

Checklist for Curriculum Proposals

- ____. 1. Are all **signatures on the hard copy of the proposal?** chair
- _X_. 2. Is the **effective date** correct?
- _X_. 3. Is the **rationale** for the proposal consistent with the changes proposed?
- _X_. 4. Does the proposed **number of credits** match the stated number?
- _X_. 5. Have affected units been identified and contacted? Are required **support letters** attached? (waiting for one from Math, will be forwarded when received)
- _X_. 6. Is a [resolution](#) necessary? NO If so, is it attached?
- (Necessary for: establishing a major; disestablishing a major; a name change to any program with permanent status; a name change to a department or college; a transfer or creation of any department; request for permanent status).
- _X_. 7. Are all **courses (required or referenced)** in the UDSIS Inventory or in the approval process? Yes (LING202 being proposed) [courses being proposed](#)
[Challenge List](#)
- _X_. 8. Are all **university requirements** correctly specified?
- _X_. A. Breadth requirements.
- _X_. B. Multicultural requirement.
- _X_. C. Writing requirement.
- _X_. D. DLE requirement.
- _X_. 9. Are all **college requirements** correctly specified?
- _X_. 10. Is a [side-by-side comparison](#) provided?

UNIVERSITY FACULTY SENATE FORMS

Academic Program Approval

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. For more information, call the Faculty Senate Office at 831-2921.

Submitted by: Robin Andreasen phone number 831-2919

Department: Linguistics and Cognitive Science email address robina@udel.edu

Action: Revise major: BS in Cognitive Science
(Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.)

Effective term 13F
(use format 04F, 05W)

Current degree BS
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed change leads to the degree of: BS
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed name: no change
Proposed new name for revised or new major / minor / concentration / academic unit (if applicable)

Revising:

Undergraduate major / Concentration: BS in Cognitive Science
(Example: Applied Music – Instrumental degree BMAS)

Undergraduate minor: _____
(Example: African Studies, Business Administration, English, Leadership, etc.)

Graduate Program Policy statement change: _____
(Must attach your Graduate Program Policy Statement)

Graduate Program of Study: _____
(Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

Graduate minor / concentration: _____

Note: all graduate studies proposals must include an electronic copy of the Graduate Program Policy Document, highlighting the changes made to the original policy document.

List new courses required for the new or revised curriculum. How do they support the overall program objectives of the major/minor/concentrations)?

(Be aware that approval of the curriculum is dependent upon these courses successfully passing through the Course Challenge list. If there are no new courses enter "None")

LING 202: Science of Language

This course is being developed for two reasons.

1. LING202 has been designed to bridge the gap between LING101 and more advance/technical LING courses covering syntax, phonology, and semantics.

A majority of Cognitive Science majors take 300 and 400-level LING courses in syntax, phonology, and semantics as part of their concentration requirements. Currently, there are few courses intermediate between LING 101: Intro to Linguistics and these 300 and 400-level courses. Those that exist -- such as LING203: Languages of the World and LING222: Gender and Language -- are not sufficient to bridge this gap.

2. We are finding that CGSC majors need more time exploring the idea of computation -- as it applies to the mind and to language. LING 202 covers the idea of computation from a linguistic perspective.

Explain, when appropriate, how this new/revised curriculum supports the 10 goals of undergraduate education:
<http://www.ugs.udel.edu/gened/>

The proposed revisions are primarily to make explicit changes we have been making through substitutions so as to make advising simpler, aid in student course planning, and to make it easier for students to get seats in courses that can be used to fulfill the requirements for the cognitive science major. The only main content change is the addition of LING202. This change affects goals 1 and 2 (at minimum). By focusing on computation, students will gain further opportunity to practice quantitative reasoning and to learn to think critically about different conceptions of language processing. Goal 10 is highlighted by the fact that Linguistics, by its very nature, is a global discipline.

Identify other units affected by the proposed changes:

(Attach permission from the affected units. If no other unit is affected, enter "None")

The Department of Psychology is effected by the addition of PSYC340 and PSYC350 as courses that may be taken to fulfill the cognitive psychology/biopsychology portion of our major. Currently, students are only allowed to take PSYC314. Since this course is also required of Psychology majors, we have been allowing the above substitutions for this course (along with two CGSC courses). We anticipate that this will not change the number of students requesting PSYC courses but, instead, will help distribute them more evenly across 300-level PSYC course offerings. It also makes explicit a practice that has been in place for the last 4 years -- and with the support of the Department of Psychology. A supporting letter from Psychology is included in this application.

