## **UNDERGRADUATE AND PROFESSIONAL MAJOR CHANGE BULLETIN NO. 9**

## Faculty Senate Approved 2/23/2012

## ---REQUIREMENTS---Spring 2012

The requirements listed below reflect the undergraduate major curricular changes approved by the Catalog Subcommittee since approval of the last Undergraduate Major Change Bulletin. All changes are underlined. Deletions are crossed out. The column to the far right indicates the date each change becomes effective.

In the case of revisions to graduation requirements, the current GER designations are still in place in most schedules of studies. Transition to the new UCORE designations is currently under construction and is expected in early this Spring 2012 in a separate bulletin.

Dept	Current	Proposed	Effective Date
Earth and	<b>Environmental Science</b>	Environmental Science	8-12
Environmental Sciences	A minor in environmental science	A minor in Environmental Science may	
Revise minor in	requires 18 hours, including ES/RP	be certified after the completion of 90	
Environmental	101, <del>335</del> , 444, and elective courses	semester credit hours. The minor	
Science	to be chosen in consultation with an	requires 18 credit hours, including	
	ES/RP advisor. Credit hours for the	ENVR SCI 101, 444. An additional 10	
	minor must include 9 hours of	credit hours may be selected from the	
	upper-division work taken in	following classes: ENVR SCI 250,	
	residence at WSU or through WSU-	275, 285, 310, 335, 463, 490,	
	approved education abroad or	GEOLOGY 230, 303, 315, NATRS	
	educational exchange courses.	300, 312, or 454. Of these 18 credit	
		hours, 9 hours must be in upper-	
		division work taken in residence at	
		WSU or through WSU-approved	
		education abroad or educational	
		exchange courses. Courses taken to	
		meet the minor requirements cannot be	
		<u>taken on a pass/fail basis.</u>	
Engineering and Computer Science WSU-Vancouver	Bachelor of Science, Computer Science Requirements (Vancouver Only) (122	Bachelor of Science, Computer Science Requirements (Vancouver) (120 Hours)	8-12
Revise certification	Hours)	(* ancouver) (120 fiours)	

and graduation			Students who have completed a	t least
requirements for BS	Students who have complete	ed at	30 semester hours of course work and	
in Computer	least 30 semester hours of co	ourse	who have completed CS 121, CS 122,	
Science.	work and who have complet	ed CS	CS 216, CS 224, CS 260, CS 261,	
	121, CS 122, CS 216, CS 22	24, CS	MATH 171, MATH 172, and	
	260, CS 261, Math 171, Mat	th 172,	PHYSICS 201, or their equivale	ents, are
	$\frac{\text{Phil } 201}{or the second sec$	neir	eligible for certification into the	
	equivalents, are eligible for	C	Bachelor of Science in Compute	er
	certification into the Bachele	or of	Science program. All courses re	quired
	Science in Computer Scienc	e	for certification must be comple	ted
	program. All courses require	to d	with a grade of C or better. Enro	ollment
	with a grade of C or better	eled	in 400-level computer science c	ourses
	Encollment in 400 level con	putor	is restricted to certified majors of	or in the second se
	science courses is restricted	to	minors in computer science and	to
	certified majors or minors in		Juniors and seniors certified in c	otner
	computer science and to jun	iors and	degree programs requiring 400-	level
	seniors certified in other deg	ree	computer science courses.	
	programs requiring 400-leve	el	No courses listed in this schedu	le of
	computer science courses.		studies may be taken on a pass/	Fail
	1		basis. All listed computer science	ce and the second se
	No courses listed in this sch	edule of	courses, and their prerequisites.	must be
	studies may be taken on a pa	ass/fail	completed with a grade of C or	better.
	basis. All listed computer sc	ience		
	courses, and their prerequisi	tes,	First Year	
	must be completed with a gr	ade of	First Term	Hours
	C or better.		CS 121	4
	First Voor		ENGLISH 101 [WRTG]	3
	First Town	Hanna	MATH 171 or Quantitative	-
		nours	Reasoning [OUAN]	4
	CS 121	4	Roots of Contemporary Issues	
	GenEd 110 [A] (GER)	3	[ROOTS]	<u>3</u>
	Math 171 <del>[N] (GER)</del>	4	Second Term	Hours
	Phil 201 [H] (GER)	3	CS 122	
	Second Term	Hours	CS 122	4
	CS 122	4	CS 210	3
	CS 216	3	Humanities [HUM]	3
	Engl 101 [W] (GER)	3	MATH 1/2	4
	GenEd 111 [A] (GER)	3	Second Year	
	Math 172	4	First Term	Hours
			CS 223	3
	Second Year		CS 260	3
	First Term	Hours	ECONS 101 or 102 or Social	
	CS 223	3	Sciences [SSCI]	3
	CS 260	3	MATH 272	2
	EconS 101 <del>[S]</del> or 102 <del>[S]</del>	3		2
		5		

