

# **Mini-Grant Offering: Undergraduate Course Development Support**

## **Theme: The Future of NO Work and Artificial Intelligence**

The Office of the Vice Provost for Undergraduate Affairs and the Division of Experience-Based Learning and Career Education through the UC Forward Program, will support undergraduate coursework for 2019-20 course offerings that address the **impact of advances in Artificial Intelligence on the Future of Work**. Up to eight courses will be funded with course development awards of \$5000 each. Activities are intended to promote progressive pedagogy and associated research inquiry. Coursework interactions and outcomes are anticipated to lead to collaboration among diverse disciplines in both teaching and ancillary research opportunities in any related area of interest. Coursework proposals are sought from all disciplines, including those not traditionally focused on AI studies.

### **Background and Challenge**

The swift development of Artificial Intelligence (AI), and its convergence with developments in the field of robotics and data analytics, will affect many professions profoundly over the next 5-20 years. While labor economists do not predict wholesale job destruction, many do predict that between 40% and 80% of the tasks currently associated with specific professions will cease to exist by 2040. Every aspect of work that can be automated using machine learning – from recognizing cancer cells to interpreting the financial performances of companies – eventually will be outsourced to intelligent machines.

Paul Mason, emerging technologies director for Innovate UK, foresees, “the survival of the most adaptable.” The ability to acquire new and necessary skills quickly will have to augment foundational learning. Both foundational and ongoing education will play a key role in helping people develop these new survival skills, but necessarily will look very different from most educational offerings we see today.

It is critically important that colleges and universities re-imagine their roles, redesign their curricula, and adopt very different pedagogical strategies to address this inevitability.

The University of Cincinnati has distinguished itself as a leader in preparing its students for the world of work and placing them in professional workplaces. Our academic and administrative leaders continue to explore cutting edge practices for doing so through many approaches, including the proposed Co-op 2.0 plank of the “Innovation Agenda” Platform included in the “Next Lives Here” Presidential vision. Successful proposals for the UC call for courses described below will add to the university’s understanding of the future dynamics of the workplace and how innovative pedagogy can position UC as a leader in 21<sup>st</sup> century education. This Call seeks to develop pedagogy that will help assure that UC is a place where students are prepared for survival in an unsettled and dramatically different economy and society.

In order to position the University of Cincinnati as a leader in 21<sup>st</sup> century education, we need to identify and support UC faculty members who understand these issues and who already are actively involved in questioning current practices and preparing students for the uncertain future they face. This Call incentivizes faculty members to develop relevant, powerful, interdisciplinary courses for our students’ benefit. The course-based work of these faculty members can point the way for a profound change in our pedagogical approach.

### **Suggested Format and course products**

UC Forward promotes transdisciplinary interaction in the classroom and engagement with outside collaborators. Course design should be based upon analysis of pedagogy with intent to generate new knowledge and improved methods that include cross-disciplinary work and collaboration both internally and externally. Cross-disciplinary coursework proposals, team-taught by faculty of different programs in collaboration with external partners including employers, industry associations, and policy groups are ideal for consideration. Pairing or clustering of coordinated parallel individual courses of separate disciplines is also encouraged and the cross-listing of these courses is practical. Proposals may include existing and/or new courses.

Coursework that addresses this challenge can take many forms including seminars, studios, labs, practicums, capstones, etc. Experiential learning opportunities and service-learning courses are ideal formats. A coordinated set of coursework is sought for the 2019-20 academic year through this funding program that may be offered by a number of different programs during the same semester, or in an organized sequence over two semesters. Parallel or spin-off research or technical service is welcome but not included in this scope.

Course products are expected and may vary to include summary reports, student research papers, posters, web pages, public displays, or other documentation.

### **Funding and Timeline**

\$5,000 in funding will be provided to each participating course. Funds may be used for any expense associated with the course but may not be used for faculty salaries or for adjunct faculty costs, except if it is to release the applicant faculty to teach the proposed course or to have an adjunct faculty member join in a single multi-disciplinary course. Half funding will be issued at the beginning of the semester with the remainder issued on submission of the final course products and documentation.

November 20: Call issued

December 11: Indication of Intent to apply (not mandatory) at [www.uc.edu/cdc](http://www.uc.edu/cdc)

December 13, 12:00 pm: Info Session, 220 Van Wormer

**January 18, 2019, 4:00 p.m.:** Grant proposals due by email to [frank.russell@uc.edu](mailto:frank.russell@uc.edu).

*February 1, 2019: Announcement of Awards*

*Selection Process:* Grant proposals will be reviewed by a committee composed of representatives of the Provost and UC Forward.

Selected coursework and the production of student course products must be completed by end of exam week of each semester. Summary reports are due 30 days after the end of the semester..

See [www.uc.edu/cdc](http://www.uc.edu/cdc) for grant updates, FAQs, and a list of potential faculty collaborators.

