Chulalongkorn School of Integrated Innovation

Innovation in Health & Wellbeing

*Dr Sebastien BERTIN-MAGHIT, PhD*

1. **Course Number** 5604307
2. **Course Credit** 3 Credits
3. **Course Title** Innovation in Health & Wellbeing
4. **Instructor / Academic Staff** Dr Sebastien BERTIN-MAGHIT
5. **Condition** None

**(Pre-requisite, Co-requisite, Concurrent)**

1. **Status (Required/Elective)** Elective
2. **Hours / Week** 3 hours
3. **Course Description**

This course aims at introducing different technologies and skills that support innovation in Health & Wellbeing.

We will define Health and learn about the systems underlying it.

We will study some basics of Biology in order to better understand current technologies used in the field.

This course will also introduce skills that are required to innovate; we will learn about the different models of innovation, project management, intellectual property applied to medical products, some basics of contracts to be able to set-up collaboration when conducting innovation projects.

Students will also learn how to communicate health-related data and new discoveries; the rules and regulations of the industry, and will be introduced to ethics and integrity.

After completion of this course, students should understand what it takes to be an innovator in Health and Well-being and have some basic skills in several domains, both scientific and not, to be able to conduct some projects driving innovation.

1. **Course Content**

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| **Session** | **Module** |
| 1 | Definition of health and wellbeing. |
| 2 | Basics of Biology: from genes to proteins and cell functions.  Presentation of the immune system. |
| 3 | Basic techniques used in the medical field and in health research. |
| 4 | New technologies in Health and their consequences for medical practice: precision medicine, big data, AI… |
| 5 | What it takes to innovate in Health & Well-being: the innovator’s mindset |
| 6 | Basics in Project Management |
| 7 | Basics in Intellectual Property for health products |
| 8 | Introduction to legal knowledge required to conduct projects in Health R&D |
| 9 | Communication in Health: how to read and write a scientific/medical publication. |
| 10 | Health & Wellbeing, regulated industries. An introduction to local and international regulatory bodies and guidelines. |
| 11 | R&D: the mother of innovation. How to fund and conduct R&D projects. |
| 12 | Ethics in Health R&D |
| 13 | The importance of integrity Health & Well-being. Conflicts of interests of how to manage them. |
| 14 | Some basics of marketing health-related products. (1.5 hours)  Presentation of projects (1.5hours) |
| 15 | Presentation of projects |

1. **Course Project**

During this course, students will be asked to develop either a skin care product or a herbal health supplements. Students will plan their projects, conduct some R&D activities to design a new product, check regulations in the field to develop a prototype and design a possible marketing campaign. The project will be presented as a showcase in the last course class.

1. **Instructor**

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| **Name** | **Contact number** | **Email** |
| Dr Sebastien BERTIN-MAGHIT | 088 931 8806 | [sebastien.b@chula.ac.th](mailto:sebastien.b@chula.ac.th) |