H	H	H

HIGH – H MEDIUM- M LOW – L

Course Pedagogy

The course pedagogy includes a comprehensive study including the various rules of quality management and patient safety. Various aspects about the use for same in health care setups are discussed in relevance to the topic taught so as to relieve the monotony of the subject. Regular doubt clearing sessions, written assignments, quiz, presentations are some of the measures for learning. Periodic and surprise tests are taken to apprise and evaluate the students.

Course Contents

Module 1: Quality assurance and Management

Introduction, Quality improvement approaches, standards and norms, quality improvement tools, introduction to NABH guidelines.

Module 2: Basic of Emergency care and Life support skills

Basic life support (BLS) following cardiac arrest, recognition of sudden cardiac arrest and activation of emergency response system, early cardiopulmonary resuscitation(CPR) and rapid defibrillation with an automated external defibrillator(AED)

Module 3: Basic emergency care

First aid, choking, rescue breathing methods, ventilation including use of bag valve master (BVMs)

Module 4: Biomedical Waste Management

Definition, waste minimization, BMW-segregation, collection, transportation, treatment and disposal (Including color coding), Liquid BMW, Radioactive waste, metals/chemicals/drug waste, BMW management and methods of disinfection, use of Personal protective equipment (PPE)

Module 5: Infection Prevention and Control

Sterilization, Disinfection, Effective hand hygiene, use of PPE, Prevention and control of common health care associated infections, Guidelines (NABH) and JCI for hospital infection control.

Module 6: Disaster preparedness and management

Fundamentals of emergency management

Practical (demonstration only)

1. Vital signs and primary assessment



2. Basic emergency care- first aid

Course References

1. The Essentials of Patient Safety by Charles Vincent
2. Laboratory Quality Control and Patient Safety by De Gruyter
3. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458

Required Readings:

1. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458


Recommended Readings:

1. Medical Dictionary

Others

1. Disaster management set up in india - opcw.org
2. www.opcw.org/sites/default/files/documents/event_photos/2010/tabletop_exercise_poland_nov2011..
3. Natural disasters: hospital management | 2015-10-22 | ahc ...
4. www.reliasmedia.com/articles/136571-natural-disasters-hospital-management
5. Biomedical waste management in India: Critical appraisal - NCBI - NIH
6. www.ncbi.nlm.nih.gov/pmc/articles/PMC5784295
7. Vital signs: Understanding what the body is telling us
8. <https://www.coursera.org/learn/vital-signs/>
9. Patient Safety and Quality Improvement
10. <https://www.coursera.org/learn/patient-safety>



	School of Health Sciences		
	B. Optometry		
Course Title: Medical Ethics and Legal Aspect			
Semester: II	Course code: BOPT203	Credits:02	SEC
No of sessions Lectures / Tutorial: 2		No of practical hours: NIL	
Course Pre-requisites: None		Number of sessions: 2	

5. Course Objectives

Legal and ethical considerations are firmly believed to be an integral part of medical practice in planning patient care. Advances in medical sciences, growing sophistication of the modern society's legal framework, increasing awareness of human rights and changing moral principles of the community at large, now result in frequent occurrences of healthcare professionals being caught in dilemmas over aspects arising from daily practice.

Medical ethics has developed into a well based discipline which acts as a "bridge" between theoretical bioethics and the bedside. The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice". Doctors are bound by, not just moral obligations, but also by laws and official regulations that form the legal framework to regulate medical practice. Hence, it is now a universal consensus that legal and ethical considerations are inherent and inseparable parts of good medical practice across the whole spectrum.

6. **Course Outcomes:** Upon successful completion of the course, the students should be able to:

CO1: To Find ethical considerations and practice which are needed in a clinical field

CO2: To create an overview about the legal aspects linked to health care practice.

CO3:Apply medico legal litigations and to motivate high standard of ethical and legal aspects in the clinical practice

CO and PO Mapping



	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	L	L		M		L	M	M		M	H	L
CO2		L		L	L	M		L	L		H	L
CO3	L		L	M	M	M		L	L	M		H

7. Course Pedagogy

This course follows a pedagogy of active involvement of students. After each theory lecture where a technique is explained by presentations: pictures, explanation, and videos, a practical session will take place where the students are guided through the technique themselves. We will have demonstrations followed by students interactions and procedures training.

8. Course Contents

1. Medical ethics - Definition - Goal - Scope
2. Introduction to Code of conduct
3. Basic principles of medical ethics – Confidentiality
4. Malpractice and negligence - Rational and irrational drug therapy
5. Autonomy and informed consent - Right of patients
6. Care of the terminally ill- Euthanasia
7. Organ transplantation
8. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects.
9. Professional Indemnity insurance policy
10. Development of standardized protocol to avoid near miss or sentinel events
11. Obtaining an informed consent.
12. Ethics in the profession of optometry
13. Obtaining informed consent
14. Ethics and Clinical Research
15. Legal Rights and Moral Rights




Course Assessment Scheme:

Mid-Term (40)					End Term (60)	Total
Mid Semester Examination (Theory)	Quiz /Presentation Quiz/Roleplay/Panel Discussion	Assignment	Continuous Assessment (Class tests & student interaction)	Total	Theory	
15	15	5	5	40	60	10

5. Course References

1. Medical Law and Ethics by Bonnie F Fremgen
2. Medical Law and Ethics by Jonathan Herring
3. Goldsby RA, Kindt TJ, Osborne BA. (2007). Kuby's Immunology. 6th edition W.H. Freeman and Company, New York



		Sushant School of Health Sciences BMRIT	
Course Title: Medical Ethics and Legal Aspects			
Semester: II	Course 23BMRIT2005	code:	Credits:02
		Core	
No of sessions Lectures / Tutorial: 10		No of practical hours:	
Course Prerequisites:		Number of sessions: 10	

Course Introduction:

Allied and healthcare professionals (AHPs) include individuals involved with the delivery of health or healthcare related services, with qualification and competence in therapeutic, diagnostic, curative, preventive and/or rehabilitative interventions.

They work in multidisciplinary health teams in varied healthcare settings including doctors, nurses and public health officials to promote, protect, treat and manage a person's physical, mental, social, emotional, environmental health and holistic well-being. The study of legal aspects and medical ethics helps them in putting into perspective the knowledge that they gain for better future

Course Objectives:

This course is designed to provide the students the basic knowledge in laws and ethics to follow as health professionals.

After completion of the course the students will be able to: Understand the various definitions

Course Learning Outcomes:

Upon successful completion of the course, the students should be able to:

CLO1: Understood the importance of the professional laws and ethics.

CLO2: Understood the legal aspects and medical ethics in health setups.

Course Pedagogy

The course pedagogy includes a comprehensive study including the study of general actions of the drugs. Various clinical aspects are discussed in relevance to the topic taught so as to relieve the monotony of the subject. Regular doubt clearing sessions, written assignments, quiz, presentations are some of the measures for learning. Periodic and surprise tests are taken to apprise and evaluate the students. The practical includes the study of drugs via presentations and viva voce.

Course Contents

Module 1

Role, Definition and Interaction with the patients and health care professionals, Ethical, Moral, and Legal Responsibilities, Patient safety and quality, restraint policies and role of health professionals.

Biomedical waste Management, medical records and reports.

Module 2



Medical terminology- The course employs a body systems-oriented, word-analysis approach to learning medical terminology.

Module 3

The goal of the class is to prepare students for the terminology they might encounter in their subsequent coursework, in their clinical rotations and ultimately in their roles as health care professionals.

Course Assessment Scheme

Students would be assessed continuously throughout the semester in the form of continuous evaluation. Periodic tests and surprise tests will be conducted. Students will have to submit written assignments, quiz for the topics. Practical will be conducted with viva. Midterm and end term evaluation will be done theoretically and practically. Students will also be assessed on the basis of presentations of various topics.

Assessment Criteria

For a course of 100 marks containing only theory Component:

MID SEMESTER EVALUATION (40) – Theory (40 Marks)

Theory (40)				
Assignment(s)	Continuous Assessment	Mid Semester Examination Theory	Quiz(s), Presentation(s), Faculty Student Interaction	Total
5	5	15	15	40

END SEMESTER EXAMINATION (60)

Theory (60)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	Knowledge & Expertise of Medical radio-imaging technology	Leadership and management	Problem solving	Ethics and accountability	Communication & presentation skills	Commitment to professional excellence	Research	Lifelong learning	Employability, Entrepreneurship	Organizational Behavior	Ethical, Social and professional understanding



COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3
CO3	3	3		1	3	3	1		3	3	3
CO4	3	3	3		3	3		2		3	

1= LOW 2= MEDIUM 3= HIGH

Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Explain indication, contraindication and reactions of contrast media. Demonstrate how to take in minimum numbers of exposures in each special investigation.	PO1, PO2, PO3, PO8, PO9 PO10, PO11
CO2	Demonstrate the positioning and technique of the special studies.	PO1, PO2, PO3, PO9 PO10, PO11
CO3	Explain the technique of all GIT study according to investigation.	PO1, PO2, PO3, PO6, PO7, PO8, PO9 PO10, PO11
CO4	Demonstrate surface anatomy. To be able to know the technique behind the radiography.	PO1, PO4, PO5, PO6, PO8, PO11

Relationship between the Course Outcomes (COs) and Program Outcomes (POs) / Program Specific Outcomes (PSOs)



Matrix 1- Mapping of COs with POs and PSOs

Matrix 1- Mapping of COs with POs and PSOs

Course Outcomes (COs)


Program Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M

Course Outcomes (COs)

Program Specific Outcomes (PSOs)

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M

	Sushant School of Health Sciences BMRIT		
Course Title: Quality control and patient safety			
Semester: IV	Course code: 23BMRIT4004	Credits:04	Core
No of sessions Lectures / Tutorial: 40		No of practical hours: 40	
Course Pre-requisites:		Number of sessions: 80	

Course Objectives

This course is designed to provide the students the basic knowledge in Radiography.

At the end of the course, the student should be able to:

- 1-Radiation protection
- 2-Biological effects of radiation
- 3-Planning of radiation installation-protection primary & secondary radiation
- 4-Personnel monitoring systems

Course learning Outcomes

CLO 1-Enumerate the guidelines of all respective organizations. Enumerate the risk and effects of the radiation.

CLO 2-Label Demonstrate how to use and care of all types of lead aprons

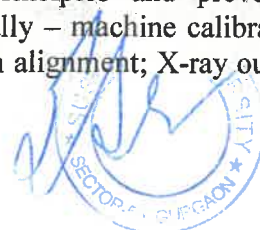
CLO 3-Demonstrate the handling and how to use TLD's and badges as per guidelines

CLO 4- Able to know about biological effects of radiation.

