



## Graduate Student Information and Policy Guide

Department of Physics

Kent State University

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# Information and Policy Guide for Graduate Students in Physics

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Latest Revision: Spring 2024

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The Graduate Program and Admissions Committee,  
The Graduate Coordinator,  
And the Chairperson  
Department of Physics  
Kent State University

## PREFACE

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This Information and Policy Guide is issued principally for the benefit of the graduate students in the Department of Physics at Kent State University. All graduate students are expected to be familiar with its contents and to abide by the stated rules. In addition, faculty will find the Guide a useful reference, particularly with regard to curriculum advising and thesis and dissertation procedures.

The information in this guide is the result of deliberations of the Faculty and the Graduate Program and Admissions Committee of the Department of Physics. Refer to the Physics Department Committees assignment sheet, which is distributed to all faculty and graduate students each fall, for the membership of these committees. The Graduate coordinator chairs the Graduate Program and Admissions Committee.

Since it is difficult to write rules that will apply to every case, special consideration will be given by the committee to individual cases when rules and guidelines in this document do not adequately apply.

The Physics Department and its committees reserve the right to make alterations and additions to policy. When such alterations or additions are made which affect graduate students, they will be communicated to the graduate students, their advisors, or their representatives.

One of the principal goals of the Physics Department is to become and remain a leading department in the state and the nation. Since graduate students are members of the Department, quality of performance and productivity by graduate students is very important. Contributions and constructive suggestions by graduate students toward these goals are welcome.

This is your department. Help us make it the best possible!

## Table of Contents

<b>PREFACE .....</b>	<b>3</b>
<b><i>Table of Contents.....</i></b>	<b>4</b>
<b>1. ACADEMIC PROGRAMS .....</b>	<b>1</b>
1-1. Doctoral Program .....	1
1-2. Master's Degree Program .....	1
1-3. Graduation Requirements .....	1
<b>2. CURRICULAR AND RELATED REQUIREMENTS.....</b>	<b>2</b>
2-1. Course Schedules for Physics Graduate Programs .....	2
2-2. Special Courses and Their Requirements.....	5
2-2.3. Course Credit for Research.....	5
2-3. The "16-Hour" Requirement .....	6
2-4. Continuous Registration Requirement .....	6
2-5. Colloquium Requirement.....	6
<b>3. DOCTORAL CANDIDACY REQUIREMENTS.....</b>	<b>7</b>
3-1. Candidacy Examination (admits from Fall 2023 onwards) .....	7
<b>4. ADVISORS FOR PHYSICS GRADUATE STUDENTS.....</b>	<b>13</b>
4-1. Curriculum Advisor .....	13
4-2. Thesis and Dissertation Advisor .....	13
4-3. Limit on Number of Graduate Students per Thesis or Dissertation Advisor.....	14
4-4. Approval Required for Submission of a Paper .....	14
<b>5. THESIS AND DISSERTATION .....</b>	<b>15</b>
5-1. Dissertation (Thesis) Topic, Prospectus, and Committee .....	15
5-2. Writing Style for Thesis and Dissertation .....	18
5-3. Procedures for Examination of the Masters Thesis and Oral Defense .....	18
5-4. Procedures for Examination of the Doctoral Dissertation and for the Oral Defense .....	18
5-5. Examining Committee.....	19
5-6 The Final Oral Defense .....	19
<b>6. TIMETABLE FOR GRADUATE DEGREE PROGRAMS.....</b>	<b>21</b>
6-1. Master's Degrees .....	21
6-2. Doctorate .....	21

6-3.	Timeline for Dissertation and Graduation .....	21
<b>7.</b>	<b><i>FINANCIAL SUPPORT</i> .....</b>	<b>24</b>
<b>8.</b>	<b><i>DUTIES AND EVALUATION OF GRADUATE APPOINTEES</i> .....</b>	<b>27</b>
8-1.	Graduate Assistant .....	27
8-2.	Research Assistant.....	27
8-3.	Teaching Evaluation of Graduate Appointees.....	27
8-4.	Role and Status of Graduate Student Appointees .....	28
8-5.	Graduate Student Evaluations .....	28
<b>9.</b>	<b><i>STUDENT ORGANIZATIONS AND COMMITTEE SERVICE</i>.....</b>	<b>29</b>
9-1.	Society of Physics Students and Sigma Pi Sigma .....	29
9-2.	Committee Service - Graduate Student Representatives .....	29
<b>10.</b>	<b><i>SEXUAL HARASSMENT</i> .....</b>	<b>30</b>
<b>11.</b>	<b><i>STUDENT GRIEVANCE PROCEDURE</i>.....</b>	<b>32</b>

## **1. ACADEMIC PROGRAMS**

### **1-1. Doctoral Program**

A Ph.D. student takes approximately two academic years and one summer of full-time course work (*see Course Schedules*), takes the candidacy exam (*see Candidacy Exam*), completes a dissertation and defends it in an oral exam (*see Dissertation*), and presents a colloquium based on his/her work to the Physics community (*see Colloquium Requirement*). Research for the dissertation usually begins in the second spring or first summer. The Graduate Program Committee approves the selection of the research advisor and the Dissertation Committee. The course Dissertation 1 is started after passing the Candidacy Exam and other course requirements (including 30 hours for students with a Masters and 60 hours with a Bachelor's degree) are fulfilled.

Since the Ph.D. is a research degree, the learning of research techniques and the completion of a satisfactory research project are perhaps the most important steps. The personal characteristics of having self-discipline, motivation, ability to organize research, recognition of the significance of results, staying current in one's research area, and the capability of spending extended hours in the laboratory or poring over a problem aid the candidate in the completion of the dissertation.

The national average for the time required to obtain a Ph.D. degree in physics after the bachelor's degree is approximately six and one-half years. It is desirable for Ph.D. students to complete their work earlier, if possible. The Physics Department bases its financial support of an appointee on satisfactory progress toward the degree. Students in the Ph.D. program (and in the master's programs who wish to enter the Ph.D. program) are reviewed at the end of each term by the Graduate Program and Admissions Committee for the continuation of financial support (*see Financial Support, Section 7*).

### **1-2. Master's Degree Program**

The M.A. degree is a non-thesis option that does not require research. The M.S. degree requires a research project that must result in a written report. MS students can choose a report in the form of a thesis that is defended orally. It is expected that a student will complete the requirements for the M.A. in a calendar year, and the M.S. within three semesters (plus one summer term).

The minimum credit-hour requirement for the MA degree is 32 credit-hours of graduate courses with no more than one-half at the 50000 level. Students in the MS program meet this requirement, while completing a set of core courses. The course schedule for the students pursuing the master's degree can be the same as for the first year of the Ph.D. program.

