

For PhD admissions January 2020: Openings are available in the following constituent units of Manipal Academy of Higher Education (MAHE) in
 Medicine/Health sciences, Public Health, Biostatistics, Social Work, Virology, Pharmacy, Biological/Life Sciences, Stem Cell and Regenerative Medicine, Nursing, Allied Health Sciences, Engineering/Technology, Physics, Chemistry, Mathematics, Applied Mathematics, Applied Physics, Commerce, Management, Humanities, European Studies, Geopolitics & International Relations, Gandhian & Cultural Studies, Hospitality Management

Streams	Institution	Departments	Number of Seats
Medicine/ Health sciences	Kasturba Medical College, <u>Manipal</u>	Medical Genetics, Pathology, Molecular & Neurosciences, Microbiology, Pharmacology	7 Research topics available
	Melaka Manipal Medical college, Manipal	Pharmacology, Obstetrics & Gynaecology	2 Research topics available
	Prasanna School of Public Health	Public Health	1 Research topics available
		Biostatistics	1* Research topics available
		Social Work	1* Research topics available
	Manipal Institute of Virology	Virology	2 Research topics available
Pharmacy	Manipal College of Pharmaceutical Sciences	Pharmaceutics Pharmacy Practice Pharmacology Pharmaceutical Quality Assurance Pharmacognosy Pharmacy Management Pharmaceutical Chemistry	19 Research topics available
Life Sciences/ Biological Sciences	Manipal School of Life Sciences	Plant Sciences Biophysics Cell and molecular Biology Radiation Biology & Toxicology Ageing Research	6 Research topics available

Stem Cell and Regenerative Medicine	Manipal Institute of Regenerative Medicine, <u>Bengaluru</u>		3 Research topics available
Nursing	Manipal College of Nursing	Medical Surgical Nursing, Community Health Nursing, Child Health Nursing, Obstetrics and Gynaecology Nursing	4 Research topics available
Allied Health	Manipal College of Health Professions, Manipal	Speech and Hearing	4 Research topics available
		Physiotherapy	5 Research topics available
		Nuclear Medicine	2 Research topics available
		Occupational Therapy	1 Research topics available
		Optometry	1 Research topic available
	Manipal College of Health Professions Bengaluru campus	Physiotherapy	1 Research topics available
Engineering/ Technology/ Science/ Management	Manipal Institute of Technology	Information & Communication Technology, Biotechnology, Chemical Engineering, Electronics & Communication Engineering, Instrumentation & Control Engineering, Mechanical Engineering, Computer Sceince & Engineering, Biomedical Engineering, Electrical & Electronics Engineering, Civil engineering/geology, Computer Applications	30 Research topics available
	Deakin-MAHE Cotutelle Program	Information & Communication Technology Civil engineering/geology Mechanical Engineering	3 Research topics available
	Dept of Science	Chemistry, Physics, Mathematics	13 Research topics available
	Dept of Data Science, PSPH	Applied Mathematics	1 Research topics available

	International Centre for Applied Sciences	Chemistry	1 Research topics available
	Department of Atomic and Molecular Physics	Applied Physics	4 Research topics available
	Department of Commerce	Commerce	3+3* Research topics available
	Manipal Institute of Management	Management	1 Research topics available
	Dept of Humanities, MIT, Manipal	Management & Humanities	1 Research topics available
	Manipal Centre for Humanities	Humanities	1 Research topics available
	Manipal Centre for European Studies	European studies	1 Research topics available
	Geopolitics & International Relations	Geopolitics & International Relations	1 Research topics available
	Centre for Creative and Cultural Studies	Gandhian and Cultural Studies	1 Research topics available
Hospitality Management	Welcomgroup Graduate School of Hotel Administration	Hospitality Management	1 Research topics available