Course contents

MODULE 1 Objectives of quality Control: Improve the quality of imaging thereby increasing the diagnostic value; to reduce the radiation exposure; Reduction of film wastage and repeat examination; to maintain the various diagnostic and imaging units at their optimal performance. Quality assurance activities: Equipment selection phase; Equipment installation and acceptance phase; Operational phase; Preventive maintenance. Quality assurance programme at the radiological faculty level: Responsibility; Purchase; Specifications; Acceptance; Routine testing; Evaluation of results of routine testing; Quality assurance practical exercise in the X ray generator and tube; Image receptors from processing; Radiographic equipment; Fluoroscopic equipment; Mammographic equipment; Conventional tomography; Computed tomography; Film processing, manual and automatic; Consideration for storage of film and chemicals; Faults tracing; Accuracy of imaging- image distortion for digital imaging devices. LASER printer calibration

MODULE 2 Quality assurance programme tests: General principles and preventive maintenance for routine, daily, weekly, monthly, quarterly, annually – machine calibration. Basic concepts of quality assurance – LASER printer - Light beam alignment; X-ray out-put



and beam quality check; KVp check; Focal spot size and angle measurement; Timer check; mAs test; Grid alignment test; High and low contrast resolutions; Mechanical and electrical checks; Cassette leak check; Proper screen-film contact test; Safe light test; Radiation proof test; Field alignment test for fluoroscopic device; Resolution test; Phantom measurements - CT, US and MRI.

MODULE 3 Quality assurance of film and image recording devices: Sensitometry; Characteristic curve; Film latitude; Film contrast; Film speed Resolution; Distortion; Artifacts of films and image recording. Monitor calibration. SMPTE pattern 6. Maintenance and care of equipment: Safe operation of equipment; Routine cleaning of equipment and instruments; Cassette, screen maintenance; Maintenance of automatic processor and manual processing units; Routine maintenance of equipments; Record keeping and log book maintenance; Reject analysis and objectives of reject analysis programme. Care and maintenance of diagnostic equipment: General principles and preventive maintenance for routine - daily, Weekly, monthly, quarterly, annually: care in use, special care of mobile equipment.

MODULE 4 Radiation safety in diagnostic Radiology 1. Radiation Quantities and Units: Radiation- Radioactivity- Sources of radiation - natural radioactive sources -cosmic rays terrestrial radiation - - man made radiation sources. Units of radiation - Quality factor - Flux-Fluence-Kerma- Exposure- Absorbed dose- Equivalent Dose- Weighting Factors-Effective Dose - Occupational Exposure Limits - Dose limits to public.

MODULE 5 Biological Effects of radiation: Ionization, excitation and free radical formation, hydrolysis of water, action of radiation on cell-Chromosomal aberration and its application for the biological dosimetry- Effects of whole body and acute irradiation, dose fractionation, effects of ionizing radiation on each of major organ system including fetus -Somatic effects and hereditary effects- stochastic and deterministic effects-Acute exposure and chronic exposure-LD50 - factors affecting radio sensitivity. Biological effects of non-ionizing radiation like ultrasound, lasers, IR, UV and magnetic fields. Radiation detection and Measurements: Ionization of gases- Fluorescence and Phosphorescence -Effects on photographic emulsion. Ionization Chambers - proportional counters- G.M counters-scintillation detectors - liquid semiconductor detectors - Gamma ray spectrometer. Measuring systems - free air ionization chamber - thimble ion chamber - condenser chamber - Secondary standard dosimeters - film dosimeter - chemical dosimeter- Thermoluminescent Dosimeter. - Pocket dosimeter Radiation survey meter- wide range survey meter -zone monitor-contamination monitor their principle function and uses. Advantages & disadvantages of various detectors & its appropriateness of different detectors for different type of radiation measurement. Dose and Dosimetry, CT Dose Index (CTDI, etc.), Multiple Scan Average Dose (MSAD), Dose Length Product (DLP), Dose Profile, Effective Dose, Phantom Measurement Methods, Dose for Different Application Protocols, Technique Optimization. Dose area product in fluoroscopy and angiography systems, AGD in mammography. 4. Radiation protection: Radiation protection of self and patient- Principles of radiation protection, time - distance and shielding, shielding - calculation and radiation survey - ALARA- personnel dosimeters (TLD and film batches) occupational exposure.

MODULE 6 Radiation Hazard evaluation and control: Philosophy of Radiation protection, effects of time, Distance & Shielding. Calculation of Work load, weekly calculated dose to radiation worker & General public Good work practice in Diagnostic Radiology. Planning consideration for radiology, including Use factor, occupancy factors, and different shielding



material.

Course Assessment

For a course of 100 marks containing both theory and Lab Component:

MID SEMESTER EVALUATION (40) – Theory (25 Marks) + Lab (15 Marks)

Theory (25 Marks) + Lab (15 Marks)				
Mid Semester Examination Theory	Quiz(s), Presentation(s), Lab/practical performed & Lab report	Assignment(s)	Continuous Assessment	Total
15	15	5	5	40

END SEMESTER EXAMINATION (60)	
Theory (35)	Lab (25)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	Knowledge & Expertise of Medical radio-imaging technology	Leadership and mentorship	Problem solving	Ethics and accountability	Communication & presentation skills	Commitment to professional excellence	Research	Lifelong learning	Employability, Entrepreneurship	Organizational Behavior	Ethical, Social and professional understanding
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3
CO3	3	3		1	3	3	1		3	3	3




CO4	3	3	3		3	3		2		3	
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1= LOW 2= MEDIUM 3= HIGH

Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Explain indication, contraindication and reactions of contrast media. Demonstrate how to take in minimum numbers of exposures in each special investigation.	PO1, PO2, PO3, PO8, PO9 PO10, PO11
CO2	Demonstrate the positioning and technique of the special studies.	PO1, PO2, PO3, PO9 PO10, PO11
CO3	Explain the technique of all GIT study according to investigation.	PO1, PO2, PO3, PO6, PO7, PO8, PO9 PO10, PO11
CO4	Demonstrate surface anatomy. To be able to know the technique behind the radiography.	PO1, PO4, PO5, PO6, PO8, PO11



	Sushant School of Health Sciences BMRIT		
Course Title: Regulatory Requirements in Radio Imaging			
Semester: V	Course 23BMRIT5004	code: Credits:04	Core
No of sessions Lectures / Tutorial: 40		No of practical hours:	
Course Pre-requisites:		Number of sessions: 40	

COURSE OBJECTIVES-

AERB safety code and ethics

Patient Protection-Safe work practice in diagnostic radiology-

Radiation emergencies- situation handling.

Course learning outcomes-

CLO 1-Enumerate how to work as per the AERB safety guideline in clinical setup.

CLO 2-Demonstrate radiation protection and patient care

CLO 3-Enumerate radiation emergencies & radiation protection and patient care

CLO 4 Enumerate Quality Assurance (QA) Requirements.

Course contents

MODULE 1 Regulatory Bodies & regulatory Requirements: International Commission on Radiation Protection (ICRP) / National Regulatory body (AERB - Atomic Energy Regulatory Board) - Responsibilities, organization, Safety Standard, Codes and Guides, Responsibilities of licenses, registrants & employers and Enforcement of Regulatory requirements.

MODULE 2. Role of Radiographer in Planning, QA & Radiation Protection: Role of technologist in radiology department - Personnel and area monitoring., Setting up of a new X-Ray unit, staff requirement, AERB specifications for site planning and mandatory guidelines – Planning of X-ray rooms, dark rooms – Inspection of X-Ray installations - Registration of X-Ray equipment installation- Certification

MODULE 3 Evaluation of workload versus radiation factors – Occupational exposure and protection Tools/devices. ICRP, NRPB, NCRP and WHO guidelines for radiation protection, pregnancy and radiation protection. NABH guidelines, AERB guidelines, PNDT Act and guidelines



Assessment Scheme:

For a course of 100 marks containing both theory and Lab Component:

MID SEMESTER EVALUATION (40) – Theory (25 Marks) + Lab (15 Marks)

Theory (25 Marks) + Lab (15 Marks)				
Mid Semester Examination Theory	Quiz(s), Presentation(s), Lab/practical performed & Lab report	Assignment(s)	Continuous Assessment	Total
15	15	5	5	40

END SEMESTER EXAMINATION (60)	
Theory (35)	Lab (25)

Books Recommended-

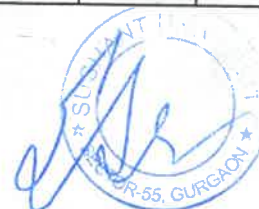
Text book of radiology for residents and technicians- s k bhargava

www.wikipedia.co.in // www.radiopedia.co.in

Guide lines of AERB

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Keywords	Knowledge & Expertise of Medical radio-imaging technology	Leadership and mentorship	Problem solving	Ethics and accountability	Communication & presentation skills	Commitment to professional excellence	Research	Lifelong learning	Employability, Entrepreneurship	Organizational Behavior	Ethical, Social and professional understanding
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3



C03	3	3		1	3	3	1		3	3	3
C04	3	3	3		3	3		2		3	

1= LOW 2= MEDIUM 3= HIGH

Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Explain indication, contraindication and reactions of contrast media. Demonstrate how to take in minimum numbers of exposures in each special investigation.	PO1, PO2, PO3, PO8, PO9 PO10, PO11
CO2	Demonstrate the positioning and technique of the special studies.	PO1, PO2, PO3, PO9 PO10, PO11
CO3	Explain the technique of all GIT study according to investigation.	PO1, PO2, PO3, PO6, PO7, PO8, PO9 PO10, PO11
CO4	Demonstrate surface anatomy. To be able to know the technique behind the radiography.	PO1, PO4, PO5, PO6, PO8, PO11

Relationship between the Course Outcomes (COs) and Program Outcomes (POs) / Program Specific Outcomes (PSOs)

Matrix 1- Mapping of COs with POs and PSOs

Matrix 1- Mapping of COs with POs and PSOs

Course Outcomes (COs)

Program Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M



Course Outcomes (COs)

Program Specific Outcomes (PSOs)

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M



Sushant University <i>soaring high</i>	School of Health Sciences		
	B. Optometry		
Course Title: Introduction to National Health Care Delivery System in India (Workshop)			
Semester: I	Course code: BOPT106	Credits:01	DSE
No of sessions Lectures / Tutorial: 10		No of practical hours: NIL	
Course Pre-requisites: None		Number of sessions: 10	

1. Course Objective:

The course provides the students a basic insight into the main features of Indian health care delivery system and how it compares with the other systems of the world. This course will acquaint students to the basics of epidemiology.

2. Course Outcomes:

CO1: Organize and promote health, prevent illness, detect and treat conditions.

CO2:Apply the concept of epidemiology and how it is relevant to optometry, as well as achieve an understanding of blindness prevention.

CO3:Analyze the prevalence of certain eye diseases on a global scale.

CO and PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1		H	M	M	H	H	H	H	H	H	M	
CO2	M	L			L	L	L			M		M
CO3	L	L	L	M		L		M	L	L	L	L

3. Pedagogy:

This course will include presentations, workshops and lectures with active involvement of students.



