

3+2 Joint B.S./M.S. in Computational Linguistics

Students must complete the College of Arts and Sciences Education (CASE) requirements. B.S./M.S. coursework can count towards the Social and Historical Studies and Natural and Mathematical Sciences Breadth of Inquiry requirements. Foundations: English Composition and Mathematical Modeling, World Languages and Culture, Breadth of Inquiry: Arts and Humanities, CASE: Intensive Writing, Critical Approaches to the Arts and Sciences, and Public Communication requirements are completed with courses offered by outside departments.

IUB General Education and College CASE requirements:

Foundations: English Composition, Mathematical Modeling	6 hrs
World Languages and Cultures\CASE Foreign Language: Four semesters of a foreign language or equivalent proficiency	14-16 hrs
Critical Approaches to the Arts and Sciences: One course	3 hrs
Public Communication: One course	3 hrs
Arts and Humanities: Two courses	6 hrs
Social and Historical Studies: Two courses	6 hrs
Natural and Mathematical Sciences: Satisfied by Math and Logic Foundation	—
Total:	38-40 hrs

Math and Logic Foundation

Mathematics	M212 “Calculus II”	4 hrs
Statistics	STAT-S 320 “Introduction to Statistics”	3 hrs
Logic	PHIL-P 250 “Introductory Symbolic Logic” or COGS-Q250 “Mathematics and Logic for the Cognitive and Information Sciences”	3 hrs or 4 hrs
	Total:	10-11 hrs

Computational BS/MS Core requirements

UG level	Linguistics Core	LING-L203 “Introduction to Linguistic Analysis” (formerly LING-L 303) , LING-L306 “Phonetics,” LING-L307 “Phonology,” LING-L310 “Syntax”	12 hrs
	Computational Core	LING-L245 “Language and Computers,” LING-L415 “Corpus Linguistics” (new course), LING-L435 “Foundational Skills in CL” (new course), LING-L445 “Introduction to Computational Linguistics”	12 hrs
	Computer Science	CSCI-C211 “Introduction to Computer Science,” CSCI-C212 “Introduction to Software Systems,” CSCI-C241, “Discrete Structures for Computer Science”	11 hrs
Grad level	Linguistics Core Specialization a. Morpho-syntax or b. Morpho-phonology	LING-L614 “Alternative Syntactic Theories” LING-L543 “Syntactic Analysis”; plus one of the following: LING-L544 “Morphological Analysis,” LING-L546 “Semantics,” or LING-L643 “Advanced Syntax” LING-L542 “Phonological Analysis”; plus either LING-L544 “Morphological Analysis” or LING-L642 “Advanced Phonological Description”	9 hrs
	Computational Linguistics	LING-L645 “Advanced Natural Language Processing”, LING-L665 “Applying Machine Learning Techniques in CL” (new course), LING-L715 “Seminar in Computational Linguistics”	9 hrs
	Computer Science Library & Information Science	CSCI-A594 “Data Structures”; either CSCI-B401 “Fundamentals of Computing Theory” or CSCI-B403 “Introduction to Algorithm Design and Analysis” SLIS-S534 “Information Retrieval: Theory and Practice”	9 hrs

		Total:	62 hrs
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Electives (3 courses from the following lists, at least 2 at the 500-level or above, or as approved)

Linguistics	LING-L 308 “Morphology,” LING-L315 “Intro to Sociolinguistics,” LING-L 325 “Semantics,” LING-L520 “Sociolinguistics, LING-L541 “Introductory Phonetics,” LING-L 542 “Phonological Analysis,” LING-L 543 “Syntactic Analysis,” LING-L544 “Morphological Analysis,” LING-L546 “Semantics,” LING-L642 “Advanced Phonological Description,” LING-L643 “Advanced Syntax,” LING-L 7xx (Relevant seminars)	9 hrs
School of Informatics and Computing: Computer Science	CSCI-A290 “Tools for Computing” or CSCI-A590 “Topics in Programming,” CSCI-B503 “Algorithm Design and Analysis,” CSCI-B555 “Machine Learning,” CSCI-B651 “Natural Language Processing, CSCI-B659 “Topics in Artificial Intelligence,”	
Informatics	INFO-I529 “Machine Learning in Bioinformatics,” INFO-I 532 “Seminar in Bioinformatics,” INFO-I534 “Seminar in Human-Computer Interaction”	
Library & Information Science	SLIS-S543 “Computer-Mediated Communication,” SLIS-S 604 “Topics in Library and Information Science” (e.g., Information Networks, Metadata & Semantics), SLIS-S 636 “Semantic Web,” SLIS-S637 “Information Visualization”, SLIS-S661 “Concepts and Contemporary Issues in Human-Computer Interaction”	
Cognitive Science	COGS-Q351 “Introduction to Artificial Intelligence and Computer Simulation”; COGS-Q520 “Mathematics and Logic of Cognitive Science”; COGS-Q550 “Models in Cognitive Science”	
Total		9 hrs

Outside Concentration (Required)

The outside concentration must consist of 12 credit hours at any level taken in one department. The following disciplines are appropriate for an outside concentration: cognitive science, computer science, informatics, mathematics, psychology, or a foreign language (the latter must be different from the language used to fulfill the WLC requirement). Alternatively, students can fulfill this requirement through a minor offered by any of these departments.	
Total:	12 hrs

Internship

Students have the option of participating in a summer internship between the 4 th and 5 th years. They will receive 2-3 credit hours for their participation and activity in the internship.	
Total:	2-3 hrs

Grand total: 133-37 hrs