UCF Physics Written Candidacy Exam: Rules and Guidelines

1. **Subjects.** The written candidacy exam comprises four parts, one for each of the following subjects: 1) Classical Mechanics, 2) Statistical Physics, 3) Electromagnetism, and 4) Quantum Mechanics.
2. **Learning Objectives (LOs): content.** The topics that can be covered in the candidacy exam are specified by one document per subject, listing the books students can use as references, and a detailed list of learning objectives, grouped in categories.
3. **LOs: approval and publication.** The LOs documents must be made available to all graduate students at least three months in advance to the subsequent exam. The documents can be amended and must be approved by the departmental faculty.
4. **Subject Exam.** At any given offering of the exam, each student will be offered four problems for each of the subjects he / she is required to be examined on. The student must return the solution of three of these problems, of his / her choice.
5. **Passing Grade**. The passing grade for the candidacy exam is 50% averaged over all subjects with the minimum passing score for each subject being 30%. NB: This will change in the Fall 2021.
6. Exam Frequency. The candidacy exam is offered at least twice per year.
7. **Exam Time and Attempts**. The written exam is offered over a period of 4 days: one subject per day.
   Students will be allowed to attempt each subject within a period of time that will be determined in the Fall 2021.
8. **Accessibility Services.** Students who qualify for extended time or alternative accommodations must notify SAS and the department sufficiently in advance, for appropriate measures to be taken.
9. **Problems Composition.** The problems in each subject are determined as follows. Half of the problems are chosen by the candidacy committee out of a pool of no fewer than 16 problems for each subject, which must be made available to the students at least three months in advance to the exam, along with their solutions. The committee has the latitude to make minor modifications to these problems, as long as the learning objectives of the problems and the fundamental aspects of their solutions are unchanged. The suggested changes must be approved by a majority of the committee members. The other half of the problems are formulated by the committee, based on the subject learning objectives. These additional problems and their full solutions must be made available to all committee members at least two weeks in advance of the committee meeting, where they must be approved by a majority vote.
10. **Update of the problem pool.** At the end of the evaluation meeting that follows the exam, the new problems are included in the pool, and the modified old problems are appended to the original, as variants. The committee may also decide, by majority vote, to archive some of the pool problems. Archived problems and their solutions remain available to the students for training purposes. Any faculty member can recommend modifications to the existing problems in the pool or propose new problems, as long as they are accompanied by full solutions and conform to the required format. The committee will decide at the earliest opportunity whether to include the suggested problems in the pool, possibly after having modified them, and whether to accept the recommended corrections to the existing

problems.

11. **Problem Format.** To be considered for the exam, or to be added to the pool, any problem must be accompanied by its solution in an editable electronic form, LaTeX (preferred) or docx, using the templates provided in Annex I. The pool of each subject must be kept under revision control in a separate Git repository.

12. **Grading and Feedback.** A grading rubric will be developed for every question. Provide the solutions and the rubrics to students after the exams have been graded. Give the graded exams back to students**.** A selective double grading will be adopted. This item may change and will be finalized in the Fall 2021.

13. **Tutoring.** All students who fail one or more subjects in a written candidacy exam will be provided with tutoring support for each failed subject. This item may change and will be finalized in the Fall 2021.

14. To reduce any potential biases, each student will be assigned a written candidacy exam identification number (WCEID) the week after the registration email is sent. The student's WCEID will be assigned by the Graduate Candidacy Committee (GCC) support staff person and sent to the student via email. The student will use their assigned WCEID instead of their name in the written candidacy exam paperwork (and, if applicable, in the appeal).

If a student is enrolled in the MS program in good standing (a minimum of 3.0 GPA) and wishes to take the PhD written candidacy exam earlier, the student may do so, provided the graduate director approves it. This needs to be documented with justification from the graduate director. This will be counted as the 1st attempt for the student.

1. **Appeals:** A student may appeal the results of the written candidacy exam. Appeals must include supporting documentation, if applicable, and will be reviewed. Appeals must be submitted within 1 week after distribution of exam scores. In general, research productivity will not be considered as a valid reason to appeal the results of the exam.

2. To appeal the results of the written candidacy exam, a student should:
   (i) Send an e-mail to soto@ucf.edu with subject title: "Appeal Written Candidacy Exam Results"
   (ii) In the e-mail, include the assigned written candidacy exam identification number (WCEID), and petition (appeal)
   (iii) Include supporting documentation, if any. The student must remove any personal identifiable information (name, UCFID, etc.) and instead, include the assigned written candidacy exam identification number (WCEID) at the top-right-hand corner of each page.
   (iv) Allow the GCAC 10 business days to review and respond to appeal
   (v) After 10 business days from receipt of the appeal, the decision of the GCAC will be communicated in an e-mail to the student.

If for any reason the GCAC is unable to make a decision about the appeal and/or need additional information/clarification, the student will receive an e-mail request/notification. Once the student provides the additional information/clarification, allow another 10 business days for the GCAC to review and consider the additional information/clarification before a decision is made and communicated to the student. The decision of the GCAC after reviewing an appeal is final.