Date: November 6, 2013

To: Faculty of Arts and Sciences-Newark

From: Jan Lewis  
Acting Dean of Faculty

Re: Faculty Meeting

There will be a meeting of the Faculty of Arts and Sciences-Newark on Wednesday, November 13, 2013 at 2:30p.m in Smith Hall, Room 220.

The agenda will be as follows:

I. Dean’s Report

II. Committee Reports  
   a. Courses of Study  
   b. General Education  
   c. Governance, Bylaws and Nominations

III. University Senate

IV. Old Business

V. New Business

*Faculty Minutes are now available on the FASN Dean’s web-site:  
http://ncas.rutgers.edu
To: Faculty of Arts and Sciences - Newark

From: Harold Siegel, Chair of the Courses of Study Committee

Date: Wednesday, October 30, 2013

AGENDA
Wednesday, October 30, 2013

The committee recommends approval for the following course requests:

I. Arts Culture Media

Course Title Change:
From: 21:088:303 Performance for Television (3 credits)
To: 21:088:303 Acting for the Camera (3 credits)

Changes in Credits:
From: 21:087:356 Ensemble II (1 credit)
To: 21:087:356 Ensemble II (2 credits)

From: 21:087:456 Ensemble III (3 credits)
To: 21:087:456 Ensemble III (1 credit)

II. Chemistry

Offer Existing Course for Winter Session:
21:160:115 General Chemistry (4 credits)

III. EES

Creation of a New Course:
21:460:375 Quantitative Methods in the Geosciences (4 credits)
IV. English

Creation of New Courses:
21:350:210 Literature and Medicine (3 credits)
21:352:230 Race, Nation, and Borders in American Literature (3 credits)
21:350:233 Whose English? (3 credits)

Course Title and Number Changes:
From: 21:350:351 Survey of World Literature (3 credits)
To: 21:350:223 Introduction to Global Literature (3 credits)

From: 21:350:398 Literature of Protest (3 credits)
To: 21:352:225 Literature of Social Protest (3 credits)

V. Math and Computer Science

Creation of a New Course:
21:640:134 Trigonometry Bridging Course (1 credit)

VI. Philosophy

Creation of New Courses:
21:730:203 Human Nature (3 credits)
21:730:381 Philosophy of Neuroscience (3 credits)
21:730:382 The Self: East and West (3 credits)

VII. Political Science

Creation of a New Minor:
Minor in Global Politics
(*See attached for appendix I.)

Revision of an Existing Minor:
Minor in International Affairs
(*See attached for appendix III.)

VIII. Psychology

Creation of a New Course:
21:830:431 Media Psychology (3 credits)
Offer Existing Courses Online:
21:830:102 Principles of Psychology 102 (3 credits)
21:830:335 Social Psychology (3 credits)
21:830:363 Abnormal Psychology (3 credits)

IV. Spanish and Portuguese Studies

Creation of a New Minor:
Minor in Latin American Studies
(*See attached for appendix II.)

V. New Joint Major Program with the School of Health Related Professions in Psychiatric Rehabilitation
(*See attached for appendix IV.)
Proposal for a Minor in Global Politics

To be administered by the Department of Political Science

Rutgers, the State University of New Jersey

Campus at Newark

Start Date: January 2014

Contact:

Dr. Gabriela Kütting

Hill Hall 718

kutting@rutgers.edu

(973) 353 5126
Proposal for a Minor in Global Politics

Rationale

In light of the requirement for Rutgers Newark students to complete a minor track in addition to a major, we propose to offer a Minor in Global Politics in addition to a Major and Minor in Political Science. This Minor reflects the strengths of our faculty and the needs of our students.

Objectives

- To acquire a background in the study of global politics.
- To offer students the opportunity to focus on the international and global aspects of political science.
- To gain a deeper understanding of the institutions and political processes both at the international level and in other countries.

These objectives are aligned with the general goals of the undergraduate academic programs in the Department of Political Science, currently articulated as follows:

Learning Goals for Political Science Majors

Political Science is a big tent that covers American Government, International/Global Relations, Comparative Government, Classical and Modern Political Theory, Public Law, Urban Studies, and Race, Ethnic, and Gender studies. The classical Greeks described Politics as the “architectonic science” because it concerns itself with the questions underlying the whole of civic life: What constitutes a just republic? How do we define a good citizen? How and for what ends should power be used and resources allocated? What defines the good life?

Students majoring in Political Science should acquire a background in its fundamental principles and core literature—even if they ultimately choose to focus on one or more specialties within the larger discipline. They should acquire a political imagination—i.e., a lens through which to view and analyze governmental institutions; policy choices; and competing political and philosophical values.

