

## **Service Learning Pathways**

(Institutional Self-study, Criterion Five, p. 90)

### **Project Summary**

Illinois Institute of Technology proposes to adapt and implement Purdue University's Engineering Projects in Community Service (EPICS) Program at IIT by creating a formal service learning pathway experience, with team projects for undergraduate students at its core, and embedded within our established Interprofessional Projects (IPRO) program. This adaptation and implementation project will expand opportunities for IIT's students to engage in community service work that serves non-profit organizations on a long-term basis. The following specific elements of the EPICS model will be adapted: (1) continuous multi-year formal partner relationships, (2) focus on community, social service, and other non-profit organizations and themes, (3) accommodation of organizations based on need and not ability to pay, (4) methodologies for managing community service projects, (5) content for conveying principles of service learning, and (6) processes for students to participate on the same team over several semesters.

The intellectual merit of our approach centers on establishing a four-part service learning pathway through which students: (a) develop a context and culture for participating in an extended community service learning experience, including insight derived from a customized "service learning body of knowledge"; (b) engage in on-going service learning team experience, working with non-profit organization partner; (c) reflect upon the lessons learned during this experience and providing valuable feedback to enrich the experience for those who follow; and (d) act as service learning ambassadors, as team leaders, as IPRO fellows and IPRO scholars, and as alumni mentors.

IIT is gaining prominence in multidisciplinary team-based project learning through its distinctive IPRO program, initiated in the spring of 1995 as a pilot effort. This effort was bolstered by National Science Foundation (NSF) support through the DUE Institution-Wide Reform Program. By 1998, an IIT undergraduate general education requirement was established through which all IIT undergraduate students complete at least two interprofessional project experiences that are each one-semester, three-credit-hour courses. In the context of the challenge of adapting the EPICS model, most IPRO projects are currently completed in one or two semesters, thereby limiting the size and scope of the community projects that can be undertaken. There is also significant turnover in team members that currently affects the potential for readily maintaining

longer-term sustained client/partner relationships. The EPICS model provides proven methods that permit IIT to create a formal service learning pathway via the IPRO program. Creation of the Service Learning IPRO (ServPRO) Pathway concept via adaptation of EPICS elements is compatible with our aim to establish methodologies that support themed clusters of team experiences, including entrepreneurship, service learning, international, research, design and process improvement. In developing a formal pathway of service learning team projects, we will integrate EPICS core values within the IPRO program: (1) structure the context and culture for a ServPRO pathway; (2) develop and demonstrate a servant leadership development process; (3) develop and demonstrate a service learning team reflection process; and (4) formalize ServPRO project partnerships with candidate non-profit organizations.

There is a tremendous opportunity to achieve a broader impact via the service learning pathway:

- The City of Chicago (encompassing the Chicago Public Schools, Chicago Park District, Chicago Fire Department, and Department of the Environment) is a rich resource for developing diverse, significant, and lasting community partnerships, particularly those affecting K-12 students and their communities.
- It is also clear that with IIT's location and access to prominent, national non-profit and other social organizations, and unique institutions that include the world-renowned museums and zoos, there will be exciting possibilities for involving the national EPICS program.
- IIT is in a position to capitalize on our deepening collaborations with other prominent universities in the Chicago area including The University of Chicago, Northwestern University, University of Illinois at Chicago, DePaul University, and Loyola University Chicago to build unique partnerships with community organizations.
- IIT is developing areas of special competency in building a comprehensive team program assessment process, knowledge management system, and body of knowledge in environmental sustainability and e-learning games that offer the potential for collaboration and extension to other team project programs.

