



ACTS Program Guidelines for Summer 2010

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1. Overview

ACTS is a three-year professional development program for science, math, engineering, and technology (STEM) teachers supported by the Office of Science, Department of Energy (DOE). The program at Argonne National Laboratory is offered as a four-week and an eight-week summer research internship. All participants will extend their professional development through weekly collaborative meetings under the direction of a master teacher, to participate in lab/inquiry activities, tours, and to participate in a variety of scientist seminars on cutting-edge research.

The four-week program is for teachers who prefer to work together in a team as they create and conduct their own research project. During the first institute, research activities will be conducted by participant teams in such areas as instrumentation, chemistry, alternative energy, microscopy, and water quality. A specific group and project will continue to develop over the next two years. Participants will learn how to setup their lab protocols, apply simple and advanced instrumental techniques to their studies, collect and analyze their data in a professional and collegial manner.

The eight-week program is for teachers who join on-going research projects with a scientist or engineer. Generally this option is more technical and intensive with less teacher-mediated collaboration.

Program expectations include: creating and maintaining a Professional Development Plan that includes input from content knowledge self assessments and professional practice inventories; the development of new lessons that capture interest and improve student learning; working a 40-hour institute week and to follow-through on all research tasks; balancing time between research, collaboration, enrichment, and deliverables; the ability to work safely and effectively in a research setting; to bring and use a personal laptop with wireless access; to stay connected to peers, mentors, and lab resources throughout the academic year and the duration of the program.

1. Program Eligibility and Laboratory Access

The national program requires that participants: (a) are and remain US citizens, (b) are, and continue to be, a full time employee of a public or private school system (excludes home school) throughout the duration of the program, and (c) maintain a teaching assignment with at least 3/4 of classroom contact hours in science, mathematics, and/or technology.

In accordance with Argonne policy, conditions/contingencies that apply to your participation include: (a) maintaining health coverage during the duration of the appointment; (b) verification of work eligibility as mandated by Federal Immigration Law (I-9 Form).

For laboratory access, an official state identification (e.g. drivers license) is required for all. Offer Letter documentation is required for your initial Laboratory access. Participants must enter at the main gate from Northgate Road and Cass Ave, just south of I-55. After an Argonne photo badge is issued, participants may also enter and leave at east gate and west gate locations.

2. Payroll Checks

W2 federal/state and direct deposit forms must be completed before the first day of the program. Along with the \$800 weekly stipend, a \$1400 mini-grant will be embedded within a day-pay rate of \$194 and paid by direct deposit on the last working day of each month worked. At the end of the summer each participant must keep \$1200-1300 available to cover approved grant requests.

3. Travel

Up to \$500 roundtrip expenses will be reimbursed for those who live beyond 50 miles from Argonne. Ground travel is processed through India Gordon (DEP 223, M101). Air Travel must be scheduled in advance through the Argonne division that the teacher will be doing their research. Air Travel is the only expense that is prepaid. Teachers cannot get reimbursed for airline arrangements they make themselves.

4. Housing

Out-of-Area teachers typically lodge off-site at the **Extended Stay America**, 2345 Sokol Court, Darien IL 60561, 630-985-4708. Rates will vary by the length of stay – contact them directly for costs and reservations. These costs must first be paid by the participant who then gets a receipt that can be processed by DEP on a weekly or monthly basis. See India Gordon, DEP 223, M101. Only the dates that fall within the program dates (includes the night before the first & last day) can be reimbursed

5. Deliverables and Requirements

Participants should expect to spend 40 or more hours per week in educational, enrichment, and mentored research activities including safety training. The time allocation breaks out approximately to: 12%, 6%, and 82%, respectively.

All participants are required to:

Arrive on time the first day with a wireless laptop. Daily and prompt attendance is vital to the quality of your experience.

2. Complete the **pre-survey** questionnaire on the EDULINK website <http://educationlink.labworks.org>.
3. On the ACTS Portfolio (see the three-year program checklist, p 59 of the ACTS program handbook):
 - a. Complete the Content Knowledge Self Assessment and Professional Development Inventories as indicated on the program checklist
 - b. Begin and periodically update your Professional Development Plan (PDP)
 - c. Develop and update your education module (unit of related lessons)
 - d. Submit weekly and one summary journal entry of your experience.
4. Attend weekly plenary/collaborative meetings
5. Attend DEP-sponsored research seminars, tours, and special activities (enrichment)
6. Give & submit a midterm oral presentation of your research and PDP/education module progress.
7. In the final week, meet one-on-one to discuss your PDP and education module deliverables with the master teacher and/or program coordinator.
8. Give & submit a final oral presentation of your research (four-week TAI may also do the PDP/education module).
9. Submit grant requests based on your PDP.
10. Complete the **post-survey** questionnaire on the EDULINK website <http://educationlink.labworks.org>.
11. Submit file copies of all deliverables on a designated flashdrive or desktop, and on the ACTS Portfolio. Review the three-year program checklist that **everything is completed**.

