

Notice of Change for: Medical Physics Program

Date: 01.05.2017

A. PROGRAM INFORMATION

1. Name of institution  
University of Rhode Island
  2. Name of department, division, school or college  
Department: Physics  
College: Arts and Sciences
  3. Intended initiation date of program change. Include anticipated date for granting first degrees or certificates, if appropriate.  
Initiation date: 09.01.2017  
First degree date: -
  4. Intended location of the program
  5. Summary description of proposed program (not to exceed 2 pages).  
The Medical Physics program is designed in partnership between the Physics Department, URI, and Rhode Island Hospital. According to hospital rules, background criminal checks need to be performed annually for all students. We propose to include specific language in the catalog which reflects this requirement. URI signed an agreement with RIH (see attached).
- The information about the program can be found at:  
<http://web.uri.edu/physics/medical-physics/>
6. If applicable, please include the existing URI catalog language and proposed catalog changes **indicated in Track Changes**.  
See attached file.
  7. Signature of the President

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David M. Dooley

## PHYSICS

The Department of Physics offers a Bachelor of Arts (B.A.) degree for students already registered and a Bachelor of Science (B.S.) degree. The department also offers the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees.

*Faculty:* Associate Professor Andreev, *chairperson*. Professors Heskett, Kahn, Kaufman, Malik, Meyerovich, Muller, Nightingale, and Steyerl; Associate Professors Andreev and Reshetnyak; Adjunct Professor McCorkle; Adjunct Associate Professors Bozyan, Karbach, and Ruffa; Professors Emeriti Desjardins, Hartt, Letcher, Nunes, Penhallow, Pickart, and Willis.

### BACHELOR OF ARTS

*As of June 2009, new admissions to this program have been suspended. For program details, please refer to the [2009-2010 URI Catalog](#).*

### BACHELOR OF SCIENCE

This curriculum provides a general background in both theoretical and experimental physics. It forms a foundation for further study at the graduate level toward an advanced degree, and also prepares the student for a career as a professional physicist in industry, education, or government. Initiative, independent solution of laboratory problems, and research are encouraged in the advanced laboratory courses.

The following courses are required for the B.S., but exceptions and/or substitutions are possible and can be arranged by consulting the department chairperson.

A total of 120 credits is required for graduation. PHY 483 and 484 are the **capstone** courses in this program.

*Freshman Year First semester: 14 credits*

MTH 141 (4); PHY 203/273 (4), General Education requirements and electives (6).

*Second semester: 16 credits*

MTH 142 (4); PHY 204/274 (4), General Education requirements and electives (8).

*Sophomore Year First semester: 17 credits*

CSC 211 (4); MTH 243 (3); PHY 205/275 (4), General Education requirements and electives (6).

*Second semester: 14 credits*

MTH 244 (3); PHY 306 (3), 410 (3), Basic Liberal Studies requirements and electives (5).

*Junior Year First semester: 14 credits*

PHY 322 (3), 381 (3); MTH 215 (3), General Education requirements and electives (5).

*Second semester: 17 credits*

Mathematics elective at the 300 or 400 level (3), PHY 331 (3), 382 (3), General Education requirements and electives (8).

*Senior Year First semester: 13 credits*

PHY 401 (1), 420 (3), 451 (3), 483 (3), General Education requirements and electives (3).

*Second semester: 15 credits*

PHY 452 (3), 455 (3), 484 (3), 510 (3), General Education requirements and electives (3).

### **BACHELOR OF SCIENCE- *Interdisciplinary Track***

This modified bachelor of science degree is intended primarily for physics education majors and physics majors who do not intend to pursue graduate studies in physics. The following courses are required, but exceptions and/or substitutions are possible and can be arranged by consulting the department chairperson.

A total of 120 credits is required for graduation. PHY 492 (or PHY 491) is the **capstone** course in this track.

*Freshman Year First semester: 14 credits*

MTH 141 (4); PHY 203/273 (4); General Education requirements and electives (6).

*Second semester: 16 credits*

MTH 142 (4); PHY 204/274; General Education requirements and electives (8).

*Sophomore Year First semester: 17 credits*

CSC 211 (4); MTH 243 (3); PHY 205/275 (4); General Education requirements and electives (6).