## **Results from Prior Support**

Illinois Institute of Technology (IIT) received NSF support through the DUE Institution-Wide Reform Program entitled "Institution-wide Implementation of the Interprofessional Projects Program at IIT" (DUE 98-50064 in the amount of \$200,000 between July 1, 1998 and June 30, 2002). This grant helped to establish the IIT Interprofessional Projects (IPRO) program. Thomas Jacobius, director of the IPRO program since its inception, was the principal investigator of that grant and is the proposed PI herein. The institution-wide reform grant was accomplished in collaboration with faculty from various academic units, and had the highest levels of support from the president and board of

trustees. The interprofessional course has been institutionalized as a general education requirement for all undergraduates, with about 70 IPRO team projects completed each year involving over 700 students and 40 faculty members. Students must complete two three-credit-hour “IPRO projects” to graduate in any of IIT’s undergraduate degree programs.

This NSF grant particularly made important contributions to the fields of interdisciplinary and engineering education, including the fulfillment of criteria established by the Accreditation Board for Engineering & Technology (ABET). The focus of this prior work was to develop and demonstrate the efficacy of the interprofessional course, a three-credit-hour semester-long multilevel multidisciplinary student team project experience. This experience offers valuable insight concerning the process of institutionalizing a team-based general education requirement for all undergraduates. IIT’s experience demonstrates to other universities how to integrate a cross-functional open-ended problem solving team experience into the curriculum, relying on faculty from any field, to foster collaboration among students across disciplines and professions. Outcomes indicate that the IPRO experience prepares students for team-based workplace environments. Additional project outcomes have included patent applications, refereed journal and conference publications, new venture developments, and new products and or services offerings.

The adaptation and implementation opportunity outlined in this proposal offers an exciting approach for advancing the IPRO program to provide greater social benefit, address national needs and build lasting and vibrant partnerships between students, the university and the community.

## **Goals and Objectives**

Integration of community-based work for service organizations into an engineering curriculum has been shown to be an effective means of meeting the needs of both stakeholders<sup>1</sup>. Recent examples of engineering service learning include projects integrated into freshman-level introductory courses<sup>2</sup>, capstone senior design courses<sup>3</sup>, and multidisciplinary approaches<sup>4</sup>. Other initiatives have sought to integrate the co-curricular activities of student organizations with engineering service learning<sup>5</sup>. Such efforts build upon the growth of service learning in K-12 educational systems and on federal legislation enacted during the past decade<sup>6</sup>.

We propose to adapt and implement Purdue University’s Engineering Projects in Community Service (EPICS) Program at IIT by creating a formal portfolio of service learning team projects for undergraduate students at its core that builds on our

---

<sup>1</sup> Duffy, Tsang, & Lord (2000)

<sup>2</sup> Hobson, 2000; Tsang (2000)

<sup>3</sup> Catalano, Wray, & Cornelio (2000)

<sup>4</sup> Nagchaudhuri, Eydgahi, & Shakur (2000)

<sup>5</sup> Stott, Schultz, Brei, Winton Hoffman, & Marcus (2000)

<sup>6</sup> See, for example, Shumer (1997)

established IPRO program. This adaptation and implementation project will expand the opportunities for IIT's students to engage in community service work that serves non-profit organizations on a long-term basis. Our approach will establish a four-part service learning pathway through which students: (a) develop a context and culture for participating in an extended community service learning experience, including insight derived from a customized "service learning body of knowledge"; (b) engage in on-going service learning team experience, working with non-profit organization partner; (c) reflect upon the lessons learned during this experience, captured through facilitated debriefing discussions at the conclusion of each semester, and providing valuable feedback to enrich the experience for those who follow; and (d) act as service learning ambassadors (for pre-college students considering engineering and other careers), as team leaders (who encourage new students to join their service project team), as IPRO fellows and IPRO scholars dedicated to the service learning pathway, and as alumni mentors (who share their experience and provide professional insight that enlightens the team's work).

Students completing this service learning pathway will be better prepared to engage in life-long community service work at a high level of personal and professional satisfaction and as role models for others who follow them. IIT, as a prominent urban technological university, will be better able to partner with a social service or other non-profit organization through long-term, robust projects that address evolving needs for various community stakeholders. This proposal outlines a project to broadly, directly, and positively enrich IIT's entire curriculum by adapting critical elements of the EPICS model within the IPRO program and is submitted as a Type I comprehensive project via the CCLI – A&I Program. A formal service learning pathway will have a significant impact on IIT degree programs, within a growing number of capstone design courses, and on the greater Chicago community.

