

UNIPÓS-RIO-FÍSICA – The Unified Examination for the Graduate Degrees in Physics in Rio de Janeiro

Editais 2017-2

The Coordinators of following Graduate Programs of Rio de Janeiro:

1. Centro Brasileiro de Pesquisas Físicas – CBPF
2. Departamento de Física da Pontifícia Universidade Católica do Rio de Janeiro - PUC-Rio
3. Universidade do Estado do Rio de Janeiro – UERJ
4. Instituto de Física da Universidade Federal Fluminense – UFF
5. Instituto de Física da Universidade Federal do Rio de Janeiro – UFRJ,

make public the opening of the registration for the selection exam of candidates for Masters and Doctoral courses for the second semester of 2017.

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1. IMPORTANT DATES

- Registration: from April 10 of 2017 to May 14 of 2017.
- Deadline for the candidate to request to do the exam in another institution: May 14 of 2017.
- Written examination: May 19 of 2017.
- Result of the written examination: May 31 of 2017.
- Deadline for the candidate to request the revision of her/his scores: from June 1 to June 3 of 2017.
- Presential evaluation: June 12 of 2017 for Master course candidates and June 13 of 2017 for Doctor course candidates.
- Final results: June 21 of 2017.

2. REGISTRATION

2.1 Registration will be open from April 10 of 2017 to May 14 of 2017 and must be made online through the form found at <http://uniposrio-fisica.cbpf.br/index.php?pgn=inscricoes>

2.2 Registration for the exam implies that the candidate is automatically included in all Graduate Programs that organize the exam. The candidate does not need to do a separate

registration for each institution.

2.3 The applicant should submit the following documents through the website at the time of registration :

- Undergraduation achievements
- Master degree achievements (when applicable)
- CPF / ID or passport

2.4 - This item has been substituted by item 6.9

3. EXAM

3.1 The exam will consist in one single exam, that will take place on May 19th, 2017, from 2:00 PM to 6:00 PM (local Rio de Janeiro time), at Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio).

The candidate must arrive 45 min in advance at the following location:

PUC-Rio –Pontifícia Universidade Católica do Rio de Janeiro,
Rua Marquês de São Vicente, 225
22451-900 Gávea - Rio de Janeiro - RJ BRASIL
uniposrio2017.2@puc-rio.br
Tel: +55 (21) 3527-1268

The UNIPOSRIO exam will take place in room(s) of the PUC-Rio to be announced or as directed to the applicants on site.

3.2 The Organizing Committee will take efforts to ensure that the examination is also applied on the same day and time in other institutions in Brazil and other countries. Applicants who wish to take the exam at another location than at the PUC-Rio must manifest their wish by contacting the exam coordination until May 14th of 2017 by email at uniposrio2017.2@puc-rio.br. However, the realization of the examination at the home (or nearby) institution of the candidate is not guaranteed.

4 . THE EXAM PROGRAM

4.1 The exam will be based on knowledge of the broad areas of Graduate Programs in Physics, consisting of 5 blocks, namely:

Block 1: Classical Mechanics

Block 2: Waves, Fluids and Thermodynamics

Block 3: Electromagnetism

Block 4: Electromagnetic Waves , Optics and Modern Physics

Block 5: Quantum Mechanics

4.2 All applicants must choose only (4) four of the (5) five blocks to solve. PhD candidates will be required to choose the block 5 (quantum mechanics). Only the 4 blocks chosen by the student will be corrected. The choice of 4 blocks by the candidate should be clearly stated in the test cover sheet.

4.3 Each block will consist of three (3) multiple-choice questions and a discursive question. Two wrong answers to multiple-choice questions cancel one correct answer to another multiple choice, within the universe of 12 multiple-choice questions of four selected blocks. Blank answers will have no effect on the correction of other issues.

4.4 The suggested bibliography is:

Block 1: Classical Mechanics

- * Course Basic Physics 1 , Nussenzveig , Herch Moyses / Edgard Blucher
- * Fundamentals of Physics 1 - Resnick , Robert ; Halliday , David ; Walker , Jearl / LTC

Block 2: Waves, Fluids and Thermodynamics

- * Course 2 Basic Physics , Nussenzveig , Herch Moyses / Edgard Blucher
- * Fundamentals of Physics 2 - Resnick , Robert ; Halliday , David ; Walker , Jearl / LTC

Block 3: Electromagnetism

- * Course Basic Physics 3 , Nussenzveig , Herch Moyses / Edgard Blucher3
- * Fundamentals of Physics 3 - Resnick , Robert ; Halliday , David ; Walker , Jearl / LTC

Block 4: Electromagnetic Waves , Optics and Modern Physics

- * Course Basic Physics 4 , Nussenzveig , Herch Moyses / Edgard Blucher
- * Fundamentals of Physics 4 - Resnick , Robert ; Halliday , David ; Walker , Jearl / LTC

Block 5: Quantum Mechanics

- * Quantum Mechanics - Vol 1 - Cohen - Tannoudji Claude Bernard Diu , Frank Laloe / Wiley-Interscience .

