HP Innovations in Education Grants

2009 Request for Proposals – College & University (USA)

"Re-imagining undergraduate engineering education"

Focused on college & university undergraduate degree programs in engineering, computer science, & information technology

Introduction and goals

With a global economy that interconnects every country around the world, the demand for highly qualified high-tech professionals increases. Attracting students into and graduating students from high-quality, high-tech degree programs is a growing challenge. Evidence is emerging that the effective use of technology combined with exemplary teaching can positively impact student academic outcomes.

The HP Innovations in Education grants for higher education institutions in the US are targeted at the administrators and key faculty responsible for undergraduate degree programs. In the US, the focus is on proposals from administrators and faculty who are enhancing degree programs in engineering, computer science, information systems, and information technology. HP is inviting proposals from eligible education institutions that are committed to exploring the innovations that are possible at the intersection of teaching, learning, and technology. The HP Innovations in Education grant recipients will become a global network of educators around the world who are designing the future of undergraduate high-tech education.

Each grant supports program improvement in four key areas:

- **Leadership Capacity** – creating a global network of administrators and key faculty who implement innovative approaches to curriculum, instruction, and the use of technology to enhance undergraduate learning and research
- **Digital Learning Environments** – using technology to fundamentally redesign the learning experience in ways that lead to increased student engagement and academic success; can include innovations in online learning, virtual worlds, gaming for learning, and simulations
- **The Undergraduate Design & Research Experience** –making engineering real and relevant by involving engineering undergraduate students in design and

research challenges that address real needs in society; can include local and/or global service learning
- **Pre-College Outreach** – engaging administrators, faculty, and undergraduate students to work with secondary school teachers and students, increasing awareness and interest in high-tech degree programs and careers

In 2009, HP will select exemplary proposals from approximately 10 campuses across the United States. This request for proposals is openly available to any public or private, 2 or 4 year accredited college or university. Grants will be awarded on a competitive basis. Not all campuses that apply will be selected. Institution eligibility, proposal review considerations, application instructions, and key due dates are listed below. Proposals must be submitted online in English, no later than 5:00 p.m. Pacific Time on March 30th, 2009.

Description of the grant award

Each 2009 HP Innovations in Education award for colleges and universities in the U.S. supports a campus team of 8 faculty and administrators to pilot various uses of technology to enhance the targeted degree programs and courses. The grant, valued at more than $240K (list price), includes several elements:

- **Faculty & Administrator solution** (for 8 participants):
  - HP Tablet PC with extended life battery
  - Widescreen Monitor, dock with DVD drive, keyboard, and mouse
  - Digital projector

- **HP Digital Classroom:**
  - **30 HP Tablet PCs, storage cart, and digital projector** – Tablet PCs are "convertible laptops" that include a digital pen for drawing directly on the screen. They are favorite among students and teachers who are engaged in teaching and learning subjects that are diagrammatic in nature, such as math, science, and engineering. See www.hp.com/go/hpteach-hied for examples of how faculty are using tablet PCs to create engaging and powerful learning experiences. For additional reading, visit our blog, "Teaching, Learning, and Technology in Higher Education" (www.hp.com/go/hied-blog).

  - DyKnow Classroom Interaction Software (38 licenses for one year ASP service hosted by DyKnow), Initial Training (online) – www.dyknow.com
  - Two HP ProCurve wireless access points
  - 44" wide format printer for CAD drawings, data charts, presentation posters, and a wide variety of printer consumables
  - Tier Two Technical Support (50 incidents prepaid)

- **HP Design Lab with remote access**:
  - **16 HP Blade Workstations** and 42" rack, with workstation management software, HP Session Allocation Management software
  - 16 widescreen monitors, tablet pc docks with DVD drive, keyboard, and mouse
  - One day on-site engineering support, HP 1y 9x5 3-incident Blade Workstation Software Tech Support (2hr response), and HP 1y 9x5 3 Incident Session Allocation Manager (SAM) SW Tech Support
  - Registration for one person to attend a three day HP Blade Workstation training event

- **Remote Graphics Software** to access the workstations anywhere across campus, or beyond! The value of RGS on HP Workstations is that it enables "Workstation Computing Using Graphically Intense Applications from Anywhere" with the following benefits:

