

**LORENA SCHOOL OF ENGINEERING – EEL/USP**  
**MATERIALS ENGINEERING GRADUATE PROGRAM – PPGEM**  
**Notice – 2nd Semester/2025**

**SELECTION FOR MASTER AND DIRECT DOCTORAL PROGRAMS**

Applications are open at EEL-USP for the Materials Engineering Graduate Program (PPGEM), in the Master's and Direct Doctoral modalities, the latter aimed at candidates who do not hold a Master's degree.

Applications will be accepted exclusively through the submission of the application form and supporting documents via the application link, with the files submitted numbered and named according to item 3 of this notice. Only searchable PDF format documents (PDF/A ISO 19005) with good resolution quality will be accepted; image files in jpeg, png, gif, tif, etc., formats will not be accepted, except for item 3.1.1 of this notice. In this regard, all documents containing the applicant's signature must be signed electronically (*Gov.br electronic signature, DocuSign, or equivalent*).

**1. NUMBER OF POSITIONS IN 2025:**

Master's: 15 (fifteen)

Direct Doctorate: 5 (five)

**2. IMPORTANT DATES**

**For Brazilian or Portuguese-speaking foreign candidates residing in Brazil:**

Applications: May 5th to June 20th, 2025

Written Exam: July 1st, 2025

Location: Department of Materials Engineering – Area II, EEL/USP

Time: 8:30 AM

Direct Doctoral Project Defense: July 8th, 2025

Result: July 15th, 2025

Enrollment: July 21st to 24th, 2025.

**For foreign candidates residing outside Brazil:**

Applications: May 5th to June 20th, 2025

Master's and Direct Doctoral Project Defense: the schedule date will be released later.

Result: July 15th, 2025

Enrollment: July 21st, 2025 to August 13th, 2025.

**3. REQUIRED DOCUMENTS FOR APPLICATION**

**3.1. Master's and Direct Doctorate**

3.1.1. One recent 3x4 photo in an image file: jpeg, png, gif, tif, etc.;

3.1.2. Application Form. Available at the link [www.inscricao.eel.usp.br](http://www.inscricao.eel.usp.br), to be filled out and signed electronically (*Gov.br electronic signature, DocuSign, or equivalent*);

3.1.3. Copy of the CPF (Brazilian individual taxpayer registry number) – presentation waived if included in the RG (Brazilian national identity card);

3.1.3.1. For foreign candidates residing in Brazil:

3.1.3.2.a) Cadastro de Pessoa Física (CPF),

3.1.3.3.b) Registro Nacional Migratório (RNM) (National Migratory Registry) or

3.1.3.3.c) Passport (pages containing identification/photo, passport number, and validity).

3.1.4. Digital copy of the Registro Geral (RG) (Brazilian national identity card). Attention: the CNH (Brazilian driver's license) will not be accepted;

3.1.5. Digital copy (front and back) of the Diploma or Certificate of Completion of the undergraduate course, containing the graduation date. Candidates currently in their final semester of undergraduate studies are exempt from presenting the Diploma or Certificate of Completion with the graduation date at the time of application; however, these documents will be mandatory for enrollment if the candidate is approved. Nevertheless, they must present a certificate of enrollment in the current year/semester of the course;

3.1.6. Digital copy of the Undergraduate Academic Transcript (referring to the diploma presented in item 3.1.5, or the ongoing course, as well as course transfers, if any);

3.1.7. Detailed and documented digital academic curriculum. Preferably the Lattes Curriculum;

3.1.8. If your project includes a co-supervisor, the submission of the following documents separately is mandatory: a) letter from the supervisor with a detailed justification proposing the punctual accreditation of the co-supervisor; b) letter of acceptance of co-supervision digitally signed by the future co-supervisor, containing justifications based on merit and the co-supervisor's expertise on the project's theme; c) Lattes curriculum of the last 5 (five) years; d) co-supervisor accreditation form, available at the CPG link:

<https://cpg.eel.usp.br/aluno/formularios/credenciamento-recredenciamento-de-orientadores>;

### **3.2. Supplementary documents only for Brazilian candidates for direct doctorate and foreign candidates residing abroad**

3.2.1. Research Project in digital format, searchable PDF (PDF/A ISO 19005), with a maximum of 20 pages (double-spaced and Arial font size 12). The file must be uploaded (attached) on the application page;

