Campus	Faculty	Program	List major research areas	Mode of PhD Program (FT/PT/Both)
Amaravati	Computing	Computer Science and Engineering	Healthcare, AI and ML, IoT, Network Security, Under water Communication, NLP, Image Processing, DL	Full Time
Amaravati	Engineering	Electronics and Communication Engineering	VLSI & Semiconductor Technologies Quantum Computing AI in Image Processing & Healthcare Computational Electromagnetics & Metamaterials Battery Management Systems Wireless Communications Renewable Energy & Materials AI for Seismic & Geophysical Applications Biomedical Engineering & Bioinformatics Smart Manufacturing	Both

Amaravati	Physical Sciences	Mathematics	Computer Algebra Symbolic Algorithms for Differential Equations Numerical Algorithms Numerical Analysis Differential Equations — Integer and Fractional Mathematical Modelling Applications of Mathematics in Computer Science Deep Learning and Machine Learning Computer Security Applied Mathematics Generalized Thermoelasticity Wave Propagation in Material Media Hydrodynamic Stability in Porous Media Mathematical Modelling for Bioconvection Chaotic Behaviour Public-Key Cryptography Searchable Encryption and Privacy-Preserving Data Access Attribute-Based Cryptography Post-Quantum Cryptography Stochastic Models in Actuarial Science Insurance Risk Modelling Classical Risk Processes Markovian Models Statistical Modelling Time-Series Analysis and Predictive Analytics Environmental Data Science Air Quality Modelling	Both
Amritapuri	Arts, Humanities and Commerce	Philosophy	Philosophy (East and West), Ethics (East and West), Yoga Philosophy, Sanskrit Vyakarana, Sanskrit Literature, Sanskrit Education.	Both

Amritapuri	Arts, Humanities and Commerce	Commerce and Management	Environmental Sustainability Biodiversity Finance Climate Finance Green Finance Livelihood Sustainable Development Goals (SDGs)	Full Time
Amritapuri	Arts, Humanities and Commerce	Applied Sign Language Studies	Indian Sign Language Sign Linguistics Deaf Education Accessibility Assistive Technologies AI for Sign Language Language Policy Interpretation & Translation Inclusive Education experts	Both
Amritapuri	Ayurveda	Ayurveda		Part Time
Amritapuri	Computing	Computer Science and Engineering	. Computer Vision and Robotics . AI and Distributed Systems . Artificial Intelligence . Deep Learning . Complex Networks . Machine Learning . Medical Image Analysis . Computer Vision . Data Science . Pattern recognition . Graph Mining . Video Surveillance . Web Security . Assistive Technologies and Learning with Disabilities . Probability Theory . AI/ML applications in Interdisciplinary areas . Graph theory . Natural Language Processing	Both

Amritapuri	Computing	Cybersecurity	AI and Cybersecurity Digital Twins and Cybersecurity Formal Methods for Cybersecurity Game Theory for Cybersecurity Cryptanalysis for Cybersecurity Cybersecurity in Education Zero Trust Security	Full Time

Amritapuri	Engineering	Electrical and Electronics Engineering	1. AI-Enabled Intelligent Protection and Reinforcement Learning for Cyber-Resilient Smart Distribution Grids 2. Synthetic Loaf Profiling for Decentralized control & Demand side management in smart grids using ML 3. Digital Twin & Predictive Asset Intelligence in smart grid 4. AI-Assisted Monitoring and Data Analytics for Grid Assets in Smart Distribution Grids 5. Large scale VRE integration strategies and its operational resilience in smart grids 6. FACTS & Power Quality improvement in Smart Grids 7.Power quality improvement techniques, 8.Harmonics in distribution transformers, 9. Renewable energy integration to grid, 10. Power system stability with EV integration, Off shore floating charging station, Demand side management and inertia 11. Climate Smart Village Focused Ph.D. Areas: a)Climate Smart Villages and Sustainable Rural Development (b) Renewable Energy and Rural Microgrids (c) Blockchain-Based P2P Energy Trading and Electricity Markets 12.Aerial payload delivery using unmanned aerial vehicles 13.Thermal management in EV batteries	Both