(GER)		Sciences [PSCI]		
Math 273	2	Second Term	Hours	
Phys 201 [P] (GER)	4	Biological Sciences [BSCI]	4	
Second Term	Hours	with lab	-	
Biological Sciences [B]	4	CS 224	2	
(GER)	т	CS 261	3	
CS 224	2	MATH 220	2	
CS 261	3	PHYSICS 202	4	
Math 220	2	Complete Writing Portfolio		
Phys 202 [P] (GER)	4	Thind Voon		
Complete Writing Portfolio		First Torm	Hound	
Third Voor				
Finat Torm	Uoung	CS 320 [M]	3	
CS 317		CS Option Course <sup>1</sup>	3	
CS 317	3	ENGLISH 402 or 403 or	5	
CS 520 [W]	3	Communication [COMM] or		
Engl 402 [W] or 403 [W]	5	Written Communication	3	
$\frac{\text{Engl}}{(\text{GER})}$	3	[WRTG]		
Stat 360	3	Stat 360	3	
Second Term	Hours	Second Term	Hours	
Arts & Humanities and		CS 351	3	
Diversity [H,G,D] or Social	- 2	CS 355	3	
Sciences and Diversity	Ð	CS 360	4	
[ <del>[\$,K,D] (GER)</del>		CS Option Course <sup>1</sup>	3	
CS 351	3	Diversity [DIVR]	<u>3</u>	
CS 355	3			
CS 360	4	Fourth Year	<b>TT</b>	
CS Option Course <sup>1</sup>	3	First Lerm	Hours	
Fourth Vear		Creative & Professional Arts	<u>3</u>	
First Term	Hours	CS 450	3	
CS 402  [M]	<u>1100113</u>	CS 460	3	
CS 450	3	CS Option Course <sup>1</sup>	<u>5</u> 6	
CS Option $Course^1$	6	Second Term	Hours	
Intercultural Studies [LG K]	1	CS 402 [M]	3	
(GER)	3	CS 420 [M]	<u>-</u> 3	
Second Term	Hours	CS Option Courses <sup>1</sup>	9	
CS 420 [M]	3			
CS Option Courses <sup>1</sup>	9	Footnotes		
Tier III Humanities or	2	<sup>1</sup> 21 credit hours of option area	courses	
Social Science Course [T]	÷	are required for completion of	f the	

	(GER)	degree program. The option courses	
	Footnotes <sup>1</sup> 21 credit hours of option area courses are required for completion of the degree program. The option courses are chosen from upper-division computer science and related courses and must be pre-approved by a faculty advisor.	are chosen from upper-division computer science and related courses and must be pre-approved by a faculty advisor.	
Mathematics	THIRD AND FOURTH YEAR	THIRD AND FOURTH YEAR	8-12
Create new	MATHEMATICS OPTIONS	MATHEMATICS OPTIONS	
Applied Mathematics	REQUIREMENTS	REQUIREMENTS	
Option	Mathematics majors must complete	Mathematics majors must complete the	
(combination of	the courses specified by one of the	courses specified by one of the	
the following three options),	following options:	following options:	
and	Computational Mathematics	Applied Mathematics Option	
Drop options in     Operations	Option	Required Courses: In addition to the	
Research,	Required Courses: Cpt S 122, Math	core requirements, at least four upper-	
Option,	364, 448, and two of (416, 440, 464,	division courses in mathematics that	
Mathematics.	466). Suggested Courses: Computer	form a coherent program within the	
and	Science minor with Cpt S 223 and	Applied Mathematics Option. These	
Mathematical	three upper-level courses (e.g. Cpt S	courses must be approved by your	
Modeling     Revise	317, 322, and 445 or 450), approved	advisor.	
footnotes reflect	by the Cpt S undergraduate		
changes.	<del>coordinator.</del>	Theoretical Mathematics Option	
		Required Courses: Four of: Math 302,	
	Mathematical Modeling Option	303, 325, 415, 441 and 453.	
	Required Courses: Four of: Math	Secondary Mathematics Teaching	
	340, 415, 440, 448, 486. Suggested	Option	
	Courses: Two of (Math 364, 416,	See separate schedule of studies below.	
	423, 441, 464), and a minor in an		
	area that uses mathematical	First Year	
	modeling.	First Term Hours	
	<b>Operations Research Option</b>	Biological Sciences [B] (GER) 4	
	Required Courses: Math 364, 464,	Engl 101 [W] (GER) 3	

