SUGGESTED IPRO LEARNING OBJECTIVES – BEST DRAFT-

1. IPRO projects require students to be productive members (and leaders) of an inter-professional team, contributing the skills and knowledge of their major plus working on topics outside of their major.
2. IPRO projects require students to apply creative and critical thinking to solve complex and open-ended problems.
3. IPRO projects require students to communicate the technical and non-technical aspects of a project to a diverse set of stakeholders.
4. IPRO projects require students to efficiently and effectively plan and manage projects, delivering a viable, tangible outcome with the given timing and resources.
5. IPRO projects require students to pursue innovation, developing solutions that have significant impact on our community and the world.

In an IPRO class, students should learn to:	In order to achieve these learning goals, IPRO project should be selected according the following criteria:		
	Unacceptable	Acceptable	Exemplary
Add value to inter professional teams *(teamwork and leadership)*	This project is best addressed by a single professional discipline or by several disciplines but in a sequential, mutually exclusive manner.	This project will require multiple majors working simultaneously to create an integrated solution. This project will require students to contribute the skills and knowledge of their major into a team composed of multiple professions.	*Acceptable criteria plus…* This project will require the students to work on topics outside of their profession as well as with students and faculty outside of their major in order to arrive at a solution.
Solve complex open-ended problems *(Critical and creative thinking)*	An existing technology solution is adequate to address the problem; there is a single, clear enough answer.	There is no clear answer – this project will require students to follow a fact based, hypothesis driven process in order to create a solution.	*Acceptable criteria plus…* This project will require students to consider multiple approaches and create a portfolio of solutions.
Communicate the technical and non-technical aspects of a project *(Communication)*	The project will not require students to communicate with stakeholders outside of the class	The project will require students to communicate key issues to other IPRO groups, IIT faculty, and staff	*Acceptable criteria plus…* the project will require students to communicate persuasively and clearly at a strategic level to sponsors and investors
Deliver a viable, tangible outcome with the given timing and resources *(Project management)*	The topic is theoretical in nature; it is unlikely to yield a tangible outcome in the context of an IPRO project or series of projects.	The project intends to deliver achievable, measureable outcome within the context and constraints of the IPRO program.	*Acceptable criteria plus…* This project includes several stretch goals that may include additional risk commensurate with reward.
Develop solutions that have significant impact on our community and the world *(Innovation)*	This project is of low to moderate interest of key stakeholders	This project is of significant interest to a specific client (companies, non-profits, governments) or has been identified as a key theme or strategy for the IIT community.	This is a high priority, critical problem that effects large segments of the global population. *(note, this does not need to be a build of the previous criteria)*

Some suggestions on administrative issues affecting learning in the IPRO program.

From the IPRO objectives review committee, version 1 by Paco Ruiz 3/22/12

Our committee has been charged with revising the learning objectives, criteria for project selection and similar matters in order to improve the academic aspects of the IPRO program. We felt, however, that there are additional issues commonly labeled as "administrative" that are having a deep impact on the students' learning, hence this document. What follows is a series of suggestions, in no particular order, including the rational backing them and the proposed action items.

1. **The IPRO Day system of rubrics, scores, and prizes should be thoroughly revised.** Many students prepare for months for this event, and their activity is guided by the metrics used on that day. We feel that the current set of metrics has little to do with the learning objectives, thus causing a conflict. We recommend that a committee composed of faculty familiar with IPRO undertake this revision.
2. **The amounts budgeted for IPRO instructors should be made more transparent to academic units.** Currently many academic units do not see the economic benefit of running ipros (even though deans insist that it's already a part of their budgets) so that they do not encourage their faculty to participate, and the quality of the students' experience suffers as a result. Perhaps the solution could be as simple as a more obvious way to highlight these monies in academic unit budgets.
3. **The IPRO proposal cycle should be once a year instead of once a semester.** This would allow student-generated projects to find and instructor as well as assure that learning objectives would be met. Projects that are meant to continue (especially those with an outside sponsor) would also benefit from the one-year review, by easing the burden of semester-to-semester review. Student learning would be enhanced too, if they are able to stick with a project for consecutive semesters.
4. **Proposers should be available to answer questions during proposal review.** Currently, proposals are delayed for lack of information that could be easily supplied by the proposers, causing uncertainty on students preparing to join the projects proposed. In the past, proposers were invited to come at a certain point during the review to answer questions, with good results. These are not NSF proposals.
5. **IPRO 397 should be decoupled from the IPRO general education requirement.** Even though the faculty were told there would be a connection between the two, things have evolved otherwise. That being the case, the continuance of IPRO 397 as a legitimate part of the general education requirement should be presented on its own merit vs. other possibilities, not as a part of the IPRO requirement.
6. **A best practices workshop should be run with some regularity.** We have instructors who have been doing ipro projects for years and have developed

a sense of what works and what doesn't, as well as newcomers that develop interesting new ways of doing things. Some of the IPRO office resources could be used to run a workshop at a convenient time (perhaps once a year at the end of the Spring semester), so that these experiences are collected and transmitted. This is an important part of academic reflection and improvement and it is not being done at the moment, though it has been in the past.

7. (from Mark Snyder) based on comments from a number of faculty that we gathered it seems in the long run that consideration should be given to making IPRO its own academic unit. This action would go a long way towards giving the program the stature it needs (many faculty/departments do not consider IPRO a "real academic class"), a set of content experts who are responsible for IPROs and best practices, and the potential to expand into new avenues of inter-disciplinary work.