



UNIVERSIDADE FEDERAL DE PELOTAS  
Pró-Reitoria de Pesquisa e Pós-Graduação  
Faculdade de Agronomia Eliseu Maciel.  
Programa de Pós-Graduação em Fitossanidade

### **CALL Nº 188/2022**

## **MASTER AND DOCTORATE STUDENTS CALL FOR APPLICATIONS (01/2023) PROGRAM RECOMMENDED BY CAPES AT LEVEL 6.**

The Federal University of Pelotas, following the Graduate Programs Regiment of the Office of the Dean of Research and Graduate Studies and the Coordination of the Graduate Program in Crop Protection, announces the commencement of the selection process of applicants for the Crop Protection Program (PPGFS), at master's and doctoral level, under the terms established in this call.

### **I – APPLICATIONS**

Applications for the Graduate Program in Crop Protection exam at UFPeI for the MASTER and DOCTORAL level will be open from November 1 - 18 of the current year. They must be submitted via an online form available on the program website ( <https://ppgfsufpel.com.br/selecao-estude-conosco/>) until 11:59 pm on November 18, 2022.

I.1- Graduates in Agronomy, Biology, and Forestry can apply. For the doctoral level, applicants must also have a master's degree in any area of knowledge besides a bachelor's degree in those areas.

I.2. Applications must be submitted exclusively online, filling out the electronic form posted on the Crop Protection Program website (<https://ppgfsufpel.com.br/selecao-estude-conosco/>). The electronic form must be fully completed. In addition, the following documents must be uploaded in the form:

- For Master's degree applicants: a copy of the bachelor's degree certificate.
- For Doctoral degree applicants: a copy of the Master's degree certificate. A Master's degree statement of completion will be accepted for application purposes. However, the original document must replace it upon enrollment.
- Link to the "Curriculum Vitae" registered on the Lattes CNPq platform. For foreign applicants, registering their curriculum on the Lattes CNPq platform is unnecessary. However, the Curriculum Vitae is required and must be sent via google forms form. The curriculum does not need to be supported by documents. Curriculum evidence will be provided by filling the score sheet and attaching supporting documents only to the items filled in the sheet (according to II.4 of this call);
- The score sheet is available on the Program website: (<https://ppgfsufpel.com.br/selecao-estude-conosco/>). It must be completed in the Excel file, which will automatically fill in the weights of each production.

- Copy of the Academic Transcript of the Undergraduate Program (for Master's applicants) and Undergraduate and Master's Degrees (for doctoral applicants).
- For Brazilian applicants: copies of the updated Identity Card (allowing for photo and signature recognition), CPF, Military discharge certificate, Birth Certificate, and Marriage Certificate (in case of name change).
- For foreign applicants: Copy of Birth Certificate and passport (photo page). If approved in this call, they must have a visa, foreign registration, and CPF (Social security number) upon arrival in Brazil.
- Self-declared black applicants must provide a specific document filled in when they apply, available at: ([https://wp.ufpel.edu.br/prppgi/files/2018/03/declaracao\\_etnia.pdf](https://wp.ufpel.edu.br/prppgi/files/2018/03/declaracao_etnia.pdf)). The self-declaration will be analyzed by a hetero-identification committee appointed by the Center of Affirmative Actions and Diversity and will be carried out in person, on 12/19/2022, at a date to be further defined.
- Indigenous applicants must submit a copy of the Administrative Registry of Indigenous Birth (RANI) or FUNAI declaration and declaration of the leadership of the group to which they belong;
- Quilombola applicants must present a declaration of the leadership of the community to which they belong;
- Disabled applicants must present a medical certificate informing their Disability Code, according to the International Classification of Diseases – CID;
- Proof of proficiency in Portuguese (Celpe-Bras; <http://portal.inep.gov.br/acoes-internacionais/celpe-bras>) is not required for foreign applicants, except when this language is official in their home country. This document must be presented during the course, if not provided upon enrollment. Applicants from countries whose native language is English or Spanish do not need to present this document. However, upon arriving in Brazil, they must take Portuguese classes.
- Self-declared transvestite/transsexual applicants must provide a specific institutional document available at: <https://wp.ufpel.edu.br/prppgi/documentos-2/>, which will be submitted to the Center for Gender and Diversity at UFPel.
- Applicants working at UFPel must submit a PDF print file of their institutional page at UFPel, containing their SIAPE number and department.
- Affirmative action applicants who choose to apply in a single group at the time of application must do so by submitting a form or document specifically required for those positions in accordance with Resolution 05/2017 CONSUN or in accordance with Resolution no 54/2021 CONSUN, since simultaneous applications for affirmative action positions is prohibited.

