

# BS/MS-Health Professions co-terminal proposal

Draft 1.2

Approved by Biology on 06 Oct 2016

## Rationale

1. We are deemphasizing the MAS degrees due to low student interest, and low internal capability to provide internships and corporate experiences that are an integral part of most MAS programs.
2. We have implemented a new MS - Health Professions (MS-HP) degree that is both in popular, and serves the needs of premeds well. Most current co-terminal MAS students are premeds and it seems likely they would be both happier and better served by this program.
3. Most current co-terminal MAS students do not like the MAS professional classes, and instead prefer more technical biological classes, such as are offered in the MS HP program. This also help them more with the MCAT and as preparation for med-school coursework.

## Proposal

### Shared courses (9 ch)

1. *BIO402* substitutes for *BIO504*. This is identical to our other co-terminal degrees. These courses deliver virtually identical content, so overlap is indicated.
2. *BIO544* subs for *BIO 445*. This is identical to our other co-terminal degrees. These courses deliver virtually identical content, so overlap is indicated.
3. *BIO530 human physiology* substitutes for *BIO430 physiology* in BS Biology. These courses deliver significantly similar content, so overlap is indicated. In BS Biochemistry, which does not require *BIO430*, *BIO530* substitutes for *a technical elective*. Currently the vast majority of biochemistry majors – and virtually all premeds – currently take *BIO430* as a technical elective.



BS-Biochemistry / MS-Biology for the Health Professions

**BS-BCHM MS-HP**

			apply 3a					admit 3b					
		BS	MS	F16	S17	F17	S18	F18	S19	F19	S20	F20	S21
		128	32	15	16	17	15	15	15	15	15	13	15
Biology	100		2	2									
	107		3	3									
	109		1	1									
	115		3		3								
	117		1		1								
	210		3				3						
	214		3			3							
	401		3					3					
	402		3						3				
	404		3					3					
	445												
	446 or 431 or 4'		3							3			
or chem451	451		2										2
	495		1								1		
	504	s											
	515	f								3			
	526		3										3
	527		3						3				
	530		3						3				
	542		3										
	544	f	3							3		3	
	595		1									1	
	gradelec		1										1
	gradelec		3									3	
	gradelec		3										3
	gradelec		3						3				
Tech Elective	4xx1												
300 or 400 B or C	4xx2		3					3					
or other approved	4xx4		3							3			
2 ch elec allowed	4xx5		3									3	
Chemistry	124		4	4									
	125		4		4								
	237		4			4							
	239		3				3						
	240		2				2						
	247		3					3					
	343		3							3			
	344		4								4		
	485		1									1	
Physics	123		4			4							
	221		4				4						
Mathematics	151		5	5									
	152		5		5								
	251		4			4							
	425		3							3			
CS	105		2			2							
Humanities	1xx		3			3							
	3xx		3					3					
	3yy		3									3	
Soc. Science	2xx		3				3						
	2yy		3						3				
	3xx		3										3
Hum/SocSci	xxx		3										3
I PRO	497		3							3			
	497		3								3		

Required courses

Bachelor of Science in Biology/Master of Science in Biology for the Health Professions

Required Courses	Credit Hours		
	<i>UG</i>	<i>grad</i>	<i>total</i>
<b>Biology Requirements</b>	40	22	54
BIOL100, 107, 109, 115, 117, 210, 214, 225, 401, <b>402*</b> , 451, 495(x2), 2 of {404, 431, 446, 491}, 515, 526, 527, <b>530*</b> , 542, <b>544*</b> , 595			
<b>Biology Technical Electives</b>			21
300 or higher	12		
400 or higher		6	
500 or higher		4	
<b>Chemistry Requirements</b>	18		18
CHEM124, 125, 237, 239, 240, 247			
<b>Mathematics Requirements</b>	13		13
MATH151, 152, 425			
<b>Physics Requirements</b>	11		11
PHYS 123, 221, 224			
<b>Computer Science Requirement</b>	2		2
CS105 or 110 or 115			
<b>Humanities and Social Science Requirements</b>	21		21
<b>I PRO</b>	6		6
<b>Free elective</b>	3		
Total	126	32	149
	<i>126 + 32 - 9 = 149</i>		

\*Courses in bold are shared courses between undergraduate and graduate curricula (BIOL402, 530, 544; 9 ch)