3.2.2. The text of the thesis project must contain: title, objective, justification, relevant literature review, experimental procedure, necessary resources, funding agency, activity schedule, and references. The study plan to be attached to the thesis project is available at the link: <http://cpg.eel.usp.br/formulario-cpg/> Form 7;

3.2.3. Referral letter digitally signed by the future supervisor, who must be regularly accredited in the PPGEM. The letter must contain the justifications for the request, based on merit, the supervisor's expertise on the topic, the originality of the research work proposal, academic performance, and the candidate's scientific maturity for direct doctorate;

3.2.4. Digital Term of Orientation Commitment. Properly filled out and signed, available at the link:

[http://cpg.eel.usp.br/sites/files/cpg/arquivos/formularios/12\\_Termo\\_Compromisso\\_de\\_Orientacao.pdf](http://cpg.eel.usp.br/sites/files/cpg/arquivos/formularios/12_Termo_Compromisso_de_Orientacao.pdf)

3.2.5. If your project includes a co-supervisor, the submission of the documents listed in item 3.1.8 of this notice is mandatory.

## **4. SELECTION CRITERIA.**

The selection process for the Master's and Direct Doctoral programs will consist of an analysis of the candidate's documented Curriculum Vitae and a written exam (for Brazilian or Portuguese-speaking foreign candidates residing in Brazil). For the Direct Doctoral program, the oral presentation of the research project referred to in item 3.2.1 is also part of the

selection process. The oral presentation of the project is also required for Master's and Direct Doctoral candidates residing abroad.

4.1. In the Curriculum Vitae analysis, undocumented information will not be considered for the score of this item;

4.2. The Written Exam will be eliminatory:

4.2.1. For the Master's program: minimum grade of 3.0 (three);

4.2.2. For the Direct Doctoral program: minimum grade of 5.0 (five).

The written exam is part of the evaluation only for Brazilian and Portuguese-speaking foreign candidates residing in Brazil.

4.3. A candidate for the Direct Doctoral program will only be considered eligible to present their research project to an Examining Committee if they obtain a grade equal to or higher than 5.0 (five) on the written exam. The candidate may have a maximum of one failure during their undergraduate studies and must have at least 1 (one) publication in an indexed journal with a JCR equal to or greater than 1.0.

4.3.1. The research project presentation will have a maximum duration of 30 minutes.

4.3.2. The Examining Committee will consist of two members chosen by the CCP (Graduate Program Coordinating Committee), using the criteria established in Annex A for the evaluation of the project/candidate;

4.3.3. The evaluation of the project/candidate by the committee is not public; therefore, the presence of third parties is prohibited. Each member of the Examining Committee will assign a grade for the project presentation.

4.4 For Master's candidates, the final grade (NF) will be calculated by combining the Written Exam grade (NPE) with the Curriculum Vitae analysis grade (NC), assigning a weight of 60% to the written exam grade (NPE) and 40% to the Curriculum Vitae analysis grade (NC), according to the equation:  $NF = (NPE \times 0.60) + (NC \times 0.40)$

4.5. For Direct Doctoral candidates, the final grade will be obtained by the arithmetic average of the grades given by the two members of the examining committee.

4.6. A candidate for the Master's or Direct Doctoral program who obtains a final grade (NF) equal to or higher than 5.0 (five) will be considered approved in the selection process.

4.7 For foreign candidates who will apply in their country for PEC-PG scholarships granted by the Brazilian government or scholarships granted by other international bodies, the selection process will consist of an analysis of the candidate's Curriculum Vitae and research project by an examining committee defined by the CCP.

## **5. EVALUATION CRITERIA OF THE DIRECT DOCTORAL EXAMINING COMMITTEE.**

The evaluation by the members of the Examining Committee will be based on the following items:

- 5.1. Content (35% of the final grade): (a) Clarity of objectives; (b) Methodology and approach to the problem; (c) Infrastructure planning for project execution; (d) Economic feasibility of the project; (e) Adequacy and relevance of the bibliography; (f) Supervisor's expertise in the project's theme, evidenced by supervisions and scientific articles; (g) Scientific originality of the proposal;
- 5.2. Project Presentation (10% of the final grade): (a) Formatting; (b) Quality of elaboration and clarity of figures and tables; and (c) Writing;
- 5.3. Oral Presentation (35% of the final grade): (a) Logical sequence of the exposition; (b) Confidence and mastery of the subject; (c) Quality of the answers provided;
- 5.4. Quantitative Evaluation of the Curriculum Vitae + Academic Transcript (20% of the final grade).
  - 5.4.1. The PPGEM Secretariat will provide the evaluators with the consolidated spreadsheet of points computed in item 5.4 for verification, according to the documentation submitted by the candidate regarding item 3.1.3.

