

PG Certificate Programme in
**Manufacturing
Management
& Analytics**

IIM Tiruchirappalli

Batch 02



Position in
Outlook ICARE 2021



as per NIRF - 2022



as per India Today
MDRA 2020



Leadership &
Innovation Award 2020
in the Business School
Category by HEF

About IIM Tiruchirappalli

IIM Tiruchirappalli (IIMT) is one of the fastest-growing second-generation IIMs with a full-fledged state-of-the-art campus spread over 176 acres. Started in 2011, the institute has established its name as one of the premier management institutions with capabilities in creating and disseminating management knowledge. The institute has over 33 faculty members with strong academic and industrial experience.

Faculty members are from leading management educational institutions both from India, like IIMs and IITs, and also from foreign universities. The institute, apart from running the flagship Post Graduate Programme in Management, also has doctoral programmes and postgraduate programmes in business management for working managers.

IIM Tiruchirappalli was conferred with the Leadership & Innovation Award: 2020 in the Business School Category by the Higher Education Forum (HEF) at the 11th HEF Annual Convention. The Institute is placed 7th among top B-Schools in Outlook-ICARE India MBA Rankings 2020.

IIM Tiruchirappalli has been placed at 18th rank by the National Institutional Ranking Framework, Ministry of Human Resource Development, Government of India (2022) in the category of Management Institutions. The eLearning Centre of Executive Education and Consultancy (EEC) furthers the mission of IIMT to reach out to aspiring executives keeping in mind their time and location constraints.

The e-learning programmes enable IIMT to foray into the online Executive Education space with a single-minded focus to make quality management education contemporary, conveniently accessible and affordable.



IIM Tiruchirappali Director's Message



Prof. Pawan Kumar Singh
Director

Indian Institute of Management Tiruchirappalli (IIMT) is the 11th IIM established by the Government of India in 2011 and has completed the 10-year milestone. Tiruchirappalli is a vibrant city widely known for its art and culture that dates back to thousands of years. Now the city is the hub of educational institutions, scholastic centres, and modern industries. Our Institute is transcending to new heights and stands true to its motto: 'Gyaanam Anantam' which means 'Knowledge is Infinite'. Continuous learning is the foundation for better value creation and IIMT aspires to instil in its students an unceasing desire to learn. The institute proudly takes on the responsibility

of shaping the students into leaders of tomorrow who would be the catalysts of change for the betterment of society. IIMT is functioning from its sprawling state-of-the-art campus spread over 175 acres of land, situated about 11 km from Tiruchirappalli International Airport.

Our mission is to nurture a learning environment that assimilates, disseminates, and creates knowledge of global standards adding value to the society and nation. Starting journey with an intake of 84 students, today we host over 500 students and offer diverse Programmes such as: Post Graduate Programme in Management (PGPM); Post Graduate Programme in Management – Human Resources (PGPM - HRM), Doctoral Programme in Management (DPM), Executive Doctoral Programme in Management (EDPM) and Post Graduate Programme in Business Management (PGPBM) for the working executives. The Executive Education & Consulting under IIM Trichy offers both short duration and long duration programmes, Faculty Development Programmes, and e-Learning Programmes especially designed to enhance the skills and knowledge of the corporate managers. Through a carefully designed curriculum, we shape our students as future leaders with a deeper understanding. We also strive to create dynamic and innovative entrepreneurs who could bring positive changes in Society.

Our strength comes from our faculty members and dedicated staff. Our faculty possess the highest level of innovative and interactive skills. They not only impart knowledge but also instil the core values and ethos of invincible Indian culture. We develop a spirit of enquiry into the minds of our students and for fruitful purposes invite them to challenge the existing paradigms. High-quality research is always an integral part of IIMT culture. Our thoughtfully created Learning Resource Centre helps the faculty and research scholars to ponder over their ideas in an exquisite academic ambience and produce world-class research output. IIM Tiruchirappalli has expanded its horizons by entering into various collaborations with academia and industry. We have signed agreements of academic cooperation with reputed institutions across the world. Through projects like 'Make a Difference', we imbibe social and national commitments in our students.

We take pride in who we are. We do not fixate on past accomplishments and constantly look for innovative ways to establish our vision to be a leading management institution with a significant impact on business and society. We believe that the Institute has the potential to be transformed into one of the best world-class management schools in India. We invite every stakeholder of society to join us in this journey of spreading value-based management education.

Profile of the Programme Directors



Prof. Sivakumar S

Operations Management & Decision Sciences

Sivakumar S is an Assistant Professor in OM & DS Area at IIM Tiruchirappalli. He brings a blend of outstanding academic and professional track record, high quality research publications, with rich consulting and industry experience. He holds a Bachelor's degree in Mechanical Engineering from NIT Trichy, and a Post Graduate Diploma in Management from IIM Bangalore. He is a doctoral fellow of IIM Bangalore in the area of Production and Operations Management. He was the winner of SAP Labs merit scholarship during his doctoral programme at IIM, Bangalore. He has an industry work experience of 14 years with Wipro Technologies including 7 years of experience in Europe and USA. During his professional career, he played diverse roles in solution design & consulting, delivery operations, project management, account management, mining sales, domain competency development, and corporate training. His research interests include management of service operations, supply chains & sourcing, and Industry 4.0 transformation.