*Second semester: 14 credits*

MTH 244 (3); PHY 306 (3), PHY 410 (3); General Education requirements and electives (5).

*Junior Year First semester: 14 credits*

MTH 215 (3); PHY 322 (3), PHY 381 (3); General Education requirements and electives (5).

*Second semester: 17 credits*

PHY 331 (3), PHY 382 (3); General Education requirements and electives (11)

*Senior Year First semester: 13 credits*

PHY 401 (1), PHY 451 (3); General Education requirements and electives (9).

*Second semester: 15 credits*

PHY 492 (3); General Education requirements and electives (12).

### **Medical Physics Track: Five-Year Program leading to a B.S. in Physics and an M.S. in Medical Physics.**

The field of medicine is facing a significant shortage of well-trained and qualified clinical medical physicists, due to the increasing use of complex technology in the field of radiation oncology and medical imaging. Consequently there is a growing demand for the training of professionals in medical physics. Only specially created programs can accomplish this mission, since among other things medical physics requires a multidisciplinary effort.

This degree program provides students with rigorous training in essential undergraduate and graduate physics courses, as well as in medical physics courses. Students are introduced to both research and clinical aspects of modern medical physics through the Rhode Island Hospital state-of-the-art medical imaging and therapy facilities. The program is based on the B.S. and M.S. programs in physics with the introduction of additional courses in photo medicine,

nanotechnology, radiation physics and dosimetry, radiation oncology, radio-biology, and a clinical practicum. These courses are taught by the URI Physics Department, the Rhode Island Hospital-Brown University Medical School Faculty, and the staff at the RI Nuclear Science Center at the Bay Campus.

Matriculation in this program requires that the student apply and be accepted; it is not automatic. It is possible that a student will enter the program having taken some of the courses but not all. It is mandatory that the student take all of the courses (or show credit in them) in order to graduate. The schedule outlined below demonstrates that it is possible to get both degrees in five years. Where we have written two courses separated by an “or” (e.g., PHY 322 or 420) the student is to take whichever course is offered that semester. The student must have credit in both courses, however, at the end of the curriculum.)

*Criminal Background Checks and Trainings. All students must undergo a criminal background check annually during the professional years of the program using the College’s approved vendor. The criminal background check must be completed prior to the spring semester of each year. Rhode Island Hospital participates in the program and requires certification that students have a clear criminal record (or a criminal record which, due to the timing or nature of the criminal behavior, or the relevant circumstances, does not, in the judgment of the site preclude the student’s participation in the practicum/learning experience at their site). Students with criminal records, therefore, should be aware that their criminal record may preclude their participation in clinical experiences at the hospital, and as a result, their progression to meet the degree requirements may be impeded.*

*All students will be required to complete OSHA, HIPAA and Basic Life Support Training programs. The training programs must be completed prior to the spring semester of each professional year. Rhode Island Hospital participates in the program and requires training certifications.*

*Freshman Year First semester:*

BIO 121 + lab; MTH 141; PHY 203H, 273H; URI 101; one 3-credit General Education course.

*Second semester:*

BIO 242, 244; CHM 101, 102; MTH 142; PHY 204H, 274H; one 3-credit General Education course.

*Sophomore Year First semester:*

CSC 211; MTH 243; PHY 205H, 275H, 210; 6 credits of General Education courses.

*Second semester:*

MTH 244; PHY 306, 410; 9 credits of General Education courses.

*Junior Year First semester:*

MTH 215; PHY 381, 451, 322 or 420; 6 credits of General Education courses.

(In the beginning of the sixth semester, the student can begin the application process to be admitted to graduate school. This is necessary only if the student is planning on getting both the master’s and bachelor’s degrees after five years. The application will be evaluated by a

committee of faculty formed for that purpose, and it will be the sole determiner of who goes on in that year. At that time it will still be possible to get a simple B.S. in physics in the standard four years.)

*Second semester:*

PHY 331, 382, 455, 540 or 545; 6 credits of General Education courses.

*Senior Year First semester:*

PHY 322 or 420, 550 or 552, 560 or 565, 510 or 610; ELE 564, 565.

*Second semester:*

PHY 402, 452 or 570, 540 or 545; ELE 562, 563; STA 307.

*Fifth Year First semester:*

PHY 483, 550 or 552, 560 or 565, 510 or 610.

