

MSIT

Master of Science

in Information Technology

Maestría en Administración
de Tecnologías de Información

Cohort 2018-2020

Preparing leaders to promote change and organizational innovation through the effective use of information technologies and management skills.

Online program

A dual master's degree offered by Carnegie Mellon and Tecnológico de Monterrey



Tecnológico
de Monterrey

Carnegie Mellon



Carnegie Mellon, ranked as one of the top universities in Computer Science by U.S. News and World Report, integrates the study of Business and Information Technology with its Master of Science in Information Technology.

Carnegie Mellon University Center, Pittsburgh, PA, USA.

Carnegie Mellon

Carnegie Mellon, located in Pittsburgh, Pennsylvania, is an internationally recognized institution with a distinctive mix of world-class educational and research programs in Computer Science, Robotics, Engineering, the Sciences, Business, Public Policy, Fine Arts, and the Humanities. Newsweek Magazine listed Carnegie Mellon among the “New Ivies” for its “exceptional academic programs and campus offerings”. MSIT is widely recognized across Corporate America as being the bridge between technology and management.

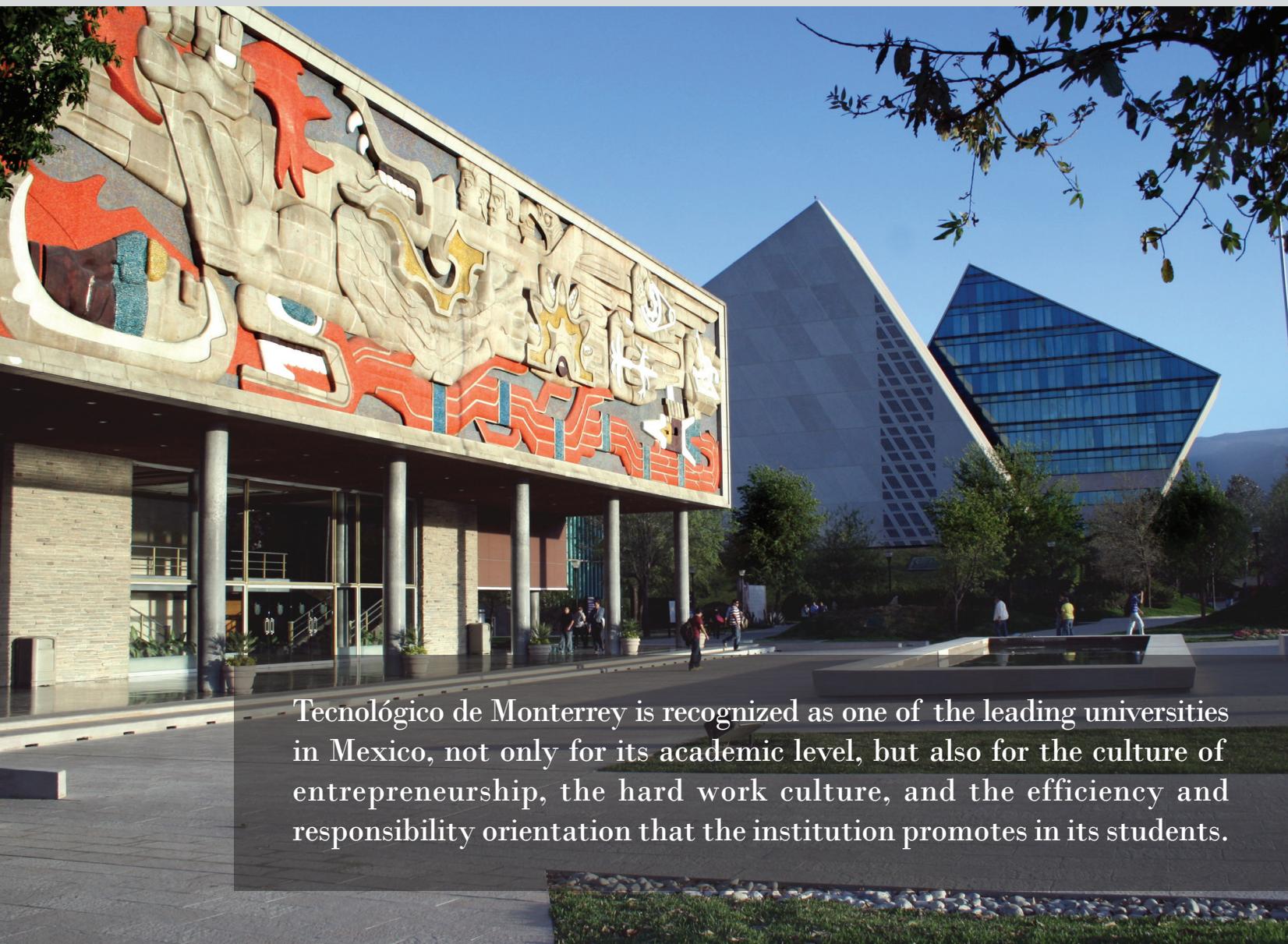


Andrew Wasser
*Associate Dean of Information
Systems Management
John Heinz School of Public Policy
Carnegie Mellon University
in Pittsburgh*

“ We are delighted to be offering a dual degree in Information Systems Management with Tecnológico de Monterrey. The Master of Science in Information Technology (MSIT) program at Carnegie Mellon will prepare the next generation of technology managers to lead enterprises and reshape organizations across North America”.

Two leading institutions in higher education

A dual-degree graduate program



Tecnológico de Monterrey is recognized as one of the leading universities in Mexico, not only for its academic level, but also for the culture of entrepreneurship, the hard work culture, and the efficiency and responsibility orientation that the institution promotes in its students.

Tecnológico de Monterrey's Presidency Plaza, Monterrey, N.L., Mexico.

Tecnológico de Monterrey

Tecnológico de Monterrey is the best known school in Mexico with highly recognized programs in Engineering, Business, Public Policy, Human Studies and Science. Tecnológico de Monterrey is a private institution with a main campus in Monterrey and 31 campuses throughout México with more than 293,500 graduate and undergraduate students. Furthermore, in order to promote students' internationalization, Tecnológico de Monterrey has the support of liaison offices located in strategic cities around the globe and also has signed agreements with foreign Universities.