## **Project Plan**

We will integrate key elements of Purdue University's EPICS model within IIT's established IPRO program to create a special cadre of ongoing service learning project teams. This will significantly elevate and enrich our curriculum with opportunities for undergraduates in long-range service projects with community partners.

### **Purdue's EPICS Model is Proposed Source of Adaptation Materials & Methods**

Engineering Projects in Community Service (EPICS) is a service learning program that Purdue University initiated in the fall of 1995. Under this program, undergraduate students in engineering can voluntarily earn academic credit for participating on long-term project teams that solve technology-based problems for local community service organizations. A student can participate on an EPICS team for up to three and a half years, receiving one hour of elective credit each semester. The EPICS model enables ambitious community projects to be completed over several years. Teams of multidisciplinary undergraduates are matched with community service agencies that request technical assistance. Under the guidance of faculty and industry advisers, these

EPICS project teams work closely with their partner community organizations to define, design, build, test, deploy, and support system solutions that have a lasting positive impact on the served populations.

EPICS students learn many valuable lessons, including the role of the partner or *customer*; in defining an engineering project; the necessity of teamwork; the difficulty of managing and leading large projects; the need for skills and knowledge from many different disciplines; and the art of solving technical problems. They also learn many valuable lessons in citizenship including the role of community service in our society; the significant impact that their engineering skills can have on their community; and that assisting others leads to their own substantial growth as individuals, engineers, and citizens.

### **An IPRO Program Service Learning Pathway is Proposed Recipient of Adaptation Materials & Methods**

IIT is gaining prominence in multidisciplinary team-based project learning through its distinctive IPRO program<sup>7</sup>, which was initiated in the spring of 1995 as a pilot effort. By 1998, an IIT undergraduate general education requirement was established through which all IIT undergraduate students complete at least two interprofessional project experiences that are each one-semester, three-credit-hour courses. Graduate students are also encouraged to participate in IPRO project team courses for credit including electives that satisfy certain degree requirements. This graduate-level opportunity offers added practical experience and workplace connections in the context of their discipline. IPRO teams may include students from all academic levels (sophomore through graduate school, thereby encouraging *vertical integration* of the teams) and from across academic disciplines and professional programs (including engineering, science, business, law, psychology, design, and architecture, thereby ensuring *horizontal integration*). The majority of students complete the two-IPRO requirement during their junior and senior years, although there is latitude based on their individual progress toward completing their other courses and their motivation to seize the opportunity to join a particular IPRO team and remain with the team for multiple semesters.

The interprofessional course has five learning objectives: (1) function as part of a multidisciplinary team; (2) develop and apply communication skills via a variety of means; (3) develop and apply project management (and leadership) skills through the life cycle of a typical project; (4) engage in real world problem solving that is open-ended (including complex ethical and other non-technical considerations) and serves the needs of a mentor/stakeholder; (5) develop a desire for lifelong learning to help solve problems. A sixth objective pertains to the Entrepreneurial IPROs (EnPROs) and developing awareness about business planning principles.

IPRO projects are based on real-world topics, most often involving sponsors and clients that reflect the diversity of the workplace: corporations, entrepreneurial ventures, non-profit organizations, and government agencies. Since 1995, 433 IPRO project team

---

<sup>7</sup> Jacobius, Ruiz and Volland (2000); Jacobius (2002)

course sections have been completed, involving over 2,000 students, 100 faculty and 100 sponsoring organizations. Over time, themes of IPRO team experiences have emerged: research, design, process improvement, international, entrepreneurship, and service learning. The most notable formalized cluster to-date is the new venture Entrepreneurial IPRO (EnPRO) projects. Through the Ed Kaplan Entrepreneurial Studies Program, students may become Kaplan fellows, a two-year experience that involves completion of two EnPRO team projects, as well as mentoring opportunities, field trips, and participation in business plan competitions. This IPRO experience confirms the feasibility of creating a similar service learning pathway experience.