*Fifth Year Second semester:*

PHY 484, 555, 691; SOC 224.

Near the end of the final semester, students also take a final exam which is similar to the ABR Part 1 exam they are expected to take to get into a CAMPEP accredited residency program.

## CLINICAL EDUCATION AGREEMENT

This Agreement between University of Rhode Island a public institution of higher learning engaged primarily in education and practical training and accredited with the Commission on Accreditation of Medical Physics Educational Programs (CAMPEP) ("School") and Rhode Island Hospital, a Rhode Island not-for-profit corporation ("Facility"), is made as of the 4<sup>th</sup> day of October, 2016 and shall continue in effect until terminated as herein provided.

In consideration of the mutual promises set forth herein, the parties hereto agree that a program of supervised clinical and didactic experience in the area of (check one or more as applicable):  Physical Therapy,  Occupational Therapy,  Speech Pathology,  Respiratory Therapy,  Nursing,  Paramedic,  Emergency Medical Technician,  medical physics students [Other] (the "Program") shall be conducted by Facility for students of School under the following terms and conditions:

### ***I. Responsibilities of School:***

#### **A. Student Qualifications.**

1. **Pre-Requisites:** School shall ensure that only those students who have successfully completed all the prerequisite courses and/or previous clinical educational experiences as specifically requested or required by Facility and as are necessary to perform the tasks and services reasonably expected to be assigned to students in the Program in a safe and effective manner shall participate in the Program. If Facility currently requires, or at any time during the term of this Agreement adopts a policy requiring, previous clinical educational experience as a condition of participation in the Program, Facility shall set forth in writing the nature of such requirements and the specific clinical educational experience required as a condition of participation in the Program.
2. **Background Checks:** The School represents and warrants that it has completed a criminal background check that covers the six (6) month period immediately preceding the start date for any Student, and the results of such background checks did not reveal any information that the Facility has deemed to be disqualifying for work on its premises, as communicated by the Facility to the School. The School further represents and warrants that because the Facility may primarily provide services to minors, the School's agents, students or employees who will work on the Facility's premises have signed and returned to the Facility the statement attached as Exhibit #1. A student's failure or refusal to submit the attached statement, and to amend such statement as needed during an assignment, shall be grounds for immediate dismissal from the program.

- B. Student Records/School Curriculum.** School shall inform Facility in writing of the level of training each student has received prior to his/her participation in the Program and, upon request, shall provide Facility with a copy of each such student's academic/educational record to the extent the School is allowed to provide such record under state and federal law. Facility understands that its personnel may use such record only to determine eligibility for participation in the Program or in furtherance of the clinical experience for the student, and such record may not be disclosed to any person not affiliated with the Program without the student's prior written consent unless permitted under applicable law. School also shall

provide Facility with current information about its curriculum and clinical educational goals and objectives and shall promptly forward to Facility any change to its curriculum or clinical educational goals prior to the effective date of such change.

- C. Insurance.** School agrees and represents that each student assigned to the Program shall be covered by Student Professional Liability insurance with limits of at least \$1,000,000 per occurrence and at least \$3,000,000 in the aggregate and that each faculty member of School who might come to the Facility as part of the Program shall be covered by Teachers Professional Liability insurance with limits of at least \$1,000,000 per occurrence and at least \$3,000,000 in the aggregate. School shall, upon request of Facility, furnish to Facility a certificate evidencing such insurance. School shall maintain such insurance in full force and effect during the term of this Agreement and such insurance shall name Facility as an additional insured and shall contain a provision that the insurer will not cancel or change the policy or policies without first providing Facility thirty (30) days prior written notice.
- D. Program Coordination.** School will designate a faculty member of School as its Academic Coordinator of Clinical Education (ACCE) to work with an employee of Facility designated by Facility as its Coordinator of Clinical Education (CCE) in order to coordinate the academic and clinical aspects of each student's education. School shall have faculty available to students on site, if necessary under the circumstances, or readily accessible by telephone throughout the clinical period during which students are providing care. Each student's name and other relevant information shall be provided by School to Facility at least thirty (30) days prior to the start of such student's participation in the Program. The parties agree, however, that the School's ACCE is not permitted to access any identifiable information of patients of the Facility in the course of performing services under this Agreement. If such access is believed to be crucial at any point during the term of this Agreement, the parties agree to contact the Office of the General Counsel at Facility for guidance on whether such access is permissible under applicable law under the circumstances presented.
- E. Program Cancellations.** In the event that it becomes necessary to change a student assignment to the Program, School shall notify Facility of such change at least one month in advance of the scheduled beginning of the assignment so that Facility can plan accordingly. If a last-minute cancellation or change is necessary, the ACCE shall call the CCE immediately.
- F. Adherence to Facility Policies.** School shall inform its students and faculty participating in the Program of the requirement that they adhere to all of the policies and procedures of Facility, as in effect from time to time, including those relating to employee/student immunizations and health, maintenance of health insurance and delivery of the health care at Facility and the students' role in it. The student will be required to submit the necessary health information to the site prior to starting their placement.
- G. Patient Confidentiality/Return of Records/Surveys.** The parties agree that all students participating in the Program and performing services under this Agreement shall be considered members of the workforce of Facility for purposes of compliance with the Health Care Portability and Accountability Act of 1996 and the regulations promulgated there under ("HIPAA"). As such, School shall inform students that they are required by law to comply with all HIPAA policies and procedures of Facility as well as all other federal and state laws

