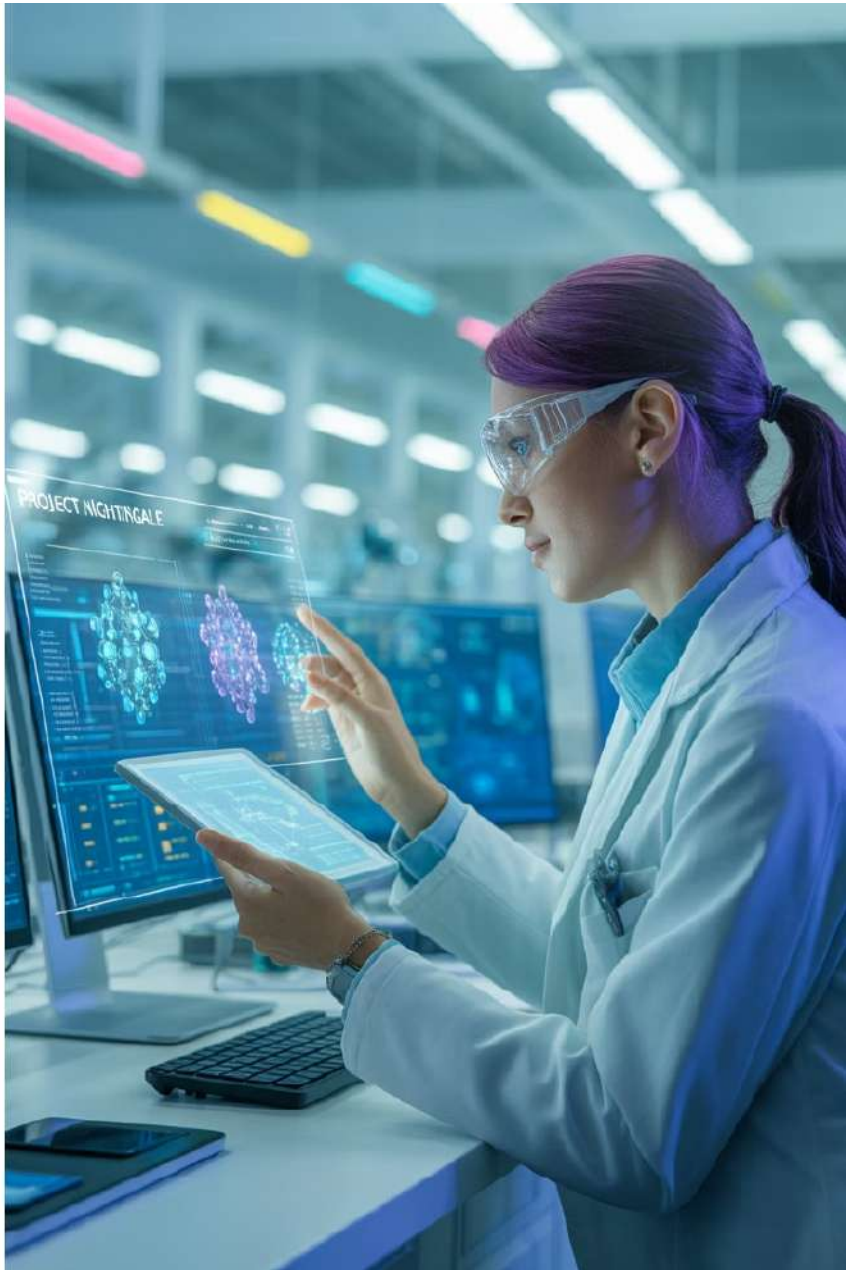
Certificate Course in Artificial Intelligence in Life Science

School of Life Science - Skill Development Training & Research



🎯 Course Overview

Transform your career in life sciences with cutting-edge Artificial Intelligence skills! This comprehensive 6-month certificate program is designed to bridge the gap between traditional life science expertise and modern AI applications, empowering professionals to leverage AI technologies across pharmaceuticals, healthcare, medical devices, and biotechnology sectors.

