



Center to Advance the Teaching of Technology & Science
1914 Association Drive
Suite 201
Reston, VA 20191-1539

Phone: 540-382-4804
FAX: 540-382-4808



Engineering byDesign™ Professional Development Opportunities Developing Consistency, Sustainability and Scale

The International Technology Education Association's (ITEA) Center to Advance the Teaching of Technology & Science (Center) proudly offers professional development opportunities with the **Engineering byDesign™ (EbD™) Curriculum Specialists**. These specialists have been trained to deliver consistent professional development on Engineering byDesign™—the Standards-Based Model Program—including the courses, assessments, professional development and sharing opportunities and other aspects that comprise the Program. Specialists can provide a broad overview of the Program, while preparing teachers to deliver a specific course or courses. The amount of material covered is determined by the amount of time provided for the institute or workshop.

Professional Development

The EbD™ Curriculum Specialists are available on a priority basis to EbD™ Consortium member states. This means that Consortium states that are pre-planning for spring, summer or fall seminars, institutes or workshops, can arrange for specialists to do workshops on the following EbD™ courses on a cost-recovery basis:

Elementary

- I³ Lessons
- NASA HEP/STS-118 Units

Middle School

- *Exploring Technology*
- *Invention and Innovation*
- *Technological Systems*

High School

- *Foundations of Technology*
- *Technological Issues*
- *Advanced Design Applications*
- *Advanced Technological Applications*
- *Engineering Design*

Consistency, Sustainability, & Scale

The ITEA Center believes that Professional Development is a continuous improvement process—not a one-time, half-day, “drive-by” workshop. Therefore, the Specialists have been trained to deliver a variety of professional experiences dependent on time and resources. The key is *flexibility with consistency*. Consistency is achieved because specialists deliver professional development lessons and activities directly from the model course guides. Teachers leave the sessions with the framework for the course and the knowledge and skills necessary to use the 5-E Lesson Planning Model or the Primary Challenge/Learning Cycles used in the Guides. Due to time limitations, a sampling of student lessons from the Units are presented that are representative of the entire course. These experiences are designed to prepare the teacher participants to plan their course(s) based upon what they learn in the institute or workshop.

Sustainability is achieved through a series of experiences for teachers over time. States are encouraged to plan one full year of activities involving the specialists. For example, hold three full-day workshops throughout the year (or a two-day workshop at a regional conference, with follow-up days), then culminate the experience with an end-of-year Institute where the specialists can go into depth with the courses that are to be implemented. This may also be done in reverse—have the Institute during the summer prior to the implementation year, then follow-up with regional sharing.

Sustainability and Scale are achieved through the professional learning community called the *EbD™ Network*. The Network consists of the unique web-based (Moodle) learning community called *eTIDEonline™*. Teachers in the Network work in schools throughout the nation and have dedicated themselves to delivering standards-based instruction. Through *eTIDEonline™*, teachers share the results of their work in the classroom by posting examples of student work (exemplars) and related rubrics, worksheets and classroom materials. Participants who agree to become part of the EbD™ Network get free access to *eTIDEonline™* and all of its resources.

Specifications

Specialists are volunteers who are committed to helping states implement a standards-based approach to teaching and learning through technological literacy and engineering design concepts. Therefore, certain minimum requirements have been determined:

1. Specialist(s) will provide their own laptop or, alternatively, a flash drive of the presentation(s), depending on the setup of the sessions.
2. **Internet Connectivity:** Specialists have set up the workshop agenda to include access to eTIDEonline™. Participants should have access to the Internet using a laptop or lab with computers.
3. **Additional Audio/Visual Equipment:** One LCD projector, screen and power strip will be required on site, with all appropriate cables (including sound cable or microphone to play sound on laptop).
4. **Printing:** it is recommended that all printing be completed by the sponsoring organization. All costs for printing (including travel to deliver and pick up) will be billed to the organization if not done in-house. Specialists can supply files electronically for this purpose.
5. **Materials for Instruction:** All materials used to deliver the workshop will be billed to the sponsoring organization by the specialist. Alternatively, a list may be provided for the materials to be provided at the workshop.
6. **Travel:** All travel to and from the workshop, including air travel, rental car, and/or mileage; parking; ground transportation and other travel-related costs, will be billed by the specialist to the sponsoring organization.
7. **Meals:** A per diem for meals is recommended. This will include costs during transit to and from the professional development activity. Specialists will keep receipts and submit actual costs for meals reimbursement.
8. **Hotel:** Each Specialist requires a non-smoking single room (two specialists will require two single rooms). Free wireless Internet connection in the room is also required.
9. **Stipend:** While the specialists are volunteers, they should be provided a stipend or honorarium. A stipend of \$500/day is standard, and highly recommended. This includes all pre-planning and follow-up to the meeting. For example, and 1.5 day meeting would warrant a \$1,000 stipend. This \$1,000 includes all the preplanning required of the specialists to get everything ready (usually another two days minimum) and another day post-meeting to disseminate or follow-up as necessary.
10. **Booking Specialists:** The ITEA Center arranges professional development opportunities with the Specialists (contact Shelli Meade at 540-382-4804 or smeade@iteaconnect.org). *Once booked, the organization will work directly with the specialist(s) to finalize all arrangements and reimbursements.*
11. **Estimated Costs:** The table below illustrates estimated costs for a 1-day, 2-day, or 3-day workshop. For more than 30 participants, the sponsoring organization should engage two specialists. If a middle and high school professional development opportunity is desired at the same time, it is highly recommended that two specialists be engaged.

	<u>Total Estimated Costs Per Professional Development Opportunity</u>		
	1 +/- Day	2 Days	3 Days
	<i>10 - 30 participants</i>	<i>10 - 30 participants</i>	<i>10 - 30 participants</i>
Transportation			
Airfare (Depends on location, etc)	\$ 600.00	\$ 600.00	\$ 600.00
Parking, tolls, transportation to & from airport, etc	\$ 100.00	\$ 115.00	\$ 130.00
Mileage @ .585/mile to/from airport/ other as needed	\$ 50.00	\$ 50.00	\$ 50.00
Travel			
Hotel Accommodations @ \$180/day	\$ 360.00	\$ 540.00	\$ 720.00
Meals @ \$75/day (reimbursed by actual receipts)	\$ 150.00	\$ 225.00	\$ 300.00
Other			
Materials for workshop @ \$15/person per day	\$ 450.00	\$ 900.00	\$ 1350.00
Printing for workshop @ \$10 each for entire workshop	\$ 300.00	\$ 300.00	\$ 300.00
Stipend (recommended)	\$ 500.00	\$ 1,000.00	\$ 1,500.00
Estimated costs	\$ 2,510.00	\$ 3,730.00	\$ 4,950.00

For more information and booking specialists for your
conference and professional development opportunity, contact
Shelli Meade
smeade@iteaconnect.org