*Including self sponsored seats

RESEARCH TOPICS

KMC, Manipal

Department	Topics	Seats Available
Medical Genetics	<p>Uncovering the molecular roles of the epigenetic modulators KDM5B and BCORLI in rare Mendelian neurodevelopmental disorders using in vitro and drosophila models</p> <p>Liquid biopsy tests early detection and treatment monitoring of human papilloma virus associated cancers</p> <p>Prenatal and postnatal arthrogryposis: Deciphering the clinical and genomic profile</p>	3
Pathology	A study on investigating course of death in preterm and term infants using sampling by percutaneous Needle Autopsy	1
Molecular & Neurosciences	Developing in vitro 3D models for neurodevelopmental disorders	1
Microbiology	Metagenomics application to study the burden of antimicrobial resistance genes and detection of antibacterial agents in a non clinical environment	1
Pharmacology	Ameliorative potential of betanin against fluoride induced behavioural and cognitive disorders in developing and developed brain in rodents	1

Melaka Manipal Medical College, Manipal

Department	Topics	Seats Available
Pharmacology	Cardioprotective effects of rapamycin and Amalaki Rasayana in angiotensin ii-infused hypertensive animal model: role of motor and ubiquitin-proteasome pathway	1
Obstetrics & Gynaecology	Role of gut bacteria in linking hyper estrogenic conditions and hypothyroidism in women- a preliminary study	1

Prasanna School of Public Health, Manipal

Department	Topics	Seats Available
Public Health	Evaluation of immunisation program in Karnataka state	1
Biostatistics	Performance of survival trees in time to event studies	1*
Social work	Psychosocial needs of individuals with cancer and their families well-being of employees in corporate sector	1*

Manipal Institute of Virology, Manipal

Department	Topics	Seats Available
Virology	<ol style="list-style-type: none"> 1. Development of a miRNA based screening assay for Hepatitis B virus (HBV) associated hepatocellular carcinoma (HCC) 2. Targeting protease activity of chikungunya virus capsid protein using fret-based assay-a prototype antiviral high-throughput screening (HTS) platform 	2

Manipal College of Pharmaceutical Sciences, Manipal

Department	Topics	Seats Available
Pharmaceutics	<p>Development of long -acting formulations to treat Alzheimer's disease</p> <p>Drug loaded nanocarriers: Preparation by continuous processing and evaluation</p> <p>CO-crystalization of IBRUTINIB by hot melt extrusion method and it evaluation</p>	3
Pharmacy Practice	<p>Pharmacogenomics and population pharmacokinetic integration for precision therapy of tapentadol in palliative oncology</p> <p>Vitamin D receptor gene expression and biofilm formation in diabetic foot infection (DFI) and effect of vitamin d supplementation in DFI patients</p> <p>Medication therapy management incorporating pharmacogenomics-guided individualized dosing of Warfarin</p>	3
Pharmacology	<p>Evaluation of the role of wif-1 inhibitors in Alzheimer's disease</p> <p>AMPK activators as modulators of NLRP3 inflammasomes to regulate neuro-inflammation</p> <p>Development and evaluation of floating formulations from the active extracts and isolated compounds of some of the selected medicinal plants against helicobacter pylori for the treatment of peptic ulcers</p>	3
Pharmaceutical Quality Assurance	<p>Pharmacokinetic assessment of enzyme mediated interactions of cyclin dependent kinase (CDKs) inhibitors and proton pump inhibitors for the treatment of metastatic breast cancer</p> <p>Development and validation of stability protocol for classical Ayurvedic formulations using modern analytical techniques.</p>	2`
Pharmacognosy	<p>Investigations of herbal anitioxidants sesamol and its derivative in drug-induced liver toxicity</p>	2

	Anti-cancer activity of the bioactive phytoconstituents from <i>Syzygium caryophyllatum</i>	
Pharmaceutical Chemistry	QSAR-based drug, synthesis and biological evaluation of noncovalent DPR1 inhibitors	1
Pharmacy Management	A study on impact of cosmeceutical product advertisements, assessing the awareness level regarding the adverse reaction and proposed concept of cosmetovigilance system in Indian context	1

Manipal School of Life Sciences, Manipal

Department	Topics	Seats Available
Plant Sciences	Responses of hormonal regulation, physiological traits and epigenetic modulation in barley (<i>Hordeum vulgare</i> L) in response to heat stress	1
Biophysics	Screening of HDAC 2 Isoform Selective Inhibitory activity of small molecules Fabrication of Biodegradable elastomeric microfluidics device	2
Cell & Molecular Biology	Neural circuit analysis of behaviors in mice	1
Radiation biology & toxicology	Deciphering the link between radiation induced gut microbiota dysbiosis and neurotoxicity	1
Ageing Research	Understanding the neutrophil (dys)function in Type 2 Diabetes: Implications in combating infections	1