    - MORE EFFECTIVE CAPITAL UTILIZATION: While workstation labs are normally closed at night and not utilized, with RGS students can access the workstations remotely late into the night; in addition, a campus can expand the use of its entire existing workstation pool without having to invest in more lab space
    - GREEN: students with remote access to computing power do not need to make an extra trip to campus simply to do their homework, lab, or research
    - ECONOMICAL: first generation college students are extremely cost-sensitive; students are complaining about the cost of college (textbooks, laptops, parking). With RGS and HP Workstations, all they need is a "normal laptop" or tablet pc plus high-speed internet from home; they don't need to buy heavy and expensive workstation laptops; in addition, students don't have to buy expensive high-end software licenses (and they won't have to pirate it either)
    - ONLINE LEARNING: It supports the expansion of online courses and labs that engineering programs can offer
    - TRUE MOBILITY and POWER: Students now have the BEST OF BOTH WORLDS: students with existing laptops and ultra-mobile tablet pcs now have access to high-end workstation power when they need it

- **HP Virtual Training Room** – Incorporate synchronous online events into your project. The grant includes an institutional license that supports up to 10 concurrent users, 24x7 for 10 months. Each room supports audience interaction and polling, a video/webcam window for the presenter, Voice over IP audio, and more. See http://education.hp.com/hpvr for more information. Educational uses of an HP Virtual Training Room could include:

    - Webinars for/by students
    - Students who are ill or otherwise unable to come to school
    - Guest speakers for career awareness
    - Webinars or workshops for Faculty Professional Development

- **Faculty Development**:
    - **ISTE peer coaching** - The International Society for Technology in Education (www.iste.org) will provide a coach/mentor to work with the project team on the effective use of technology for teaching and learning, and on evaluating results. Peer coaches will be selected based on their experience using technology to teach in higher education. Each peer coach will be funded to attend an initial face to face meeting with the grant team, and will be available to the team online throughout the grant period.
    - **DyKnow "Getting Started" webinar**– To familiarize faculty with the use of DyKnow Vision software for engaging students and gathering real-time feedback, DyKnow will provide a "Getting Started" webinar.

- **Cash grant totaling $20,000**, payable in two installments ($15,000 at the beginning of the project, and then $5,000 after the first project update report and video is submitted at the end of the first school year)

    This funding can be used for:
    - faculty time, offsetting the normal course load, or to share with other faculty and/or

interns supporting the project
- the purchase of additional project materials, including a wireless router, a digital projector or software
- the costs of a public campus celebration event or reception at the beginning and/or conclusion of the first year of the project
- miscellaneous travel expenses related to attending conferences to disseminate best practices that emerge from the project
- support for Pre-College Outreach
- the production of a short project documentary video

Note: The cash portion of this grant comes to the institution as an unrestricted cash award. HP will not allow the cash award to be used to finance indirect costs.

- **Attendance at the HP Worldwide Innovations in Education conference** in early 2010, a gathering of all recent grant recipients. HP will provide registration, travel and hotel accommodations for three participants from each institution to attend this event. Additional registrants can participate on a "self-funded" basis, as space allows.

Eligibility requirements

This grant program is competitive - not all applicants will receive an award.

To be considered for a 2009 HP Innovations in Education grant for colleges & universities, applicant institutions must:

- Be an accredited public or private, 2-4 year tertiary (college/university) institution
- Be validated as compliant with US laws and regulations
- Be an organization that is consistent with HP's non-discrimination policies and practices. Institutions are not eligible if their primary mission is religious, sectarian, discriminatory, political, or if the organization discriminates on the basis of race, creed, religion, gender, national origin, sexual orientation, age, disability, or veteran status.
- Propose innovations that enhance learning in at least one of the following degree programs:
    - Engineering
    - Information Systems / Information Technology
    - Computer Science

- Describe a project team that includes
    - A lead administrator (Dean, Rector, or equivalent) responsible for the degree program
    - The IT Director who serves the faculty and students in the degree program
    - 3-5 faculty members who will be using the technology for teaching
    - An expert advisor in teaching, learning sciences and/or instructional technology

