

## ERASMUS EXCHANGES

### ACADEMIC YEAR 2005/2006

#### **ECOLE POLYTECHNIQUE – F PALAISE01**

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International Exchange Program  
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<b>Program</b>	<p><u><a href="#">Socrates/Erasmus Exchanges</a></u> constitute one part of the International Exchange Program and concern students coming from the partner universities which agree to validate the academic results achieved in the frame of a Socrates learning agreement.</p> <p>This program offers selected scientific students the opportunity to pursue advanced studies, for a full academic year or shorter periods, through admission into the year 2 or the year 3 of the “Ingénieur” Program of studies or into the activities of the Research Centre for a research internship.</p>
<b>Homepage</b>	<p><a href="http://www.polytechnique.edu">http://www.polytechnique.edu</a> (Academics – Exchange Program)</p>
<b>Application requirements</b>	<p>This program is open to scientific foreign students <b>under 26 years of age</b> who have</p> <ul style="list-style-type: none"><li>- in general completed at least three years of university studies.</li><li>- excellent university results in sciences. (Mathematics plays a key unifying role in all the fields of study).</li><li>- a good knowledge of the French language</li></ul>
<b>Application and Admission</b>	<p><u><a href="#">Application deadline :</a></u></p> <ul style="list-style-type: none"><li>- <b>Main applications : April 25<sup>th</sup> 2005</b> for admissions in September 2005 and January 2006.</li><li>- <b>Additional applications :</b> A second jury can evaluate late applications for admission in January 2006. The application materials must be sent before <b>October 28<sup>th</sup> 2005</b>.</li></ul> <p>We strongly encourage all applicants to meet the main application deadline.</p> <p><u><a href="#">The application material must contain :</a></u></p> <ul style="list-style-type: none"><li>- the application form</li><li>- the learning agreement</li><li>- a resume</li><li>- official transcripts of records including all university-level courses</li><li>- a description of the grading system of the university</li><li>- a letter of statement in French</li><li>- a description of the courses taken in the home university in two distinct parts :<ul style="list-style-type: none"><li>➤ <i>1<sup>st</sup> part:</i> courses taken in Mathematics and in the fields the students are applying for.</li><li>➤ <i>2<sup>nd</sup> part:</i> courses taken in all the other scientific fields.</li><li>➤ Applicants are required to mention the courses they will be attending until the end of the academic year and to list the references of the main textbooks (author and title) used for all the described courses.</li></ul></li><li>- A certificate from a French teacher confirming the student’s oral and written level</li><li>- Letters of recommendation from two professors</li></ul>

	<p><b>Final admission</b> into the program is confirmed in June 2005 and in November 2005 for late applications.</p>
<p><b>Academic program</b></p>	<p>Students apply to courses for which they have the appropriate preparation and background. The courses on offer are those of the “Ingénieur” program of studies. The applications concern :</p> <ul style="list-style-type: none"> <li>- <b>Either</b> the courses of the <b>Year 2 “General education”</b>: a period divided into two semesters. Each semester is composed of <i>long</i> and <i>short courses</i>. Our regular students have the obligation of studying six different fields over the entire year. This rule does not apply to International Exchange students who must attend, at least, one long course and two short courses per semester.</li> <li>- <b>Or</b> the courses of the <b>Year 3 “Specialized education”</b>: a period divided into three terms : <b>Majeures 1</b> (1<sup>st</sup> term), <b>Majeures 2</b> (2<sup>nd</sup> term), <b>Advanced Research Project</b> (3<sup>rd</sup> term). Exchange students must at least follow 3 courses of one “Majeure”.</li> </ul> <p>They can also apply for a <b>Research internship</b> carried out in one of the 23 laboratories.</p> <p><b>Fields of study</b></p> <p>Mathematics, Applied Mathematics, Computer Science, Economics, Mechanics, Physics, Chemistry and Biology.</p>
<p><b>Terms</b></p>	<p><b>Expected term dates for academic year 2005-2006</b></p> <p><b>Year 2 of the curriculum:</b></p> <p><u>Fall semester:</u></p> <ul style="list-style-type: none"> <li>- Long courses: from end of August 2005 to end of January 2006</li> <li>- Short courses (first period): from end of August until end of October 2005</li> <li>- Short courses (second period): from beginning of November 2005 until end of January 2006</li> </ul> <p><u>Spring semester:</u></p> <ul style="list-style-type: none"> <li>- Long courses: from end of January 2006 to mid-July 2006</li> <li>- Short courses (first period): from end of January until mid-April 2006</li> <li>- Short courses (second period): from end of April until end of June 2006</li> </ul> <p><b>Year 3 of the curriculum:</b></p> <p><u>1<sup>st</sup> term:</u> from end of September 2005 to Mid-December 2005</p> <p><u>2<sup>nd</sup> term:</u> from beginning of January 2006 to beginning of April 2006</p> <p><u>3<sup>rd</sup> term:</u> from beginning of April 2006 to mid-July 2006</p> <p><b>Research internship:</b></p> <p>Anytime during the academic year 2005/2006 for a three-month minimum stay</p>

<b>ECTS Credits</b>	<p>Each scientific course is credited with ECTS. Credits are awarded when the course has been completed and all required examinations have been passed. In the case of a research internship, credits are given on the base of its duration.</p> <p>A minimum of courses must be followed so that the total of ECTS reaches at least :</p> <p><b>Year 2 :</b></p> <ul style="list-style-type: none"> <li>- 20 ECTS credits for a semester, that is at least one long course and two short courses (one for each period).</li> <li>- 40 ECTS credits for a full academic year</li> </ul> <p><b>Year 3 :</b></p> <ul style="list-style-type: none"> <li>- 15 ECTS credits for a term, that is at least 3 courses of one Majeure.</li> <li>- 30 ECTS credits for 2 terms</li> <li>- 45 ECTS credits for a full academic year</li> </ul>
<b>Language of teaching</b>	<p><b>French.</b></p> <p>All the courses and exams take place in French. A good command of the language is compulsory.</p>
<b>Language courses</b>	<p>French courses are given from October until June. They take place once a week and last 2 hours. They are taught at different levels; a placement test takes place in the very first days after the students' arrival. They are free of charge.</p>
<b>Optional courses</b>	<p>Exchange students can follow a program in the humanities and social sciences. The courses and seminars offer a rich diversity of subjects: philosophy, literature, history, politics and political culture, plastic arts and so on...Many of those courses require a very good command of the French language.</p> <p>Students can also study a foreign language in addition to French courses. Admission into these courses is decided upon the students' arrival and is submitted to the Department's Head for approval.</p>
<b>Sport</b>	<p>Sport complements the scientific program and is part of the "polytechnicien"'s education. Indoor and outdoor facilities enable the practice of 16 sports on the base of 6 hours per week. Exchange students are highly encouraged to take part in those activities for a perfect integration in the Ecole's life.</p>
<b>Grading system</b>	<p>All the courses are exclusively evaluated with letters :</p> <p>A : with very high honors  B : with high honors  C : with honors  D : Passing  E : conditional failure  F : failure</p>
<b>Welcome day</b>	<p>Takes place a few days before the courses start. It includes</p> <ul style="list-style-type: none"> <li>- A visit of the school</li> <li>- Registration procedure (access badge, access to the computer rooms and to a personal e-mail account)</li> <li>- A welcome meeting with the regular students of the school</li> </ul>
<b>Accommodation</b>	<p>As of 2005, all students of the International Exchange Program will be accommodated on the main campus.</p> <p>Currently, the room charge is 122 euros per month (February 2005).</p>

<b>Meals</b>	Students have their meals on campus. The restaurant is open year round and serves three meals a day The price of a meal is about 6 euros.
<b>Health Insurance</b>	<p>Compulsory in France.</p> <ul style="list-style-type: none"> <li>- Students from EEC countries should have an appropriate insurance certificate (E111, E 128 or equivalent). On top, they must be covered for the guarantee “civil liability”. Therefore an extra insurance has to be purchased at the cost of 78 euros (in 2004) for the year</li> </ul> <p><b>Compulsory vaccinations :</b> Before their arrival in France, students must be vaccinated for :</p> <ul style="list-style-type: none"> <li>• DT-Polio (Diphtheria-Tetanus-Poliomyelitis) : the injection must have to be done less than 10 years ago.</li> <li>• Test of the BCG (Bacillus Calmette-Guérin, Tuberculosis prevention) : the intradermal reaction must not be older than 6 months.</li> </ul>
<b>Budget</b>	<p>The following budget per month is given for information :</p> <ul style="list-style-type: none"> <li>• Accommodation : 122 euros</li> <li>• Meals : 540 euros</li> <li>• Insurance : 26 euros</li> <li>• Books and tuition : Free</li> <li>• Personal expenses : about 600 euros (depends on the personal needs and habits)</li> </ul>
<b>Contacts</b>	<p>Mrs. Pascale FUSEAU : pascale.fuseau@polytechnique.edu  Tel : + 33 1 69 33 39 45  Fax : + 33 1 69 33 30 53  Mrs. Myriam CLOAREC : myriam.cloarec@polytechnique.edu  Tel : + 33 1 69 33 42 99</p>

**STUDENTS EXCHANGE 2005 – 2006**

**APPLICATION FORM FOR INCOMING STUDENTS**

<b>Home Institution</b>	
Name of Institution	
Full Address	
Faculty or Department	
Academic adviser	
Tel.	Fax
E-mail	

**1. Student's Personal Information**

Family name \_\_\_\_\_ First name \_\_\_\_\_

Date of birth \_\_\_\_\_ Place of birth \_\_\_\_\_

Marital status     single     married    Nationality \_\_\_\_\_  
Gender :         Male         Female

Mailing address where you wish to receive the official admission documents (will not be sent before July 2005. For late applications, November 2005) \_\_\_\_\_

Tel. \_\_\_\_\_ E-mail \_\_\_\_\_

Permanent address \_\_\_\_\_  
\_\_\_\_\_

**2. Language proficiency**

Native language \_\_\_\_\_ Others \_\_\_\_\_

French     excellent     good     sufficient     none

**3. Current studies**

Degree to be earned \_\_\_\_\_

Number of university-level study years prior to departure abroad \_\_\_\_\_

Field of study \_\_\_\_\_

Did you already study abroad?  yes (*where*) \_\_\_\_\_  no

**4. Program at the Ecole Polytechnique (Please, indicate clearly the courses you wish to attend)**

Field of study \_\_\_\_\_

courses  Advanced Research Project  Research internship

\* If courses are chosen, which part of the curriculum ?

\_\_\_\_\_

\* If the advanced research project is chosen, in which field and in which foreseen laboratory?

\_\_\_\_\_

\* If the research internship is chosen, title of the project and name of the foreseen laboratory

\_\_\_\_\_

Duration of your stay from \_\_\_\_\_ to \_\_\_\_\_

**5. Financial support:**

Personal  Home scholarship (*Please, specify which one*)

Do you apply for financial support from the Ecole Polytechnique ? :  
(*Financial support reserved to students with low resources. Proof of resources will be asked once the admission is confirmed*)

**Approval from home institution**

Co-ordinator of the Exchange Program :

Name, title \_\_\_\_\_

\_\_\_\_\_

Address \_\_\_\_\_

Phone, fax \_\_\_\_\_

and e-mail \_\_\_\_\_

date \_\_\_\_\_

Signature

***Please attach:***

- the learning agreement
- a resume
- 2 passport-size photos
- official transcripts of records including full details of all university-level courses
- a description of the grading system of the university
- a letter of statement in French
- a description of the courses already taken in the home university in ***two distinct parts*** :
  - *1<sup>st</sup> part*: courses taken in Mathematics and in the fields the student is applying for.
  - *2<sup>nd</sup> part*: courses taken in all the other scientific fields.
  - Applicants are required to mention the courses they will be attending until the end of the academic year and to list the reference of the main textbooks (author and title) used for all the described classes.
- a certificate from a French teacher confirming the student's oral and written level in the language
- letters of recommendation from two professors.

***SOCRATES ERASMUS Program***

**LEARNING AGREEMENT**

**Academic year 2005/2006**

**Field of study:**

**Name of the student:**

**Date of birth:**

HOME INSTITUTION :

PARTNER INSTITUTION: F-PALAISE 01  
ECOLE POLYTECHNIQUE (France)

<i>Course reference</i>	<i>Course Title</i>	<i>ECTS Credits</i>

Student's signature

Date

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HOME INSTITUTION :

*We confirm that the above-proposed program of study is approved*

Departmental Coordinator's signature

Institutional Coordinator's signature

Date

Date

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PARTNER INSTITUTION:

*We confirm that the above-proposed program of study is approved*

Departmental Coordinator's signature

Institutional Coordinator's signature

Date

Date

**YEAR 2**  
**General education**

**Requirements** for Exchange students: minimum of ECTS credits in the scientific courses:

- 20 ECTS for a semester (at least, one long course and two short courses)
- 40 ECTS for a full year.

*(Regular students must choose 2 long courses and 2 short courses per semester)*

<b>Fall semester</b>		<b>Spring semester</b>	
<b>Long courses</b>		<b>Long courses</b>	
(18 blocs, 72 h. of teaching, 10 ECTS)		(18 blocs, 72 h. of teaching, 10 ECTS)	
Economics ( <i>ECO 431</i> )		Computer Sciences ( <i>INF 431</i> )	
Mathematics ( <i>MAT 431</i> )		Applied Mathematics ( <i>MAP 431</i> )	
Mechanics ( <i>MEC 431</i> )		Physics ( <i>PHY 432</i> )	
Chemistry ( <i>CHI 431</i> )		Biology ( <i>BIO 451</i> )	
Short courses		Short courses	
(9 blocs, 36 h. of teaching, 5 ECTS)		(9 blocs, 36 h. of teaching, 5 ECTS)	
Mathematics ( <i>MAT 432</i> )	Physics ( <i>PHY 431</i> )	Mathematics ( <i>MAT 451</i> )	Mathematics ( <i>MAT 452</i> )
Chemistry ( <i>CHI 411</i> )	Biology ( <i>BIO 431</i> )	Fluid Mechanics ( <i>MEC 432</i> )	Mechanics ( <i>MEC 433 and 434</i> )
Computer Sciences ( <i>INF 421</i> )	Computer Sciences ( <i>INF 421</i> )	Statistics ( <i>MAP 433</i> )	Applied Mathematics ( <i>MAP 411</i> )
Economics ( <i>ECO 432</i> )	Probability ( <i>MAP 432</i> )	Modex (Experimental work in Biology, Chemistry, Mechanics, Physics, Electronics)	Modex (Experimental work in Biology, Chemistry, Mechanics, Physics, Electronics)
Humanities & Social Sciences : courses, seminars (6 ECTS, 3 per semester)			
Foreign languages (6 ECTS, 3 per language)			
Sport			
Scientific Research Team Project (5 ECTS) : <b>this project is optional for Exchange students</b>			

Please select the courses within this frame.

**The contents of all these courses are fully described on our web site:**

<http://www.edu.polytechnique.fr>  
(Livret d'enseignement –English version)

## **YEAR 3** *Specialized education*

**Requirements** for Exchange students: minimum of ECTS credits in the scientific fields :

- 15 ECTS for a term, (at least, three courses of the same “Majeure”)
- 30 ECTS for two terms,
- 45 ECTS for a full year.

*(Regular students must choose one full “Majeure” per term)*

<b>1<sup>st</sup> Term: choose one of the following « majeures »</b> (40 blocs, 160 h. of teaching, 20 ECTS)		
<b>“Majeures” 1</b>	Computer Science ( <i>INF 501</i> )	Chemistry ( <i>CHI 501</i> )
	Physics ( <i>PHY 501</i> )	Mathematics ( <i>MAT 501</i> )
	Mechanics ( <i>MEC 501</i> )	Applied Mathematics ( <i>MAP 501</i> )
	Biology ( <i>BIO 501</i> )	

<b>2<sup>nd</sup> Term: : choose one of the following « majeures »</b> (40 blocs, 160 h. of teaching, 20 ECTS)		
<b>“Majeures” 2</b>	Economics ( <i>ECO 502</i> )	Earth Sciences ( <i>MEC/PHY 503</i> )
	Mathematics ( <i>MAT 502</i> )	Physics ( <i>PHY 502</i> )
	Eco-Sciences ( <i>BIO 503</i> )	Computer Science ( <i>INF 502</i> )
	Electronics, components and systems ( <i>PHY 504</i> )	Chemistry of life ( <i>BIO/CHI 502</i> )
	Engineering Sciences, Simulation and Modeling ( <i>MAP 502/MEC 502</i> )	

Please do not select courses from different Majeures because of time schedule incompatibility.

<b>Optional for Exchange students :</b>	
Humanities & Social Sciences : courses, seminars (3 ECTS)	
Foreign language (4 ECTS)	
Sport	

<b>3<sup>rd</sup> Term</b>	<b>Advanced Research Project (20 ECTS)</b> Laboratory research project ( <i>Compulsory for regular students</i> ) carried out in one of the 23 laboratories of the Research Center of the Ecole Polytechnique
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**The list of the laboratories is available on:**

<http://www.polytechnique.edu> (Research – Research Labs)