

Fundamentals of Technological Change

BMAN 10252

Credit rating 10

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Alliance Manchester Business School

Undergraduate

Level 1

Course unit overview

The course will act as a first introduction to management and social science perspectives on technological change and how it has developed over time.

The first part of the course will explore the nature of technology from social and economic perspectives and will outline the economic history of technological change and industrialisation and its relationship with society. It will introduce the concept of technological innovation, exploring how understandings of the innovation process have developed from simple science-led or demand-pull linear models through to the interactive models currently favoured by social scientists, showing how the latter have developed progressively as empirical case studies of innovation have been amassed. The second part of the course will discuss the implications of our understanding of technological change for the governance and management of technology both in the firm and in society more generally. Possible examples include the diffusion of innovation, inequality and geographical unevenness of innovations, technological revolutions and creation of sustainable societies or firm level innovation strategies (e.g. open innovation and corporate venturing).

Aims

- 1) To understand and explain the nature of technological change and the roles it plays in firm competitiveness, economic growth and development
- 2) To introduce students to the challenges of managing technological change at both the societal (public policy) and firm (management/strategy) levels
- 3) To appreciate and use insights from economic history, economics, sociology and management studies as they relate to technological change

Learning outcomes

Knowledge and understanding

- an appreciation of the role of technological change in economic development, past and present
- awareness of key models of the innovation process, their strengths and weaknesses
- an understanding of the role of innovation in society
- an appreciation of the management, policy and regulatory challenges in relation to technological change and innovation

Intellectual and practical skills

- Apply theories to make sense of recent and emerging debates and controversies relating to technological change.
- Develop and present critical arguments relevant to technological change.

Transferable skills and personal qualities

- Develop strategies to work creatively alone as well as with others.
- Demonstrate skills in developing, structuring and communicating ideas in writing and discussions.

Methods of delivery

Lecture plus small group seminar. Eight seminars are focused around the key reading of that week and one is a supporting session on critical reading/thinking and on essay writing. Lecture may be delivered in a blended format.

Lecture hours: 12 (1 hour per week for 12 weeks)

Seminar hours: 9 (1 hour per week for 9 weeks)

Private study: 79

Total study hours: 100

Assessment methods

- i) Assessed essay 60%
For the essay, students will work in small, self-selected groups up to a maximum of 3 students. The report word size is illustrated in the following table:

| Individual/group size | Report size (words) |
|-----------------------|---------------------|
| 2 | 2500 |
| 3 | 3000 |

- ii) Seminar worksheets (individual) (40%)

Feedback methods

- Informal advice and discussion during a lecture, seminar, workshop.
- Responses to student emails and questions including feedback provided to a group via an online discussion forum.
- Specific course related feedback sessions.
- Written and/or verbal comments on assessed coursework.

Requisites

BMAN10252 is a free choice option for students with prior agreement from their home schools. Option for BSc Accounting.

Recommended reading

Specific readings will be made available for each seminar.

In addition, a number key texts provide good support for an exploration of the relationship between technology and economic change.

Freeman, Christopher; and Soete, Luc (1997) The Economics of Industrial Innovation (Third Edition), Printer Publishers

Mazzucato Mariana (2015) The entrepreneurial state: debunking public vs. private sector myths (Anthem Books).

Volti, Rudi, (2017) Society and Technological Change (Eight Edition), Worth Publishers

Scheduled activity hours

| | |
|----------|----|
| Lectures | 12 |
| Seminars | 9 |

Independent study hours 79 hours

Additional notes

Other staff involved: Other teaching staff and guest lecturers may be included.

Pre-requisites: None

Co-requisites: None

Dependent course units: None

Programme Restrictions:

- Available as a free choice option to students who have received prior agreement from their registering School.
- Option for BSc Accounting and IBFE. Not available to BSc in Management/Management (Specialism), IMABS, IM, or ITMB.
- BMAN10252 is available to visiting and exchange students admitted through the University of Manchester's International Programmes Office.

Timetable<https://ughandbook.portals.mbs.ac.uk/Non-AllianceMBSstudents/Teachingtimetables.aspx>

For Academic Year:

Updated:

Approved by: