

Education



The Education Program at IPEN aims to develop human resources and to provide and disseminate scientific information in nuclear and correlated areas

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Introduction

The Education Program at IPEN aims to develop human resources through scientific training programs and to provide and disseminate scientific information in nuclear and correlated areas.

IPEN is responsible for the graduate program in the nuclear area at University of São Paulo, the Nuclear Technology Program IPEN/USP. Since its creation, in 1976, the Program was evaluated with grade A by the Federal Government Evaluation (CAPES), the highest in this classification. In 2003 CAPES changed the evaluation criteria; since then, it has been considered a program of Excellence, with grade 6. Levels 6 and 7 are granted only to those programs having internationally recognized expertise. Level 6 was maintained in the last evaluation considering the period 2007-2009. Along its 34 years the Nuclear Technology Program awarded 1813 titles: 1238 master's degrees and 575 doctor's degrees.

The institution is also responsible for the Professional Master Degree - Lasers in Dentistry, in partnership with the School of Dentistry from University of São Paulo.

IPEN has a Scientific Initiation Program for undergraduate students aiming to stimulate young people to enter the scientific research career. This program allows the student to enter scientific world under the guidance of a supervisor to develop a specially assigned study. CNEN and CNPq are the main funding agencies supporting this Program. The institute also offers, since 2000, undergraduate disciplines for students of University of São Paulo. A total of 21 disciplines have been approved by the University.

There is also a Scholarship Program for graduate students, funded by CNPq, CAPES and Fapesp. Since 2006, CNEN and IPEN started a scholarship program, a long lasting demand from the IPEN community.

The postdoctoral program regulating the activity at the institution was approved in 2005. Since then, around 100 professionals were enrolled in the program.

To accomplish all the activities mentioned above, IPEN has a Board of Education and a dedicated building, having facilities such as: one hall for events, two auditoriums (70 people approximately), two computer labs and 10 classrooms.

Concerning scientific information support, there is available a central specialized library, which offers, beyond traditional collections and services, a comfortable study place for the students and the IPEN community, nicely equipped with wireless and stations for search support and consult to all the information resources.

The education page on the IPEN website provides information about the structure and application procedures for the graduate program on nuclear technology, the professional master degree program on lasers in dentistry and the Scientific Initiation program for undergraduate students. Other information like the disciplines to be offered, the advisors for the graduate program, and the scholarships offered and conditions and period for submitting applications are also available.

Nuclear Technology Graduate Program

IPEN is responsible for the graduate program in the nuclear area at University of São Paulo, the Nuclear Technology Program IPEN/USP. This Program started at 1976 and presents nowadays three concentration areas: Applications, Materials and Reactors. The Federal Government Evaluation (CAPES) granted grade 6, considering it a program of Excellence, for the period comprehending 2007-2009. IPEN has maintained this grade since 2003. Until 2010 the program awarded 1813 titles: 1238 master's degrees and 575 doctor's degrees. The performance during this period is shown in Table 1.

Table 1. Nuclear Technology Graduate Program

	2008	2009	2010
Master's degrees awarded	109	101	93
Doctor's degrees awarded	39	46	31
Offered disciplines	87	89	89
Total graduate enrollment	592	598	565

Professional Master Degree

IPEN is also responsible for the Professional Master Degree - Lasers in Dentistry, in partnership with the School of Dentistry from University of São Paulo. This program began in 1999 and, till now, 131 master's degrees were conceded. This program was evaluated with the highest degree by CAPES. It is considered a model program. The numbers for the period are presented in Table 2.

Table 2. Professional Master Program

	2008	2009	2010
Master's degrees awarded	1	9	13
Offered disciplines	8	8	8

Undergraduate disciplines

The institute also offers, since 2000, undergraduate disciplines for students of the University of São Paulo. A total of 21 disciplines have been approved by the University (Table 3).

Table 3. Undergraduate Program

	2008	2009	2010
Offered disciplines	15	18	16
Enrolled students	284	325	333

Scientific Initiation Program

The institute has a Scientific Initiation Program for undergraduate students aiming to stimulate young people to enter the scientific research career. This program allows the student to enter scientific world under the guidance of a supervisor to develop a specially assigned study. CNEN and CNPq are the

main funding agencies for a Scientific Initiation Scholarship Program supporting these activities. The number of scholarships offered in the period is shown in Table 4.

Table 4. Undergraduate Scholarship Program

Funding Agency	2008	2009	2010
CNPq	45	50	60
FAPESP	9	6	7
CNEN	25	25	25
TOTAL	79	81	92

Graduate Scholarship Program

There is also a Scholarship Program for graduate students, funded by CNPq, CAPES, Fapesp. Since 2006, CNEN and IPEN started a scholarship program, a long lasting demand from the IPEN community. The total number of scholarships awarded during the period considered is presented in Table 5.

Table 5. Scholarship Programs

Funding agency	DOCTOR DEGREE		
	2008	2009	2010
CNPq	36	35	36
CAPES	17	20	29
FAPESP	14	15	24
CNEN	4	9	4
IPEN	3	7	7
TOTAL	69	79	89

Funding agency	MASTER DEGREE		
	2008	2009	2010
CNPq	24	24	24
CAPES	15	20	29
FAPESP	18	10	10
CNEN	17	15	11
IPEN	14	16	17
TOTAL	76	80	83

Postdoctoral Program

The postdoctoral program regulating the activity at the institution was approved in 2005. During the period considered in this report, around 80 professionals were enrolled in the program and 30 were supported by postdoctoral scholarships.

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Facilities and support

To accomplish all the activities mentioned above, IPEN has a Board of Education and a dedicated building, having facilities such as: one hall for events, two auditoriums (70 people approximately), two computer labs and 10 classrooms.

Concerning scientific information support, there is available a central specialized library, which offers, beyond traditional collections and services, a comfortable study place for the students and the IPEN community, nicely equipped with wireless and stations for search support and consult to all the information resources.

There is a technical and reference information desk provided by the staff. Access to all the main electronic information resources in the country, like electronic journals provided by CAPES and USP data bases are assured and managed through collaborative arrangements.

The library also manages the institutional repository with 65% of the full text records authored by the IPEN scientific community.

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