Jorge Ramírez
*Director of Engineering
and Technology
Graduate Program
Instituto Tecnológico
y de Estudios Superiores
de Monterrey*

“ We are certain that this master's degree will fulfill your personal expectations and will have a direct impact on your professional development. Both leading institutions in higher education in Latin America and the U.S. have put together the best of their educational resources in order to meet your high expectations”.

Achieve business objectives

The business environment we live in nowadays demands three important elements for competitiveness: information, technology and management.

In order to integrate these elements, organizations require skills, theories, structures, systems and strategies that enable them to be more effective.

Decision-making, problem-solving and general planning are key elements to compete in a dynamic business world and become a high-performance organization.



2017 cohort students at Carnegie Mellon University, Pittsburgh PA.

Program Objective

The main purpose of the Master of Science in Information Technology (MSIT) - Maestría en Administración de Tecnologías de Información (MTI) is to prepare leaders with an international perspective which promote change and are able to surpass the barriers of conventional structures of organizations. In order to achieve its purpose, this program integrates information technology and management skills.

through the intelligent application of technology



Entering class 2017. Tenth cohort of the MSIT – MTI program.

Student Profile

This dual master's degree is oriented for engineers and managers with an executive position in strategic areas of any organization that requires an innovative and transformational change. It is also designed for professionals working directly on IT key-areas such as IT management, freelancers and business consultants seeking to apply new concepts into the transformation of organizations to become more competitive in the future.

Graduate Profile

Schooled in inter-disciplinary tradition and trained as analytical problem-solvers, MSIT-MTI graduates will develop and deploy IT to create value for their organizations and society. They are also professionals in a constant quest for new schemes, development and innovation supported by information technology.

Alumni from this dual master's degree program are professionals experienced in executive positions with a global view of IT management within a Latin American context. Program graduates are able to learn on their own and have a passion for excellence in service quality and technological support as a strategy for competitiveness.

