# UCONN Contaron buat ARTS AND SCIENCES COMMITTEE ON CURRICULA AND COURSES 

Jon Gajewski, Chair

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## Preliminaries

1. Approve minutes of March 11, 2014 meeting.
2. Appointment of secretary pro tem: M. McElya.
3. Approval of the final edits of the Study Abroad Report.
4. Online Curriculum Action Request form.

## Special Topics Proposals approved by chair

2014-029 HRTS 3295 Human Rights and New Technologies

Instructor: Molly Land
Short description: This course will examine the role that new technologies (social media, mobile phones, Internet applications and platforms) are playing in the fulfillment, protection, and enforcement of international human rights. New technologies provide a vehicle for the enjoyment of certain rights, conduits for the exchange of information needed for the fulfillment of rights, and platforms for collecting information and engaging in advocacy around state accountability. Focusing on a series of case studies, the course will consider both the opportunities and risks presented by new technologies for human rights protection and enforcement. Although there are considerable benefits that can be realized through the deployment of new technologies toward human rights aims, there are also risks, not only privacy and security risks but also risks in the form of hate speech and discrimination online. Finally, the course will highlight some of the technical and legal innovations employed in the case studies selected to minimize the risks and maximize the opportunities provided by new technologies.

## 2014-042 MARN 4895 Special Topics: Synoptic-Mesoscale Meteorology

Instructor: Dr. Kelly Lombardo

Course Description: Fundamentals in atmospheric synoptic-dynamics and mesoscale meteorology, including the equations of motion, potential vorticity thinking, quasi-geostrophic theory, extratropical cyclone dynamics, frontogenesis, atmospheric stability, and coastal mesoscale processes.

## Resubmitted Proposals

## 2013-129 Change BIOL 1102 Foundations of Biology

Current Catalog Copy:

## 1102. Foundations of Biology

(102) Four credits. Three class periods and one 2-hour laboratory period. Not open for credit to students who have completed a year of advanced biology in high school. Students may not receive more than 12 credits for courses in Biology at the 1000's level.
A laboratory course designed for non-science majors; surveys major biological principles with emphasis on their importance to humans and modern society. A fee of $\$ 10$ is charged for this course. CA 3-LAB.

Proposed Catalog Copy:

## 1102. Foundations of Biology

(102) Four credits. Three class periods and one 2-hour laboratory period. Not open for credit to students who have completed a year of advanced biolegy in high school. Students may not receive more than 12 credits for courses in Biology at the 1000's level. Not open to students who passed BIOL 1107, 1108 or 1110.

A laboratory course designed for non-science majors; surveys m Major biological principles with emphasis on their importance to humans and modern society; designed for non-science majors. A fee of $\$ 10$ is charged for this course. CA 3LAB.

## 2013-226 Add SOCI 2271 The Social Construction of Happiness

## SOCI 2271. The Social Construction of Happiness

## Three credits.

The pursuit of "happiness" as a social construction which is shaped by and helps shapes human societies and their various social structures and processes. Topics include: the social evolution of the concept of happiness; the social, economic and political exploitation of the pursuit of happiness; insights into the nature of happiness offered by various religious and spiritual traditions; the social correlates of happiness; and the social implications of widespread happiness.

## 2014-003 Change 2010Q-2011Q Fundamentals of Algebra and Geometry

Current Catalog Copy:

## 2010Q-2011Q. Fundamentals of Algebra and Geometry

(247Q-248Q) Three credits each semester. Prerequisite: PSYC 1100 and three credits of
Mathematics. Not open for credit to students who have passed MATH 2110, 2410, 220, 2130, or 2143. May not be counted in any of the major groups described in the Mathematics Departmental listing.
The development of the number system with applications to elementary number theory and analytic geometry. This course is intended only for students in elementary education, specifically those in pre-teaching elementary and in the Neag School of Education.

Proposed Catalog Copy:

## 2010Q-2011Q. Fundamentals of Algebra and Geometry

(247Q-248Q) Three credits each semester. Prerequisite: PSYC 1100 and three credits of Mathematics. Open only to students enrolled in the Elementary Education program in the Neag School of Education or by consent of instructor. May not be counted in any of the major groups described in the Mathematics Departmental listing.
The development of the number system with applications to elementary number theory and analytic geometry. This course is intended only for elementary education majors in the Neag School of Education.

## 2014-020 Add PSYC 5445 Neurobiology of Language: Typical and Atypical Cognition and Language Development

Proposed Catalog Copy:

## COGS 5140. Neurobiology of Language: Typical and Atypical Cognition and Language Development

3 credits. Seminar. Open to graduate students in Psychology, LING, SLHS; others with consent of instructor.
Survey of current research on language acquisition in developmentally delayed/atypical populations, including but not restricted to Autism, Williams Syndrome, Down Syndrome, and Specific Language Impairment. Examination of what the language delays and deficits reveal about each disorder, the processes of language acquisition, the representation and organization of language, and the biology/neuropsychology/genetics of language.