Projects have addressed international humanitarian efforts (e.g., working with United Nations High Commissioner on Refugees—led by the dean of IIT's Chicago-Kent College of Law, a team of law, computer science, and engineering students created a geographic information system (GIS) database to track loved ones and distribute supplies to Kosovar refugees); designs that focus on safety (e.g., a remote sensing device to detect non-accident releases from tank cars) or other interesting opportunities (e.g., a home run distance estimation system for the Chicago White Sox and the 2003 All-Star Game); and the community (e.g., an e-learning game to educate teenagers about credit risk, implemented by a high school outreach program of the Illinois Secretary of State Securities Division).

Unlike EPICS project teams, IIT's IPRO teams work with an extremely wide range of clients that include traditional corporations, small businesses, entrepreneurs, government agencies, and non-profit organizations of various sizes and types in the greater Chicago area. This has included Daimler-Chrysler, Motorola, Commonwealth Edison, Clow Elementary School, Chicago Public Schools, Hewlett Packard, The Marmon Group, Elkay Manufacturing, Don Bosco University (El Salvador), National Easter Seal Society, Gibson Guitar, Access Community Health Network, and the Museum of Science & Industry. Additional details are at [www.ipro.iit.edu](http://www.ipro.iit.edu).

This is made possible by the unique nature of the interprofessional course as a general learning platform that accommodates virtually any kind of organization and attracts the participation of any faculty member regardless of discipline or expertise. There are also a significant number of projects driven by the research interests of faculty from various academic units. More importantly, in the context of the challenge of adapting the EPICS model, most IPRO projects are currently completed in one or two semesters, thereby limiting the size and scope of the community projects that can be undertaken. There is also significant turnover in team members that currently affects the potential for readily maintaining longer-term sustained client/partner relationships. The EPICS model provides proven methods that permit IIT to create a formal service learning pathway via the institutionalized IPRO program.

While IIT's IPRO program can accommodate long-term relationships, the opportunity offered in adapting the EPICS model is to do so independent of a sponsorship fee, but in a way that can plant seeds for attracting philanthropic and other support, as Purdue has demonstrated. Creation of the ServPRO concept via adaptation of EPICS elements

is compatible with our aim to establish methodologies that support themed clusters of team experiences including entrepreneurship, service learning, international, research, design, and process improvement.

### **What will be adapted from the EPICS Model to create a Service Learning Pathway in the IPRO Program?**

We propose to enhance the undergraduate curriculum at IIT through service learning IPRO team sections within IIT's established IPRO program. The following specific elements of the EPICS model will be adapted and implemented: (1) continuous multi-year formal partner relationships, (2) focus on community, social service, and other non-profit organizations and themes, (3) accommodation of organizations based on need and not ability to pay, (4) methodologies for managing community service projects, (5) content for conveying principles of service learning, and (6) establishment of processes for students to participate on the same team over several semesters.

For example, in the EPICS approach, community service projects are often long-term (several years or more) and multi-faceted (involving a number of separate but related sub-projects). Thus, student participation on the same team can be sustained over a longer period of time (seven semesters instead of two), participants have time to build basic skills and knowledge that the project requires, learn about the history of the project, develop a rapport with the community partner, and eventually grow into positions of leadership. IPRO team projects, however, are generally short-term (e.g., one or two semesters) and focus on the timely development and demonstration of a single product or service, but without the obligation to follow through and deploy, maintain, upgrade, or replace products or systems. As a result, the student commitment to a project team is often limited; and, indeed, because of the diversity of the project topics and faculty leading IPRO teams, many students see value in gaining experience with totally different teams. While this does have merit and has been shown to be effective and beneficial to student learning, there can be richer opportunities for student development by building up a competency and expertise in the context of a single community partner's needs. Thus, IIT seeks to integrate within the IPRO program through ongoing service learning teams that meet needs of community partners in Chicago.

In order to appreciate the adaptation context for the proposed service learning pathway, it is useful to compare and contrast the EPICS and IPRO programs, as summarized in the table below.