Amritapuri	Engineering	Electronics and Communication Engineering	•Analog VLSI •Digital VLSI •Radio frequency and antenna engineering •Photonics and quantum information •Material science and applications •Signal processing •Communication •Embedded systems •Robotics, Control System, IoT and AI •Machine learning and computer vision •Intelligent Transportation Systems •Agricultural Technology •Non-Traditional Machining and Digital Manufacturing •Flexible Electronics •Landslide analysis	Full Time

Amritapuri	Engineering	Advanced Automation and Robotics (HuT Labs)	Modelling and improving motor drive performance for robotic actuators Design and optimization of power converters for robotic systems Real-time measurement and modelling of energy consumption in robotic systems Energy-efficient control strategies for multi-joint robotic manipulators Multi-Sensor Fusion for Autonomous Agricultural Robots AI-Driven Precision Agriculture for pest and disease management Assistive Medical Robotics for remote healthcare applications Optimization and Mathematical Modelling of Robotic Systems Multi-Sensor Fusion and Embodied AI for Autonomous Robots Agentic AI for Precision Agriculture and Smart Farming AI-Driven Medical Diagnosis, Healthcare Robotics and Digital Health Optimization, Mathematical Modelling and AI for Intelligent Robotic Systems Agentic AI and Autonomous Electric Vehicles for Precision Agriculture AI Agents and Embodied Intelligence for Telemedicine Robotics Medical Robotics, Physical AI and Intelligent	Both

Amritapuri	Engineering	Wireless Networks & Applications	Wireless Sensor Networks (WSNs) & Internet of Things (IoT) Next-Generation Wireless Communications (5G/6G & Edge Architectures) Internet of Medical Things (IoMT) & Body Area Networks (WBAN) Embedded Systems, Gateway Design & Edge Computing AI/ML for Wireless Network Optimization & Signal Processing	Full Time
Amritapuri	Physical Sciences	Chemistry	Polymer nanocomposites, Computational Chemistry, Organic synthesis, Inorganic chemistry, Organic photochemistry, Electrochemical sensors	Full Time
Amritapuri	Physical Sciences	Mathematics	• Machine Learning and Deep Learning • Physics-Informed Neural Networks (PINNs) • Metric Fixed Point Theory • Inverse Problems, Ill-Posed Problems, and Numerical Analysis • Theoretical Computer Science • Graph Theory and Combinatorics	Both
Amritapuri	Physical Sciences	Physics	Condensed matter physics - material science Atmospheric physics Satellite meteorology Computational devices and plasmonics	Both
Amritapuri	Social and Behavioral Sciences	Cognitive Sciences & Technology	1. AI and Ethics 2. Cognitive Science informed design and development of technology supported (IoT, Social IoT, AI, ML, DL, VR/AR) Learning Environments 3. Cognitive Collaboration between human and AI	Full Time
Amritapuri	Social and Behavioral Sciences	Social and Behavioral Sciences	Mental health and well-being 2. Gender-Based Violence 3. Child Rights and Child protection 4. Social Policy Evaluation	Both

Amritapuri	Social and Behavioral Sciences	Social Sciences and Technology	1. Digital Learning Technology Integration 2. Innovation and Sustainable Development 3. Indigenous Innovation, Technology and Development (IKS	Full Time
Bengaluru	Artificial Intelligence	Artificial Intelligence and Data Science	Artificial Intelligence & Machine Learning Multimodal AI: NLP, Speech, & Large Language Models AI for Healthcare & Biomedical Systems Computer Vision & Image Analytics IoT, Networking & Smart Systems Cloud, Edge, HPC & Distributed Systems Cybersecurity, Blockchain & Privacy Robotics, Control & Intelligent Systems Computational Science & Applied Mathematics AI for Agriculture, Environment & Energy Interdisciplinary & Emerging Applications Computer Architecture & Hardware Systems Remote Sensing and its Applications Ethical and Trustworthy AI in Education Responsible AI	Both
Bengaluru	Arts, Humanities and Commerce	Philosophy	Water History & Natural Resource Management Environmental History & Climate Change Governance & Sustainability	Both
Bengaluru	Arts, Humanities and Commerce	English Language and Literature	postcolonial studies,gender studies, culture studies, translation studies	Both

