



R. Itaguaiçu, 595 - São Caetano,  
Betim - MG, 32677-562  
+55 (31) 3597-6360  
<https://www.ifmg.edu.br/betim>

**Welinton La Fontaine**  
Headmaster  
[dge.betim@ifmg.edu.br](mailto:dge.betim@ifmg.edu.br)

**Marcel Souza**

Course Coordinator  
Chemistry Counselor

[coord.tec.quimica.betim@ifmg.edu.br](mailto:coord.tec.quimica.betim@ifmg.edu.br)

**Vinícius Sá**

Course Coordinator  
Mechanics Counselor

[coord.tec.mecanica@ifmg.edu.br](mailto:coord.tec.mecanica@ifmg.edu.br)

**Victor Melo**

Course Coordinator  
Automation Counselor

[coord.tec.automacao@ifmg.edu.br](mailto:coord.tec.automacao@ifmg.edu.br)

**Nara Nogueira**

Campus Betim International Affairs  
[nara.nogueira@ifmg.edu.br](mailto:nara.nogueira@ifmg.edu.br)

**9:1**

Student-teacher ratio.  
Average class of 30

Number of students enrolled:

- 522 - Technical Level;
  - 408 - Undergraduate Degree
- Graduating class size: 156

**98%**

of faculty holds  
advanced degrees:

- 52% hold Master's Degrees
- 47% hold Ph.D Degrees

## THE SCHOOL

The Federal Institute of Education, Science, and Technology of Minas Gerais (IFMG) is a Brazilian institution of higher education that integrates the Federal Network of Vocational, Scientific and Technological Education Institutions implemented by the Brazilian Ministry of Education in 2008. It offers public education at a high level of excellence.

IFMG Betim is one of the eighteen campuses located in Minas Gerais state. It has been serving students from various surrounding municipalities since 2011. Nowadays, the campus offers technical courses integrated into the high school curriculum in the areas of Chemistry, Mechanics, and Industrial Automation; and two undergraduate courses, Bachelor on Industrial Automation Engineering and Bachelor on Mechanical Engineering.

## OUR MISSION

IFMG aims at fostering vocational and technological education, research and innovation in an inclusive, democratic society, by boosting scientific, humanistic, and cultural development.

## SCHOOL RESULTS

### ENEM: A STANDARDIZED BRAZILIAN NATIONAL EXAM

Humanities - **595,06**

Natural Sciences - **579,20**

Languages - **587,93**

Mathematics - **677,01**

Composition - **789,71**

## GRADING SYSTEM

The student's progress is evaluated in diverse learning situations, considering their abilities and attitudes. Students' grade point averages are calculated below:

- Graduating **Class of 2021** Average GPA = 74,5
- Graduating **Chemistry** Class Average GPA = 76,2
- Graduating **Automation** Class Average GPA = 74,4
- Graduating **Mechanics** Class Average GPA = 72,9



## CURRICULUM: VOCATIONAL HIGH SCHOOL ACADEMIC PROGRAMS

Students take the same core classes offered in an ordinary high school course with the addition of integrated higher-level technical subjects, according to the student's choice of application before taking the institution's entrance exam. IFMG's curriculum is based on the guidelines set forth by the Brazilian Ministry of Education and by the Department of Technological Education.

Subject	Total Workload
Arts	60h
Biology - A,B and C	180h
Chemistry - A, B and C	180h
English - A, B and C	180h
Geography - A,B and C	180h
History - A,B and C	180h
Portuguese Language/Literature and Writing	330h
Mathematics - A,B and C	330h
Physical Education - A,B and C	180h
Physics - A, B and C	240h
Philosophy	90h
Sociology	90h
Informatics	60h
Labor Safety	30h
Administration and Entrepreneurship	60h
Spanish (optional)	60h

HIGH SCHOOL CORE CURRICULUM

*Spanish is offered as an optative discipline.  
Total course workload: 3300h*

Students must undergo **highly demanding classes**, both in their field of choice and high school. Industrial Automation and Mechanics have a curricular emphasis on Physics, Mathematics, and college-level Engineering. Chemistry has a curricular emphasis on Chemistry, Mathematics, Biology, and college-level Laboratory Practices.

In order to graduate, students must attend 3600 class hours throughout three years and successfully achieve approval in all classes.

**There are no AP or Honors Classes.**

In addition to the specific classes of each course, students take the same core curriculum, regardless of their demonstrated academic abilities.

## SPECIFIC CURRICULUM REQUIREMENTS

**Chemistry Course:** Inorganic Chemistry, Introduction to Laboratory Chemistry, Industrial Processes and Unit Operations, Analytical Chemistry I and II, Applied Organic Chemistry, Physical Chemistry and Corrosion, Microbiology, Mineralogy, and Polymeric Materials.

**Industrial Automation Course:** Technical Drawing, Structured Algorithms, CAD + Computer Modeling, Analysis of Electrical Circuits, Digital systems, Manufacturing + CNC and Hydropneumatics, Embedded Systems, Quality and Project Management, Instrumentation and Process Control, Industrial Automation, and Electric.

**Mechanics Course:** CAD/Modeling, Metrology, Mechanical Manufacturing, Science of Materials, Quality and Project Management System, Machine Thermal / Hydropneumatics, Elements of Technical Mechanical Machines and Material Strength, Welding Electricity and Facilities.

## SCHOOL FACTS

**School type:** Public (tuition-free)

**System of education:** Professional Education of Technological Level and Higher Education

**Division of high school academic calendar:** Three trimesters

**Scoring system:** All classes have a minimum passing grade of 60 on a 0-100 scale.

**Primary language of instruction:** Portuguese

**Is the school bilingual?** No

**Religious affiliation:** None

**CEEB or ACT code:** None

**Years of instruction offered:** Three years

**Class rank:** IFMG Betim does not have a class ranking system that influences educational processes.

**Entrance system:** To enroll, students must first take an entrance exam. The exam consists of questions on Mathematics, Sciences (Physics, Chemistry, and Biology), Portuguese, Geography, and History.

IFMG Campus Betim has a high number of applicants per place. In 2021, out of 1087 applicants, only 16% were accepted.

**Acceptances:** Our high-school students go on to study in some of the best universities in Brazil, such as Federal University of Minas Gerais, Federal University of Rio de Janeiro, Campinas State University, Federal University of Bahia, and also abroad, in Argentina, and France.

## AWARDS

IFMG Betim students have received several awards in national Olympiads and similar competitions:

- **1st place** on IFMG's 2021 Innovation Olympiad
- **Science National Olympiad 2021** - 02 gold medals, 06 silver medals, 03 bronze medals
- **Math Kangaroo 2021** - 05 silver medals, 02 bronze medals
- **Brazilian Olympiad of Astronomy 2020** - 04 gold medals, 04 silver medals, 02 bronze medals
- **Yale Young Global Scholars 2021** - 01 student participated of the online summer program
- **Latin American Leadership Academy 2021** - 02 students participated of the online bootcamp

## EXTRACURRICULAR ACTIVITIES

IFMG provides students with diverse opportunities for personal and academic enrichment outside of the classroom through a variety of activities, including:

- Clube do Livro (Book Club)
- CineClube (Film and Cinema Club)
- SLAM Poetry Club
- Astrocultura Project (Astronomy Club)
- Se Joga! (Female Soccer Team)
- PIEL (Sports and Leisure Program)
- Extension projects in a variety of areas, such as Humanities, Arts, Social Sciences, and STEM.
- Tutor/Teaching Assistant
- Scientific Research projects
- Student Council
- Dance Club