THE UNIVERSITY OF BRITISH COLUMBIA

Curriculum Proposal Form
UBC OKANAGAN
New or Change to Course or Program

Category: 1

Faculty: The Irving K. Barber School of Arts and Sciences **Unit/Dept.:** Unit 3 **Faculty Approval Date:** **Effective Session:** Winter Term 1 2007	**Date:** 25 March 2007 **Contact Person:** Al Vaisius **Phone:** (250) 807-8748 **Email:** al.vaisius@ubc.ca
	URL: **http://okanagan.students.ubc.ca/calendar/index.cfm?tree=18,282,858,1069**

Proposed Calendar Entries:

Major in Biochemistry

The Major is structured to meet the requirements of a major in Science and will take four years.

First and Second Years	Credits
BIOL 116, 125	6
CHEM 111, 113; or CHEM 121, 123	6
MATH 100, 101	6
PHYS 112, 122; or PHYS 111, 102	6
Two of ENGL 112, 113, 150, 151, 152, 153	6
BIOL 200	3
BIOL 228	3
CHEM 203, 204	6
One of CHEM 201, 210	3
Arts electives	6
Science electives	6
General Option	
MATH 200	3
Wine Option	
BIOL 210	3
Total Credits	60 (57)
Third and Fourth Years	**Credits**
BIOC 304, 305	**6**
BIOL 365, 366	6
BIOL 393, 395[2]	6
BIOC 402[1]	3
BIOC 405[1]	3
BIOC 410[1]	3
Arts electives	6
Electives	12
General Option	

Present Calendar Entry:

Major in Biochemistry

The Major is structured to meet the requirements of a major in Science and will take four years.

First and Second Years	Credits
BIOL 116, 125	6
CHEM 111, 113; or CHEM 121, 123	6
MATH 100, 101	6
PHYS 112, 122; or PHYS 111, 102	6
Two of ENGL 112, 113, 150, 151, 152, 153	6
BIOL 200	3
BIOL 228	3
CHEM 203, 204	6
One of CHEM 201, 210	3
Arts electives	6
Science electives	6
General Option	
MATH 200	3
Wine Option	
BIOL 210	3
Total Credits	60 (57)
Third and Fourth Years	**Credits**
~~BIOL 311~~	~~3~~
BIOL 365, 366	6
BIOL 393, 395[2]	6
BIOC 402[1]	3
BIOC 405[1]	3
BIOC 410[1]	3
Arts electives	6
Electives	12
General Option	

BIOC 403	3	BIOC 403	3
		~~BIOL 319~~	~~3~~
CHEM 304	3	CHEM 304	3
CHEM 305	3	CHEM 305	3
CHEM 333	3	CHEM 333	3
CHEM 335	3	CHEM 335	3
Medical Option		**Medical Option**	
BIOC 308, 309	6	BIOC 308, 309	6
BIOC 407	3	BIOC 407	3
BIOL 310	3	BIOL 310	3
		~~BIOL 319~~	~~3~~
CHEM 304	3	CHEM 304	3
CHEM 305	3	CHEM 305	3
Wine Option		**Wine Option**	
BIOC 306	3	BIOC 306	3
BIOC 307	3	BIOC 307	3
BIOC 310	3	BIOC 310	3
BIOC 403	3	BIOC 403	3
BIOL 333	3	BIOL 333	3
		~~CHEM 333~~	~~3~~
Total Credits	60 (63)	Total Credits	60 (63)
Minimum credits for degree	120	Minimum credits for degree	120

Proposed Course Description:

BIOC 304 (3) MOLECULAR BIOCHEMISTRY I
Principles of thermodynamics and reaction kinetics in biochemistry. Acid/base biochemistry. An introduction to structural techniques, e.g., X-ray crystallography. Structure and function of lipids, amino acids, proteins, carbohydrates, nucleotides, and nucleic acids. Enzyme kinetics. Recombinant DNA technology. [3-2*-0]
***Prerequisite:* BIOL 200, CHEM 204, and one of CHEM 201 or CHEM 210.**

BIOC 305 (3) MOLECULAR BIOCHEMISTRY II
Metabolic pathways with a mechanistic perspective including regulation and control of carbohydrate, lipid, amino acid, and nucleotide catabolism and anabolism. Oxidative- and photo-phosphorylation. The biochemistry and

Present Course Description:

None

molecular biology of signal transduction, replication, DNA repair, transcription, translation and gene regulation. [3-0-0] ***Prerequisite:* BIOC 304**	**Type of Action:** Modify program by replacing a core course with a course specific for biochemistry majors. **Rationale:** The two biology courses BIOL 311/319 (6) which cover biochemistry for the biology major are being replaced with two biochemistry courses specifically for biochemistry majors, BIOC 304/305 (6). The wine option only required BIOL 311 (3) and is replaced with BIOC 304/305 (6) and consequently CHEM 333 Spectroscopy is removed from the program.