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Module Code:MACM0016

Title of Module

Full Title: Innovation, Technology Management and Total Design

Short Title: Innovation

MODULE

MACM0016 (A 05/6)

Innovation, Technolog...

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Version: 1

Credit Points: 8

Level / ECTS Level: M

First Offered: 1/9/1999 00-00-00

6. Home Department:

AAD

7. Departments(s) contributing to teaching:

9. Module Aims:

- * Gain a thorough understanding of the field and process of innovation and the factors and disciplines closely associated with it.
- * Be able to audit an organisation's capability for innovation.
- * Gain skills in a practical set of tools and processes for setting up and/or improving an organisations capability for innovation.
- * Make links to innovation in the Automotive Industry.

10a. Learning Outcomes: Knowledge and Understanding:

- * Understand the conceptual basis and models of innovation in relation to the human mind and business culture.
- * Gain an awareness of the range of innovation process, with attention to some in detail.
- * Improved their self awareness and how this affects the innovation process especially with regard to personal and business constraints that limit innovation.
- * Gain knowledge about innovation audits.

10b. Learning Outcomes: Skills and Attributes:

- * Communicate the potential benefits of innovation to the automotive industry.
- * Demonstrate an in-depth understanding of the importance of innovation to the survival and growth of organisations; of the processes by which innovation occurs; and of the factors which support or constrain its

success.

* Critically appraise (audit) the capability of a group or organisation for innovation through the selective use and updating of appropriate tools, techniques and models at state of the art, and make and implement recommendations for improvement.

* Investigate and debate the strengths and weaknesses of current practice and challenge the assumptions upon which that practice is based.

* Develop and demonstrate an improvement in their own capability for innovation by undertaking and evaluating a project of their own (or own company's) choosing involving a new product or service innovation.

11. Module Content

11a Module Content:

Innovation is essential to the survival and profitability of all organisations, but they often resist the factors that enhance their innovative capability. This module takes delegates systematically through this topic from initial examples and definitions of key processes to the derivation and application of comprehensive audit procedures. Essential core tools of technology management and total design are identified and discussed together with more specialised topics (patents, investment etc). Particular emphasis is placed on the influence of the softer factors associated with individuals, leaders organisational cultures. Interactive sessions involving case studies give examples of innovation in practice. Assistance in the selection of innovative assignments will be given through small group tutorials where principles and processes presented in class can be discussed in relation to the work areas of individual delegates.

11b. Further details on how the learning outcomes of the module will be achieved:

Day 1- Introduction/Background - what is innovation, why do we need it;

Day 2- Toolkit - how do we go about innovation - Technology Management base;

Day 3- Organisations and individuals - which are enablers and which constraints - Team work should be assessed (10%);

Day 4- Industry perspective - automotive industry methodology and examples with contrasts in connected and unconnected industries;

Day 5- Providing and implementing an Innovation Auditing Capability (IAC).

READING LIST

The first three books and one Journal are recommended as a generic foundation for the topic of innovation. A substantial supplementary list is also available-

1. Managing Innovation - Integrating Technological Market and Organisational Change by

Joe Tid, John Bessant & Keith Pavitt, J Wiley & Sons 1997 ISBN 0-471-97076-X

2. The Human Side of Managing Technological Innovation - A Collection of Readings edited

Ralph Katz. Oxford University Press 1997 ISBN 0-19-509694-0

3. Total Design - Integrated methods for Successful Product Engineering - Stuart Pugh

Addison Wesley 1991 ISBN 0-201-41639-5

4. International Journal of Technology Management - published by the Open University,

editor Mohammed Dorgham.

It is also recommended (though not essential) that Project Management (Module 14) be taken as a technique module prior to this module if at all possible.

12. Language of Delivery:

English

13. Language of Assessment:

English

14. Assessment Details (Academic):

Coursework: 100

Exam: 0

Other:

Assessment Notes:

Typically, assessment will consist of-

Coursework tutorials and assessed teamwork 10%

Assignment with 2 alternatives considered 90%

15. Locations(s):

UH HATFIELD

16. Pre and Co-Requisite:

Pre-Requisite

None

Co-Req

None

Prohibited

17. Subject Board of Examiner/s:

IGDS SUBJECT BOARD

18. Comments

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