**TABLE 1: Characteristics of EPICS, IPRO, and the Proposed ServPRO Pathway**

	EPICS PROGRAM (Purdue)	IPRO PROGRAM (IIT)	
		Diverse IPRO Themes	ServPRO Pathway (Proposed)
<b>Project Theme(s)</b>	service learning	research, design, process, international, service learning, entrepreneurship	service learning
<b>Client Focus</b>	community, social service, and other non-profit organizations	corporations, small businesses, entrepreneurs, government, non-profit	community, social service and other non-profit organizations
<b>Relationship</b>	partner	sponsor or benefactor	partner
<b>Funding</b>	university, government, philanthropy	university, industry sponsors, government	university, sponsors, government, philanthropy
<b>Project Duration</b>	multi-year	1-2 semesters (typical)	multi-year (planned)
<b>Project Scale</b>	multi-faceted; evolutionary	single focus	multi-faceted; evolutionary
<b>Participation</b>	voluntary elective satisfied in various ways	completion of two IPRO courses is required for all undergraduates	completion of two ServPROs to satisfy the IPRO requirement
<b>Commitment</b>	continuous: students remain on same EPICS team (1-7 semesters)	variable: students may join different IPRO teams to satisfy two semester IPRO requirement	continuous: students required to remain on same ServPRO team in appropriate capacity (2-7 semesters)
<b>Team Composition</b>	interdisciplinary (engineering, psychology, communication, etc.)	interprofessional (architecture, business, design, engineering, humanities, law, psychology, sciences)	interprofessional (architecture, business, design, engineering, humanities, law, psychology, sciences)
<b>Academic Schedule</b>	semester	semester	semester
<b>Curricular Fit</b>	elective (1 credit-hour) and other possibilities depending on department options	general education requirement (two three-credit-hour IPRO project courses)	general education requirement (two three-credit-hour project courses with continuity via independent study, etc.)

**How will the identified adaptation components be implemented through a Service Learning ServPRO) Pathway?**

In developing a formal pathway of service learning team projects, our efforts will focus on four activities to integrate EPICS core values within the IPRO Program: (1) structure the context and culture for a ServPRO pathway; (2) develop and demonstrate a servant leadership development process; (3) develop and demonstrate a service learning team

reflection process; and (4) formalize ServPRO project partnerships with candidate non-profit organizations

### **1) Structure a ServPRO Pathway**

IIT will plan, design, and validate a ServPRO pathway that establishes a unique context, culture, and collaborative workspace identity for service learning activities. The ServPRO pathway will complement the already established Entrepreneurial IPRO (EnPRO) pathway by creating a body of knowledge and methodology of practice that is distinctive for IPRO team projects that are within the service learning mode as they address the needs of community organizations on a continuous basis. The goals and core values of national EPICS program participants will be integrated as part of the ServPRO pathway of projects within IIT's IPRO program. This specifically includes (1) providing a variety of forms of academic credit for students who participate on ServPRO teams each semester, (2) establishing sustaining partnerships with non-profit community organizations, and (3) engaging professionals within the partnerships in a collaborative fashion for the benefit of the students and the organizations. We envision the active participation of at least five non-profit organizations from the very beginning of the grant period, with potential for expansion going forward. We also aim to encourage cross-team and cross-partner interaction to identify and seize opportunities that can serve common, multiple social goals, thus leveraging the impact of our ServPRO teams.

The EPICS program will also provide a rich resource of knowledge about the value of service learning and proven methods for defining, managing, and assessing service project experiences in a university team environment. In this respect, we are fortunate that there is such a terrific degree of compatibility in terms of program logistics (e.g., number and size of teams) and fundamental learning objectives associated with the EPICS and IPRO programs. The insight gained from the EPICS program will be integrated with other knowledge and methods that have been evolving at IIT and other universities so that the service learning body of knowledge distills the broadest possible range of contemporary perspectives for the benefit of the students at IIT and ultimately the national EPICS program. Activities (2) and (3) below will develop unique servant leadership and teamwork reflection components of a body of knowledge that builds on service learning instructional methods and materials developed via the EPICS program.

