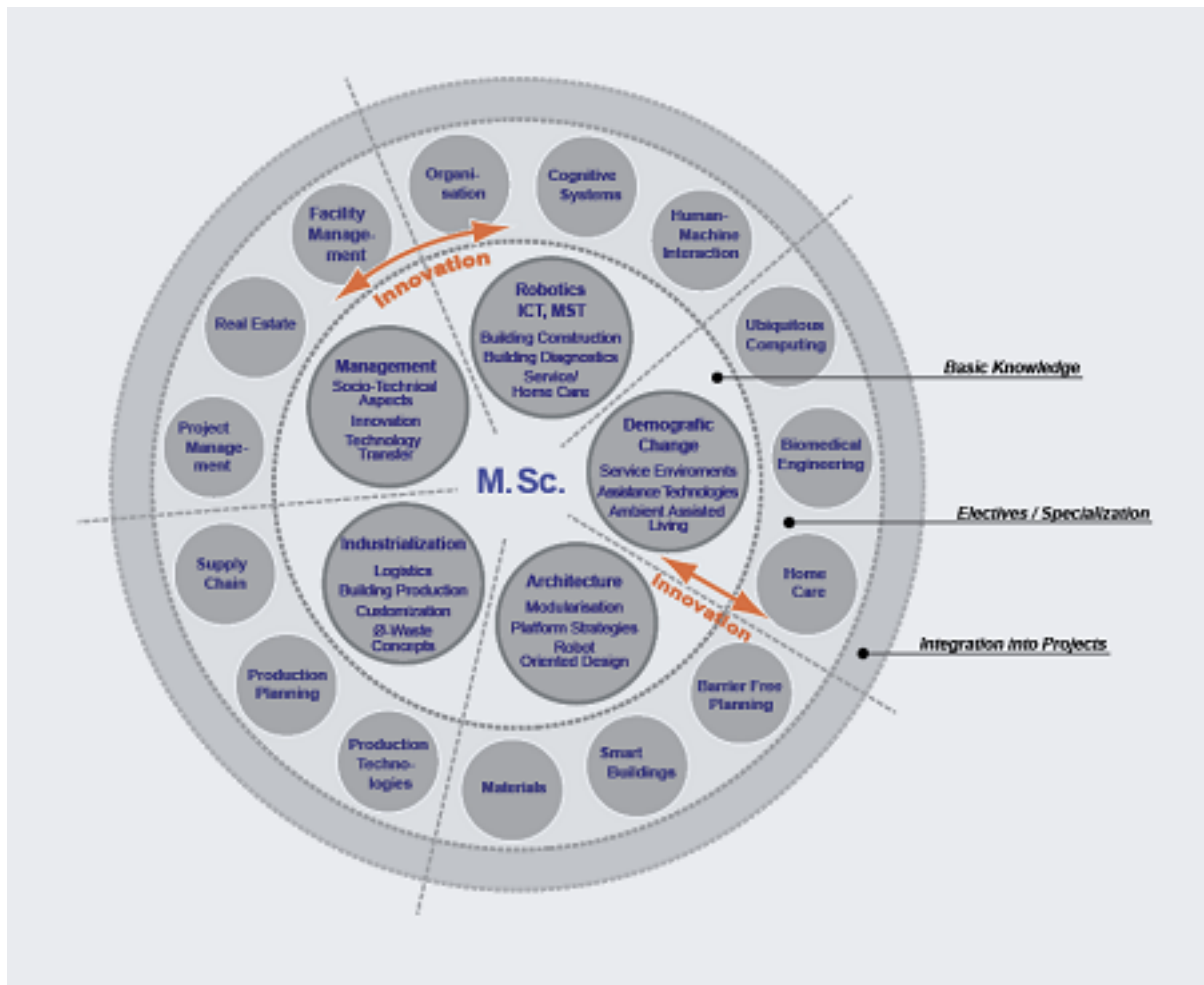


Topics of the Master Course



The topics of this Course aim at expanding the professional core competence in construction while responding to changing technological, social and ecological circumstances:

- **New technologies, processes and strategies for designing and producing of buildings**

Faster return on investment through implementation of rapid project delivery and zero defect construction by robot oriented design and automated construction systems.

The students who take the Master Course in Advanced Construction and Building Technology acquire a complementary knowledge in design, production, assembly, logistics, and management, emphasizing on information, communication, automation, robotics, mechatronics, and service technologies.

- **Integration of intelligent systems in daily life and environments**

Microsystems and microelectronics increasingly form a part of our everyday's life. Its miniaturization allows its incorporation in domestic systems and appliances. Simultaneously we want to deal with a standardized and compatible network of synergetic subsystems rather than detached island solutions.

On top of conventional construction planning, engineering, and management, these new technologies require an even more complex project management capacity for interfacing the various frontier science disciplines.

In order to incorporate mechatronic technologies in intelligent living environments the students acquire basic knowledge of these advanced ICT.

- **Life cycle management, value engineering and design, innovation**

The Master Course follows a holistic approach: The deployment of new technologies is considered in each phase of life cycle originating in marketing and project development till re-use and disassembly. Due to the elementary approach of open systems and subsystems, the life cycle of a building can be extended by upgrading or repairing one element without destroying the whole system. This approach is common in aero space industries. In construction industry a secondary resource utilization helps increasing the total resource efficiency of building performance.

The students apply management of technology, processes and projects, its technological interdependancies and socioeconomical boundary constraints. By studying intercultural cases in design, production, and management, the students get acquainted to crosscultural experiences for future professional international career