## 2014-021 Crosslist PSYC 5445 Neurobiology of Language: Typical and Atypical Cognition and Language Development

Proposed Catalog Copy:

## COGS 5140. Neurobiology of Language: Typical and Atypical Cognition and Language Development

3 credits. Seminar. Open to graduate students in Psychology, LING, SLHS; others with consent of instructor. Survey of current research on language acquisition in developmentally delayed/atypical populations, including but not restricted to Autism, Williams Syndrome, Down Syndrome, and Specific Language Impairment. Examination of what the language delays and deficits reveal about each disorder, the processes of language acquisition, the representation and organization of language, and the biology/neuropsychology/genetics of language. Also offered as PSYC 5445.

## PSYC 5445. Neurobiology of Language: Typical and Atypical Cognition and Language Development

3 credits. Seminar. Open to graduate students in Psychology, LING, SLHS; others with consent of instructor.
Survey of current research on language acquisition in developmentally delayed/atypical populations, including but not restricted to Autism, Williams Syndrome, Down Syndrome, and Specific Language Impairment. Examination of what the language delays and deficits reveal about each disorder, the processes of language acquisition, the representation and organization of language, and the biology/neuropsychology/genetics of language. Also offered as COGS 5140.

## New Proposals

## 2014-30 Offer HRTS 3295 International Human Rights Law

Instructor: Molly Land
Short description: This course will provide an overview of the mechanisms and issues relevant to human rights lawyering. We will examine the domestic, regional, and international forums that human rights advocates use to increase respect for international human rights and consider the advantages and disadvantages of each. The course will also address the roles, activities, and obligations of corporations and non-governmental organizations in the enforcement of human rights as well as specialized topics in the field, including truth commissions, humanitarian intervention, the right to a healthy environment, and the right to health.

## 2014-31 Add Major Mathematics-Actuarial Science-Finance

## Proposed Catalog Copy:

## Mathematics

## Mathematics-Actuarial Science-Finance

Bachelor of Science or Arts in Mathematics-Actuarial Science-Finance: The requirements for the B.S. or B.A. degree in Mathematics-Actuarial ScienceFinance are 36 credits at the 2000-level or above in Mathematics, Statistics, Business, and related areas (in addition to MATH 2110Q or 2130Q or 2143Q) and 15 credits in Finance. The required courses are MATH 2210Q (or 2144Q), 2620, 3160, 3630, 3631, 3650, 3660; STAT 3375Q, 3445, ACCT 2001, FNCE 3302, 4209, 4302, 4305, either MATH 3632 or 3634; either MATH 2610, FNCE 3221 or 4325, and either FNCE 4306 or 4895 . Students should include ECON 1201 and 1202, and a Computer Science course in their program of study as early as possible. To satisfy the writing in the Major and Information Literacy competencies, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, 3670W, or 3796W.

This degree is offered through the College of Liberal Arts and Sciences. Admission to the Actuarial Science program will be available only to students who meet the following two requirements. First, the student must have a total grade point average of 3.2 or higher or a grade point average of 3.2 or higher in mathematics. The student must also satisfy one of the following:

1. completed MATH 1121Q, 1126Q, or 1131Q with a grade of at least B;
2. successfully completed an honors calculus course with a grade of at least C;
3. received AP credit for MATH 1131Q; or
4. received a passing score on one or more of the actuarial examinations.

Students not satisfying one or more of the requirements may be admitted into the program by the Mathematics Department Actuarial Committee.

To remain as an Actuarial Science Major, the student is expected to maintain a total grade point average of 3.2 or higher.

## 2014-32 Change Major MATH

Current Catalog Copy:

## Mathematics

The Mathematics Department offers programs of study in Mathematics, Applied Mathematical Sciences, Actuarial Science (in cooperation with the School of Business), Mathematical Statistics (in cooperation with the Department of Statistics), and Mathematics - Physics (in cooperation with the Department of Physics).

MATH 2010Q, 2011Q, 2194W, 2720W, 2784, 2794W, and 3670W and STAT 3484 and 3494W may not be counted in any of the major groups listed below.

The Department offers both a Bachelor of Science and a Bachelor of Arts degree in Mathematics, Applied Mathematical Sciences, Mathematics-Statistics, and Mathematics-Actuarial Science and a Bachelor of Science in Mathematics Physics. The Bachelor of Science program provides in-depth training in Mathematics as preparation for graduate study or for participation in scientific and engineering teams in government, industry, or research laboratories. The Bachelor of Arts degree is designed to provide training in contemporary mathematics without the depth and concentrated specialization required for the Bachelor of Science program. To satisfy the writing in the major and information literacy competencies in the Bachelor of Arts in Mathematics, the Bachelor of Science in Mathematics, the Bachelor of Arts in Applied Mathematical Sciences, and the Bachelor of Science in Applied Mathematical Sciences, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, or 3796W.

Bachelor of Science in Mathematics: The requirements for the B.S. in Mathematics are:
(1) either (i) MATH 2110Q (or 2130Q), 2210Q, 2410Q (or 2420Q), 2710 (or 2141Q-2142Q) or (ii) MATH 2141Q, 2142Q, 2143Q, 2144Q;
(2) MATH 3150 (or 4110), 3151, 3230 (or 4210);
(3) At least 6 additional credits from any of the following courses: MATH 2360Q, $3146,3160,3170,3210,3231,3240,3250,3260,3270,3330$ (or 4310), 3370, 3410, 3430, 3435, 3510, 3511, 3710, and approved sections of 3094 and 3795;
(4) At least 3 additional credits from any of the following courses: MATH 3210, $3231,3240,3250,3330$ (or 4310), and 3370. In addition, at least 12 credits at the 2000-level or above in approved related areas are required.

Bachelor of Arts in Mathematics: The requirements for the B.A. in Mathematics are 27 credits of 2000-level or above course work in Mathematics and 12 credits of course work in approved related areas. The required courses are:
(1) either (i) MATH 2110Q (or 2130Q), 2210Q, 2410Q (or 2420Q), 2710 (or 2141Q-2142Q), or (ii) MATH 2141Q, 2142Q, 2143Q, 2144Q;
(2) MATH 3150 (or 4110), 3230 (or 4210);
(3) At least 3 additional credits from any of the following courses: MATH 3151, 3210, 3231, 3240, 3250, 3330 (or 4310), and 3370. The remaining courses may come from any 2000-level or above Mathematics courses.

Bachelor of Science in Applied Mathematical Sciences: The requirements for the B.S. in Applied Mathematical Sciences are
(1) either (i) MATH 2110 Q (or 2130Q), 2210Q, 2410Q (or 2420Q), 2710 (or 2141Q-2142Q) or (ii) MATH 2141Q, 2142Q, 2143Q, 2144Q;
(2) MATH 3150 (or 4110), 3410, 3510, and 3511;
(3) Two courses selected from MATH 3146, 3151, 3160, 3170, 3270, 3430, 3435,3710 , and approved sections of 3094 and 3795;
(4) At least 3 additional credits from MATH 2360Q, 3160, 3210 (or 4210), 3230, 3231, 3240, 3250, 3260, 3330 (or 4310), and approved sections of 3094 and 3795. In addition, at least 12 credits at the 2000-level or above in approved related areas are required.

Bachelor of Arts in Applied Mathematical Sciences: The requirements for the B.A. in Applied Mathematical Sciences are 27 credits of 2000-level or above
course work in Mathematics and 12 credits of course work in approved related areas. The required courses for the degree are MATH 2110Q (or 2130Q or 2143Q), 2210Q (or 2143Q-2144Q), 2410Q (or 2420Q or 2144Q), 3510, 3410, and 3511 . The remainder of the 27 credits of Mathematics must be chosen from MATH 2710, 3146, 3150 (or 4110), 3160, 3170, 3210 (or 4210), 3250, 3270, 3430,3435 , and 3710.

Bachelor of Science or Arts in Mathematics-Statistics: The requirements for the B.S. or B.A. in Mathematics-Statistics degree are 36 credits at the 2000-level or above in Mathematics and Statistics (in addition to MATH 2110Q or 2130Q), with at least 12 credits in each department. The required courses for the Mathematics-Statistics major are MATH 2210Q or 3210 or (2143Q and 2144Q); 2410Q (or 2144Q); and STAT 3375Q and 3445. To satisfy the Writing in the Major and Information Literacy competencies, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, 3796W, or STAT 3494W.

Bachelor of Science or Arts in Mathematics-Actuarial Science: The requirements for the B.S. or B.A. degree in Mathematics-Actuarial Science are 36 credits at the 2000-level or above in Mathematics, Statistics, Business, and related areas (in addition to MATH 2110Q or 2130Q or 2143Q). The required courses are MATH 2210Q (or 2144Q), 2620, 3160, 3630-3631; STAT 3375Q3445; either MATH 3632 or 3634; and either MATH 2610, FNCE 3221 or 4325. Students should include ECON 1201 and 1202, a Computer Science course, and ACCT 2001 and 2101 in their program of study as early as possible. To satisfy the writing in the Major and Information Literacy competencies, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, 3670W, or 3796W.

Admission to the Actuarial Science program will be available only to students who meet the following two requirements. First, the student must have a total grade point average of 3.2 or higher or a grade point average of 3.2 or higher in mathematics. The student must also satisfy one of the following:

1. completed MATH 1121Q, 1126Q, or 1131Q with a grade of at least B;
2. successfully completed an honors calculus course with a grade of at least C;
3. received AP credit for MATH 1131Q; or
4. received a passing score on one or more of the actuarial examinations.

Students not satisfying one or more of the requirements may be admitted into the program by the Mathematics Department Actuarial Committee.

To remain as an Actuarial Science Major, the student is expected to maintain a total grade point average of 3.2 or higher.

Bachelor of Science in Mathematics-Physics: The B.S. degree in Mathematics- Physics may be completed by following either track $A$, which has a physics emphasis, or track B, which has a mathematics emphasis. Students in track A should choose an advisor from the Physics Department, and those in Track B should choose an advisor from the Mathematics Department. In either track the writing in the major and information literacy competencies are met using PHYS 2501W.

The required courses for the Mathematics-Physics Major Track A (Physics Emphasis) are:
(1) either: i) MATH 2110Q (or 2130Q or 2143Q) and 2210Q and 2410Q (or 2420Q) or: ii) MATH 2141Q and 2142Q and 2143Q and 2144Q.
(2) All of: MATH 3146, 3410, 3510 and PHYS 2300, 2501W, 3101, 3201, 3202, 3300, 3401.
(3) Any nine credits from: PHYS 2200, 2400, 2502, 3102, 3103, 3104, 3150, 3402, 3989, 4093, 4095, 4096, 4098, 4099, 4100, 4130, 4140, 4150, 4210, 4300, 4350, 4900.

The required courses for the Mathematics-Physics Major Track B (Mathematics Emphasis) are:
(1) either: i) MATH 2110Q (or 2130Q or 2143Q) and 2210Q and 2410Q (or 2420Q) and 2710 (or 2141Q and 2142Q) and 3146, or: ii) MATH 2141Q and 2142Q and 2143Q and 2144Q and 3146
(2) All of: PHYS 2300, 2501W, 3101, 3201, 3202, 3401.
(3) Any 3 credits from: PHYS 2200, 2400, 2502, 3102, 3103, 3104, 3150, 3300, 3989, 4093, 4095, 4096, 4098, 4099, 3402, 4100, 4130, 4140, 4150, 4210, 4300, 4350, 4900.
(4) Any 4 courses from MATH 3150 (or 4110), 3151, 3160, 3210, 3230 (or 4210), 3330 (or 4310), 3370, 3410.

A minor in Mathematics is described in the "Minors" section.

Proposed Catalog Copy:

## Mathematics

The Mathematics Department offers programs of study in Mathematics, Applied Mathematical Sciences, Actuarial Science (in cooperation with the School of Business), Mathematical Statistics (in cooperation with the Department of Statistics), and Mathematics - Physics (in cooperation with the Department of Physics).

MATH 2010Q, 2011Q, 2194W, 2720W, 2784, 2794W, and 3670W and STAT 3484 and 3494W may not be counted in any of the major groups listed below.

The Department offers both a Bachelor of Science and a Bachelor of Arts degree in Mathematics, Applied Mathematical Sciences, Mathematics-Statistics, Mathematics-Actuarial Science and Mathematics-Actuarial Science-Finance, and a Bachelor of Science in Mathematics - Physics. The Bachelor of Science program provides in-depth training in Mathematics as preparation for graduate study or for participation in scientific and engineering teams in government, industry, or research laboratories. The Bachelor of Arts degree is designed to provide training in contemporary mathematics without the depth and concentrated specialization required for the Bachelor of Science program. To satisfy the writing in the major and information literacy competencies in the Bachelor of Arts in Mathematics, the Bachelor of Science in Mathematics, the Bachelor of Arts in Applied Mathematical Sciences, and the Bachelor of Science in Applied Mathematical Sciences, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, or 3796W.

Bachelor of Science in Mathematics: The requirements for the B.S. in Mathematics are:
(1) either (i) MATH 2110Q (or 2130Q), 2210Q, 2410Q (or 2420Q), 2710 (or 2141Q-2142Q) or (ii) MATH 2141Q, 2142Q, 2143Q, 2144Q;
(2) MATH 3150 (or 4110), 3151, 3230 (or 4210);
(3) At least 6 additional credits from any of the following courses: MATH 2360Q, $3146,3160,3170,3210,3231,3240,3250,3260,3270,3330$ (or 4310), 3370, 3410, 3430, 3435, 3510, 3511, 3710, and approved sections of 3094 and 3795;
(4) At least 3 additional credits from any of the following courses: MATH 3210, 3231, 3240, 3250, 3330 (or 4310), and 3370. In addition, at least 12 credits at the 2000-level or above in approved related areas are required.

Bachelor of Arts in Mathematics: The requirements for the B.A. in Mathematics are 27 credits of 2000-level or above course work in Mathematics and 12 credits of course work in approved related areas. The required courses are:
(1) either (i) MATH 2110Q (or 2130Q), 2210Q, 2410Q (or 2420Q), 2710 (or 2141Q-2142Q), or (ii) MATH 2141Q, 2142Q, 2143Q, 2144Q;
(2) MATH 3150 (or 4110), 3230 (or 4210);
(3) At least 3 additional credits from any of the following courses: MATH 3151, $3210,3231,3240,3250,3330$ (or 4310), and 3370. The remaining courses may come from any 2000-level or above Mathematics courses.

Bachelor of Science in Applied Mathematical Sciences: The requirements for the B.S. in Applied Mathematical Sciences are
(1) either (i) MATH 2110Q (or 2130Q), 2210Q, 2410Q (or 2420Q), 2710 (or 2141Q-2142Q) or (ii) MATH 2141Q, 2142Q, 2143Q, 2144Q;
(2) MATH 3150 (or 4110), 3410, 3510, and 3511;
(3) Two courses selected from MATH 3146, 3151, 3160, 3170, 3270, 3430, 3435, 3710, and approved sections of 3094 and 3795;
(4) At least 3 additional credits from MATH 2360Q, 3160, 3210 (or 4210), 3230, 3231, 3240, 3250, 3260, 3330 (or 4310), and approved sections of 3094 and 3795. In addition, at least 12 credits at the 2000-level or above in approved related areas are required.

Bachelor of Arts in Applied Mathematical Sciences: The requirements for the B.A. in Applied Mathematical Sciences are 27 credits of 2000-level or above course work in Mathematics and 12 credits of course work in approved related areas. The required courses for the degree are MATH 2110Q (or 2130Q or 2143Q), 2210Q (or 2143Q-2144Q), 2410Q (or 2420Q or 2144Q), 3510, 3410, and 3511 . The remainder of the 27 credits of Mathematics must be chosen from MATH 2710, 3146, 3150 (or 4110), 3160, 3170, 3210 (or 4210), 3250, 3270, 3430,3435 , and 3710.

Bachelor of Science or Arts in Mathematics-Statistics: The requirements for the B.S. or B.A. in Mathematics-Statistics degree are 36 credits at the 2000-level or above in Mathematics and Statistics (in addition to MATH 2110Q or 2130Q), with at least 12 credits in each department. The required courses for the Mathematics-Statistics major are MATH 2210Q or 3210 or (2143Q and 2144Q); 2410Q (or 2144Q); and STAT 3375Q and 3445. To satisfy the Writing in the Major and Information Literacy competencies, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, 3796W, or STAT 3494W.

Bachelor of Science or Arts in Mathematics-Actuarial Science: The requirements for the B.S. or B.A. degree in Mathematics-Actuarial Science are 36
credits at the 2000-level or above in Mathematics, Statistics, Business, and related areas (in addition to MATH 2110Q or 2130Q or 2143Q). The required courses are MATH 2210Q (or 2144Q), 2620, 3160, 3630-3631; STAT 3375Q3445; either MATH 3632 or 3634; and either MATH 2610, FNCE 3221 or 4325. Students should include ECON 1201 and 1202, a Computer Science course, and ACCT 2001 and 2101 in their program of study as early as possible. To satisfy the writing in the Major and Information Literacy competencies, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, 3670W, or 3796W.

Admission to the Actuarial Science program will be available only to students who meet the following two requirements. First, the student must have a total grade point average of 3.2 or higher or a grade point average of 3.2 or higher in mathematics. The student must also satisfy one of the following:

1. completed MATH 1121Q, 1126Q, or 1131Q with a grade of at least $B$;
2. successfully completed an honors calculus course with a grade of at least C;
3. received AP credit for MATH 1131Q; or
4. received a passing score on one or more of the actuarial examinations.

Students not satisfying one or more of the requirements may be admitted into the program by the Mathematics Department Actuarial Committee.

To remain as an Actuarial Science Major, the student is expected to maintain a total grade point average of 3.2 or higher.

Mathematics-Actuarial Science-Finance
Bachelor of Science or Arts in Mathematics-Actuarial Science-Finance: The requirements for the B.S. or B.A. degree in Mathematics-Actuarial ScienceFinance are 36 credits at the 2000-level or above in Mathematics, Statistics, Business, and related areas (in addition to MATH 2110Q or 2130Q or 2143Q) and 15 credits in Finance. The required courses are MATH 2210Q (or 2144Q), 2620, 3160, 3630, 3631, 3650, 3660; STAT 3375Q, 3445, ACCT 2001, FNCE 3302, 4209, 4302, 4305, either MATH 3632 or 3634; either MATH 2610, FNCE 3221 or 4325, and either FNCE 4306 or 4895 . Students should include ECON 1201 and 1202, and a Computer Science course in their program of study as early as possible. To satisfy the writing in the Major and Information Literacy competencies, all students must pass one of the following courses: MATH 2194W, 2720W, 2794W, 3670W, or 3796W.

This degree is offered through the College of Liberal Arts and Sciences. Admission to the Actuarial Science program will be available only to students who meet the following two requirements. First, the student must have a total
grade point average of 3.2 or higher or a grade point average of 3.2 or higher in mathematics. The student must also satisfy one of the following:

1. completed MATH 1121Q, 1126Q, or 1131Q with a grade of at least B;
2. successfully completed an honors calculus course with a grade of at least C;
3. received AP credit for MATH 1131Q; or
4. received a passing score on one or more of the actuarial examinations.

Students not satisfying one or more of the requirements may be admitted into the program by the Mathematics Department Actuarial Committee.

To remain as an Actuarial Science Major, the student is expected to maintain a total grade point average of 3.2 or higher.

Bachelor of Science in Mathematics-Physics: The B.S. degree in Mathematics- Physics may be completed by following either track A, which has a physics emphasis, or track B, which has a mathematics emphasis. Students in track A should choose an advisor from the Physics Department, and those in Track B should choose an advisor from the Mathematics Department. In either track the writing in the major and information literacy competencies are met using PHYS 2501W.

The required courses for the Mathematics-Physics Major Track A (Physics Emphasis) are:
(1) either: i) MATH 2110 Q (or 2130Q or 2143Q) and 2210Q and 2410Q (or 2420Q) or: ii) MATH 2141Q and 2142Q and 2143Q and 2144Q.
(2) All of: MATH 3146, 3410, 3510 and PHYS 2300, 2501W, 3101, 3201, 3202, 3300, 3401.
(3) Any nine credits from: PHYS 2200, 2400, 2502, 3102, 3103, 3104, 3150, 3402, 3989, 4093, 4095, 4096, 4098, 4099, 4100, 4130, 4140, 4150, 4210, 4300, 4350, 4900.

The required courses for the Mathematics-Physics Major Track B (Mathematics Emphasis) are:
(1) either: i) MATH 2110Q (or 2130Q or 2143Q) and 2210Q and 2410Q (or 2420Q) and 2710 (or 2141Q and 2142Q) and 3146, or: ii) MATH 2141Q and 2142Q and 2143Q and 2144Q and 3146
(2) All of: PHYS 2300, 2501W, 3101, 3201, 3202, 3401.
(3) Any 3 credits from: PHYS 2200, 2400, 2502, 3102, 3103, 3104, 3150, 3300, 3989, 4093, 4095, 4096, 4098, 4099, 3402, 4100, 4130, 4140, 4150, 4210, 4300, 4350, 4900.
(4) Any 4 courses from MATH 3150 (or 4110), 3151, 3160, 3210, 3230 (or 4210), 3330 (or 4310), 3370, 3410.

A minor in Mathematics is described in the "Minors" section.

## 2014-33 Change GERM 1175 Human Rights and German Culture

Current Catalog Copy:

## 1175 Human Rights and German Culture

(175) Three credits. Readings and lectures in English. May not be used to meet the undergraduate foreign language requirement.
Study of primary sources on human rights from the Age of Enlightenment to contemporary documents and debates as well as literature and other forms of art related to human rights. Documentaries on the Holocaust, human rights in divided Germany, and the contemporary debate on multiculturalism and political asylum. CA 1. CA 4-INT.

Proposed Catalog Copy:

## 1175 Human Rights and German Culture

(175) Three credits. Readings and lectures in English. May not be used to meet the undergraduate foreign language requirement.
Study of philosophical discourse on human rights from the Enlightenment to the present and analysis of related ethical problems in conjunction with an examination of relevant literary texts, film, and other art forms. Study of Germany's role in the development of international human rights instruments. CA 1. CA 4-INT.

## 2014-34 Add ANTH 3555 Archaeological Science

Proposed Catalog Copy:

## ANTH 3555. Archaeological Science

Either semester. Three credits. Open to Sophomores. Consent of instructor required. Hartman.
Survey of scientific methods used to answer archaeological questions. Methods, applications and lab demonstrations.

Proposed Catalog Copy:
ANTH 3720 Lab Methods in Archaeological and Forensic Science
Either Semester. 1-6 credits. Consent of instructor required. Introduction to scientific lab methods used in archaeology and forensics. Includes six stand alone modules, each dedicated to a different method.

## 2014-36 Change HEB 3279 Literature of Modern Israel

Current Catalog Copy:

## 3279. Literature of Modern Israel

(279) Three credits.

The major themes and literary achievements of modern Hebrew writing. Authors to be emphasized include Feierberg, Bialik, Brenner, Berdichevsky, Tschernichowsky, Agnon, Greenberg, and Alterman.

Proposed Catalog Copy:

## 3279. Literature of Modern Israel

(279) Three credits.

Modern Israeli Literature in Translation. The major themes and literary achievements of modern Hebrew writing in translation. Authors range from the pre-Statehood period (Bialik, Tchernikovsky, Agnon) to the present (Yehoshua, Grossman, Liebrecht, Semel).

## 2014-37 Add HIST 2210 History of the Ocean

Proposed Catalog Copy:

## HIST 2210. History of the Ocean

(Also offered as MAST 2210.) Three credits.
Cultural, environmental, and geopolitical history of the ocean from prehistory to the present. Examines the impact of migration, industrialization, modernization, and globalization on the relationships between people and oceans.

## 2014-38 Crosslist HIST 2210 History of the Ocean as Mast 2210

Proposed Catalog Copy:

## HIST 2210. History of the Ocean

(Also offered as MAST 2210.) Three credits.
Cultural, environmental and geopolitical history of the ocean from prehistory to the present. Examines the impact of migration, industrialization, modernization, and globalization on the relationships between people and oceans.

## MAST 2210. History of the Ocean

(Also offered as HIST 2210.) Three credits.
Cultural, environmental and geopolitical history of the ocean from prehistory to the present. Examines the impact of migration, industrialization, modernization, and globalization on the relationships between people and oceans.

## 2014-39 Add HIST 3519 Contemporary America

Proposed Catalog Copy:

## 3519. Contemporary America

## 3 Credits.

American politics, society, and economy from 1973 through the present. Topics include: Conservatism, feminism, gay liberation, the end of the Cold War, Latino immigration, deindustrialization, and the New Economy.

## 2014-40 Add HIST 5505 Gender in the Early Modern West

Proposed Catalog Copy:

## HIST 5505. Gender in the Early Modern West

3 credits. Seminar.
Discussion of key works on gender, women, and sexuality, spanning the 1400s1700s with a geographical focus mostly on Britain, continental Europe, and the Americas.

## 2014-41 Add HIST 5544 American Land and Society

Proposed Catalog Copy:

## HIST 5544. American Land and Society

3 credits. Seminar.
Examines the historical literature on American ideas about landholding and agriculture from the $18^{\text {th }}$ to the $20^{\text {th }}$ century and their impact on society, culture, and the environment.

## 2014-043 Add POLS 3082 Critical Race Theory

Proposed Catalog Copy:

## Pols 3082. Critical Race Theory

Three credits. Prerequisite: Open to Juniors or Higher. Recommended preparation: Pols 1002.
Contemporary race scholarship in political theory and related disciplines on how racial identification connects to legal decisions, the construction of publics, and political action. Additional topics include interactions between states and social movements on racial questions, the intersections of race, class, gender, and membership, and the problems with both post-racialism and identity politics.

## 2014-044 Change PP 3032 Managing Public Money

Current Catalog Copy:

## PP 3032. Managing Public Money

3 credits. Seminar
Introduction to the policy and management issues surrounding how governments spend the money they raise.

Proposed Catalog Copy:

## PP 3032. Budgeting in Public Service Organizations

3 credits. Seminar.
Introduction to the policy and management issues surrounding how governments budget and spend the money they raise.

## 2014-045 Change PP 5318 Financial Management for Public and Nonprofit Organizations

Current Catalog Copy:
PP 5318. Financial Management for Public and Nonprofit Organizations 3 credits. Seminar.

Management of financial resources in public service organizations. Topics include variance analysis, public sector and nonprofit accounting, financial statement analysis, and forecasting.

Proposed Catalog Copy:

## PP 5318. Financial Management for Public Organizations

3 credits. Seminar.
Management of financial resources in public organizations. Topics include variance analysis, public sector accounting, financial statement analysis, and forecasting.

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2014-046 Change PP 5323. Leadership and Management of
Nonprofit Organizations
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Current Catalog Copy:
PP 5323. Leadership and Management of Nonprofit Organizations
3 credits. Seminar.
The theory and practice of effective leadership and management of nonprofit organizations.

Proposed Catalog Copy:
PP 5323. Leading and Governing Nonprofit Organizations 3 credits. Seminar.
The theory and practice of effective leadership and governance of nonprofit organizations.