Course Highlights

Duration

6 Months

(4 months coursework + 2 months projects)

Format

Virtual Weekend Classes

(Saturdays & Sundays)

Study Hours

32 hours intensive learning

+ 18 hours hands-on projects

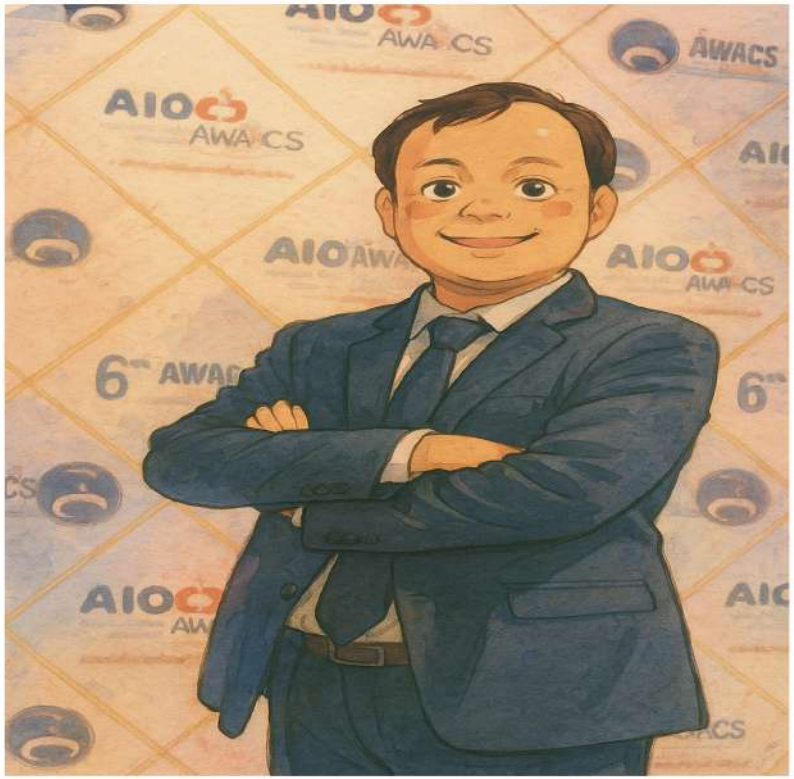
Investment

₹10,000 + Taxes

Certification

Industry-recognized certificate upon successful completion

👨‍🏫 Meet Your Expert Faculty



Dr. Manasranjan Rout

Renowned Strategy Consultant & Generative AI Expert in Life Sciences

With over two decades of transformative experience in life sciences, Dr. Rout brings unparalleled expertise in bridging traditional pharmaceutical knowledge with cutting-edge AI applications.

Professional Credentials

Industry Experience

23+ years of extensive experience in Life Sciences

Entrepreneurial Leadership

Successful Life Science Entrepreneur & Pharma Career Coach

Founding Director

Impeerical Consulting (Pvt.) Ltd.