6. Timeline: Program Dates and Activities (numbered above)

1st week in June #1, 2, 3

June 14 – Aug 6 #4,5

- 1) Seminar Series (Wednesdays, 9 – 10 AM, Building 203, Auditorium).
- 2) Collaborative meetings (Wednesdays, 10:15-Noon)
- 3) Tours & special activities
- 4) Journal entries

Early July #6,7

Midterm presentations

Last week #8, 9

One-to-one; follow-on discussions, final research presentations

Last Day # 10, 11

Presentations (?), debriefing, evaluation, course credit. Hangout or Depart at noon

7. Orientation

Program Orientation Program, Day 1

Arrive and meet at Division of Educational Programs (DEP) check-in with DEP staff.

Welcome – H. Myron, DEP Points of discussion: program overview, elements, deliverables, and requirements. Take your photo badge picture at the AIC. Lunch. Report to your Division representative.

Orientation Program, Day 2 - Building 201, Room 190

Counterintelligence Awareness

Initial Security Awareness Briefing

Cybersecurity (Computer Security)

Diversity Program Office Orientation

General Safety Program

An **Argonne Photobadge** is typically issued after this orientation is completed.

8. Schedule – Collaborative Sessions - Wednesdays, Building 223, Room S103, 10:15 – Noon

The schedule will be circulated separately from this document

9. Program Elements

a) Edulink Online Resource & ACTS Portfolio

EduLink (<http://educationlink.labworks.org>) is a password-protected site used to complete pre- and post-surveys. ACTS Portfolio is dedicated solely to the ACTS program and its deliverables.
<https://applicationlink.labworks.org/edulink/lstpd.nsf/Portfolio.htm>

b) Minigrants and Professional grants (conferences and professional organizations)

About \$1400 in taxable funds is awarded to participants each year by DEP through payroll checks or by an honorarium check. Even though funds are paid ahead by DEP as indicated, all grants must be officially approved by HQ, and then indicated as "paid" by DEP on the portfolio. All participants MUST get their grant requests processed to this "paid" level for at least \$1200 each year. The resubmission of a request with adjustments to your PDP may be required.

Before a request is submitted or resubmitted, please check the following:

- The full text of your current professional development plan must be in your PDP section on the portfolio.
- Is your request fully anchored within your professional development plan? Readjust your PDP if it is not clearly there (goals section also). **Briefly explain how you will use the materials here.** Save those changes on the portfolio.
- Date all requests at the top in large font. It's Ok to itemize things.
- In the justification section of the funding request, do not copy the specific part of the professional development plan related to the funding request. You should be able to describe, in a few sentences, how the funding request is linked to your professional development plan and less about how you will use the equipment. Simply add ***"This equipment will assist me in fulfilling goal X in my PDP to _____."***

All approved items must be purchased during the academic year. To assure this occurs, by early May a full year summary of purchases (spreadsheet) with attached receipts (or copies) will be submitted to the program coordinator for the academic year by June 1.

c) Enrichment and Laboratory Tours

A number of enrichment activities are available if your schedule permits. These include the Wednesday morning scientist seminar series, other divisional seminars, off-site fieldtrips (local Windfarm), Camp Sagawau – Cook County Forest Preserve District, Fermilab visits, and other special events.

Laboratory tours provide teachers with exposure to Argonne's major Scientific User Facilities and research programs. The activities provide DEP participants with knowledge of the Department of Energy research programs beyond their specific research assignment. Activities also provide enhanced opportunities to network. The facilities below may be scheduled for tours.

- Advanced Photon Source (APS)
- Engineering Research Exhibit - Building 208
- Transportation Research at Argonne
- Center for Nanoscale Materials (CNM)

d) Safety Training and Integrated Safety Management

Participants are required to complete all Environmental Safety & Health (ESH) training courses before they are allowed to work independently at the Laboratory. The research division and the safety coordinator within each division prepare a Job Hazard Questionnaire (JHQ) that describes the safety requirements and training profile for each participant. There are specific follow-up procedures in place to ensure that the DEP participants perform their assignments in a safe environment.

