

Class 2022 Orientation

MASTER OF ENGINEERING TECHNICAL MANAGEMENT



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**MASTER OF ENGINEERING
TECHNICAL MANAGEMENT**



Department Welcome



Dr. Reza Langari

Department Head
Engineering Technology &
Industrial Distribution

JR Thompson Endowed Chair

**MASTER OF ENGINEERING
TECHNICAL MANAGEMENT**



Student Introductions

- Name
- Company
- Title
- Why METM?

TCMT 612

Technical Management Decision Making



Dr. Xiaomin Yang

Industry Professor

Saudi Aramco

Technology Portfolio Manager

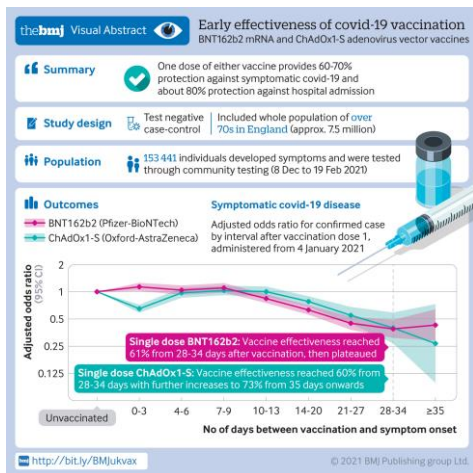
Howdy!

from Saudi Arabia



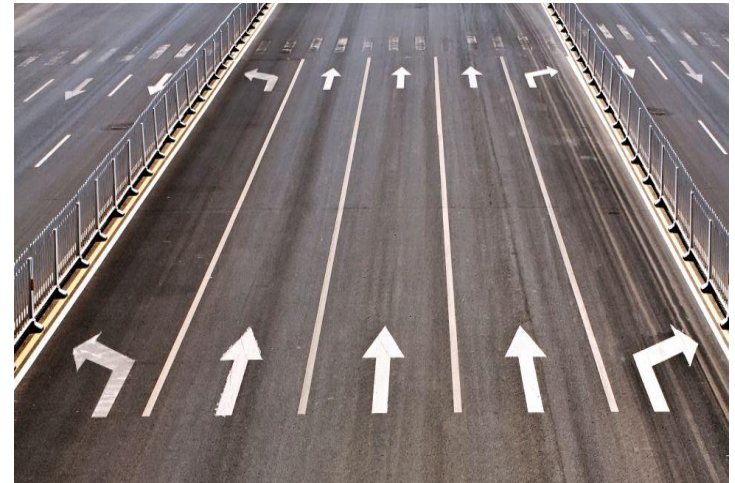
Add a slide of TA





Common mistakes of decision-making

- Unclear business guidance
- Distracted by past decisions and sunk cost
- Drown by data: unclear purpose
- Lack of autonomy: too many cooks
- Difficult to be decisive and deliberative
- Too slow to adapt
- Fail to EXECUTE
- ...



Systematic approach to decision-making

From this course, You will learn:

You are expected to:

1. Understand competitive strategy

2. Articulate prudent business goals

3. Derive business insights from analysis

4. Evaluate uncertainty and risk

5. Make intuitive judgment

Think as a visionary leader

Able to make informed decisions

Be decisive and unbiased



Intuitive judgment

Module 1 - Introduction to Decision Making

- Leadership and Management Styles

Module 2 - Intuitive Judgement in Decision Making

- Status Quo Bias and, Escalation of Commitment

Module 3 - Intuitive Judgement in Competitive Environments

- Win-win negotiation and Negotiation Biases

You will learn:

1. How to manage intuitive judgment biases
2. How to apply structure and process to negotiation



Decision-making under uncertainty

Module 4 - Data Driven Decision Making

- Visualize uncertain scenarios
- Make calculated choice
- Justify risks (conservative vs. gambler)
- Communicate decisions to motivate team

You will learn:

1. How to develop decision tree models
2. How to incorporate risk tolerance into decision analysis



Align decision with business strategy

Module 5 - Align Decision with Business Strategy

- Cost Leadership and Differentiation Strategies

Module 6 - Measure Business Performance

- Financial Performance and Strategy Alignment

You will learn:

1. The secrets of industry profitability and competitive advantages
2. How to set strategic objectives and performance criteria



Data-driven decisions

Module 7 - Business Forecasting

- Moving Average Method and Seasonal Analysis

Module 8 -Business Optimization

- Business Analytics to Transform Decision Making
- Demand / Production Planning and Inventory Optimization

Requirement:

Personal computer (with MS Window)*

MS office (offline version installed on PC)

*Analytics software not completely compatible with MAC

You will learn:

1. Build forecasting models to predict performance of a business
2. Draw business insights from optimization analysis



Add a slide of materials

- Textbooks
- Software
- Read materials
- Self assessment
- Negotiation projects
- Quiz
- Assignments
- Simulation
- Final exam
- Discussions



*Have fun &
enjoy the new
journey!*



TCMT 613 Technical Project Management



Prof. Michael Handy

Industry Professor

National Instruments

Engineering Section Manager

TCMT 613 Technical Project Management

TCMT 623 Financial Decision Making



Prof. Marc Marini

Industry Professor

National Instruments

Director of Research &
Development, DAQ & Control

TCMT 623 Financial Decision Making

TCMT 624 Managing Technical Teams



Prof. Lisa Spence

Industry Professor

NASA

Deputy Element Manager
(Retired)

TCMT 624 Managing Technical Teams

Break



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TCMT 619 Personal Leadership Coaching



Dr. Ben Zoghi

Founding Director
Master of Engineering Technical
Management

Victor H. Thompson Professor

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TCMT 619 Personal Leadership Coaching



Prof. Bryan Anderson
Industry Professor

Anderson & Anderson
EQ Coach

TCMT 619 Personal Leadership Coaching

Lunch Break



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Introduction & When to Contact



Ms. Leslie Ehlers

Assistant Director

Master of Engineering Technical
Management

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TECHNICAL MANAGEMENT**



Class President

- Selected during Residency Week
- Class Decision: Select in August or December?

Social Media

- Facebook | Class Owned
- LinkedIn | METM Owned

Student Handbook

- University Resources
- METM Student Expectations & Policies
- Steps for Success
- Faculty & Staff
- Student Rosters

Degree Plan

- August 18 Deadline
- Step-by-Step Instructions

Break



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Introduction & Research Opportunities



Dr. Michele Norton

Postdoctoral Research Associate
Master of Engineering Technical
Management

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Introduction & When to Contact



Dr. Wei Lu

Curriculum Manager

Master of Engineering Technical
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Canvas Navigation

Canvas Q&A

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