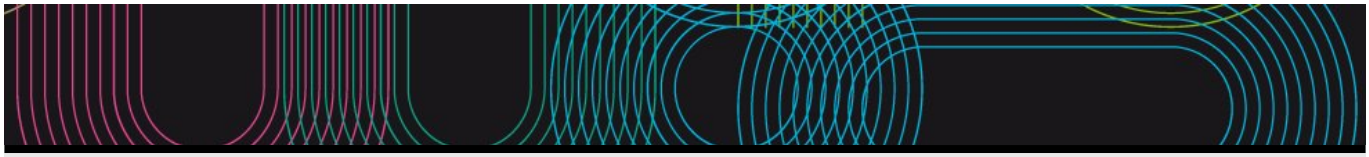
Universidade Vigo

Subject Guide 2017 / 2018



IDENTIFYING DATA				
Biochemistry: Biochemistry				
Subject	Biochemistry: Biochemistry			
Code	V53G140V01103			
Study programme	(*)Grao en Enfermaría			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	1st	1st
Teaching language	Spanish Galician			
Department				
Coordinator	García Suárez, Alfonso			
Lecturers	de Miguel Bouzas, José Carlos García Suárez, Alfonso Gayoso Rey, Mónica			
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General description	Bioquimica Human. Studio descriptivo of wools principales biomoleculas of him organism, with atencion special al water y disoluciones. Repaso Of los aspects geneales of him metabolism , with atencion special al human. Relacion It go in he corecto funcionamiento of estos processes y he been of salud.			

Competencies	
Code	
A1	Students have demonstrated knowledge and understanding in an area of study that comes from the basis of the general secondary education, and it is often found at a level that, if well supported on advanced text books, it also includes some aspects that involve knowledge from the forefront of their field of study.
A3	Students have the capacity to collect and interpret relevant data (normally within their area of study) to make judgments that include a reflection on relevant topics of social, scientific or ethical nature.
C1	To know and identify the structure and function of the human body. To understand the molecular and physiological basis of cells and tissues.
D1	Analysis and synthesis ability
D7	Critical reasoning.

Learning outcomes			
Expected results from this subject	Training and Learning Results		
Knowledge relevante, and capacity to apply basic sciences and of the life.	A1 A3	C1	D1
Know distinguish the process of xeneración, storage and utilization daenerxía metabólica.		C1	D1
Be able to distinguish the molecular systems are processes involved in the almacenaiento, replicacióne expression of wool genetic information.		C1	D1 D7
Know comprise the molecular changes associated the distinct situaciones physiological and patológicas.		C1	D1 D7

Contents	
Topic	
1.- Introducción The biochemical	Brief introduccion historica. The world of the bioquimica: dimensiones, distances etc... The saude and the illness since the point of view of the Bioquimica. Relacion Of the bioquimica with other sciences.
2.- Cellular biology	Brief repaso to the estructura of the celula eucariota and the sús function. Organulos of but interés Membranes: the sua function and fenomenos of transport.

3.-Bases of the biochemical: *bioelementos, *biomoléculas, water and *disolucions, sour and bases	*Bioelementos: Abundance and *distribucion. *Biomoleculas: *dimensions *Estructura And properties. Distribution of the water in the organism. *Balanzo *hidrico And control *hormonal *Disolucions Component.Criteria of ranking.Forms to express the concentration.Acidity and *basicidade and his measure: scale of pH.*Disoluciones *amortiguadoras And his *imprtancia.Disorders of the balance *acido-base: *acidose and *alcalose.*Osmose And pressure *osmotica.*difusión And *dialise.*Disoluciones Of salts. Balance *hidroelectrolitico
4.-Biochemical *estructural: *carbohidratos, *lípidos, *lipoproteínas, proteins	*Glucidos:General properties.*Estereoisomeria. Ranking.Derivatives of the *monosacaridos.It link *glicosidico. *Oligosacaridos And *polisacaridos of interest *bioloxico.Importance of the determination of *glicidos in *bioquimica clinical :*diabetes,*galactosemia *fructosuria essential,intolerance to the *lactosa *Lipidos : Diverse criteria of ranking. *Lipidos Related with *acidos fatty:*Acilgliceridos and *eicosanoides.*Lipidos Of membrane:*fosfolipidos and *esfingolipidos *Lipidos *isoprenoides.Steroids *Aminoacidos and *proteinas: *minoacidos and his ranking. Properties of the *aminoacidos. *Aminoacidos Modified of *interés *bioloxico Link *peptidico.*Peptidos And *proteinas.Ranking of *proteinas.*Proteinas *plasmaticas. *Enzimas: Ranking. *Cinetica. *Modulacion Of the activity
5 energetic Metabolism: *mitocondrias and *obtención of energy. Metabolism of the hydrates of carbon. Metabolism of the *lípidos and *lipoproteínas. Nitrogenous metabolism	. Human metabolism. Processes of digestion and *absorción. Studio of the main processes *biosinteticos and *degradativos
6.-- · Genetic information	Nitrogenous bases, *nucleosidos and *nucleotidos. *Polinucleotiidos. Substances of interest *bioloxico in the that take part the *nucleotidos *Estructura and functions of DNA and ARN.Replication,*transcripción and *traducción.*Biosintese Of *proteinas.*Codigo *xenetico.

