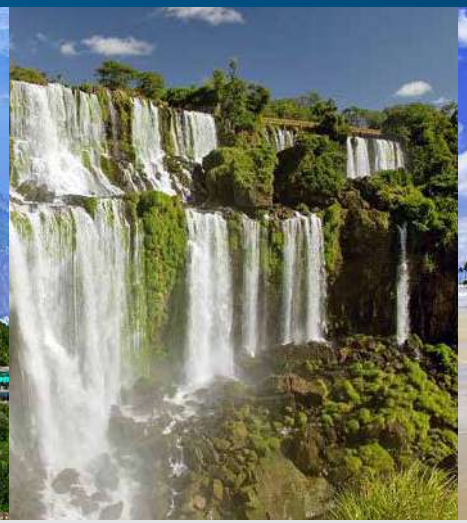
Inatel

Instituto Nacional de Telecomunicações

Have you ever thought of coming to Brazil?



The largest country in South America, it occupies almost half the continent. With vast stretches of rainforest filled with exotic plants and wildlife, its 7,400-kilometer Atlantic coast is lined with golden sand beaches. For tourists, Brazil is both a tropical paradise and an exciting cultural destination with attractions for all tastes, from idyllic beach holidays and jungle explorations to world-class art museums and the pulsing rhythms of Rio's Carnival.

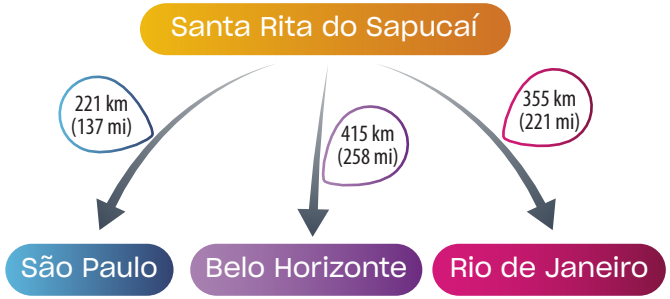
The “Brazilian Silicon Valley”

Known as the “Brazilian Silicon Valley”, Santa Rita do Sapucaí has more than 130 small and medium companies in the areas of electronics, industrial automation, telecommunications, software, electro-medicine, and others in the engineering field.

These companies offer products and services throughout Brazil and offer internship and employment opportunities, being a great technological pole employer to the students and engineers trained by Inatel.

With a privileged geographic location – in one of the most developed regions of the country, Santa Rita do Sapucaí is located among the 3 largest economic and commercial centers in Brazil (São Paulo, Rio de Janeiro and Belo Horizonte).

DISTANCE



Founded in 1965, the National Institute of Telecommunications – Inatel – is a center of excellence in teaching and research in the area of Engineering, and has become increasingly consolidated, in Brazil and abroad, as a barn of great talent. It was the first educational institution in the country to offer a higher degree of Engineering with telecommunications as a focus. It is a private non-profit institution maintained by the National Telecommunications Institute Foundation (Finatel).

Studying at Inatel, in addition to a high level of training, the student will be inserted in an environment totally focused on professional training and offering internship and employment opportunities, as well as starting up his own company.

Bachelor Degree

Biomedical Engineering
Control and Automation Engineering
Computer Engineering
Telecommunication Engineering
Electrical Engineering
Production Engineering
Software Engineering

Postgraduate studies

- Mobile Development and Cloud Computing
- Technology Business Management
- Clinical Engineering and Biomedical Engineering
- Telecommunications Networks and Systems Engineering
- Digital Transformation (Recorded Classes)
- v5G Mobile Communication Networks

Master Degree and Doctoral Program in Telecommunications

Biomedical Engineering

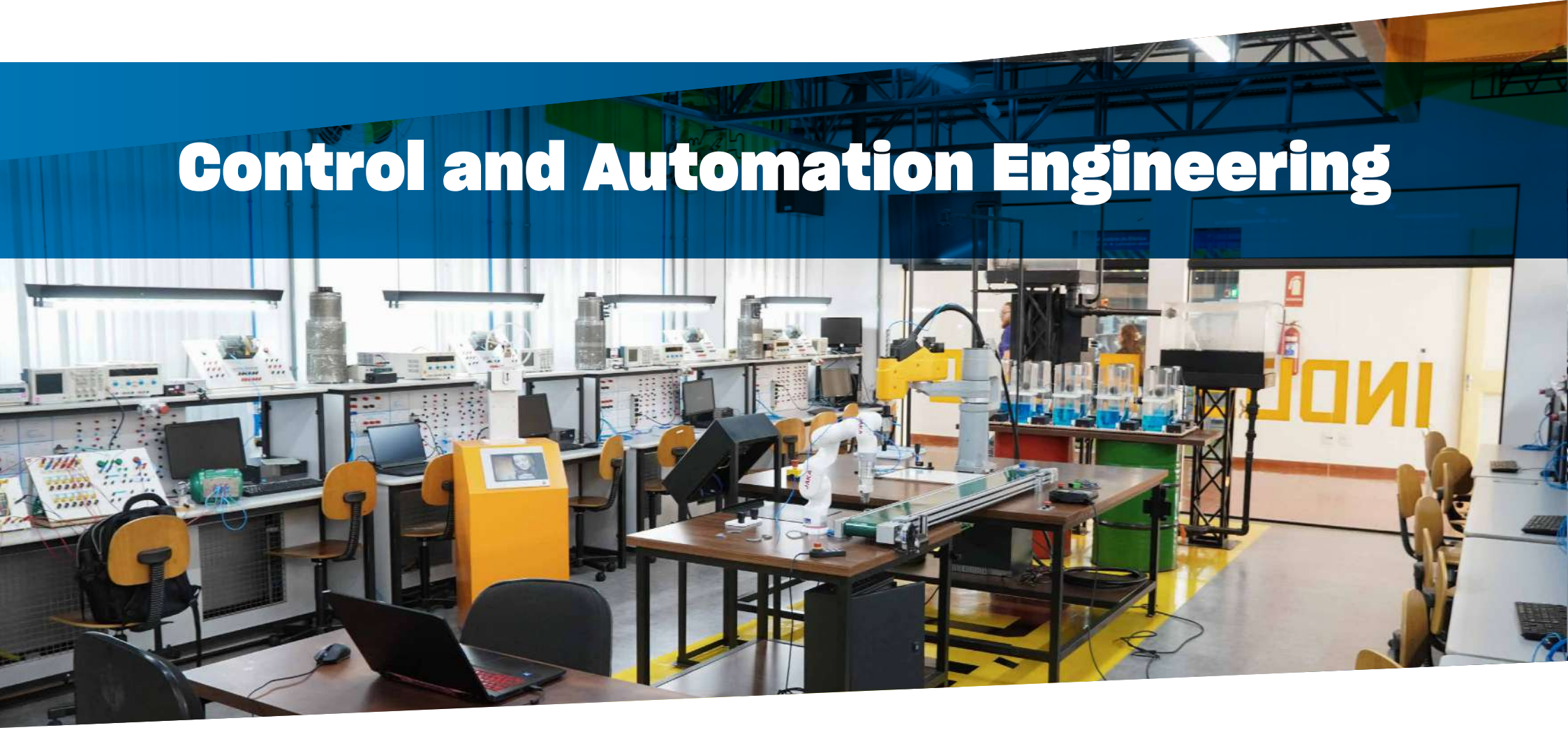
Inatel's Biomedical has an interdisciplinary characteristic, forming a professional to act on the frontier of knowledge between these two areas and allows the technology to be applied for the benefit of health.When you are graduated in Biomedical Engineering you can work in several areas such as: Industries and companies marketing or providing services in the area of health equipment. Design, development or commercialization of medical-hospital technologies. Development of software and electronic equipment. Hospitals and clinics, management of the technology present in the health entities,follow-up of the doctor in procedures that use technologies Academic and Scientific Career; Teaching and scientific research in universities for the development of new equipment, the discovery of biomedical materials and instruments; Consultancies or expertise in health organizations.

Telecommunications Enginnering

Inatel's Telecommunications Engineering course was the first to be created in Brazil in 1965. It is a pioneer and reference in the teaching and development of Telecommunications in the country, having trained professionals in the major and major companies in the sector.

