

INSTITUTO MAUÁ DE TECNOLOGIA



MAUÁ

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COMPUTER ENGINEERING SÃO CAETANO DO SUL

# COM PU TER





## WHAT DOES A COMPUTER ENGINEER DO?

Computer engineers are generalist professionals who can easily work on many fronts in the ICT (Information and Communication Technologies) market. These professionals can work in network infrastructure, software development and hardware/software integration.

Computer engineers can work with the following:

- Developing applications for dedicated hardware — routers, firewalls, games consoles, on-board computers, navigation systems, Internet of Things hardware, and more;
- Provision of services and consulting — software development for business, industry, games, the internet and mobile devices;
- Computer networks and telecommunications — network infrastructure, virtualization, cloud computing, information security;
- Software support for networks and smart cities — vehicles and objects connected to the internet, smart power grids, traffic management, smart campus, smart buildings, urban mobility software and applications;
- Results-based analytical software — software solutions that allow in-depth knowledge of customer needs and behavior, software tools for business models, data management for decision making;
- New technologies and challenges — development and applications for cloud computing, large data processing (Big Data), applications for all types for mobile devices, intensified use of social networks, Internet of Things, artificial intelligence and information security;
- Higher Education sector, research and development.

### Computer Engineering vs. Computer Science

Computer scientists work with software specifications and development, whereas computer engineers specialize in software and hardware design and integration.

## THE JOB MARKET

Because of how ubiquitous computers have become in Brazil and abroad, Computer Engineering has enjoyed constant growth. The Brazilian job market for computer engineers tends to be very strong, and is usually unable to fill all of its job vacancies. The South and Southeast regions of Brazil concentrate the largest number of jobs for professionals in this field. Because of their versatility, computer engineers can find work in any of the industrial hubs spread across the country, as well as start their own businesses.



# COM PU TER

**PROGRAM LENGTH:  
DAYTIME CLASSES: 5 YEARS.**

**LOCATION:  
SÃO CAETANO DO SUL CAMPUS**



## THE COMPUTER ENGINEERING PROGRAM AT IMT

The Computer Engineering Program at IMT provides students with an education that not only has a strong focus on the fundamental concepts of engineering, but it also prepares students to take advantage of opportunities in the market.

As part of this preparation, there are several practical subjects and activities in the curriculum that aim at developing a business-oriented mindset, fostering innovation and entrepreneurship.

The program allows students to develop skills related to the trifecta of innovation: desirability, feasibility and viability.

**IMT UNDERGRADUATE STUDENTS OF ALL ENGINEERING PROGRAMS PURSUE THE SAME COURSE PATH DURING THEIR FIRST YEAR OF STUDY.**

**WHEN PROGRESSING TO THEIR SECOND YEAR, STUDENTS CAN CHOOSE THEIR MAJOR.**

# THE PROGRAM OFFERS:

- The best laboratory infrastructure in Brazil, with state-of-the-art equipment and software;
- Collaborative environments and advanced multidisciplinary labs that allow for new innovation experiences;
- Flexible learning path, allowing students to build their own life projects;
- A differentiated curriculum that leads students to developing new skills: communication, collaboration, creativity, innovation, critical thinking, problem solving, planning and management, diversity, and much more;
- Excellent technical education applied to product and service development;
- Integration between theory and practice – students involved in project development since their first year in the program;
- Development of integrated projects involving all Engineering disciplines, Design and Business Administration;
- Contact with the labor market – projects developed in partnership with businesses, solving real-world problems;
- Support for students to participation in contests and award competitions;
- Opportunity to be in constant contact with professionals already working in the field through lectures, workshops and events;
- Innovation, Leadership and Entrepreneurship Week, integrating the Engineering, Design and Business Administration fields – academic competitions, hackathons, lectures, visits, international relations, real projects involving companies, and more.







## AWARDS AND ACCREDITATIONS

- Score of 4 (out of 5) on the National Student Performance Test (Enade)
- Partnerships with renowned businesses, such as Cisco, IBM, Oracle, Microsoft, DellEMC, Rede Globo.
- Students from the Mauá eSports team have won prizes in external competitions.
- Partnerships with international Higher Education Institutions, giving students the opportunity to earn international experience.
- IMT Computer Engineering graduates tend to stand out in the job market.

## SPECIAL PROJECTS AND ACTIVITIES

In addition to conventional classes, students engage in essentially practical projects and activities in which they must work in groups composed of students enrolled in different programs and program years. There are more than a hundred projects and activities in progress, which take advantage of the excellent infrastructure available at IMT.

