

INSTITUTO TECNOLÓGICO DE BUENOS AIRES



ITBA – URBAN CAMPUS

6 Strategic Sites

North: S. Isidro (partnership)
Admission courses

North: Pilar (partnership)
Admission courses

Software site
Software Engineering
Department, courses and Labs

Graduate School Building
Graduate School

Madero Historical buildings
Rectorate, central offices
and 8 undergraduate
programs.
Research Labs

South... coming soon
New project

CIDIM
Research and Development
Center for Mechanical
Engineering



ITBA – IN NUMBERS

Students	
Undergraduate	1897
Graduate	601
PhD	25



Admission Rate	54%
Retention Rate	65%
Students with Financial Aid	15%
Students in graduating class w/ international experience	20%

Our Graduates represent 10% of total Engineers in Argentina

Alumni	
Undergraduate	5687
Graduate	1967

Faculty	
Full Time	85
Part Time	429

ITBA- UNDERGRADUATE DEGREES

Engineering and Management School:

- Business Administration and Information Systems (4 years)
- Industrial Engineering (5 years)
- Software Engineering (5 years)

Engineering and Technology School:

- Bio Engineering (5 years)
- Mechanical Engineering (5 years)
- Chemical Engineering (5 years)
- Petroleum Engineering (5 years)
- Naval Engineering (5 years)
- Electrical Engineering (5 years)
- Electronic Engineering (5 years)

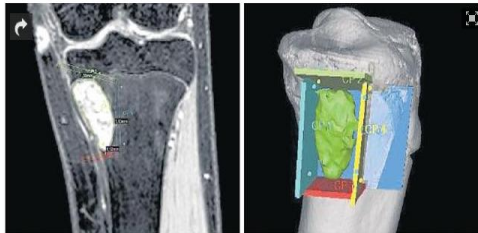
ITBA – RESEARCH & DEVELOPMENT

SOME EXAMPLES

HYBRID BUS

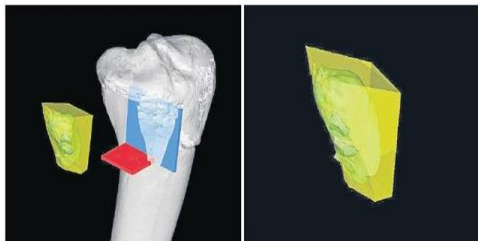
Hydrogen-based transportation without fuels cells. This is a transcending project because, in addition to reducing emissions and noise, lowers the cost of production units.

El nuevo sistema permite planificar en tres dimensiones



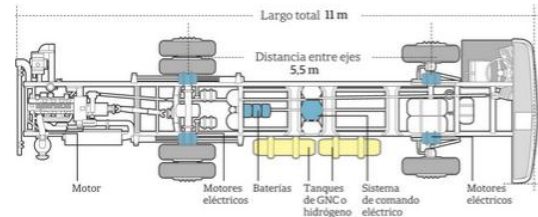
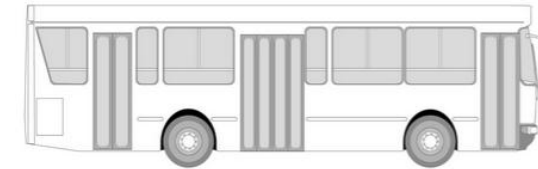
Ubican y toman las medidas del tumor

En 3D, determinan los márgenes de seguridad



Pueden aislar el área a tratar para observarla en detalle y con mucha precisión

También, pueden girar el tumor para verlo desde todos los ángulos y tomar decisiones quirúrgicas



Caja de cambios:
Automática

Dirección:
hidráulica

Velocidad máxima:
122 km/k

Capacidad máxima:
16.500 kg

Sistema de frenado:
recuperará la energía de frenado, transformándola en energía eléctrica para cargar las baterías

DETALLES TÉCNICOS

MOTOR
El motor actualmente es de propulsión diésel con motor de combustión interna con comando electrónico. Tecnología Euro III.

Conversión

Primera etapa: propulsado a GNC

Segunda etapa: será alimentado por hidrógeno

EJES
Serán transformados para acoplarse los motores de propulsión eléctrica tanto en el eje trasero como en el eje delantero.

BATERIAS
El motor principal accionará un generador para cargar las baterías eléctricas, que son las que darán energía a los motores eléctricos como en los buses híbridos tradicionales.

OBJETIVO

Que el motor trabaje en la zona de máximo torque, en el rango aproximado entre 40 y 60 % de su número de revoluciones máximo, con mínimo nivel de consumo de combustible, para lograr un mayor rendimiento. De esta manera, el bus emitiría bajos niveles de ruido en operación urbana.

PRESURGERY PLANNING SYSTEM FOR TREATING BONE CANCER

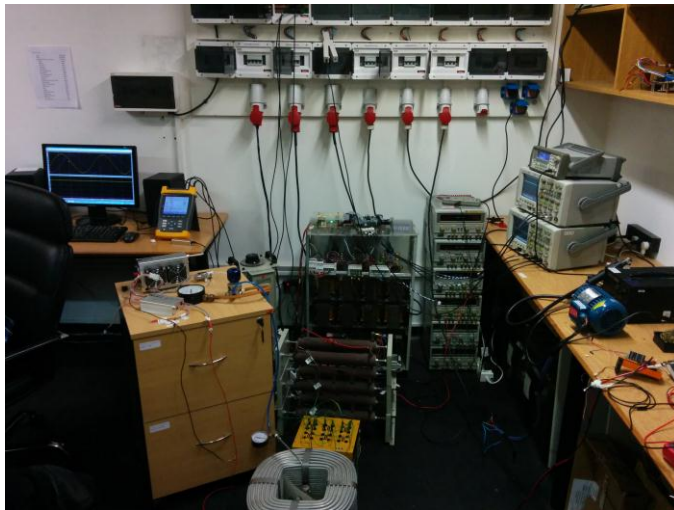
It uses a virtual reality scenario for treating bone cancer. Replaces and refines the usual preoperative planning for an interactive and three-dimensional plan.

ITBA – RESEARCH & DEVELOPMENT

SOME EXAMPLES

MAP OF ARSENIC - PROBLEM OF DRINKING WATER IN ARGENTINA

Development of a "map of arsenic" with data from drinking water samples from different public entities and individuals (educational establishments, homes, canteens, hospitals, first aid rooms, etc.). Relevant technical advice if it finds contamination in those waters.



POWER ELECTRONICS – Multilevel Current Source Inverter

Development of control systems, modulation and experimental prototype of a Single Rating Inductor Multilevel Current Source Inverter (MCSI) to interface Renewable Energy Sources with the electric grid, and high speed active filters.