4. Course Contents:

Introduction to healthcare delivery system

- Healthcare delivery system in India at primary, secondary and tertiary care
- Community participation in healthcare delivery system
- Health system in developed countries.
- National Health Mission
- National Health Policy
- Issues in Health Care Delivery System in India

National Health Programme- Background objectives, action plan, targets, operations, achievements and constraints in various National Health Programme.

Introduction to AYUSH system of medicine

- Introduction to Ayurveda.
- Yoga and Naturopathy
- Unani
- Siddha
- Homeopathy
- Need for integration of various systems of medicine

Health scenario of India – past, present and future, Public health – India (epidemiology and demography)


Demography & Vital Statistics-

- Demography – its concept
- Vital events of life & its impact on demography
- Significance and recording of vital statistics
- Census & its impact on health policy

Epidemiology

- Principles of Epidemiology
- Natural History of disease
- Methods of Epidemiological studies
- Epidemiology of communicable & non-communicable diseases, disease transmission, host defense immunizing agents, cold chain, immunization, disease monitoring and surveillance.



 Sushant University <i>soaring high</i>	School of Health Sciences		
	B. Optometry		
Course Title: Public Health Community Optometry			
Semester: V	Course code: BOPT506	Credits: 03	Community Service
No of sessions Lectures / Tutorial: 3		No of practical hours: NIL	
Course Pre-requisites: None		No. of sessions: 3	

4. **Course Description:** Introduction to the foundation and basic sciences of public health optometry with an emphasis on the epidemiology of vision problems especially focused on Indian scenario.

5. **Course Objectives:** The purpose of this course is to:

1. Familiarize students with the basics of Public Health.
2. Develop an understanding on basic principles of Community Optometry & Ophthalmology.

6. **Course Outcomes:** At the end of the module students should be able to-

CO1:Apprise Community based eye care activities in India and globally and Understand Epidemiology of various eye diseases and their optometric management.

CO2: To **develop** Information Education Communication (IEC) materials on eye and vision care increasing awareness.

CO3: To **initiate** and actively participate in screening for various eye diseases in the community and to develop Eye health education programmes in the community

CO4:Develop sensitization towards public health perspective of eye diseases.

CO and PO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	M	L		L	L		L	L		H	L	L

CO2		M	L	M	L	L		L		H		H
CO3	L	M	L	L		M	M	M	L	H	M	H
CO4	L		M		L	M	L		M	H	M	L

7. Course Pedagogy:

The course will be taught in an interactive manner. The concepts shall be mostly shared through slides, screen sharing as required and further reinforced through individual or group activities such as student presentations, exercises, and case discussions, etc. Student case presentations. There will be video based teaching sessions (in between lectures, tutorial section) and Clinical case presentations (in practice)

8. Course Content:

The sessions time slots will be divided/adjusted according to the content of below mentioned topics-

31. Introduction to module and warm up session / student's suggestions
32. Public Health Optometry: Introduction, Concepts and Principles
33. Difference between Clinical and community optometry
34. Understanding Epidemiology principles of eye diseases
35. Levels of disease prevention and levels of health care delivery systems
36. Defining blindness and visual impairment- Magnitude and Burden
37. Role of an optometrist in Public Health
38. Eye in primary health care- Past, present and future challenges!
39. National Eye Care Programs around the world
40. National and International eye health agencies e.g.- IAPB, NPCB
41. Principles & practices of Screening for eye diseases
42. Organization and Management of Eye Care Programs – Principles of planning
43. Health manpower and Human resource development
44. School eye health programmes
45. Primary eye care for children
46. Global vision report- Challenge & opportunity
47. Assessment of eye care programs e.g. ECSAT and EHSA
48. Vitamin A deficiency eye disease- Role of Public health
49. Information, Education and Communication for Eye Care programs-
Trachoma SAFE STRATEGY



50. Introduction to principles of "Disability"
51. Impactful Power point presentations- soft skills in Public health
52. Quality in research- Publish or Perish
53. Ethics in Research
54. Basics of Tele-Medicine and AI in Public Health
55. Journal / Articles discussions
56. Students Presentations
57. Video presentations relevant to Public health optometry
58. Revision class/ Preparation slot
59. Internal assessment exam
60. Students Feedback session

Course Assessment Scheme:

Mid-Term (40)					End Term (60)	Total
Mid Semester Examination (Theory)	Quiz /Presentation Quiz/Roleplay/Panel Discussion	Assignment	Continuous Assessment (Class tests & student interaction)	Total	Theory	
15	15	5	5	40	60	100

9. Course References

TEXT BOOKS:

5. GVS Murthy, S K Gupta, D Bachani: The principles and practice of community Ophthalmology, National programme for control of blindness, New Delhi, 2002
6. Newcomb RD, Jolley JL : Public Health and Community Optometry, Charles C Thomas Publisher, Illinois, 1980
7. K Park: Park's Text Book of Preventive and Social Medicine, 19th edition,
8. Banarsidas Bhanot publishers, Jabalpur, 2007



BP 505 T. PHARMACEUTICAL JURISPRUDENCE (Theory)**45 Hours**

Sushant University <i>soaring high</i>	School of Health Sciences		
	Bachelor of Pharmacy		
Course Title: PHARMACEUTICAL JURISPRUDENCE			
Semester: V	Course code: BP 505 T	Credits: 4	Core / Elective: Core
No. of lectures/ tutorials: 4/week		No. of practical hours: 0/week	
Course Pre-requisites: None			

COURSE OUTCOMES (COs):

Upon completion of the course, the student shall be able to understand:

CO 01: The Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals.

CO 02: Various Indian pharmaceutical Acts and Laws

CO 03: The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals

CO 04: The code of ethics during the pharmaceutical practice

Mapping	PO 01	PO 02	PO 03	PO 04	PO 05	PO 06	PO 07	PO 08	PO 09	PO 10
CO 01	L	L	H	L	L	L	L	M	M	H
CO 02	L	L	H	M	L	L	M	L	L	H
CO 03	L	L	H	L	M	L	M	L	M	H
CO 04	L	L	H	L	M	L	M	L	L	H

Course Content:**UNIT-I**

Drugs and Cosmetics Act, 1940 and its rules 1945:



Objectives, Definitions, Legal definitions of schedules to the Act and Rules

Import of drugs – Classes of drugs and cosmetics prohibited from import, Import under license or permit. Offences and penalties.

Manufacture of drugs – Prohibition of manufacture and sale of certain drugs,

Conditions for grant of license and conditions of license for manufacture of drugs, Manufacture of drugs for test, examination and analysis, manufacture of new drug, loan license and repacking license.

UNIT-II

10Hours

Drugs and Cosmetics Act, 1940 and its rules 1945.

Detailed study of Schedule G, H, M, N, P,T,U, V, X, Y, Part XII B, Sch F & DMR (OA)

Sale of Drugs – Wholesale, Retail sale and Restricted license. Offences and penalties

Labeling & Packing of drugs- General labeling requirements and specimen labels for drugs and cosmetics, List of permitted colors. Offences and penalties.

Administration of the Act and Rules – Drugs Technical Advisory Board, Central drugs Laboratory, Drugs Consultative Committee, Government drug analysts, Licensing authorities, controlling authorities, Drugs Inspectors

UNIT-III

10Hours

- **Pharmacy Act –1948:** Objectives, Definitions, Pharmacy Council of India; its constitution and functions, Education Regulations, State and Joint state pharmacy councils; constitution and functions, Registration of Pharmacists, Offences and



Penalties

- **Medicinal and Toilet Preparation Act –1955:** Objectives, Definitions, Licensing, Manufacture In bond and Outside bond, Export of alcoholic preparations, Manufacture of Ayurvedic, Homeopathic, Patent & Proprietary Preparations. Offences and Penalties.
- **Narcotic Drugs and Psychotropic substances Act-1985 and Rules:** Objectives, Definitions, Authorities and Officers, Constitution and Functions of narcotic & Psychotropic Consultative Committee, National Fund for Controlling the Drug Abuse, Prohibition, Control and Regulation, opium poppy cultivation and production of poppy straw, manufacture, sale and export of opium, Offences and Penalties

UNIT-IV

08Hours

- **Study of Salient Features of Drugs and Magic Remedies Act and its rules:** Objectives, Definitions, Prohibition of certain advertisements, Classes of Exempted advertisements, Offences and Penalties
- **Prevention of Cruelty to animals Act-1960:** Objectives, Definitions; Institutional Animal Ethics Committee, CPCSEA guidelines for Breeding and Stocking of Animals, Performance of Experiments, Transfer and acquisition of animals for experiment, Records, Power to suspend or revoke registration, Offences and Penalties
- **National Pharmaceutical Pricing Authority:** Drugs Price Control Order (DPCO)-2013. Objectives, Definitions, Sale prices of bulk drugs, Retail price of formulations, Retail price and ceiling price of scheduled formulations, National List of Essential Medicines (NLEM)

UNIT-V

07Hours

- **Pharmaceutical Legislations** – A brief review, Introduction, Study of drugs enquiry committee, Health survey and development committee, Hathi committee and Mudaliar committee
- **Code of Pharmaceutical ethics** Definition, Pharmacist in relation to his job, trade, medical profession and his profession, Pharmacist's oath
- **Medical Termination of Pregnancy Act**
- **Right to Information Act**
- **Introduction to Intellectual Property Rights (IPR)**

Recommended books: (Latest Edition)

1. Forensic Pharmacy by B.Suresh




2. Text book of Forensic Pharmacy by B.M.Mithal
3. Hand book of drug law-by M.L.Mehra
4. A text book of Forensic Pharmacy by N.K.Jain
5. Drugs and Cosmetics Act/Rules by Govt. of India publications.
6. Medicinal and Toilet preparations act 1955 by Govt. of India publications.
7. Narcotic drugs and psychotropic substances act by Govt. of India publications
8. Drugs and Magic Remedies act by Govt. of India publication
9. Bare Acts of the said laws published by Government. Reference books(Theory)



Recommended Books (Latest edition):

1. Y.K. Sing, Environmental Science, New Age International Pvt, Publishers, Bangalore
2. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
3. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India,
4. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
5. Clark R.S., Marine Pollution, Clarendon Press Oxford
6. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196p
7. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
8. Down of Earth, Centre for Science and Environment



		Sushant School of Health Sciences BMRIT	
Course Title: Quality assurance & radiation safety (AERB guide line) in diagnostic radiology-II			
Semester: VI	Course BMRIT6001	code:	Credits:06
		Core	
No of sessions Lectures / Tutorial: 40		No of practical hours: 40	
Course Pre-requisites:		Number of sessions: 80	

COURSE OBJECTIVES-

AERB safety code and ethics

Patient protection-Safe work practice in diagnostic radiology-

Radiation emergencies- situation handling.

Course learning outcomes-

CLO 1-Enumerate how to work as per the AERB safety guideline in clinical setup.