Outstanding Career Opportunities

Graduates of the MSIT-MTI program are employees at many of the world's most successful companies in industries that include consulting, technology, finance, and information security. In addition, alumni of the program have pursued careers with startup companies or embarked on their own entrepreneurial ventures.



Preparing professionals to understand and plan actions that combine technological and business strategies.

Dual Degree Structure

Through this partnership, students will pursue two graduate programs. The program will be delivered in 12 week trimesters and includes 21 classes. Each class requires an average of 12 hours per week.

The Carnegie Mellon's Heinz School offers the Master of Science in Information Technology with 24 credit hours of coursework (13 courses).

Tecnológico de Monterrey offers the Maestría en Administración de Tecnologías de Información with 24 credits of coursework (8 courses).

The program will be offered in a lock-step cohort, meaning students will start and end as a group. This online program only has two face-to-face moments consisting on mandatory trips to both institutions:

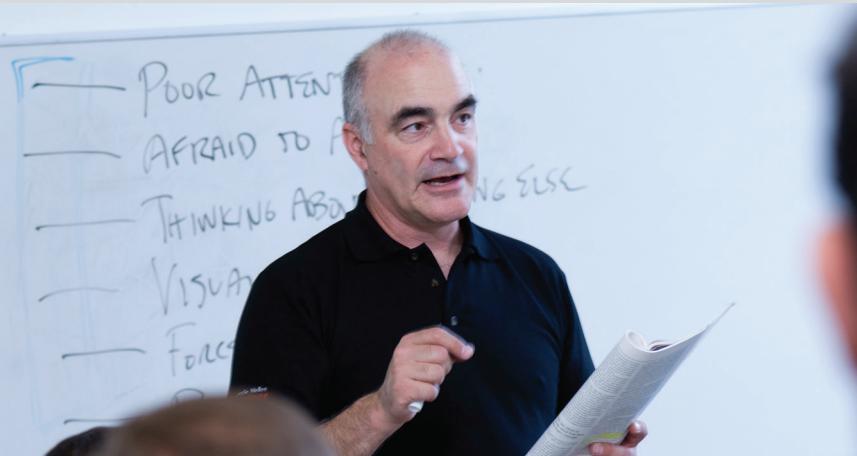
- **Orientation week, July 23 - 27, 2018**
- **Closing week, December 2020.**

University	Units	Class
CMU	Mandatory	Orientation Week in Pittsburgh, PA, United States
TEC	12	Administration
CMU	6	Business Communications
CMU	12	Global IT Management
TEC	12	Human Capital Management
CMU	12	Database Management
TEC	12	Information Technology Governance
CMU	6	Economic Analysis for IT Managers
CMU	6	Art and Science of Business Analytics
CMU	6	IT Project Management
TEC	12	Leadership for Sustainable Development
CMU	12	Telecommunications Management
TEC	12	Computer Security
TEC	12	Strategic Enterprise Performance Management
CMU	6	Statistics for IT Managers
CMU	6	Data Warehousing
TEC	12	TEC - Field Project I
CMU	6	Decision Making Under Uncertainty
CMU	6	Enterprise Architectures
CMU	6	Business Process Modeling
TEC	12	TEC - Field Project II
CMU	6	Digital Transformation
TEC	Mandatory	Closing Week at Tecnológico de Monterrey, Mexico
192 Total Units		

(Some courses may be subject to change without previous notice)

Tecnológico de Monterrey Course
 Carnegie Mellon Course
 Orientation & Closing Weeks

Program Structure and Benefits



Chris Labash, professor of Professional Speaking, also serves on the Board of Advisors of TechBridgeWorld, a global nonprofit organization.



Network with high quality professionals from all over the world. Juan Carlos Lozano (MSIT – MTI, 2011) CIO for Cinépolis.



As consultant of ODATO Marketing Group Ed Barr, professor of Professional Writing, is also co-founder of Linchpin Learning.

