

Introductory Course - Immunology Part

Organization : Université de Tours
Teaching unit coordinator: Isabelle DIMIER-POISSON
Position: Professor (PhD)

Teaching unit outline

This module will be focused on immunology to ensure that all the students share the same basic knowledge in this core discipline of the programme. A teaching approach close to the “flipped classrooms” concept will be implemented for this introductory course to develop the student's ability to acquire new knowledge autonomously but also to meet and to work collectively, for instance to deepen a meaningful concept through interactive group activities.

Topics addressed

Immunology:

Lymphoid tissues

General introduction to the immune system

Structure and organisation of the immune system

Complement

Immunoglobulins and B lymphocytes: Structure and function of immunoglobulins, Molecular genetics, antigen-antibody interactions, lymphocyte development, B lymphocyte biology, signaling mechanisms and activation

T lymphocytes: T cell antigen receptors, T lymphocyte signaling mechanisms and activation, development of T cells, peripheral T lymphocyte responses and function

Macrophages and phagocytosis

Major Histocompatibility complex (MHC) molecules: Structure, Function and genetics

Cell biology of antigen processing and presentation

ECTS	Lectures	Tutorials	Practical work	Digital learning	Personal work
2	4	16 hours			30

Assessment method

Oral presentation 100%

Introductory Course - Statistics part

Organization: Université de Tours

Teaching unit coordinator: Clovis TAUBER- Bruno GIRAUDEAU

Position: Assistant Professor (PhD). Professor (MD; PhD)

Teaching unit outline

This module will be students the basis of Statistics and train them for the use of R software.

Topics addressed

Statistics: Probability, Bayes rule, correlation versus causation, Mean, Median, Mode; Standard Deviation, Variance, Normal distribution, linear regression, Confidence intervals, Statistical tests

ECTS	Lectures	Tutorials	Practical work	Digital learning	Personal work
2	15				35

Assessment method

Computer based exam 100%