

KINDLE course outline

Content	Objective	Sub-topics	Time (days)
Introduction	Orientation to the course To ensure that the participation level in the course is high	Need for the course Growth curve of engineers Career in manufacturing What to expect from course - from Krysalis and from candidates General motivation Metrics for measurement - course completion	0.5
Basic economics and business	Exposure to commerce To give a perspective of their coordinates in the world - how their work contributes the moving world	Macro: what is GDP. How to measure. Leading economies what is the % contribution of agri, mfg and services to Indian GDP inflation, taxes, GST Growth, Manufacturing output and SMEs Companies that have invested in India Opportunities for engineers in India Micro: Turnover, sale, expenses, profit Tax what is a P&L, B/S (explain for an imaginary small biz they run)	1
Basics of company	Visualise a company, its key functions, roles, org structure, key people	Types of company Vision, mission and values Policies and statutory compliances Role of - Sales & Marketing - Production & production planning - Quality - NPD - Purchase - HR Roles & responsibilities of these functions and performance metrics (KPIs)	1
Basics of Auto industry	Auto Industry in India – overview The ecosystem – OEMs, tier-1/2 suppliers, supply chain, interactions and challenges	- The Indian auto Industry - Major players - Assembling cars (with video) - Make or buy decision and outsourcing - Role of suppliers (Quality, cost, delivery) - Interaction between OEMs & suppliers * Scheduling process * logistics & transportation * ASN, GRN & payment process * SMEs, their role in the economy & key challenges faced by them	0.5

Basics of auto components	Classification, key functions and criticalities	<ul style="list-style-type: none"> - Proprietary * Tyres, batteries, electricals (motors, alternators), engines, accessories (bulbs, seat,) - Made to print *Casting *forging *machining *sheet metal fabrication *Rubber & plastic parts *bought-outs <p>(For all the above, key characteristics of the product, functional criticality, technology trend & machines used should be taught)</p> <p>A project to be given where the candidate has to study two component in detail (from different categories) and should present details (criticality, machine used, acceptance standards etc) to the class. So the entire class covers a good portion of components</p>	1
Basics of component manufacturing	Machining, fabrication, forging, casting, assembly		1
	Machines involved (videos)		
Basics of Quality	Reading a drawing – GD & T, special characteristics, special processes, balloon / layout drawing, BOM, metrics.	Standard modules as in past	1
	Handling of instruments		0.5
	PFDA – process symbols, income source of variation and nature of defects		1
	Control plan – Process and product characteristics, freq and reaction plan		0.5
	Quality systems - Introduction		1
Basics of NPD	Basics of part development, Steps involved	Standard modules	0.5
	APQP		1
	PPAP, PIPS/ TQS		1
	PFMEA		1
Basics of Production	Production planning, resource allocation, coordination	Standard module	0.5
	Basics of OEE, OTIF/ delivery performance & tool monitoring	Standard module	0.5
Basics of lean	Lean awareness	<ul style="list-style-type: none"> - Competitive advantage & Need for lean - Introduction to lean- VA & NVA - Seven wastes 	1

	5S and kaizen	- Need for 5S How companies have implemented 5S Challenges faced '- Introduction to Kaizens	0.5
Basics of Problem solving	Q C tools & workshop	Standard module	2
	8D report & JDI	Standard module	0.5
Professionalism	Behaviour and attitude orientation	Understanding self through Transactional Analysis Sharpening Interpersonal skills through FIRO-B Enhancing professionalism	2
Basic excel	basics of statistics & MS excel	- Introduction to statistics. How statistics help us understand the world better - Mean, median, mode - Interpreting basic charts - Intro to excel	1
Time management & supervisory skills	Planning, supervisory roles, team building etc	- Characteristics of a good leader - Key leadership traits - Understanding self & identifying improvement areas - Importance of time management - Frameworks to manage time	1
Mini projects (3)	Review	To reiterate understanding and practice what was learnt	3
Industry visit	To learn best practices (with focus on 5S and visual control)	Possibly to a large company (yet to be finalized)	0.5
Habit of continuous learning	To cultivate the habit of 'learning'	Exercises on understanding a news article, reading a book(chapter) and videos would be given as exercises every week	Spread throughout