Prof. Pravin Tambe

Operations Management & Decision Sciences

Dr. Pravin P. Tambe is an Assistant Professor in the Operations Management Decision Sciences area at IIM Tiruchirappalli. He holds a Ph.D. from Indian Institute of Technology(IIT) Delhi and M.Tech in Industrial Engineering. Earlier, he worked in Piaggio Vehicles Pvt. Ltd. and Skoda Auto India Pvt. Ltd. He has over 16 years of academic experience of teaching in management and engineering institutions. His areas of interest include Production and Operations Management, Project Management, Manufacturing Systems, etc. He has published research papers in reputed international journals by Elsevier, Emerald, Springer, etc., in the areas of Operations Planning, Reliability, Maintenance Planning, Quality Control, Production Scheduling and Optimization. He has also contributed to several international conferences by presenting papers and serving as track chair, session chair, etc. He is a reviewer for many international journals like Computers, Industrial Engineering, Reliability, Engineering System Safety, European Journal of Operational Research, Journal of Manufacturing Technology Management and several international conferences like Productions and Operations Management Society (POMS), Industrial Engineering and Operations Management (IEOM), etc. He received the prestigious Fellowship award of Indian Institution of Industrial Engineering for his excellent contribution in the field of Industrial Engineering.



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Growth Opportunities in the Indian Manufacturing Industry

India's manufacturing sector has been evolving and growing rapidly over the last few years driven by various factors like positive investment sentiment, robust demand, policy support and resource advantages.



Policy Support

- Government aims to achieve 25% GDP share from Manufacturing Industry in 2022
- Production Linked Incentive Schemes for Electronics Manufacturing
- Initiatives like 'Make in India' and 'Atmanirbhar Bharat' transforming India into a Global Manufacturing Hub
- 100% FDI in through automatic routes in multiple sectors
- Large scale investments in Green Technology



Robust Demand

- Increasing domestic and export markets with a bulging middle class
- Robust internal demand by government for building Smart cities
- Increased demand for Electronics because of "all things" virtual during lockdown



Resource Advantage

- Access to rich natural resources- Metals, Minerals, Solar Insulation, Cotton, etc.
- Increasing share of young working population
- Access to homegrown technology and superior IT capabilities



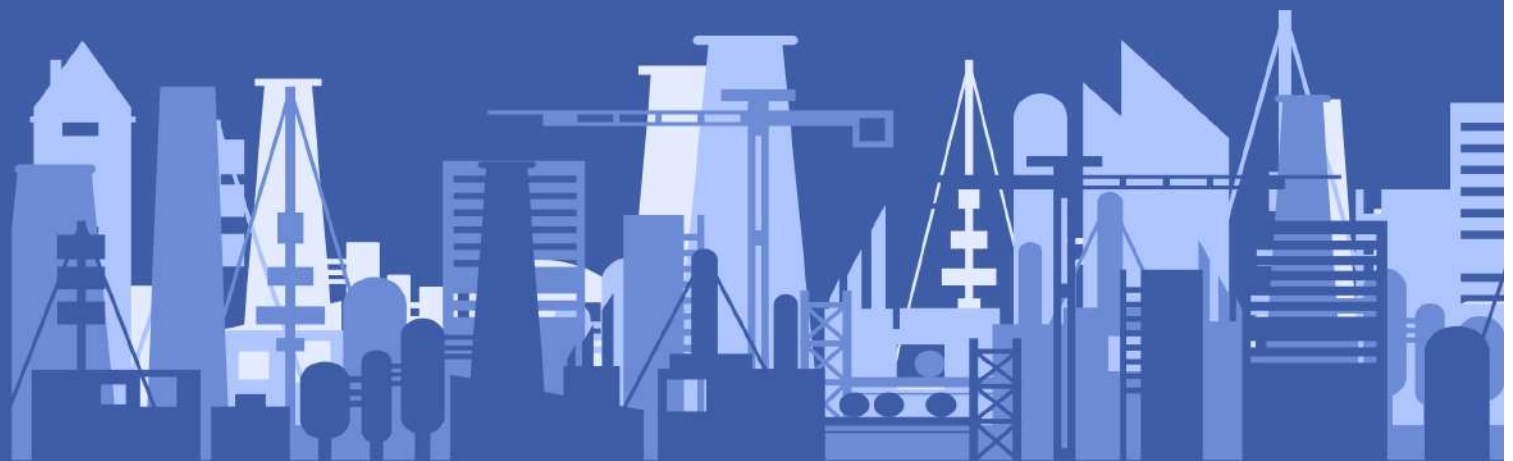
Investment Growth

- Investments by Large Contract Manufacturers like Foxconn, Pegatron
- Investments in Lithium-Ion Battery Manufacturing to support growth in Electric Vehicle Industry
- Investments by large banks, Venture Capital and Private Equity firms in Indian Manufacturing Startups



