

## MASTER BIOTECHNOLOGIES

### PARCOURS MASTER INTERNATIONAL EN BIOTECHNOLOGIES MARINES

#### semestre 9

#### INGREDIENTS AND ACTIVE MOLECULES

## Marine biotechnology applied to cosmetics and healthcare products development

### Présentation

The purpose of this course is to enable students to consolidate knowledge about the corporate world of cosmetics. Cosmetic products represent more than 80 billion of turnover in Europe. This is an area in perpetual change and renewal. In fact, the cosmetic products marketing is regulated by a European directive which was introduced in July 2013. Companies have the obligation to declare the composition of all their products, and, the trend is that increasingly substances are banned because of their toxic power. Many companies are looking for alternative solution and thus are turning to marine products in order to replace toxic synthetic molecules and because it attracts some customers as well.

This is why companies recruit more scientists with knowledge of the marine biotechnology, and raw materials needed to make these cosmetic products.

#### 2 crédits ECTS

Volume horaire

Travaux Pratiques : 4h  
Cours Magistral : 26h

### Descriptif

Introduction: Definition of cosmetic products, European settlement (4 hours by Sandrine Morvan)

Chapter 1: Biology of skin and appendages (4 hours by Laurence Meslet-Cladiere).

Chapter 2: The physicochemical properties of cosmetic products (2 hours by Sandrine Morvan)

Chapter 3: All raw materials for cosmetics products (4 hours by Laurence Meslet-Cladiere)

Chapter 4: Formulation of cosmetics products (4 hours by Laurence Meslet-Cladiere)

Chapter 5: Toxicology and security of cosmetic products (2 hours by Nolwenn Hymery)

Chapter 6: Research of new conservatives products (2 hours by Julien Claus)

Chapter 7 : Algae in cosmetics products (2 hours by Bernard Kloareg)

Chapter 8 : Voluntary testing on cosmetics (3 hours by Alexandre Batardière)

### Bibliographie

Manuel d'anatomie et de physiologie humaine

[Bryan Derrickson](#) (Auteur), [Gérard G. Tortora](#) (Auteur) - Manuel (broché). Paru en 03/2009

Biologie, cosmétologie BTS esthétique cosmétologie

[G. Peyrefitte](#) (Auteur), [M.C. Martini](#) (Auteur) - Scolaire / Universitaire (broché). Paru en 05/2013

### Modalités de contrôle des connaissances

#### Session 1 ou session unique - Contrôle de connaissances

Nature de l'enseignement	Modalité	Nature	Durée (min.)	Coefficient	Remarques
	CT	Ecrit - devoir surveillé	120	100%	

#### Session 2 : Contrôle de connaissances

Nature de l'enseignement	Modalité	Nature	Durée (min.)	Coefficient	Remarques
	CT	Ecrit - devoir surveillé	120	100%	