The course has a set of basic, professional and specific curricular subjects, as well as complementary activities and entrepreneurship, which result in the desired profile - an engineer with diverse skills and abilities in the Telecommunications area and who maintains a relationship with human and social activities and with other areas of Engineering. The faculty is qualified and composed of masters and doctors. There are several teaching and research laboratories, with updated equipment and software, which contribute to a differentiated training.

Control and Automation Engineering



Since 2012, Inatel has offered the Control and Automation Engineering Course, which meets a demand from several sectors – electric, electronic, telecommunications, oil, mining, automotive, pulp, railway, among other areas. The course of Control and Automation Engineering combines mathematics, physics, mechanics, electronics, IT and telecommunications, as well as disciplines related to the environment, health, law and entrepreneurship. With many practical activities, in high technology labs, students learn how to develop, design, analyze and control electronically operated machines. It can also work with robotic systems, electrical and industrial control systems, building and commercial.

Electrical Engineering

The Electrical Engineering course is the branch of engineering that works with the studies and applications of electricity, electromagnetism and electronics. At Inatel, the course prepares the professional with solid technical-scientific training, general and complemented with components of entrepreneurship. The curricular structure has general disciplines of mathematics, physics, chemistry and electrical circuits. It also addresses more specific matters of the profession in the areas of: electronics, electromechanics, energy, power electronics, transmission and distribution of energy and others. The electrical engineer deals with electrical power systems, considering factors such as costs, location and safety.

Computer Engineering

Inatel's Computer Engineering course was created in 2004 and since then has been training professionals increasingly essential for the Information Technology and Communication market. The course provides training that allows the trainee to work in the areas of software development, firmware and hardware, computer networks, application and gaming development, automation and telecommunications systems, whether in companies (public or private), universities or business.

Production Engineering

The Production Engineering course was created based on the experience of the institution with the other engineering courses and with the Superior Course on Technology in Telecommunications Management. To train a qualified professional, the Production Engineering Course comprises Mathematics, Physics, Electronics, Computer Science, Entrepreneurship and Innovation, Project Management, Production Management, Finance, Marketing, Design, Industrial Networks, Strategic Planning, among others. It should be noted that more than 20% of the course hours will be practical and taught in Inatel's modern laboratories. The student of the Inatel has the possibility to obtain besides the diploma of the Institution, also a double diploma in an European university.

Software Engineering

The Software Engineering course prepares the professional to work in the development and management of computer programs (software) in its various types and levels: applications for the most diverse platforms and operating systems, Internet solutions, specific / on demand solutions, distributed systems, embedded systems, among others. This professional is responsible for planning, designing, coding, testing, maintaining and reviewing software development. In addition, it can also be responsible for managing projects and controlling product / development quality.

Course: Master and Doctorate in Telecommunications

The Master and Doctorate course at Inatel is designed for engineers from the different areas of Electrical Engineering, Computer Engineering, and professionals who graduated in Computer Science and Information Technology.
Enrollments can be made as Regular Student or Special Student.
Classes are provided from Monday to Saturday, at the Inatel campus, in Santa Rita do Sapucaí.

Course: Master and Doctorate in Telecommunications

Research lines:

1) Photonic RF Devices for Telecommunications
2) Telecommunications Networks and Systems

Research Fields:

- Network Performance Analysis
- Antennas
- Optical and Photonic Communications
- Electromagnetism Applied to Telecommunications
- Artificial Intelligence and Machine Learning
- Internet of Things and Sensor Networks
- Future Internet and Converged Networks
- Cognitive Radios and Cognitive Networks
- Vehicular Networks
- Digital Communication Systems
- 5G and 6G Mobile Communications Systems

Postgraduate studies Difference between Regular and Special Student:

Master's Degree

Regular students are linked to the program and must take at least two subjects per semester and perform all program activities, including passing the English language proficiency exam and defending a master's dissertation. In addition, the student is bound to all obligations and deadlines established on the by-law.
To complete the credits and enroll in a master's thesis, it is necessary to take 24 credits (6 subjects) with 60 hours each.

Doctorate Degree

Regular students are linked to the program and must take at least two subjects per semester and perform all program activities, including passing the English language proficiency exam and defending a master's dissertation. In addition, the student is bound to all obligations and deadlines established on the by-law.
To complete the credits and enroll in a master's thesis, it is necessary to take 48 credits (12 subjects) with 60 hours each.