and two of (325, 416, 448, 45	53, 456,	GenEd 110 [A] (GER)	3	
4 <del>66).</del>		Math 171 [N] (GER)	4	
-00).		Second Term	Hours	
Theoretical Mathematics O	ption	Cpt S 121 or 251	3 or 4	
Required Courses: Four of N	<b>J</b> ath	GenEd 111 [A] (GER)	3	
$202 \ 202 \ 225 \ 415 \ 441 \ and \ 4$	153	Math 172	4	
302, 303, 323, 413, 441 and 4	+55.	Math 220 or 230	2 or 3	
Secondary Mathematics Te	aching	Social Science [S,K] (GER) <sup>1</sup>	3	
Option		Second Year		
See separate schedule of stud	lies	First Term	Hours	
below.		Arts & Humanities [H,G] or Social Sciences [S,K] (GER) <sup>1</sup>	3	
<b>T</b>		Math 273	2	
First Year		Math 300 [M]	3	
First Term	Hours	Phys 201 [P] (GER)	4	
Biological Sciences [B]	4	Elective <sup>2</sup>	3	
(OLR) Engl 101 [W] (GER)	3	Second Term	Hours	
GenEd 110 [A] (GER)	3	Biological [B] or Physical [P] Sciences (GER)	4	
Math 171 [N] (GER)	4	Intercultural Studies [I.G.K]		
Second Term	Hours	(GER)	3	
Cpt S 121 or 251	3 or 4	Math 301	3	
GenEd 111 [A] (GER)	3	Math 315	3	
Math 172	4	Math 360	3	
Math 220 or 230	2 or 3	Complete Writing Portfolio		
Social Science [S,K]	3			
(GEK)		Inird Year	TT	
Second Year		First Term	Hours	
First Term	Hours	Intercultural Studies [I,G,K], or	3	
Arts & Humanities [H,G] or Social Sciences [S K]	3	Social Sciences [5,K] (GER)	2	
(GER) <sup>1</sup>	5	Engl 402 [W] (GER)	3	
Math 273	2	Math Option Course <sup>3</sup>	3	
Math 300 [M]	3	Flective <sup>2</sup>	3	
Phys 201 [P] (GER)	4	Second Term	Hours	
Elective <sup>2,3</sup>	3	Arts & Humanities [H G]	nours	
Second Term	Hours	(GER)	3	
Biological [B] or Physical	4	Math 398	1	
[P] Sciences (GER)	ſ	Math 421 [M]	3	
Intercultural Studies [I,G,K] (GER)	3	Math Option Course <sup>3</sup>	3	