5. EXAM APPLICATION

5.1 The candidate must attend the examination room with at least 45 minutes advance to check and sign attendance forms, with a valid photo identification.

5.2 The applicant must sign each answer sheet used.

5.3 The test will last for (4) four hours beginning at 2:00 pm (local time of Rio de Janeiro)

5.4 No applicant will be allowed entry at the exam application site after 2:00 pm (local time of Rio de Janeiro)

5.5 The use of any material beyond that provided by the organization will not be allowed.

5.6 The use of scientific calculators and any other electronic equipment such as mobile phones and schedules will not be allowed .

5.7 Applicants are allowed to leave the examination room only after 90 minutes elapsed from the beginning time.

5.8 Applicants can use bathrooms only after 60 minutes from the beginning time but must be accompanied by a supervisor.

5.9 Drafts will not be considered as part of the exam answers.

6. EXAM CORRECTION AND RESULTS

6.1 The exam will be corrected by a board specified by the Graduate Coordinators involved. Each candidate will be assigned a final score from 0 to 10, with accuracy up to the two decimal places, reflecting their performance in the exam. The Graduate Programs involved will have access to the notes, but it will not be made public.

6.2 Each candidate will receive either by post or email to the addresses indicated on the registration form, his/hers final grade on the exam and the overall grade distribution. The deadline for the release of these results is May 31 of 2017.

6.3 The applicant may request a revision of his/hers scores from June 1 of 2017 to June 3 of 2017. The candidate himself may request the revision via e-mail address uniposrio2017.2@puc-rio.br. After reviewing the exam, the review notes assigned by the examiners will be the final grade of the candidates.

6.4 Each program shall establish a minimum score for the applicants to carry out the Presential Evaluation (see 6.6), which will be made public along with the candidate's notes.

6.5 After the results of the exam are public, applicants can apply for the Presential Evaluation at the institutions he/she wish to apply at the address

<http://uniposrio fisica.cbpf.br/index.php?page=formularios.PreAgendaEntr>

Only candidates with grades higher or equal to the minimum (see 6.4) grades may register for the Presential Evaluation of each program .

6.6 During the Presential Evaluation, the candidate will have his/her academic career evaluated and may be ask about the result of their written exam.

6.7 The Presential Evaluation will be held at the PUC-Rio, in rooms that will be announced in due course at <http://uniposrio-fisica.cbpf.br/> site, on June 12 of 2017 (candidates for Master course) and June 13 of 2017 (candidates for PhD course).

6.8 Candidates who have taken the Exam outside of Rio de Janeiro or candidates who are unable to attend the Presential Evaluation on the established dates may, exceptionally, conduct their Evaluations remotely, by Skype, on dates to be disclosed by each of the participating institutions. The dates of the Remote Assessments in each institution will not necessarily be the same. The applicant should contact each institution individually for information and scheduling of Remote Evaluations.

6.9 Applicants who have obtained a grade equal or higher than the minimum stablished by the Institutions and wish to apply for the Presential Evaluation must have two (2) recommendation letters of two different teachers/researcher of his/her knowledge. The teachers/researcher must register in the UNIPOSRIO system as a collaborator (COLABORADOR) using the COLABORADORES TAB in the Menu ate the initial page (<http://uniposrio-fisica.cbpf.br/?pgn=colaboradores>). Recommendation letters should be filled in the online form that can be found at the initial collaborator page after login. The recommendation letter form should be filled until June 4th 2017.

Candidates with Master's degree must ask one recommendation letter to his/hers supervisor. By failing to meet this requirement, the applicant must justify it.

7. THE USE OF RESULTS

7.1 Each program shall use the results of the exam and the presential evaluation for selection and ranking of candidates at its own discretion . Acceptance or non - acceptance into a program does not imply acceptance or non- acceptance in another program.

8. THE USE OF PREVIOUS SCORES

Possibility to use the previous scores of examinations of UNIPOSRIO is subject to each program and the candidate who is interested in such a possibility should contact with each program to obtain relevant information about this possibility.

9. THE FINAL RESULT

9.1 The deadline for simultaneous public announcement of the final results of the selection process for the Graduate Programs is June 21 of 2017.

10. ADDITIONAL INFORMATION

Organization of the examination: uniposrio2017.2@puc-rio.br

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Rio de Janeiro - RJ - CP: 68528 - CEP: 21941-972