The special student is not affiliated with the program and only takes isolated subjects, which can be utilized if he/she enters as a regular student in the program. The use limit of the subjects coursed as special student is 50% (up to 3 subjects).

Registration (regular and special student)

Documents required for enrollment as a regular student:

- Application form duly completed (available on the website).
- Academic history of the undergraduate course for the Master's and Master's history for enrollment in the Doctorate.
- Curriculum Vitae for the Masters and Lattes Curriculum for the Doctorate.
- Graduate Diploma or statement declaring that the student is awaiting the diploma (for the Master's degree), diploma, or declaration of completion of the Master's degree (for the Doctorate).
- 2 letters of recommendation from 2 professors in the field who know the candidate's performance. (available on the site)

Documents required for enrollment as a special student:

- Application form duly completed (available on the website)
- Academic history of the undergraduate course for the Master's enrollment and Master's history for enrollment in the Doctorate Curriculum Vitae for the Masters and Lattes Curriculum for the Doctorate.
- Graduate Diploma or statement declaring that the student is awaiting the diploma (for the Master's degree), diploma, or declaration of completion of the Master's degree (for the Doctorate).

Scholarship possibilities:

A former student at Inatel who has completed undergraduate, postgraduate courses (Lato Sensu or Stricto Sensu) has a monthly scholarship for the course corresponding to 50% of the monthly fee.

Typically, students with no employment relationship and no paid activity, enrolled as a regular student and with exclusive dedication to the Master's and doctoral program may apply for the monthly scholarship. The scholarship request will be submitted for analysis, and if approved, the student may be assisted by Finatel (Maintainer of the Inatel Foundation).

To apply for the Finatel scholarship, the candidate must fill out the scholarship application form available at: https://inatel.br/mestrado-doutorado/inscricao and deliver it to the Student Assistance Section of Inatel – SAE or send it via e-mail sae@inatel.br with the documentation specified below:

1) ID carc (RG).
2) Cadastro de Pessoa Física (CPF).
3) Work card, regardless of the current employment relationship. (pages: identification, last contract, next page)
4) Complete Individual Income Tax Declaration, referring to the current year, including a declaration of assets and rights and delivery receipt.
   If you do not declare, you must print the Refund consultation, for the current year, issued on the website of the Federal Revenue:
   http://www.receita.fazenda.gov.br/aplicacoes/atrjo/consrest/atual.app/paginas/index.asp

Scholarship possibilities:

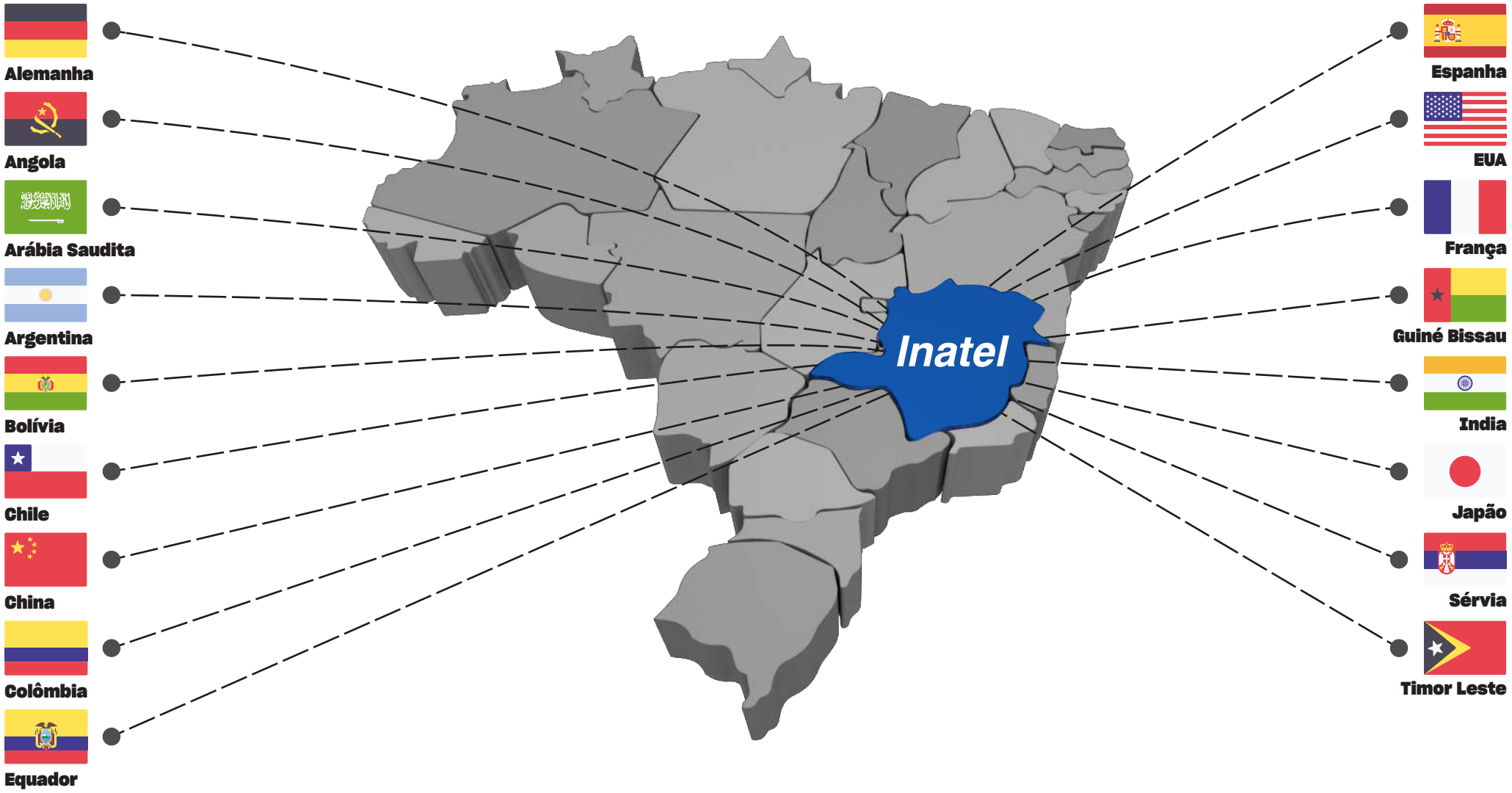
In addition to the Monthly Allowance Granted by Finatel, the candidate may apply for the Fundacred Grant – a 50% refundable scholarship that Inatel has in partnership with Fundacred for which the student will pay after the course is completed. The application will be analyzed and the candidate may or may not be benefited.

The conditions of this scholarship can be obtained from the Student Assistance Section of Inatel - SAE by e-mail sae@inatel.br.

The course provides, within established limits, maintenance grants from Finatel, Capes, Fapemig, and partner companies. These scholarships are allocated through a selection test (regular students only).

For more information:
https://inatel.br/mestrado-doutorado/
Documents for registration - access:
https://inatel.br/mestrado-doutorado/inscricao
About scholarships:
https://www.inatel.br/sae/bolsa-mestrado-e-doutorado

