### <u>IPRO 301</u>

# Researching, Designing, Testing and Evaluating IPRO Program Enhancements

IPRO 301
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<u>Name</u>

Psychology

Psychology

Psychology

Applied Math

Architecture

Mechanical Eng.

Physics

Responsibility

Reflective Thinking

Groupware

Teamwork

Forecasting

Ethics

Inter-rater reliability

Learning Objectives

# **Team Objective**

To conduct a professional, multidisciplinary research program to improve the calibre of IIT student learning.

## **Reflective Thinking**

Reflective thinking is defined by researchers King and Kitchener as the ability to make good decisions about ill-structured problems, or problems that do not have simple, clear right answers.

**Pre-reflective level** 

**Quasi-reflective level** 

**Reflective level** 

# **Reflective Thinking**

#### **Objective**:

What is the relationship between problem context and reflective thinking?

#### **Expected Deliverables**:

Analysis of reflective thinking in Service-Learning and other IPRO's

Literature search to find previous research conducted

#### Why is it important?

Reflective thinking is necessary in the professional world and the IPRO program is working to prepare the students for the professional world.

### Groupware

#### **Objective**:

How does the use of iGroups have an affect on learning outcomes?

#### **Deliverables**:

A literature search as well as defining and analyzing relationship between IPRO success and recommendation on use of iGroups to future IPRO's

#### Why is it important?

This research will analyze how the use of iGroups can provide a superior IPRO performance.

### Teamwork

**Objective**:

What impact does participation in IPRO Games have on team functioning?

#### **Deliverables**:

Recommendation to IPRO Program on best ways to use and improve IPRO Games

Literature search outlining how other programs promote and enhance effective teamwork skills.

#### Why is it important?

Understanding how participation in the intervention influences teamwork and helps to create a better intervention.

## Forecasting

#### **Objective:**

Create an IPRO enrolment forecast for the upcoming semesters

#### **Deliverables:**

Forecasting model for the next two academic years Literature search analyzing existing statistical models

#### Why it is important:

The IPRO program needs to have an accurate forecasting model so that it can prepare an adequate number/types of IPROs for future semesters

# Inter-rater Reliability

IRR is extent to which multiple judges view and score the same object

#### **Objective**:

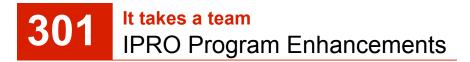
Improve the inter-rater reliability of the IPRO Day judging procedure

#### **Deliverables**:

- Comprehensive recommendation on an intervention program
- A mathematical model to improve reliability, as well as increased judging training

#### Why it is important:

There should be more consistent and fair scoring by the judges on IPRO day.



### Ethics

#### **Objective:**

Evaluate and determine if the development of a code of ethics, by students, leads to the development of ethical awareness.

#### **Deliverables:**

Literature review of relevant data and the implementation of an ethics exam to assist in the measurement of ethical awareness.

Why is this important?:

ENRON, MCI, etc.

# Learning Objectives

#### **Objective:**

Improve student attainment of the innovation and design learning objectives.

#### **Deliverables:**

Complete design and innovation LOs (body of knowledge, test questions, study guide), intervention, literature review.

#### Why is it Important:

Moves design and innovation to completed and testing phase of development. Helps students better understand design and innovation, and improve their attainment of said LOs.

#### **Research Projects**

**Reflective Thinking** 

Groupware

Teamwork

Forecasting

Ethics

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Learning Objectives

#### Team Member

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