### **1-3. Graduation Requirements**

The policy regarding graduate requirements is stated in the *Graduate Catalog*. The student is allowed to follow the policy in any Kent State University graduate catalog dated since the date the student entered continuous graduate work at Kent State. The prospective graduate must inform the Office of Graduate Studies of the College of Arts and Sciences well in advance of graduation of his/her intent to graduate, must fill out appropriate forms and meet the deadlines for graduation at the end of a specific term. In addition, the student must be continuously registered until the term of graduation. The student's advisor, the Graduate Program and Admissions Committee, and the Office of the Associate

Dean for Graduate Affairs in the College of Arts and Sciences check the student's record to see if all requirements have been fulfilled and the proper deadlines have been met

## **2. CURRICULAR AND RELATED REQUIREMENTS**

### **2-1. Course Schedules for Physics Graduate Programs**

In the following pages, course schedules for students pursuing pre-doctoral or M.S. degree programs assume that the students have preparation equivalent to that of a Kent State Bachelor of Science degree in Physics. A student's curriculum advisor can help with any questions regarding the course selection and schedule. The following upper class courses (or their equivalent) in the Kent B.S. program are expected to have been taken in undergraduate school with a satisfactory grade: Mechanics (35101/2), Thermodynamics (4/55301), Introductory Modern Physics (36001), Quantum and Atomic Physics (4/56101), Introduction to Nuclear Physics (4/56301), Electromagnetic Theory I and II (4/55201, 4/55202), and Introduction to Solid State Physics (4/56401).

Each new graduate student must obtain a copy of the course schedules from the departmental office. The student and his/her curriculum advisor together plan the student's course schedule before registration. After reviewing the student's transcript and background, the curriculum advisor and the student work out the details of the projected schedule of courses for each term until receipt of degree. If a student is admitted initially to a master's degree program, and wishes to be considered later for admission to a doctoral degree program, then the student needs to plan and submit a course schedule projected also to the receipt of the doctoral degree. Projected course schedules may be reviewed each term and revised as necessary. The student and the advisor must sign the planned course schedule and submit it to the Graduate Program Coordinator for approval before registration.

It may be advantageous to make changes in approved course schedules. To affect such changes, a graduate student must obtain advance approval from both his advisor and the Graduate Coordinator. It is expected that a graduate student will typically take three *formal\** graduate courses per term. In certain circumstances, it may be possible and desirable for a student to engage in research before completing formal course work. A graduate student in a doctoral program may perform research instead of a formal course, provided that the reduced formal course program neither interferes with the completion of formal prescribed courses within nor extends the number of terms for formal courses beyond two academic years including two summer terms. The research work must be planned in conjunction with the faculty research advisor and receive a written approval of the Graduate Coordinator in advance of registration. If the research advisor is not the dissertation advisor, then the course schedule must be approved by the curriculum advisor.

Students in the PhD program should register in 70000 or 80000 sequence of courses; students in the Masters program should register for 60000 level courses. Transfer student may apply to the Graduate Coordinator for a waiver of required core course(s) based on the same course work satisfactorily completed at a recognized university (with at least a "B" grade). Requests for a course waiver should be addressed to the Graduate Program and Admissions Committee and submitted to the Graduate Coordinator. Evidence of previously taking the course, a satisfactory grade, and the syllabus should be submitted with the request. The request should be discussed and endorsed by the advisor and submitted well in advance so that the course in question can still be taken as scheduled, should the waiver not be granted.

The sample course schedule shown on the next page lists the typical first and second year courses. Alternative fall and spring courses that may be selected in consultation with a curriculum Advisor. Required courses for MS and PhD degrees are also indicated.



## Graduate Course Offerings

( for PhD: # = req, ## = choose at least one; for MS: \*\* = req, \* = choose at least two

### **Typical Year 1: Fall Semester**

Course #	Course Name
**6/7510 1	Classical Mechanics (3)
**6/7616 1	Quantum Mechanics I (3)
*6/75203 (3)	Classical Electro. I (3)

### **Typical Year 1: Spring Semester**

Course #	Course Name
*#6/7530 1	Statistical Mechanics (4)
#6/76162 (3)	Quantum Mechanics II (3)
#6/75204 (3)	Classical Electro. II (3)

### **Typical Year 1: Summer**

Cours e #	Course Name
6/7410 1	Advanced Prob. Solving (3)
80098	Research

### **Available Fall Semesters Only**

Course #	Course Name
4/54600 (3)	Intro to Biol Phys. (ODD) (3)
*4/5520 1	Electromagnetic Theory (4)
*4/5540 1	Math. Methods in Physics (4)

### **Available Fall and Spring**

Course #	Course Name
60098	Research [masters] (1-15)
80098	Research [doctoral] (1-15)
60199	Thesis I (2-6)
60299	Thesis II (2)
4/50020	Advanced Phys. Lab (2)
50096	Indiv. Invest. (1-3)
80097	Colloquium (1)
80091	Seminar (1)
6/70295	Adv Topics (1-3)
4/5/7009 5	Special Topics (1-3)

### **Typical Year 2: Fall Semester**

Course #	Course Name
#6/7620 1	Particle Physics (3)
#6/7640 1	Solid State I (3)
#76163 (3)	Quantum Mechanics III (3)

### **Typical Year 2: Spring Semester**

Course #	Course Name
##6/7840 1	Liquid Crystal (ODD) (3)
##76403 (3)	Adv. Cond. Matt (EVEN) (3)
##76303 (3)	Appls of QCD (EVEN) (3)
6/80098	Research

### **Available Spring Semesters Only**

Course #	<u>Course Name</u>
4/54802 (3)	Astrophysics (EVEN) (3)
*4/5530 1	Thermal Physics (3)
4/55403 (3)	Data Analysis & Comp.Phys. (ODD) (3)
4/55501 (3)	Electromagnetic Waves & Modern Optics (EVEN) (3)
4/56101 (4)	Quantum Mechanics (4)
4/56301 (3)	Intro to Nuclear (EVEN) (3)
4/56401 (3)	Intro Solid State (ODD) (3)
4/51010 (3)	Biophotonics (ODD) (3)

## **2-2. Special Courses and Their Requirements**

### **2-2.1. Attendance of Colloquia and Seminars**

All graduate students are expected to attend Colloquia and Seminars in the department. Normally, seminars are given by Physics faculty, graduate students, and invited speakers, and deal with specialized areas of research. Colloquia are presented by outside speakers who are invited to speak on their research. Colloquia are normally on a general level, accessible by all faculty and graduate students.

### **2-2.2. College Teaching of Physics**

Graduate Assistants may be required by the Physics Department to take College Teaching of Physics (Physics 6/70094) for one semester of credit. The training received will help the student in his/her teaching duties and in his/her career after graduation. Graduate Students who are assigned to teach undergraduate laboratories under a faculty member's supervision may register for this course.

### **2-2.3. Course Credit for Research**

Students must fulfill some requirements to get a "Satisfactory" grade and course credit for research. These requirements are outlined in the Research Agreement form filled out each semester by the student in consultation with the faculty research mentor. The Research Agreement is signed by the student and research mentor and turned in to the graduate coordinator by the second week of the semester.

The requirements consist of the following:

1. Signed Research Agreement form with a short description of the expectations for the semester attached. For example, the statement can address questions such as the following: What is the focus of the research? What are your goals for the research? What do you expect to learn? How often will you meet? Any other expectations discussed with your research mentor.
2. Midterm report: Short progress report (1 – 2 slides or paragraphs) due at the midterm of the semester.
3. Final report. This can be slides of your research presentation or it can be a written document summarizing your research experience/results over the semester.
4. Present a short 5 – 10 minute talk of your research experience.