## Bachelor of Science in Biochemistry/Master of Science in Biology for the Health Professions

Required Courses	Credit Hours		
	<i>UG</i>	<i>grad</i>	<i>total</i>
<b>Biology Requirements</b>	<b>37</b>	<b>22</b>	54
BIOL100, 107, 109, 115, 117, 210, 214, 401, <b>402*</b> , 451, 495, 2 of {404, 431, 446, 491}, 515, 526, 527, <b>530*</b> , 542, <b>544*</b> , 595			
<b>Biology Technical Electives</b>			18
300 or higher	9		
400 or higher		6	
500 or higher		4	
<b>Chemistry Requirements</b>	28		28
CHEM124, 125, 237, 239, 240, 247, 343,344, 485			
<b>Mathematics Requirements</b>	17		17
MATH151, 152, 251, 425			
<b>Physics Requirements</b>	8		8
PHYS 123, 221			
<b>Computer Science Requirement</b>	2		2
CS105 or 110 or 115			
<b>Humanities and Social Science Requirements</b>	21		21
<b>IPRO</b>	6		6
<b>Total</b>	<b>128</b>	<b>32</b>	<b>151</b>
	<i>128 + 32 – 9 = 151</i>		

\*Courses in bold are shared courses between undergraduate and graduate curricula (BIOL402, 530, 544; 9 ch)

Sample schedule

<b>BS-BIO MS-HP</b>					
BIOL 100	2			BIOL 115	3
BIOL 107	3			BIOL 117	1
BIOL 109	1			CHEM 125	4
CHEM 124	4			MATH 152	5
MATH 151	5			HUM 200	3
		<b>15</b>			<b>16</b>
BIOL 214	3			BIOL 210	3
CHEM 237	4			CHEM 239	3
PHYS 123	4			PHYS 221	4
CS 105	2			H 3xx	3
S 2xx	3			BIOL 225	2
		<b>16</b>			<b>15</b>
BIOL 401	3			BIOL 402	3
BIOL 404	3			BIOL 530	3
CHEM 247	3			BIOL 542	3
H 3xx	3			MATH 425	3
PHYS 224	3			Tech Elec 3xx	3
		<b>15</b>			<b>15</b>
BIOL 515	3			BIOL 527	3
BIOL 446	3			Grad Elec 5xx	3
BIOL 495	1			TechElec 3xx	3
Tech Elec 3xx	3			BIOL 494	1
Free Elec	3			IPRO	3
IPRO	3				
		<b>16</b>			<b>13</b>
BIOL 544	3			BIOL 451	2
BIOL 595	1			BIOL 526	3
Grad Elect 5xx	3			BIOL 595	1
TechElec 3xx	3			Grad Elect 5xx	3
H	3			S 3xx	3
		<b>13</b>		H/S 3xx	3
					<b>15</b>
				<b>TOTAL</b>	<b>149</b>

<b>BS-BCHM MS-HP</b>							
BIOL 100	2			BIOL 115	3		
BIOL 107	3			BIOL 117	1		
BIOL 109	1			CHEM 125	4		
CHEM 124	4			MATH 152	5		
MATH 151	5			HUM 200	3		
		<b>15</b>				<b>16</b>	
BIOL 214	3			BIOL 210	3		
CHEM 237	4			CHEM 239	3		
PHYS 123	4			PHYS 221	4		
CS 105	2			H 3xx	3		
MATH 251	4			CHEM 240	2		
		<b>17</b>				<b>15</b>	
BIOL 401	3			BIOL 402	3		
BIOL 404	3			BIOL 530	3		
CHEM 247	3			BIOL 542	3		
H 3xx	3			MATH 425	3		
Tech Elec 3xx	3			S 3xx	3		
		<b>15</b>				<b>15</b>	
BIOL 515	3			BIOL 4xx	3		
BIOL 446	3			BIOL 495	1		
Grad elective 5xx	3			CHEM 344	4		
CHEM 343	3			CHEM 485	1		
I PRO	3			TechElec 3xx	3		
		<b>15</b>		I PRO	3		
						<b>15</b>	
BIOL 544	3			BIOL 451	2		
BIOL 595	1			BIOL 526	3		
Grad Elect 5xx	3			BIOL 595	1		
TechElec	3			Grad Elect 5xx	3		
H	3			S 3xx	3		
		<b>13</b>		H/S 3xx	3		
						<b>15</b>	
				<b>TOTAL</b>		<b>151</b>	