Manipal Institute of Regenerative Medicine, Bengaluru

Department	Topics	Seats Available
Stem Cell & Regenerative Medicine	Evaluation of efferocytosis in bone remodelling in diabetic contexts Lysosomal accumulation progress TNT formation and direct neuron to neuron transfer of pathology in Alzheimer's disease Elucidating stage specific contribution of ubiquitin proteasome system during midbrain dopaminergic neuronal fate Parkinson's disease (PD) using iPSC model system	3

Manipal College of Nursing, Manipal

Department	Topics	Seats Available
Medical Surgical Nursing	Developing family and community capacity to provide evidence-informed advanced dementia care, and reduce risks of dementia related elder abandonment neglect abuse and hardships	1
Community Health Nursing	Mixed method research to assess the elder home safety & environmental and development of an interprofessional educational programme	1

Child Health Nursing	Effectiveness of capacity enhancement program on evidence synthesis among health care professionals	1
Obstetrics and Gynaecology Nursing	Effectiveness of a mobile health Cardiovascular Diseases Care Program for premenopausal and perimenopausal women.	1

Manipal College of Health Professions, Manipal

Department	Topics	Seats Available
Speech & Hearing	<p>Design, development and batch production of sillocone rubber products for communication disorders</p> <p>A cross-linguistic investigation exploring the mechanisms associated with sub-lexical dyslexia in two alphasyllabic orthographies</p> <p>Mixed reality in Aphasia rehabilitation(MiRAR)</p> <p>Lip and jaw movement characteristics in children with varying degree of hearing loss across south Indian languages- an explorative study</p>	4
Physiotherapy	<p>Exercise in pulmonary hypertension</p> <p>Effect of ArmAble (An training Rehabilitation Device) on upper extremity function in people with stroke</p> <p>Validation of “SPARSH” - Innovative new device for the early detection of diabetic peripheral neuropathy</p> <p>Efficiency of home-based pulmonary rehabilitation on health related quality of life in interstitial lung disease: prospective randomized controlled trial</p> <p>Effect of neurophysiological facilitation techniques on respiratory function, neuromotor development and clinical outcome in preterm infants - RCT</p>	5
Occupational Therapy	Impact of peer-led education programs on knowledge, attitudes and practices regarding falls among urban community-dwelling Indian elderly : A cluster randomized controlled trial	1
Nuclear Medicine	<p>Anticancer effects of mitochondria-targeted antioxidants, mitotempo against n-nitrosodiethylamine-induced murine hepatocarcinogenesis : a mechanism study</p> <p>Optimization of magnetic gold nanoparticles (AuMNPs) for theranostic application in brain metastasis</p>	2
Optometry	Intra-subject variability in perimetry	1

Manipal College of Health Professions, Bengaluru Campus

Physiotherapy	Efficacy of trunk and bimanual hand training on upper limb motor recovery and function after a stroke, a randomized controlled trial	1
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Manipal Institute of Technology, Manipal

Department	Topics	Seats Available
Information & Communication Technology	Estimation of Fish Size and Behavior Classification using Computer Vision and Machine Learning	1
Biotechnology	Inulinase production in SSF reactor In vitro synthesis of phytic acid and its derivatives for anticancer activity Investigation of immunomodulatory potential of enzymatically derived chito-oligosaccharides from marine chitinases Ocular drug delivery for post-cataract operations and sustained release of anti-vegF and corticosteroid drugs to treat macular edema	4
Chemical Engineering	Novel nano adsorbents for the removal of 2,4,D from aqueous solutions Optimization of biogas production Development of novel perovskite based nano materials for low temperature co oxidation	3
	Experimental studies on nano enhanced Phase Change Materials (PCM) in solar liquid desiccant air conditioner Studies and modelling of adsorption of colour from wastewater using a novel adsorbent Studies on application of hybrid nano-composite materials for effluent treatment	1
Electronics & Communication Engineering	Design and development of microwave photonic sensor	1
	Isolation and Gain enhancement of MIMO Antenna using Metamaterial based Superstrate for Wireless Communication Interval based probabilistic model of query generation for WSNs Prediction of Ruptures in Aortic Aneurysm Using Computational and Physical Simulation Customized Low Power Processor Architecture design to implement pattern recognition algorithms Fabrication and characterization of Nano particle on mirror - Al Nano Particles on Al surface- for bio-sensing applications Automatic Detection, Grading and progression prediction of Knee Osteoarthritis severity using Deep Learning techniques	2