#### **Exceptions**

Students taking less than 3 credit hours of research need only to turn in the Research Agreement (1) and a brief written final report (3).

Masters students taking research for credit who have taken or are currently taking Thesis 1 are exempt from the requirements in the Research Agreement.

#### **Research Mentor Report**

At the end of the semester, Research Mentors will provide students with feedback in the form of a short written report that evaluates the student's performance in research. The report should be constructive and include a short review of the research conducted over the term. It should describe strengths, developing skills, and areas that can use improvement. The mentor should take into account the

amount of prior research experiences the student has to set appropriate expectations. This report should be discussed with the student at the end of the term and will be made available to the student's Candidacy Exam Committee for help in evaluating research skills and potential.

### **2-3. The "16-Hour" Requirement**

In order for the faculty to have an opportunity to observe a student's performance, each doctoral student must take and pass 16 hours of formal physics courses at the 6/70000 level at Kent. The presentation of a seminar (80091) may be used to satisfy one hour of the 16-hour requirement. It is the responsibility of each student to establish that he or she has satisfied the 16-hour requirement. The 16-hour requirement is not a prerequisite for the candidacy examinations.

### **2-4. Continuous Registration Requirement**

Doctoral students who have reached the dissertation stage of their graduate work are required to register each term (fall, spring, and summer) until graduation. After completing course work, a graduate student is to enroll for two semesters of Dissertation I (at 15 credit hours each semester). Students should register for 15 hours of Dissertation II each semester until graduation. Dissertation I fees are less than regular course fees; Dissertation II fees are considerably less. A student registering for Dissertation II must also select the section corresponding to his/her Dissertation Advisor.

It is possible to register for Dissertation I and course(s) in the same term with the approval of the student's advisor and the Graduate Program Coordinator.

### **2-5. Colloquium Requirement**

Each Ph.D. candidate is required to present the findings of his or her dissertation before graduation. The presentation normally will occur before the dissertation defense. Students are encouraged to give their presentation at a departmental colloquium or seminar, though a presentation given outside the Department can also satisfy this requirement. A record of the title, date, and name of seminar series or conference is required before the student is cleared for graduation. The student's Advisor should submit this information to the Graduate Committee for consideration and approval by the Graduate Coordinator.

### 3. DOCTORAL CANDIDACY REQUIREMENTS

#### 3-1. Candidacy Examination (admits from Fall 2023 onwards)

The purpose of the Candidacy Exam is to certify that a graduate student has sufficient command and understanding in core areas of the physics discipline and demonstrates necessary research skills so that, along with the other requirements, admission as a candidate for the PhD degree is warranted.

##### Summary

Passing the Candidacy Exam will be based on assessment of two components: (1) proficiency in core physics subjects, and (2) research skills and research potential. Based on these assessments, the candidacy committee will make passing recommendations to be discussed by faculty to make a final decision.

This should be completed by the end of the sixth semester (end of second year).

##### 1. Proficiency in course physics subjects

Course grades in core introductory courses: Mechanics (PHY 75101), Quantum Mechanics 1 (PHY 76161), Quantum 2 (PHY 76162), Electrodynamics 1 (PHY 75203), Electrodynamics 2 (PHY 75204), and Statistical Mechanics (PHY 75301) will be used to assess basic physics proficiency. The expectation to demonstrate proficiency is at least an average GPA of 3.2 in these classes.

If a student skips coursework due to equivalent coursework taken elsewhere, the GPA is calculated for the remaining introductory core courses taken at KSU.

##### 2. Research Skills and Research Potential

Assessment of research skills and research potential includes a written report and an oral exam conducted by the student's Oral Exam Committee (OEC).

##### Eligibility

To be eligible to take the candidacy oral exam, a student must have at least a 3.0 GPA in the core subjects and have at least 30 credit hours taken or in progress the semester of the exam.

##### Timeline.

The following timeline is for an approximately 6 week period for candidacy and involves the following steps.

##### **Before**

The student should make an appointment with the CEC Chair in order to form the OEC committee. The student is expected to give the broad area of research interest and may request one faculty member to be on the committee.

##### **At least one week prior to start of exam period**

The student starts the process by proposing the topic, a brief outline of the structure of the paper, and at least two key references. The OEC drafts a letter outlining the expectations for the report, the due date for the report, and the target date for the exam.

<b>During the next four weeks (start of the exam period)</b>	The student will research and write the report on the assigned topic. This will be turned in to the OEC Chair by the date specified in the letter. Shortly thereafter, the student will be told if the report is acceptable to proceed. The oral exam date is finalized at this time, usually two weeks after the report is submitted.
<b>Approximately 2 weeks later</b>	Student takes the oral exam with the OEC.
<b>Within one day of the exam</b>	The student will be given the assessment of the oral exam.
<b>Afterwards</b>	The full faculty will meet to determine if the student passes the candidacy exam.

### **Details about the Oral Exam**

Oral Exam Committee (OEC). The OEC formed for each student consists of a chair and two other faculty members. One member of the Oral Exam Committee can be chosen by the student. The Candidacy Exam Committee (CEC) Chair will choose the other faculty members from the CEC and designate the OEC Chair. The Chair of the CEC will not be the member recommended by the student.

Topic and Written Report. This part of the exam is an evaluation of a student's ability to find, understand, synthesize, and communicate the relevant literature needed to *begin* research on a topic.

The student starts the process by proposing the topic, a brief outline of the structure of the paper, and at least two key references. These will be approved or modified by the OEC. Students are strongly encouraged to consult with faculty in the department in choosing the topic and the scope of the report. The topic may be closely related to the student's supervised research experience and include original results. This is not required, however. The exam is not an evaluation of the student's research accomplishments.

The written part of the Candidacy Exam is a professional-style report on the chosen topic. The report should be between 10 to 15 pages (not including figures and reference) with 1.5 line spacing and 12 pt font. The scope of the report should be a broad overview. It is an opportunity to review the literature and synthesize what one needs to know to understand some current work in the field. The level should be aimed as a useful introduction for another graduate student wishing to become informed about the subject. Original results are not expected, though may be included. Students may wish to begin reading and researching the topic before the official start of the exam period. It must be well organized and clearly written. It should include a motivation/introduction section, as well as a forward looking discussion of the topic and/or a short proposal that can address open questions.

In writing the report, students can use any resources available, including discussions with other students, faculty, or a research supervisor. It must be written by the student and be the student's own work.

Oral Exam. The OEC will conduct an oral exam consisting of a short (approximately 20 minutes) presentation by the student followed by questions from the OEC. Questions will be centered around this topic, but will include related general physics assessment (at the level of the core courses) as well. It is anticipated that approximately 20 minutes be given to the presentation, about an hour for questions about the presentation and general physics knowledge in first year core subjects.

Only the student and the members of the OEC will be present at the Candidacy Exam.

**Assessment.**

The OEC will form an overall assessment of the research skills and potential of

- ☐ exceeds expectations
- ☐ meets expectations
- ☐ slightly below expectations
- ☐ far below expectations

This assessment is based on the following criteria.

