



MGM INSTITUTE'S UNIVERSITY DEPARTMENT OF PROSTHETICS & ORTHOTICS
(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES, NAVI MUMBAI)

(Deemed to be University u/s 3 of UGC Act, 1956)

Grade 'A++' Accredited by NAAC

Sector-I, Kamothe, Navi Mumbai-410 209 | Tel.: 022-27437829, 27437620

Email: mgmudpo@mgmuhs.com | Website: www.mgmudpo.edu.in

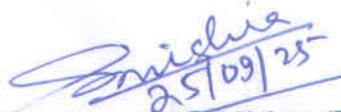
Course Outcomes of Prosthetics Science -I, II, III and IV

Course Outcomes	Course Name	Total Hr
	Prosthetics Science-I (As per RCI Guidelines -)	80 Hr
	CO Definition	
CO1	Understanding Trans Tibial Prosthesis in relation to Assessment, Socket Design, Alignment & Suspension.	30Hr
CO2	Understanding Symes and Partial Foot Prosthesis in relation to Assessment, Socket Design, Alignment & Suspension.	20Hr
CO3	To understand and identify Prosthetic feet .	10Hr
CO4	Identify Gait Deviation & Check-out of all types of Partial Foot, Symes and Transtibial Prostheses.	12Hr
CO5	Understanding Prosthetics terminologies and History of Prosthetics	08Hr

Course Code	Course Name	Total Hr
	Prosthetics Science-II (As per RCI Guidelines -)	80 Hr
	CO Definition	
CO1	Understanding Trans Femoral Prosthesis in relation to Assessment, Socket Design Technology, Alignment, Suspension	24 Hr
CO2	Understanding Through knee Prostheses in relation to Assessment, Socket Design, Alignment, Suspension.	21 Hr
CO3	Understanding the Prosthetics Knee Joints in Transfemoral Prosthesis and Through-Knee Prostheses.	23 Hr.
CO4	Identify Gait Deviation & Check-out Procedure of Transfemoral and Through-knee Prostheses.	10 Hr
CO5	Understanding the Prosthetics Hip Joints in Transfemoral Prosthesis and Through-Knee Prosthesis.	02 Hr


Dr. Deepshikha Raut (P&O)
Course Co-Ordinator




Dr. Swagatika Mishra (P&O)
Professor/ Principle



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Course Code	Course Name	Total Hr
	Prosthetics Science-III (As per RCI Guidelines -)	90 Hr
	CO Definition	
CO1	Understanding Trans Radial Prosthesis in relation to Prescription, Casting, Socket Design, Alignment, Harnessing & Suspension.	15Hr
CO2	Understanding Trans Humeral Prosthesis and Elbow Disarticulation in relation to Prescription, Casting, Socket Design, Alignment, Harnessing & Suspension.	15Hr
CO3	Understanding Wrist Disarticulation and Partial Hand Prosthesis in relation to Prescription, Casting, Socket Design, Alignment, Harnessing & Suspension.	15Hr
CO4	Understanding Shoulder Disarticulation in relation to Prescription Casting, Socket Design, Alignment, Harnessing & Suspension.	15Hr
CO5	Understanding Upper Limb Prosthetics Components , Terminal devices, Wrist units, Elbow units and Shoulder units. Grasp Patterns, and Control systems in relation to functional electrical stimulation (FES), myoelectric and bio-feedback	30Hr

Course Code	Course Name	Total Hr
	Prosthetics Science-IV (As per RCI Guidelines -)	60 Hr
	CO Definition	
CO1	Understanding Hip Disarticulation Prosthesis in relation to Assessment, Socket Design, Alignment & Suspension.	20Hr
CO2	Understanding Bilateral Amputation (U/E & L/E) in relation to Assessment, Socket Design, Alignment & Suspension.	10Hr
CO3	Understanding Translumbar, Congenital Anomalies, and Child Prosthesis in relation to Assessment, Socket Design, Alignment & Suspension	10Hr
CO4	Identify Gait Deviation & Check-out of all types of Hip Disarticulation Prosthesis, Bilateral Prostheses, Translumbar, Congenital Anomalies, and Child Prosthesis	10Hr
CO5	Understanding Prosthesis adaptation for sports and recreation and Immediate post-surgical Fitting.	10Hr