**“No country is ever successful
in the long term without a really
strong and vibrant manufacturing base”**

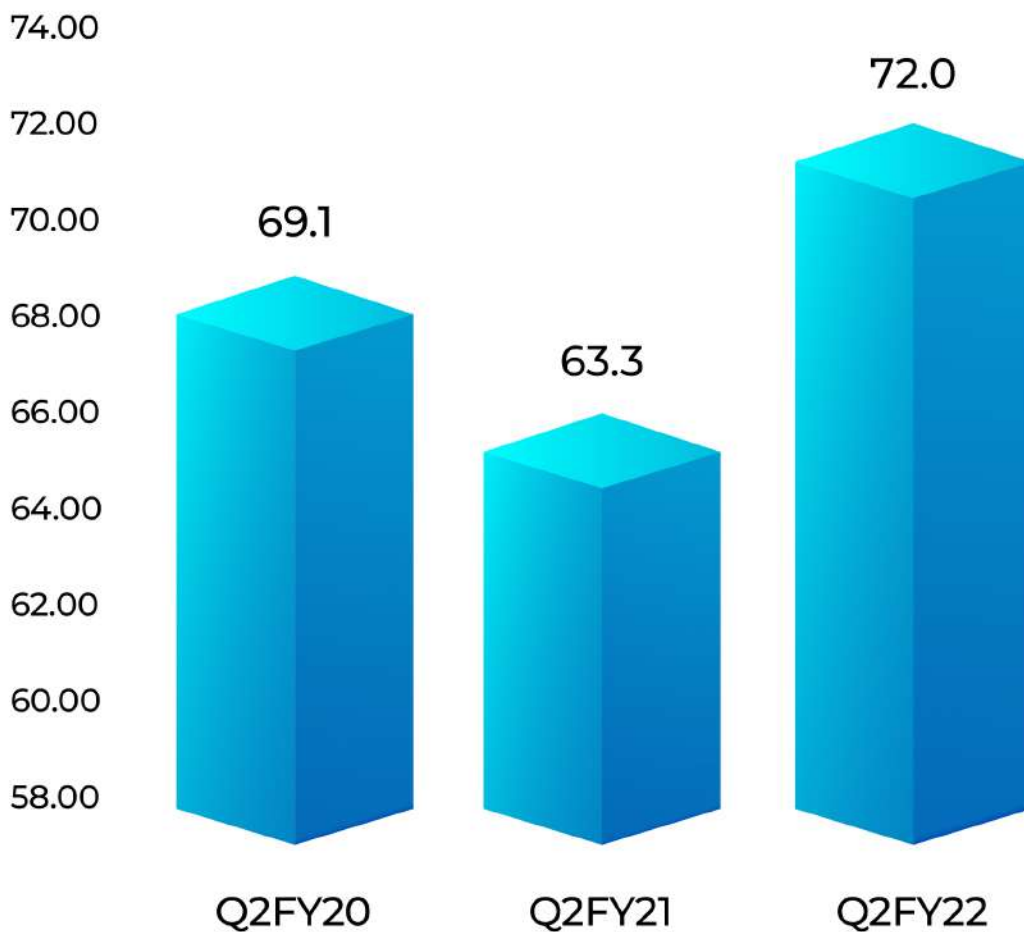
-Alan Mulally, Former CEO - Ford Motor Company



New Growth Formula in Manufacturing Industry

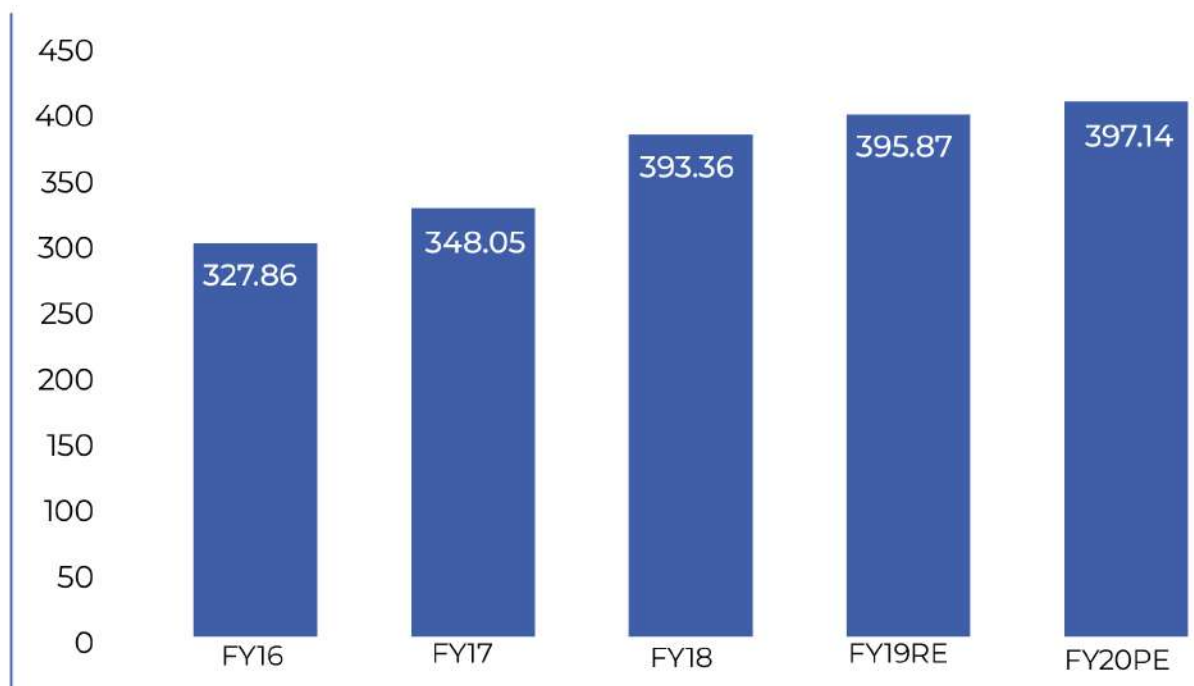
“The manufacturing sector of India has the potential to reach US\$ 1 trillion by 2025.”

Capacity Utilisation in Manufacturing Sector (in %)



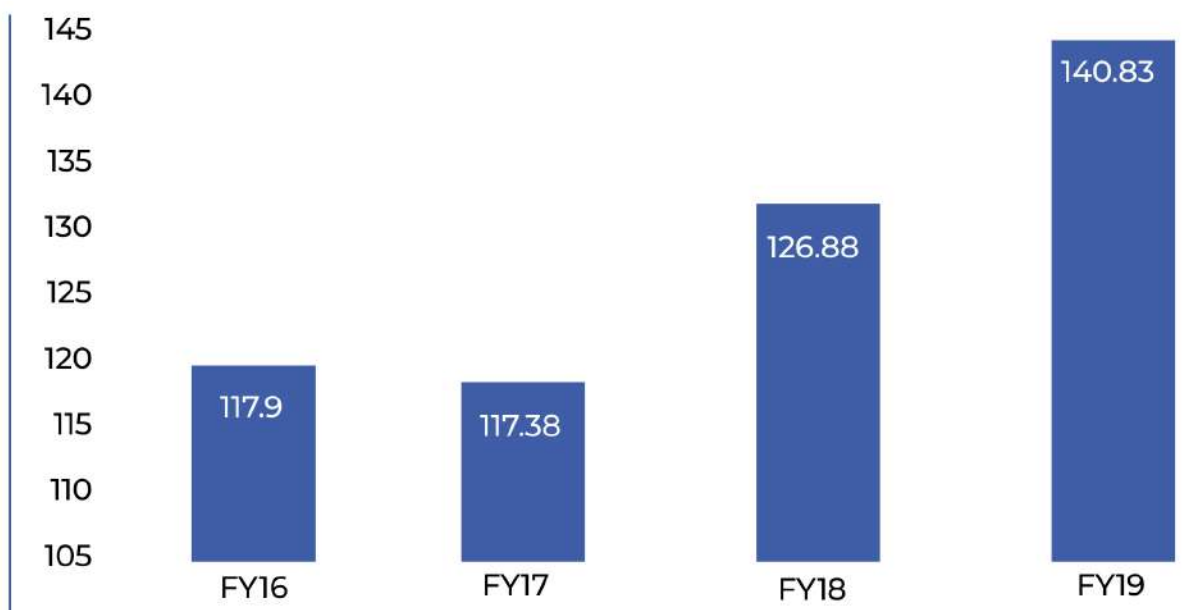
“Manufacturing Analytics Market to attain USD 29.41 billion in revenue while increasing its growth with a 17.16% CAGR by 2030.”

