

# Guidelines and Instructions for Completing the Full Application

The guidelines provided in this document are based on the characteristics of highly successful implementations of the PHAGES course and serve as recommendations for structuring the course at your institutions.

## CONTACT INFORMATION

### **Application Contact Information:**

The named person will serve as the primary recipient of course-related communications from HHMI that are intended for all key institutional personnel involved in the PHAGES course. The named person should be an instructor that will be significantly involved in preparing and teaching the course.

### **Institutional Official Authorizing the Course Information:**

The named person should be a member of your institution leadership with oversight of faculty teaching assignments. Typically, this person is the Dean or Department Chair. This person will also provide a letter of support to accompany the Full Application.

## COURSE INFORMATION

### **Course Type:**

This two-semester laboratory course is designed to replace the standard introductory biology laboratory course. Please indicate if the PHAGES course will be implemented as a new course or used to modify or replace an existing course at your institution. Please also provide a brief description.

### **Are there pre-requisite courses?**

This course is designed for students that are enrolled in introductory undergraduate biology and/or chemistry courses with no other pre- or co-requisites.

### **Academic Level:**

The course is aimed at undergraduates who are new to college level science and have had little or no research experience. Please indicate if the course will be offered at the freshman, sophomore, junior or senior level. If other, please specify.

### **Targeted Student Population:**

SEA institutions vary in the student populations targeted, if any, for the PHAGES course. Examples of targeted student populations include honors students, STEM majors, nonscience majors, and students underrepresented in the biomedical field.

### **Commitment in Number of Years to SEA-PHAGES:**

HHMI will invest a significant amount of resources to enable you to implement the PHAGES course at your institution and encourages the continued implementation of the course beyond Year 1.

### **Do you have plans to add additional sections after Year 1?**

Indicate or describe, as appropriate.

**Additional Information:**

Use this space to provide additional information and/or explanations for how the course will be implemented at your institution, including if you plan to offer the course across multiple campuses at your institution.

**Support Staff Information:**

HHMI recommends that each section of students offered the PHAGES course be staffed with multiple personnel; that might mean two faculty members or a faculty member and at least one well-prepared Teaching Assistant. TAs assigned the PHAGES course have included students, research assistants and faculty members.

## **PHAGE DISCOVERY AND BIOINFORMATICS COMPONENTS**

The PHAGES course is divided into two consecutive components, a Phage Discovery “wet lab” component and a Bioinformatics component, and is formally scheduled for an entire academic year. Based on successful implementations of the course, we recommend allocating 60 lab hours per semester (or per component). The course should be scheduled so that each laboratory section (excluding lecture) of the course meets at least twice per week for at least 2 hours per meeting. In addition, it is helpful to create supervised “open lab” opportunities for the students. If it is not possible to have formal lab sessions of at least four hours per week, then making available informal time in the lab is critically important.

**Academic term(s) component will be offered:**

Typically, the Phage Discovery component is offered during the Fall semester and the Bioinformatics component in the Spring semester.

**How will your institution be able to access transmission electron microscopy equipment for this course?**

The Phage Discovery component of the course involves evaluating isolated bacteriophages by transmission (not scanning) electron microscopy. SEA institutions that do not have access to a transmission electron microscope for this course have typically made arrangements with other institution to provide this service. You will be responsible for paying any costs to the serving institution.

**How will your institution provide computing equipment to the faculty staff and students to run the software required for the course?**

The computer software for the Bioinformatics component of the course requires the following minimum computer configurations: Windows XP/Vista/7 or Mac OS X 10.5; 1.6 GHz/x64 dual-core processor; 4 GB RAM; 128 MB video memory; 20 GB free hard-drive space. The software requirements are likely to require the support of the institution’s IT staff.

## **EVALUATION**

All institutions implementing the PHAGES course will be expected to participate in SEA-PHAGES-sponsored assessments, including the PITS survey for which further information will be provided to SEA schools in the fall. In addition, institutions are welcome to conduct their own course assessments using appropriately selected and validated assessment tools.

## **FACULTY PREPARING AND TEACHING THE COURSE (UP TO 5)**

Faculty is defined as a person that will be preparing and teaching the course. Teaching assistants should not be listed as faculty.

### **Name and Contact Information:**

For each semester, at least two instructors should be assigned the PHAGES course. The persons teaching the Phage Discovery semester can be but do not have to be the same as the persons teaching the Bioinformatics semester. You may list up to 5 instructors in total.

### **Tenure Status:**

Please indicate if this faculty instructor has tenure or is on a tenure-track. If other, please specify.

### **Teaching Effort:**

HHMI recommends that teaching the SEA-PHAGES course represent at least 30 % teaching load per semester per faculty instructor. Provide the number of hours that the instructor will dedicate to teaching each PHAGES component and the instructor's total teaching load, in hours, for each corresponding semester.

### **Role Description:**

Use this space to provide additional information regarding the role(s) of the faculty instructor in implementing the PHAGES course.

## **LETTER OF SUPPORT**

A letter of support must be prepared by the institution official authorizing the course. The letter of support should include a description of institutional support for the following:

- Scheduling of course
- Assignment of instructors
- Provisions for classroom/lab space and supplies, including computer equipment and IT support
- Implementation of SEA-PHAGES-sponsored assessments
- Commitment towards continued course implementation beyond Year 1.

You may upload 2 additional letters of support.

The deadline for submitting an application is **October 31, 2018.**