Instrumentation & Control Engineering	Design, Analysis and Implementation of Sliding Model Controller for a Quadrotor Cyber Physical System interconnectivity and fault tolerance Design, Analysis and Implementation of Sliding Mode controller for Quadrotor UAV	3
	Design and implementation of Grid Integrated Solar PV system Embedded control system for neonatal care	1
Mechanical Engineering	Synthesis and characterization of vegetable oil bio-lubricant with nanoparticles as an additive: its effect on performance, emission and fictional behavior of a compression ignition engine Characterization of ZNO nano fibres prepared by electro-spinning technique for sensor applications Steady state and transient analysis of thermosiphon heat transport device applied to solar indoor cooking	3
	Exploration and Assessment of Post Case Hardening Treatments on Gear Alloy Steel Surface Characteristics Production and Experimental Investigation on SiC and Gr Reinforced Al2024 Hybrid Metal Matrix Composite Investigation of a solar air heater for performance enhancement using stepped turbulence generator fins Soft Computing Approach for Prediction and Optimisation of Process Output Variables during Abrasive Water Jet Machining of Plant Fiber Reinforced Polymer Composites Image processing for correlation of image features with quality of machined surface and machining parameters Characterization of Mechanical and Thermal Properties of Agricultural Waste Based Nano Natural Fiber Reinforced Polymer Composites and its Machinability Study Machinability study of hybrid natural fibre-reinforced composites	2
Computer Science & Engineering	3D reconstruction of a brain tumor for the progressive assessment of residual/recurrent tumor for neurosurgical planning	1
	Computer Based Decision Support System for Detection and Monitoring of Visual Abnormalities Enhancing the QoS parameters of IoT devices in Healthcare monitoring using Software Defined Internet of Things Framework Deep Learning Techniques for Unmanned Aerial Vehicle Network operations	1
Biomedical Engineering	Design and development of intelligent assistive devices	2

	Development of bio-ink library for skin bio-printing applications	
	Virtual Reality (VR) based assistive tool in healthcare for Rehabilitation of the disabled individuals	1
	Multi parameter signal processing approach to detect sleep apnea	
Civil Engineering/Geology	High Volume Flyash Binder systems for sustainable concrete	1
Electrical & Electronics Engineering	Voltage control in distribution network connected with distributed generators using voltage control devices	1
	Control and Operation of Radial Distribution Systems with Integration of Renewable Energy Resources	
	Power Quality Improvement of Electric Vehicle Charging Stations	
	Modelling and real time control of low frequency dynamics of flexible smart systems	
Computer Applications	Real-time Face Recognition during Video Surveillance using Deep Learning	1

Deakin-MAHE Cotutelle Program	Modeling of Nutrient Dynamics and Water quality for agriculture in Backwater: A Data Analytics Approach	1
	Source tracking pharmaceuticals and personal care products (PPCPs) in urban areas of Southwestern India	1
	A modelling approach to study diffuse source microplastics from urban environments	
	Natural Fibre Based Hybrid Composite Material for all weather UAV application	1

Dept of Science, Manipal Institute of Technology, Manipal

Department	Topics	Seats Available
Chemistry	Hypoxia Sensitive Nanoparticle Conjugates for Targeted Drug Delivery in Cancer	5
	Computational design synthesis and characterization of novel nucleosides bearing heterocyclic moieties as telomerase inhibitors for anticancer properties	
Synthesis and characterisation of antimicrobial polymers and their coating studies on the textile materials		
Nanocomposites of soft materials for electro-optic applications		
Design, synthesis and characterization of new luminescent liquid crystals and their metal/metal oxide nanocomposites for technical applications		
	Development of Anticorrosive Surface coating of Polymers of Intrinsic Micro porosity Loaded with Metal oxide Nanoparticles	1