Gross Value Added of Manufacturing Sector* (US\$ Billion)



*At Basic Current Prices Source. PE - Provisional Estimate, RE - First Revised Estimates. Source: MoSPI

Gross Capital Formation of Manufacturing Sector* (US \$ Billion)



At Basic Current Prices Source. PE - Provisional Estimate, RE - First Revised Estimates. Source: IBEF

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**“Manufacturing is more than just putting parts together.
It's coming up with ideas, testing principles and
perfecting the engineering, as well as final
assembly”**

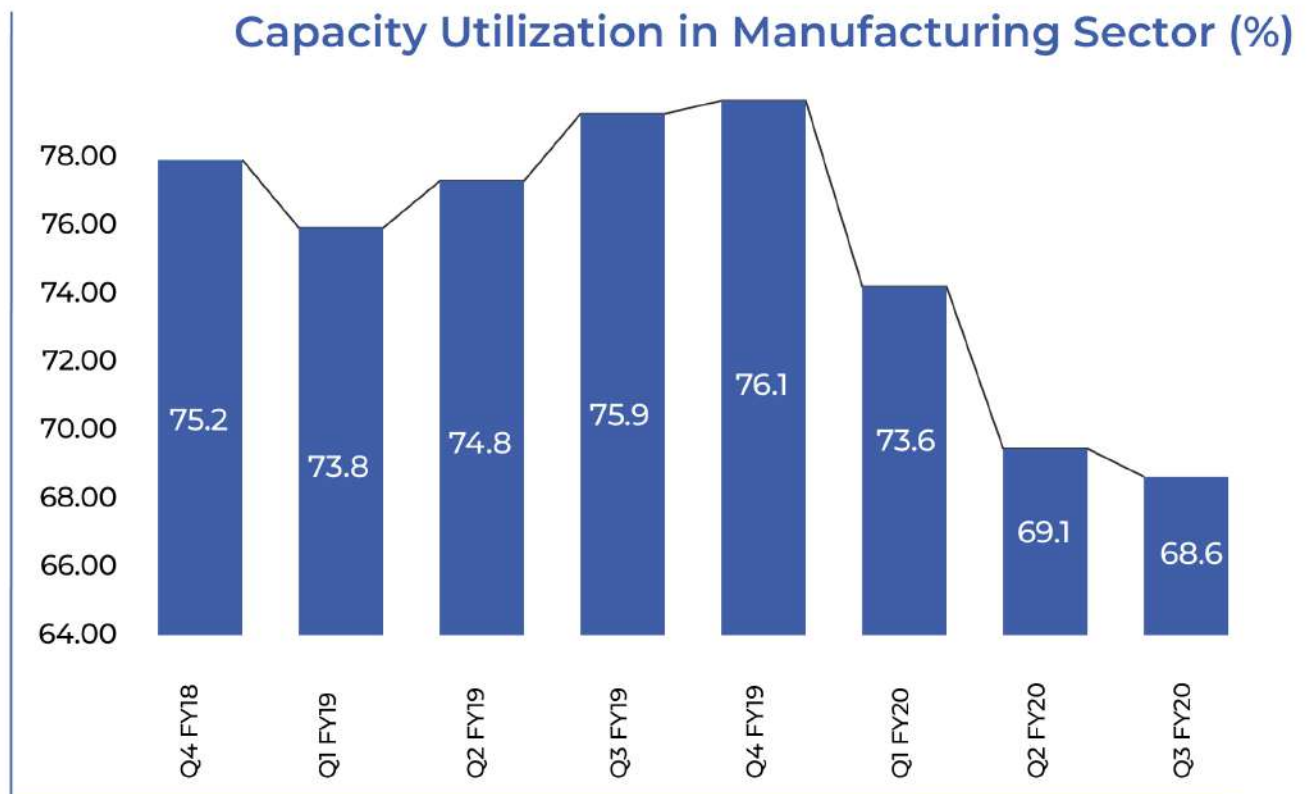
-James Dyson, Founder – Dyson Ltd.

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Need for Manufacturing Management and Analytics

Indian Manufacturing Industry is plagued by the problems related to productivity and capacity utilization. Compared with India, Indonesia is twice more productive and China and South Korea are four times more productive. There are also significant opportunities for the industry to reduce its spend on imports and focus on localizing production.



Source: IBEF

There is a growing demand for professionals with advanced skills in Materials management, Process Management, Productivity Management, Data Analytics and Industry 4.0 in the Manufacturing Industry. The PG Certificate Programme in Manufacturing Management and Analytics is designed to enable participants to expand their skills to contribute to the overall growth of the sector and fulfill the dream of an 'Atmanirbhar Bharat' (Self-Sufficient India).

“By adopting Industry 4.0 and automation technologies and investing in analytics, reskilling, and upskilling, Indian manufacturers could accelerate the capture of many of these gains.”