I.3- No applicant will participate in any stage of the application process if any documentation required for the application is pending.

I.4- Applicants can request further information by email: [ppgfsfaem@gmail.com](mailto:ppgfsfaem@gmail.com)

I.5. – In the appropriate space of the work plan (google forms), applicants must select and describe their preference to work in one of the areas of concentration (Entomology, Phytopathology, Weed Science, and Crop Protection) within one of the research lines of the chosen area (as described below), as well as outline a topic of interest within each line:

**- Area of concentration in Entomology:**

Research line 1. Biology, ecology, and management of insect pests and mites

Prof. Anderson Dionei Grützmacher

Prof. Daniel Bernardi

Prof. Flávio Roberto de Mello Garcia

Prof. Marcos Botton

Prof. Uemerson Silva da Cunha

Research line 2. Control and resistance of arthropods to insecticides

Prof. Daniel Bernardi

Research line 3. Biological control of pests and selectivity of pesticides to natural enemies

Prof. Anderson Dionei Grützmacher

Prof. Dori Nava

Prof. Marcos Botton

Research line 4. Molecular biology of insects.

Prof. Moisés João Zotti

**- Area of concentration in Crop Pathology:**

Research line 1. Biology, ecology, and physiology of nematodes

Prof. Cesar Bauer Gomes

Prof. Jerônimo Vieira de Araújo Filho

Research line 2. Plant-pathogen interaction

Prof. Leandro José Dallagnol

Research line 3. Integrated control of nematodes and fungi

Prof. Cesar Bauer Gomes

Prof. Leandro José Dallagnol

Prof. Jerônimo Vieira de Araújo Filho

**- Area of concentration in Weed Science:**

Research line 1. Ecophysiology and weed management

Prof. Andre Andres

Prof. Dirceu Agostinetto

Profa. Fabiane Lamego

Research line 2. Herbicide physiology and herbicide resistance of plants

Prof. Dirceu Agostinetto

Prof. Leandro Vargas

Prof. Luis Antonio de Avila

Prof. Edinaldo Rabaioli Camargo

Research line 3. Weed science and the environment: Herbicide dynamics and climate change

Prof. Edinaldo Camargo

Prof. Luis Antonio de Avila

Research line 4. Technology and innovation in weed science

Prof. Dirceu Agostinetto

Prof. Edinaldo Camargo

Prof. Luis Antonio de Avila

#### **- Area of concentration in Crop Protection:**

Research line 1. Integrated pest management: weeds, insects, and disease

Research line 2. Crop protection in a changing world

Research line 3. Smart crop protection Agriculture 4.0

Professors working in the three research lines:

Prof. Cesar Bauer Gomes

Prof. Dirceu Agostinetto

Prof. Edinaldo Camargo

Prof. Flávio Roberto de Mello Garcia

Prof. Jerônimo Vieira de Araújo Filho

Prof. Leandro José Dallagnol

Prof. Luis Antonio de Avila

Prof. Moisés João Zotti

## **II- THE SELECTION PROCESS**

The exam will be carried out in four steps:

II.1- The first stage will consist of assessing the documentation presented/sent by the applicant. The official list of approved applications will be published on the date in the schedule defined by the selection committee on the PPGFS website (<https://ppgfsufpel.com.br/selecao-estude-conosco/>).

II.2- The second stage will consist of two phases. First phase: an in-person written test (test 1 - eliminatory) applied for candidates coming from places up to 250 km from Pelotas or applied by a professional from an educational/research institution closest to the applicant. Second phase: preparation and presentation of the descriptive memorandum (test 2 - classificatory). Applicants taking the in-person test must be expected at: Eliseu Maciel Agronomy School (Faculdade de Agronomia Eliseu Maciel), Department of Crop Protection, Campus Capão do Leão. Applicants must be present at the place, date, and time set for the written test with a photo id, blue or black pen, pencil, and an eraser.

Test 1: It will be eliminatory and specific to each Area of Concentration, different for Masters and Doctorate applicants. The content of the test for each concentration area is described below. Information on how to do the test will be published after the approval of applications. Students earning a grade equal to or greater than sixty (60) will be selected, which is a prerequisite to participate in the next steps.

Test 2: It will be classificatory and consist of preparing an autobiographical essay (maximum three pages long) to be presented in 10 minutes (maximum). This test will be worth 30. The autobiographical essay must be prepared

based on the candidate's academic-scientific history and a previous proposal for a working plan to be carried out during the master's/doctoral program.

