TRAINING A NEW GENERATION OF SCIENTISTS

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TRAINING A NEW GENERATION OF SCIENTISTS

The online seminars have served as a means during the pandemic to provide contents and follow up to students who are interested and engaged on scientific topics. Students from all levels, engage on the seminars, participate on the projects and participate as speakers on international conferences.
Fase Experimental

En nuestro caso dejamos caer el egg drop desde una altura de 3,40 metros y tardó aproximadamente 1 segundo en llegar al suelo.
Paso 2

Doblar en la líneas marcadas.
Results

48% female

52% male

Over 570,000 people reached in 10 months from All America, Germany, Spain, Portugal.

In the last seminars, participation flips to 52% women.

Some of our Speakers


Pheno 2021.
During the pandemic of 2020, our seminars expanded from local countries to all over Latin America and the world. We have reached people from Spain, Germany, Portugal, United States, India and Dubai.
INTERNATIONAL ELEMENTARY PARTICLE LABORATORY

Derived from the need for better spaces and working methodologies was established in 2005, at the initiative of Dr. Julián Félix the International Laboratory of Elementary Particles, in the Division of Sciences and Engineering, Leon Campus of the University of Guanajuato.

This laboratory begins operations under an interactive learning model, which encourages students to participate in world-class scientific-technological innovations and allows their insertion into international collaborations.
LABORATORIO INTERNACIONAL DE PARTÍCULAS ELEMENTALES

http://laboratoriodeparticulaselementales.blogspot.com/
http://laboratoriointernacionaldeparticulaselementales.net
MAKING INNOVATIVE PROTOTYPES

Innovative prototypes built on site.

At the same time, Dr. Julián Félix starts a new methodology of working with students of programs in Science, from Bachelor to Doctorate, which allows a better appropriation of content through holistic models of learning. In all courses, they are taught how to take data, keep a log of log appropriately, write their observations and record their data and results so that they can be recorded, used and replicated later.

Students are actively involved in the design, construction, characterization and operation of research prototypes, fully developed in the facilities of the International Laboratory.
Designed by the Laboratory STAFF models were Outsourced during the pandemic and currently being characterized.
In the follow-up of graduates of the CL UGTO, students trained academically under this methodology find better job opportunities replicating this model, which positively affects their income level. About 10% of students have already positioned themselves at the top level.

Around 60 experimental prototypes have been produced, original in the laboratory, from the planning, design, characterization and operation phase. These prototypes are part of a incipient radiation detection research program, which has published more than 50 articles in various international publications.
INNOVATING THE RADIATION DETECTION

Compact, efficient and cost effective new methodologies can provide applications in Industry, Geology, Medicine, Security and other fields.
BUILDING TECHNOLOGY FROM SCRATCH

Innovative designs build from the ground up on site provide an educational experience.

SOME RESULTS

- 7 PhD graduate students finished
- 60 Summer Research Visits
- 7,000 K-12 Students on the STEAM Program
- 2,500 teachers reached
- 2 Pilot schools at the grammar level.
- International outreach with seminars to over 570,000 people

International Participation (Berlin Science Week, APS, Virtual Educa, Reimagine.)

Students who participate in these activities, exhibit a improved set of skills and get better positions when finishing their studies.
RESEARCH

60 innovative prototypes
20 published books
60 published articles

Participation in Experiments
DUNE / MINERvA

International presentations
SYNERGISTIC ACTIVITIES

Over 7,000 students have participated in the face to face activities.
Over 2,500 teachers.
5 International hybrid courses.

CONCLUSIONS

• The prototypes perform well under normal conditions. They are currently being characterized under several conditions. Signals are being detected and the prototypes operation is normal.

• All students participating in this methodology at the Teacher Training School have found better job opportunities, positioning themselves in educational institutions at various levels of the system, sometimes at the upper level effectively.

• The methodology implemented in international courses has a positive impact on educational indicators, creates long-term competencies, with significant learning in students. In these courses' students learn basic competencies from planning, reporting and carrying a work log to designing, developing and characterizing original prototypes.
THANK YOU

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