-McKinsey Report, October 2020

Why choose this programme in Manufacturing Management and Analytics

Manufacturing firms consist of complex systems with several interconnected processes. The activities and resources that are a part of these processes, generate a vast amount of data that is rarely captured or utilized effectively. The need to derive insights from this data (at both micro and macro level) for making informed business decisions has become inevitable in this analytics-driven world.

Manufacturing firms are also constantly striving to provide the best quality products and services to clients, while increasing productivity and cost-efficiency at the same time. This becomes increasingly relevant in the current crisis due to the pandemic. Also, the nature of the data collected in a manufacturing environment differs significantly from the data generated in other fields. Due to this, the executives involved in manufacturing need to adapt and follow a tailored approach to overcome



Programme Overview

Manufacturing companies are complex systems with many interconnected processes. These processes' activities and resources generate a massive amount of data, which is rarely captured or utilised effectively. In this analytics-driven world, the need to derive insights from this data (at both the micro and macro levels) for making informed business decisions has become unavoidable.

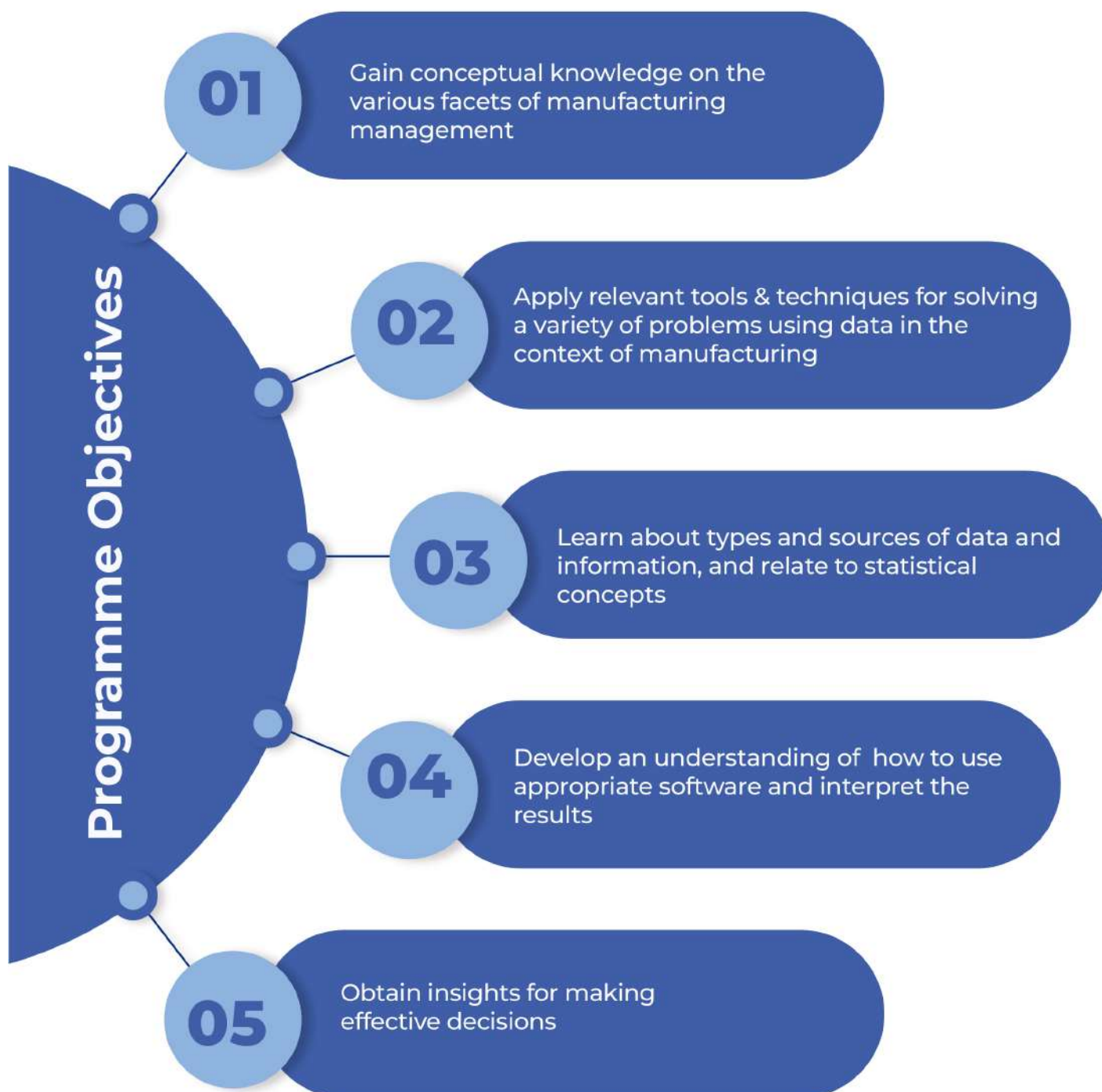
Additionally, Manufacturing firms are constantly striving to provide their clients the highest quality products and services while increasing productivity and cost efficiency. This is especially important in light of the current pandemic. Furthermore, the nature of data collected in a manufacturing environment is very different from data generated in other fields. As a result, executives in the manufacturing industry must adapt and take a tailored approach to overcome the challenges.

Ride the next growth wave by enrolling in IIM Tiruchirappalli's PG Certificate Programme in Manufacturing Management and Analytics. This interdisciplinary programme is designed to enable professionals to learn the fundamental concepts, techniques, and tools needed to effectively manage manufacturing systems using analytics. The programme will assist participants in providing quantitative reasoning and generating useful insights to improve the planning process, manufacturing efficiency, yield, and future performance, resulting in bottom-line benefits through hands-on exercises, practical applications, and case studies.

Moreover, this programme is carefully curated and scheduled during non-working hours, keeping in mind the busy schedule of working professionals.