CLO 2-Demonstrate radiation protection and patient care

CLO 3-Enumerate radiation emergencies & radiation protection and patient care

Course contents

MODULE 1 Quality Assurance and quality control of Modern Radiological and Imaging Equipment which includes Digital Radiography, Computed Radiography, CT scan, MRI Scan, Ultrasonography and PACS related.

MODULE 2 Image artifacts their different types, causes and remedies, Newer Radiation safety protocols and recent advances in radiation safety including AERB guidelines

MODULE-3 National & international agencies, AERB, BARC, ICRP, WHO, IAEA and their role.

MODULE- 4 AERB safety code and ethics: Built in safety specifications for diagnostic x-ray, fluoroscopy and CT units, Specifications for radiation protection devices-room layout. Operational safety-Radiation protection programme- Personnel requirements and responsibilities-regulatory controls.

MODULE-5 Radiation emergencies- situation handling, safety and prevention-legal requirements recent developments in radiation safety related topics.

Assessment Scheme:



For a course of 100 marks containing both theory and Lab Component:

MID SEMESTER EVALUATION (40) – Theory (25 Marks) + Lab (15 Marks)

Theory (25 Marks) + Lab (15 Marks)				
Mid Semester Examination Theory	Quiz(s), Presentation(s), Lab/practical performed & Lab report	Assignment(s)	Continuous Assessment	Total
15	15	5	5	40

END SEMESTER EXAMINATION (60)

Theory (35)	Lab (25)
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Books Recommended-

Text book of radiology for residents and technicians- s k bhargava

www.wikipedia.co.in // www.radiopedia.co.in

Guide lines of AERB

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	<i>Knowledge & Expertise of Medical radio-imaging technology</i>	<i>Leadership and mentorship</i>	<i>Problem solving</i>	<i>Ethics and accountability</i>	<i>Communication & presentation skills</i>	<i>Commitment to professional excellence</i>	<i>Research</i>	<i>Lifelong learning</i>	<i>Employability, Entrepreneurship</i>	<i>Organizational Behavior</i>	<i>Ethical, Social and professional understanding</i>
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3
CO3	3	3		1	3	3	1		3	3	3

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 OR-55, GURGAON

Sushant University <i>soaring high</i>	School of Health Sciences B.Sc. MLT		
	<i>Course Title: Medical ethics and Legal aspects</i>		
Semester: II	Coursecode:BMLT203	Credits: 2	Core
No of sessions Lectures / Tutorial: 20		No of practical hours: None	

Course Introduction

Medical ethics has developed into a well-based discipline which acts as a "bridge" between theoretical bioethics and the bedside. The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice". Physicians are bound by, not just moral obligations, but also by laws and official regulations that form the legal framework to regulate medical practice. Hence, it is now a universal

consensus that legal and ethical considerations are inherent and inseparable parts of good medical practice across the whole spectrum.

Employability-level: Foundation core

37. Foundation Core	38. Foundation Skill	39. Professional Core	40. Professional Skill	41. Premier Skill
✓				

Course Objectives

To understand the present ethic and legal regime governing health sciences.

To apply the jurisprudential principles within Indian framework and identify the evolving gaps in medical ethics and law.

1. To analyze and evaluate the need for integrating principles of medical ethics with the prevailing legal regime through bottom up approach.
2. To evaluate the need for creating a new legal regime integrating the medical ethics with health science laws and public policy.

Course Outcomes

Upon successful completion of the course, the students should be able to:

CO1: Classify, recognize, and further categories the ethical and legal principles



applicable to health sciences and applied medicine.

CO2: Interpret the ethical-legislative intent and comparative best practices in India and across the world concerning health sciences.

CO3: Examine and further test the present Indian health law regime with the ethical and legal principles prevailing in the global context

CO4: Develop and formulate a proposed bill integrating 1) ethics, 2) legal principles, 3) evolving best practices in health sciences.

Course Pedagogy

Following pedagogical approaches will be adopted:

- Interaction sessions and clinical learning (beyond classroom): to support the development of theoretical and practical construct.
- Case study Method: better understanding of the case structure and interpretation of law and procedure.

Group Discussions on the contemporary issues revolving the new concepts as per the prevailing regime

Course Contents

1. Medical ethics - Definition - Goal - Scope
2. Introduction to Code of conduct
3. Basic principles of medical ethics – Confidentiality
4. Malpractice and negligence - Rational and irrational drug therapy
5. Autonomy and informed consent - Right of patients
6. Care of the terminally ill- Euthanasia
7. Organ transplantation
8. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects.
9. Professional Indemnity insurance policy
10. Development of standardized protocol to avoid near miss or sentinel events



11. Obtaining an informed consent.
12. Ethics in the profession of Medical Laboratory Science

For a course of 100 marks containing only theory component

MID SEMESTER EVALUATION (40) – Theory (40)

Theory (40)				
Mid Semester Examination (Theory)	Quiz/Roleplay/Presentation	Assignment	Continuous Assessment (Class tests & student interaction)	Total
15	15	5	5	40

END SEMESTER EXAMINATION (60)

Theory (60)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	Knowledge & Expertise of Medical Laboratory technology	Leadership and mentorship	Problem solving	Ethics and accountability	Communication & presentation skills	Commitment to professional excellence	Research	Lifelong learning	Employability, Entrepreneurship	Organizational Behavior	Ethical, Social and professional understanding
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	1	3	1	3	1	3	2	3	2
CO2	3	1	1	3		3		3	1	3	3
CO3	3	3	3	2	1		2	3	2	2	3
CO4	3	3	3	3		3	1	3	2	1	3



Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Classify, recognize, and further categories the ethical and legal principles applicable to health sciences and applied medicine.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11
CO2	Interpret the ethical-legislative intent and	PO1, PO2, PO3, PO4, PO6, PO8, PO9, PO10, PO11

Course References

1. Medical Law and Ethics by Bonnie F Fremgen
2. Medical Law and Ethics by Jonathan Herring
3. Medical Law and Ethics, Fifth edition, Bonnie F. Fremgen, Pearson, Copyright 2016
4. S. V. Jogarao- Current Issues in Criminal Justice and Medical Law



Sushant University <i>soaring high</i>	School of Health Sciences B.Sc. MLT		
	Course Title: <i>Introduction to Quality and Patient Safety</i>		
Semester: I	Coursecode:BMLT105	Credits: 3	Core
No of sessions Lectures / Tutorial: 30		No of practical hours: None	
Course Pre-requisites: None		Number of sessions: 30	

1. Course Introduction

As antibiotic resistant strains of bacteria are growing rapidly, making it difficult to cure such patients, the importance of sterilization and proper disposals is only way to prevent it. Well known sayings, prevention is better than cure, the main objective of this course is to focus mainly on the preventive measures and quality assurance to the patients. This course emphasizes more on risk management principles and safe handling of disposals, basic emergency care and basic life support skills which can prove remedy in emergency cases.

Employability-level: Foundation core

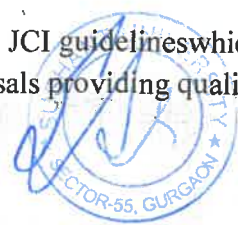
22. Foundation Core	23. Foundation Skill	24. Professional Core	25. Professional Skill	26. Premier Skill
✓				

1. **Course Objectives:** The main objective of this course is to teach students quality measures to provide patients with effective methods of treatment with more focus on proper handling of infected specimens and proper treatment with best sterilized and disinfected means to reduce the cross-infection scenario and nosocomial infections, which occurs due to poor handling of infected specimens and improper disposal means polluting environment too. Students are made to learn basic concepts of quality in health care and develop skills to implement sustainable quality assurance program. Introducing students to basic emergency care, infection prevention & control with knowledge of biomedical waste management and antibiotic resistance.

2. Course Outcomes

Upon successful completion of the course, the students should be able to:

C01: Understand quality improvement approaches, NABH, NABL, JCI guidelines which purely focuses on the quality measures and proper handling of disposals providing quality facility to patients.



C02: Understand basic life support skills which can save many lives in urgent cases.

C03: Understand proper disposals of biomedical waste, reducing risk of infection to waste handling personnel and cross infection which can occur due to improper handling of infected waste polluting surroundings too.

C04: Understand effective hand hygiene, prevention and control of common healthcare associated infections.

C05: Understand fundamentals of emergency management, disaster preparedness.

3. Course Pedagogy

This course will use mixed technique of interactive lectures, digital learning methodologies, regular assignments and power point presentations. Students will be made to prepare project reports by interacting directly with laboratory personnel and visits to hospital to engage the students in strengthening their conceptual foundation and applying the knowledge gained to different day to day real world applications. This course will focus mainly on applying based methodologies, students will not be made limited to theory only, but hands on practices and analyzing every aspect of the module by themselves.

Course Contents

Module 1. Quality assurance and Management

Introduction, Quality improvement approaches, standards and norms, quality improvement tools, introduction to NABH guidelines.

Module 2. Basic of Emergency care and Life support skills

Basic life support (BLS) following cardiac arrest, recognition of sudden cardiac arrest and activation of emergency response system, early cardiopulmonary resuscitation (CPR) and rapid defibrillation with an automated external defibrillator (AED)

Module 3. Basic emergency care

First aid, choking, rescue breathing methods, ventilation including use of bag valve master (BVMs)

Module 4. Biomedical Waste Management

Definition, waste minimization, BMW-segregation, collection, transportation, treatment and disposal (Including color coding), Liquid BMW, Radioactive waste, metals/chemicals/drug waste, BMW management and methods of disinfection, use of Personal protective equipment (PPE)



Module 5. Infection Prevention and Control

Sterilization, Disinfection, Effective hand hygiene, use of PPE, Prevention and control of common health care associated infections, Guidelines (NABH) and JCI for hospital infection control.

Module 6. Antibiotic Resistance

History of antibiotics, how resistance happens and spreads, Types of resistance- intrinsic, acquired, passive, Trends in drug resistance, Actions to fight resistance, Bacterial persistence, Antibiotic sensitivity, Consequences of antibiotic resistance, Antimicrobial Stewardship – Barriers and opportunities, tools and models in hospitals

Module 7. Disaster preparedness and management

Fundamentals of emergency management, Psychological impact management, Resource management, Preparedness and risk reduction, Key response functions (including public health, logistics and governance, recovery, rehabilitation and reconstruction), information management, incident command and institutional mechanisms

For a course of 100 marks containing only theory Component:


MID SEMESTER EVALUATION (40) – Theory (40 Marks)

Theory (40)					
Mid Semester Examination (Theory)	15	Quiz /Presentation Quiz/Roleplay/Panel Discussion	15	Assignment	5
				Continuous Assessment (Class tests & student interaction)	5
					Total 40

END SEMESTER EXAMINATION (60)

Theory (60)



	School of Health Sciences		
	B. Optometry		
Course Title: Medical Ethics and Legal Aspect			
Semester: II	Course code: BOPT203	Credits:02	SEC
No of sessions Lectures / Tutorial: 2		No of practical hours: NIL	
Course Pre-requisites: None		Number of sessions: 2	

1. Course Objectives

Legal and ethical considerations are firmly believed to be an integral part of medical practice in planning patient care. Advances in medical sciences, growing sophistication of the modern society's legal framework, increasing awareness of human rights and changing moral principles of the community at large, now result in frequent occurrences of healthcare professionals being caught in dilemmas over aspects arising from daily practice.

