JSS ACADEMY OF HIGHER EDUCATION & RESEARCH
(DEEMED TO BE UNIVERSITY) MYSURU

India's First

AI-Integrated Pharmacy Programs

JSS College of Pharmacy, Ooty

Join Now!

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Bachelor of Pharmacy (B.Pharm) with Integrated AI Focus

Duration 4 Years

Objective : To produce pharmacy graduates who are proficient in pharmaceutical sciences & possess strong foundational skills in **Artificial Intelligence (AI), Data science & Digital Healthcare Technologies.**

Key Features

- AI modules embedded in existing PCI-aligned subjects
- Hands-on training with AI platforms & real-world datasets
- Special AI-focused electives in Years 3 & 4
- Capstone project applying AI in pharmacy practice or R&D

AI Curriculum Highlights

Year	Integrated Subjects	AI Content
Year 1	Biostatistics & Computer Applications	Basics of AI, Python, Data visualization
Year 2	Organic Chemistry, Pharmaceutics	QSAR, Simulation, Molecular Modeling
Year 3	Pharmacology, Hospital Pharmacy	CDSS, adverse event prediction, AI in pharmacogenomics
Year 4	Jurisprudence, Project	AI ethics, regulatory compliance, AI-driven pharmacy projects

Master of Pharmacy (M. Pharm) with Integrated AI Focus

Duration 2 Years

Objective : To develop domain-specific experts with advanced skills in applying **AI for research, innovation,** & **industrial excellence.**

AI Integration Across Specializations

Pharmacology AI in preclinical research, Trial Design, Pharmacovigilance	**Pharmaceutics** AI in formulation optimization, scale-up, smart drug delivery	**Regulatory Affairs** Automated compliance, AI-based dossier management
Pharmacy Practice Personalized medicine, AI-based clinical decision tools	**Pharmaceutical Chemistry** In silico modeling, predictive drug design	**Pharmaceutical Analysis** Automated compliance, AI-based dossier management
Quality Assurance AI Enhanced QbD & PAT in process manufacturing technology	**Pharmaceutical Biotechnology** AI-Driven Enzyme Design & Engineering	**Pharmacognosy** AI-Driven Phytochemistry & AI enabled Herbal Drug Validation

Add-ons

- Electives on “AI in Healthcare and Drug Development”
- Internships with pharma tech companies
- AI-driven thesis/dissertation

Doctor of Pharmacy (Pharm.D)

Duration 6 Years

with AI & Digital Health Integration

Objective : To train clinical pharmacists to work in AI-enabled healthcare environments, supporting personalized care and real-time interventions.

Key Enhancements

AI concepts introduced in clinical pharmacy, hospital rotations

Use of predictive analytics for adverse drug reaction monitoring

AI-based medication therapy management (MTM) tools

Integration of telehealth, wearable data, and mobile health applications

AI-Focused Curriculum Threads

Year	Focus Area	AI Integration
Year 3	Pathophysiology, Therapeutics	Pattern recognition, Treatment analytics
Year 4	Clinical Pharmacy	CDSS, AI in patient safety & counseling
Year 5	Clerkship & Rotations	Real-time data monitoring, pharmacovigilance tools
Year 6	Project	Digital health intervention using AI-driven platforms

Cross-Program Support Infrastructure

PharmAIcist Skill Lab
Dedicated space for AI learning and projects

Faculty Training
Continuous AI-Pharma pedagogy upskilling

Industry Partnerships
With IBM, AWS, Google Health, pharma AI startups

Digital Tools Used
Python, KNIME, BioRender, IBM Watson, Jupyter Notebooks

Outcome: Graduates from JSS AHER's pharmacy programs will not only meet traditional competencies but emerge as AI-enabled pharmacy professionals ready to innovate, lead, and redefine healthcare.