	Green Synthesis of Heterocyclic compounds using Nanoparticles Investigation of different strategical approach for photocatalytic hydrogen evolution reaction and supercapacitor applications	
Physics	Bismuth Ferrite Thin Films: Growth and Structure-Property Correlation 2D Nanostructure based gas sensor for human health monitoring at room temperature Rare-earth doped glasses as up converters and luminescent solar concentrators in solar cells Study of optical, multiferroic and photovoltaic properties: Hexagonal manganites Study of trajectories of tetra- and pentaquarks	5
	Thermoelectric performance of doped and composite thermoelectric materials for high temperature applications Synthesis and characterization of melt grown composite thermoelectric materials for peltier cooling applications Tuning nonlinear optical properties of doped metal oxide semiconductor thin films by microwave irradiation Investigating photo response of ternary compound semiconductor thin films for solar cell applications	1
Dept of Data Sciences, PSPH, Manipal	Matrices, Generalized inverses and applications	1
Mathematics	Regularization methods for inverse problems Algebraic Hyperstructures Generalized complements and spectra of graphs	1

International Centre for Applied Science, Manipal

Department	Topics	Seats Available
Chemistry	Implementation of novel green anticorrosion inhibition for different industrially applicable metals and performing the correlation studies using the design of experiment (DOE)	1

Department of Atomic & Molecular Physics, Manipal

Department	Topics	Seats Available
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Applied Physics	<p>Design and development of 3-D quantitative phase imaging to identify cancerous cells</p> <p>Nanostructured contact lenses for improved wettability and antimicrobial activity</p> <p>Development of fibre-optic based humidity sensor for clinical applications</p> <p>Testing evaluation and in-situ validation of a stand-off laser spectroscopy system for environmental quality assessment and medical applications</p>	4
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Department of Commerce, Manipal

Department	Topics	Seats Available
Commerce	<p>Financial Markets and its contribution to the growth of Economy</p> <p>Service quality perception and patient satisfaction-A SEM approach towards primary healthcare centres (PHCS)</p> <p>Efficiency of Financial Markets in India</p> <p>Sustainable Corporate Financial Policies</p> <p>Women health and Microfinance initiatives in India: A case study of Coastal Karnataka</p> <p>The impact of insurance agents role variables and role relationship orientation on unethical sales behavior neutralization : Life Insurance perspective</p>	3 +3 *

Manipal Institute of Management, Manipal

Department	Topics	Seats Available
Manipal Institute of Management, Manipal	Impact of negative online reviews on purchase intention of high-involvement products: Moderating role of product price and brand reputation	1
Dept of Humanities, MIT, Manipal	Modelling and Simulation of Pro-environment Behaviour of Youth	1

Manipal Centre for Humanities, Manipal

Department	Topics	Seats Available
Humanities	Classical Indian Philosophy and pre-modern literary traditions	1

Manipal Centre for European Studies, Manipal

Department	Topics	Seats Available
European Studies	Cross-border education at Cross roads: Study on student mobilities in the populist political climate	1

Department of Geopolitics & International Relations, Manipal

Department	Topics	Seats Available
Geopolitics & International relations	Advances in outer space and its implications for space warfare	1

Centre for Creative and Cultural Studies, Manipal

Department	Topics	Seats Available
Centre for Creative and Cultural Studies	Cultural Studies, Cultural History, Art History, Visual Culture, Advertising and Design Theory, Media Theory, Gandhian Studies, Tagore Studies: Sub areas: Literature, music, film, folklore, fine arts-art history, visual culture, visual design , advertising and management, and related field of studies. Interdisciplinary areas: Gandhian ideas and theories, Tagore ideas and theories, media and visual culture, Society and Culture, Classical arts and folklore, arts and aesthetics, arts and religious studies, arts and management, arts and science, arts and philosophy, arts and environment	1

Welcomgroup Graduate School of Hotel Administration, Manipal

Department	Topics	Seats Available
Hospitality Management	The role of capital in product development: A study on Indian restaurant industry	1