At the end of the programme, participants should be able to:



Key Takeaways



Build expertise by absorbing real-life cases from global repositories



Play simulation games (virtual and in physical mode during campus immersion module)



Learn new age tools to analyse manufacturing problems



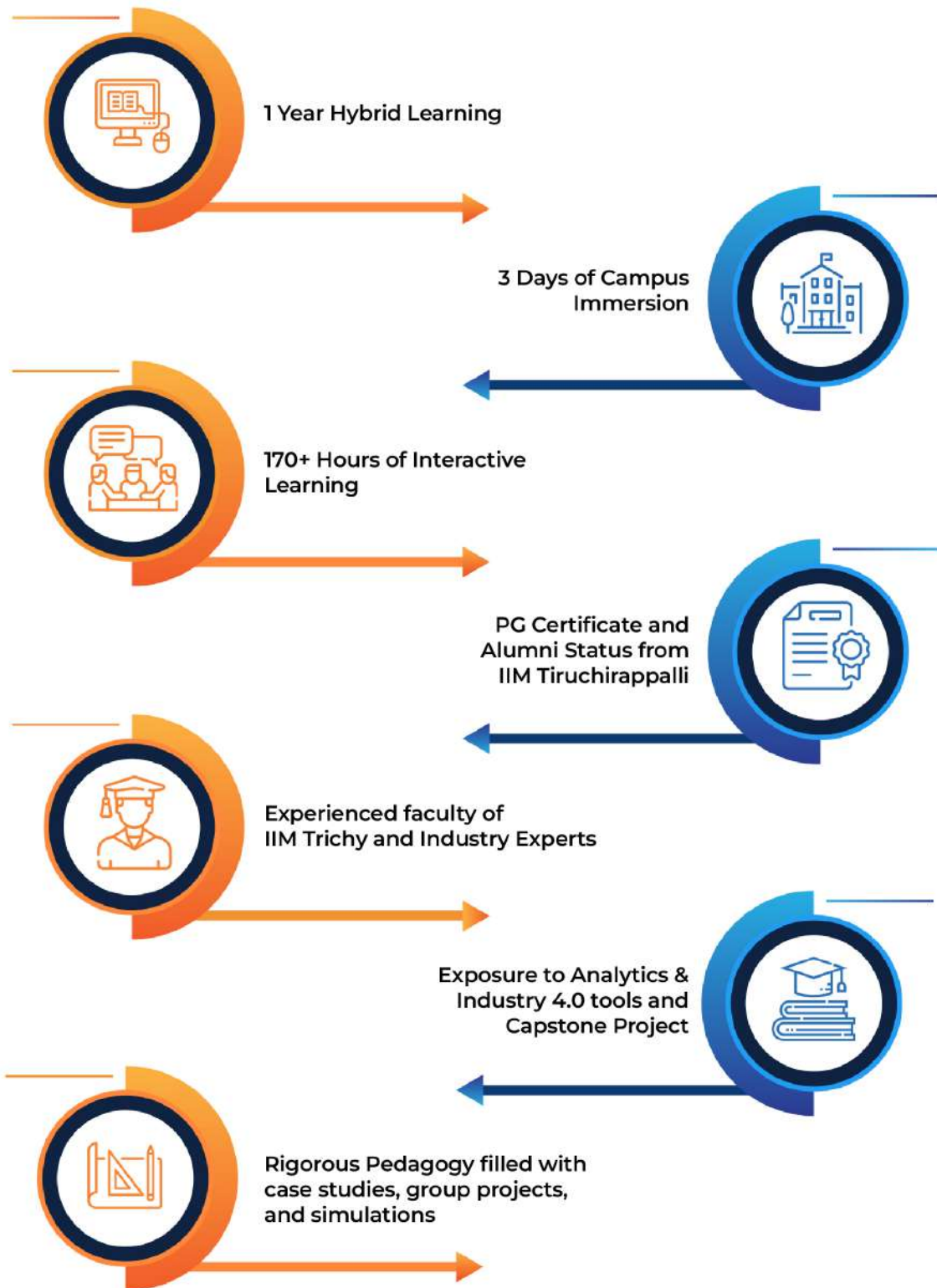
GAGE pack



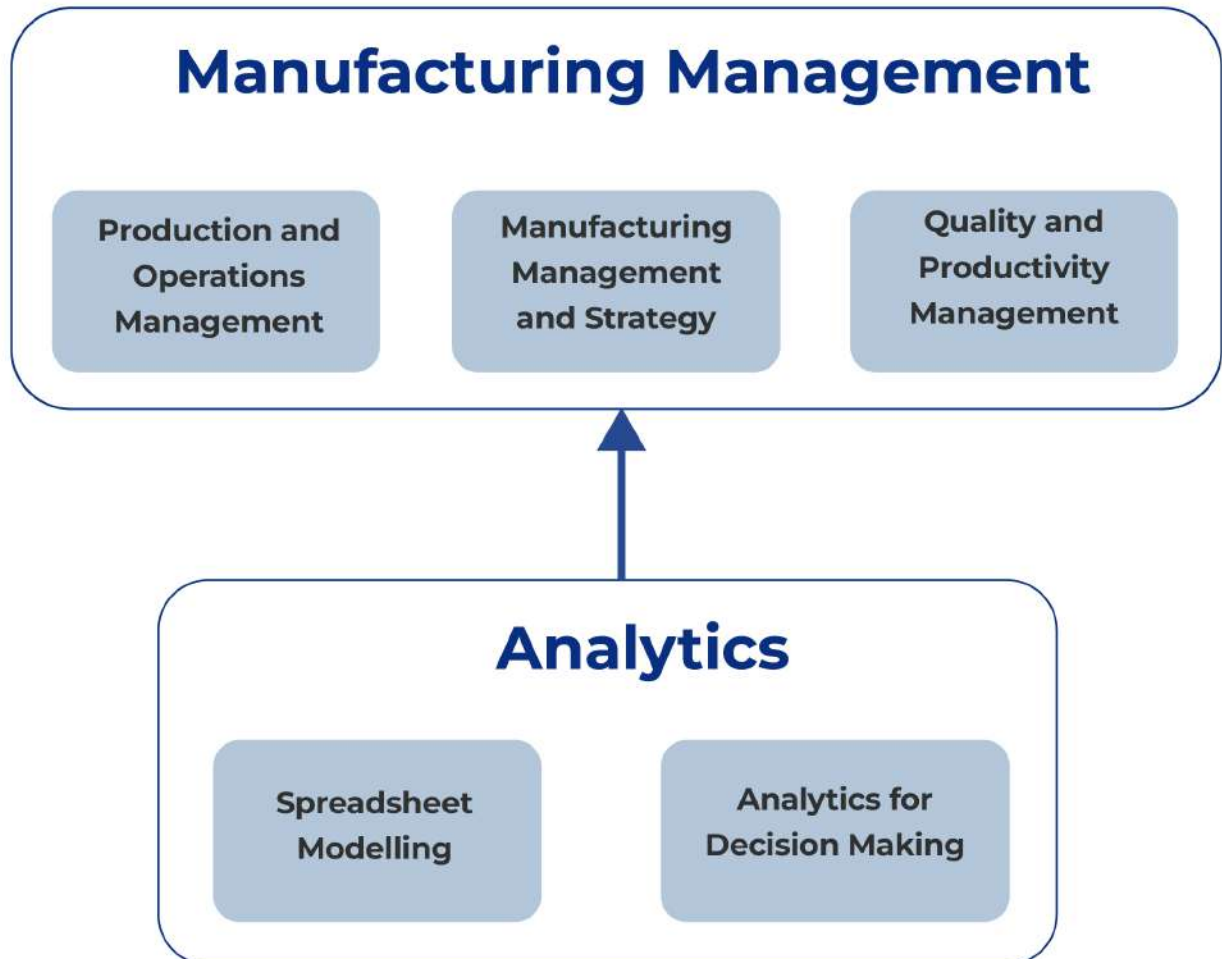
Work in peer groups apply concepts/frameworks/tools and techniques for resolving the real-life problem



Key Takeaways



Programme Framework



Pedagogy

The programme will be delivered in a hybrid mode, with one on-campus module and the rest delivered online. The 45-week synchronous learning classes will have three hours of contact time per week.

Pedagogy will consist of a combination of lectures, case-based discussions, and hands-on exercises. Participants must read the various course materials and assimilate and participate in class discussions. Each module will be assessed as part of the course evaluation. Participants will also be required to complete a capstone project to demonstrate their comprehension of the concepts covered in this programme.

Programme Contents

1) Spreadsheet Modelling

- ▶ Basic Excel Functions
- ▶ Data Selection and Sub-setting
- ▶ Advanced Excel Functions - 1
- ▶ Advanced Excel Functions - 2

2) Analytics for Decision Making - I

- ▶ Descriptive Analytics
- ▶ Data Visualization and Dashboards
- ▶ Normal Distribution & Sampling distribution
- ▶ Hypothesis Testing
- ▶ Linear Regression

3) Operations Research for Prescriptive Analytics

- ▶ Basics of Linear Programming and Optimization
- ▶ Binary Integer Programming for Yes-or-No decisions
