APPENDIX A
Course Code: IBIO-2780

DEPARTMENT OF BIOMEDICAL ENGINEERING
DESIGN PROJECT 1 – IBIO-2780

Credits and contact hours

	Credits	Contact hours (per week)	Sessions per week	Offer frequency
Course	3	3	2	Yearly
Complementary class				
Laboratory				

Instructor's or course coordinator´s name: Camila Castro

Main Textbooks:

None

Specific course information

a. Brief description of the content of the course (catalog description)

This is a design course and it is based on a project. Students, through the logic of design thinking, will address and develop a solution to a health issue from a biomedical engineering perspective. This course is part of the Design Project 1 and 2. In this first semester, students will identify a health need and will develop a value proposition and solution proposition in order to address it. At the end of the semester, students must have conducted a killer experiment that will serve to evaluate the concept and so be able to continue their project the following semester.

b. Prerequisites

IBIO-1010 Introduction to Biomedical Engineering; IBIO-2102 Quantitative Physiology for Biomedical Engineering; IELE-1010 Circuits and instrumentation. REQ. ESPA Spanish Requirement.

c. Co-requisites

None

d. Indicate whether a required, elective or selective elective course in the program

Required	Elective	Selective
X		

Specific goals for the course

a. Specific outcomes of instruction

At the end of this course, students will be able to:

- Use methods of qualitative observation to identify a specific need.
- State needs based on observations and define criteria to select
- Propose a solution for the selected need
- Evaluate with a killer experiment the proposed solution

b. Explicitly indicate which of the student outcomes (listed in Criterion 3 or any other outcomes) are addressed by the course

OUTCOME C: An ability to design a system component or process to meet desired needs
OUTCOME D: An ability to function on multi-disciplinary teams
OUTCOME F: An understanding of professional and ethical responsibility
OUTCOME G: An ability to communicate effectively
OUTCOME H: A broad education to understand the impact of engineering solutions in a global and societal context
OUTCOME I: Recognition of the need for, and ability to engage in life-long learning
OUTCOME J: Knowledge of contemporary issues

Brief list of topics to be covered

Topic	Suggested duration (weeks)
Identify needs	6
Concept generation	5
Proposed solution and killer experiment	5