CEO & Founder

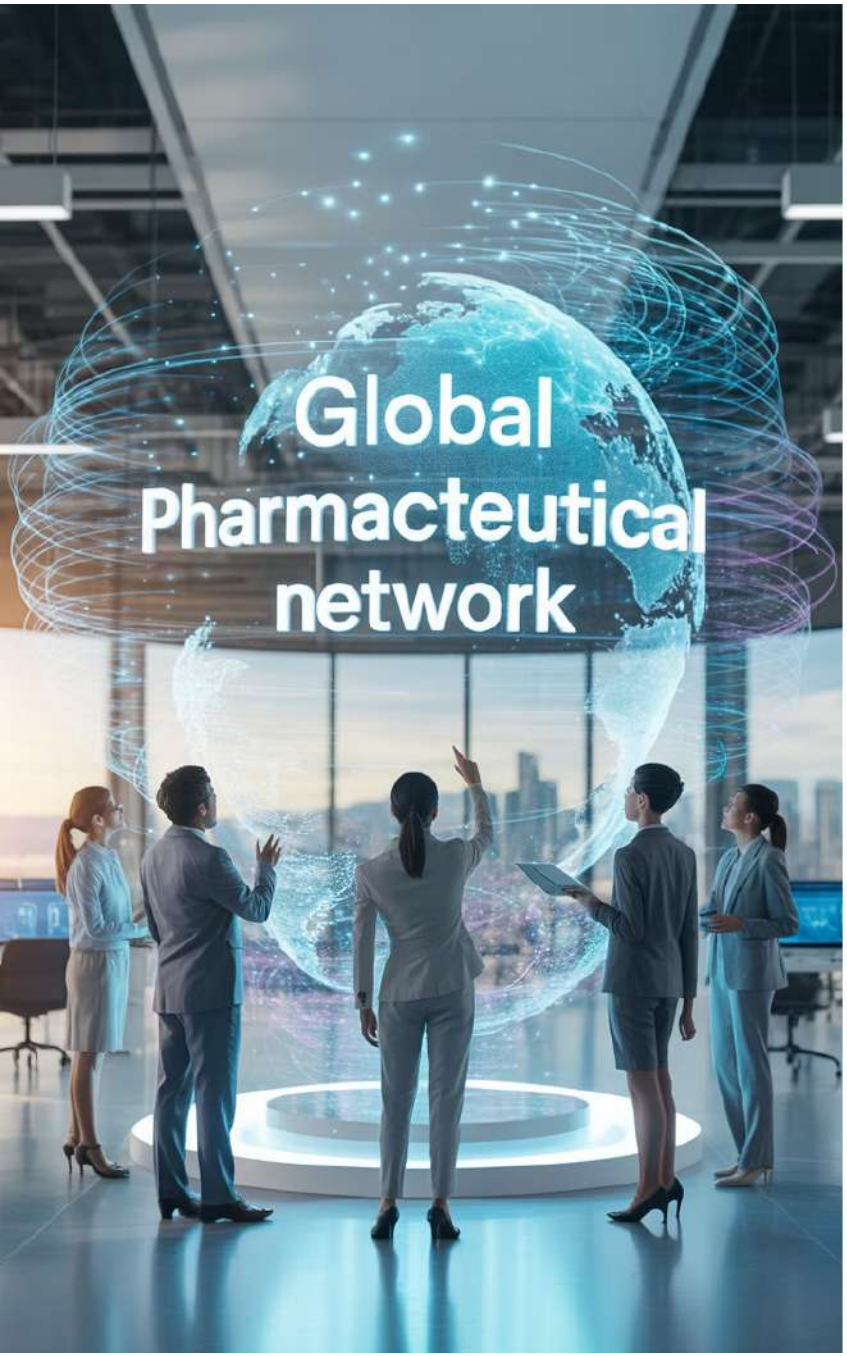
School of Life Science-Skill Development Training and Research

Executive Positions

Former Vice President, Strategic Analysis INC (Asia Pacific, Africa & Middle East)

International Experience

Former Country Manager, Torrent Pharmaceuticals (East Africa)



Academic Excellence & Industry Impact

Academic Qualifications

- Doctor of Philosophy (Honoris Causa), Strategy Marketing, Theophany University, USA
- IIM Kozhikode - Strategic Management
- PGDM, Symbiosis International University - Marketing
- Bachelor of Commerce, Osmania University

Industry Impact

5000+

Projects Completed

Across pharmaceuticals and healthcare

500+

Global Clients

Leading pharma companies, medical device manufacturers, hospitals

- Mentor & Advisor to pharmaceutical startups
- Professor of Practice, MVN University, Haryana

📚 Detailed Course Curriculum

A meticulously designed curriculum that transforms life science professionals into AI-powered innovators through hands-on learning and real-world applications.