Dual Degree Benefits

- Learn with **world-class faculty** from both Carnegie Mellon and Tecnológico de Monterrey. Our faculty has a reputation for its multi-disciplinary and real-world emphasis.
- Earn **two degrees** in an accelerated format.
- Become **transformational leaders** using appropriate and effective Information Technology in organizations.
- Become a **specialist** to evaluate and adopt emerging technologies to support business.
- Acquire technical knowledge and management skills required for **professional advancement**.
- Flexible **“anytime-anyplace”** distance learning approach. Our distance format permits to pursue and international scope program through the internet, allowing participants to study part-time without having to leave their job or relocate.
- Access to the **same courses** taught on Carnegie Mellon and Tecnológico de Monterrey using state-of-art technologies.
- Join a multicultural cohort in order to further develop the management and workgroup skills needed to become an IT leader.
- Interact with leading organizations and top corporate recruiters through Tecnológico de Monterrey’s exclusive job search database and Carnegie Mellon’s Heinz College Career Services office.



Business Communications

The objective of this course is to understand the process of negotiations and how the structure of the negotiations process affects the outcomes achieved.

IT Project Management

The purpose of this course is to assist the IT professional in understanding the components of complex projects, manage those project components, form and lead a project team.

Economic Analysis for IT Managers

The primary objectives of this course are to develop concepts and techniques of microeconomic analysis, to sharpen your analytic abilities, and to apply economic analysis in the information or network economy.

Database Management

In order to provide an understanding of the evolution of data management, the traditional file organization is compared with network, hierarchical and relational models of data.

Global IT Management

It covers theory and practice of business management in IT setting including development of an effective IT strategy.

Art and Science of Business Analytics

The aim of this course is to understand what it takes for companies to successfully leverage data and analytics to become more customer-centric while driving improved business results while also providing opportunities for hands-on learning.

Telecommunications Management

This course will help students to understand the technical, business and industry fundamentals necessary for the effective management of organizations that develop, operate and/or use telecommunications.

Statistics for IT Managers

The objective of this course is to provide individuals who

aspire to enter management positions in firms that use the internet to market and serve its clients with the basic statistical tools for analyzing and interpreting Internet data.

Data Warehousing

This course will introduce you to the major activities involved in a data warehousing project.

Decision Making Under Uncertainty

This class teaches a range of quantitative methods for making practical decisions under uncertainty, and in doing so gives an intense introduction into the art of mathematical modeling of business and social systems.

Business Process Modeling

The goal of this course is to provide students with the knowledge and skills necessary to analyze, design and model a business process that leverages new technologies, especially web service technologies, to achieve desired operational efficiencies.

Digital Transformation

The objective of this core course is to serve as a capstone course integrating technological and managerial aspects of information technology.

Computer Security

During this course, students will learn to identify, assess and manage the risks and threats of classified information.



Working professionals have access to high quality distance learning education.

Courses

Enterprise Architectures

The course provides the foundations for the effective design of modern organizations that are involved in complex environments characterized by intense competition and the surplus and shortage of resources.

Strategic Enterprise Performance Management

This course will study strategy and how business success is strongly related to the extent to which managers are able to define and communicate strategy through the whole organization.

Administration

The objective of this course is to provide a detailed vision of the production, commercialization and product distribution of digital information, applying emergent business models from digital business opportunities.

Human Capital Management

This course studies organizations based on information technologies in a globalized world. You will study the structure, design, analysis and persons that form such organization.

Information Technology Governance

The aim of the course is to study the concepts of corporate governance of information technology, so that students can develop a strategy, plan, manage and control the information technology function in organizations.

Leadership for Sustainable Development

This class develops the awareness about environmental problems, and the crises caused by the inadequate use and consumption of natural resources.

Field Project I

Practical application course.

Field Project II

Practical application course.



Admission Requirements¹ for Dual Master's Degree²

- Submit the admission application for Tecnológico de Monterrey.
- Submit the admission application for Carnegie Mellon University. Mandatory essay and recommendations must be included.
- Score report of the Tecnológico de Monterrey's admission test (PAEP³) or GMAT³ with a minimum score of 500 or above. If you present the score report for the GRE³, the minimum is 550 points for the quantitative section and 4.0 for analytical writing.
- TOEFL³ certificate with the next minimum scores: Reading 22, Listening 22, Speaking 18, Writing 22. Applicants with a 25 or higher in each section have the best chance for admission. We suggest a score of 89 points in Toefl IBT.
- Certificate of undergraduate studies with an average of 80/100 or its equivalent in other scales.
- Transcript evaluation report from undergraduate degree (course-by-course), completed by an organization accredited by NACES (naces.org).
- Birth Certificate.
- Four small ID color photos.
- Up-to-date resume in English.
- A minimum of two years of relevant professional work experience is required.