### **2) Develop & Demonstrate a Servant Leadership Development Process**

Because interaction with community service partners can be particularly sensitive, a faculty member in IIT's Leadership Academy will be provided release time (and a research assistant) to develop highly modular instructional materials about collaboration and leadership skills. This effort will reflect Dr. Fisher's expertise in "servant leadership," a concept characterized by the Greenleaf Center for Servant Leadership in these terms: "Servant-Leadership is a practical philosophy which supports people who choose to serve first, and then lead as a way of expanding service to individuals and institutions. Servant-leaders may or may not hold formal leadership positions. Servant-leadership encourages collaboration, trust, foresight, listening, and the ethical use of power and empowerment." According to Larry Spears, the CEO of the Greenleaf Center, servant leadership is "an emerging approach to leadership and service" that "attempts to

simultaneously enhance the personal growth of workers and improve the quality and caring of our many institutions through a combination of teamwork and community, personal involvement in decision making, and ethical and caring behavior.” The materials developed by Dr. Fisher and a graduate student in his program will be integrated into the ServPRO pathway experience and available as resource materials delivered via seminars and online tutorials via the IPRO website.

### **3) Develop & Demonstrate a Service Learning Team Reflection Process**

A special reflection process will be designed for students who progress through the ServPRO pathway while they are at IIT, including participation on a ServPRO team over several semesters. This process will build on the IPRO program assessment process that is currently being implemented across the 30 to 35 IPRO teams each semester. The learning objectives associated with the interprofessional course provide the threads for gauging student, team, and program effectiveness over time during a semester and from one semester to the next. The assessment process has been evolving over the past five years to incorporate various instruments (pre- and post-experience surveys, peer evaluation, team effectiveness, leadership development, etc.), focus group discussions and team interventions in order to evaluate perceptions of achievement and progress in relation to the full cohort of teams in a given semester and longitudinally across semesters. Ultimately, the assessment process will be developed to help provide tools for grading that are rooted in measures of learning objectives, provide methods to benchmark the IPRO program against similar programs etc. The ServPRO pathway experience offers a special opportunity for reflection, because of the service motivation and orientation of students motivated to participate. Thus, various instruments and engagements can be developed and applied to capture the richness of the learning that has taken place. Ultimately, such reflection can strengthen the ServPRO pathway by continuously reaffirming the students’ commitment and by testament, attract similarly motivated students and inspire potential partner organizations to participate.

### **4) Formalize ServPRO Project Partnerships with Candidate Non-Profit Organizations**

IIT will initiate its ServPRO pathway program through established and emerging relationships with non-profit organizations in the Chicago area associated with several IIT faculty members. These relationships can involve undergraduate students and faculty from many disciplines: architecture, business, computer science, design, engineering (aerospace, architectural, biomedical, chemical, civil, computer, electrical, environmental, management, materials, mechanical), sciences (biology, chemistry, physics), law, education, humanities, political science, and psychology.

Several projects led by a variety of faculty offer potential for building more comprehensive long-term partnerships: Susan Feinberg (Humanities—multi-year experience in guiding IPRO teams in areas related to usability testing and evaluation, and now focused to e-learning games for K-12 education); David Grossman (Computer Science—multi-year experience in guiding IPRO teams in the field of search engines, now focused to information search for the U.S. National Memorial Holocaust Museum); Paul Fagette (Biomedical Engineering—recent experience in guiding a team to develop