The objectives we pursue are both general and specific—general in that our majors should be able to think conceptually, specific in that they should also possess the factual knowledge necessary to understand particular phenomena.

Among the core concepts Political Science majors should understand are the following: The interactions between institutions and individuals; and between different countries and regions of the world; how regimes influence the character and priorities of their citizens; the national and international roles...
played both by key individuals and large political and natural forces (e.g., famine, revolutions, demographic shifts); the impact of globalization on a state’s institutions, culture, and economic well-being; the influence of nationalism and religious fundamentalism; the tension between liberty and equality; liberty and order; change and continuity.

**Particular Learning Goals**

Students majoring in Political Science at Rutgers-Newark are expected to acquire the following skills:

1.) Reading and research capabilities; familiarity with major works in the discipline and the ability to locate and understand primary sources; the ability to gather and analyze data using both qualitative and quantitative measures.

2.) The capacity to think critically—i.e., to accept nothing as a given, but, rather, to investigate the source of the information; seek arguments for and against its reliability; determine the extent to which an argument is logical, internally consistent, and supported by evidence; detect the historical, cultural, or personal bias that might influence an argument.

3.) The ability to write clearly, effectively, and persuasively.

We in the Political Science Department make demands on our students, but we do so in order to help them develop civic virtues, a broad understanding of the discipline, and the intellectual and personal qualities necessary to succeed in life on both a professional and personal level.

**Design**

The minor consists of two core courses totaling 6 credits: the Level Two courses America and the World and Students have a choice of either World Politics or International Political Economy for their second core course.

Students must successfully complete a minimum of 12 credits beyond the required core courses. Students must choose courses from the Global and Comparative Politics track in the Political Science department to fulfill this requirement.

**Other minors in global politics in New Jersey**

There are no other Minors in Global Politics in New Jersey.
The proposal for the New Minor in Global Politics

The minor in Global Politics requires 18 credits as follows:

1. Two Core courses:
   21 790 202 America and the World
   And either
   21 790 321 World Politics or
   21 790 317 International Political Economy

2. Four Electives:
   Any Political Science courses from the following list or offered under the Global Politics concentration:

   21:790:301. Gov’s of Great Britain/Commonwealth
   21:790:311. Government/Politics of Latin America
   21:790:333. Government/Politics of the Middle East
   21:790:337. Government/Politics of Southeast Asia
   21:790:345. International Relations of Latin America
   21:790:379. Gov’t/Politics of Russia/Former USSR
   21:790:387. International Law
   21:790:417. Problems in International Relations: Gender and Global Politics
   21:790:460. Topics in Political Science: Gender, Peace and the Environment

For Political Science Majors who decide to pursue a Minor in Global Politics, only core courses can double count for both the Major and Minor.
Proposed Minor in Latin American Studies

Objectives and justification for the minor

The proposed Latin American Studies minor will be committed to several educational goals: (1) to provide our students with knowledge of the history and culture of Latin American countries, as well as an understanding of the role that these countries play on the world stage from an economic and political perspective; (2) to provide our students with knowledge of the history and culture of Latino and Latin American populations in the United States, as well as their political and economic situation; (3) to provide rigorous liberal-arts training to students enrolled in the minor by honing critical thinking and writing skills; (4) to develop our students' academic proficiency in Spanish and Portuguese, languages that are essential for the study of Latin America; (5) to give students an introduction to the modes of inquiry of several academic disciplines through the lens of Latin American Studies. The proposed minor would be housed in the Department of Spanish and Portuguese Studies, but would include courses from the Departments of Economics, English, History, Political Science, and Sociology and Anthropology. It could be offered as soon as it is approved.

The courses for the minor will draw upon faculty expertise not only in Latin American Studies but also in Latino/a, Caribbean, and Iberian Studies. At the moment, Newark is the only Rutgers campus without an undergraduate degree program in Latin American Studies; there are also undergraduate Latin American Studies programs at all the neighboring research universities in New Jersey and New York. Given the sizeable number of Latino and Luso-American students on our campus, the growing economic and political prominence of Latin America, as well as the recent curricular change on our campus mandating the study of a second field, we expect considerable interest in this minor from undergraduate students enrolled in a variety of majors.