Recommended bibliography and/or topics for the specific exam in the areas of concentration:

- Area of Concentration: Entomology

Recommended bibliography:

GALLO, D. et al. Entomologia agrícola. Piracicaba: FEALQ, 920p. 2002.

MORAES, G.J. de; FLECHTMANN, C.H.W. Manual de Acarologia – Acarologia Básica e Ácaros de Plantas Cultivadas no Brasil. Ribeirão Preto: Holos, 2008. 308p.

GILBERT, L. Insect molecular biology, and biochemistry. Amsterdam: Elsevier/Academic Press, 2012. 563p.

Contents of the eliminatory test:

- Taxonomy, morphology, and biology of insects
- Insect ecology;
- Insect physiology;
- Control methods: chemical, biological, behavioral;
- Biological control of mites;
- Molecular biology of insects;
- Resistance of plants to insects and insecticidal plants;
- Arthropod resistance to chemical control strategies and genetically modified plants;
- Integrated pest management.
- Area of Concentration: Phytopathology

Recommended bibliography:

AGRIOS, G.N. Plant pathology. 5<sup>a</sup> ed. Ed. San Diego, EUA: Academic Press, 922p. 2005.

AMORIM, L.; REZENDE, J. A. M.; BERGAMIN FILHO, A. Manual de fitopatologia: princípios e controle. v.1, 5. ed. Piracicaba: Agronômica Ceres, 2018. 573p.

AMORIM, L.; REZENDE, J. A. M.; BERGAMIN FILHO, A. CAMARGO, L. E. A. Manual de fitopatologia: doenças de plantas. v.1, 5. ed. Piracicaba: Agronômica Ceres, 2016. 772p.

TIHOHOD, D. Nematologia agrícola aplicada. FUNEP, Jaboticabal, 2000. 473p.

FERRAZ, L.C.C.B.; BROWN, D.J.F. Nematologia de plantas: fundamentos e importância. L.C.C.B. Ferraz e D.J.F. Brown (Orgs.). Manaus: NORMA EDITORA, 2016. 251p.

DALLAGNOL, L.J. Resistência genética de plantas a patógenos. 1. ed. Pelotas, RS: Editora UFPEI, 2018. v. 1. 437p.

RIOS, J. A.; ALMEIDA, L. C.; SOUZA, E. B. Resistência de plantas a patógenos. 1ed.Recife, PE: Universidade Federal Rural de Pernambuco, 2021,

Contents of the eliminatory test:

- Non-host resistance and host resistance: genetic, biochemical and physiological aspects;
- Physical and biochemical mechanisms of plant defense against pathogens;

- Use of resistance-inducing agents to control plant diseases;
- Integrated management of phytonematodes;
- Phytonematode diagnosis;
- Taxonomy of Phytonematodes;
- General traits of phytoviruses;
- Integrated management of phytoviruses;
- General traits of bacteria;
- Management of phyto bacterias;
- General traits of phytopathogenic fungi (basidiomycota, ascomycota), asexual fungi and oomycetes (oomycota);
- Integrated management of phytopathogenic fungi
- Biological Control: mechanisms of action, main biocontrol agents, microorganism selection strategies.
- Area of Concentration: Weed science

Recommended bibliography:

ROMAN, E.S. et al. Como funcionam os herbicidas da biologia à aplicação. Gráfica Berthier, 160p. 2007.

SILVA, A.A.; SILVA, J.F.da (ed). Tópicos em manejo de plantas daninhas. Editora UFV, 367p. 2007.

OLIVEIRA JR. R.S. Biologia e Manejo de Plantas Daninhas. Omnipax, 448p. 2011.

Contents of the eliminatory test:

- Identification and characterization of weeds;
- Competition;
- Allelopathy;
- Weed management methods;
- Herbicide Physiology in Plants: Absorption and Translocation of Herbicides;
- Mechanisms of action of herbicides;
- Weed resistance to herbicides;
- Herbicidology (terminology and physicochemical characteristics);
- Herbicide and adjuvant formulations;
- Dynamics of herbicides in the environment;
- Sprayer adjustment and calibration.
- Area of Concentration: Crop Protection

Content of the areas of concentration in weed science, entomology, and Phytopathology. These exams will be in English.

II.3 – The third step will consist of an interview, with a weight of 30, common to the three areas of concentration, with the grade assigned by three professors, one from each area of concentration. For the interview, the following items will be considered: 1) questions about the autobiographical essay and 2) questions about the research topics

developed by the applicant in his previous scientific experiences. Candidates unavailable for the interview on the day and time stipulated by the Program will not have another opportunity to take the interview.