- ▶ Resource Allocation
- ▶ Workforce Scheduling and Staffing
- ▶ Network Optimization Problems

4) Production and Operations Management

- ▶ Process Analysis and Improvement
- ▶ Materials Management
- ▶ Sales and Operations Planning
- ▶ Supply Chain Management
- ▶ Project Management

5) Productivity Management

- ▶ Work Study
- ▶ Process Mapping and Analysis
- ▶ Theory of Constraints
- ▶ Process improvement and re-engineering
- ▶ Discrete Event Simulation

6) Quality Management

- ▶ Voice of Customer and Critical-to-Quality
- ▶ Quality Tools - Basic and New
- ▶ Control Charts
- ▶ Lean and Six Sigma
- ▶ Quality Function Deployment

7) Manufacturing Strategy

- ▶ Operations System Design
- ▶ Capacity Strategy
- ▶ Process Technology Strategy
- ▶ Supply Chain Strategy
- ▶ Servitization Strategy

8) Management of Manufacturing Systems

- ▶ Layout Design
- ▶ Job Scheduling
- ▶ Maintenance Management
- ▶ Performance Management
- ▶ Purchase Management

9) Analytics for Decision Making - II

- ▶ Risk Analytics
- ▶ Decision Analysis using Simulation
- ▶ Multiple-Criteria Decision Making
- ▶ Benchmarking and Evaluation

10) Modern Manufacturing Practices

- ▶ Agile Manufacturing
- ▶ Additive Manufacturing
- ▶ Sustainable Manufacturing Practices
- ▶ Industry 4.0 in Manufacturing
- ▶ People Practices in Manufacturing



Eligibility

- ▶ Bachelor's Degree, with at least 50% marks or equivalent CGPA [45% in case of the candidates belonging to SC/ST/PWD] from a recognized institute/ university.
- ▶ Minimum post qualification experience of 1 year.
- ▶ Reservations will be provided to eligible candidates as per Government of India norms.