- Have pre-approved the HP "Terms and Conditions" associated with HP grants

- Meet the minimum infrastructure requirements to support the use of the technology
    - Adequate infrastructure (electricity, buildings, internet access, etc.)
    - Existing or planned high-speed wireless computing environment
    - IT resources that will be committed to support the use of the granted equipment

Review criteria

To receive an award, a proposal must provide exemplary answers to the questions provided in the

HP Request for Proposals. Criteria to be used to evaluate the proposals will include, but will not be limited to:

Primary criteria

- Proposal includes plans for innovation in all four facets focus dimensions: Leadership Capacity, Digital Learning Environments, Undergraduate Design & Research Experiences, and Pre-College Outreach.
- Proposal is likely to be scalable and sustainable.
- A collaborative, committed, and complete campus/department team.
- Project proposals must:
    - Clearly describe **why** this project is important - what fundamental teaching and learning issues are being addressed through the project
    - Describe in **what** ways the granted HP technology will be used to address the issues expressed in the "why" question above.
    - Include **how** the "success" will be measured (e.g., have specific plans for measuring the success of the project in terms of student learning outcomes such as improved grades, increased enrollment and retention, improved performance on recognized tests, increased quality of student project etc.) in comparison with baseline data from the years prior to this project
    - Have specific plans for communicating the project outcomes, on campus and beyond
- The project contributes toward the attainment of the institution's vision and plans for broader deployment of mobile technology solutions in the learning environment

Preference will be given to education institutions that:

- Serve significant numbers of under-represented, low income or otherwise marginalized populations of students (e.g. women pursuing computer science)
- Propose projects that increase the institution's capacity to offer project-based learning experiences for undergraduate students engaged in community service (local or abroad). These programs are sometimes described as "service learning" or "engineering abroad" programs where students experience the relevance and excitement of applying engineering principles to address real societal issues.
- Engage partner organizations
- Have a source of matching funds than will be applied to this project, should it be selected for funding

Grant recipient commitment (two years)

Innovation takes time, so receiving a grant of this size is a significant commitment on the part of everyone involved. While the technology and the professional development are provided in year one, the grant period is defined as two years, during which the project will be implemented, monitored and measured.

This grant of equipment and cash is awarded to the education institution. The HP equipment is the property of that organization, to be used by the principal investigator and team for implementation of the proposed project.

By accepting the grant award, the organization, its directors and staff members make the commitment to:

- Complete the proposed grant project
- Assign one person on the team to be the primary point of contact for HP and ISTE; this person will be the responsible for communicating important grant-related information to the entire team
- Provide the proper IT infrastructure and support to ensure program success, including data

center space for the HP Blade Workstation rack, plus installation and maintenance of all granted equipment

- Create a public webpage that describes the project, including:
    - Title, abstract, contacts
    - Project rationale (why this project was chosen; what educational issues it is meant to address)
    - Implementation (changes in pedagogy; use of technology)
    - Impact (on teaching and learning)
- Create a brief video that explains the context and impact of the project; publish the video on a publicly available website (e.g., YouTube, Vimeo, TeacherTube, etc.)
- Provide HP with private project update reports annually for two years by responding to an HP web-based survey. The first report will be due in May 2010. Data requested will include:
    - The number of students impacted
    - The extent to which the project has impacted student learning (on a scale of 0–4), with a description of the evidence collected (open-ended text describing the outcomes measured)
    - The extent to which the project has impacted teaching (on a scale of 0–4), with a description of the evidence collected (open ended text describing the outcomes measured)
    - Unexpected outcomes and other comments
    - Summary statement from key administrators
    - Quotes from students and faculty
    - Suggestions for how HP can enhance this grant initiative
- Participate in the HP Innovations in Education conference in early 2010, which includes an informal presentation poster session
- Abide by the HP Terms and Conditions that were accepted during the application process. Please reference the terms and conditions of gift that were sent to you during the application process.

Required elements of your proposal

Proposals must provide answers, in English, to the questions below. Answers will be submitted through a web-based system. Additional content and attachments will not be accepted. In the web-based system you will be asked to enter responses to the questions below directly into fields in the order shown. You may want to first compose your responses to these questions in a text file, then cut and paste the responses into the corresponding fields of the online grant application. Use plain ASCII text only (no special characters, please!).