1. To meet expectations, a written report and presentation should address the underlying physics issues of the topic and show a reasonable understanding of the important related outstanding problems.
2. To meet expectations, a student should answer questions with good scientific reasoning about their chosen topic and show appropriate general physics knowledge of core subjects.
3. To meet expectations, a student should have overall positive Research Mentor Reports (if any).

An explanation and feedback to the student will be written and endorsed by the student's OEC that comments on each of the three components of the exam. This report will be shared with the student by the student's OEC Chair.

The Chair of the CEC will oversee this process and review the report before it is shared with the student.

## Template for Candidacy Exam Letter

Mr./Ms. f J. Doe  
KSU Department of Physics  
[Date]

Dear John/Jane Doe:

Your Advisory Committee proposes the following topic for your Doctoral Candidacy Examination:

### **“Physics Topic”**

Please prepare a 10 –15 page paper with 12 pt font and 1.5 line spacing on this topic (with references, figures, and tables counted separately, formatted as in a regular publication). This paper is to be completed and given to your Candidacy Examination Committee by **[Date]**.

You should consider the following aspects of the topic<sup>1</sup>:

1. **[Focus area #1]**
2. **[Focus area #2]**
3. **[Focus area #3]**
4. ...

**[Optional supplementary material or instructions related to the topic provided by advisor and committee]**

As you prepare your paper you may freely use all of the resources of the University, including discussions with faculty, postdocs, and students. Particularly fruitful discussions should be acknowledged in the paper. You can review a draft of the paper with any faculty member (including an Advisor), however the paper must be your own work. Members of the Committee reserve the right to not answer every question, but you should feel free to *ask* any questions, especially questions of clarification. You are *not* expected to present original research, but to demonstrate the ability to digest the literature and synthesize a coherent picture and understanding of your specific topic and its broader context. You should make sure you understand the core concepts of your paper very well. You should tailor the level of your paper so it would be useful and understandable to a new graduate student interested in this area. Do not attempt to cover too much material, and make sure you understand and can explain everything you include in the paper.

The oral portion of the exam will be given on **[Date]** at **[Time]** in **[Room]**. Your paper should be submitted to your Exam Committee Chair at least a week prior to this date.

For the oral exam you should prepare a 15-20 minute presentation of your paper. You should review a draft of your slides with a faculty member (who could be an Advisor if you have one), however the presentation must be your own work. You should practice the presentation with a group of your peers. The Committee will ask you questions during and after your presentation. These questions may diverge from the specific subject matter of your paper at the discretion of the members and include basic concepts from your first year courses. The Committee will try to ensure a deep understanding of the core concepts underlying your topic. More detailed information about the Candidacy Examination can be found in the Physics Graduate Policy Guide.

Good Luck!

Sincerely yours,  
Prof. X  
Advisor, for the Advisory Committee  
cc: Profs. Y, Z

<sup>1</sup>Alternatively, the student can be asked here to select relevant subtopic(s) themselves, but it must be clear that a focused discussion is necessary.



### **3-2. Policy on Course work outside the Physics Department**

The Department of Physics recognizes that at times, a more complete graduate preparation can be achieved if students are able to complement their physics graduate studies with courses offered by other Departments. To provide a consistent framework for students and advisors, the Physics Department has adopted the following guidelines. (Note: English courses taken to satisfy University requirements are regulated separately and do not fall under this policy):

- a) First Outside Course: The Department of Physics will automatically cover the cost incurred with the registration for 1 (one) course outside the Physics Department.
- b) Second (or more) Outside Courses: A graduate student, with the approval of his/her research advisor, may petition the Graduate Program Committee to register for additional course(s) outside the Department. When such a request is judged to be appropriate, the approval will be granted and, to the extent possible, supported by the departmental budget. If the tuition cost is covered by non-departmental funds, approval will be automatic assuming taking such a course will not jeopardize taking the scheduled physics courses.

Guidelines for taking additional courses depends on the student's progress in the degree program:

#### First year students:

First year students are strongly discouraged from taking outside coursework. Students who are especially well-prepared or who have been exempted from some course(s) in the first year curriculum by the Graduate Program Committee and who are interested in outside course work should consult their curriculum advisor.

#### Second year students who have passed the Candidacy exam:

The second year of study normally provides some degree of flexibility in course selection. However, students are required to obtain approval from their curriculum or research advisor each semester before they register. If a student is making satisfactory progress towards the Ph. D. degree, i.e., has passed the candidacy exam and has maintained acceptable grades in physics courses, the student and advisor may choose to include course work outside the Department of Physics in addition to the required Physics courses.

#### Students registered for Dissertation I or II:

A graduate student registered for Dissertation I or II and is interested in taking a course outside the Department should consult and seek approval from his/her research advisor, before submitting a written petition to the Graduate Program Committee. The approval may be granted regardless of outside coursework that may have been taken prior to reaching Dissertation I or II status.

## **4. ADVISORS FOR PHYSICS GRADUATE STUDENTS**

### **4-1. Curriculum Advisor**

The Graduate Coordinator will appoint a Curriculum Advisor for each new graduate student. The Curriculum Advisor will advise and counsel the student on his/her work and degree program. A new student may register for research credit hours with any faculty member, with the agreement of the faculty member, and subject to approval by the Curriculum Advisor and the Graduate Coordinator.

### **4-2. Thesis and Dissertation Advisor**

An entering M.S. student must choose a thesis advisor no later than the end of the second semester. A doctoral student must have an approved dissertation advisor no later than the end of the semester in which s/he passes the Candidacy Exam. Normally, Physics graduate students are expected to perform their Ph.D. research with a Physics faculty member. Under exceptional circumstances, the full Physics Graduate Faculty will consider a request to work with a non-Physics faculty member. However, a Physics Graduate Faculty co-advisor is normally required. Students changing from doctoral to masters' program have one semester after the change to choose a thesis advisor.

The student is expected to become aware of all the major areas of research in the Department before selecting a dissertation topic. The student may be aided in the choice of a research area and advisor by the following:

1. Attendance at Physics seminars or other programs where Physics Department faculty and graduate students speak.
2. Talking personally with faculty members about their present and planned research.
3. Reading professional literature such as *Physics Today*, *Physical Review*, *Science*, *American Journal of Physics*, etc..
4. Talking with senior graduate students about their research activities.

Before a Ph.D. student selects a research advisor it is highly recommended that the student consults with as many physics professors as possible regarding their research areas and interests.

#### **4-2.1 Request for Dissertation Advisor**

Doctoral students must have an approved dissertation advisor not later than the end of the semester of passing the Candidacy Exam and finish their coursework requirements.

In general, the student is expected to consult as many Physics Graduate Faculty members as possible concerning their research programs, and his/her research interests. The selected faculty member signifies that s/he is willing and able to supervise the student's doctoral research under departmental guidelines by filling out the appropriate section of the form. A signature of an additional faculty member

who has been consulted in the student's search for an advisor is also required. The student then submits the form to the Graduate Coordinator for the Graduate Program Committee's approval.

Normally, the Graduate Program Committee and the Department Chairperson will approve the student's choice of advisor. However, there may be constraints which dictate otherwise. In that case, the student will be given an opportunity to discuss matters with the Committee, in order to assist in the selection and approval of a suitable research advisor. The Committee will take into account the interests of the student and potential advisors, the programmatic needs of the department, and the sources of support for his/her research.