The Department of Philosophy is minimally affected. We are moving PHIL205 from the statistics portion of the major into the computational portion (which currently includes only CISC courses). This should not make much difference (if any) in terms of the numbers of students in our major taking this course. A supporting letter from Philosophy is included in this application.

The Department of Math is minimally affected. We are removing MATH201 from the possible list of courses and making explicit the existing practice of allowing MATH 202 and MATH205 as substitutions for PSYC209. This should not make much of difference to the number of students taking their statistics course in the MATH department since very few of our students take MATH201, 202, or 205 to fulfill the statistics requirement. Most take PSYC209 or STAT200. A supporting letter from MATH is included in this document.

The Department of Computer and Information Sciences is minimally affected by the addition of LING202: Science of Language and PHIL205 as acceptable options to fulfill the computational component of the cognitive science major. This change will not make a sizeable difference to computer science, as we already allow students to substitute computationally oriented linguistics courses for the CISC courses listed in the major. We are also adding CISC101 to the list of acceptable courses, by the suggestion of the CISC department. A supporting letter from computer science is included with this proposal.

Describe the rationale for the proposed program change(s):

(Explain your reasons for creating, revising, or deleting the curriculum or program.)

See full proposal for details. There are three proposed changes:

1. Required Course: PSYC 314. Right now this course is required of every major in Cognitive Science. However, because PSYC 314 is also a requirement for Psychology majors, it is hard for Cognitive Science students to get a seat in the course. We are therefore proposing to revise the requirement to read, "One of the following: PSYC 314: Brain and Behavior, or PSYC 340: Cognition, or PSYC 350: Developmental

Psychology, or CGSC 410: Embodied Cognition, or CGSC 420: Research Methods in Cognitive Science, or CGSC 451: Topics in Cognitive Science." Students can still satisfy the requirement by taking PSYC 314, but they can also satisfy the requirement with one of several other courses.

2. Requirement in Logic or Statistics. Right now the BS in Cognitive Science requires one of PHIL 205: Logic, MATH 201: Introduction to Statistical Methods I, MATH 205: Statistical Methods, or PSYC 209: Measurement and Statistics. There are additional courses that should also count to satisfy this statistics requirement, and we are proposing to add them to the list of possible courses. We are also proposing to remove MATH 201 and PHIL 205 from the list. (See below for justifications).

Justifications:

The Psychology Department has approved MATH 202, MATH SOCI 301, and STAT 200 as substitutions for PSYC 209. Since we allow PSYC 209 to satisfy our requirement, any substitute for PSYC 209 should also count. We also independently agree that all of these courses would be appropriate statistics background for students in Cognitive Science, and having more choices will make it easier to fit the requirement into students' busy schedules. We are proposing to remove MATH 201 from the list of required courses because many of our students, in the process of completing the major, take upper level Psychology courses that have a PSYC 209 pre-requisite. Removing MATH 201 from the list will help to avoid errors in student course planning. In addition, very few of our students take MATH 201 to complete the statistics requirement. Most take PSYC 209 or STAT 200. We are also proposing to remove PHIL 205 from this list of courses because we want every student in the major to take a statistics course. Furthermore, for reasons specified above, PHIL 205 fits better in a different part of the major.

3. **Required Course in Computer Science**

Right now the BS in Cognitive Science requires a 3-credit computer science course. The reason for this requirement is to allow students to gain a better understanding of computation and the computational view of mind and language. We currently require one of the following courses: CISC 103: Introduction to Computer Science with Web Applications, CISC 108: General Computer Science, CISC 181: Introduction to Computer Science II, or CISC 280: Program Development Techniques. We are proposing to add options that deal with computation but are in other subject areas.

Justification:

Computer science provides one way to get students to think about a computational view of mind. However, many of our students would be well served with a different type of computational course. We are thus proposing to give students additional options by adding PHIL 205 a new 200-level linguistics course titled "Science of Language". The latter course is currently being taught as LING 267. However, we plan to submit the course for as permanent course this fall under the number LING This course will focus on computational aspects of linguistics and will be a great way for students in the speech pathology concentration to think about computation within the context of language.

Program Requirements:

(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be sure to indicate the changes being made to the current curriculum and **include a side-by-side comparison** of the credit distribution before and after the proposed change.)

See attached.

ROUTING AND AUTHORIZATION: (Please do not remove supporting documentation.)