Coursework

Students will complete 18 credits chosen from Core and Elective courses, and must earn a C or higher in all classes counted towards the minor. The distribution of the requirements will be as follows:

- At least 3 courses in Core courses, from at least two different departments.
- The remainder of the courses will be chosen from core and elective courses so that each minor will have taken courses in at least three different departments.
- Language proficiency: each minor will demonstrate proficiency in Spanish or Portuguese either by completing a course in either language at the 200 level or by placement exam.
Faculty

The tenured or tenure-track faculty who teach courses included in the minor are the following:

Jennifer Austin, Spanish and Portuguese
Karen Caplan, History
Aldo Civico, Sociology and Anthropology
Jon Cowans, History
Jason Cortés, Spanish and Portuguese
Jennifer Duprey, Spanish and Portuguese
Belinda Edmonson, English and Women’s and Gender Studies
Kimberly Holton, Spanish and Portuguese
Micaela Kramer, Spanish and Portuguese
Elena Lahr-Vivaz, Spanish and Portuguese
Asela Laguna-Díaz, Spanish and Portuguese
Laura Lomas, English
Sean Mitchell, Sociology and Anthropology
Isaías Rojas-Pérez, Sociology and Anthropology
Carlos Seiglie, Economics

The courses for the minor are drawn from regular course offerings taught by permanent faculty. No new hires will have to be made nor will any additional courses need to be created to offer the minor. The courses that constitute the minor may occasionally be taught by adjunct faculty, depending on the staffing needs of the departments. While the creation of an administrative board to oversee the minor will not be necessary, any changes to the minor will be undertaken in consultation with the faculty who teach courses included in it.

Administration

Full-time faculty from the Department of Spanish and Portuguese Studies will be responsible for administration of the minor, including advising students and certifying them for program completion. At the moment, no additional facilities will be necessary, nor will additional administrative or academic support be needed for the minor to be offered.
Core courses

HISTORY

510:207 History of Colonial Latin America
Survey of the encounter between indigenous and Iberian peoples in Latin America, from conquest and colonization to the wars of independence. Among the topics considered are the moral implications of the encounter, the histories of race and ethnicity, the development of colonial economic and political institutions, and the eventual breakdown of imperial order.

510:208 History of Modern Latin America
Survey of the history of the nations of Latin America from the wars of independence to the present. Among the topics considered are the nature and consequences of the independence movements, the creation of new political and economic institutions, the development of postcolonial relationships between formerly colonized peoples and their former colonizers, and the implications of the past since independence for the problems of contemporary Latin America.

21:510:311 Latin America and the United States (3)
The historical relationship between Latin America and the United States, including political, social, economic, and cultural ties. Examines those ties from both Latin American and U.S. perspectives and shows how hemispheric relations affect not only governments but also national, regional, and local communities. Topics include U.S. imperialism in the late 19th century; Latin American and U.S. images of their neighbors; the effects of the cold war on hemispheric politics; and the history of Latin American immigration to the United States.

21:510:374,375 History of Spain (3)
The history of Spain from the middle ages to the present. First semester: Muslim conquest; interactions among Muslims, Christians, and Jews; Christian reconquest; formation of a Spanish state; advent of overseas empire; role of the Church. Second semester: Enlightenment reforms; Napoleonic wars and popular revolt; Basque and Catalan movements; economic development and modernization; rise of anarchism and socialism; Spanish Civil War; Franco regime; democracy since 1975.

21:510:377 Portugal and Its Empire (3)
The history of Portugal and its overseas empire from the 14th century to the present, examining the country's politics, economics, and culture, as well as its global expansion and relations with colonies, particularly Brazil.

POLITICAL SCIENCE

21:790:311 Government and Politics of Latin America (3)
The political process in Latin America; emphasis on the role of political parties, social sectors, and special groups such as the military, labor, and students; specific problems of Latin-American political development, and government economic and social policymaking in an era of modernization.

21:790:345 International Relations of Latin America (3)
International relations of Latin America from independence to the present; emphasis on evolving policies of leading hemisphere governments, including the United States, as well as on patterns and problems of inter- and intra-American association since World
War II.

SOCIOLOGY & ANTHROPOLOGY
21:070:352 Peoples and Cultures of Latin America (3)
Latin-American cultures studied with emphasis on contributions and interactions of native Americans, Iberians, and Africans. Examines the impact of colonialism and neocolonialism; structures of class, race, and gender; and ongoing efforts to implement change. Readings focus on Brazil, Guatemala, and Peru.

SPANISH AND PORTUGUESE
21:812:208 Introduction to Brazilian Literature (3)
Survey of Brazilian literature, with emphasis on reading and discussion of literary texts representative of significant literary movements and authors of Brazil. Conducted in Portuguese.

21:812:318,319 Brazilian and Lusophone World Literature in English Translation (3,3)
Reading and discussion of literary works representative of the different literary trends, movements, and authors of Brazil and Lusophone Africa. Two-semester sequence covers early 19th century up to the present. Conducted in English. Not open to Portuguese majors or minors.