## 2014-047 Change PP 5324. Resource Development for Nonprofit Organizations

Current Catalog Copy:

## PP 5324. Resource Development for Nonprofit Organizations

3 credits. Seminar.
Important concepts in the fundraising process unique to local, national and international nonprofit organizations.

Proposed Catalog Copy:
PP 5324. Grant Writing and Fund Development for Nonprofit

## Organizations

3 credits. Seminar.
Core fundamentals of fund development and grant writing practices for nonprofit organizations.

## 2014-048 Change PP 5361. Theory of Public Organizations

Current Catalog Copy:

## PP 5361. Theory of Public Organizations

3 credits. Seminar.
An examination of organization theory and research findings and their relation to public organizations.

Proposed Catalog Copy:

## PP 5361. Managing Public Organizations

3 credits. Seminar.
Core management and behavioral concepts to effectively lead a public organization. Topics include leadership, strategic planning, managing
organizational performance, and organizational structure, culture and politics.

## 2014-049 Change PP 5362. Organization and Management

Current Catalog Copy:

## PP 5362. Organization and Management

3 credits. Seminar
The application of organization theory and research findings; their relation to public organizations.

Proposed Catalog Copy:

## PP 5362. Applied Management Project

3 credits. Seminar. Open to MPA students only. Prerequisite: PP 5370
The application of management concepts and theory, research and practice to problems facing public and nonprofit organizations. This course is an MPA capstone option.

## 2014-050 Change PP 5375. Analytic Tool for Public Problems

Current Catalog Copy:

## PP 5375. Analytic Tool for Public Problems

3 credits. Seminar.
The analytic tools necessary to evaluate the activities of government.
Proposed Catalog Copy:

## PP 5375. Economic Analysis for Public Administration

3 credits. Seminar.
The economic tools necessary to evaluate the activities of public administration.

## 2014-051 Add PP 5314. Causal Program Evaluation

Proposed Catalog Copy:

## PP 5314. Causal Program Evaluation

3 credits. Seminar.
This course will provide the student with the advanced methods and tools used for causal program evaluation. This course is an MPA capstone option. Also offered as ECON 5314.

## 2014-052 Crosslist PP 5314 with ECON 5314

Proposed Catalog Copy:

## ECON 5314. Causal Program Evaluation

3 credits. Seminar.
This course will provide the student with the advanced methods and tools used for causal program evaluation. This course is an MPA capstone option. Also offered as PP 5314.

## PP 5314. Causal Program Evaluation

3 credits. Seminar.
This course will provide the student with the advanced methods and tools used for causal program evaluation. This course is an MPA capstone option. Also offered as ECON 5314.

## 2014-053 Add PP 5328. Business Functions of Nonprofit Organizations

Proposed Catalog Copy:

## PP 5328. Business Functions of Nonprofit Organizations

3 credits. Seminar.
Management of financial resources in nonprofit organizations. Topics include variance analysis, nonprofit accounting, financial statement analysis, internal controls, cash management and forecasting.

## 2014-054 Add PP 5331. Quantitative Methods for Public Administration

Proposed Catalog Copy:

## PP 5331. Quantitative Methods for Public Administration

3 credits. Seminar.
This course will provide the student with quantitative tools necessary to manage and evaluate public programs.

## 2014-055 Add PP 5383: Advanced Questionnaire Design

Proposed Catalog Copy:

## PP 5383: Advanced Questionnaire Design

3 credits. Seminar.
An overview over the art and science of designing survey questionnaires. Special attention will be paid to the psychological and social processes that may influence the survey response in unanticipated ways.

## 2014-056 Add PP 5378. Methods of Data Collection

Proposed Catalog Copy:
PP 5378. Methods of Data Collection
3 credits. Seminar.
An exploration of the many challenges of survey data collection and the points in the data collection process where survey error can be introduced.

## 2014-057 Add PP 5382. Project Management in Survey Research

Proposed Catalog Copy:
PP 5382. Project Management in Survey Research
3 credits. Seminar.
An exploration of project management techniques applied to survey research projects.

## 2014-058 Add PP 5384. Political Polling

Proposed Catalog Copy:
PP 5384. Political Polling
3 credits. Seminar.
An exploration of the role of opinion polling in American political campaigns, journalism, and academic research, as well as the methodological aspects of scientific opinion polling.

## 2014-059 Add PP 5386. Survey Research Analysis and Reporting

Proposed Catalog Copy:

PP 5386. Survey Research Analysis and Reporting
3 credits. Seminar.

A focus on the development of high-quality, specialized, analytic writing skills that apply specifically to preparing survey research reports.

## 2014-060 Add PP 5387. Surveys for Market Research

Proposed Catalog Copy:
PP 5387. Surveys for Market Research
3 credits. Seminar.
An exploration of how survey research techniques and methods are used to address market research problems.