Medical ethics has developed into a well based discipline which acts as a "bridge" between theoretical bioethics and the bedside. The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice". Doctors are bound by, not just moral obligations, but also by laws and official regulations that form the legal framework to regulate medical practice. Hence, it is now a universal consensus that legal and ethical considerations are inherent and inseparable parts of good medical practice across the whole spectrum.

2. Course Outcomes: Upon successful completion of the course, the students should be able to:

CO1: To Find ethical considerations and practice which are needed in a clinical field

CO2: To create an overview about the legal aspects linked to health care practice.

CO3:Apply medico legal litigations and to motivate high standard of ethical and legal aspects in the clinical practice



CO and PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	L	L		M		L	M	M		M	H	L
CO2		L		L	L	M		L	L		H	L
CO3	L		L	M	M	M		L	L	M		H

3. Course Pedagogy

This course follows a pedagogy of active involvement of students. After each theory lecture where a technique is explained by presentations: pictures, explanation, and videos, a practical session will take place where the students are guided through the technique themselves. We will have demonstrations followed by students interactions and procedures training.

4. Course Contents

1. Medical ethics - Definition - Goal - Scope
2. Introduction to Code of conduct
3. Basic principles of medical ethics – Confidentiality
4. Malpractice and negligence - Rational and irrational drug therapy
5. Autonomy and informed consent - Right of patients
6. Care of the terminally ill- Euthanasia
7. Organ transplantation
8. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects.
9. Professional Indemnity insurance policy
10. Development of standardized protocol to avoid near miss or sentinel events
11. Obtaining an informed consent.
12. Ethics in the profession of optometry
13. Obtaining informed consent
14. Ethics and Clinical Research



15. Legal Rights and Moral Rights


Course Assessment Scheme:

Mid-Term (40)					End Term (60)	Total
Mid Semester Examination (Theory)	Quiz /Presentation Quiz/Roleplay/Panel Discussion	Assignment	Continuous Assessment (Class tests & student interaction)	Total	Theory	
15	15	5	5	40	60	100

5. Course References

1. Medical Law and Ethics by Bonnie F Fremgen
2. Medical Law and Ethics by Jonathan Herring
3. Goldsby RA, Kindt TJ, Osborne BA. (2007). Kuby's Immunology. 6th edition W.H. Freeman and Company, New York



		Sushant School of Health Sciences BMRIT		
Course Title: Quality assurance & radiation safety (AERB guide line) in diagnostic radiology-II				
Semester: VI	Course BMRIT6001	code:	Credits:06	Core
No of sessions Lectures / Tutorial: 40			No of practical hours: 40	
Course Pre-requisites:			Number of sessions: 80	

COURSE OBJECTIVES-

AERB safety code and ethics

Patient protection-Safe work practice in diagnostic radiology-

Radiation emergencies- situation handling.

Course learning outcomes-

CLO 1-Enumerate how to work as per the AERB safety guideline in clinical setup.

CLO 2-Demonstrate radiation protection and patient care

CLO 3-Enumerate radiation emergencies & radiation protection and patient care

Course contents

MODULE 1 Quality Assurance and quality control of Modern Radiological and Imaging Equipment which includes Digital Radiography, Computed Radiography, CT scan, MRI Scan, Ultrasonography and PACS related.

MODULE 2 Image artifacts their different types, causes and remedies, Newer Radiation safety protocols and recent advances in radiation safety including AERB guidelines

MODULE-3 National & international agencies, AERB, BARC, ICRP, WHO, IAEA and their role.

MODULE- 4 AERB safety code and ethics: Built in safety specifications for diagnostic x-ray, fluoroscopy and CT units, Specifications for radiation protection devices-room layout. Operational safety-Radiation protection programme- Personnel requirements and responsibilities-regulatory controls.

MODULE-5 Radiation emergencies- situation handling, safety and prevention-legal requirements recent developments in radiation safety related topics.

Assessment Scheme:



For a course of 100 marks containing both theory and Lab Component:
MID SEMESTER EVALUATION (40) – Theory (25 Marks) + Lab (15 Marks)

Theory (25 Marks) + Lab (15 Marks)				
Mid Semester Examination Theory	Quiz(s), Presentation(s), Lab/practical performed & Lab report	Assignment(s)	Continuous Assessment	Total
15	15	5	5	40

END SEMESTER EXAMINATION (60)	
Theory (35)	Lab (25)



Books Recommended-

Text book of radiology for residents and technicians- s k bhargava

www.wikipedia.co.in // www.radiopedia.co.in


Guide lines of AERB

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	<i>Know ledge & Expe rise of Medic al radio- imagi ng techn ology</i>	<i>Lead ershi p and ment orshi p</i>	<i>Prob lem solvi ng</i>	<i>Ethics and account ability</i>	<i>Comm unicati on & presen tation skills</i>	<i>Com mitm ent to profe ssion al excel lence</i>	<i>Resear ch</i>	<i>Lifelon g learn ing</i>	<i>Empl oyabi lity, Entre pren eursh ip</i>	<i>Organ ization al Behavi or</i>	<i>Ethical, Social and professi onal understa nding</i>
COURSE OUTCOME S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3
CO3	3	3		1	3	3	1		3	3	3
CO4	3	3	3		3	3		2		3	

1= LOW 2= MEDIUM 3= HIGH



 Sushant University <small>Erstwhile Ansal University Gurugram</small>	School of Health Sciences B.Sc. (Psychology)		
	Course Title: SOCIAL PSYCHOLOGY		
Semester: I	Course code: BCP106	Credits: 03	Core
No of sessions Lectures / Tutorial: 3		No of practical hours:	
Course Pre-requisites:		Number of sessions: 30	

1. Course Introduction

Social Psychology is the study of social interaction and social influence. As such, it remains one of the most comprehensive and personally relevant areas within the field of psychology. This course has the following objectives.

2. Course Objectives

To expand your knowledge about social psychology and human behavior.

To foster respect for human diversity, particularly with regard to matters of gender, race and ethnicity. To enable students to (a) understand the forces that create group differences in patterns of social behavior, (b) understand and tolerate the behavior of other people, particularly that of members of the diverse array of groups and social categories to which they do not belong (c) recognize the limits in generalizing psychological research to all cultural/gender/ethnic/age groups, and (d) understand the dynamics of intergroup relationships, conflict, and cooperation.

3. Course Outcomes

CO: To develop an understanding of the characteristics of social psychology and contrast it with similar disciplines.

CO: To identify the importance of ethical issues involved in conducting social psychological research.

CO: To classify the process of social perception and the factors that influence it.



Pedagogy:

Lecture based but after completion of topic or module same will be explained with the help of videos.

4. Course contents**MODULE I: Introduction**

- Meaning, Nature and importance of Social Psychology, difference between social psychology and sociology.
- Scope and Development of Social Psychology
- Relationship of Social Psychology with other discipline

MODULE II: Social Perception and Cognition

- Perceiving ourselves: Self-Concept, Self-esteem and Self-Presentation, self awareness
- Perceiving others: Forming impressions and role of verbal and non-verbal cues
- Attribution: Understanding the causes of others' behavior
- Attribution Biases

MODULE III: Interpersonal Attraction

- Understanding attraction
- Concept and Meaning of interpersonal attraction
- Factors affecting interpersonal attraction,
- Theories of interpersonal attraction: Reinforcement Theory, Complementary Theory, Exchange Theory

MODULE IV: Prosocial Behaviour

- Meaning and Nature of pro-social behaviour
- Social exchange theory, Bystander effect

- Determinants of prosocial behavior

MODULE V: Relationships.

- Understanding relationships, need to relate, type of relationships.
- Attraction, love, Relationship and gender.

5. Course Assessment

Assessment Scheme:

	Mid Term Evaluation A+B+C				End term Evaluation D	
Evaluation Component	/Attendance Class Performance	Mid B Term	Assignment C	Total	End Term Examination	Total
weightage	10MM	15MM	15MM	40MM	60MM	100MM

6. Course References

A) Books

- Baran, R.A. & Byrne, D.: Social Psychology. Boston, MA: Pearson Allyn and Bacon.
- Myers, D. G.: Social Psychology (10th Ed). New York: McGraw Hill
- Feldman, R. S.: Social Psychology: Theories, Research and Application. New York: McGraw Hill
- Secord, P.F. & Backman, C. N.: Social Psychology. USA: McGraw-Hill

B) Online Resource.

- <https://www.coursera.org/learn/social-psychology>



MAPPING BETWEEN CO'S PO'S

	Course out comes CO's	MAPPED PROGRAM OUTCOMES
CO 1	To develop an understanding of the characteristics of social psychology and contrast it with similar disciplines.	PO-1,PO-3,PO-4,PO-6,PO-7,PO-10,PO-11,
CO 2	To identify the importance of ethical issues involved in conducting social psychological research.	PO-1,PO-3,PO-5,PO-7,PO-8,PO-9,PO10,PO-11,PO-12
CO3	To classify the process of social perception and the factors that influence it.	PO-2,PO-4,PO-5,PO-7,PO-6,PO-9,PO10,PO-11,PO-12

PO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	H	M	H	H	H	H	H	L	H	H	H	H
CO 2	H	H	H	H	H	H	M	H	M	H	H	L
CO3	H	L	H	M	M	H	L	H	M	H	H	H

H=HIGH.

M=MEDIUM.

L=LOW.



Sushant University <i>soaring high</i>	School of Health Sciences		
	B. Optometry		
Course Title: Introduction to Quality And Patient Safety			
Semester: I	Course code: BOPT105	Credits:02	SEC
No of sessions Lectures / Tutorial: 20		No of practical hours: NIL	
Course Pre-requisites: None		Number of sessions: 20	

1.Course Introduction

As antibiotic resistant strains of bacteria are growing rapidly, making it difficult to cure such patients, the importance of sterilization and proper disposal is the only way to prevent it. Well known sayings, prevention is better than cure, the main objective of this course is to focus mainly on the preventive measures and quality assurance to the patients. This course emphasizes more on risk management principles and safe handling of disposals, basic emergency care and basic life support skills which can prove remedy in emergency cases.

2. Course Objectives: The main objective of this course is to teach students quality measures to provide patients with effective methods of treatment with more focus on proper handling of infected specimens and proper treatment with best sterilized and disinfected means to reduce the cross-infection scenario and nosocomial infections, which occurs due to poor handling of infected specimens and improper disposal means polluting the environment too. Students are made to learn basic concepts of quality in health care and develop skills to implement sustainable quality assurance program. Introducing students to basic emergency care, infection prevention & control with knowledge of biomedical waste management and antibiotic resistance.