21:812:349 Brazilian Film and Literature (3)
Focuses on the major themes and movements of 20th-century Brazilian cinematic and literary production, with a particular focus on the Cinema Novo era. Conducted alternately in Portuguese and English.

21:940:208 Introduction to Latin American Literature (3)
Development of Latin American literature from its colonial origins to the present; conducted in Spanish.

21:940:343,344 Latin American Literature in English Translation (3,3)
A chronological survey of Latin American literature from the period of the conquest to the 20th century, with emphasis on literary traditions and cultures. Not open to Spanish majors or minors.

21:940:348 Hispanic Film and Literature (3)
Analysis and comparison of films and written narratives from Spain and Latin America, grouped according to themes relevant to contemporary social, cultural, and aesthetic concerns; conducted in Spanish.

21:940:350 U.S. Hispanic Literature (3)
Survey of U.S. literature by Hispanic-American writers. Includes work by Chicanos, Puerto Ricans, and writers of Caribbean and Central and South American derivation; conducted in Spanish and English.
Electives

ECONOMICS

21:220:339 Economic Development (3)
Review the alternative theories of economic development and examine the process of
economic development in an international perspective. Examination of the broad
diversity of experience in selected Pacific Rim countries used as a point of departure to
illustrate the validity of alternative development theories. Although emphasis is placed on
East Asian countries, comparison between East Asian and Latin American countries is
made in the context of the political-economic approach.

ENGLISH

21:352:324 Latino/a Literature and Culture (3)
Examines representative texts by Latino/a authors from the colonial period through the
present, which reveal the perspectives of Chicano, Puerto Rican, Cuban, South, and
Central American migrant writers. Considers a variety of genres and formats including
chronicles, essays, fiction, oratory, journalism, performance art, film, and music. Themes
include: migration, assimilation, and dislocation; working conditions and labor struggles;
colonization; language loss and translation; cultural hybridity and mestizaje; and gender,
sexuality, color, class, nationality, and transnationality in Latino/a texts. Students may
engage in group research into Latino/a cultures of New York and New Jersey.

21:352:356 Caribbean Literature (3)
This course introduces students to some of the primary canonical texts of Caribbean
literature from the mid-twentieth century to the present. Reading widely from the
literature of the Spanish-, French-, and English-speaking Caribbean, we shall investigate
the common themes, as well as the dissimilarities, that emerge in the writings from these
ethnically and linguistically diverse societies. Some of the key words for the course will
be slavery and colonialism, hybridity (also known as mestizaje or “mulatto aesthetics”),
and immigration.

21:352:368 Narratives of Migration in the Americas (3)
Migration between Latin America and the United States has marked the literary form,
subjectivity and preoccupations of writing by migrants between these regions since its
inception in the nineteenth century. These narratives show some similarities to, but also
differ widely from the stories of European immigrants. Representing sustained
bilingualism, regular returns to the place of origin and cultural resistance to assimilation,
this literature wrestles with dominant or mainstream forms of American culture. It
provides new definitions of culture and demands new methods for studying literature.
This course will introduce students to some of these interdisciplinary, comparative
methods for interpreting literary texts. Our reading includes literature in a variety of
genres—including poetry, short stories, essays, legal texts and fiction. The course assumes
that all subjectivity is also gendered. Our texts primarily by Latina, Chicana and migrant women writers call attention to gendered experiences of migration. poetry, short stories, essays, legal texts and fiction. The course assumes that all subjectivity is also gendered. Our texts primarily by Latina, Chicana and migrant women writers call attention to gendered experiences of migration.

HISTORY

21:510:312 Democracy and Rebellion in Modern Latin America (3) History of democracy, rebellion, and citizenship in Latin America from the early 19th century to the present. Topics include the transformation of colonial societies into liberal republican democracies, new citizens' relationships to new states, and the effects of changes in those states on the terms of citizenship over two centuries. Focuses on the meaning of democracy and the ways in which it sometimes breaks down, either peacefully or in armed rebellion. Concludes with a look at the recent trend toward democratization.

21:510:317 History of the Caribbean (3) Caribbean history from the colonial period to the present; the development of a sugar economy; the competition among foreign powers for control; 19th-century struggles for independence; and contemporary social upheavals.

21:510:325 History of Mexico and Central America (3) Historical development of Mexico and Central America from the pre-Columbian civilizations to the present. Contemporary issues affecting the region.

21:510:441,442 Topics in Latin American and Caribbean History (3,3) Prerequisites: 21:510:201,202, or permission of instructor.

POLITICAL SCIENCE

21:790:345 International Relations of Latin America (3) International relations of Latin America from independence to the present; emphasis on evolving policies of leading hemisphere governments, including the United States, as well as on patterns and problems of inter- and intra-American association since World War II.

SOCIOLOGY & ANTHROPOLOGY

21:920:375 Poverty and Growth in Africa, Asia, and Latin America (3) Comparative study of the developed and the less-developed nations, and of what separates the two; the growth of nationalism; the emergence of new elites; the roles of higher education and the military in development; the sociological determinants of economic growth; modernity as an individual and societal characteristic.
21:812:321 Oral History of Newark's Ironbound Neighborhood (3)
Focuses on the Portuguese and Brazilian immigrant community of Newark's Ironbound neighborhood. Explores ethnographic fieldwork (participant observation and tape-recorded interviews) and compiling oral history. Readings of anthropological, literary, and historical texts. Issues covered include migratory patterns, adaptation and assimilation, postcolonial conflict and collaboration, cultural heritage, and immigrant identity.

21:812:342,343 Lusophone World Culture I and II (3,3)
Discussion of significant historical, social, and cultural trends in the Portuguese-speaking world from the colonial era to the present. Conducted in Portuguese.

21:812:351 Soccer, Samba, and Spiritualism: Performing the Nation in Portugal and Brazil (3)
Conducted in English and explores expressive culture in Portugal and Brazil. Performance is broadly defined to include religious worship and urban festivity. Students will explore emblematic performance forms of Portugal and Brazil such as samba, fado, candomblé, and soccer spectatorship to understand how these cultural forms participate in and comprise a "national culture."

21:812:440,441 Topics in Portuguese and Brazilian Culture (3,3)
Explores significant themes, topics, concepts, movements, trends, and complex issues with regard to the diverse Portuguese, Brazilian, and Lusophone African societies and cultures. Conducted alternately in Portuguese and English.

21:940:270 Puerto Rican Literature (3)
History and development of Puerto Rican literature from its beginnings to the present. Selected readings in the novel, poetry, short story, essay, and theater; conducted in Spanish.

21:940:304 Slavery, Race, and Black Experience in Spanish-American Literature (3)
Interdisciplinary examination and analysis of major literary themes in the history of the black experience in Spanish America, as seen in antislavery literature of the 19th century, and in many texts dealing with miscegenation, race relations, blackness, sexuality, discrimination, and the search for identity; conducted in Spanish.

21:940:322 Latino Bilingualism in the United States (3)
An examination of Latino bilingualism in the United States from various perspectives, including linguistics, education, history, psychology, and sociology. Discussion of polemical topics such as maintenance of Spanish in bilingual communities, legislation of the use of English and bilingual education in the United States, and the effects of
bilingualism education on cognitive development and educational achievement. Conducted in Spanish, with readings in Spanish and English.

21:940:324 Puerto Rican Narrative (3)
Literary examination of the contemporary Puerto Rican short story and novel, including representative works by Enrique Laguerre, Luis Rafael Sánchez, Rosario Ferré, and others; conducted in Spanish.

21:940:331 Themes in Spanish and Spanish-American Literatures (3)
Tracing and elaboration of a selected theme in Spanish and/or Spanish-American literary texts (e.g., the caudillo, solitude, mysticism). Questions of gender, class, subjectivity, representation, and politics; conducted in Spanish.

21:940:333 The Latin American Short Story (3)
Historical and theoretical examination of the Latin American short story from its precursors in colonial literature, to its formal inception in the 19th century, to modern masterpieces; conducted in Spanish.

21:940:341,342 Iberian and Ibero-American Civilization (3,3)
Historical and cultural development of Spain and Latin America. Conducted in Spanish.

21:940:375 Indigenous and Indigenista Literature from Latin America (3)
Study of texts by and about Amerindian peoples of the Caribbean and Central and South America, from pre-Columbian and indigenista texts to modern testimonials; conducted in Spanish.

21:940:379 National Literatures of Spanish America (3)
Study of one national literature, such as Argentinian, Colombian, Cuban, Dominican, or Mexican, treated in the context of the history, geography, and culture of the particular country; conducted in Spanish.

21:940:381 Journalism in the Hispanic World: From Theory to Practice (3)
An examination and discussion of the history and practice of journalism in the Hispanic world with emphasis on the press as experienced in Spain, Spanish-American, and local Hispanic communities in New Jersey. Conducted in Spanish.