Bengaluru	Computing	Computer Science and Engineering	Artificial Intelligence & Machine Learning Multimodal AI: NLP, Speech, & Large Language Models AI for Healthcare & Biomedical Systems Computer Vision & Image Analytics IoT, Networking & Smart Systems Cloud, Edge, HPC & Distributed Systems Cybersecurity, Blockchain & Privacy Robotics, Control & Intelligent Systems Computational Science & Applied Mathematics AI for Agriculture, Environment & Energy Interdisciplinary & Emerging Applications Computer Architecture & Hardware Systems Remote Sensing and its Applications Ethical and Trustworthy AI in Education Responsible AI	Both
Bengaluru	Engineering	Mechanical Engineering	•Smart and Advanced Manufacturing. •Artificial Intelligence & Machine Learning. •Robotics, Automation and IoT. •Product Lifecycle Management. •Product Development and Concurrent Engineering. •Supply Chain Management. •Composite and Advanced Materials. •Tribology. •Kinematics and Dynamics of Multi-body Systems. •Computational Mechanics and Simulation. •Environmental Engineering. •Renewable Energy and Sustainable Technologies. •Heat Transfer. •Automobile Technology.	Both

Bengaluru	Engineering	Electronics and Communication Engineering	. VLSI DESIGN . IMAGE PROCESSING . NETWORK ON CHIP . PROCESSOR ARCHITECTURE . RF COMMUNICATION . MICROWAVE COMMUNICATION . WURELESS NETWORKS . 5G/6G COMMUNICATION . ROBOTICS AND ARTIFICIAL INTELLIGENCE . DATA SCIENCE . DEVICE LEVEL MODELLING . VLSI ARCHITECTURES . SOLID STATE MEMORIES . BIOMEDICAL ENGINEERING . SIGNAL PROCESSING/SPEECH PROCESSING	Both
Bengaluru	Engineering	Electrical and Electronics Engineering	1.Power Systems, Smart Grids & Energy Systems 2.Power Electronics, Drives & Electric Vehicles 3. Control Systems, Automation & Robotics 4.Artificial Intelligence, Machine Learning & Intelligent Systems 5.Embedded Systems, IoT & Cyber-Physical Systems 6.VLSI, Microelectronics & Semiconductor Devices 7.Communication Systems, RF & Signal Processing 8.Instrumentation, Sensors & Measurement Systems 9.Biomedical Instrumentation, Signal Processing & Healthcare Technologies 10.Optoelectronics, Photonics & Emerging Technologies	Both

Bengaluru	Engineering	Electronics and Communication Engineering	RF Engineering, Bio-medical Engineering, Speech Processing, Robotics, IoT, 5G/6G Mobile Communication, Processor architectures, Embedded Systems, System on Chip, Advanced Communication, Low Power VLSI Architectures, Front End Design, Physical Design, VLSI Design and verification, Digital Communication, Artificial Intelligence and Machine Learning, Natural language Processing, Optical Fiber Communication, Linear Transform Architectures, Analog VLSI Circuits, Image and Video Processing, Signal Processing	Both

Bengaluru	Management	Management	Healthcare Economics Sustainability and New Institutional Economics Health Services and Policy Technology Adoption and Society Labour Economics Sustainable Operations and Supply Chain Management Circular Economy Operations Management Technology Management SDG-Oriented Management Sustainable marketing and business performance Economics of strategy Financial Management Corporate taxation Banking Investment analysis Mindfulness and Consumer Behavior Sustainability-Oriented Consumer Psychology Artificial Intelligence and Consumer Adoption Marketing Management Virtual Influencers and Digital Marketing Disaster Management Industrial Relation & Labour Laws Organisational Behaviour & Human Resource Management (HRM) Sociology	Both

