# Strategies for emerging technologies

## Prof. Carlo Maria Ferro; Prof. Marco Minciullo

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course is intended to provide the managerial skills for implementing efficient and sustainable growth strategies based on emerging technologies. Successful digitalisation requires a strategic approach that leads to rethinking the company's aims, the structure and processes to gain efficiency and apply technology in a manner to support the company's competitiveness and growth. The course reports on experiences of corporate strategies both in firms playing in technologically progressive industries, as well as in those belonging to mature sectors and wishing to understand how to create and respond to innovation.

Students are taught to view the industry through the eyes of the top managers. They learn how to understand the perspectives of various industry players, how to evaluate strategic options and their consequences, and how to anticipate how they are likely to behave under different circumstances.

The class will give the skills for an excellent problem-solving attitude, decision-making approach as well as knowledge on strategic management in a technologically dynamic environment.

Upon successful completion of the requirements for this course, students will:

* be aware of the most important theories and frameworks in the corporate strategy field;
* be able to understand existing corporate strategies implemented by firms operating in the hi-tech environments, and to make recommendations;
* be aware of decision-making abilities and tools required to strategising in multi-business firms;
* be able to develop a corporate plan in the hi-tech industries;
* be aware of the most important strategic trends that are occurring in the technological industries;
* develop and reinforce a problem-solving approach;
* develop the capability to work in team;
* improve the capacity to present in public business cases and industry analyses;
* be equipped with the knowledge basis and capacity to collect additional information that is needed to tackle more advanced strategic topics.

***COURSE CONTENT***

Module 1: *Challenges and opportunities in the technological industries* (Prof. Carlo Maria Ferro)

– The evolution of the semiconductor industry through continuous innovation, a case study

– The next industrial mega trends from digital technologies:

* IoT.
* Smart & clean Mobility.
* Industry 4.0.
* Smart Health Services.

– Financing innovation:

* Financing start-up.
* The role of venture capital and private equity.
* The IPO.
* Debt and Equity Capital Markets instruments.
* Capital Structure at various stages of company’s development.

– M&A in technological industries:

* Organic vs External growth: a strategic choice.
* Assessing the strategic fit of business combination in a technology sector
* Combined business plan.
* Valuation: DCF, comparable trading multiple and comparable transactions methods.
* A case of valuation in the semiconductor industry.

– Strategic Control to drive strategy execution in technology sectors:

* Strategic planning and strategic control: framework.
* KPIs vs Key Success Factors.
* Controlling R&D activities: from expenses control to measuring R&D effectiveness.
* The Balanced Score Card methodology.
* Balanced Score Card: a case in the semiconductor industry.

Module 2: *Corporate strategies in technological industries: How to create and deliver value* (Prof. Marco Minciullo)

– Foundations of Corporate Strategy:

* Corporate advantage.
* Identifying resources.
* Synergies: benefits to collaboration.
* Governance costs.

– Decisions about portfolio composition: increasing the scope of the corporation:

* Core business and diversification.
* Portfolio matrix.
* Alternatives for growth.
* Ally or acquire?
* Managing the M&A process.
* Managing the alliance process.
* Financial perspective of portfolio decisions

– Decisions about portfolio composition: reducing the scope of the corporation:

* Divestiture: stay or exit.
* Outsourcing: make or buy.

– Decisions about portfolio organization:

* Designing the multi-business corporation.
* Designing the corporate HQ.
* Control and cohesion mechanisms.
* Resources and competencies transfer.

– Embedding corporate social responsibility in CS:

* Corporate social responsibility and shared value creation.
* The path to embed CSR in corporate strategy.
* Sustainability and emerging technologies.

***READING LIST[[1]](#footnote-1)***

*Attending students:*

P. Puranam-B. Vanneste, Corporate strategy: Tools for analysis and decision-making, Cambridge University Press, 2016.

Collection of materials (articles, case studies) posted on BlackBoard.Unicatt: slides, case studies, exercises, and library links to readings.

*Not attending students:*

P. Puranam-B. Vanneste, *Corporate strategy: Tools for analysis and decision-making*, Cambridge University Press, 2016.

Belussi, F., & Orsi, L. (Eds.). *Innovation, alliances, and networks in high-tech environments*. Routledge, 2019.

Collection of materials (articles, case studies) posted on BlackBoard.Unicatt: slides, case studies, exercises, and library links to readings.

***TEACHING METHOD***

The course consists of lectures, testimonies and seminars, case-study and case-problem discussions, a group project.

Attending Students are required to participate actively in class; to discuss business cases; and to deliver presentations.

***ASSESSMENT METHOD AND CRITERIA***

The two modules converge to a unique final mark. The latter is the result of the following evaluations:

*Attending students:*

For attending students, the final grade will be based partially (60%) on a final exam in written form with a combination of questions with open-ended and closed-ended answers, analyses of cases and written essays, based on the reading list for attending students. The exam will assess the knowledge of most important theories and frameworks in the business strategy and the ability of their application. and

The remaining part of the final grade (40%) will be determined by a group work aimed at assessing the strategic skills and capacities and communication skills. More details will be communicated at the beginning of the course and made available on Blackboard. Students will be qualified as attending students only until the December exam session. Afterwards, they will have to take the exam as not attending students.

*Not attending students:*

For not attending students, with a combination of questions with open-ended and closed-ended answers, analyses of cases and written essays, based on the reading list for non-attending students. The exam will assess the knowledge of most important theories and frameworks in the business strategy and the ability of their application.

***NOTES AND PREREQUISITES***

Attending formula is strongly recommended to benefit from participating in case discussions and in the group project.

In case the current Covid-19 health emergency does not allow frontal teaching, remote teaching will be carried out following procedures that will be promptly notified to students.

1. I testi indicati nella bibliografia sono acquistabili presso le librerie di Ateneo; è possibile acquistarli anche presso altri rivenditori. [↑](#footnote-ref-1)