Deepshikha

Dr. Deepshikha Raut (P&O)
Course Co-Ordinator



Swagatika
25/09/17

Dr. Swagatika Mishra (P&O)
Professor/ Principle



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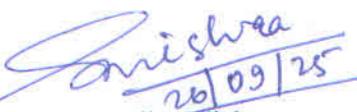
Course Outcomes of Assistive Technology

Course Outcomes (CO)		Teaching Hours
Course Code	Course Name	
	Assistive Technology (As per RCI Guidelines -)	80hrs
CO1	Explain the principles, design, and biomechanics	20hrs
CO2	Analyse normal and delayed developmental milestones	14hrs
CO3	Understanding concepts of the Manual Wheelchair with cushions	18hrs
CO4	Understanding concepts of a Motorised wheelchair with cushions	12hrs
CO5	Understanding concepts of a Tricycle and a Motorized tricycle	16hrs

Course Outcomes (CO)		Hours
Course Code	Course Name	
	P&O Workshop Management (As per RCI Guidelines -)	80hrs
CO1	Introduction to Management (Principles, OB, Organizational Administration)	20hrs
CO2	Material Management, including Stores, Inventory, Purchases	20hrs
CO3	Planning, Construction, and Industrial Safety	12hrs
CO4	Human Resource Management, Professional and interpersonal/interprofessional Ethics	14hrs
CO5	Business Management Practices (Managerial Accounting, Finances)	14hrs


Course Co-Ordinator
Dr. Swagatika Mishra




26/09/25
Dr. Swagatika Mishra
Professor & Principal
MGM Institute's University Department of
Prosthetics and Orthotics,



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Course Outcomes of Biomechanics-I, II, III

Course Outcomes (CO)	
Course Code	Course Name
	Biomechanics - I (As per RCI Guidelines -)
CO1	Understanding Basics concepts of biomechanics: Kinematics & Kinetics Understanding normal human locomotion
CO2	Understanding Basics concepts of Joint structure & Function and Biomechanics of Ankle & foot
CO3	Biomechanics of below knee orthosis and below knee prosthesis

Theory Hours as per Course-80 Hours
CO1-27+20
CO2-12
CO3-21

Course Outcomes (CO)	
Course Code	Course Name
	Biomechanics - II (As per RCI Guidelines -)
CO1	Understanding Tissue mechanics of Bones, Ligaments, Cartilage and muscles and Biomechanics of Hip and Knee
CO2	Understanding gait analysis, Pathological gait, Kinetics and kinematics of gait, Joint force analysis and Concept of EMG
CO3	Biomechanics of all types of above knee prosthesis and above knee orthotics along with pathological condition
CO4	Demonstrate the ability to identify and interpret common gait deviations associated with the use of above-knee prostheses and orthoses

Distribution of hours for Biomechanics-II Theory Hours-70, practical hours-30		
CO1-15	T.H-15	
CO2-30	T.H-18	P.H-12
CO4-30	T.H.-20	P.H.-10(4,6)
CO5-25	T.H-17	P.H-8

Course Outcomes (CO)	
Course Code	Course Name- Biomechanics – III (As per RCI Guidelines)
CO1	Upper Limb Biomechanics & Prosthetic Application
CO2	Control systems in Prosthetics & Orthotics
CO3	Spinal Biomechanics & its orthotic applications
CO4	Design Concepts in Prosthetics & Orthotics – Part I & Part II
CO5	Standards and Design Calculations for P&O Devices

Distribution of hours for Biomechanics-III
Total Hours-80
CO1-30
CO2-10
CO3-16
CO4-20
CO5-4

Gauri
25/9/25

Dr. Gauri Panse (P&O)
Course Co-Ordinator



Swatika
25/09/25

Dr. Swatika Mishra (P&O)
Professor/ Principle



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Course Outcomes of Orthotics Science-IV