21:940:432 Spanish-American Literature of the Postboom (3)
Examination of intellectual and aesthetic currents in the narratives, poetry, and essays of the postboom period (from 1975 to the present). To be studied in the context of ideas about postmodernism, postindustrialism, and postcolonialism; conducted in Spanish.

21:940:453 Hispanic Women Writers (3)
Literary works of representative women writers of Spain and Latin America. The role of women in cultural production in the Hispanic literatures and their historical marginalization from the literary canon. Close examination of text in drama, poetry, and prose, with emphasis

21:940:454 Contemporary Latin American Novel (3)
The development of the Latin American novel after 1940; representative works by Asturias, Carpentier, Fuentes, Garcia Marquez, and others; conducted in Spanish.

21:940:460 Early Spanish-American Literature (3)
Development of Spanish-American literature from its colonial origins to the Independence movement; significant works, including chronicles, poetry, prose with novelistic elements, and essays; conducted in Spanish.

21:940:461 Nineteenth-Century Spanish-American Literature (3)
Development of Spanish-American literature in the 19th century, stressing literary trends, historical background, and sociopolitical problems as reflected in the works of representative authors; conducted in Spanish.

Development of Spanish-American literature in the 20th century, stressing literary trends, historical background, and contemporary problems as reflected in the works of representative authors; conducted in Spanish.

21:940:498 Theoretical Approaches to Hispanic Literature and Culture (3)
Study of theories of literature and civilization. At the discretion of the instructor, approaches may include psychoanalytic, sociological, phenomenological, poststructuralist, civilization, and others. Studied in a comparative examination of applications both within and outside the Hispanic world; conducted in Spanish.
Proposal for a revised Minor in International Affairs

To be administered by the Department of Political Science

Rutgers, the State University of New Jersey

Campus at Newark

Start Date: January 2014

Contact:

Dr. Gabriela Kütting

Hill Hall 718

kutting@rutgers.edu

(973) 353 5126
Proposal for a revised Minor in International Affairs

Rationale

The existing Minor in International Affairs is effectively defunct as its requirements are based on courses that do not exist any longer. The rationale for this revision is to offer our students the opportunity to complement their education with a minor that prepares them and gives them awareness of an increasingly global and interdependent world in which they will enter the workforce. This minor fulfills a major intellectual need as it gives students a necessary footing in both an awareness of a transboundary world as well as major applied skills through the language component.

Objectives

- To provide students with an area of concentration in International Affairs to complement their chosen Major.
- To prepare students for an increasingly global workplace and world.
- To give students an appreciation of the interlinkages between the local, the national and the international spheres.
- To equip students with the necessary tools to appreciate cultural, political and sociological differences across boundaries.

Design

The minor in International Affairs requires 18 credits as follows:

1. Language requirement: 2 semesters of one foreign language either at the intro or more advanced level. No credit for existing proficiency in a foreign language (6 credits).

2. Two of the following core courses (6 credits):

   21 790 202 America and the world (3)

   And either
3. Two additional courses at the 300 or 400 level with an international or global-related content from the following list (6 credits):

21:070:340. Comparative Roles of Women,
21:070:475. Culture and Globalization Anthropology,
21:920:303. Social change and Globalization,
21:920:375. Poverty and Growth in Africa, Asia, & Latin America,
21:510:362 Capitalism and Socialism,
21:510:379 Colonialism and Decolonization,
21:220:335,336 International Economic Relations,
21:220:339 Economic Development
21:790:311. Government/Politics of Latin America
21:790:333. Government/Politics of the Middle East
21:790:337. Government/Politics of Southeast Asia
21:790:345. International Relations of Latin America
21:790:379. Government/Politics of Russia/Former USSR
21:790:387. International Law
21:790:417. Problems in International Relations: Gender and Global Politics
21:790:460. Topics in Political Science: Gender, Peace and the Environment
21:350:337 Literature and Decolonization
21:350:223 Introduction to Global Literature

Study abroad is strongly encouraged. A student majoring in one of the cooperating disciplines may not count more than 6 credits of his/her major toward this minor.