Department Chairperson _____ Date _____

Dean of College _____ Date _____

Chairperson, College Curriculum Committee _____ Date _____

Chairperson, Senate Com. on UG or GR Studies _____ Date _____

Chairperson, Senate Coordinating Com. _____ Date _____

Secretary, Faculty Senate _____ Date _____

Date of Senate Resolution _____ Date to be Effective _____

Registrar _____ Program Code _____ Date _____

Vice Provost for Academic Affairs & International Programs _____ Date _____

Provost _____ Date _____

Board of Trustee Notification _____ Date _____

Revised 10/23/2007 /khs

CURRICULUM CREDITS

DEGREE REQUIREMENTS

Required Courses (26 hours/credits)

All of the following:

CGSC 100	First Year Experience	1
CGSC 170	Introduction to Cognitive Science (foundation course)	3
CGSC 314	Brain and Behavior	3
CGSC 485	Seminar in Cognitive Science (senior seminar)	3
LING 101	Introduction to Linguistics	3
PSYC 100	General Psychology and	3

One of the following:

BISC 104 Principles of Biology with Laboratory 4

or

BISC 207 Introductory Biology I 4

and

One of the following:

CISC 103 Introduction To Computer Science with Web Applications 3

or

CISC 108 General Computer Science 3

or

CISC 181 Introduction to Computer Science II 3

or

CISC 280 Program Development Techniques

One of the following:

PHIL 205 Logic 3

or

MATH 201 Introduction to Statistical Methods I 3

or

MATH 205 Statistical Methods 4

or

PSYC 209 Measurement and Statistics 3

CONCENTRATION REQUIREMENT

In addition to completing the required core, students will develop, with the aid of a faculty advisor, a concentration program individualized to their interests of at least 18 credit hours. Concentrations may

include a focus of linguistics or pre-professional speech pathology and speech science, natural language processing, animal cognition, artificial intelligence, computer modeling of cognition, or psychological models of cognition, among other possibilities.

The faculty advisor must be among the core departmental faculty listed on the departmental website (<http://www.ling.udel.edu/ling>). Further, the concentration program must be proposed by the student, approved by the student's faculty advisor and approved by the Undergraduate Studies Committee of the department. All concentration programs will consist of at least 18 credits drawn from a list of eligible courses which will be maintained on the Department's website. Some concentrations may exceed 18 hours. The list of eligible courses will be updated and posted annually on the Departmental website. Substitute courses may be proposed by the student with the approval of the faculty advisor.

First Year Experience and Discovery Learning

All first-year students in the Cognitive Science Interest major must complete a First Year Experience (FYE). The course, CGSC 100, will meet the first 8 weeks of the semester.

All students are required to participate in a discovery or experiential learning experience. The available Discovery or Experiential Learning Programs are posted on the departmental website (<http://www.ling.udel.edu/ling>). The Department currently offers opportunities for study abroad and internship possibilities which meet this requirement.

Capstone Course

Senior majors are brought together for a seminar on topics in cognitive science: CGSC 485 Seminar in Cognitive Science. The course requires participants to engage in research that demonstrates grasp of the issues in the field as a whole and in their chosen focus. This work may lead to an Honors Thesis for qualified students.

University and College Requirements

In order to receive the degree of BS in Cognitive Science all students must meet the University requirements for a bachelor's degree. Students are also required to meet the skill requirements of the College of Arts and Sciences.

College Breadth Requirements

Students must meet the following breadth requirements:

Group A Creative Arts and Humanities

These courses provide students with an understanding and appreciation of the visual and performing arts, of aesthetic forms, designs, or craftsmanship, or of literary, philosophical, and intellectual traditions. Courses may focus on a single aesthetic form or intellectual tradition, or cross-cultural comparisons. Nine credits of courses representing at least two departments or appropriate instructional units.

Group B History and Cultural Change 6

These courses provide students with an understanding of the sources and forces of historical changes in ideas, beliefs, institutions, and cultures. Courses may address social, cultural, intellectual, economic, technological, artistic, scientific, and political development, changes in a discipline, or globalization and its effects. Nine credits of courses representing at least two departments or appropriate instructional units.

Group C Social and Behavioral Sciences 6

These courses provide students with an understanding of the behavior of individuals and social groups in the context of their human and natural environments. Courses emphasize the empirical findings, applications, and methods of the social and behavioral sciences. Nine credits of courses representing at least two departments or appropriate instructional units.

If the grade earned is sufficient, a course may be applied toward more than one requirement (e.g., breadth and major requirements), but the credits are counted only once toward the total credits for graduation. If all but one course in a group has been taken in one department or program, a course cross-listed with that program will not satisfy the distribution requirement.