Course Outcomes (CO)	
Course Code	Course Name: Orthotics Science-IV
	Orthotics Science-IV (As per RCI Guidelines -)
CO1	Explain the normal anatomy of human spine and correlating it with its functional, clinical, radiological aspect.
CO2	To understand the etiology, pathology, and clinical presentation of common neurological, musculoskeletal and other spinal conditions & Deformities
CO3	Understand and Explain the anatomical, physiological, and biomechanical principles of spinal orthoses , describe their functions , and discuss their indications and contraindications .
CO4	Explain the principles of material selection, measurement techniques, fabrication processes, fitment, and checkout procedures for all types of spinal orthoses

Total Hours-80
CO1-10
CO2-15
CO3-20
CO4-35

Gauri
25/9/25

Dr. Gauri Panse (P&O)
Course Co-Ordinator



Swagatika
25/09/25

Dr. Swagatika Mishra (P&O)
Professor/ Principle

Worksheet 1 - Program and Course Outcomes	
Step 1: Obtain course & Program outcomes	
Program Outcomes (PO) (As per RCI Guidelines)	
Program Code	Program Name
101	BPO
PO1	Rehabilitational Professional (Including quality services)
PO2	Rehab Team leader Member
PO3	Communicator
PO4	Lifelong Learner
PO5	Critical thinker
PO6	Researcher
PO7	Digitally literate
Course Outcomes (CO)	
Course Code	Course Name
	Orthotics Science-II (As per RCI Guidelines -)
CO1	Understanding Pathological Conditions of Knee and It's Orthotic Management
CO2	Understanding Pathological Conditions of Hip and It's Orthotic Management
CO3	Understanding various Sports Injuries with respect to Hip and Knee and their Orthotic Management
CO4	Assessment, Fabrication, Fitment and Checkout of Above Knee Orthoses .

Number of Hours for Orthotics Science I = 80

20
15
15
30


 Dr. Uttara Deshmukh (P&O)
 Course Co-Ordinator




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 Professor/ Principle

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PO5	Critical thinker
PO6	Researcher
PO7	Digitally literate
Course Outcomes (CO)	
Course Code	Course Name
	Orthotics Science-III (As per RCI Guidelines -)
CO1	Explain the normal gross anatomy of Upper Extremity and correlating it with its functional, clinical and radiological aspects.
CO2	Understanding Pathological Conditions of Upper Extremity It's Orthotic Management with Principles.
CO3	Understanding various Sports Injuries with respect to Upper Extremity and it's Orthotic Management.
CO4	Assessment, Fabrication, Fitment and Checkout of Upper Extremity Orthoses with principles.

Number of Hours for Orthotics Science I = 80

15
20
15
30


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PO6	Researcher
PO7	Digitally literate
Course Outcomes (CO)	
Course Code	Course Name
	CRDP (As per RCI Guidelines -)
CO1	Understand various Neurological and Musculoskeletal conditions with respect to their introduction, etiology, symptoms, types and management.
CO2	Analyse and classify the role of Each Member of Rehabilitation Team and understanding the interdisciplinary and multi disciplinary approach.
CO3	Understanding various disabilities as described by the W.H.O. And the concept of CBR & IBR
CO4	Define and Interpret various laws and welfare schemes for Divyangjan.

Number of Hours for CRDP = 60

30

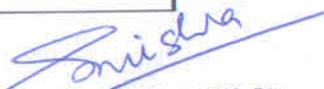
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8


Dr. Uttara Deshmukh (P&O)
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PO4	Lifelong Learner
PO5	Critical thinker
PO6	Researcher
PO7	Digitally literate
Course Outcomes (CO)	
Course Code	Course Name
	Orthotics Science-I (As per RCI Guidelines -)
CO1	Understanding Ankle and Foot Pathologies and their Orthotic Management
CO2	Understanding Below Knee Pathological Conditions and their Orthotic Management
CO3	Understanding various Sports Injuries and their Orthotic Management
CO4	Assessment, Fabrication, Fitment and Checkout of Below Knee Orthoses .

Number of Hours for Orthotics Science I = 80

30
20
15
15



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