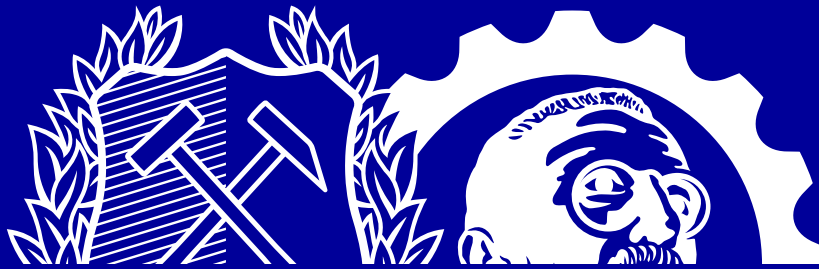




Fundação  
**GORCEIX**

EDUCATION,  
SCIENCE  
TECHNOLOGY  
AND SOCIAL ACTION





As one of the principal support institutions for the development of science and technology in the mineral-metallurgical sector, the **Gorceix Foundation (Fundação Gorceix)** has been active for more than half a century, thus obtaining a rich history of achievements through areas such as geology, metallurgy and others. whilst providing social assistance throughout Brazil.

The foundation was established in 1960 by a group of alumni from the **Ouro Preto School of Mines** who were inspired by the trailblazer spirit of its patron, **Claude-Henri Gorceix**. It is a legally registered entity that comes under the jurisdiction of private law. It is also considered to be a non-profit entity that is beneficial to the community, with activities that include scientific and technological research, social assistance, overall education and culture, and incentives for the development of Brazilian industries. Priority is given to industrial projects which involve the participation of the professors and students at the **School of Mines from the Federal University of Ouro Preto - UFOP**.

Present in the development of projects that are important for Brazil, the **Gorceix Foundation** has agreements with renowned private and public companies, both national and international, combining science and technology with social development for a sustainable environment.





**DEMAM | GORCEIX**

DEPARTAMENTO

DE MEIO

AMBIENTE



## *Its your main partner for sustainability projects.*

The sustainable use of natural resources is the main objective of studies and projects developed by the **Environmental Department (Departamento de Meio Ambiente - DEMAM)**, together with the country's and overseas' public and private entities. **DEMAM** proposes sustainable solutions, minimizing environmental aggressions, searching for efficient methods to explore and extract natural resources. **DEMAM** provides traineeships and professional development courses through a number of partnerships, with a focus on **Gorceix's** agreement with the **Federal University of Ouro Preto - UFOP**, where it directly manages *strictu sensu* and *lato sensu* graduate degrees. Among the work conducted, one of the key features is the participation of public and private organizations that aim for research, development, and teaching as well as services for environmental sustainability.



A partner with major Brazilian companies involved in the exploration and exploitation of natural resources, **DEMAM** provides advice in projects associated with other **Gorceix Foundation Departments**, particularly, **DEPETRO** and **DETEMM**. Professors, students and professionals attached to **DEMAM**, develop concepts, methodologies and standards involved in the process of elaborating diagnoses as well as the management of projects related to the revitalization of environmentally impacted areas. Through its project history and knowledge in environmental studies, **DEMAM** is prepared to face the challenges related to sustainable development, focusing on the elimination as well as mitigation of the eventual impacts caused by the mineral-metal-lurgical sector, as well as the elaboration of projects which may contribute to the disposal of urban and industrial solid waste, thus aiding in sustainable development.





**DEPAI | GORCEIX**

DEPARTAMENTO  
DE ANÁLISES  
E INOVAÇÕES



## *Its your main partner for high technology analysis.*

Created to supply the demand for technological categorization of materials, the **Department of Analyses and Innovation (Departamento de Análises e Inovações – DEPAI)** develops high quality technology and analysis geared towards the mineral-metallurgical sector's activities. With a tradition of stimulating research, the **Department** uses its own laboratories to create and develop methodologies and tools which focus on the maximization of the processes for resource extraction and minimization of negative impacts of mining activity, through actions with professors, researchers, and students from the **School of Mines - EM** from the **Federal University of Ouro Preto – UFOP**, allowing for projects that are more efficient and less aggressive towards the environment.



DEPAI is equipped with modern analysis instruments, distributed among five research laboratories: **instrumental chemistry**, **wet chemistry**, **mineralogy**, **industrial waste**, and **control and automation**, developing analysis of several minerals, studies in applied quantitative minerography (focusing on mechanical treatment processes of mineral and metallurgical procedures), metallurgical waste analysis, processes control as well as the development of new equipment, manufacturing and programming of logical circuits, and 3D simulation and modelling. Among its projects, the **Department** has increased the studies on the reuse of fine steelmaking sludge, one of the waste products of steel refining which has the largest negative impact on the environment, as a result of the steelmaking process.