The relationship between a student and a research advisor becomes official when approved by the GPAC. The *Request for Research Advisors* form should be completed by the student and prospective advisor and returned to the Graduate Coordinator. This form is available in the graduate physics office.

#### **4-2.2 Termination by Advisor or Student**

When either the student or the faculty advisor for the thesis or dissertation research feels that s/he can no longer continue in the advisor/advisee relationship, s/he should consult with the department chairperson and/or the graduate coordinator. Beyond the first semester, which is considered a trial period, the investment of effort and resources by both parties indicates that termination is a step that should not be taken lightly. Future issues affected by a termination should be weighted. They include: the student's standing in the degree program, the question of stipend for the student, the disposition of research notes, files and data, possible authorship on publications reporting research in which the student had a significant involvement. If after consultation with the chairperson and/or graduate coordinator the student or advisor still feels the relationship must be terminated, it is their right to do so.

#### **4-3. Limit on Number of Graduate Students per Thesis or Dissertation Advisor**

The limit on the number of graduate students per thesis or dissertation advisor shall normally be three full-time, on-campus students. In exceptional cases, a faculty member may request permission from the Graduate Program Committee to have four students. Exceptions could include such situations as: (1) a faculty member brings a student to Kent State to work on a project; or (2) a faculty member needs an additional student to meet the requirements of research grants or contracts, or (3) to move into a new research area.

In certain cases, a student may have co-advisors. No more than two co-advisors are allowed per graduate student.

#### **4-4. Approval Required for Submission of a Paper**

If a graduate student wishes to submit an abstract or paper on scientific work, either for publication or presentation at a meeting, the submission must acknowledge Kent State University. Before the submission is made, approval of a Physics faculty member must be obtained (normally the advisor). The possibility of co-authorship must be considered and each co-author must approve the submission.

## 5. THESIS AND DISSERTATION

### 5-1. Dissertation (Thesis) Topic, Prospectus, and Committee

*Notification of Approved Thesis Topic* and *Notification of Approved Dissertation Topic and Prospectus* form, obtained from the Graduate Studies website, should be completed in collaboration with the students Advisor. This form consists of two main parts:

- 1) a dissertation prospectus and topic that outlines the motivation, rationale, and anticipated results of the proposed Dissertation work
- 2) two (or three, if the Advisor is not a Physics Faculty) additional Physics Faculty to serve on the Dissertation Committee and an Outside Discipline Member from another department selected by the student, in consultation with the Research Advisor. The Dissertation Committee will also include a Graduate College Representative, selected by the Associate Dean for Graduate Programs prior to the final defense and upon request by the Research Advisor.

The prospectus must be approved by the GPAC no later than the semester before graduation. An example of a Dissertation Prospectus is shown in the following pages.

(Example)

## Dissertation Prospectus

A Theoretical Study of Surface Induced Phenomena in  
Nematic Liquid Crystals

Hristina Galabova

Bulk elastic properties of nematic liquid crystals are usually described in terms of Frank elastic theory, and the surface influence is characterized by the stability of the nematic director orientation at the surface with respect to the surface easy direction when a bulk deformation is imposed. In the framework of Frank theory the nematic director orientation is considered to vary in space but the degree of uniaxial orientational order  $S$  is assumed to be spatially independent. Near surfaces, however, the orientational order is expected to be different from that of the bulk, and thus spatial variations of  $S$  should also be considered. In addition, a bulk uniaxial nematic liquid crystal in contact with a surface favoring homogeneous alignment should exhibit surface biaxiality. Therefore, a spatially dependent biaxial order parameter should be introduced in order to properly describe the surface behavior of the liquid crystal. In order to account for variations in both the uniaxial and the biaxial order parameters, as well as variations in the director orientation, in this dissertation the nematic liquid crystal will be described with a biaxial tensor order parameter and Landau-de Gennes theory will be used to study different surface induced phenomena in nematic liquid crystals.

The behavior of a nematic liquid crystal under severe confinement could differ considerably from the one predicted using Frank elastic theory. Changes in the uniaxial and biaxial order parameters would be as important as changes in the director orientation. As an example of a confined liquid crystal, a nematic liquid crystal cell with homogeneous anchoring at one plate and homeotropic at the other, will be investigated under weak anchoring conditions. A number of different configurations are expected to arise in addition to the usual bend configuration. The possibility for different configurations will be discussed for different values of the surface anchoring strengths and different values of the cell thickness.

In the last several years a new method for liquid crystal alignment has been of great interest. It was found that certain types of photoreactive polymers have the ability to orient a liquid crystal after being exposed to linearly polarized ultraviolet (UV) light. A number of experiments have been performed but no definitive theory has been developed to describe the phenomenon. Therefore, in this dissertation the theoretical aspects of liquid crystal alignment on UV irradiated polymer films will be considered. Two different types of surface alignment will be studied. In the first case the photoreactive polymer is of poly (vinyl-cinnamate) (PVCN) type, and is exposed once to normally propagating linearly polarized UV light. Since this type of polymer film is experimentally found to introduce no pretilt angle, a two dimensional model of the film will be developed. The polymer film will be described as a collection of reactivity sites and their distribution function will be calculated as a function of exposure time. The bulk behavior of the

liquid crystal, together with the polar and azimuthal anchoring coefficients, will be calculated using the Landau-de Gennes theory. Comparison with experimental observations will also be discussed.

In the second type of liquid crystal alignment on a UV exposed surface, a polyimide film is irradiated in such a way that a liquid crystal in contact with the film exhibits tilted alignment. The polyimide film is first exposed to normally propagating linearly polarized UV light, and the film is subsequently irradiated with obliquely incident UV light with polarization rotated in a plane perpendicular to the polarization direction of the first UV light. In this dissertation the distribution of ordering sites in the polyimide film will be investigated, and the behavior of a nematic liquid crystal in contact with an exposed film will be calculated in the framework of Landau-de Gennes theory. The generated pretilt angle will be studied as a function of both normal and oblique exposure times, and as a function of the UV light angle of incidence. The surface anchoring strengths will also be estimated and comparison with experimental observations will be discussed.

## **5-2. Writing Style for Thesis and Dissertation**

The Kent State College of Arts and Sciences has established general guidelines for the format and style of theses and dissertations which can be found on the Graduate Studies website. This style guide ensures that the document conforms to the standard required an electronic Thesis or Dissertation (ETD) submission to the University Library's catalogue system (OhioLink).

The student, the student's advisor, and the department Chairperson must certify that the completed dissertation has been prepared in conformity with the guidelines at the time the dissertation is submitted to the Graduate College.

## **5-3. Procedures for Examination of the Masters Thesis and Oral Defense**

The student and his/her advisor select a thesis examination and defense committee. The advisor, in consultations with the committee members, sets the date of defense. He/she serves as the chair of the examination committee and as the moderator during the defense. The defense schedule and a short abstract of the thesis will be announced in the department for interested parties to attend.

## **5-4. Procedures for Examination of the Doctoral Dissertation and for the Oral Defense**

### **5-4.1. General**

Two separate committees will be involved with the progress, completion, and examination of the doctoral candidate's dissertation. These are (1) the dissertation committee, and (2) the examining committee. The examining committee includes the dissertation committee plus two additional members, the Graduate College representative and the Moderator.