Proposal for a Revision to the Curriculum of the BS in Cognitive Science

Department of Linguistics and Cognitive Science

October 3, 2012

Required Course: CGSC 100

The first change involves CGSC 100: Freshman Year Experience. Right now, this course is required for all students in the major. We are proposing to remove this course from the list of required courses.

Our Justification is Two-Fold.

Many of our majors already fulfill their FYE requirement with other FYE courses. This is because most transfer into the major in their sophomore year or later. It is our practice to allow these students to substitute the FYE that they have already completed. Typically they have completed UNIV 101 or UNIV 116.

After reviewing the curriculum of what is offered in UNIV 101 and UNIV 116 – and comparing it with the course we offer – we feel that the students are better served with the UNIV options. CGSC 100 is a 1 credit pass-no pass course that meets roughly 8 times per semester and serves as a preview of the faculty and courses offered in the CGSC major. Each meeting is run by a different member of the department, or affiliated faculty, on some aspect of research or teaching. Because students come to know the faculty through their courses and learn about research and teaching options through advising, we do not feel this course is vital to student success. Courses such as UNIV 101 and UNIV 116 provide valuable skills such as time management, good study habits, and other skills that help set the students up for academic success.

Required Course: PSYC 314

The second change involves PSYC 314: Brain and Behavior. Right now this course is required of every major in Cognitive Science. The Department of Linguistics and Cognitive Science is therefore proposing to broaden the requirement as follows.

One of the Following:

PSYC 314: Brain and Behavior, or

PSYC 340: Cognition, or

PSYC 350: Developmental Psychology, or

CGSC 410: Embodied Cognition, or

CGSC 420: Research Methods in Cognitive Science, or

CGSC 451: Topics in Cognitive Science.

Justification:

Right now PSYC 314 is required of every major in Cognitive Science. However, because PSYC 314 is also a requirement for Psychology majors, it is hard for Cognitive Science students to get a seat in the course. We have been addressing this problem by allowing students to make substitutions for PSYC 314 (such as those listed above). This practice has worked. However, using substitutions is not ideal from the perspective of student course planning or advising.. All of these courses cover various topics in cognition and psychology, and as such are appropriate for fulfilling the original intent of requiring PSYC 314 – namely, to expose students to more advanced topics in psychology and cognition than what they receive in PSYC 100 (General Psychology) and CGSC 170 (Introduction to Cognitive Science).

Required Course in Computer Science

Right now the BS in Cognitive Science requires a 3-credit computer science course. The reason for this requirement is to allow students to gain a better understanding of computation and the computational-representational view of mind and language. We currently require one of the following courses: CISC 103: Introduction to Computer Science with Web Applications, CISC 108: General Computer Science, CISC 181: Introduction to Computer Science II, or CISC 280: Program Development Techniques. We are proposing to change this requirement to read...

One of the following.

CISC 101: Computers and Information Systems, or

CISC 103: Introduction to Computer Science with Web Applications, or
CISC 108: General Computer Science, or
CISC 181: Introduction to Computer Science II, or
LING 202: Science of Language, or
PHIL 205: Logic

Justification:

Computer science provides one way to get students to think about a computational view of mind. However, many of our students would be well served with a different type of computational course. We are thus proposing to give students additional options by adding PHIL 205 as well as a new 200-level linguistics course titled “Science of Language”. The latter course is currently being taught as LING 267. However, we have submitted a request to make this a permanent course LING202: Science of Language. This new LING course focuses on computational aspects of linguistics and will be a great way for students in the speech pathology concentration to think about computation within the context of language. Additionally, CISC 280 no longer exists, so we are replacing it with CISC 101: Computers and Information Systems. This course has recently been revised so that it now covers the kinds of topics of relevance to cognitive science.

Required Course in Logic or Statistics

Right now the BS in Cognitive Science requires one of PHIL 205: Logic, MATH 201: Introduction to Statistical Methods I, MATH 205: Statistical Methods, or PSYC 209: Measurement and Statistics. There are additional courses that should also count to satisfy this statistics requirement, and we are proposing to add them to the list of possible courses. We are also proposing to remove MATH 201 and PHIL 205 from the list. (See below for justifications). We are thus proposing that students complete one of the following statistics courses.

One of the Following:

MATH 202: Introduction to Statistical Methods II, or
MATH 205: Statistical Methods, or
PSYC 209: Measurement and Statistics, or
SOC 301: Introduction to Sociological Research, or
STAT 200: Basic Statistical Practice.