Math 3153Math 3603Complete Writing PortfolioThird YearFirst TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences [S,K] (GER)3Engl 402 [W] (GER)3Math 4203Math Option Course43Elective33Second TermHoursArts & Humanities [H,G]3	Fourth YearHoursFirst TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or3Social Sciences [S,K] (GER)Math 401 [M]Math 401 [M]3Math Option Course <sup>3</sup> 3Tier III Course [T] (GER)3Elective <sup>2</sup> 3Second TermHourseMath 402 [M]3Math Option Course <sup>3</sup> 3Electives <sup>2</sup> 3Electives <sup>2</sup> 3Math Option Course <sup>3</sup> 3Electives <sup>2</sup> 3
Math 3603Complete Writing PortfolioThird YearFirst TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences [S,K] (GER)Engl 402 [W] (GER)Engl 402 [W] (GER)Math 420Math Option Course4Elective3Second TermArts & Humanities [H,G]	Fourth YearHoursFirst TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or3Social Sciences [S,K] (GER)Math 401 [M]Math 401 [M]3Math Option Course <sup>3</sup> 3Tier III Course [T] (GER)3Elective <sup>2</sup> 3Second TermHoursMath 402 [M]3Math Option Course <sup>3</sup> 3Electives <sup>2</sup> 3Second TermHoursBMath Option Course <sup>3</sup> 3BElectives <sup>2</sup> 3
Complete Writing PortfolioThird YearFirst TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences [S,K] (GER)3Engl 402 [W] (GER)3Math 4203Math Option Course43Elective33Second TermHoursArts & Humanities [H,G]3	First TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or3Social Sciences [S,K] (GER) $3$ Math 401 [M] $3$ Math Option Course <sup>3</sup> $3$ Tier III Course [T] (GER) $3$ Elective <sup>2</sup> $3$ Second TermHoursMath 402 [M] $3$ Hours $3$ Electives <sup>2</sup> $3$ Hours $3$ Electives <sup>2</sup> $3$ Hours <t< td=""></t<>
Third YearFirst TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences [S,K] (GER)3Engl 402 [W] (GER)3Math 4203Math Option Course43Elective33Second TermHoursArts & Humanities [H,G]3	Arts & Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences [S,K] (GER)Math 401 [M]Math 0ption Course <sup>3</sup> Tier III Course [T] (GER)Elective <sup>2</sup> Second TermMath 402 [M]Math Option Course <sup>3</sup> Electives <sup>2</sup>
Third YearHoursFirst TermHoursArts & Humanities [H,G],Intercultural Studies[I,G,K], or Social Sciences3[S,K] (GER)3Engl 402 [W] (GER)3Math 4203Math Option Course <sup>4</sup> 3Elective <sup>3</sup> 3Second TermHoursArts & Humanities [H,G]3	Intercutural studies [1,0,K], ofSocial Sciences [S,K] (GER)Math 401 [M]Math Option Course <sup>3</sup> Tier III Course [T] (GER)Elective <sup>2</sup> Second TermMath 402 [M]Math Option Course <sup>3</sup> Electives <sup>2</sup> Math Option Course <sup>3</sup> Electives <sup>2</sup>
First TermHoursArts & Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences3[I,G,K], or Social Sciences [S,K] (GER)3Engl 402 [W] (GER)3Math 4203Math Option Course43Elective33Second TermHoursArts & Humanities [H,G]3	Math 401 [M]3Math Option Course <sup>3</sup> 3Tier III Course [T] (GER)3Elective <sup>2</sup> 3Second TermHourseMath 402 [M]3Math Option Course <sup>3</sup> 3Electives <sup>2</sup> 3
Arts & Humanities [H,G],Intercultural Studies[I,G,K], or Social Sciences[S,K] (GER)Engl 402 [W] (GER)Math 420Math Option Course <sup>4</sup> Elective <sup>3</sup> Second TermArts & Humanities [H,G]	Math Option Course <sup>3</sup> 3Tier III Course [T] (GER)3Elective <sup>2</sup> 3Second TermHourseMath 402 [M]3Math Option Course <sup>3</sup> 3Electives <sup>2</sup> 3
Intercultural Studies3[I,G,K], or Social Sciences3[S,K] (GER)3Engl 402 [W] (GER)3Math 4203Math Option Course <sup>4</sup> 3Elective <sup>3</sup> 3Second TermHoursArts & Humanities [H,G]3	Tier III Course [T] (GER)Elective2Second TermMath 402 [M]Math Option Course3Elective2
[I,G,R], or botch belefices $[S,K]$ (GER)Engl 402 [W] (GER)Math 420Math Option Course <sup>4</sup> Elective <sup>3</sup> Second TermArts & Humanities [H,G]	Incluise [1] (OLK)Elective2Second TermMath 402 [M]Math Option Course3Electives2
Engl 402 [W] (GER)3Math 4203Math Option Course43Elective33Second TermHourseArts & Humanities [H,G]3	BillBillBill $3^3$ Second TermHours $3^3$ Math 402 [M] $3^3$ $3^3$ Math Option Course <sup>3</sup> $3^3$ $3^3$ Electives <sup>2</sup> $8^3$
Math 4203Math Option Course43Elective33Second TermHourseArts & Humanities [H,G] $3$	Bit Math 402 [M] $33$ Bit Math Option Course <sup>3</sup> $33$ Electives <sup>2</sup> $83$
Math Option Course43Elective33Second TermHourseArts & Humanities [H,G]3	Math Option Course <sup>3</sup> 3BElectives <sup>2</sup>
Elective <sup>3</sup> 3 Second Term Hours Arts & Humanities [H,G]	B Electives <sup>2</sup>
Second TermHoursArts & Humanities [H,G]2	
Arts & Humanities [H,G]	3
	Footnotes
(GER)	<sup>1</sup> Actuarial Science Option students
Math 398 1	should take EconS 101, 102.
Math 421 [M] 3	$\frac{2}{3}$ See Mathematics Options list for
Math Option Course <sup>4</sup> 3	suggested electives.
Electives <sup>3</sup> 6	5 See Mathematics Options list for
Foundh Voor	required option courses.
Fourth Year	
First ferm Hours	
Arts & Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences [S,K] (GER)	3
Math 401 [M] 3	3
Math Option Course <sup>4</sup> 3	3
Tier III Course [T] (GER) 3	3
Elective <sup>3</sup> 3	3
Second Term Hours	<b>š</b>
Math 402 [M] 3	3
Math Option Course <sup>4</sup> 3	3
Electives <sup>3</sup> 8	3

<ul> <li>122.</li> <li><sup>3</sup> See Mathematics Options list for suggested electives.</li> </ul>	
<sup>4</sup> See Mathematics Options list for required option courses.	