## ACADEMIC COMPETITIONS

- Aerodesign
- Model Aircraft
- Baja Mauá
- Concreto Mauá
- Gravity Car Race
- Inova Mauá
- Eco Mauá
- Mauá Racing
- Robótica Mauá
- Mauá Júnior - Student-ed non-profit strategy consulting firm
- eSports Mauá







# PART NER SHIPS

INTERNATIONAL  
PARTNERSHIPS



# SANDWICH YEAR

Cooperation agreement (with partial or full scholarships available) with several international Higher Education Institutions, where students attend a semester or a year in an institution abroad, earn international experience and may transfer some of their credits back to their program in Brazil.



# INTERNATIONAL PARTNERSHIPS AND OPPORTUNITIES



# IMT KEY FEATURES



Built on over 130,000 square meters, São Caetano do Sul campus offers some of the best-equipped higher education facilities in the country.



Over 100 laboratories – two labs per conventional classroom –, including the brand-new Fab Lab.



Comfort and safety – the campus has several cafes, snack bars and different social areas, as well as free parking for approximately 1,400 vehicles.



Several exchange programs offered in prestigious international institutions: dual degree agreements, sandwich and study abroad programs. Students can apply for scholarships, and transfer some of their credits back to IMT.



Distinguished academic staff that blends subject-matter experts with extensive industry experience, and professors holding Master's and PhDs from some of the best universities in Brazil and abroad.



A new and innovative educational approach that requires active learning experiences – from outside the classroom – for the purpose of curriculum integration: academic competition, partnerships with the business community, undergraduate research, teaching assistantships, and much more.



An academic environment that includes close cooperation with industry technology development projects involving both the faculty and student bodies.



# IMT KEY FEATURES



Activities focused on developing the social and emotional skills students need to succeed in their professional careers.



Special support to help students transition to academic life: assistance available at non-classroom hours, access to vast digital content (video lessons and exercises), tutoring.



Curriculum flexibility, allowing students to choose complementary graduation projects and activities, as well as elective courses.



Minor programs, which provide students with an undergraduate specialization that is both complementary to and distinct from their main major, in areas such as Project Management, Business Management, Design and Innovation, Energy and Sustainability (programs revised on an annual basis).



A teaching philosophy focused on preparing students for innovation and entrepreneurship, developing projects that integrate Management, Design and Engineering.



Partnerships with the business community and mentoring by experienced executives to assist students with their term papers, adding a strong business focus, and connect their research to the marketplace issues and routine.



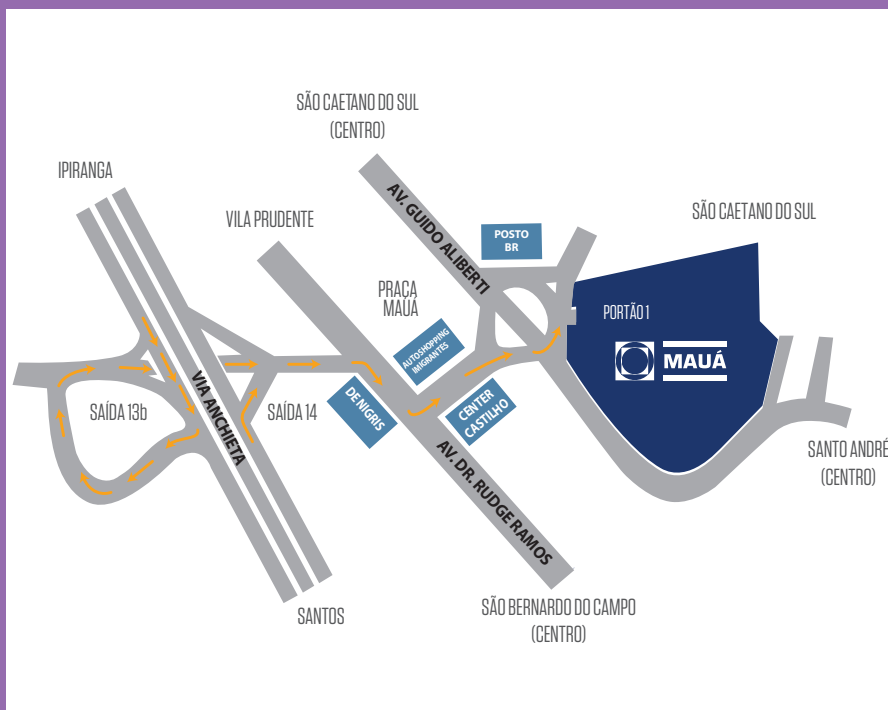
Undergraduate research opportunities offered in several IMT research groups that make significant contributions to scientific and technological advancement.





SÃO CAETANO DO SUL CAMPUS

# CAMPUS DIRECTION MAPS



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