### **5-4.2. Dissertation Committee**

The candidate's dissertation committee will be approved by the department Chairperson upon recommendation from the Graduate Program Committee. The membership of the dissertation committee consists of at least three *tenured or tenure-track* members of the Graduate Faculty from the *Department of Physics* (including the advisor and co-advisors) and a Graduate Faculty member from an outside discipline relevant to the dissertation topic. Together with the advisor, this group will be responsible for monitoring the progress of the dissertation, and will direct the candidate's research. The student's research advisor will bear the heaviest responsibility, and will serve as chairperson of the dissertation committee.

### **5-4.3. Preliminary Approval of Dissertation**

When the advisor thinks that the dissertation is ready, it will be circulated in easily legible form among the members of the dissertation committee. The advisor will allow a ten-day period for reading the dissertation and will then convene the dissertation committee (without the candidate) for the purpose of evaluating it. The Graduate Faculty Representative should be notified of this meeting and invited to attend (*see Section 5-4.3 below.*) The committee will make a formal decision regarding the

“defensibility” of the dissertation in the meeting. Recommended revisions will be noted by the advisor and communicated to the candidate. When, in the opinion of the advisor and the candidate that the appropriate revisions have been made, the advisor will inform the department Chairperson and the Associate Dean for Graduate Affairs and schedule the final oral examination.

## **5-5. Examining Committee**

### **5-5.1. Personnel**

The examining committee consists of the dissertation committee (as defined above), plus a moderator and a representative from the Graduate Faculty. (Note: The examining committee for a masters thesis defense does not require a moderator, graduate college representative or an outside person.)

### **5-5.2. Selection of the Moderator**

The moderator will be selected by the dissertation advisor from the members of the Graduate Faculty approved for this service by the Associate Dean for Graduate Affairs, College of Arts and Sciences. The moderator will not be a faculty member in the department of the candidate's major.

### **5-5.3. Graduate Faculty Representative**

The representative of the Graduate Faculty will be selected by the Associate Dean for Graduate Affairs or his designate from those who have directed a dissertation to completion. At the time that the entire dissertation is first circulated to the Dissertation Committee, the student’s research advisor must request the Associate Dean for Graduate Affairs to appoint the Graduate Faculty Representative. The Graduate Faculty Representative is provided with a copy of the dissertation and invited to the meeting to discuss Preliminary Approval of Dissertation (see 5.33 above). S/he reports back to the Associate Dean on the quality of dissertation and defense, and the compliance with the KSU procedures.

## **5-6 The Final Oral Defense**

### **5-6.1. Time and Place**

The advisor will designate the time and place of the final oral defense and notify all members of the examining committee. The defense should be scheduled to allow ten days for the Examining Committee to study the dissertation. This ten-day period is in addition to the ten-day period (noted in *Section 5-3.3*) in the process for obtaining preliminary approval of the dissertation committee. (The candidate should make further revisions after the oral defense, if necessary.) See *Section 6-3* for a *timeline* showing the steps required to complete a dissertation.

Copies of the abstract of the dissertation will be distributed to departmental faculty and graduate students and posted at least two days prior to the defense to familiarize members of the Graduate Faculty and other students with the findings and the method of the dissertation.



### **5-6.2. Attendance**

The final oral will be open to the University community. Questions will be asked by members of the Examining Committee; however, questions may be asked by anyone present at the discretion of the Moderator near the end of the defense after the Examining Committee is done.

### **5-6.3. Comments or Questions**

Questions or comments dealing with punctuation or grammar minutiae, spelling, etc., in the dissertation should be written and submitted privately to the student's research advisor and should not be part of the questioning during the defense. General comments or questions dealing significantly with the quality of writing are quite appropriate.

### **5-6.4. Order of the Defense**

The candidate will open the defense with a brief (approximately 20 minute) presentation after which the members of the Examining Committee will question the candidate in an order to be determined by the Moderator. When, in the opinion of the Moderator, members of the examining committee have had an adequate opportunity to question the candidate, the Moderator may open the examination to appropriate questions from others present.

### **5-6.5. Determination of Success or Failure of Defense**

When the questioning has run its course, the Moderator will adjourn the defense and clear the room of everyone except the members of the Examining Committee. Parliamentary procedure will be observed to determine the success or failure of the candidate with the Moderator acting as chairperson without a vote. The candidate is evaluated upon both the quality and significance of the dissertation and the oral defense of the findings. The candidate passes if there is no more than one dissenting vote cast by the Examining Committee. All members of the Examining Committee will sign the Report of Final Examination form, recording their votes.

## **6. TIMETABLE FOR GRADUATE DEGREE PROGRAMS**

### **6-1. Master's Degrees**

The non-thesis option of the M.A. degree program based on coursework can be completed in one calendar year. The M.S. degree, which requires a written report based on research (which may take the form of a thesis), may require an additional year for completion. Based on satisfactory performance, financial support for M.S. students is typically given for four semesters, whereas those in the non-thesis, M.A. option, receive two semesters of support. M.S. students who do a thesis should normally select a research advisor and begin research work no later than the end of the second term of graduate work at Kent State University.

### **6-2. Doctorate**

The timetable for the completion of doctoral research is difficult (for even the most experienced advisor) to predict since unknown experimental or theoretical difficulties may arise. The schedules given in *Section 2* show that course work can usually be completed by full-time students who enter with a bachelor's degree in two academic years plus two summers. It is normally expected that a student entering with a bachelor's degree will complete the candidacy exam within six semester terms (two academic years and two summers). After completing the Candidacy Exam and the course work, the dissertation research is the primary responsibility of the student. Full-time students should make every effort to complete the dissertation within five years of graduate study. Continued financial support for the Ph.D. student is based on certain criteria which are given in the following section. These criteria are based on satisfactory progress toward the degree. See also the section on *Time Limits* in the *Graduate Catalog*.

Students normally complete all of their degree requirements the semester of their defense. Students who complete their degree requirements after the deadline for graduation may have to file for graduation the following semester. Accordingly, a student is expected to submit an accepted Dissertation to the college no later than the semester following a successful defense. Award of an assistantship beyond the semester of the Defense requires approval by the Graduate Committee.

Doctoral students may choose to apply for an MA degree once they have satisfied its course requirements. A student must notify the graduate office of their intention to apply for the degree the semester that the course requirements are met. It may not be possible to receive a MA degree on the way to the Doctoral degree after a student has enrolled in Dissertation I (i.e., after coursework is completed). A Doctoral student who leaves the program before completing the PhD degree requirements may apply for a Masters Degree. Scheduling restrictions do not apply for the timing of these "terminal" Master's degrees.

### **6-3. Timeline for Dissertation and Graduation**

The timeline shows the sequence of major events involved in the completion and defense of a dissertation. Section numbers refer to sections in this document which provide details of various steps.