concerning patient confidentiality, and the School will further inform students that they must attend all HIPAA training sessions and related activities required by Facility. The parties agree that neither School nor any faculty member of School, including the ACCE, shall have the right to access patient identifiable information under this Agreement.

Furthermore, School agrees and shall inform each of its students and faculty participating in the Program that they must agree not to copy or use any confidential information of Facility, whether or not such information is patient related, for its or his/her benefit or the benefit of any third party, and School agrees that it shall require its students and faculty to adhere to this provision. School also agrees that it shall inform students participating in the Program to return promptly all of Facility's records and other property in student's possession at the conclusion or termination of student's participation in the Program. School further agrees, and shall inform its students and faculty that they must agree, not to engage in any research, including but not limited to any formal or informal survey or other study, relating in any way to Facility or its patients, without first obtaining Facility's written approval. This provision shall survive termination or expiration of this Agreement.

- H. **Certifications/Approvals.** School agrees and represents that it and its faculty currently have in effect, and will continue to have in effect during the term of this Agreement, all licenses, certifications, permits and approvals necessary to operate as an educational facility and to provide the type of instruction or education which it and they offer to students and/or for which School offers degrees.
- I. **Promotional Material.** School agrees that it will not publish, list or describe Facility or the Program in any marketing or promotional material or in any curriculum description or student handbook of any kind, nature or description without first obtaining Facility's written permission.

## ***II. Responsibilities of Facility:***

- A. **Program Objectives.** Facility shall provide a supervised program of clinical and didactic experience for qualified students of School based on objectives compatible with those of School. Before or contemporaneous with its execution of this Agreement, School shall provide Facility with a summary of its objectives concerning the academic aspects of the education it offers to students as well as its expectations of the objectives concerning the clinical experience to be provided by Facility in connection with the Program. Facility will provide qualified personnel to supervise the students directly during the clinical experience.

Facility shall designate and submit in writing to School the name and professional and academic credentials of the CCE, as well as the names and credentials of each student supervisor assigned by Facility to the Program.

- B. **Program Instruction/Patient Care/Assignment of Reimbursement.** Facility shall allow School's students participating in the Program to work with the appropriate Facility personnel, assisting when and where appropriate and applicable, and observing them in the performance of their daily duties; provided, however, that no student shall perform any patient care task in or on behalf of Facility without the assistance, presence or permission, as



the case may be under the circumstances, of an active member of Facility's professional staff. Students shall not and may not access areas of the Facility unrelated to their Program activities at Facility nor shall they be present in the Facility, except as a visitor or a patient, at times beyond those scheduled for Program activities. Facility shall retain full responsibility for patient care and welfare in the organization, administration, staffing, operation and financing of its services and the maintenance of standards accepted for the efficient management by the appropriate accrediting body. Facility may bill for the patient care services of School's students delivered at Facility and School shall not bill for such services. School agrees to assign, if deemed necessary by Facility, to Facility all rights to bill for such services, regardless of the class or type of patient to whom such services are or were delivered and regardless of the payor involved.