Proposal overview

1. HP Reference – If an HP employee invited your district to submit a proposal, please indicate that employee's name and email address
2. HP Region – To help us easily organize proposals coming in from around the world, please indicate your "HP region" (for this RFP, select "USA" in the pull-down menu).
3. Project name - A brief title for your project.
4. Project executive summary (200 words maximum) - Provide a high-level overview of your project in an executive summary.
5. Number of Students impacted (number) – In the initial two years of your proposed project,

approximately how students will be participating in the proposed project?

6. Number of Marginalized Students impacted (number) – In the initial two years of your proposed project, approximately how many of the participating students are considered low-income, under-represented, and/or marginalized?
7. Description of Students Impacted - Please provide any additional information that will help us characterize the students who will be impacted by your project (100 word maximum)
8. Course(s) impacted - Which degree program(s) and course(s) will be impacted by this project?

Innovation Details

For examples of previously funded projects, see www.hp.com/go/hpteach-hied

For 2009, competitive proposals will address four areas of innovation:

- **Leadership Capacity** – creating a global network of administrators and key faculty who implement innovative approaches to curriculum, instruction, and the use of technology to enhance undergraduate learning and research
- **Digital Learning Environments** – using technology to fundamentally redesign the learning experience in ways that lead to increased student engagement and academic success; can include innovations in online learning, virtual worlds, gaming for learning, and simulations
- **The Undergraduate Design & Research Experience** –making engineering real and relevant by involving engineering undergraduate students in design and research challenges that address real needs in society; can include local and/or global service learning
- **Pre-College Outreach** – engaging administrators, faculty, and undergraduate students to work with secondary school teachers and students, increasing awareness and interest in high-tech degree programs and careers

9. Describe why this grant is important to your institution (500 word maximum); include the learning, teaching, and leadership challenges facing your program that will be addressed through the proposed project.
10. Describe the innovations your project proposes to explore or expand (700 word maximum). Provide examples of how you intend to enhance Leadership Capacity, Digital Learning Environments, the Undergraduate Design & Research Experience, and Pre-College Outreach. Include a description of the changes you anticipate in how faculty teach and students learn. If your proposal includes aspects of service learning, please describe them here.
11. How will the technology provided through this grant be used to support these innovations? (500 word maximum) What other technology will be incorporated in the innovation work, if applicable?
12. How are you going to measure the results of this project? (500 word maximum) Describe the outcomes you intend to monitor that support the academic learning & teaching challenges mentioned earlier in your proposal. Helpful resources on measurement and evaluation are available at http://www.iste.org/research/planning.
13. Provide a timeline for project completion with periodic milestones and celebration dates identified. (200 words maximum) The project timeline should commence when the hardware is delivered and continue for 24 months (two academic years). HP requests that each project team report results annually for two years, though we hope to stay in touch for years to come.

Project Team

The 2009 HP Innovations in Education grant program for colleges & universities is designed to be a catalyst for enhancing engineering, computer science, and information technology degree programs. To that end, seeks proposals that include **up to 8 participating faculty and administrators** who are responsible for the design and implementation of the undergraduate learning experience. This should include the degree program's key administrator (i.e., the Dean or Rector), an IT director responsible for supporting the technology needs of the program's students and faculty, and teaching faculty who will be using the technology that is provided by this grant.

While a campus team may be more extensive, we only need the contact information for the 8 participating faculty and administrators who will be funded by this grant.

14. Team Leader - Please select one person to be the primary contact for communications from HP and ISTE. This person can be a faculty member or administrator, and must have direct email access to all participants. For this individual, please provide the following contact details: Full Name, title, address, phone, fax, e-mail.
15. Lead Administrator – For the participating campus administrator (Dean, Rector) responsible for the degree program, please provide the following contact details: Full Name, title, address, phone, fax, e-mail.
16. Lead IT Administrator - For the participating IT director responsible for supporting the technology needs of the program's students and faculty, please provide the following contact details: Full Name, title, address, phone, fax, e-mail.
17. Other Project Participants - Describe the additional team members (not already listed above) who will be active participants in the proposed project. Include each person's name, title, email address, and the role they will play on the project team.