Foreigners who came to Inatel

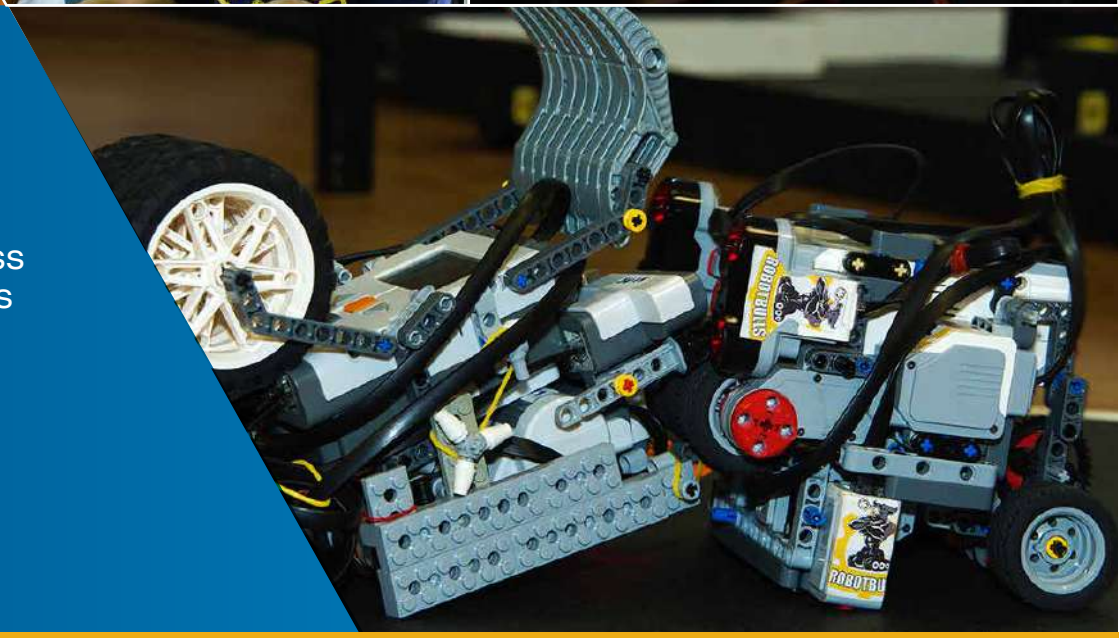


Campus

- Infrastructure of 75 thousand m² of area;
- More than 40 technological laboratory environments;
- Wide multi-sports space;
- Library with more than one million electronic titles, in addition to extensivephysical collection;
- Business Incubator with space for more than 20 projects;
- Teatro Inatel, one of the most modern in the south of our state;
- Researching and Competence Center;

Campus

- Laboratory of Cognitive Radio
- Laboratory of Woca – Wireless and Optical Convergent Access
- Laboratory of Information and Communications Technologies
- Coders, Developers & Gamers (CDG) Hub
- Laboratory of Robotics and Artificial Intelligence
- Cyber Security & IoT Lab
- Iot Research Group



eHealth Innovation Center

Internship activities:

(a) Development of projects in healthcare, including concepts of assistive technologies, biomaterials, telemedicine, serious games, home care and rehabilitation of patients;

(b) Understanding of protocols applied for medical informatics and softwares;

(c) Analysis of scenarios for creating new projects, academic activities and short courses in Biomedical Engineering;

(d) Support for students working on research papers and industrial projects.

www.inatel.br/ehealth

Inatel Radiocommunication Reference Center - CRR

The goal of Inatel's Radiocommunications Reference Center is to develop solutions aimed at 4th-grade mobile communications and 5th generations based on the latest techniques for implementing digital communication systems.

Internship activities:

a) radio frequency systems for mobile networks;

b) implementation of physical layer algorithms employing the software-defined radio philosophy;

c) implementation of MAC layer algorithmsemploying the software-defined radio philosophy;

d) laboratory and field testing of the technology developed at CRR.

www.inatel.br/crr

Information And Communications Technologies Lab – Ict Lab

Area of expertise:

Embedded and Industry 4.0 converging with Future Internet.

We have projects in the area of IoT, economy of things with IoTA, NetFPGA and KeyFlow, embedded in LoRa and IEEE 802.15.4.

Internship activities:

a) in the area of embedded and IoT, preferably in more than one Hardware.

b) economy of things with IOTA and Rapsberry Pi creating a digital wallet for micropayments for sensors and actuators.

c) integration with Internet of future NovaGenesis.

www.inatel.br/ictlab

Robotics and Artificial Intelligence Lab
Industrial Networks Lab

Internship activities

Industrial Networks Lab:

Work and operate equipment in the main industrial networks of the automation market: PROFIBUS, AS-I, PROFINET, Ethernet APL, and apply the concepts of Industry 4.0 in industrial communication protocols.

Robotics Team - Robotbulls:

Work, develop and design robots for competitions in various segments. Use of programming, control (Matlab), electronics, mechanical design, 3D printing, microcontroller programming and others.

www.inatel.br/robotica

Inatel Competence Center
Research and services

In addition to a college, Inatel also acts as an extension of the corporate researching areas and transfers all knowledge of the academy through a service center – the Inatel Competence Center – ICC. There are more than 150 specialists in the areas of Hardware, Software, Corporate Training, Testing, Calibration and Consulting that meet the needs of the technology market. It has more than 100 partners, among large national and multinational companies such as Ericsson, Benchmarck, ZTE, Huawei, and more, in addition to being strongly related to the companies of the Technological Pole of Santa Rita do Sapucaí. Inatel is also accredited by Inmetro to make product approvals.