Justifications:

The Psychology Department has approved MATH 202, MATH SOC 301, and STAT 200 as substitutions for PSYC 209. Since we allow PSYC 209 to satisfy our requirement, any substitute for PSYC 209 should also count. We also independently agree that all of these courses would be appropriate statistics background for students in Cognitive Science, and having more choices will make it easier to fit the requirement into students’ busy schedules. We are proposing to remove MATH 201 from the list of required courses because many of our students, in the process of completing the major, take upper level Psychology courses that have a PSYC 209 prerequisite. Removing MATH 201 from the list will help to avoid errors in student course planning – by guaranteeing that our students take a statistics course that satisfies the pre-requisites for upper level psychology courses. In addition, very few of our students take MATH 201 to complete the statistics requirement. Most take PSYC 209 or STAT 200. We are also proposing to remove PHIL 205 from this list of courses because we want every student in the major to take a statistics course. Furthermore, for reasons specified above, PHIL 205 fits better in a different part of the major.

Proposed Curriculum of the BS in Cognitive Science

Department of Linguistics & Cognitive Science

October 5, 2012

Degree: Bachelor of Science

Major: Cognitive Science

DEGREE REQUIREMENTS

Required Courses for Major (26 hours/credits)

- Students must earn a grade of C- or higher in all of the courses within the major, including those that make up the concentration.
- Students may not take courses pass/fail unless the course is graded solely on a pass/fail basis.
- Students may not take 600-level courses and have them count towards the B.S. degree in Cognitive Science.
- Credits may be counted only once toward a degree.
- Students minoring in linguistics and majoring in cognitive science may not use the same courses to count towards both the major and the minor, with the exception of LING101.

All of the Following:

CGSC 170	Introduction to Cognitive Science	Best if taken first year	<u>12 Credits</u>
CGSC 485	Seminar in Cognitive Science	Take in senior (or late Jr) year	3 Credits
LING 101	Introduction to Linguistics	Best if taken in first year, preferably Fall or Winter	3 Credits
PSYC 100	General Psychology	Best if taken in first year, preferably Fall or Winter	3 Credits

One of the Following:

PSYC 314	Brain & Behavior (cross-listed w/CGSC314)		<u>3Credits</u>
PSYC 340	Cognition		3 Credits
PSYC 350	Developmental Psychology		3 Credits
CGSC 410	Embodied Cognition		3 Credits
CGSC 420	Research Methods in Cognitive Science		3 Credits
CGSC 451	Topics in Cognitive Science		3 Credits

One of the Following:

BISC 104	Principles of Biology with Laboratory		<u>4 Credits</u>
BISC 207	Introductory Biology I		4 Credits

One of the Following:

CISC 101	Computers and Information Systems		<u>3 Credits</u>
CISC 103	Introduction to Computer Science with Web Applications		3 Credits
CISC 108	General Computer Science		3 Credits
CISC 181	Introduction to Computer Science II		3 Credits
LING 202	Science of Language		3 Credits
PHIL 205	Logic		3 Credits

One of the Following:

MATH 202	Introduction to Statistical Methods II		<u>3 Credits</u>
MATH 205	Statistical Methods		3 Credits
PSYC 209	Measurement & Statistics		3 Credits
SOCI 301	Introduction to Sociological Research		3 Credits
STAT 200	Basic Statistical Practice		3 Credits

Concentration Requirement (minimum of 18 credits)

In addition to completing the 26 credit hours of required courses, students must complete a minimum of 18 additional credit hours in a concentrated area of study. (Some concentrations may exceed 18 hours.) A number of pre-approved concentrations can be

found on the Department of Linguistics & Cognitive Science website (www.ling.udel.edu). Alternatively, students have the option of developing an individualized concentration with the aid of their faculty advisor and by approval of the Director of Undergraduate Studies and the Undergraduate Studies Committee. Please see the Department of Linguistics & Cognitive Science (www.ling.udel.edu) site for more information on individualized concentrations.

Capstone Course, 3 Credits

Junior and senior majors are brought together for a seminar on topics in cognitive science: CGSC 485: Seminar in Cognitive Science. The course requires participants to engage in research that demonstrates a grasp of the issues in the field as a whole and in their chosen focus. This work may contribute to an Honors Thesis for qualified students.

University Requirements and College of Arts & Sciences Requirements

In addition to completing the requirements for the Cognitive Science major, students must complete a number of University and College of Arts and Sciences requirements.

