

Materials Education Strategies for a Rapidly Changing World

How can we design excellent, agile, constantly updated Materials Education programs?

The fast-changing base of materials science and discovery, and the fast evolution of student expectations and interests, demand that the Materials curriculum, and presentation, and teaching approaches, should be structured to facilitate regular, well-conceived, and coherent integration of new topics and learning resources into academic programs at every level. How can these goals be addressed?

Forum

How to Constantly Update

Curricula, Resources, Technology, Teaching Styles, and Budgets?

Panel Members will present invited reviews of their experiences, innovations, and opinions relating to key aspects of these goals. They will also offer comments about related issues that need consideration at a global level, such as the following:

- An evolving curriculum: core versus hot topics.
- Electronic resources in materials science and engineering education.
- Difficulties and solutions for laboratory-based materials education.
- Economic constraints
- Assessing effectiveness of new approaches
- Global perspectives and diverse national / cultural priorities.

A Panel Discussion, seeking to highlight key future strategies, will follow these presentations.

Workshop

Networking Discussions on Strategic Policies for Action

All Participants will attempt to identify

- Greatest immediate opportunities for remedial / creative actions now
- Areas of commercial impact needing examination. For example, major effects on markets for teaching resources and publications; priorities identifiable by industries depending on reliable pipeline for a qualified workforce.
- Requirements for realistic technology projections, to define future educational goals.
- Areas of national / regional public policy, in need of proof of economic benefits of support for science education.
- Issues where success will depend on increasingly effective global collaboration.

Concluding Actions

Outline key elements of a functional plan for a Global Materials Education Network, structured to help address these issues and to offer continuing leadership, vitality and support for a forward-looking global Materials Education strategy.

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