II.4 - The fourth step will evaluate the curriculum (worth 40) according to the score sheet that must be completed together with the other application documents. The score sheet can be obtained on the Program webpage (<https://ppgfsufpel.com.br/selecao-estude-conosco/>). The filling must be done in the Excel file, which will automatically calculate the weights of each production. The curriculum must be documented, presenting only a scanned copy of the certificate for each production. In the case of scientific articles, only the first page of each document containing the applicant's name must be attached. All documents must be numbered and this numbering must be informed in the excel file. Applicants who do not number their documents or do not fill out the worksheet correctly will not receive a grade for their CV. The XLS file and certificates (arranged in an orderly fashion) must be sent in a single PDF file.

II.5- The final classification will be determined by the sum of the grades obtained in the autobiographical essay + its presentation (weight 30), interview/questions about the autobiographical essay (weight 30), and CV (weight 40).

II.6- This call for the Graduate Program in Crop Protection is organized as follows:

Selection timetable:

- October 24 to November 18, 2022 - Application period;
- November 25, 2022 - Publication of approved applications and the exam calendar. The exam calendar will be published on the PPGFS website. - <https://ppgfsufpel.com.br/selecao-estude-conosco/>.
- December 05, 2022 – eliminatory test;
- December 12 to 14, 2022 – interviews;
- December 16, 2022 - publication of the results.

### III - THE EVALUATION CRITERIA

The Evaluation Committee will take into account the following:

#### III.1) SCORING:

a) Test 1 - eliminatory: All questions related to the area of knowledge indicated by the applicant at the time of registration. Students earning a grade equal to or greater than sixty (60) will be selected as a prerequisite to move on to the third step. The sum of all items will be a maximum of 100 points.

b) Exam 2 - Classificatory: Analysis of the descriptive memorial and its oral presentation via videoconference and interview/questioning: The descriptive memorial, three pages long max (1.5 cm line spacing and 12-inch font), will be evaluated as follows: 30 points in writing (organization of the memorial (5 points), emphasis on important points (10 points), number of pages (5 points) and correct Portuguese writing (10 points); 30 points for the presentation composed of questioning regarding the past experience (5 points), knowledge assessment of the area in which the applicant developed research or worked professionally (5 points) and knowledge in the area (5 points), clarity of answers (5 points), quick reasoning (5 points) and knowledge of the area to which they have applied (5 points). The sum of all items will be a maximum of 60 points.

c) Curriculum analysis: the curriculum score will be evaluated according to the score table and comparison with peers. The sum of all items will be a maximum of 40 points. Worksheet for filling available at: <https://ppgfsufpel.com.br/selecao-estude-conosco/>

#### III.2) CLASSIFICATION:

- a) Test 1 – Eliminatory, whose score must be  $\geq 60\%$  (This score does not count to compose the classification score)
- b) Exam 2 - Classificatory - Weight 60 points (Written autobiographical essay = 30 points; Interview/questioning = 30 points)

c) CV analysis - 40 points

Total: 100 points

#### **IV – VACANCIES**

Eleven (11) vacancies will be available for the Master's degree and 14 (fourteen) for the Doctorate, distributed as follows:

- Area of concentration in Entomology: 3 for Master and 3 for Doctorate;
- Area of concentration in Phytopathology: 2 for Master and 2 for Doctorate;
- Area of concentration in Weed Science: 6 for Master and 7 for Doctorate;
- Area of concentration in Crop Protection: 2 for Doctorate.

According to CONSUN/UFPEL resolutions no. 005/2017 and 09/2019, 25% of the vacancies will be reserved for black, quilombola, indigenous, or disabled people and 10% for UFPEL employees, respectively. Moreover, according to Resolution 54/2021, 5% of the vacancies will be reserved for transvestite and transsexual candidates (or at least one reserved vacancy).

The vacancies are distributed as follows:

- a) For the Master's degree: 06 (six) vacancies by wide competition, 03 (three) vacancies for affirmative access of RN 005/2017, 01 (one) vacancy for UFPEL employees, and 01 (one) vacancy for RN 54 /2021.
- b) For the Doctoral degree: 08 (eight) vacancies to wide competition, 04 (four) vacancies for affirmative access of RN 005/2017, 01 (one) vacancy for UFPEL employees, and 01 (one) vacancy for RN 54/2021.

Black people, quilombola(s), indigenous(s), disabled, transvestite, and transsexual applicants will compete concomitantly for the reserved and general vacancies, according to the ranking in the selection process. The approval of these applicants classified within the number of vacancies offered for the general competition will not be computed to fill the reserved vacancies.