University Requirements

ENGL 110: Critical Reading and Writing (minimum grade C-)

3 Credits

- This requirement must be completed by the time a student has earned 60 credits. Students who transfer into the College of Arts and Sciences with 45 credits or more must complete this requirement within two semesters

First Year Experience (FYE)

0 – 3 Credits

- Cognitive Science Majors can satisfy this course with any FYE offered at the University of Delaware

Discovery Learning Experience (DLE) (minimum grade C-)

3 Credits

- DLE courses must be taken for a letter grade, unless the course is taught solely on a pass/no pass basis.

University Breadth Requirement (minimum grade C-)

12 Credits

- 3 credits in each group (A, B, C, and D) of pre-approved University Breadth Requirement courses.
- Up to 3 credits from each University Breadth Requirement categories may be used to simultaneously satisfy the College of Arts and Sciences Breadth Requirements.
- See University of Delaware Course Catalogue for restrictions and qualifications.

Multi-Cultural Course

3 Credits

- LING 101: Introduction to Linguistics (a requirements for the major) fulfills the multicultural requirement.

College of Arts & Sciences Requirements

Second Writing Requirement (minimum grade C-)

3 Credits

- CGSC 485: Senior Seminar (a requirement for the major) fulfills the second writing requirement.

Foreign Language

0 – 12 Credits

- Completion of the intermediate-level course (107 or 112 or 202 or 214). The number of credits needed and initial placement will depend on the number of years of high school study of foreign language. See the University Course Catalogue for details.

Mathematics

0 – 4 Credits

- This requirement must be completed by the time a student has earned 60 credits. Students who transfer into the College of Arts and Sciences with 45 credits or more must complete this requirement within two semesters.

College of Arts & Sciences Breadth Requirement: (For students entering Fall 2010 or later, minimum grade C-)

- Minimum of 6 credits each in Groups A, B, and C.
- Up to 3 credits from each University Breadth Requirement categories may be used to simultaneously satisfy the College of Arts and Sciences Breadth Requirements.
- See University of Delaware Course Catalogue for restrictions and qualifications.

Current**DEGREE: BACHELOR OF SCIENCE
MAJOR: COGNITIVE SCIENCE****CURRICULUM****CREDITS****UNIVERSITY REQUIREMENTS**

ENGL 110 Critical Reading and Writing (minimum grade C-)	3
First Year Experience (FYE)	0 – 4
University Breadth Requirements	12
Discovery Learning Experience (DLE)	3
Multi-Cultural Courses	3

REQUIREMENTS, COLLEGE OF ARTS AND SCIENCES

Second Writing Requirement (minimum grade C-)	3
Foreign Language <i>Completion of the intermediate-level course (107 or 112 or 202 or 214).</i>	0 – 12

MATHEMATICS Complete one of the following four options with a minimum grade of D-	0 -4
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OPTION ONE, ONE OF THE FOLLOWING

MATH 113: Contemporary Mathematics,
MATH 127: Mathematics and Quantitative Reasoning

OPTION TWO, ONE OF THE FOLLOWING

MATH 114: College Mathematics and Statistics
MATH 115: Pre-Calculus
MATH 117: Pre-Calculus for Scientists and Engineers

OPTION THREE

Successful completion of any mathematics course at or above the 200-level except MATH 201, MATH 202, MATH 205, MATH 250, MATH 251, MATH 252, MATH 253, MATH 266, MATH 300 or MATH 450.

OPTION FOUR

Successful performance on a proficiency test administered by the Department of Mathematical Sciences. (0 credits awarded)

College of Arts & Sciences Breadth Requirement: (minimum grade C-)

Minimum of 6 credits each in Groups A, B, and C.
See UD Course Catalogue for restrictions & qualifications.

Revised**DEGREE: BACHELOR OF SCIENCE
MAJOR: COGNITIVE SCIENCE****CURRICULUM****CREDITS****UNIVERSITY REQUIREMENTS**

ENGL 110 Critical Reading and Writing (minimum grade C-)	3
First Year Experience (FYE)	0 - 4
University Breadth Requirements	12
Discovery Learning Experience (DLE)	3
Multi-Cultural Courses	3

REQUIREMENTS, COLLEGE OF ARTS AND SCIENCES

Second Writing Requirement (minimum grade C-)	3
Foreign Language <i>Completion of the intermediate-level course (107 or 112 or 202 or 214).</i>	0 - 12

MATHEMATICS Complete one of the following four options with a minimum grade of D-	0 -4
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OPTION ONE, ONE OF THE FOLLOWING