a prototype exhibit for the Museum of Science & Industry that models the change in blood flow from newborn to infant); Daniel Ferguson (Institute of Business & Interprofessional Studies—multi-team lecturer and co-principal investigator, currently mentoring a team sponsored by Access Community Health Network in assessing needs and developing information technology solutions); Glenn Broadhead (Humanities and Communication Across the Curriculum Program—multi-year experience in mentoring IPRO teams serving the needs of Pilgrim Baptist Church related to creating a music archive and cultural center to celebrate the work of Thomas A. Dorsey, prominent gospel musician); Kevin Meade (Mechanical Engineering—multi-year experience in guiding IPRO teams focused to developing a highly accurate spirometer for asthmatic patients and developing a brace kit and training module for correcting scoliosis and collaborating with Don Bosco University in El Salvador to expand the impact of his work in Latin America); Blake Davis (Architecture—new to the IPRO lecturer role, will guide a Greenhouse project team in Spring 2005 to develop a process for linking the Chicago Center for Green Technology and the Chicago Community Gardening Program); and Norm Lederman (Math & Science Education—with a unique math and science teacher education and certification program, there are significant opportunities to create ServPRO teams that provide teacher practicum experiences and serve the needs of the Chicago Public Schools).

### **What will be the national impact of this EPICS-to-IPRO adaptation project?**

There is a tremendous opportunity to achieve a national impact through ServPRO pathway in the IPRO program:

- The City of Chicago (encompassing the Chicago Public Schools, Chicago Park District, Chicago Fire Department, and Department of the Environment) is a rich resource for developing diverse, significant, and lasting community partnerships, particularly those that can affect students in K-12 and their communities.
- It is also clear that with IIT's location and access to prominent, national non-profit and other social organizations, and unique institutions that include the world-renowned museums and zoos, there will be exciting possibilities for involving the National EPICS Program.
- IIT is in a position to capitalize on our deepening collaborations with other prominent universities in the Chicago area, including The University of Chicago, Northwestern University, University of Illinois at Chicago, DePaul University, and Loyola University Chicago to build unique partnerships with community organizations.
- IIT is developing areas of special competency in building a comprehensive team program assessment process, knowledge management system, and body of knowledge in environmental sustainability and e-learning games that offer the potential for collaboration and extension to other team project programs.

## **Experience and Capabilities of the Principal Investigators**

Two of the co-principal investigators, Mr. Jacobius and Professor Ferguson, are responsible for advancing the existing IPRO learning experience and infrastructure on a full-time basis. Professor Huyck and Dr. Fisher have been involved in various aspects of the IPRO program over time. Their expertise in team process and leadership development, intervention methods, assessment and feedback, has been a tremendous resource over several years.

### **Thomas Jacobius (Principal Investigator), Director, Interprofessional Studies & the IPRO Program**

Mr. Jacobius provides overall guidance for the grant in fully adapting key elements of the EPICS model and assuring compatibility with the overall goals and requirements of the IPRO program. His focus is on assuring the successful development of a well-defined service learning cluster within the IPRO program, i.e., the ServPRO pathway teams with embedded values adapted from the EPICS program. This will create a body of knowledge and methodology that will be distinctive to ServPRO pathway teams as they address the needs of community organizations on a continuous basis. His responsibilities also include formalizing and sustaining the partner relationships. This is an extremely critical element of the EPICS model that is being adapted. Mr. Jacobius will also be instrumental in working with academic units across the university and the Interprofessional Studies Committee to consider and adopt a range of creative options for students to continue to participate on a ServPRO team while at IIT, beyond fulfillment of the two-semester general education requirement associated with the IPRO program. This continuity of participation on the same team and with the same partner are fundamental elements of the EPICS model that are being adapted.

### **Daniel Ferguson, Senior Lecturer, Interprofessional Studies**

Professor Ferguson is responsible for instructing five teams each semester within the IPRO program, as well as participating in continuous process improvement efforts. Three of the teams he is currently coordinating (in collaboration with Professor Huyck and other IIT faculty members) are directed to supporting the IPRO program overall and encompass the following elements: assessment (individual/team/program), benchmarking, body of knowledge content development and delivery, development and implementation of a customized IPRO Knowledge Management System (to assure team knowledge transfer over time and across teams), and a website that incorporates compelling video documentary-style stories and testimonials supporting the IPRO program. Professor Ferguson is currently leading a community service-oriented IPRO team for Access Community Health Network (the largest non-profit community health delivery system in the nation) that is focused on assessing information technology needs and developing solutions that improve various patient intake and care processes across a diversity of local health care delivery sites. This project is expected to continue and is one of the candidate ServPRO teams that will adapt aspects of the EPICS model to enhance the service learning experience of our students and the community organization.