An Admission Committee from both universities will consider the status of every applicant. Some of these requirements may be subject to change during the admission process.

¹ More documents will be required according to every candidate's profile.

² Since application is to both universities, some documents are required in Spanish and English, thus official translations must be made.

³ Test is effective only for 2 years after the day it was taken.

Faculty



María del Socorro J. Marcos
Director of Admissions Department

Tecnológico de Monterrey

María del Socorro Marcos holds a Bachelor Degree in Business and Technology, an MBA and a Ph.D. in Business with major in Technology Management granted by Tecnológico de Monterrey. Part of her doctoral studies were at Glasgow University.

Alessandro Acquisti
Assistant Professor of Information Technology and Public Policy

H. John Heinz III School of Public Policy and Management at Carnegie Mellon University

Professor Acquisti received a Master and a Ph.D. in Information Systems in 2001 and 2003 from SIMS, UC Berkeley. Acquisti also received a Master in Economics from Trinity College, Dublin, in 1999; and a Master in Econometrics and Mathematical Economics from the London School of Economics in 1999.



Macedonio Alanís
Master of Information Technology Management Coordinator

Tecnológico de Monterrey

Professor Alanís received a B. in Computer Systems Engineering from the Tecnológico de Monterrey and earned a Master in Computer Science from Brown University and a Ph.D. in Administration with concentration in Information Systems Management from the University of Minnesota.



Ramayya Krishnan
Dean of Carnegie Mellon's Heinz College and, W.W. and Ruth F. Cooper Professor of Information Systems

Professor Krishnan received a B. Tech in Mechanical Engineering from the Indian Institute of Technology, Madras, India, and earned an M.S. in Industrial Engineering and Operations Research and a Ph.D. in Information Systems from the University of Texas at Austin.

Accreditations

Online Master's Degrees offered by **Tecnológico de Monterrey** are officially recognized by the Secretary of Public Education in Mexico. In addition, Tecnológico de Monterrey is accredited by the following Mexican and U.S. agencies:

- Asociación de Universidades e Instituciones de Educación Superior, **ANUIES** (The Association of Universities and Institutions of Higher Education).
- Federación de Instituciones Mexicanas Particulares de Educación Superior, **FIMPES** (The Federation of Private Institutions of Higher Education in Mexico).
- Tecnológico de Monterrey is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, masters and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call (+1) 404-679-4500 for questions about the accreditation of Tecnológico de Monterrey.

Carnegie Mellon is accredited through a voluntary, peer-review process coordinated by the Middle States Commission on Higher Education (**MSCHE**), which manages accreditation for degree-granting schools, colleges and universities in the mid-Atlantic region of the U.S. Such institutions are typically reaccredited every five years. Carnegie Mellon has been accredited since 1921.

H. John Heinz III School of Public Policy and Management is accredited by the National Association of Schools of Public Affairs and Administration (**NASPA**). Last reviewed: 2007

Student Stories

Manuel Belaunzarán Barrera
MTI-MSIT, cohort 2010-2012

“This dual master’s degree has changed my perspective regarding my work. Now I am able to understand the business side of technology, detect global trends in the market and implement better solutions. It’s not easy, but the reward is worth the effort.”

Scan the code to
watch full interview



Scan the code to
watch full interview



Juan Carlos Lozano
MTI-MSIT, 2009-2011

“Carnegie Mellon University is at the top of its game with a world - class faculty, excellent academic resources and plenty of experience in information technology that enriches this program like no other!”

Scan the code to
watch full interview



José Luis Gómez
MTI-MSIT, 2008-2010

“The flexibility of this program gives you the unique opportunity to maintain your work experience and, at the same time, gain valuable knowledge and technical skills.”

Carnegie Mellon



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