Module 1: Foundation of Artificial Intelligence

1

Duration: 8 Hours

Week 1-2: AI Fundamentals

Core Learning Topics

AI Evolution & Current State

Introduction to Artificial Intelligence: History, Evolution & Current State

Machine Learning Fundamentals

Understanding Machine Learning, Deep Learning, and Neural Networks

AI Classifications

Types of AI: Narrow AI vs General AI vs Super AI

Ethics & Responsibility

AI Ethics and Responsible AI Development

Industry Applications

Overview of AI Applications Across Industries

Practical Components

- Setting up AI development environment
- Basic AI terminology and concepts workshop
- Case studies of AI success stories in life sciences

Module 2: AI Tools and Platforms Mastery

1

Duration: 12 Hours

Week 3-6: Comprehensive Tool Training

Conversational AI Platforms

ChatGPT

Advanced prompt engineering, API integration, custom GPTs for life science applications

Claude

Scientific literature analysis, research assistance, regulatory document processing

Perplexity

Research methodology, citation tracking, evidence-based analysis

Gemini

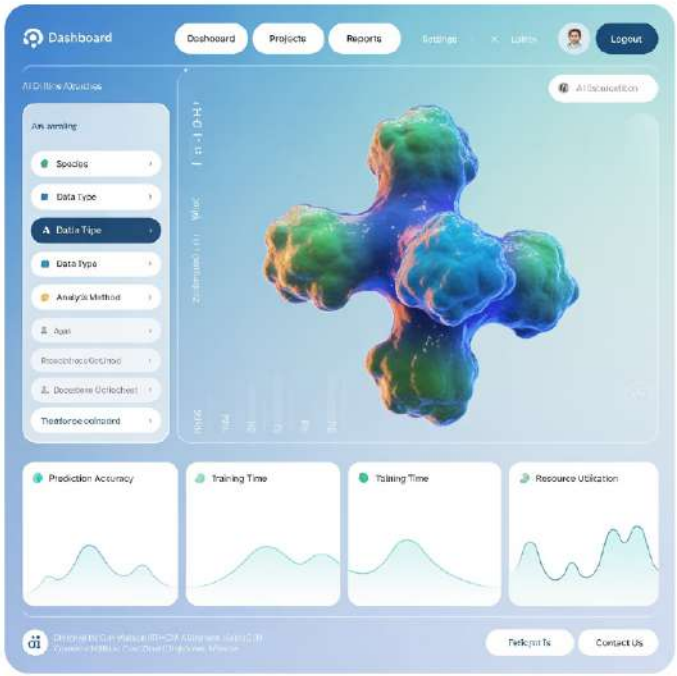
Multimodal analysis, image processing for medical imaging

Grok

Real-time data analysis and trend identification

Specialized AI Tools

- **Gamma:** AI-powered presentation creation for scientific conferences
- **Data Squirrel:** Advanced data analytics and visualization for clinical trials
- **Tableau with AI:** Predictive analytics for market research
- **Python-based AI Libraries:** Introduction to TensorFlow, PyTorch for life science applications



Hands-on Training Components

01

AI-Powered Research Workflows

Creating comprehensive research workflows that integrate multiple AI tools for enhanced productivity and accuracy in life science research.

02

Custom AI Assistants

Building specialized AI assistants tailored for pharmaceutical research, including drug discovery, clinical trial management, and regulatory compliance.

03

Automation Implementation

Automating repetitive tasks in life science operations, from data entry to report generation, increasing efficiency and reducing human error.