In case of withdrawal of black, quilombola, indigenous, disabled, transvestite, transsexual, and UFPEL employee applicants approved in a reserved vacancy, the vacancy will be occupied by the black, quilombola, indigenous or disabled applicant following the classification order.

Among the vacancies reserved for affirmative actions under the terms of this call, the following proportion will be considered for distribution purposes: fifty percent (50%) for black and quilombola applicants, twenty-five percent (25%) for indigenous applicants; twenty-five percent (25%) for candidates with disabilities. Also, transvestites and transsexuals will have vacancies reserved according to RN 54/2021.

If there aren't enough black, quilombola, indigenous, or disabled applicants in each category, the remaining vacancies will be distributed among the other candidates for affirmative access in compliance with CONSUN/UFPEL Resolution 005/2017, following the classification order.

If there aren't enough black, quilombola, indigenous, disabled, transvestite, and transsexual approved applicants to occupy the reserved vacancies, the remaining vacancies will be reverted to the general competition, being occupied by the other approved applicants in the classification order.

In compliance with Resolution 09/2019, vacancies occupied by UFPEL servers will not be discounted from those to be occupied by the affirmative access policies provided for CONSUN resolutions no. 05/2017 and 54/2021.

#### **V - PUBLISHING OF THE RESULTS**

The selected applicants will appear in a list organized in classification order, which will be published on the PPGFS website (<https://wp.ufpel.edu.br/ppgfs/>) in a schedule to be defined by the PPGFS selection committee.



## **VI – RESULTS APPEALS**

a) Appeals to the results regarding the approval of applications and of any of the phases of the evaluation process must be sent to the program email (ppgfsfaem@gmail.com) up to 72 hours after the results are published.

b) The Graduate Program Board in Crop Protection will carry out an analysis of the appeals by taking into account the criteria set out in this call, as well as the applicants' access to information and documents produced by the applicant, once the need has been demonstrated and the interest is justified, by any other applicant in the contest, at all stages of the selection process.

## **VII – FINAL CONSIDERATIONS**

The tests will be mandatory, eliminatory, and classificatory. In the event of a tie, priority will be given to the applicant who has obtained the highest grade in the curriculum evaluation and, as a second criterion, the oldest candidate. Should the tie still persists, applicants will be invited to participate in a drawing that will define the filling of the vacancy.

All selected applicants will be entitled to enrollment under item IV of this call.

When scholarships are available, their granting will follow the final ranking order of the candidates selected.

If a scholarship and mentorship are available, alternate candidates may be called.

Approval in the selection process does not constitute an employment relationship nor an obligation to provide candidates with a scholarship, as it depends on CAPES policies.

The Program does not need to fill in all the vacancies offered.

A language proficiency test will not be required at the time of application but must be taken in the course of the first year of the Program.

Candidates will only have their applications approved if they follow the rules of this public call.

Applying to the selection process implies full acceptance of all terms established in this call.

The final list with the result of the tests will be available to applicants on the dates defined by the Program Selection Committee and published on the website. <https://wp.ufpel.edu.br/ppgfs/>.

What is not provided for in this call follows the Graduate Programs Regulations of the Dean of Research and Graduate Studies and the General Regulations of UFPEl.

Pelotas, October 14, 2022.

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**Prof. Dr. Edinaldo Rabaoli Camargo**

**Coordinator of PPGFS**

**In accordance:**

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**Prof. Dr. Flavio Fernando Demarco**

**Dean of Research and Graduate Studies at UFPEL**

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**Prof.<sup>a</sup> Dr.<sup>a</sup> Isabela Fernandes Andrade**

**President of UFPEL**

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Documento assinado eletronicamente por **EDINALVO RABAIOLI CAMARGO, Coordenador de Curso de Pós-Graduação, Programa de Pós-Graduação em Fitossanidade**, em 10/11/2022, às 10:58, conforme horário oficial de Brasília, com fundamento no art. 4º, § 3º, do [Decreto nº 10.543, de 13 de novembro de 2020](#).



Documento assinado eletronicamente por **FLAVIO FERNANDO DEMARCO, Pró-Reitor, Pró-Reitoria de Pesquisa e Pós-Graduação**, em 10/11/2022, às 11:34, conforme horário oficial de Brasília, com fundamento no art. 4º, § 3º, do [Decreto nº 10.543, de 13 de novembro de 2020](#).



Documento assinado eletronicamente por **URSULA ROSA DA SILVA, Vice-Reitora**, em 10/11/2022, às 14:37, conforme horário oficial de Brasília, com fundamento no art. 4º, § 3º, do [Decreto nº 10.543, de 13 de novembro de 2020](#).



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