**DETI | GORCEIX**

DEPARTAMENTO  
DE TECNOLOGIA  
DA INFORMAÇÃO



## *Its your main partner for IT projects and communication.*

The Department of Information Technology (Departamento de Tecnologia da Informação - DETI) offers innovative technology and software solutions, with outstanding expertise on **system analysis and development**, **diagnosing managerial processes**, tailoring **Enterprise Resource Planning (ERP) Systems** to the clients' corporate organizational model. It also develops **websites** and other **web systems**, **managerial information reports** that assist in strategic decision-making, **installation, configuration, maintenance**, and **management of servers and networks**, focusing on security of the information and excellency in the operation of critical missions.



With a highly-qualified team, both in development as well as maintenance, and with a dynamic perspective in an environment of constant transformation and innovation, **DETI** uses audacious methodologies, focusing on the **efficient management of the Information and Communication Technology - ICT**, aimed at reducing operational costs, without hurting the reliability and quality of services, providing solutions and results fitting of the ICT's necessary requirements. **DETI** adopts several platforms that adjust according to the project's needs, seeking to continuously improve its technological processes, keeping the focus where it really matters: **the proper management of your business**.





**DETEM | GORCEIX**

DEPARTAMENTO  
DE TECNOLOGIA  
EM MINERAÇÃO  
E METALURGIA



## *Its your main partner for ore processing projects.*

The **Department of Technology for Mining and Metallurgy** (Departamento de Tecnologia em Mineração e Metalurgia – DETEM) focuses on *R&D* programs, technical and managerial consultancy for segments in the mineral-metallurgical sector and in the sectors of Civil Engineering, Production and Environmental Engineering. The **Department** develops its activities through thematic divisions; **Processing of Ferrous and Non-Ferrous Ores, Metals and Industrials, Aggregation of Ores and Industrial Waste**, which are performed according to the needs of each project. The **DETEM** team is comprised of senior professionals, with extensive experience in creation, management and development of projects aimed at the sectors within its scope. Its infrastructure is made up of modern equipment for a myriad of studies which are related, thus highlighting **physical characterization, chemistry and mineralogy laboratories, bench processing for small samples, a modern laboratory for mineral aggregation**, which comprises



**pilot units for pelletization and sintering, and a reduction laboratory.** Aside from these, it also has **plans for a pilot scale**, on which studies can be conducted over several mineral concentration circuits, considering the unit operations of **crushing, classification, grinding, concentration by conventional cells and column flotation, gravimetry, and magnetic separation**, dry and wet, at different field intensities. **DETEM** offers studies in **hydrometallurgy**, such as **chemical and bacterial leaching of metals**, among others, considered alternatives to the recycling of minerals that are low grade or of higher mineral complexity, one of the biggest challenges faced today by the mineral-metallurgic sector.





**DETAP | GORCEIX**

DEPARTAMENTO  
DE TREINAMENTO  
ACADÊMICO E  
PROFISSIONAL



## *Its your main partner for professional training.*

The Department of Academic and Professional Training (Departamento de Treinamento Acadêmico e Profissional - DETAP) focuses on the promotion of complementary education, both academic and professional, for the School of Mines' at the Federal University of Ouro Preto – UFOP (Escola de Minas da UFOP) students, as one of the main statutory activities of the Gorceix Foundation in order to minimize the great challenges faced by its scholarship students. As a consequence of the labor market becoming more demanding and due to the social reality of the country, some students need professional guidance. DETAP is working to diminish the academic gaps accumulated during the students' undergraduate years. It is up to DETAP to organize and administer courses and training aimed at personal and professional development of the Gorceix Foundation underprivileged students, by complementing their academic formation and helping them enter the labor market.



Courses are offered in several areas of knowledge: languages, behavior, and computer skills. In the area of languages, courses are offered in **English, French, German, and Spanish**. Basic courses are offered, including the software applications most used in the exercise of their academic and professional activities, such as: **MS Excel, MS Excel Advanced, MS Project, Minitab, AutoCAD 2011, Advanced 3D, AutoCAD 3D, Autodesk Revit Architecture, ArcGIS** and, recently **Autodesk Revit Structural**. **Entrepreneurial Behavior** and **Personal Marketing** are the courses offered in the behavioral area. DETAP also offers professional training to employees of partner companies by means of short courses, seminars and specific training, developed on demand.