Bengaluru	Physical Sciences	Mathematics	1. Mathematics for Artificial Intelligence 2. Graph Theory 3. Optimization Technique 4. Linear Algebra 5. Mathematical Modelling 6. Mathematics for Quantum Computing 7. Fluid Mechanics 8. Numerical Methods 9. Finite Element Methods 10. Computational Fluid Dynamics 11. Computational Sciences	Full Time
Chennai	Arts, Humanities and Commerce	English Language and Literature	- Postmodern Narratology, Narrative structures, Narrative representations of crisis and collapse - Global capitalism and literary representations - Literature, Society and Social Structures (Alternative/alternate social structures, Social transformation, changing modes of social organisation) - Dystopian, Post-Apocalyptic and Speculative Fiction (imagined societies, systemic transformation, social restructuring during crises) - Literature of Crisis, Collapse and Catastrophe - Intersectionality, Ideology and Power in Literature (gender, class, intersections of social identities, marginalisation and representation, intersectional approaches to literature, responsibility, community and social relations)	Full Time

Chennai	Computing	Computer Science and Engineering	Artificial Intelligence (AI), Machine Learning (ML) and Deep Learning (DL) Generative AI, Quantum AI and Quantum Machine Learning Natural Language Processing (NLP) and Large Language Models Computer Vision, Image Processing and Multimedia Analytics Medical Image Processing and AI in Healthcare Biomedical Signal Processing and Healthcare Analytics Transfer Learning and Intelligent Classification Systems Big Data Analytics and Intelligent Data Processing Embedded AI, Edge Computing and AIoT Underwater Object Detection, Tracking and AI-enabled Vision Systems Precision Agriculture, Crop Disease Detection and Agricultural AI Remote Sensing and Environmental Monitoring Cybersecurity, Cryptography and AI Security Image Security, Biometrics and Digital Forensics Distributed, Cloud, Edge and Fog Computing Wireless Sensor Networks (WSN), IoT and Cyber-Physical Systems (CPS) Autonomous Robotics, Drones and Intelligent Systems Wireless Communication, MIMO Antennas and	Both

Chennai	Engineering	Electronics and Communication Engineering	Signal and image processing Rf and microwave Communication Embedded system Semi conductor Material VLSI Ai and ML Energy and Smart grid Vehicular communication	Both
Chennai	Engineering	Mechanical Engineering	Advanced Manufacturing Tribology Robotics Smart Manufacturing Thermal Engineering Materials Science Design Engineering	Full Time
Chennai	Physical Sciences	Mathematics	-Graph Theory -Differential and Integral equations -Control systems -Neural Networks -Data Driven modelling -Mathematics for AI	Full Time
Chennai	Physical Sciences	Physics	Hydrogen Production Electrochemical Biosensors Photo Catalytic Behaviour	Full Time

Coimbatore	Architecture	Architecture	Climate Resilience, Disaster Mitigation, High Performance Buildings, Heritage in the Built Environment, Sustainable Development, Socio Hydrology and the Built Environment, Architectural Pedagogy, Cutting Edge Technology, Landscape, Urban Planning and Urban Design, Critical Issues in the Built Environment, Architecture, Planning and allied Design Domains	Full Time
Coimbatore	Artificial Intelligence	Artificial Intelligence and Data Science	Artificial Intelligence in Robotics Healthcare Material Science Chemistry Physics Biophysics Quantum Science Biology Enterprise Mechanical Sciences	Both
Coimbatore	Arts, Humanities and Commerce	Visual Media and Communication	Advertising New Media Integrated Marketing Communication Sustainable Marketing	Full Time

Coimbatore	Arts, Humanities and Commerce	English Language and Literature	1.Disability studies 2.Eco-Humanism 3.Travel Narratives by Indian Women 4.Gender Studies 5.Northeast Indian Literature 6.Graphic Novels & Comics 7.Multiple Narratives of Ramayana & Mahabharata 8.Regional Indian Films 9.Indian popular culture 10.Cultural Studies 11. Indian Literatures in English translation 12. Travel writings 13. Food and cooking in literature 14.English Language teaching and learning 15.Children's literature 16.Trauma and Memory Narratives 17.Addiction Studies 18.Dalit & Tribal Narratives 19.Singlehood Studies 20.Indian Horror Films 21.Malayalam Cinema 22.Climate Fiction 23.Queer Studies	Full Time