The cooperating disciplines are Political Science, Spanish & Portuguese Studies, Anthropology & Sociology, History and Economics.
### Appendix IV

Curriculum for Dual Degree: Psychology & Psychiatric Rehabilitation  
*Four Year Plan*  
July 18, 2013

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<tr>
<th>First Year-Fall Semester</th>
<th>First Year-Spring Semester</th>
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<td>3.0 Other Liberal Arts</td>
<td>3.0 Arts &amp; Media</td>
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<td>3.0 History</td>
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<td>3.0 History &amp; Modern Viewpoints 21:830:423</td>
<td>3.0 PSRT1101 Intro Psy Rehab</td>
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<tr>
<td>6.0 PSRT4119 Clin Practicum I</td>
<td>6.0 PSRT4129 Clin Practicum II</td>
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<td>3.0 PSRT2121 Community Resource Mgt</td>
<td>3.0 PSRT2131 Emerging Topics in PsyRehab</td>
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<td>3.0 PSRT 4121 Case Mgmt Approaches</td>
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<td>3.0 PSRT Elective</td>
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<tr>
<td><strong>15.0 TOTAL (SHRP)</strong></td>
<td><strong>15.0 TOTAL (SHRP)</strong></td>
</tr>
</tbody>
</table>

**TOTAL NUMBER OF CREDITS: 124.0**
To: Faculty of Arts and Sciences – Newark

From: Fran Bartkowski, Chair of the General Education Committee

Date: Monday, November 4, 2013

AGENDA
Monday, November 4, 2013

A. Course Items for Consideration

The committee recommends approval for the following course proposals:

I. Arts, Culture, Media

Winter Session Course Offerings:
21:080:121 Introduction to Drawing
21:082:102 Introduction to History of Art II: Renaissance to Modern

II. English

21:350:223 Introduction to Global Literature
21:352:230 Race, Nation, and Borders in American Literature

III. History

21:512:204 LGBT History

IV. Policy on Counting Courses Towards Both Major and Minor Requirements

V. Policy on Counting Courses Towards Both BA and MA Requirements
Date: October 14, 2013

To: Members of the Faculty of Arts and Sciences Newark

From: The General Education Committee

Re: Overlap between undergraduate major and undergraduate second concentration as fulfilled by a combined baccalaureate-master’s program

Dear Members of the Faculty of Arts and Sciences,

The General Education Committee would like to make the following recommendations concerning the use of accelerated bachelors-master’s degree programs to complete the undergraduate second concentration requirement laid out in the FASN-approved Core Curriculum:

1) That students must complete at least 12 graduate credits to complete the undergraduate second concentration via an accelerated BA-MA program.

2) That students be permitted to apply no more than one graduate course (up to 4 credits) to both the undergraduate major and the undergraduate second concentration. Master’s programs wishing to modify the number of courses that can be counted toward both the undergraduate major and the undergraduate second concentration may request modification of this restriction from the General Education Committee.

Background: Undergraduate students seeking to pursue an accelerated BA-MA program are permitted to take up to 12 graduate credits at undergraduate tuition levels following admission into a combined BA-MA program and prior to the completion of the bachelor’s degree.
The Core Curriculum as approved by FASN stipulates that in addition to completing an academic major, all students must also complete a second concentration (outside of their major) of at least 18 undergraduate credits. This requirement can be fulfilled by the successful completion of a combined baccalaureate-master’s program. “Completion” of the undergraduate second concentration is not defined for BA-MA programs.

Rationale: The goal of the second concentration is to ensure that all students acquire a second area of academic expertise and/or different levels of expertise within a single discipline. Graduate level courses enable students to acquire a level of academic expertise distinct from and more advanced than that of the undergraduate major. Graduate level courses are also more academically demanding and rigorous than undergraduate courses, as evidenced by the fact that undergraduates must be enrolled for 12 credits to attain full time status, whereas a full time load for graduate students is defined as 9 credits. The Committee views the completion of 12 graduate credits as roughly the academic equivalent of the completion of 18 undergraduate credits.
The proposal to limit to 3 to 4 the number of graduate credits that students can apply to both the undergraduate major and the undergraduate second concentration ensures that students will indeed acquire distinct levels of academic expertise, fulfilling the intended purpose of the second concentration.

The General Education committee therefore recommends that the faculty approve this limitation on the number of graduate credits that students can apply to both the undergraduate major and the undergraduate second concentration as fulfilled within the context of a combined bachelor’s-masters program.

Sincerely,

Fran Bartkowski, Ph.D.
Chair, General Education Committee
Date: October 14, 2013

To: Members of the Faculty of Arts and Sciences Newark

From: The General Education Committee

Re: Overlap between undergraduate major and undergraduate minor

Dear Members of the Faculty of Arts and Sciences,

The General Education Committee would like to recommend that the number of credits that undergraduate students are permitted to apply to both the undergraduate major and the undergraduate minor be limited to two undergraduate courses (up to 8 credits). Minor programs wishing to modify the number of courses that can be counted toward both the major and minor may request modification of this restriction from the General Education Committee.