- 🕒 Select Dissertation Advisor (*Section 4-2*) the semester the Candidacy Exam (*3-1, 3-2*) is passed and coursework is completed.
- 🕒 Form Dissertation Committee (*5-3, especially 5-3.2*) within one year of selecting dissertation advisor
- 🕒 Present Research Topic and Prospectus proposal to Graduate Program Committee (*section 5-1*) within one year of selecting dissertation advisor and at least one semester before graduation
- 🕒 *Notification of Approved Dissertation Topic and Prospectus (5-1, 5-3.2) filed*
- 🕒 Conduct research
- 🕒 Applies for graduation (watch for deadlines!)
- 🕒 Present Departmental Colloquium or Seminar (*2-4.1, 2-7*) at one month before graduation.
- 🕒 *Preliminary* draft of dissertation goes to Dissertation Committee (*5-3.3*)  
 Advisor requests Graduate Faculty Rep. from Associate Dean for Graduate Affairs (*5-4.3*)  
 (10 days allowed for Examining Committee to read dissertation) (*5-3.3*)
- 🕒 Dissertation Committee holds pre-defense meeting to give preliminary approval of dissertation (*5-3.3*); Grad. Fac. Rep. is invited (*5-3.3*); Dissertation Advisor selects Moderator (if not done before) (*5-4.2*)
- 🕒 Comments and suggestions by Dissertation Committee received in pre-defense meeting forwarded by Advisor to candidate (*5-3.3*)
- 🕒 *Revised* draft goes to Examining Committee (*5-4, 5-5.1*)  
 (10 days allowed for Examining Committee to read dissertation) (*5-5.1*)
- 🕒 Dissertation Examination & Defense (*5-5.1 to 5-5.5*)
- 🕒 Report of examination results filed through Department office (*5-5.5.c*)



Submission of final version of Dissertation to the Graduate College.



Graduation

## 7. FINANCIAL SUPPORT

Financial appointments for graduate study consist of graduate assistantships (GA), teaching fellowships (TF), research assistantships (RA), and non-service fellowships and traineeships (e.g., University and other fellowships). Doctoral and master's degree students usually receive full or half-time GA stipends.\*\*\* Students who are not RA's may be appointed as ½ time GA's for the three months of summer. Each appointee also receives a tuition scholarship which covers all fees. The University waives the out-of-state tuition fee for all appointees. A student should seek half-time RA support for the summer months by approaching faculty members before the end of the spring semester. Normally, full-time RA's are not offered to students until after the selection of dissertation advisor and completion of course work which typically occurs at the end of the second academic year. The policy of the Physics Department is to Require the student to be making satisfactory progress toward their degree in order to be eligible for financial support from University sources. The recommended time limit on appointments is five academic years for students who enter the program without a Master's degree and four academic years for students who enter the program with a Master's degree.

All appointments of Physics graduate students, independent of the sources of funds, and other activities involving the receipt or usage of monies from University sources and must be processed through and approved in advance by the Graduate Coordinator and the Department Chairperson.

Students in the doctoral programs and those in the master's programs seeking to enter the Ph.D. programs will be reviewed at the end of each semester (after grades have been turned in) for financial support for the following term. If the following criteria, as established by the Graduate Program Committee, are fulfilled, the student will be assured of continuous Departmental financial support.

### 7-1. Second-Year Support

To be eligible for support, a student must (in order of importance),

- Perform satisfactorily in teaching and other departmental duties. Performance evaluations by the supervising faculty member and students will be used to measure your performance.
- Complete at least 20 semester hours of graduate course work in the first year at Kent State University in accordance with a departmentally approved course schedule filed in the department office. (Students may be eligible for consideration as a Teaching Fellow after satisfactory completion of 32 semester hours or receipt of a master's degree from a recognized institution in the United States).
- Maintain a *departmental* GPA of 3.2 or higher in graduate course work at Kent State University

\*\*\* First year students receive \$500 of the stipend upon completion of the Teaching Assistant Orientation Program, scheduled during the week prior to fall classes.

- Complete English proficiency requirements by taking recommended courses in the first year.
- Select a dissertation advisor by the end of the term during which the candidacy exam is passed and coursework is completed.

**7-2. Third-Year Support** (in addition to requirements under Section 7.1)

- Complete the courses listed on the student's approved schedule with a physics GPA of 3.2 or higher.
- Pass the doctoral candidacy examinations in the second year.
- Have an approved dissertation advisor.

**7-3. Fourth-Year Support**

- Maintain the approved schedule of course/dissertation registrations and a physics GPA  $\geq 3.2$ .
- Recommendation from the Research Advisor that you are making satisfactory progress.

**7-4. Fifth-Year Support**

- Normally 5<sup>th</sup> year appointment is made on a case by case basis..
- Continue registration in Dissertation II in units of 15 hours per term (fall, spring, summer).
- Make satisfactory progress towards dissertation; have a positive recommendation from the research advisor.

**7-5. Sixth-Year Support**

Sixth-year support is discouraged. If needed for valid and sufficient reasons, support will be considered on a term-by-term basis.

**7-6. Termination of Support**

If a student is terminated from a degree program, for example as a result of failing the Ph.D. candidacy examinations, then financial support is discontinued effective no later than the end of the semester terminated.

Any resignation of a graduate teaching assistantship or teaching fellowship must be submitted in writing by the student to the Graduate Coordinator or the Department Chairperson for transmission to the Associate Dean for Graduate Affairs.

Any resignation of a research assistantship must be in writing by that appointee. The resignation is to be addressed to the dissertation/research advisor with a copy to the Department Chairperson. The Department Chairperson will not normally accept such a resignation without consultation with the dissertation research advisor. The department Chairperson may seek the advice of appropriate departmental committees and consider the conditions for termination as noted in *Section 4-2.1*.

## **8. DUTIES AND EVALUATION OF GRADUATE APPOINTEES**

Graduate Assistants and Teaching Fellows who are involved in the teaching of undergraduate students in laboratories, recitations, or classroom lectures have an important task in the education of undergraduate students.

Appointees lecturing in Rooms 108, 110, and 111 should obtain a key from the departmental office for those rooms and for the demonstration equipment room (109).

### **8-1. Graduate Assistant**

A graduate student holding a full-time Graduate Assistant appointment is expected to devote 20 clock-hours of work per week to his/her teaching duties. This work can take on various aspects, such as: responsibility for elementary laboratory sections; setting up equipment for the intermediate laboratories; grading laboratory reports; assisting faculty members in grading; supervising and grading intermediate laboratory sections; teaching recitation sections; assisting faculty members in conducting their research; and grading of upper division and graduate courses. The duties will generally vary from term to term. Usually the first year Graduate Assistant will be assigned elementary laboratory sections; in the second and succeeding years, s/he may be assigned an intermediate laboratory or recitation sections. The main purposes of these assignments are to expose the Graduate Assistant to as many and varied teaching experiences as possible so that the assistantship will be a valuable learning experience should s/he decide to enter the teaching profession, and to assist in carrying the teaching load of the Department as efficiently as possible.

It is the duty of the Graduate Assistant to be fully informed of his obligations, time commitments, mode of instruction, expectation by students and the faculty member to whom s/he is assigned. The Graduate Coordinator, the Assistant to the Chair, and others should be consulted when in doubt. Any absence of an instructor from a class or lab must be approved by the Assistant to the Chairperson (or, if s/he cannot be contacted, by the Chairperson) before the absence. Each instructor has the responsibility for seeing that all classes are covered in the event of an excused absence. Graduate assistants do not have authority to cancel a class, shorten the class period, or change course content or the format to be used.