**Margaret Huyck, Professor, Institute of Psychology, Assessment Adviser to the IPRO Program, Member of IIT's Interprofessional Studies Committee**

As co-principal investigator, Professor Huyck will be responsible for coordinating the development of the service learning body of knowledge for the benefit of an initial cohort of five ServPRO teams. Professor Huyck will coordinate the compilation and creation of material from the EPICS program and other relevant sources that develops in students an appreciation for the community service mission they are participating in, provides special resources for understanding and managing non-profit clients and provides the instruments and methods for the teams to share and reflect purposefully on their community service experience. This will be done within the context of established IPRO learning objectives, team deliverable requirements and resource tools for teams that generically addresses multidisciplinary teamwork, team leadership, communication, and project management. Since Professor Huyck has also been providing valuable assessment advice to the IPRO program, her perspectives will aid in developing a process for reflection and evaluation of the effectiveness of the adaptation and implementation of the EPICS model within the IPRO program.

**Bruce Fisher, Director, Center for Research & Service, Institute of Psychology, Director, IIT Leadership Academy**

Dr. Bruce Fisher provides expertise in service learning and servant leadership through two roles at IIT. First, as director of the Center for Research and Service in the Institute of Psychology at IIT, Dr. Fisher is responsible for coordinating research and consulting services to business and industry. This focus includes employee and managerial selection systems, organizational surveys, leadership development programs, and performance management systems. He has worked extensively in the development and validation of pre-employment tests, organizational surveys, and 360-degree feedback instruments and has developed several published tests. Second, as director of IIT's Leadership Academy, Fisher is responsible for designing and implementing a leadership development curriculum for the university's undergraduate population.

Finally, Dr. William Oakes, co-director of the EPICS program at Purdue University, will work with us to blend core elements of EPICS and IPRO into a powerful service learning pathway initiative that has an impact in Chicago and potential for adaptation at other institutions.

## **Evaluation Plan**

IIT has been establishing outcome-based measures that assure our interprofessional education programs are producing results. As a result, we review extensive amounts of information obtained via written evaluations and focus groups, and through the formal review of project results and IPRO administrative records, including faculty feedback (quality of the learning experience, grading, perceived value to students); student feedback (motivation, satisfaction); partner feedback (project quality, service support, participatory planning and decision making); alumni feedback (value in hiring and career development, memorable experiences); and administrative feedback (admission, career development, research and scholarship, alumni relations). All such evaluation mechanisms and data sources also will be used to monitor and assess the ServPRO pathway and associated team projects. We will retain an experienced education evaluator to establish measures, identify stakeholders, monitor progress toward goals and summarize outcomes throughout the grant period.

## **Dissemination Plan**

IIT will broadly disseminate the results of the project, with a particular focus on the national EPICS program. These efforts include publicizing the results of the project, and hosting visitors; presentations at professional meetings and conferences; providing comprehensive compilations of course materials, syllabi, workbooks, and reading lists via the Internet; and creating video summaries of the interprofessional community service curricular innovations that we develop, test and implement through the ServPRO pathway. Best practices of interprofessional, community service team project and other experiential innovations will be compiled in a conveniently searchable form, and made available to Purdue University for inclusion in their EPICS archives for further dissemination.

IIT will work with the EPICS program administrators and community service partners to promote the results of the ServPRO program locally, nationally, and internationally, through participation in the annual EPICS National Conference and other professional gatherings. For example, both the American Association for Higher Education (AAHE) and American Society for Engineering Education (ASEE) are prominent information transfer organizations for universities, as well as IEEE, ASME, AIAA, AAAS, SAE, and IRI. The breadth of faculty expertise across the university's professional programs involved in the IPRO program offers very broad opportunities for dissemination, e.g. American Bar Association, American Management Association, American Institute of Architects.