e) Resources at the Laboratory

The Laboratory maintains a Medical/Health Services Department (Building 201) that provides some medical services while at Argonne. However, this department cannot replace your personal health insurance. Other Laboratory services include library access. Recreational facilities include basketball courts, tennis courts, picnic areas, exercise facilities (Building 200 K-wing) on-site bike-use program, and nature trails. On-site and off-site bus service is available. More details about the bus schedule will be provided at the orientation.

f) Graduate Level Course Credit

Six hours of course credit each summer will be available from Aurora University. The courses are designed specifically around the ACTS program and its deliverables and do not add any extra work for the enrollees. Attendance, the completion of work, and the quality of work will factor into the letter grade. Participants must prepay the tuition @ \$100 per credit hour with a check payable to Aurora University, submitted by the second day of the summer session.

g) Follow-On Activities

At least one day during the academic year (usually a Saturday) participants will meet at a specified location to network, share their teaching progress and discuss other program items. Networking via email and other electronic venues is also encouraged. Subgroups are also encouraged to meet when possible (such as a conference).

Exit Evaluation (final day)

Name: _____ Date _____

As a result of your experience this summer at Argonne, please respond to the following questions: Circle the number that best reflects your opinion. Return completed to Lou Harnisch, Kathy Greenawalt, or India Gordon.

	ITEM OR QUESTION	6-----5-----4-----3-----2-----1 Highest Lowest
1	The level of content knowledge gained through your research experience.	6-----5-----4-----3-----2-----1
2	The level of content knowledge gained through enrichment and collaboration with peers and staff.	6-----5-----4-----3-----2-----1
3	The extent you associated professionally with someone in your research group or within the ANL community.	6-----5-----4-----3-----2-----1
4	The level you collaborated with the master teacher, program coordinator, and/or other DEP staff person.	6-----5-----4-----3-----2-----1
5	The capacity to translate the practice of science into my teaching and/or my classroom.	6-----5-----4-----3-----2-----1
6	The degree that you would recommend this program to your colleagues.	6-----5-----4-----3-----2-----1
7	The degree this program shows high quality implementation.	6-----5-----4-----3-----2-----1
8	Your level of understanding of the research enterprise at Argonne, the DOE, and its relationship to the country at-large.	6-----5-----4-----3-----2-----1
9	Is this program world class? Do all the pieces work together in creating a <u>unique</u> and <u>stimulating</u> experience?	6-----5-----4-----3-----2-----1
10	Your desire and ability to motivate students to enter or to remain in the STEM pipeline.	6-----5-----4-----3-----2-----1
11	The degree this program shows best practices (safety, motivation, problem-solving, communication)	6-----5-----4-----3-----2-----1
12	The extent this program has bolstered your confidence and your leadership activities.	6-----5-----4-----3-----2-----1
13	Your level of satisfaction with the ACTS deliverables and portfolio.	6-----5-----4-----3-----2-----1
14	Will there be formal publications resulting from your Argonne appointment?	Yes -----Maybe-----No

How did you learn about the ACTS Program?

- internet other Argonne mailing
 colleague at your home institution colleague at another institution
 Argonne employee other: _____

Please complete this written survey. Thank You for your honest and thoughtful responses.

1. Comment on your overall satisfaction with your research project and how effectively you and your mentor/group worked together to tackle it.
1. Were the facilities [egress, work space, conference rooms, internet, phone, computers, & copiers] you typically used satisfactory? If not, what should be improved or changed?
2. Were the lab instruments and equipment satisfactory? Explain.
3. At this time how do you “see” your summer experience with ACTS for Year 2 & Year 3 –in terms of availability, interests, and activities? [or how do you rate the three-year progression?] What changes would you recommend, if any?
4. Do you feel there was sufficient interaction & sharing within our TARA/TAI group? Suggestions for next year?
5. Do you feel there was sufficient interaction & sharing with other groups: TAI, TARA, PST, Fermilab? Suggestions for future programs?
6. How valuable were the enrichment experiences (seminars, tours, trips, etc)? Please comment. What things should be scheduled for next summer?
7. In what way(s) do you see the program benefiting your teaching and/or engaging students beyond your classroom? How can this goal be improved?
8. At this point what were/are the strengths of the program?
9. Do you suggest any areas or ways for improvement of the program for the future?

Anecdotal Comments: What did you do this summer that stands out as an important or an “Ah Hah” moment in your experience? We need YOUR honest heart-felt words!

Optional Questions

1. List any scientist(s) outside of DEP or your research group you have talked with during the program about your research or deliverables. How did they guide or help you or your team?
2. Indicate the value of the PBL training by IMSA for your ed module and for your PD. How could it be improved?
3. Make suggestions on keeping “ACT graduates” connected to ACTS and to Argonne resources after the 3rd year concludes.