3. Course Outcomes: Upon successful completion of the course, the students should be able to:



CO1: Examine quality improvement approaches, NABH, NABL, JCI guidelines which purely focuses on the quality measures and proper handling of disposals providing quality facility to patients.

CO2: Appraise basic life support skills which can save many lives in urgent cases and to have fundamentals of emergency management, disaster preparedness

CO3: Inspect proper disposal of biomedical waste, reducing the risk of infection to waste handling personnel and cross infection which can occur due to improper handling of infected waste polluting surroundings too.

CO4: Apply effective hand hygiene, prevention and control of common healthcare associated infections.

CO and PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1		L		M		L		M		L	H	L
CO2	L	H	L	M	L		L	L		L	H	M
CO3	M	L	M	L		M			L		H	M
CO4	M		L	H		L	M			H	L	L

4. Course Pedagogy

This course will use mixed technique of interactive lectures, digital learning methodologies, regular assignments and power point presentations. Students will be made to prepare project reports by interacting directly with laboratory personnel and visits to hospital to engage the students in strengthening their conceptual foundation and applying the knowledge gained to different day to day real world applications. This course will focus mainly on applying based methodologies, students will not be made limited to theory only, but hands on practices and analyzing every aspect of the module by themselves.

1. Course Contents and Duration (The class will meet for a period of 12 weeks approx.)

Course Contents

Module 1. Quality assurance and Management

Introduction, Quality improvement approaches, standards and norms, quality improvement tools, introduction to NABH guidelines.

Module 2. Basic of Emergency care and Life support skills



Basic life support (BLS) following cardiac arrest, recognition of sudden cardiac arrest and activation of emergency response system, early cardiopulmonary resuscitation (CPR) and rapid defibrillation with an automated external defibrillator (AED)

Module 3. Basic emergency care

First aid, choking, rescue breathing methods, ventilation including use of bag valve master (BVMs)

Module 4. Biomedical Waste Management

Definition, waste minimization, BMW-segregation (Including color coding), Liquid BMW, types of waste, BMW management and methods of disinfection, use of Personal protective equipment (PPE)

Module 5. Infection Prevention and Control

Sterilization, Disinfection, Effective hand hygiene, use of PPE, Prevention and control of common healthcare associated infections, Guidelines (NABH) and JCI for hospital infection control.

Module 6. Disaster preparedness and management

Fundamentals of emergency management

2. Course References

Texts, Materials, and Supplies:

1. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458
2. Required Readings:
3. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458
4. Recommended Readings:
5. Medical Dictionary

Course Assessment Scheme:


Mid Semester Examination (Theory)	Mid-term Theory (40)				End Term (60)	Total
	Mid-term Practical Quiz/Roleplay/Presentation	Assignment	Continuous Assessment (Class tests & student interaction)	Total	Theory	
15	15	5	5	40	60	1

Online Resources:



1. disaster management set up in india - opcw.org
2. Natural disasters: hospital management | 2015-10-22 ahc
...www.reliasmedia.com/articles/136571-natural-disasters-hospital-management
3. Biomedical waste management in India: Critical appraisal - NCBI - NIH
4. Vital signs: Understanding what the body is telling us <https://www.coursera.org/learn/vital-signs/>
5. Patient Safety and Quality Improvement <https://www.coursera.org/learn/patient-safety>



 Sushant University <small>Best Quality Affordable Education Gurugram</small>	School of Health Sciences B. Sc. Cardiovascular Technology		
Course Title: Introduction to Quality and Patient Safety			
Semester: I	Course code: BCVT105	Credits: 3	Core / Elective: Core
No. of lectures/ tutorials: 3/Week		No. of practical hours: Nil	
Course Pre-requisites: None			

Course Introduction:

As the Indian government aims for Universal Health Coverage, the lack of skilled human resource may prove to be the biggest impediment in its path to achieve targeted goals. The benefits of having AHPs in the healthcare system are still unexplored in India. An enormous amount of evidence suggests that the benefits of AHPs range from improving access to healthcare services to significant reduction in the cost of care. The teaching of computer and information science aims to integrate their learning in sync with the understanding of the basic functions of the various setups of the computers and its software; this knowledge will help them gained confidence and give them an edge in their field.

Course Objectives

Students are made to learn basic concepts of quality in health care and develop skills to implement sustainable quality assurance program. Introducing students to basic emergency care, infection prevention & control with knowledge of biomedical waste management and antibiotic resistance.

Course Learning Outcomes:

Upon successful completion of the course, the students should be able to:

- CO1:** Understand the various hardware and software of the computer system,
- CO2:** Compare the differences between the various functions of the same (Analyze)
- CO3:** Learn to apply the knowledge of various fields of the course (Apply & Analyze)
- CO4:** Augment their learning by making various presentations and graphics (Synthesize, evaluate & create)

PO KEYWORDS	Human cardio vascul	Moral values	Cardi ovascu lar disord er	Societ al and legal	Modern tools and	Lifelo ng learni ng and	Managen t of CVD
CO1	H	H	L	H	H	L	H
CO2	H	H	M	H	H	M	H



CO3	M	H	M	H	H	L	H
CO4	H	H	M	M	H	H	H
	HIGH – H		MEDIUM- M		LOW – L		

Course Pedagogy

The course pedagogy includes a comprehensive study including the various rules of quality management and patient safety. Various aspects about the use for same in health care setups are discussed in relevance to the topic taught so as to relieve the monotony of the subject. Regular doubt clearing sessions, written assignments, quiz, presentations are some of the measures for learning. Periodic and surprise tests are taken to apprise and evaluate the students.

Course Contents

Module 1: Quality assurance and Management

Introduction, Quality improvement approaches, standards and norms, quality improvement tools, introduction to NABH guidelines.

Module 2: Basic of Emergency care and Life support skills

Basic life support (BLS) following cardiac arrest, recognition of sudden cardiac arrest and activation of emergency response system, early cardiopulmonary resuscitation(CPR) and rapid defibrillation with an automated external defibrillator(AED)

Module 3: Basic emergency care

First aid, choking, rescue breathing methods, ventilation including use of bag valve master (BVMs)

Module 4: Biomedical Waste Management

Definition, waste minimization, BMW-segregation, collection, transportation, treatment and disposal (Including color coding), Liquid BMW, Radioactive waste, metals/chemicals/drug waste, BMW management and methods of disinfection, use of Personal protective equipment (PPE)

Module 5: Infection Prevention and Control

Sterilization, Disinfection, Effective hand hygiene, use of PPE, Prevention and control of common health care associated infections, Guidelines (NABH) and JCI for hospital infection control.

Module 6: Disaster preparedness and management

Fundamentals of emergency management

Practical (demonstration only)

1. Vital signs and primary assessment



2. Basic emergency care- first aid

Course References

1. The Essentials of Patient Safety by Charles Vincent
2. Laboratory Quality Control and Patient Safety by De Gruyter
3. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458

Required Readings:

1. Turgeon, Mary Louise. (2015). Clinical Laboratory Science, 7th ed. Maryland Heights, MO: Mosby. ISBN 9780323225458


Recommended Readings:

1. Medical Dictionary

Others

1. Disaster management set up in india - opcw.org
2. www.opcw.org/sites/default/files/documents/event_photos/2010/tabletop_exercise_poland_nov201..
3. Natural disasters: hospital management | 2015-10-22 | ahc ...
4. www.reliasmedia.com/articles/136571-natural-disasters-hospital-management
5. Biomedical waste management in India: Critical appraisal - NCBI - NIH
6. www.ncbi.nlm.nih.gov/pmc/articles/PMC5784295
7. Vital signs: Understanding what the body is telling us
8. <https://www.coursera.org/learn/vital-signs/>
9. Patient Safety and Quality Improvement
10. <https://www.coursera.org/learn/patient-safety>



 Sushant University <small>Postgraduate Anand University Gurugram</small>	School of Health Sciences B. Sc. Cardiovascular Technology		
Course Title: Medical Ethics and Legal Aspects			
Semester: II	Course code: BCVT204	Credits: 2	Core / Elective: Core
No. of lectures/ tutorials: 02/ Week		No. of practical hours: Nil	
Course Pre-requisites: None			

Course Objectives

Medical ethics has developed into a well-based discipline which acts as a "bridge" between theoretical bioethics and the bedside. The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice". Physicians are bound by, not just moral obligations, but also by laws and official regulations that form the legal framework to regulate medical practice. Hence, it is now a universal consensus that legal and ethical considerations are inherent and inseparable parts of good medical practice across the whole spectrum.

Course Outcomes

Upon successful completion of the course, the students should be able to:

- CO1:** Classify, recognize, and further categories the ethical and legal principles applicable to health sciences and applied medicine.
- CO2:** Interpret the ethical-legislative intent and comparative best practices in India and across the world concerning health sciences.
- CO3:** Examine and further test the present Indian health law regime with the ethical and legal principles prevailing in the global context.
- CO4:** Develop and formulate a proposed bill integrating 1) ethics, 2) legal principles, 3) evolving best practices in health sciences.

PO KEYWORDS	Human cardiovascular system	Moral values	Cardiovascular disorder	Societal and legal issues	Modern tools and techniques	Lifelong learning and training	Management of CVD
CO1	H	M	M	M	H	L	M
CO2	H	L	M	H	H	M	M
CO3	H	H	M	H	H	L	M



CO4	H	H	L	L	H	M	H
	HIGH - H		MEDIUM- M		LOW - L		

Course Contents

1. Medical ethics - Definition - Goal - Scope
2. Introduction to Code of conduct
3. Basic principles of medical ethics – Confidentiality
4. Malpractice and negligence - Rational and irrational drug therapy
5. Autonomy and informed consent - Right of patients
6. Care of the terminally ill- Euthanasia
7. Organ transplantation
8. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects.
9. Professional Indemnity insurance policy
10. Development of standardized protocol to avoid near miss or sentinel events
11. Obtaining an informed consent.
12. Ethics in the profession of Medical Laboratory Science

Course References

1. Medical Law and Ethics by Bonnie F Fremgen
2. Medical Law and Ethics by Jonathan Herring
3. Medical Law and Ethics, Fifth edition, Bonnie F. Fremgen, Pearson, Copyright 2016
4. Student Handbook, The Pathfinder: <http://www.panola.edu/student-success/documents/pathfinder.pdf>
5. S. V. Jogarao - Current Issues in Criminal Justice and Medical Law
6. Goldsby RA, Kindt TJ, Osborne BA. (2007). Kuby's Immunology. 6th edition W.H. Freeman and Company, New York.



Sushant University <i>soaring high</i>		School of Health Sciences B.Sc. MLT	
Course Title: <i>Medical ethics and Legal aspects</i>			
Semester: II	Coursecode: BMLT203	Credits: 2	Core
No of sessions Lectures / Tutorial: 20		No of practical hours: None	

Course Introduction

Medical ethics has developed into a well-based discipline which acts as a "bridge" between theoretical bioethics and the bedside. The goal is "to improve the quality of patient care by identifying, analyzing, and attempting to resolve the ethical problems that arise in practice". Physicians are bound by, not just moral obligations, but also by laws and official regulations that form the legal framework to regulate medical practice. Hence, it is now a universal consensus that legal and ethical considerations are inherent and inseparable parts of good medical practice across the whole spectrum.

Employability-level: Foundation core

37. Foundation Core	38. Foundation Skill	39. Professional Core	40. Professional Skill	41. Premier Skill
✓				

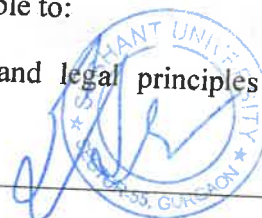
Course Objectives

- To understand the present ethic and legal regime governing health sciences.
- To apply the jurisprudential principles within Indian framework and identify the evolving gaps in medical ethics and law.
1. To analyze and evaluate the need for integrating principles of medical ethics with the prevailing legal regime through bottom up approach.
 2. To evaluate the need for creating a new legal regime integrating the medical ethics with health science laws and public policy.

Course Outcomes

Upon successful completion of the course, the students should be able to:

CO1: Classify, recognize, and further categories the ethical and legal principles



applicable to health sciences and applied medicine.

CO2: Interpret the ethical-legislative intent and comparative best practices in India and across the world concerning health sciences.

CO3: Examine and further test the present Indian health law regime with the ethical and legal principles prevailing in the global context

CO4: Develop and formulate a proposed bill integrating 1) ethics, 2) legal principles, 3) evolving best practices in health sciences.

Course Pedagogy

Following pedagogical approaches will be adopted:

- Interaction sessions and clinical learning (beyond classroom): to support the development of theoretical and practical construct.
- Case study Method: better understanding of the case structure and interpretation of law and procedure.

Group Discussions on the contemporary issues revolving the new concepts as per the prevailing regime

Course Contents

1. Medical ethics - Definition - Goal - Scope
2. Introduction to Code of conduct
3. Basic principles of medical ethics – Confidentiality
4. Malpractice and negligence - Rational and irrational drug therapy
5. Autonomy and informed consent - Right of patients
6. Care of the terminally ill- Euthanasia
7. Organ transplantation
8. Medico legal aspects of medical records – Medico legal case and type- Records and document related to MLC - ownership of medical records - Confidentiality Privilege communication - Release of medical information - Unauthorized disclosure - retention of medical records - other various aspects.
9. Professional Indemnity insurance policy
10. Development of standardized protocol to avoid near miss or sentinel events



11. Obtaining an informed consent.

12. Ethics in the profession of Medical Laboratory Science

For a course of 100 marks containing only theory component

MID SEMESTER EVALUATION (40) – Theory (40)

Mid Semester Examination (Theory)	Quiz/Roleplay/Presentation	Assignment	Continuous Assessment (Class tests & student interaction)	Total
15	15	5	5	40

END SEMESTER EXAMINATION (60)

Theory (60)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	Knowledge & Expertise of Medical Laboratory technology	Leadership and mentorship	Problem solving	Ethics and accountability	Communication & presentation skills	Commitment to professional excellence	Research	Lifelong learning	Employability, Entrepreneurship	Organizational Behavior	Ethical, Social and professional understanding
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	1	3	1	3	1	3	2	3	2
CO2	3	1	1	3		3		3	1	3	3
CO3	3	3	3	2	1		2	3	2	2	3
CO4	3	3	3	3		3	1	3	2	1	3




Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Classify, recognize, and further categories the ethical and legal principles applicable to health sciences and applied medicine.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11
CO2	Interpret the ethical-legislative intent and	PO1, PO2, PO3, PO4, PO6, PO8, PO9, PO10, PO11

Course References

1. Medical Law and Ethics by Bonnie F Fremgen
2. Medical Law and Ethics by Jonathan Herring
3. Medical Law and Ethics, Fifth edition, Bonnie F. Fremgen, Pearson, Copyright 2016
4. S. V. Jogarao- Current Issues in Criminal Justice and Medical Law



		Sushant School of Health Sciences BMRIT		
Course Title: Medical Ethics and Legal Aspects				
Semester: II	Course 23BMRIT2005	code:	Credits:02	Core
No of sessions Lectures / Tutorial: 10			No of practical hours:	
Course Prerequisites:			Number of sessions: 10	

Course Introduction:

Allied and healthcare professionals (AHPs) include individuals involved with the delivery of health or healthcare related services, with qualification and competence in therapeutic, diagnostic, curative, preventive and/or rehabilitative interventions.

They work in multidisciplinary health teams in varied healthcare settings including doctors, nurses and public health officials to promote, protect, treat and manage a person's physical, mental, social, emotional, environmental health and holistic well-being. The study of legal aspects and medical ethics helps them in putting into perspective the knowledge that they gain for better future.

Course Objectives:

This course is designed to provide the students the basic knowledge in laws and ethics to follow as health professionals.

After completion of the course the students will be able to: Understand the various definitions

Course Learning Outcomes:

Upon successful completion of the course, the students should be able to:

CLO1: Understood the importance of the professional laws and ethics.

CLO2: Understood the legal aspects and medical ethics in health setups.

Course Pedagogy

The course pedagogy includes a comprehensive study including the study of general actions of the drugs. Various clinical aspects are discussed in relevance to the topic taught so as to relieve the monotony of the subject. Regular doubt clearing sessions, written assignments, quiz, presentations are some of the measures for learning. Periodic and surprise tests are taken to apprise and evaluate the students. The practical includes the study of drugs via presentations and viva voce.

Course Contents

Module 1

Role, Definition and Interaction with the patients and health care professionals, Ethical, Moral, and Legal Responsibilities, Patient safety and quality, restraint policies and role of health professionals.

Biomedical waste Management, medical records and reports.

Module 2



Medical terminology- The course employs a body systems-oriented, word-analysis approach to learning medical terminology.

Module 3

The goal of the class is to prepare students for the terminology they might encounter in their subsequent coursework, in their clinical rotations and ultimately in their roles as health care professionals.

Course Assessment Scheme

Students would be assessed continuously throughout the semester in the form of continuous evaluation. Periodic tests and surprise tests will be conducted. Students will have to submit written assignments, quiz for the topics. Practical will be conducted with viva. Midterm and end term evaluation will be done theoretically and practically. Students will also be assessed on the basis of presentations of various topics.

Assessment Criteria

For a course of 100 marks containing only theory Component:

MID SEMESTER EVALUATION (40) – Theory (40 Marks)

Theory (40)				
Assignment(s)	Continuous Assessment	Mid Semester Examination Theory	Quiz(s), Presentation(s), Faculty Student Interaction	Total
5	5	15	15	40

END SEMESTER EXAMINATION (60)

Theory (60)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

PO Keywords	Knowledge & Expertise of Medical radio-imaging technology	Leadership and mentorship	Problem solving	Ethics and accountability	Communication & presentation skills	Commitment to professional excellence	Research	Lifelong learning	Employability, Entrepreneurship	Organizational Behavior	Ethical, Social and professional understanding
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COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		3	3		3	3	3		3	3	3
CO2	1	3	3	3	3	3		1	3	3	3
CO3	3	3		1	3	3	1		3	3	3
CO4	3	3	3		3	3		2		3	

1= LOW 2= MEDIUM 3= HIGH

Mapping between COs and Pos		
	Course Outcomes (COs)	Mapped Programme Outcomes
CO1	Explain indication, contraindication and reactions of contrast media. Demonstrate how to take in minimum numbers of exposures in each special investigation.	PO1, PO2, PO3, PO8, PO9 PO10, PO11
CO2	Demonstrate the positioning and technique of the special studies.	PO1, PO2, PO3, PO9 PO10, PO11
CO3	Explain the technique of all GIT study according to investigation.	PO1, PO2, PO3, PO6, PO7, PO8, PO9 PO10, PO11
CO4	Demonstrate surface anatomy. To be able to know the technique behind the radiography.	PO1, PO4, PO5, PO6, PO8, PO11

Relationship between the Course Outcomes (COs) and Program Outcomes (POs) / Program Specific Outcomes (PSOs)

Matrix 1- Mapping of COs with POs and PSOs

Matrix 1- Mapping of COs with POs and PSOs

Course Outcomes (COs)

Program Outcomes (POs)

	PO1	PO2	PO3	PO4	PO5	PO6
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CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M

Course Outcomes (COs)

Program Specific Outcomes (PSOs)

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	H	M	M			M
CO2	H	H		H	H	M
CO3	M	M	H	H	H	
CO4	M	H	H	M		M



Sushant University <i>soaring high</i>		School of Health Sciences	
B. Optometry		Course Title: Public Health Community Optometry	
Semester: V	Course code: BOPT506	Credits: 03	Community Service
No of sessions Lectures / Tutorial: 3		No of practical hours: NIL	
Course Pre-requisites: None		No. of sessions: 3	

1. **Course Description:** Introduction to the foundation and basic sciences of public health optometry with an emphasis on the epidemiology of vision problems especially focused on Indian scenario.

2. **Course Objectives:** The purpose of this course is to:

1. Familiarize students with the basics of Public Health.
2. Develop an understanding on basic principles of Community Optometry & Ophthalmology.

3. **Course Outcomes:** At the end of the module students should be able to-

CO1:Apprise Community based eye care activities in India and globally and Understand Epidemiology of various eye diseases and their optometric management.

CO2: To develop Information Education Communication (IEC) materials on eye and vision care increasing awareness.

CO3: To initiate and actively participate in screening for various eye diseases in the community and to develop Eye health education programmes in the community

CO4:Develop sensitization towards public health perspective of eye diseases.