**DEPETRO | GORCEIX**

DEPARTAMENTO  
DE GEOLOGIA  
DO PETRÓLEO



## *Its your main partner for oil, gas and oil projects.*

To contribute to a better assessment of the Brazilian oil potential is the objective of the **Department of Petroleum Geology (Departamento de Geologia do Petróleo – DEPETRO)**. Its researchers, professors, trainees, and professionals develop projects focusing on **geological diagnostics and analyses**, such as **basin sediment studies, seismic mapping, potential methods, integrated potential methods, seismic stratigraphy** (seismic facies), **wells** (lithofacies and electrofacies), **vectorization and remastering of seismic data, petrolific systems, and surface geology**.



**DEPETRO** performs surveys of geological sections; structural and stratigraphic mapping; surface and subsurface geological mapping; underground mapping for lithofacies, electrofacies, and seismic facies; characterization and mapping of petroleum systems; selection and mapping of plays, leads and prospects as well as the evaluation of the exploratory potential of sedimentary blocks in water basins. **DEPETRO** also manages a **Geophysical Database (Banco de Dados Geofísicos – RDG)**, receiving and authenticating reports from companies that are linked to the oil and gas sector in the field of seismic interpretation. With a focus on the professional development of partner companies' engineers and researchers, **DEPETRO** organizes and conducts training and *lato sensu* graduate courses in the field of oil and gas as well as several other areas of scientific knowledge, such as **Structural Geology, Exploratory Analysis, Reservoir Geophysics, Petrophysics Applied to Formation Evaluation, 3D Geographic Modelling of Carbonate Rocks**, among others.







**DEPEP | GORCEIX**

DEPARTAMENTO  
DE PROJETOS  
ESPECIAIS



## *Its your primary partner for projects that are not In other Departments of Gorceix Foundation.*

The Department of Special Projects (Departamento de Projetos Especiais – DEPEP) develops first-rate projects and research on all sectors in the mineral-metallurgical activities production chain, always counting on professors and researchers who are highly qualified, as long as those projects are not within the scope of the profiles and activities of the other **Departments** within the Gorceix Foundation.



Through contracts and agreements with various organizations, public and private, **DEPEP** promotes the operational development and technological management related to projects and research in the sector, including actions in tandem with other **Departments** within the **Gorceix Foundation**, according to the needs and management of each specific project.





**DEPEC | GORCEIX**  
DEPARTAMENTO  
DE PESQUISA EM  
ENGENHARIA E  
EDUCAÇÃO CONTINUADA



## *Its your main partner in training and R&D with technology and innovation.*

The Department of Engineering Research and Continuing Education (Departamento de Pesquisa em Engenharia e Educação Continuada – DEPEC) aims to stimulate and facilitate the interaction between the Gorceix Foundation’s researchers and consultants with other research and educational institutions in the country, on projects directed towards providing structure and technological development for the private sector, thus promoting interaction between the university and companies. The projects begin with an ample technical diagnostic, performed by a team of the partner company representatives and by specialists selected among the professors and researchers working with DEPEC.