Module 3: AI Applications in Life Science Sectors

1
Duration: 12 Hours **Week 7-10: Sector-Specific Applications**

Pharmaceutical Industry

Drug Discovery

Drug Discovery and Development acceleration using AI

Molecular design and compound optimization

Clinical Trials

Clinical trial optimization and patient recruitment

Predictive analytics for trial success

Regulatory Affairs

Regulatory affairs automation and compliance monitoring

Pharmacovigilance and adverse event detection

Market Access

Market access and pricing strategies using AI analytics

Competitive intelligence and forecasting

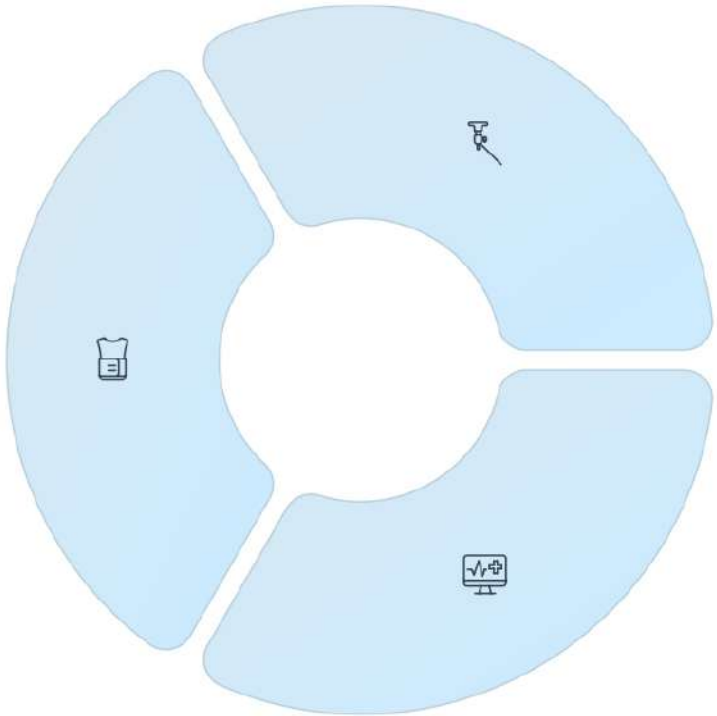
Healthcare and Hospitals

- AI-powered diagnostic tools and medical imaging analysis
- Electronic Health Records (EHR) optimization
- Predictive analytics for patient outcomes
- Hospital operations management and resource allocation
- Telemedicine integration with AI chatbots
- Population health management

Medical Devices & Advanced Applications

Medical Devices

- AI-enabled medical device development
- Predictive maintenance for medical equipment
- Quality control and manufacturing optimization
- Regulatory pathway navigation using AI



Surgical Consumables

- Supply chain optimization using predictive analytics
- Quality assurance and batch testing automation
- Market intelligence and competitive analysis
- Customer behavior analysis and sales forecasting

Medical Technology

- Post-market surveillance and real-world evidence generation
- AI-powered quality management systems
- Regulatory compliance automation
- Innovation pipeline optimization

Module 4: Advanced AI Implementation Strategies

1

Duration: 8 Hours

Week 11-12: Strategic Applications

AI Project Management

AI project management and implementation roadmaps

Cultural Transformation

Building AI-ready organizational culture

Data Governance

Data governance and privacy in healthcare AI

Regulatory Considerations

Regulatory considerations for AI in life sciences

ROI & KPI Tracking

ROI measurement and KPI tracking for AI initiatives

Future Trends

Future trends and emerging technologies

Module 5: Practical Projects and Case Studies

1

Duration: 18 Hours

Month 5-6: Hands-on Project Work

Project Options (Choose 2):

Pharmaceutical Market Analysis Project

- Use AI tools to analyze therapeutic area opportunities
- Competitive intelligence gathering and analysis
- Market entry strategy development using AI insights

Clinical Trial Optimization Project

- Design AI-powered patient recruitment strategies
- Predictive modeling for trial success rates
- Risk assessment and mitigation planning

Healthcare Operations Improvement Project

- Develop AI chatbot for patient engagement
- Create predictive models for resource planning
- Design quality improvement workflows