MATH 113: Contemporary Mathematics
MATH 127: Mathematics and Quantitative Reasoning

OPTION TWO, ONE OF THE FOLLOWING

MATH 114: College Mathematics and Statistics
MATH 115: Pre-Calculus
MATH 117: Pre-Calculus for Scientists and Engineers

OPTION THREE

Successful completion of any mathematics course at or above the 200-level except MATH 201, MATH 202, MATH 205, MATH 250, MATH 251, MATH 252, MATH 253, MATH 266, MATH 300 or MATH 450

OPTION FOUR

Successful performance on a proficiency test administered by the Department of Mathematical Sciences. (0 credits awarded)

College of Arts & Sciences Breadth Requirement: (minimum grade C-)

Minimum of 6 credits each in Groups A, B, and C.
See UD Course Catalogue for restrictions & qualifications

CURRICULUM

CGSC MAJOR REQUIREMENTS

All of the Following:

CGSC 100	First Year Experience	1 Credit
CGSC 170	Introduction to Cognitive Science	3 Credits
CGSC 485	Seminar in Cognitive Science	3 credits
LING 101	Introduction to Linguistics	3 Credits
PSYC 100	General Psychology	3 Credits
PSYC 314	Brain & Behavior (X-listed w/CGSC314)	3 Credits

One of the Following:

BISC 104	Principles of Biology with Laboratory	4 Credits
BISC 207	Introductory Biology I	4 Credits

One of the Following:

CISC 103	Introduction to Computer Science with Web Applications	3 Credits
CISC 108	General Computer Science	3 Credits
CISC 181	Introduction to Computer Science II	3 Credits
CISC 280:	Program Development Techniques	3 Credits

One of the Following:

PHIL 205	Logic	3 Credits
MATH 201	Introduction to Statistical Methods I	3 Credits
MATH 205	Statistical Methods	3 Credits
PSYC 209	Measurement & Statistics	3 Credits

Concentration Requirement (minimum of 18 credits)

In addition to completing the 26 credit hours of required courses, students must complete a minimum of 18 additional credit hours in a concentrated area of study. (Some concentrations may exceed 18 hours.) A number of pre-approved concentrations can be found on the Department's website (www.ling.udel.edu). Or, students have the option of developing an individualized concentration with the aid of their faculty advisor.

Capstone Course, 3 Credits

Junior and senior majors are brought together for a seminar on topics in cognitive science: CGSC 485: Seminar in Cognitive Science.

CREDITS

16 Credits

CURRICULUM

CGSC MAJOR REQUIREMENTS

All of the Following:

CGSC 170	Introduction to Cognitive Science	3 Credits
CGSC 485	Seminar in Cognitive Science	3 credits
LING 101	Introduction to Linguistics	3 Credits
PSYC 100	General Psychology	3 Credits

One of the Following

CGSC 410	Embodied Cognition	3 Credits
CGSC 420	Research Methods in Cognitive Science	3 Credits
CGSC 451	Topics in Cognitive Science	3 Credits
PSYC 314	Brain & Behavior (X-listed w/CGSC314)	3 Credits
PSYC 340	Cognition (X-listed w/CGSC340)	3 Credits
PSYC 350	Developmental Psychology	3 Credits

One of the Following:

BISC 104	Principles of Biology with Laboratory	4 Credits
BISC 207	Introductory Biology I	4 Credits

One of the Following:

CISC 101	Computers and Information Systems	3 Credits
CISC 103	Introduction to Computer Science with Web Applications	3 Credits
CISC 108	General Computer Science	3 Credits
CISC 181	Introduction to Computer Science II	3 Credits
LING 202	Science of Language	3 Credits
PHIL 205	Logic	3 Credits

One of the Following:

MATH 202	Introduction to Statistical Methods	3 Credits
MATH 205	Statistical Methods	3 Credits
PSYC 209	Measurement & Statistics	3 Credits
SOCI 301	Introduction to Sociological Research	3 Credits
STAT 200	Basic Statistical Practice	3 Credits

Concentration Requirement (minimum of 18 credits)

In addition to completing the 26 credit hours of required courses, students must complete a minimum of 18 additional credit hours in a concentrated area of study, (Some concentrations may exceed 18 hours.) A number of pre-approved concentrations can be found on the Department's website (www.ling.udel.edu). Or, students have the option of developing an individualized concentration with the aid of their faculty advisor.