- C. **Program Plan.** Within thirty (30) days after the execution of this Agreement, upon School's request, Facility will submit to School a description of its current plan for the clinical experience, including objectives, learning activities, responsibilities of the students, nature of the supervision provided, and such other information as may be necessary to outline the content of the clinical experience offered throughout the Program.
- D. **Orientation.** Facility agrees to provide a brief orientation to the students assigned to the Program, including instruction on the relevant policies and procedures of Facility. Facility shall inform School and each student participating in the Program at least sixty (60) days prior to such student's participation of Facility's current policy on required immunizations and physical exams for students in general. Facility further agrees to provide the same information and protection to the students in matters of health and safety as it provides to its employees in compliance with the standards set by the Occupational Safety and Health Administration (OSHA) and applicable law.
- E. **Program Participation Limit/Scheduling.** The number of School's students who can participate in the Program for any given period of time shall be determined by Facility from time to time in its sole discretion and will be a function of Facility's philosophy, available space, patient population and staffing resources. School and Facility shall mutually determine from time to time the length of time appropriate for student assignments to the Program. In addition, Facility and School shall mutually determine from time to time the schedule of days and hours students shall be assigned to the Program.
- F. **Program Changes.** Facility agrees to inform School of any changes in staffing or in the Program that will affect the clinical experience of School's students. Facility will use its best efforts to inform School of such changes at least one month prior to the implementation of such changes.
- G. **Emergency Care.** Facility agrees to provide immediate emergency medical care to School's faculty and students participating in the Program, at their own expense, in the event of injury or illness occurring at Facility's premises. The parties acknowledge and agree that such medical care or services provided by Facility shall be the financial responsibility of the student or faculty receiving such care and/or services.
- H. **Program Evaluations.** Facility agrees, upon request, to inform periodically both School and each student participating in the Program of such student's level of clinical growth and competence and to complete, upon request of School, up to three evaluation reports on forms

to be provided by School. Upon request of School, the evaluation process will include a conference between the student and Facility's applicable supervisor at the time the final report is completed. Facility shall use reasonable efforts to ensure the evaluation report is sent to School by the date requested. Facility further agrees to maintain during the term of this Agreement such other records as School may reasonably request to evaluate each student's performance in the Program.

- I. **Suspension From Program.** Facility, in its sole discretion, may temporarily or permanently suspend, and/or may request School to permanently or temporarily withdraw, as Facility deems appropriate under the circumstances, any student from the Program who has failed to comply with Facility's policies and procedures or whose conduct, competence, attitude or health status may have a detrimental effect on Facility's professional staff or its patients. Facility shall use its best efforts to notify School of the need for such temporary or permanent suspension or withdrawal as soon as possible. Wherever possible, as determined by Facility in its sole discretion, such suspension or withdrawal shall be planned cooperatively by Facility and School, and any grievance against any student shall be discussed with the student and School's ACCF; provided, however, that certain circumstances may exist, as interpreted by Facility in its sole discretion, which require Facility to suspend a student effective immediately in which event there shall be no opportunity to provide prior notice or to work cooperatively with School in resolving any grievance involving such student.
- J. **Inspection of Records/Facility.** Facility agrees, upon reasonable request made by School at any time during the term of this Agreement or within three (3) years after the termination of the Agreement, to permit inspection by School and appropriate accrediting agencies between the hours of 9:00 A.M. and 5:00 P.M., Monday through Friday only, of Facility's student records, or other records or items or premises of Facility which pertain in any way to the Program or to the School's students. Facility agrees not to dispose of or destroy such records for a period of at least three (3) years after the termination of this Agreement.

### ***III. Additional Responsibilities of School and Facility:***

- A. **Indemnification.** School agrees to defend, indemnify, and hold harmless Facility and its staff, directors, trustees, partners, limited partners, officers, contractors and employees from and against all claims, judgments and liabilities (including reasonable attorney's fees and expenses incurred in the defense thereof) relating to personal injury or property damage arising out of the acts or omissions of the School's students, faculty members, employees or agents or relating to School's, or any student's or faculty member's breach, of this Agreement, including those obligations pertaining to patient confidentiality. Facility agrees to defend, indemnify and hold harmless School and its governing board and council, respective board and council members, trustees, officers, employees and students from and against any and all claims, judgments and liabilities (including reasonable attorney's fees and expenses incurred in the defense thereof) relating to personal injury or property damage arising out of conditions existing at the Facility, to the extent the same are not caused by the acts or omissions of School's students, faculty members, employees or agents, or arising out of the acts or omissions of Facility's employees or agents in connection with the Program. Each party agrees that it shall give the other party prompt notice of any claim, threatened or made, or suit instituted against it, which could result in a claim for indemnification pursuant to the terms hereof. This Section III I shall survive any termination or the expiration of this Agreement.