Medical Device Innovation Project

- AI-enabled product development conceptualization
- Market research and validation using AI tools
- Regulatory strategy formulation

Personalized Medicine Initiative

- Genomic data analysis using AI platforms
- Treatment recommendation algorithms
- Patient stratification models

🎯 Learning Outcomes

Upon successful completion, participants will be able to:

Understand and Apply AI Fundamentals

Master AI fundamentals in life science contexts with practical applications

Master Multiple AI Platforms

Proficiently use various AI tools for professional applications

Develop Sector-Specific AI Solutions

Create tailored solutions for pharmaceuticals, healthcare, and medical devices

Create Strategic AI Implementation Plans

Design comprehensive implementation strategies for organizations

Execute End-to-End AI Projects

Deliver complete projects with measurable business impact

Navigate Regulatory and Ethical Considerations

Ensure compliance with healthcare AI regulations and ethics

Build Career Advancement Opportunities

Position yourself for leadership roles in AI-enabled life sciences

👥 Who Should Enroll

Primary Audience

- **Students & Early Career**

  Pharmaceutical Students seeking AI specialization

- **Pharmaceutical Professionals**

  R&D, Marketing, Sales, Regulatory Affairs professionals

- **Healthcare Sector**

  Healthcare administrators and clinicians

- **Medical Device Industry**

  Engineers and product managers

- **Biotechnology**

  Researchers and analysts

- **Consultants & Entrepreneurs**

  Life science consultants and entrepreneurs

Prerequisites

- Bachelor's degree in life sciences, biotechnology, Pharmacy, Biomedical engineering, or related field
- Basic computer literacy
- Interest in technology and innovation
- No prior AI experience required

Course Schedule

1

Weekend Classes

Every Saturday & Sunday

Duration: 6 Months

2

Study Format

- Interactive live sessions
- Hands-on workshops
- Group projects and peer learning
- One-on-one mentoring sessions

3

Timeline Structure

Months 1-4: Core curriculum and tool training (32 hours)

Months 5-6: Project implementation and presentation (18 hours)

💡 Unique Value Propositions

Industry-First Curriculum

- First-of-its-kind AI program specifically designed for life sciences
- Practical, hands-on approach with real-world applications
- Industry-relevant case studies and projects

Expert-Led Training

- Learn from Dr. Manasranjan Rout's 23+ years of industry experience
- Access to extensive network of life science professionals
- Mentorship from successful entrepreneurs and consultants

Flexible Learning Format

- Weekend-only classes for working professionals
- Virtual platform accessible from anywhere
- Recorded sessions for review and reference

Career Advancement Support

- Industry networking opportunities
- LinkedIn profile optimization
- Interview preparation for AI-enabled roles

🏆 Certification and Recognition

Certificate Features

Industry Recognition

Industry-recognized certification from School of Life Science – Skill Development and Training

Digital Credentials

Digital badge for LinkedIn and professional profiles

Continuing Education

Continuing education access and alumni network

Assessment Methods

- Weekly assignments and quizzes
- Mid-term practical examinations
- Final project presentation
- Peer evaluation and feedback

🚀 Take the Next Step

Join the AI Revolution in Life Sciences!

Transform your career with cutting-edge skills that are reshaping the industry.

Limited Seats Available

Enroll Today!

Early Bird Discount

Register before [Date] and **save 10%** on course fees

💰 Investment and Registration

Course Fee: ₹10,000 + Taxes

Payment Options:

- One-time payment with 10% early bird discount
- Monthly installments available
- Corporate group discounts for 3+ participants

Registration Process:

01

Submit Application

Complete online application form

02

Consultation Call

Initial consultation with program coordinator

03

Payment & Confirmation

Fee payment and seat confirmation

04

Access Materials

Pre-course material and platform access

Disclaimer: This program is designed for educational purposes. Practical implementation should always comply with relevant regulatory requirements and organizational policies.