Coimbatore	Computing	Computer Science and Engineering	Eutionary Optimization, Learning and Adaptive Systems Network Systems and Security Knowledge Engineering and Semantic Computing Secure Camera Network Analytics Data Science / Data Analytics Vision, Language and Intelligent Learning Cooperative Cyber-Physical Social Systems and IoT Image Analysis and Pattern Recognition	Full Time

Coimbatore	Engineering	Materials Science and Engineering	Electrochemical Energy conversion and storage a. Batteries: Si/MOF based anodes for lithium-ion batteries. b. Fuel Cells c. CO2RR - Carbon dioxide reduction reaction d. Hydrogen storage: MOF structures for hydrogen storage applications Advanced Materials for membrane fabrication in wastewater treatment Smart polymers Self-healing polymers Smart polymer ionogels Stimuli responsive polymers Sustainable chemicals and polymer synthesis – catalyst design, process optimization and application development Triboelectric nanogenerators (TENG)	Both

Coimbatore	Engineering	Chemical Engineering	Biofuels from second generation and third generation biomass using suitable heterogenous catalyst and biocatalysts Biodiesel from non-edible oil using heterogeneous and biocatalyst Biodiesel from waste cooking oil and algal oil using heterogeneous catalyst and biocatalyst Bioethanol from lignocellulosic biomass using biocatalyst Pyrolysis of algal biomass to value added products Drug delivery system Photocatalytic degradation of Pollutants Intergrated microchannel reactors for fuels for hydrogen production Catalyst development for methane partial oxidation for syngas production with varied hydrogen content Catalyst development for direct conversion of	Both
Coimbatore	Engineering	Civil Engineering	In All the areas of Civil Engineering Structures Environmental Geotechnical Transportation Construction Materials	Full Time

Coimbatore	Engineering	Electronics and Communication Engineering	•Autonomous Driving / ADAS •IoT communication and sensing systems •Wireless Communication Networks and Security •Biomedical signal and Image processing •Machine Learning / Artificial Intelligence applications •Hardware Security VLSI Design and Architecture •Physical Design and Fabrication (VLSI) •Battery Management Systems •Embedded Systems & IoT •Electric vehicles and Electrification •Signal, Image and Video Processing •Antenna Systems •Software Defined Vehicles •AI for healthcare and Biomedical applications •Remote Sensing •VLSI Testing & Security •Radio Frequency & Microwave Engineering •Automotive Electronics •Remote Sensing •Circuits and Instrumentation •Hardware Security •Hyper-Spectral Image Processing •Biomedical Systems •Artificial Intelligence applications •Image and Video Processing	Both

Coimbatore	Engineering	Aerospace Engineering	1. Aerodynamics and Fluid Mechanics * Computational Fluid Dynamics (CFD) * Experimental Aerodynamics * Aeroacoustics and Flow Control 2. Aerospace Structures and Materials * Composite and Advanced Materials * Aeroelasticity * Structural Health Monitoring 3. Flight Mechanics, Guidance and Control * Guidance, Navigation and Control (GNC) * Nonlinear and Adaptive Control * Autonomous Flight Systems * Multi-UAV Coordination and Swarm Systems 4. Aerospace Propulsion and Combustion * Gas Turbines and Turbomachinery * Rocket Propulsion * Combustion and Flame Dynamics * Spray and Atomization * Propulsion System Design and Optimization 5. Aircraft and UAV Systems * Aircraft Design and Multidisciplinary Optimization * UAV and Micro-Air-Vehicle Design * Autonomous and Intelligent Aerial Systems * Novel and Unconventional Aircraft Configurations * Artificial Intelligence and Machine Learning in Aerospace	Both
Coimbatore	Engineering	Electrical and Electronics Engineering	Electric Vehicle, Power Quality, Power Market, Low Power Embedded System, Signal Processing, Robotics,Smart Grid	Both