Capstone Course, 3 Credits

Junior and senior majors are brought together for a seminar on topics in cognitive science: CGSC 485: Seminar in Cognitive Science.

Philosophy Department
University of Delaware
24 Kent Way
Newark, DE 19716

2 October 2012

To Whom It May Concern:

The Philosophy Department supports the **Proposal for a Revision to the Curriculum of the BS in Cognitive Science** submitted by the *Department of Linguistics and Cognitive Science* on September 9, 2012.

Fred Schueler
Chair

Ben, Psych is entirely supportive of the changes you propose. I reviewed your proposal with the Director of Undergraduate Studies in Psych, Prof. Brian Ackerman, and we have no concerns. Thanks for consulting with us. - Greg

Gregory A. Miller, Professor and Chair
Dept of Psychology, Univ of Delaware

To: Benjamin Bruening, Chair Linguistics

From: Errol Lloyd, Chair CIS *E.L. Lloyd*

Date: October 1, 2012

Subject: Support for the proposed revision in the BS in Cognitive Science

The Department of Computer and Information Sciences supports the proposed revision in the curriculum of the BS in Cognitive Science. Specifically we support the change in the “computation requirement” to permit a course in the Science of Language or in Logic to be used as alternatives to a course in Computer Science.

From: "Gregory A. Miller" <gmiller@psych.udel.edu>
To: "'Benjamin Bruening'" <bruening@UDel.Edu>
Date: Tue, 25 Sep 2012 14:02:51 -0400
Subject: RE: changes to BS in Cog Sci
Thread-Topic: changes to BS in Cog Sci
Thread-Index: Ac2bNkhkioscE/4tRFeQtGoPQ7fQMQAEX11Q
Accept-Language: en-US
acceptlanguage: en-US
X-Mirapoint-IP-Reputation: reputation=Good-1,
source=Queried,
refid=tid=0001.0A020303.5061EEA2.0014,
actions=TAG
X-Junkmail-Status: score=10/50, host=md10.nss.udel.edu
X-Junkmail-Signature-Raw: score=unknown,
refid=str=0001.0A02020A.5061F1CD.0012,ss=1,re=0.000,fgs=0,
ip=0.0.0.0,
so=2010-12-10 20:06:05,
dmm=2011-03-08 23:48:17,
mode=single engine
X-Junkmail-IWF: false

Ben, Psych is entirely supportive of the changes you propose. I reviewed your proposal with the Director of Undergraduate Studies in Psych, Prof. Brian Ackerman, and we have no concerns. Thanks for consulting with us. - Greg

Gregory A. Miller, Professor and Chair
Dept of Psychology, Univ of Delaware

-----Original Message-----

From: Benjamin Bruening [<mailto:bruening@UDel.Edu>]
Sent: Tuesday, September 25, 2012 11:46 AM
To: gamiller@UDel.Edu
Subject: changes to BS in Cog Sci

Dear Prof. Miller,

We are proposing some changes to the BS in Cognitive Science, some of which affect the Department of Psychology. The proposal is attached. The Faculty Senate requires that we get letters of support from affected departments. Can I ask you to provide such a letter, assuming that you do support the proposed changes? If you have questions or want to discuss the proposed changes, please get back to me. We want to submit this proposal as soon as we can, so I hope this can be taken care of quickly.

Thank you,

Benjamin Bruening
Chair, Dept. of Linguistics and Cognitive Science

Benjamin Bruening
Dept. of Linguistics & Cognitive Science University of Delaware Newark, DE 19716
(302) 831-4096

-----Original Message-----

From: Benjamin Bruening [mailto:bruening@UDel.Edu]

Sent: Tuesday, October 16, 2012 10:50 AM

To: Conrad, Catherine M.

Subject: RE: permanent approval of Cog Sci BS

>Good morning and thank you for forwarding the materials which we will
>prep for review by Ed Affairs on 10/29/12. Last week we also received
>a separate proposal to revise the BS in Cognitive Science.
>

Dear Ms. Conrad,

We have now received another letter of support for the proposal to revise the BS in Cognitive Science. It is below. I can also paste it into a PDF or Word document if you prefer.

Thanks,

Ben

Dear Professor Bruening,

The Department of Mathematical Sciences is happy to support your proposed course changes for your degree program in Cognitive Science.

We understand that the impact on our courses will be minimal, and happy to accommodate your students. Best of luck with your program.

Sincerely,

John A. Pelesko

--

Benjamin Bruening

Dept. of Linguistics & Cognitive Science University of Delaware Newark, DE 19716
(302) 831-4096