

INSTITUTO MAUÁ DE TECNOLOGIA



MAUÁ

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CHEMICAL ENGINEERING SÃO CAETANO DO SUL

# CHEMICAL



## WHAT DOES A CHEMICAL ENGINEER DO?

Chemical engineers are responsible for the design, management, operation and control of chemical, petrochemical and biochemical processes in industrial plants. Their skill set also include the development of new products and industrial application processes.

Chemical engineers are qualified to work in the following areas:

- Design, construction, scaling and management of industrial plants;
- Management and optimization of processes;
- Industrial waste handling and management;
- Monitoring and reduction of environmental impacts, as well as the design and management of environmental pollution control equipment (air, water and soil);
- Analysis of risks and improvement of safety in industrial processes;
- Research and development of technologies, materials and new products and processes;
- Consulting, management of laboratories and research institutes.

## CHEMICAL ENGINEER VS. CHEMIST

Chemists usually study molecules, elements and chemical reactions in laboratory settings, while chemical engineers take materials and processes created by chemists and upscale them to make them larger or more efficient.

## THE JOB MARKET

There is a growing job market for chemical engineers, with special emphasis on process optimization, energy cost reduction, environmental management and new product development. There are several opportunities in a wide range of industries, including petrochemical, personal care and cleaning, polymers, fine chemistry, paper and cellulose, paints, varnishes, explosives, pharmaceutical, food, pesticides, water treatment, ceramics, cement, glass, and many more.



# CHEMICAL

**PROGRAM LENGTH:**

**DAYTIME CLASSES: 5 YEARSEVENING**

**CLASSES: 5 AND 6 YEARS**

**\* TOTAL CLASSROOM HOURS IS THE SAME FOR BOTH PERIODS**

**LOCATION:**

**SÃO CAETANO DO SUL CAMPUS**



## **THE CHEMICAL ENGINEERING PROGRAM AT IMT**

The Chemical Engineering Program at IMT offers a solid education in engineering concepts and addresses all stages of the main industrial processes, preparing students for situations they are likely to encounter in the job market.

With the constant application of concepts in the lab, students gain real insight into the work of engineers, working with concepts related to the design, construction, scaling, management, operation and control of industrial plants, including studies on waste management and disposal, monitoring and reduction of environmental impacts and environmental pollution control (air, water and soil).

**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:

- A solid technical education based on experimental projects, allowing students to understand and work with the concepts learned in the classroom;
- Faculty with solid academic background and experience in industrial and corporate environments, who challenge students to solve real-life problems faced by engineers in their daily work routines;
- Development and analysis of Chemical Engineering projects, using simulation software and studies of real-life situations in the field;
- Undergraduate research;
- Development of critical and creative thinking aimed at problem solving;
- A systemic view of the role of chemical engineers in the workplace;
- Integration with the Research Center, which offers opportunities for internships and job placements in companies from several industries;
- Research and teaching laboratories and facilities equipped with tools that give students the opportunity to operate and simulate industrial processes.





## AWARDS AND ACCREDITATIONS

- 4 stars in Guia do Estudante;
- Partnerships with international Higher Education Institutions, giving students the opportunity to earn international experience;
- IMT Chemical 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-led 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.



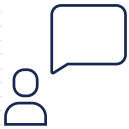
An academic environment that includes close cooperation with industry technology development projects involving both the faculty and student bodies.



# 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.



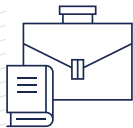
Curriculum flexibility, allowing students to choose complementary graduation projects and activities, as well as elective courses.



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.



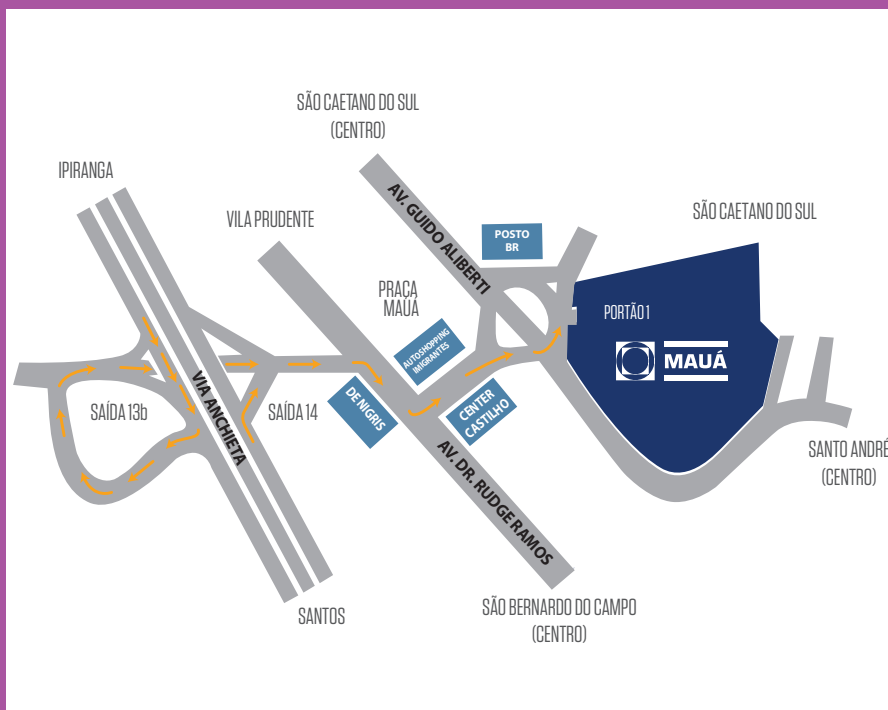
Undergraduate research opportunities offered in several IMT research groups that make significant contributions to scientific and technological advancement.





SÃO CAETANO DO SUL CAMPUS

# CAMPUS DIRECTION MAPS



Praça Mauá, 1  
São Caetano do Sul, SP  
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