Planning

	Class hours	Hours outside the classroom	Total hours
Master Session	34	74	108
Seminars	6	9	15
Autonomous troubleshooting and / or exercises	4	15	19
Introductory activities	2	0	2
Group tutoring	3	0	3
Multiple choice tests	1	0	1
Short answer tests	1	0	1
Long answer tests and development	0.5	0	0.5
Troubleshooting and / or exercises	0.5	0	0.5

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Master Session	Exhibition of the contained envelope to subject object of study, bases *teoricas and guidelines stop the resolution of exercises,and realization of works or projects to develop pole student
Seminars	Activity focused to works on subjects *especificos, that allow to supplement or *afondar the contents of the subject
Autonomous troubleshooting and / or exercises	Formulation of exercises related with the subject,owing develop the student the suitable solutions exercising routines,applying formulate or algorithms. It used how supplement to the lesson *maxistral.
Introductory activities	Activities *encamiñadas to take contact and gather information envelope the students, *asi *comoa present the subject
Group tutoring	*Reunions Of *caracter *periodico with groups reduced of students with the object of power control the progress in the understanding of the subject by part of the students, the *trves of *cuestions risen by them or #well induced pole professor.

Personalized attention

Methodologies	Description

Seminars	Activities focused to work on a specific topic, allowing delve or supplement the contents of the field. They can be used to supplement the lectures.
Autonomous troubleshooting and / or exercises	Actividade in which problems are formulated and / or exercises related to the course. The student must develop the analysis and resolution of problems and / or exercises independently.
Group tutoring	Interviews held with the student teachers of the subject for advice / development activities of the course and the learning process.

Assessment

	Description	Qualification	Training and Learning Results		
Multiple choice tests	Proofs for evaluation of the competitions purchased that include questions closed with different alternatives of answer (true/fake, multiple election, *emparellamento of elements...). The students select an answer go in a number limited of possibilities	40		C1	
Short answer tests	Proofs for evaluation of the competitions purchased that include direct questions envelope a concrete aspect. The students owe to answer of direct and brief way in base to the knowledges that have envelope to subject	20		C1	
Long answer tests and development	*Incluen Open questions envelope a subject.The students owe to develop, relate and *organizaros knowledges that have envelope to subject, in an extensive answer.	20	A1 A3	C1	D1
Troubleshooting and / or exercises	Resolution of problems or exercises in a time determined	20	A1	C1	

Other comments on the Evaluation

Stop the students that do not achieve the *calificación of approved in the 1º announcement, will establish a system of recovery that will be *basado in *titorias individual or in reduced groups, with realization of proofs enabling writings check the advance in the recovery and that will be taken into account to the hour to qualify the *rpoba of the second announcement

Sources of information

Basic Bibliography

Complementary Bibliography

Macarullá -Goñi, **Bioquimica Humana**, 2ª, Reverte, 1994

Lozano e outros, **BIOQUIMICA PARA CIENCIAS DE LA SALUD**, 3ª, Mc Graw-Hill, 2005

Noriega-Borge, **Enfermeria, principios de bioquimica**, 1ª, Masson, 2000

Jan Koolman, **Bioquimica Humana**, 4ª, 2012

Varios, **Bioquimica**, Slideshare,

Devlin TM, **Bioquimica con aplicaciones clinicas**, 4ª, Reverte, 2004

Berg JM,Tymoczko JL,Sryer L, **Bioquimica**, 5ª, Reverte, 2003

Recommendations

Subjects that continue the syllabus

Physiology: Physiology/V53G140V01105
Pharmacology and dietetics/V53G140V01203

Subjects that are recommended to be taken simultaneously

Human anatomy: Human anatomy/V53G140V01101
Physiology: Physiology/V53G140V01105

Other comments

They will recommend *tamen the texts used in 2º of *bacharelato in the subjects of *quimica and especially *bioloxia since in them is the base of the that goes *estudiar in the present course, but enlarged and with approach directed to the *bioquimica human.

To the pertinent students of FP, if they offered him *tutorias of group in the that *podran " *repasar"those concepts *basicos, whose knowledges need for power follow the program of *Bioquimica