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**FIRST SEMESTER 2016 – 2017**

**02/08/2016**

**Course No.** : MBA G525  
**Course title** : R&D Management  
**Instructor-in-charge** : Jyoti

**Scope of Objective**

In an era of globalization and global competition that too when the product/technology life cycle is becoming shorter & shorter, companies can no more attain competitive advantage just through low labour costs and market access. Companies need to look for designing and developing new products and services continuously as a crucial source of competitive advantage, differentiation, growth and profitability.

This course will provide the students to understand the complexities and nature of research and development function, which is one of the most important strategic functions in an organization, responsible for developing new products/processes/ technologies to get the competitive advantages for competing and sustaining in the competitive global business scenario.

Through this course, students will understand the linking of R&D function with other business organization functions such as Marketing, Engineering and production functions. This course will broaden thinking perspective of the students that will enhance their long term planning and decision making capabilities as an R&D/Technology manager or as an Entrepreneur. This course will sensitize the students to think for future advances in the technologies and demands of the society.

**Course description**

**Module 1:** Technology Management & R&D Management: Introduction to technology management, Critical factors in managing technology, Distinctive need, importance and characteristics of R&D and R&D management; Need of R&D management in global/Indian context; Evolution of R&D management, R&D as a system, R&D management process, Technological Innovation process, Technology life Cycle, Technology strategy and approaches to technology strategy, Technology planning process, R&D Strategy, R&D project selection, R&D project portfolio analysis.

**Module 2:** Important Issues in R&D management: Technology Forecasting, Customer/Market Orientation, Information and Knowledge Management, Intellectual Property Rights Management, Financing of R&D, Time-to-Market Management, People Management. Success factors of R&D; Success factors for R&D leaders.





**Module 3:** Globalization of R&D, FDI in R&D in India, Determinants of FDI in R&D.

**Module 4:** Intellectual property management: An overview of Intellectual property Rights, Patent process in India, PCT filing, Patent portfolio analysis, Patent Strategy, valuation and exploitation

**Module 5:** Evaluating and measuring the performance of R&D at scientist level, project level and at organization level.

**Module 6:** Government Initiatives and incentives for registered R&D units in India. mission oriented research; technology missions enunciated by Indian Government.

**Research papers from international journals will be referred for teaching the course content.**

**Reference books:**

*Management of Technology* by Tarek Khalil, International editions, 2000, McGraw Hill.

*Management of research and development organizations: managing the unmanageable* by R. K. Jain and H. C. Triandis, John Wiley & Sons Inc., New York.

*Evaluation of R&D Processes: Effectiveness through measurement* by Lynn Ellis, 1997, Artech House.

*Innovation Management: Strategies, Implementation and Profits* by Allan Afuah, 1998, Oxford University Press.

**Evaluation scheme**

EC NO.	Evaluation Component	Duration	Weightage (%)	Date, Time & Venue	Nature of Components
1.	Mid Semester test	90 mins	20%	<TEST_1>	Closed Book
2.	Surprise quizzes		10%		Closed Book
3.	Case studies and Class participation, Assignments		15%		
4.	Project Report/Presentation		20%		
5.	Compre. Exam	3 hours	35%	<TEST_C>	Closed Book and Open Book

**Chamber consultation hour: to be announced in the class.**

**Makeup policy: Only students with genuine reason will be given consideration.**

**Instructor-in-charge**

**Jyoti**

