

Title: PI Forum on Physics of Medicine/Biology

Contact Person:

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Leaders:

Name	Department	University	Email
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Mary Lowe, Ph.D.	Physics	Loyola University Maryland, Baltimore, MD	MLowe@loyola.edu
Ralf Widenhorn, Ph.D.	Physics	Portland State University Portland, OR	ralfw@pdx.edu
Pete Nelson, Ph.D.	Physics Biology	Benedictine University Lisle, IL	pete@circle4.com
Steve Hagen, Ph.D.	Physics	University of Florida Gainesville, FL	sjhagen@ufl.edu
Kathy Williams, PH.D.	Biology	San Diego State University San Diego, CA	Kathy.williams@sdsu.edu

Focus Area:

This PI Forum is designed to bring together faculty interested in sharing/creating/assessing an interactive repository of active learning student activities at the intersection of physics, biology and medicine.

Ultimate Goal:

Shared development of curriculum leading to a cohesive, active learning set of modules that can be adapted for use in individual universities in the area of physics and medicine/biology.

Expected Outcomes:

The forum has an initial group of six faculty members from different types of institutions across the country interested in sharing our work to enhance curriculum. Expected Outcomes are:

- 1) Networking that leads to strengthening of individual programs through a sharing of ideas and resources
- 2) Enhancement of active learning curricula in physics of medicine/biology
- 3) Shared assessment of curricula
- 4) Initial dissemination of project work

Meeting Schedule with Topics:

Meeting	Date	Tentative Topics
One	Thursday, 5/30/13 3 - 4:30pm (EST)	<ol style="list-style-type: none"> 1) Initial Discussion of types of programs in each leader's university 2) Discussion of work that has been done to this point in individual universities
Two	Thursday, 6/6/13 10:00 - 11:30am (EST)	<ol style="list-style-type: none"> 1) Selection of physics/biology topics in Physics of Medicine/Biology for discussion and sharing <ol style="list-style-type: none"> a. Define directions for physics/biology/medicine teaching: some courses may have a more medical focus, e.g. medical physics or diagnostic technologies, etc. Other courses will emphasize fundamental physics at the (e.g.) cellular level. Other instructors may want to integrate intro bio with intro physics - teaching intro biology and physics simultaneously. b. <i>Question:</i> How can we divide or categorize instructor objectives so that instructors can develop and or locate teaching materials that meet the appropriate objective. What sort of classification schemes can we come up with?
Three	Thursday, 6/13/13 10:00 - 11:30am (EST)	<ol style="list-style-type: none"> 1) Structuring useful modules for teaching : <ol style="list-style-type: none"> a. Maximize the 'plug & play' utility of modules for teaching b. Discuss what a useful package of materials should include (written notes, suggested readings, computer assignments and or simulations, classroom activities, demos, online activities) and how should it be organized c. Should we aim for a standard?

Four	Wed., 7/31/13 10:00 – 11:30am (EST)	<ol style="list-style-type: none"> 1) Making sense of what is already out there: <ol style="list-style-type: none"> i. Compadre (not a lot there) ii. Individual instructor websites iii. Textbooks iv. Prior NSF Projects 2) Develop plan to sort and categorize already available and put them into some kind of structure or index that will make it easier for people to find something useful.
Five	Wed., 8/7/13 10:00 – 11:30am (EST)	<ol style="list-style-type: none"> 1) Discussion of best ways to share current work (resources, developing curriculum) 3) Sharing of Assessment and Evaluation Procedures
Six	Wed., 8/14/13 10:00 – 11:30am (EST)	<ol style="list-style-type: none"> 1) Internet Presence for PI Forum

Desired Participant Characteristics:

Colleagues focusing on:

- Physics topics at the intersection of medicine and biology
- Active Learning Curricula
- Interdisciplinary Learning

Application Process:

If interested in joining this PI Forum, please contact nancy.donaldson@rockhurst.edu with the following information:

Name, Department, University, email, phone, area of interest in physics/medicine/biology