## **6. QUANTITATIVE EVALUATION OF THE CURRICULUM VITAE + ACADEMIC TRANSCRIPT.**

### **6.1. Curriculum Vitae:**

- 6.1.1. Scientific Initiation (IC): Only IC with a duration equal to or greater than 6 months will be considered; with 0.6 points for the first semester and 0.1 per additional month. Limited to 2.4 points. The accepted IC supporting documents are only declarations from the supervisor or competent body, containing the start and end dates; Commitment/Adhesion Terms will not be accepted;

6.1.2. Tutoring can only be considered if carried out for at least 6 months during the undergraduate period, with 0.9 points for each semester of tutoring. Limited to 1.8 points;

6.1.3 Undergraduate Teaching: 0.5 points per semester. Limited to 2.0 points;

6.1.4. The following scores will be considered for publications from the last 5 (five) years with themes pertaining to Engineering and Exact Sciences. Only publications with ISSN/ISBN will be accepted, where applicable; Published or in-press articles.

a) Full article in an international journal with a selective editorial policy: 2.00 points;

b) Patent filed: 1.50 points;

c) Full article in a national journal: 0.75 points;

d) Full paper in the proceedings of international conferences: 0.75 points; limited to 3 points;

e) Full paper in the proceedings of national conferences: 0.50 points; limited to 2 points;

f) Abstract in international conferences: 0.25 points; limited to 1.0 point;

g) Abstract in national conferences: 0.10 points; limited to 1.0 point;

h) Book chapter: 1.5 points; limited to 3.0 points.

6.1.5. The following scores will be considered for awards obtained in the last 5 (five) years with themes pertaining to Engineering and Exact Sciences, with national awards receiving 0.50 points and international awards 1.00 point.

6.1.6. Papers in scientific conferences can only be counted if they have already been presented. Scientific articles will only be considered if they prove, at a minimum, final acceptance by the editor.

## 6.2. Academic Transcript

6.2.1. In cases of course transfers during undergraduate studies, the candidate must present the digital academic transcript of both courses to prove the credit transfer;

6.2.2. Sum of scores related to Graduation Time and Grade Point Average (GPA). The Ideal Graduation Time will be considered as: 5 years for Engineering courses with 10 semesters, 6 years for evening Engineering courses with 12 semesters, and 4 years for Bachelor's degrees with 8 semesters.

6.2.3. The score for Total Graduation Time (disregarding any period of enrollment suspension) will be assigned as:

- a) Ideal – 1.50 points
- b) Completed with 1 (one) extra semester – 1.25 points;
- c) Completed with 2 (two) extra semesters – 1.00 points;
- d) Completed with 3 (three) extra semesters – 0.75 points;
- e) Completed with 4 (four) extra semesters – 0.50 points;
- f) Completed with 5 (five) extra semesters – 0.25 points;
- g) Completed with more than 5 (five) extra semesters – 0.00 points.

6.2.4. The score for the Undergraduate Grade Point Average (GPA), considering failures, if any, will be assigned as:

- a) GPA equal to or greater than 7.0 - 1.5 points;
- b) GPA between 6.0 and 6.9 – 1.0 points;
- c) GPA between 5.0 and 5.9 – 0.5 points;
- d) GPA lower than 4.9 – 0.0 points;

6.2.5. The maximum score for the sum of Curriculum Vitae and Academic Transcript points is 10 (ten).

## **7. EXAM**

7.1. The Exam will cover questions on the following fundamental topics of Materials Science and Engineering: Interatomic Bonds, Structures and Defects, Mechanical Properties, and Phase Diagrams;

7.2. The suggested bibliography includes the following textbooks:

- 7.2.1. CALLISTER Jr., WILLIAM D. Materials Science and Engineering: An Introduction. 7th ed. Rio de Janeiro: Livros Técnicos e Científicos Editora S.A., 2008;
- 7.2.2. ASKELAND, DONALD R. and PHULÉ, PRADEEP P. The Science and Engineering of Materials, São Paulo - Cengage Learning – 2008;
- 7.2.3. SHACKELFORD, JAMES F. Materials Science, 6th ed. Pearson – São Paulo, 2008.