Administrative support and approval

18. Approving Administrator – Please provide contact information for the "executive sponsor" or key administrator from your institution who is authorized to approve the acceptance of this grant, should your proposal be selected - Name, title, address, phone, fax, e-mail.
19. Statement of support from key administrator(s). Initial and ongoing project success depends on the active support and involvement of district leaders. Please indicate what type of support (financial or otherwise), leadership and involvement will be provided by the administrator. Indicate what campus funding, services, or matching resources will be committed to this project, should it be selected; also indicate what support will be provided to ensure the long-term success of the project, beyond the two year grant period.
20. Assurance of eligibility – Does your institution meet the eligibility requirements stated in this RFP? (ref: page 4)
21. Assurance of commitment – Is your institution prepared to fulfill the grant recipient commitments described in this RFP? (ref: pages 5-6)
22. Approval of HP terms and conditions - Do you, as an authorized administrator, approve the HP terms and conditions? To be considered for a grant, an authorized campus administrator must accept the HP terms and conditions of gift prior to the submission of the proposal. Please reference the HP terms and conditions of gift provided by HP for the US
23. Approval of HP Privacy terms and conditions - Please confirm that you understand HP's data privacy policies (http://www.hp.com/hpinfo/globalcitizenship/privacy/masterpolicy.html),

and agree that the information your school has provided may be used by HP to send you information related to this grant application and other HP Philanthropy related programs.

Institution Information

24. Institution Legal Name – Official school district name, mailing address, phone, fax
25. Institution mission statement - Describe the mission of the institution
26. Students served - Please enter the total number of secondary students (middle school, junior high, and high school) served by your school district
27. Student Ethnicity (US Only) - Indicate the percentage of students at your school by ethnicity (percentages must total 100%). Categories are African American, Asian/Pacific Islander, Caucasian/White, Hispanic, Native American, Other.
28. Institution tax ID number - Tax number appropriate for your country. (For example, in the U.S. this is a 9-digit number formatted XX-XXXXXXX)
29. (not applicable for hied proposals)
30. Tax exempt? ☐ Yes ☐ No If tax exempt, HP may request additional documentation
31. Shipping instructions - Shipping contact's name, phone, fax, e-mail, shipping address for equipment delivery. (A physical address, capable of receiving multiple pallets of equipment, is required; no P.O. boxes please! All equipment will be delivered to one drop-point at the school district; redistribution of equipment is the responsibility of the school district.)

Key Dates

- Online web-based proposal submission system opens **early March, 2009**. Visit http://grants.hp.com at that time to access the online submission system.
- Proposal submission deadline: **March 30th, 2009 @ 5:00 pm Pacific Time.**
- Notification of recipients: HP will make award announcements no later than **May 15th, 2009.** A link to the list of institutions that have been funded will be online at http://grants.hp.com

About HP

HP, the world's largest technology company, simplifies the technology experience for consumers and businesses with a portfolio that spans printing, personal computing, software, services and IT infrastructure. Global citizenship is HP's comprehensive commitment to hold ourselves to a higher standard of integrity, contribution and accountability, helping us balance and align our values and business goals with our impact on society and the planet. We aim to enrich the quality of life for people and communities around the world to be a force for positive and lasting change. Our areas of focus include ethics and compliance, environmental sustainability, privacy, human rights and labor practices and social investment. Learn more about HP's commitment to global citizenship at www.hp.com/hpinfo/globalcitizenship/. More information about HP (NYSE: HPQ) is available at www.hp.com.

For further information

- For answers to specific questions about the HP Innovations in Education grant program or application process, contact hpiie@iste.org
- For general information about HP Global Social Investments, visit http://grants.hp.com

- Examples of previously funded higher education projects from around the world are available at www.hp.com/go/hpteach-hied
- For ongoing news and examples about education technology, you may also subscribe to our blog, "Teaching, Learning, and Technology in Higher Education" www.hp.com/go/hied-blog for descriptions of emerging best practices and pointers to other information related to technology in and beyond the classroom