COURSE OUTLINE

(1) GENERAL

SCHOOL	Sciences			
ACADEMIC UNIT	International Graduate Program in Biological Inorganic Chemistry			
LEVEL OF STUDIES	Graduate			
COURSE CODE	**1**	**SEMESTER**	**2**	
COURSE TITLE	Introduction to the Research Laboratory			
INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*			**WEEKLY TEACHING HOURS**	**CREDITS**
			10	10
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).				
COURSE TYPE *general background, special background, specialised general knowledge, skills development*	Scientific field Special background Specialised general knowledge			
PREREQUISITE COURSES:	No			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek / English			
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes			
COURSE WEBSITE (URL)	http://bic.chem.uoi.gr/BIC-En/mathimata-en.html			

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

Course description

The aim of this laboratory is the "introduction to research of Biological Inorganic Chemistry", as well as the spectroscopic techniques. The laboratory aims at teaching the research methodology and familiarizing postgraduate students with various subjects of Biological Inorganic Chemistry. Students will be given a research theme, whether known or original. Students should initially search the literature and then reproduce in the laboratory published research from relevant publications in well-known journals, or start a new research topic and come to acceptable results. The examination is accomplished by a public presentation, to an audience of postgraduate students and faculty members. Supervisors of this laboratory may be all faculty members dealing with Biological Inorganic Chemistry. The faculty members are responsible for the distribution of the postgraduate students in their laboratories and provide them with the necessary facilities.

Expected Learning Outcomes

After completion of the course, students should be able to:

- demonstrate initiative and confidence in their ability to make decisions and follow the consequences created.

- apply a detailed approach to solve problems.
- effectively apply the appropriate communication skills as experts.
- produce a critical review using and reporting appropriate information sources.
- make reasonable conclusions and make suggestions based on the work of the project they have undertaken
- •produce a structured written report using appropriate format with appropriate reports.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and sensitivity to gender issues*
Team work	*Criticism and self-criticism*
Working in an international environment	*Production of free, creative and inductive thinking*
Working in an interdisciplinary environment	*……*
Production of new research ideas	*Others…*
	…….

The general competences that students should have acquired are:
Search for, analysis and synthesis of data and information and decision making
Translating the theory into practice
Production of free, creative and inductive thinking
Working independently and team work
Acquire the appropriate theoretical base to allow further education at a doctoral level (theoretical and laboratory).
Project planning and management
Production of new research ideas
Working in an interdisciplinary environment
Adapting to new situations

(3) SYLLABUS

The aim of this laboratory is the "introduction to research of Biological Inorganic Chemistry", as well as the spectroscopic techniques. The laboratory aims at teaching the research methodology and familiarizing postgraduate students with various subjects of Biological Inorganic Chemistry. Students will be given a research theme, whether known or original. Students should initially search the literature and then reproduce in the laboratory published research from relevant publications in well-known journals, or start a new research topic and come to acceptable results. The examination is accomplished by a public presentation, to an audience of postgraduate students and faculty members. Supervisors of this laboratory may be all faculty members dealing with Biological Inorganic Chemistry. The faculty members are responsible for the distribution of the postgraduate students in their laboratories and provide them with the necessary facilities.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face to face, Work in a laboratory environment
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	Natural presence

TEACHING METHODS

The manner and methods of teaching are described in detail.
Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.

The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of

Activity	*Semester workload*
Essay writing	60
Individual study, preparation	70

the ECTS		
	Course total	***130***
STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, concerningother* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	The evaluation of the students is done through oral examination - public presentation of data regarding the research field of thesis	

(5) ATTACHED BIBLIOGRAPHY

Suggested Bibliography

Supervisors will indicate the appropriate literature and appropriate references concerning the subject of postgraduate diploma thesis.