## **8. CANDIDATE CLASSIFICATION**

- 8.1. Candidates will be classified in descending order of the final grades (NF) obtained and will be approved within the limit of the number of vacancies declared in this Notice.
- 8.2. In case of a tie, the tie-breaking criterion will be the higher grade obtained in the written exam for the Master's and Direct Doctoral programs. If the tie persists, the candidate with the highest scientific productivity in the last 3 years, using the criteria of item 6.1.4, will be classified.

## **9. REQUIRED DOCUMENTS FOR ENROLLMENT**

- 9.1. Regular First Enrollment Request, duly filled out and signed, sent to the approved candidate's email by the PPGEM.
- 9.1.1. For Master's students, it must be signed by the PPGEM coordinator, as the student will be under academic guidance for the first 90 days after enrollment, and by the end of this period, they must submit the dissertation Study Plan and the Orientation Acceptance Term to the Graduate Program Coordinating Committee secretariat;
- 9.1.2. For Direct Doctoral students, it must be signed with the supervisor's agreement;
- 9.2. Copy of the CPF – presentation waived if included in the RG (mandatory for Foreigners);
- 9.3. Copy of the RG (CNH, Professional Registry, Military Registry, or others will not be accepted);
- 9.4. For foreign candidates: a) Copy of the RNE (National Registry of Foreigners) or Protocol (containing the type of Visa: Temporary IV or Mercosur or Permanent) with number and validity, for foreign candidates; b) Copy of the Passport (pages containing identification, passport number, and validity), for foreign candidates;
- 9.5. Copy of the Birth and/or Marriage Certificate;
- 9.6. Copy of the Diploma or Certificate of Completion of the Undergraduate course, containing the date of Graduation Ceremony;
- 9.7. Copy of the Undergraduate Academic Transcript;
- 9.8. 01 (one) recent 3x4 photo.



## **10. FINAL CONSIDERATIONS**

- 10.1. Applications must be submitted exclusively through the electronic form, where all documents must be attached in the specific fields in PDF format, until 11:59 PM on June 20th, 2025;
- 10.2. Written Exam: Start: 8:30 AM (10 min. tolerance) - End: 11:30 AM;
- 10.3. Enrollment will be carried out at the Secretariat of the Graduate Program Committee – CPG, by the approved candidate in person, with the required documents listed in item 9 of this notice; enrollments by proxy or third parties will not be accepted;
- 10.4. The call for the Research Project Defense for candidates classified for the Direct Doctoral program (and also for the Master's program for foreign candidates residing outside Brazil) will be communicated by email to the candidate(s) who obtain the minimum required grade according to item 4.4 of this notice;
- 10.5. A classified candidate who does not complete the stages and enrollment within the dates established in this notice will be considered to have withdrawn from the vacancy;
- 10.6. The CCP of the PPGEM will be responsible

## ANNEX A

### Master's and Direct Doctoral Candidate Evaluation Form Materials Engineering Graduate Program Lorena School of Engineering - USP

Candidate's name:

Project Title:

Presentation Date:

<b>1) Content</b>	Grade
(a) Clarity of objectives; (0 -10) (0 -10)	
(b) Methodology and approach to the problem; (0-10)	
(c) Infrastructure planning for project execution; (0 -10)	
(d) Economic feasibility of the project and supervisor's expertise in the project's subject; (0 -10)	
(e) Adequacy of the bibliography; (0 -10)	
(f) Originality of the proposal; (0 -10)	
Item 1 Grade: $(a+b+c+d+e+f)/6$ (Maximum of 10 points)	
<b>2) Written presentation</b>	
(a) Formatting; (0 - 10)	
(b) Elaboration of figures and tables; (0 - 10)	
(c) Writing; (0 - 10)	
Item 2 Grade = $(a+b+c)/3$ (Maximum of 10 points)	
<b>3) Oral presentation</b>	
(a) Logical sequence of the exposition; (0 - 10)	
(b) Confidence and mastery of the subject; (0 - 10)	
(c) Quality of the answers provided; (0 - 10)	
Item 3 Grade = $(a+b+c)/3$ (Maximum of 10 points)	
<b>4) Curriculum Vitae and Academic Transcript</b>	
(a) Sum of Curriculum Vitae scores (maximum of 10)	
(b) Sum of Academic Transcript scores (maximum of 3)	
Item 4 Grade = $(a+b)$ (Maximum of 10 points)	