### **8-2. Research Assistant**

The student holding a Graduate Research Assistant appointment will usually be expected by the grant-awarding agency (NSF, DOE, etc.) to contribute a minimum of 20 clock-hours of work per week to the research project. The student's advisor will expect the student to contribute considerably more hours than this depending on the student's course load for the term.

### **8-3. Teaching Evaluation of Graduate Appointees**

The performance of Graduate Assistants or Teaching Fellows in their teaching duties is evaluated at the end of each term through evaluation forms filled in by the students in the class. The summary of evaluations is returned to the instructor. The faculty member(s) to whom a GA/TF is assigned evaluates and submits his/her evaluation of the performance and effectiveness of the GA/TF to the Graduate Program Committee.



#### **8-4. Role and Status of Graduate Student Appointees**

There is an important document issued by Kent State University entitled *Policy on Role and Status of Graduate Student Appointees*. It discusses the graduate student's role in University governance at the departmental, collegial, and University levels, types of service appointments, evaluation of performance, hospitalization, etc. New graduate students should become familiar with its contents and should receive individual copies. A copy of this document is also available in the departmental office.

#### **8-5. Graduate Student Evaluations**

Regular evaluation of student performance is a part of our mentoring and training as well as a requirement of the College of Arts and Sciences' policy on academic standing for graduate students. Students are evaluated for their performance in the Spring semester every year by the Graduate Program Coordinator and the Graduate Committee. Results are typically not reported to the student when the evaluation suggests that the performance and progress are satisfactory. If the evaluation identifies performance concerns, a letter is sent to the student detailing the concern and will specify remediation conditions that the student must meet. Failure to meet these conditions may be grounds for suspending funding or recommending dismissal.

Dismissal from the program may be recommended for poor academic performance, failure to complete program deadlines in a timely manner, a lack of trainability as determined by the graduate committee, failure to demonstrate professional behavior, or ethical violations. Also, a student may fail to be admitted to doctoral candidacy because the relevant training committee considers the student to lack the potential to complete the doctoral program in a timely and appropriately scholarly manner.

## **9. STUDENT ORGANIZATIONS AND COMMITTEE SERVICE**

### **9-1. Society of Physics Students and Sigma Pi Sigma**

The Society of Physics Students (SPS) is a national organization whose chapter at Kent State includes both undergraduate and graduate students. SPS holds regular meetings and arranges departmental events (picnics and/or dinners). Sigma Pi Sigma ( $\Sigma\Pi\Sigma$ ) is a national physics honor society which is associated with SPS. Membership in  $\Sigma\Pi\Sigma$  is by election on the basis of physics scholarship. The honorary society includes undergraduate and graduate students and faculty.

### **9-2. Committee Service - Graduate Student Representatives**

Graduate students serve on certain departmental committees. This service is valuable to the Physics Department in the operation and improvement of its graduate and undergraduate programs. It is also valuable to the participating student, since the opinions and influence of the physics graduate students whom (s)he represents can aid in the formation of policy or operation of the committees. Students are expected to let their interests and requests be made known through their representatives on departmental committees or through the president of SPS to the department Chairperson.

## 10. SEXUAL HARASSMENT

The policy and procedures governing sexual harassment are detailed in the *University Policy Register* under section 3342-6-013. Faculty members and students should follow these procedures when complaints are pursued.

The departmental policy regarding sexual harassment is intended to clarify the point at which protected free expression ends and prohibited discriminatory harassment begins. Speech or other expression constitutes harassment if it intentionally:

- (a) is directed to an individual or individuals based upon that person's race, color, religion, national origin, age, disability, identity as a veteran with a disability, a veteran of the Vietnam era, gender, sexual orientation, or any other basis; and
- (b) tends to incite an immediate breach of the peace by making use of insulting or *fighting* words, nonverbal symbols or threatens violence. In the context of discriminatory harassment, insulting or *fighting* words or nonverbal symbols are those which are commonly understood to convey direct or visceral hatred or contempt for human beings on the basis of their race, color, religion, national origin, age, disability, or identity as a disabled veteran, veteran of the Vietnam era, or gender and/or sexual orientation or on any other basis; or
- (c) is sufficiently severe, pervasive, or persistent so as to interfere with or limit the employment, education or residential opportunities at Kent State University.

A violation of this policy should be reported immediately so appropriate action may be taken according to university policy. Persons who believe that harassment has occurred are strongly encouraged to contact one of the following: office of affirmative action, personnel, departmental Chairperson, supervisor, student ombudsman, judicial affairs, residence services, staff, or an appropriate university employee to learn of the grievance/resolution process most appropriate to the specific situation.

When incidents of alleged harassment come to the attention of a university employee, the employee, or supervisor as appropriate, shall inform that person of his/her right to notify the office of affirmative action directly or initiate other procedures available in the rules of the *University Policy Register* and the Administrative Code which include:

- (a) The complaint procedure in rule 3342-6-021 of the *University Policy Register* with the office of affirmative action.
- (b) The student conduct procedure found in rule 3342-4-15 of the *University Policy Register*.
- (c) The student academic complaint procedure found in rule 3342-4-16 of the *University Policy Register*.
- (d) The student non-academic grievance procedure found in rule 3342-4-40 of the *University Policy Register*.
- (e) The persona non grata procedure found in rule 3342-6-15 of the *University Policy Register*.

- (f) The student employee grievance procedure found in rule 3342-6-15 of the *University Policy Register*.
- (g) The student conduct procedure (regional campuses) found in rule 3342-8-08 of the *University Policy Register*.
- (h) The student grievances in regional campuses found in rule 3342-8-06 of the *University Policy Register*.
- (i) The administrative policy and procedures regarding grievances of non-teaching unclassified and classified staff found in rule 3342-6-14 of the *University Policy Register*.

University employees who observe incidents of harassment, as defined above, should report the incident according to the guidelines expressed above and, where appropriate authority exists, may initiate disciplinary procedures.

If harassment is alleged, university procedures normally implemented can be suspended if the individual filing the complaint wishes to have the matter referred to the office of affirmative action for possible resolution by all involved parties. All such matters shall be referred back to the initial procedure, either with the office of affirmative action's resolution of the matter or, for further action

## **11. STUDENT GRIEVANCE PROCEDURE**

The policy and procedures governing student academic complaints are detailed in the *University Policy Register* under section 3342-4-16. Faculty members and students should follow these procedures when student complaints are pursued.

The departmental policy regarding student grievances of any nature is that they be resolved at the lowest possible level consistent with the departmental committee structure and departmental governance procedures. If the grievance is course related, the first request for redress or reconsideration should be made to the instructor immediately in charge of the part of the course in question. If such a conference fails to satisfactorily resolve the complaint, the student will then contact the permanent physics faculty member in charge of the course, if different from the initial contact.

If the matter is not informally resolved immediately, the student may discuss the matter with the department Chairperson before lodging a formal complaint in writing, to the Department Chairperson. The student may also consult with the student ombudsman in an attempt to achieve informal resolution.

A grievance directed toward another department should discuss the problem with the Assistant to the Chairperson or the Chairperson of the Department of Physics.