### *Submission Requirements*

Please submit a maximum length three-page document containing the following course information: (if multiple courses, length may extend to 6 pages not including attachments)

- Course information
- Describe your course and how it addresses the challenges outlined above.
- Describe the anticipated course products.
- Describe how your course fits with the UC Forward experience and vision (cf. <http://www.uc.edu/careereducation/experience-based-learning/uc-forward.html>).
- Suggest other parallel courses that your course might coordinate with.
- Indicate if this course represents a new offering or the enhancement of an existing offering. For the latter, describe how this proposal, if implemented, changes the existing course.
- What are the course's Student Learning Objectives and the metrics you will use to assess them. (attach draft syllabus if available)
- What are the anticipated enrollments by College and/or program?
- When and where the course will be offered.
- Who are the external partners (specific names) anticipated, how did they become involved, and what will be their specific role in the class?
- Who is in your team of full time instructors or visitors and what will be their roles in the course? (Proposing full-time faculty should be the lead instructor. If multiple courses, lead instructor of each course should be full-time faculty)

- If the proposal includes a pairing or clustering of single discipline courses, describe specifically how contact between the students and faculty of these separate courses will take place, how frequently, in what format, and where.
- Describe the funding needs and rationale. Include any other internal and external resources (dollars, in-kind) that you expect to attract in support of the new course offering.
- Indicate whether this course(s) is intended to be repeated annually.

#### *Other Requirements*

- Applicants must be full time faculty of any rank.
- Multiple faculty members of diverse disciplines must be involved as instructors in the proposal.
- If selected as a finalist, a letter of support from the relevant college Dean(s) and school/program Director(s) will be requested.
- Selected courses must attract an enrollment of no fewer than 16 students to receive funding. If separate courses and/or cross-listed, each course must have a minimum enrollment of 16 students (unless single faculty is assigned to both cross-listed courses).
- Applicants must participate in the End of Semester Exhibit and Open House at the 1819 Innovation Hub each semester to share their course products (date tbd)
- In addition to the student produced course products, a summary report is required to document the course development, course implementation, course expenditures, and pedagogical implications for the applicants future teaching.
- Each semester, to promote communication, coordination, and interaction across classes and disciplines connected to this effort, participating faculty and students of their courses will be asked participate in a one credit hybrid in-person/on-line multi-disciplinary seminar offered by UC Forward. This seminar will feature talks by each participating faculty, thought leaders, and outside collaborators.
- Ongoing reflection on the theme will also be promoted in workshops and exhibits starting in Spring 2019 (see below)

*For additional information, contact Frank Russell, Director, UC Forward, at [frank.russell@uc.edu](mailto:frank.russell@uc.edu) or on (513) 556-3282.*

#### **Ongoing UC Reflection on These Issues: February 2019 FONW-AI workshop**

It is essential that ongoing discussion about and reflection on these issues occur at UC. To help quicken this dialogue, UC Forward will offer in the Spring Semester of 2019 a workshop for faculty and administrators on AI and the Future of Work. An open invitation will be tendered prior to the forum, but those who wish to receive occasional updates on forum design, featured speakers, etc. – or who might wish to fill a speaker or facilitator role – should send email to [terry.grundy@uc.edu](mailto:terry.grundy@uc.edu).

#### *Wide ranging Indirect effects of Artificial Intelligence on society and culture*

The impact of the emergence of AI and related technologies on labor markets inevitably poses formidable **public policy challenges**. A milieu without jobs for many people and tenuous employment even for those who have jobs is one in which individuals and families may not be able to rely on steady income – and the national economy, based as it is on consumption, is weakened. Challenges of this magnitude will require a public policy response and some governments (though notably not that of the United States) are considering strategies like Universal Basic Income (UBI), the distribution of a “citizens’ dividend,” etc. UC public policy experts would be wise to focus on the question of how appropriate responses to the effects of AI on local, state and national economies can be developed and implemented.

Concomitant to the economic challenges posed by the advent of AI are the very troubling challenges it will pose to the way people conduct their lives, as **creative individuals and as engaged citizens**. If the job destruction that economists predict occurs, multitudes of people will be deprived of what historically has been one of the most reliable aspects of identity formation, the work role. If our society is able to solve the problem of income/consumption in an economy with many fewer jobs, individuals receiving income from something like UBI will be left with significant amounts of “free” time. How will each person forge a sense of purpose and identity in this historically unprecedented milieu? How will they construct new, creative roles for themselves?

Historically, the Humanities have provided important guideposts for people who have a certain amount of leisure and are seeking ways to live meaningful and contributory lives. Humane studies like philosophy, classics, religious studies, cultural studies, history, literature, and languages – along with studies in the fine and performing arts – could become important resources for personal fulfillment for people displaced from the world of work. Likewise, expertise and skills in these areas could make it possible for people to create new modes of work for themselves that are not susceptible to job destruction by AI, robotics, advanced data analytics, etc.

Unfortunately, the Humanities and the Arts have languished in many universities’ curricula as students have been steered to STEM studies. This has been the case to some degree at UC and we must carefully consider whether the way forward will require us to reinvigorate the Humanities and Arts at our university by providing new resources for them, linked to the expectation that those who teach them reform their pedagogical practices to respond to the dramatic challenges that lie ahead and the expectation that students take a carefully designed cluster of Humanities/Arts courses during their undergraduate years.

10.20.18