- B. Unlawful Discrimination.** It is mutually agreed that no person shall be subject to unlawful discrimination in connection with the Program on the basis of race, color, religion, sex, sexual orientation, gender identity or gender expression, genetic information, national origin, age, veteran status, disability or any other legally protected characterization.
- C. Entire Agreement/Amendments.** This Agreement contains the entire agreement and understanding of the parties hereto relating to the subject matter hereof and supersedes all other prior understandings or agreements, written or oral, relating to the subject matter hereof. This Agreement may be modified only by written amendment signed by duly authorized representatives of each party.
- D. Independent Contractor.** This Agreement is not intended, and shall not be construed, to create an employment, partnership, joint venture or principal-agent relationship between Facility and School or between Facility and the students in the Program. School, and School's employees, faculty and students, and Facility shall be treated for all purposes as independent contractors. The parties understand and agree that no student will be covered under the Facility's workers compensation policy or covered by the Facility's self-insurance fund if the Facility is self-insured for purposes of workers compensation. Facility shall not be obligated to provide any type of wages or other compensation or insurance coverage to students participating in the Program.
- E. Termination.** This Agreement may be terminated at any time by either party upon sixty days' notice in writing to the other at the address set forth below; provided, however, (a) if at any time, in the sole judgment of Facility, (i) the existence of this Agreement compromises the safety or welfare of patients or the quality of care provided to patients or (ii) the quality of academic training provided to students is such that it undermines the delivery of healthcare services by Facility to patients or (b) for any breach of this Agreement by School, Facility may terminate this Agreement, without notice, effective immediately. Any termination upon sixty (60) days notice shall not take effect until the students already accepted for placement in the Program have completed their scheduled clinical training:

If to Facility:

Rhode Island Hospital  
Manager, Graduate Medical Education  
593 Eddy Street  
Providence, RI 02903

If to School:

Physics Department  
University of Rhode Island  
2 Lippitt Road, East Hall  
Kingston, RI 02881

F. **Waiver.** The failure of either party to insist in any one or more instances upon the performance of any term or condition of this Agreement shall not be construed to be a waiver of future performance of any such term or condition, but the obligation of the other party to strictly perform such term or condition shall continue in full force and effect.

G. **Governing Law.** This Agreement shall be construed and interpreted in accordance with the laws of the State of Rhode Island, as in effect from time to time.


IN WITNESS WHEREOF, the parties have executed this Agreement as of the year and day first above written.

**RHODE ISLAND HOSPITAL**

**UNIVERSITY OF RHODE ISLAND**

By: James A. Arrighi, M.D.  
Title: Director, Graduate Medical Education

By: Sharon B. Bell  
Title: Controller

Signature: 

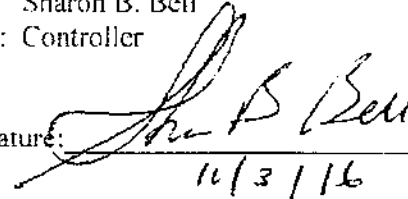
Signature:   
11/3/16

EXHIBIT #1: Student's Attestation

In accordance with R.I. General Laws Chapter 11-37.3, I certify that I am not currently registered, or required by law to be registered, as a sex offender in Rhode Island or in any other jurisdiction, as a result of being convicted of a sexual offense against a minor. If, during my placement at the Facility, I am convicted of a relevant offense and am required by law to be registered as a sex offender in Rhode Island or in any other jurisdiction, I shall immediately notify my School of this change and my School shall immediately notify the Facility and remove me from any Facility/Lifespan premises. If I fail to so notify my School of such a change in my status, I understand that my School or the Lifespan Facility may remove me from the Lifespan Facility's premises immediately and/or the Facility may have grounds for an immediate termination of its contract with my School.

Print Name: \_\_\_\_\_

Signature: \_\_\_\_\_

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