CO and PO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	M	L		L	L		L	L		H	L	L
CO2		M	L	M	L	L		L		H	H	H

CO3	L	M	L	L		M	M	M	L	H	M	H
CO4	L		M		L	M	L		M	H	M	L

4. Course Pedagogy:

The course will be taught in an interactive manner. The concepts shall be mostly shared through slides, screen sharing as required and further reinforced through individual or group activities such as student presentations, exercises, and case discussions, etc. Student case presentations. There will be video based teaching sessions (in between lectures, tutorial section) and Clinical case presentations (in practice)

5. Course Content:

The sessions time slots will be divided/adjusted according to the content of below mentioned topics-

1. Introduction to module and warm up session / student's suggestions
2. Public Health Optometry: Introduction, Concepts and Principles
3. Difference between Clinical and community optometry.
4. Understanding Epidemiology principles of eye diseases
5. Levels of disease prevention and levels of health care delivery systems
6. Defining blindness and visual impairment- Magnitude and Burden
7. Role of an optometrist in Public Health
8. Eye in primary health care- Past, present and future challenges!
9. National Eye Care Programs around the world
10. National and International eye health agencies e.g.- IAPB, NPCB
11. Principles & practices of Screening for eye diseases
12. Organization and Management of Eye Care Programs – Principles of planning
13. Health manpower and Human resource development
14. School eye health programmes
15. Primary eye care for children
16. Global vision report- Challenge & opportunity
17. Assessment of eye care programs e.g. ECSAT and EHSA
18. Vitamin A deficiency eye disease- Role of Public health
19. Information, Education and Communication for Eye Care programs- Trachoma SAFE STRATEGY
20. Introduction to principles of "Disability"



21. Impactful Power point presentations- soft skills in Public health
22. Quality in research- Publish or Perish
23. Ethics in Research
24. Basics of Tele-Medicine and AI in Public Health
25. Journal / Articles discussions
26. Students Presentations
27. Video presentations relevant to Public health optometry
28. Revision class/ Preparation slot
29. Internal assessment exam
30. Students Feedback session

Course Assessment Scheme:


Mid-Term (40)					End Term (60)	Total
Mid Semester Examination (Theory)	Quiz /Presentation Quiz/Roleplay/Panel Discussion	Assignment	Continuous Assessment (Class tests & student interaction)	Total	Theory	
15	15	5	5	40	60	100

6. Course References

TEXT BOOKS:

1. GVS Murthy, S K Gupta, D Bachani: The principles and practice of community Ophthalmology, National programme for control of blindness, New Delhi, 2002
2. Newcomb RD, Jolley JL : Public Health and Community Optometry, Charles C Thomas Publisher, Illinois, 1980
3. K Park: Park's Text Book of Preventive and Social Medicine, 19th edition,
4. Banarsidas Bhanot publishers, Jabalpur, 2007



 Sushant University <i>soaring high</i>	School of Health Sciences		
	Master of Optometry		
Course: Low Vision & Rehabilitation-I			
Semester: I	Course Code MOPT 103	Credits: 03	Core
No. of Sessions: Lectures/Tutorial: 2		No. of practical hours: 2	
Course Pre-requisites: None		Number of Sessions: 4	

Course Objectives:

Upon completion of the course, the student should be able to understand the best suitable low vision and functional assistive device for a particular condition and rehabilitation. This course gives both in-depth theoretical knowledge and clinical exposure in low vision care. The outcomes of this course are: Thorough understanding of the causes of the low vision, its functional and psychosocial consequences. Help visually impaired individuals to utilize their residual visual skills optimally and rehabilitate.

Course Outcomes:

CO1: Choose best suitable low vision and functional assistive device for a particular condition

CO2: Explain the causes of the low vision, its functional and psychosocial consequences.

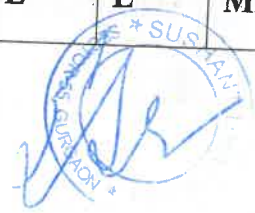
CO3: Create Principles and action plan for rehabilitation process based on the conditions

CO4: Maximize visually impaired individuals to utilize their residual visual skills optimally and rehabilitate them

CO PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	L	H	M	L	H	H	M	H	M	H	M	L
CO2	L	H	M	H	M	H	L	M	H	H	H	L
CO3	M	M	H	L	H	M	H	L	L	M	L	H
CO4	L	L	M	M	H	L	H	M	H	L	L	M

Course Pedagogy:



The conceptual understanding of the course will be through class room teaching which involves active lecture delivery, power point slides, pdf's and videos for understanding of concept. The students will later be actively involved in hands on activities and clinical exposures in terms of case discussions The course aimed to provide understanding of dealing patients with visual impairment.

Course Contents:

Module I

Revision and Clinical assessment of low vision patient

1. Purpose of low vision assessment
2. Steps of low vision assessment
3. Identifying needs
4. Diseases commonly causing low vision
5. Vision evaluation of Infants
6. Functional evaluation and mobility

Module II

Magnification, Low vision devices

1. Calculation of magnification, optical, non-optical, adaptive and electronic devices , types , advantages, disadvantages.
2. Functional Assessment of Low Vision for Activities of Daily living

Module III

Rehabilitation of the visually impaired

1. Disability and visual impairment, psycho-social perspective, rehabilitation services
2. Special case discussions on Rehabilitation of Children and Youth with vision Impairment
3. Rehabilitation of working -age Adults with Vision Impairment
4. Rehabilitation of older Adults with Vision Impairment
5. Functional consequences of Vision Impairment
6. Psychosocial assessment of adults with Vision Impairment
7. Vision and Reading - Normal Vs Low Vision

Course Assessment Scheme:

Mid Semester Examination	Theory (40)				End Term (60)	Total
	Mid-term Practical	Assignment	Continuous Assessment	Total	Theory	



(Theory)	Quiz/Roleplay/Presentation		(Class tests & student interaction)			
15	15	5	5	40	60	100

Course References:

1. The lighthouse handbook on vision impairment and Vision rehabilitation: Barbara Silverstone, Mary Ann Lang, Bruce Rosenthal, Faye



Sushant University		School of Health Sciences B.Sc. (Psychology)	
Course: Ability/Skill/VA/Core			
Course Title: Life Skills and Application			
Semester: II	Course code: PS142 /BCP106	Credits: 03	Core: Employability/SD/Entrepreneurship
No of Sessions Lectures : 30		No of Practical hours:0	
Course Pre-requisites:		Number of Sessions: 30	

1. Course Introduction

Life skills are defined as the behaviors used appropriately and responsibly in the management of personal and professional affairs. They are also set of human skills acquired via learning or direct experience that are used to handle problems and questions commonly encountered in day-to-day personal and professional life. It is always said that life skills are the core skills each individual must acquire and inculcate internally as well as externally for the betterment of self and others. Life skills, thus, are the means to empower young minds in demanding situations in personal, professional and social life. Adoption of life skills is the key to excellence.

2. Course Objectives

The objectives of the course are:

- Improve verbal and written communication to express ideas clearly and confidently.
- Cultivate leadership qualities to inspire and guide others effectively.
- Improve collaboration skills to work harmoniously with colleagues towards common goals.
- Promote humility and modesty, recognizing the value of others and avoiding arrogance.
- Promote non-violence and peaceful resolutions to conflicts, fostering harmony in society.

3. Course Outcomes



Upon completion of the course, the students should be able to:

At the end of the programme learners will be able to:

1. Gain Self Competency and Confidence
2. Practice Emotional Competency
3. Gain Intellectual Competency
4. Gain an edge through Professional Competency
5. Aim for high sense of Social Competency
6. Be an integral Human Being

CO1: Develop clear, concise, life skills to express ideas and thoughts effectively.

CO2: Learn about the self-awareness and different techniques of self-awareness.

CO3: Enhance the ability of a variety of thinking and problem solving.

CO4: Develop an understanding of dynamics of a group.

CO5: Understand the concept & effectiveness of leadership.

4. Pedagogy

This course follows a pedagogy of active involvement by the students. The students will be leading case discussions and have presentations on various topics.. Each topic will include “teach back opportunities” where students will lead the learning of certain topics. This course will incorporate research studies and group work will be encouraged so students can expand their views on subject material from understanding other students’ perspectives.

5. Course contents

Module I: Overview of Life Skills:

Meaning and significance of life skills, Life skills identified by WHO: Self-awareness, Empathy, Critical thinking, Creative thinking, Decision making, problem solving, Effective communication, interpersonal relationship, coping with stress, coping with emotion.

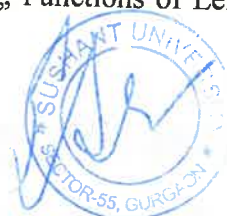
Module II: Self-awareness:

Definition, need for self-awareness; Coping with Stress and Emotions, Human Values, tools and techniques of SA: questionnaires, journaling, reflective questions, meditation, mindfulness, psychometric tests, feedback.

Module III: Interpersonal Skills

Creativity - Need for Creativity in the 21st century, Imagination, Intuition, Experience, Sources of Creativity, Myths of creativity

Critical Thinking - Lateral Thinking,, Critical thinking Vs Creative thinking, Functions of Left



Brain & Right brain, Convergent & Divergent Thinking, Critical reading & Multiple Intelligence
 Problem Solving -Steps in problem solving: Problem Solving Techniques, Six Thinking Hats,
 Mind Mapping
 Decision Making - Forced Connections. Analytical Thinking, Numeric, symbolic, and graphic
 reasoning. Scientific temperament and Logical thinking

Module IV: Group and Team Dynamics:

Introduction to Groups: Composition, formation, Cycle, thinking, Clarifying expectations,
 Problem Solving, Consensus, Dynamics techniques, Group vs Team, Team Dynamics, Virtual
 Teams. Managing team performance and managing conflicts, Intrapreneurship

Module V: Leadership:

Concept of Leadership, Types of leaders, entrepreneurial and moral leadership, vision, cultural
 dimensions.

6. Course Assessment

Assessment Scheme:

	Mid Term Evaluation A+B+C				End term Evaluation (D)	
Evaluation Component	Assignment/Pre sentation /Quiz (A)	Mid Term (B)	Assignment/ Presentation/ Quiz Assignment (C)	Total	End Term Examination	Total
Weightage	10MM	20MM	10MM	40MM	60MM	100MM

7. Course References

Books

- Sen Madhuchanda (2010), An Introduction to Critical Thinking, Pearson, Delhi
- Silvia P. J. (2007), How to Read a Lot, American Psychological Association, Washington DC
- Adolescence and Life Skills (2003) Commonwealth Youth Programme Asia Centre, Tata Mc
Graw- Hill
- Life Skills Resource Manual, Schools Total Health Program, (2006), Health Education and
Promotion International Inc., Chennai.
- Global Evaluation of Life Skills Education Programmes Final Report, United Nations



MAPPING BETWEEN CO'S PO'S

PO's/CO's	Course out comes CO's	MAPPED PROGRAM OUTCOMES
CO1	Develop clear, concise, life skills to express ideas and thoughts effectively.	PO1, PO2, PO3, PO5, PO8, PO10, PO11, PO12
CO2	Learn about the self-awareness and different techniques of self-awareness.	PO4, PO6, PO7, PO9, PO11, PO12,
CO3	Enhance the ability of a variety of thinking and problem solving.	PO1, PO4, PO5, PO7, PO12,
CO4	Develop an understanding of dynamics of a group.	PO1, PO3, PO4, PO6, PO8, PO11,
CO5	Understand the concept & effectiveness of leadership.	PO1, PO3, PO7, PO11, PO12

PO's/CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	H	H	H	M	H	M	M	H	M	H	H	H
CO 2	M	M	L	H	L	H	H	M	H	M	H	H
CO3	H	M	M	H	H	L	H	M	M	M	M	H
CO4	H	L	H	H	M	H	M	H	M	L	H	L
CO5	H	L	H	L	M	L	H	L	L	L	H	H

H=HIGH.M=MEDIUM.L=LOW