Coimbatore	Engineering	Mechanical Engineering	Thermal and Fluids Engg: Combustion, Wind Turbines, Battery modeling and cooling, BTMS, IC Engines, Spray Injector design Manufacturing: Welding, forming, FEM for manufacturing Processes, AL/ML application for condition monitoring Materials: Mg Alloys design, High Entropy alloys etc Robotics and Automation	Both
Coimbatore	Engineering	Cybersecurity	1. Cryptography and Cryptanalysis, 2. Post-Quantum Cryptography (PQC), 3. AI/ML for Cybersecurity and Security of AI/ML Systems, 4. Formal Methods and Security Verification, 5. Network and Communication Security, 6. Software and Application Security, 7. IoT, CPS and IIoT Security	Both
Coimbatore	Management	Management	•Marketing Management •Human Resource Management (HRM) & Organizational Behaviour (OB) •Finance & Accounting •Operations & Supply Chain Management •Business Analytics & Information Systems •Strategic Management •Entrepreneurship •Healthcare Management •Sports Management •Education Management •Business Sustainability & ESG Management •Economics & Business Environment •Interdisciplinary Management Research	Both

Coimbatore	Physical Sciences	Environmental Science	Natural Resources Management, Sustainable Development, Waste Management, Water, Sanitation, and Hygiene, Climate Action, Biodiversity Conservation, Environmental Pollution	Full Time
Coimbatore	Physical Sciences	Mathematics	•Mathematics •Statistics •Data Sciences •Computer Science	Full Time
Coimbatore	Physical Sciences	Food Science and Nutrition	Community Nutrition and Public Health Maternal and Child Nutrition Food Fortification Functional foods & Nutraceutical Development GI Tagged Foods, Biodegradable packaging Novel food product development Waste Valorisation Natural plant processing Green extraction Food Chemistry Proteomics Oncology Nutrition Food fermentation Food microbiology Grain Storage Millet Processing Food Process Engineering Food Packaging Process Equipment Design	Full Time
Coimbatore	Physical Sciences	Physics	Electrochemical Energy Storage system, Hydrovoltaic, Nanomaterials, semiconductors, theoretical physics (Nuclear, Astro, Quantum), Photocatalysis, Nanobiomaterials, Solar cells, Ceramics.	Full Time

Faridabad	Social and Behavioral Sciences	Social and Behavioral Sciences	- Implementation Science - Gender Equality - Critical Masculinities - Sustainable Development - Public Policy - Rural Development - Equity & Inclusion in STI - Innovation and technology policy	Both
Kochi	Arts, Humanities and Commerce	Visual Media and Communication	Animation and Motion Graphics Visual Media and Communication Indian Aesthetics and Semiotics 3D Design and Virtual Reality Space Visual Arts Mass Communication and Technology Digital Media and Journalism Communication Technology and Media Innovation Media Consumption and Audience Behaviour Convergence of Media Platforms Emerging Trends in Media Production and Dissemination Newsroom Automation	Full Time
Kochi	Engineering	Computer Science & IT	Computational Biology Computer Vision Security in Cyber Physical Systems Vehicle Route Optimization Food safety Using Blockchain Resource provisioning and De-provisioning in Cloud Computing Climate Modelling	Full Time

Kochi	Management	Management	Finance General Management Business Analytics Operations Management Marketing Organisational Behaviour and Human Resource Management AI Driven HRM Public Health and Healthcare Management Human Resource Management ESG and Sustainability Reporting	Full Time
Mysuru	Computing	Computer Science & IT	*Computer Vision * Healthcare Computing * BioSciences and Computing * Cybersecurity and Security * Networking	Full Time
Mysuru	Management	Management	* Sustainability, ESG,CSR * Finance * Analytics and AI * HR * Marketing * Decision Sciences	Full Time
Mysuru	Physical Sciences	Mathematics	* Mathematics	Both
Nagercoil	Arts, Humanities and Commerce	Amritadarshanam		Both

Nagercoil	Computing	Computer Science and Engineering	Computer Vision and Deep Learning Data Science and Big Data Analytics Cybersecurity and Privacy Cloud Computing and Distributed Systems Internet of Things (IoT) and Edge Computing Blockchain and Secure Transactions Natural Language Processing and Knowledge Engineering Embedded Systems and Intelligent Robotics	Both
Nagercoil	Engineering	Electronics and Communication Engineering	. Biomedical Signal and Image Processing . VLSI Design . Embedded Systems and IoT . Wireless Communication . Artificial Intelligence in Healthcare	Both
Nagercoil	Physical Sciences	Physics	Nanomaterials Energy Materials Computational Spectroscopy	Both