

**PHY 386/486 – Undergraduate Research I/II**  
**Department of Physics, Astronomy, and Materials Science**  
**Missouri State University**

*I acknowledge receiving the **PHY 386/486 Policies and Procedures** document (the following pages) that describes how to complete a PHY 386/486 project, select a project adviser, and form an Advisory Committee before registration for PHY 386. I understand that I should consult several faculty members in the department prior to selecting an adviser.*

*I am also notified that I must **pass the Major Field Achievement Test (MFAT)** before or during the semester of enrollment in PHY 486.*

*I am also notified that I must **meet with the Department Head for an EXIT interview** before the PHY 486 instructor can submit a final grade for my project course.*

**Date:** \_\_\_\_\_

**Student Signature:** \_\_\_\_\_

**Printed Name:** \_\_\_\_\_

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**PHY 386/486 – Policies and Procedures**  
**Department of Physics, Astronomy, and Materials Science**  
**Missouri State University**

1. When a student files a degree program in the Departmental Office, the student will be required to sign a statement acknowledging being notified of the necessity of enrolling in PHY 386 and PHY 486 no later than the semester preceding the semester in which the student will graduate. A student is eligible to enroll in PHY 386 after completing 80 credit hours of course work. Before enrolling in PHY 386, students are advised to satisfy the following specific course requirements:

- (1) Completion of: PHY 203, 204, 375, *and* 385;
- (2) Completion of at least one of: PHY 333 *or* 353; and
- (3) Completion of at least one of: PHY 324, 343, 476, *or* MAT 580.

2. In the semester preceding enrollment in PHY 386, a student must petition a faculty member to serve as an adviser to guide the student in the project courses. This petition must include a topic and a brief description of the project the student intends to do. If the faculty member agrees to serve, the student must then obtain a course permission form. The student must also form at the same time an **Advisory Committee**, which will consist of the student's adviser and two other faculty members. The student must take the course permission form and the signature slip to the **PHY 386 instructor**, who will sign it and give the student permission to enroll. The instructor will keep a record of all documents related to the PHY 386 course, and will share any necessary documents with the PHY 486 instructor by the beginning of the following semester.

3. During the semester of enrollment in PHY 386, the student will prepare a **written feasibility study**, including an appropriate literature search, with the guidance of the adviser. The written feasibility study will be submitted to the Advisory Committee no later than two weeks prior to the last day of classes. An **oral presentation of the feasibility study** will be given before the Advisory Committee no later than the last week of classes. If feasible, the student may begin working on the project while enrolled in PHY 386.

4. After the oral presentation of the feasibility study, the Advisory Committee members will each fill out a **project course evaluation form**, to be submitted to the PHY 386 instructor. The forms and the written feasibility report will become a part of the student's departmental file. The Advisory Committee will also determine whether the student passes, must make modifications to pass, or fails the course. The grade will be entered into the system by the PHY 386 instructor. **A pass signifies that the student will be permitted to enroll in PHY 486 and actually carry out the project.**

5. The PHY 386 instructor will give the signature slip to the **PHY 486 instructor** who will sign it and give the student permission to enroll in PHY 486 (granted that the student passed PHY 386). The PHY 486 instructor will keep a record of all documents related to the PHY 486 course.

6. In PHY 486, the student will complete the proposed project, with the guidance of the project adviser. A **written presentation of the results of the project**, in the format required by the *Journal of Undergraduate Research in Physics*, will be submitted to the Advisory Committee no later than two weeks prior to the last day of classes. An **oral presentation of the project** will be given before the Advisory Committee no later than the last week of classes. The Advisory Committee members will each fill out a **project course evaluation form**, to be submitted to the PHY 486 instructor. The forms and the written report will be added to the student's departmental file.

7. The **Major Field Achievement Test (MFAT)** must be taken before or during the semester of enrollment in PHY 486. If the student's percentile rank on the MFAT falls below a minimum value, – which will be determined by a vote of the Department faculty – the PHY 486 instructor will require the student to pass an additional general knowledge exam in order to receive a passing grade in PHY 486. This exam will be administered by the Advisory Committee and a pass/fail report on the outcome of this exam will be submitted to the PHY 486 instructor. The student's percentile rank on the MFAT will become a part of the student's departmental file.

8. After the PHY 486 presentation, the Advisory Committee will meet to determine the grade of the student in PHY 486, either pass or fail. To pass, the student must have:

- (1) performed satisfactorily on the project as determined by the Advisory Committee;
- (2) been ranked higher than the minimum percentile value set by the Department faculty for the MFAT or has passed the additional general knowledge exam; and
- (3) completed an EXIT interview with the Department Head.

The final task of the Advisory Committee is to ask the PHY 486 instructor to enter into the system a pass or fail grade for the student.

9. The student's project courses files (the Advisory Committee rating forms for PHY 386 and PHY 486, the student's MFAT percentile rank, the written feasibility report, and the final written project report) will be kept in the Department Office.

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### **TIMELINE summary for PHY 386/486**

Petition a faculty member to serve as an adviser to guide you in the project courses no later than the semester preceding the semester in which the student will graduate.

During the semester of enrollment in PHY 386, prepare a written feasibility study and submit to the Advisory Committee no later than two weeks prior to the last day of classes.

Present the feasibility study to the Advisory Committee no later than the last week of classes.

A pass in PHY 386 is needed to enroll in PHY 486 and actually carry out the project.

Complete the proposed project, with the guidance of the project adviser.

Take the MFAT (Major Field Achievement Test) before or during the semester of enrollment in PHY 486.

Submit a written presentation of the results of the project to the Advisory Committee no later than two weeks prior to the last day of classes.

Present the project to the Advisory Committee no later than the last week of classes.

**PHY 386/486 – Signature Slip**  
**Department of Physics, Astronomy, and Materials Science**  
**Missouri State University**

If, at any time during the PHY 386/486 project course, the student changes an adviser, a new signature slip needs to be completed. If the student only changes committee member(s), the previous name(s) should be crossed over and the new committee member(s) should sign the form.

Student

I wish to work with \_\_\_\_\_ for my PHY 386/486 research project.  
(Printed faculty name)

Faculty

I agree to work with the above student: \_\_\_\_\_ Date: \_\_\_\_\_  
(Project adviser signature)

Faculty-of-record approval for PHY 386: \_\_\_\_\_ Date: \_\_\_\_\_  
(PHY 386 instructor signature)

Faculty-of-record approval for PHY 486: \_\_\_\_\_ Date: \_\_\_\_\_  
(**After** the student passed PHY 386) (PHY 486 instructor signature)

Student

My Advisory Committee members (in addition to my project adviser) are:

1. Name: \_\_\_\_\_ Signature: \_\_\_\_\_

2. Name: \_\_\_\_\_ Signature: \_\_\_\_\_