Business

Since 1985, Inatel has a Project and Business Incubator. There are 11 companies incubated and more than 40 graduated in 15 years of history. In 2005, the Inatel Business Incubator received the award "Best Incubation Program for Innovative Enterprises in the Country", by the National Association of Entities Promoting Innovative Enterprises (Anprotec) and in 2010 was named among the 20 best Brazilian incubators.

Social Responsability

Cas@viva, program maintained by Inatel, which offers Technological Literacy for Social Inclusion to low-income students of the public school system from our town, which has already benefited more than 1,400 adolescents.

The Technological Literacy for Social Inclusion project is divided into two modules. The first one is aimed at elementary school students, with classes in Microinformatics, Ethics and Citizenship, Public Speaking Art, Environment, Sport, Music and Chess. Module 2 is dedicated to high school students, who have classes on Quality, Microinformatics, Informatics – Hardware and Software, Electricity and Electronics, Telephony, Data Communication Networks, Web Page and Programming.

For International Students

- Semester Students
- Internship at Inatel
- Technological Fair - Fetin
- Summer Couser

For International Students

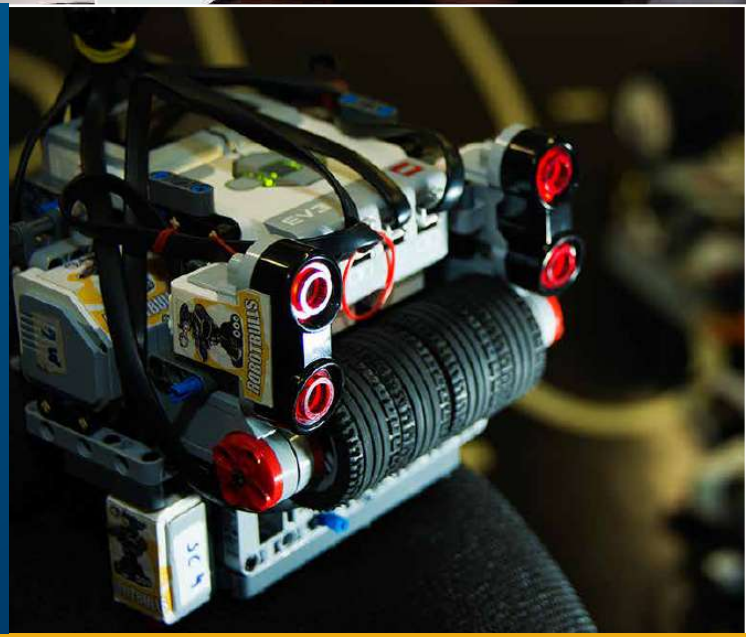
Semester at Inatel

Inatel has exchange partnerships with more than 40 universities worldwide. Successful agreements have been established between Inatel and universities in 18 different countries.

If you want to spend one or two semesters at Inatel, with the possibility of receiving a paid internship in projects or companies, visit our website for further information: **www.inatel.br/foreigners**

For International
Internship at Inatel

Work at Inatel, in our multiple laboratories with the most modern technologies in subjects such as biomedical, Telecommunication and Computing and Automation.
You can also work in the Valley of Eletronics, here in Santa Rita do Sapucaí where we have more than 150 companies in the field of technology.
For more information go to : www.inatel/foreigners



For International Students

Technology Fair of Inatel - FETIN

The Inatel Technology Fair is held annually with the exhibition of Inatel Engineering and Technology students' projects. The challenge is for them to develop innovative and applicable solutions for the current or future market. The public, in addition to visiting the stands, can also attend lectures and attend workshops on various themes at the Fetin Arena.

In order to encourage integration and exchange of professional experience between students of Engineering and Technologists, Inatel also opens the participation in this fair to foreign education institutions.

For more information: **www.inatel.br/fetin/fetin-internacional**

For International Students

Summer Course

You will have the opportunity to take a 22-hour course in the area of Telecommunications, and also have the possibility to interact with the Brazilian culture and people through integration activities and visit local companies.

Get further information about the courses offered at
www.inatel.br/foreigners/program-for-international-students/summer-course

Inatel

Instituto Nacional de Telecomunicações

For exchange programs, contact us:
nesp@inatel.br

Check our website:
www.inatel.br/foreigners