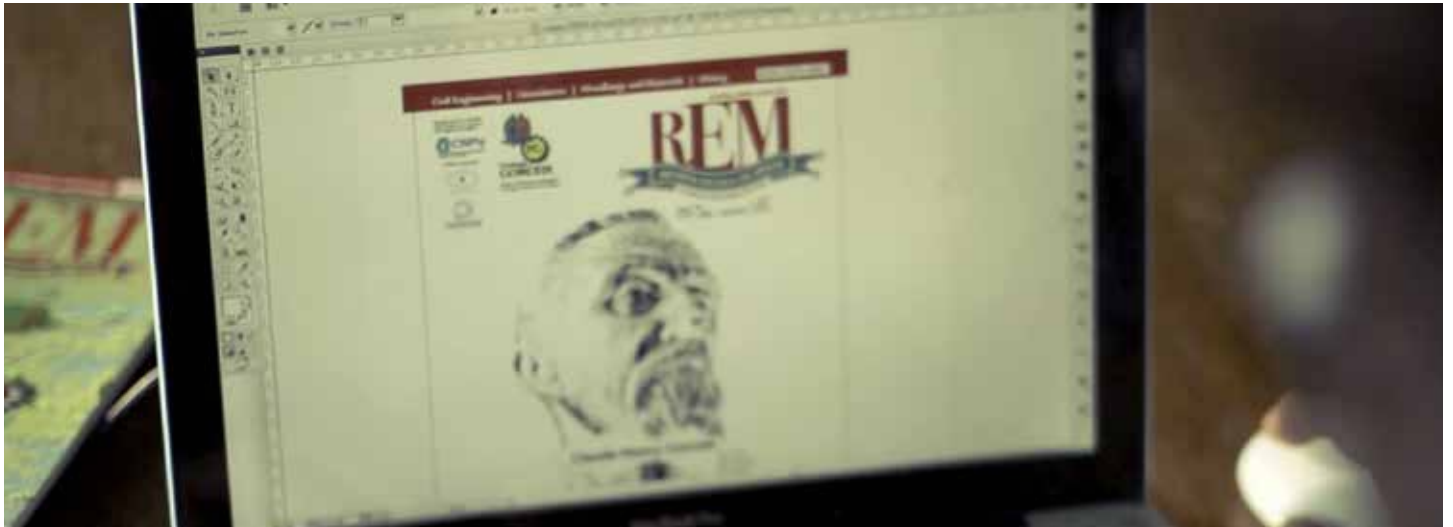
DEPEC is one the biggest providers of corporate courses in the mineral-metallurgical sector, through the interaction of consultants, universities, and research centers, qualifying professionals in the sectors of **mineral geology, export operations, mining, metallurgy, maintenance, health and safety, logistics, and the environment**. DEPEC professionals are also part of consulting projects in the mineral-metallurgical fields associated with other Gorceix Foundation Departments, especially, DETEMM. In its course associated with R&D, DEPEC has trained and still trains thousands of professionals, in the most important strategic areas of the mineral-metallurgical sector, offering high-level training, from unit operations for technicians to advanced topics for engineers. In partnership with institutions of higher learning, the Department keeps all of its programs which have instructed hundreds of experts and produced countless applied projects on demand. The areas of study consist of **Minero-Metallurgical Systems Pelletization, Material Engineering, Maintenance Engineering, Mineral Economics, and Asset Management**. TEPEC encourages and supports its alumni who are in graduate programs by keeping other laboratories and professionals open and available.





**REM | GORCEIX**

REVISTA  
ESCOLA  
DE MINAS



## *Its your main partner to promote your brand.*

Committed to the country's technical and scientific development for the past 80 years, the **School of Mines Magazine (Revista Escola de Minas – REM)** has been one of the most important vehicles for article publication in the fields of **Mining, Metallurgy, Civil, Geological, Materials, Mechanics, and Energy Engineering**. REM was the first scientific periodical in these fields in South America.

Founded in 1936 by the alumni of **Ouro Preto's School of Mines**, REM became a renowned periodical in the Brazilian and international academic world. Today, REM has the support of the **National Council of Technological and Scientific Development (Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq)** at the **Ministry of Science, Technology, and Innovation**, the **Coordination for the Improvement of Higher Education Personnel (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – CAPES)** at the **Ministry of Education**, the **State of Minas Gerais's Foundation for Research Support (Fundação de Amparo à Pesquisa do Estado de Minas Gerais – FAPEMIG)** from the **State Government of Minas Gerais**, and companies from the sector.

Starting in 2004, the REM was integrated within the **Gorceix Foundation**, whose support made possible for the aim of becoming the highest-ranking scientific periodical in the mineral-metallurgical sector. Thus, the REM increased the number of "Associate Editors", composed of 25 renowned professors from universities around the world: **United States, Portugal, India, and China**, in addition to the main Brazilian universities: **UFOP, USP, COPPE-UFRJ, UFPA, UFRGS, UFPE, UNICAMP, UFMG and UnB**. REM has over 500 national and international peer reviewers.

Issued quarterly, its circulation is directed towards Brazilian and international researchers and professionals, as well as companies in the sectors it focuses on, through its printed and online issues. REM supports several organizations related to its field: **SBG, SBGq, IBRAM, APROMIN, ABINOX**, among others. In addition to the printed version, REM offers its content free of charge on the internet through the **Scientific Electronic Library Online – Scielo** and it is indexed in the main scientific publication organizations in the world: **Scielo, Thomson Reuters (ISI), Scopus, Geosciencie e-journals, Ebsco Publishing and Redalyc**.

Due to its importance in the international academic world, REM adopted the English language for submission and publication of technical and scientific articles in 2012.





Fundação  
**GORCEIX**

EDUCATION,  
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TECHNOLOGY  
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