Programme Schedule

▶ Session Timing

Sunday
2:15 pm - 5:30 pm

* Subject to prevailing government rules pertaining to the pandemic

Fees Structure

Programme Fees

₹ 2,11,000 + 18 % GST

Registration Fees

₹ 2,500 + 18% GST

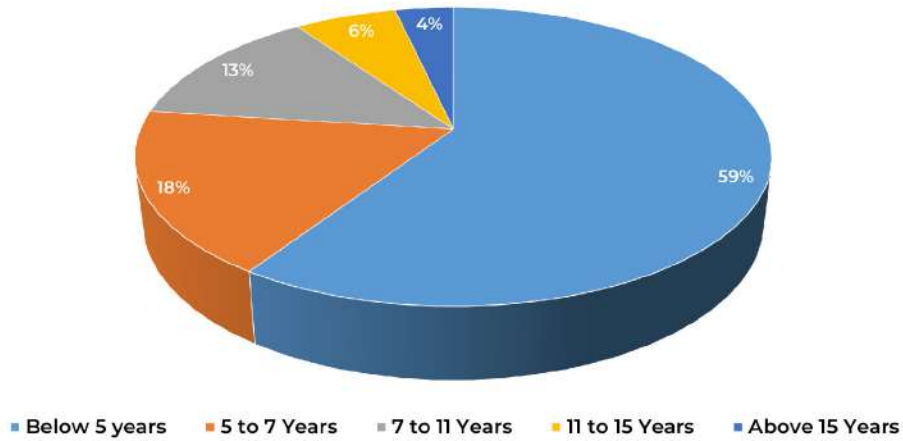
Installments

Installments			
Before 1st term ₹ 73,500	Before 2nd term ₹ 42,500	Before 3rd term ₹ 42,500	Before 4th term ₹ 52,500

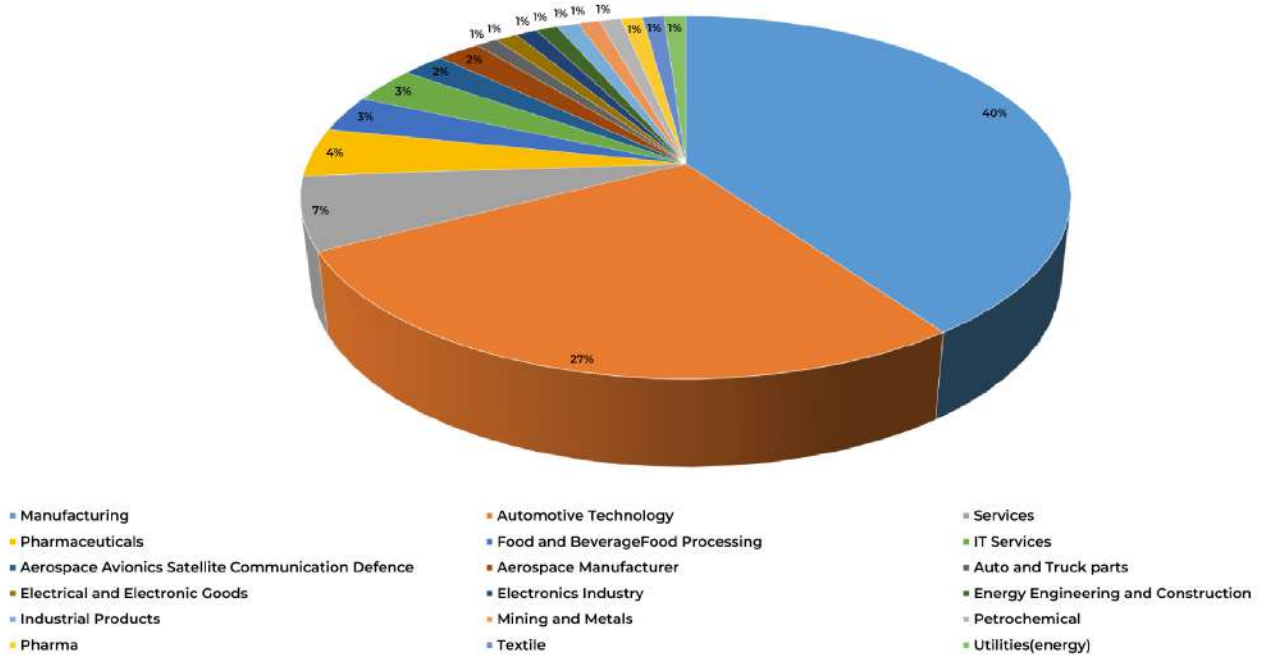
Easy Financing Options Available

Recent Batch Profiles

Experience Wise Batch Profile



Industry Experience Wise Batch Profile



Career Assistance

Profile Building

Rigorously building the candidate's profiles and resume scrutinizing with their LinkedIn profiles. Jaro Education enables personalised feedback to boost overall virtual presence.

Resume Review

Moving forward with carefully curated resumes reviews that ensures you are interview-ready for the workplace of tomorrow.

Placement Assistance

Get career assistance as per the profile and preferences. On an average, get 5-6 job recommendations to enhance quality employment opportunities

Career Enhancement Sessions

Bridging connectivity to link the best talent with organizations through eminent sessions from top-class industry speakers.

Note:

IIM Tiruchirappalli or Jaro Education do not guarantee or promise you a job or advancement in your existing position. Career services is simply provided as a service to help you manage your career in a proactive manner. Jaro Education provides the career services described here. IIM Tiruchirappalli is not involved in any way with the career services described above and offers no commitments.



About Jaro Education

“INDIA'S MOST TRUSTED ONLINE HIGHER EDUCATION COMPANY”



-  2022 EdTech Leadership Award
-  2022 National Best Employer Accolade
-  2019 Economic Times Award
-  2018 ABP Education Award
-  2017 Modi Award

1000+

Corporate Associations

3,00,000+

Careers Transformed

2009

Enhancing Career Since

Jaro Education has been India's most trusted online higher education company and a pioneer in the Executive Education space since July 2009. The company's goal is to nurture entrepreneurs and working professionals from entry-level to C-Suite levels in every field and industry by providing executive education programmes that meet their needs.

IIM Tiruchirappalli has empanelled Jaro Education to provide admission support for its most dynamic and demanded, Post Graduation Certificate in Manufacturing Management & Analytics.


Contact Us

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Jaro Education's Presence

Ahmedabad | Bangalore | Chennai | Delhi-NCR | Hyderabad | Jaipur | Kolkata |
Mumbai | Nagpur | Pune