Background: The Core Curriculum as approved by FASN stipulates that in addition to completing an academic major, all students must also complete a second concentration (outside of their major) of at least 18 undergraduate credits. This requirement can be fulfilled by the successful completion of any one of the following: a) a second major; b) a minor; c) a teacher-education program; d) the Honors College program; e) a combined baccalaureate-master’s program.

Rationale: The goal of the second concentration is to ensure that all students acquire a second area of academic expertise and/or different levels of expertise within a single discipline. With the introduction of interdisciplinary minor programs as well as multiple minor programs within the same academic discipline, it is currently possible for students to complete the requirements for the minor by taking few if any courses not already included within the major program of study. The proposal to limit to 6 to 8 the number of credits that can be counted toward both the major and the minor ensures that students will indeed acquire distinct areas of academic focus, fulfilling the intended purpose of the second concentration.

The General Education committee therefore recommends that the faculty approve this limitation on the number of credits that students can apply to both a major and a minor program.

Sincerely,

Fran Bartkowski, Ph.D.
Chair, General Education Committee
FACULTY OF ARTS AND SCIENCES MEETING
Monday, April 22, 2013

Present
Abdi Edmondson Keene Pietrangelo Snyder
Arena Eversman Keigher Piotrowski Sohrawardy
Balog Feighn Kim Puhak Spataraei
Barr Ferguson Kiniry Rodriguez Spruch
Bartkowski Foley Kirby Rojas-Perez Sternberger
Bird Franklin Kline Rollino Strub
Bonder Gilman Krasovic Sakellaridis Takesue
Buechner Goodman Lalancette Sanders Watson
Butterfield Hadas Loeb Satter Weber
Caplan Hansen Loftin Schafer White
Chang Holton Maiello Schlegel Xiang
Cohen Hull Maurel Segers
Creese Huskey Monterio Seiglie
Dark Jakle Oertel Sheridan
Dobrowolski Josephson Phillips Slater

Excused
Floreen, Jordan, Laguna, Peterman, Sidney.

Approved Minutes

The Minutes of the March 13, 2013 meeting was approved as presented.

Dean’s Report

Dean Lewis called upon Dr. Ian Watson, Chair of the Department of Arts, Culture, and Media to offer a memorial minute for Dr. Denyse Thomasos, who passed away on July 19, 2012. Dr. Watson acknowledged Dr. Thomasos accomplishments and called for the memorial minute to be included in the faculty minutes. After a moment of silence, the resolution was voted on and approved.

Dean Lewis began by congratulating faculty members who received promotions and/or awards: Katalin Balog, Philosophy, Reappointed as Associate Professor with tenure and Genese Sodikoff, Sociology and Anthropology, Associate Professor with tenure. In addition, she congratulated Peter Loeb, recipient of the Faculty Scholar-Teacher Award; Belinda Edmondson, awarded a fellowship at the Schomburg Center for Research in Black Culture; Brenda Shaughnessy awarded the 2013 Guggenheim Fellowship; and Lyra Monterro awarded fellowship at the McNeil Center, University of Pennsylvania.

At this time, the Dean called on the following committees to present their reports:

Course of Study Committee

Professor Harold Siegel, Chair of the Committee, moved for the adoption of Sections I, II, III, IV, V, VI and IV of the Committee’s April 15, 2013 report. Professor Siegel’s motion was seconded and approved.
Faculty of Arts and Sciences
April 22, 2013
Page 2

General Education Committee

Professor Frances Bartkowski, Chair of Committee, moved for the adoption of Sections I, II, III, IV, and V of the Committee’s April 10, 2013 report. Professor Bartkowski’s motion was seconded and approved. However, in response to concerns for more clarification in defining Double Counting Courses Toward Major and Minor Requirements, Section VI was referred back to the Committee for further consideration.

Governance, Bylaws and Nominations

Professor Piotr Piotrowiak, Chair of the Committee, presented the 2013-2014 Standing Committee Slated for faculty consideration. Nominations was made and seconded for the following individuals to serve on various Committees:

Harold Siegel  Appointment and Promotions
Carlos Seiglie  Appointment and Promotions
Eduardo Moncado  Faculty Secretary
Frank Jordan  Governance, Bylaws, and Nominations
Ira Cohen  Governance, Bylaws, and Nominations
Jyl Josephson  Newark Faculty Council
Claus Holzapfel  Planning and Budget

Professor Piotrowiak then moved for the approval of the Standing Committee Slate. His motion was seconded and approved.

Dean Lewis then presented her report which included the following comments:

Updates on the Deans’ Strategic Planning process
-Discussed the university plan
-Opportunity for Newark to be defined in the process
-Proposed alternative visual

Newark Differentiators
-first-rate education in an urban setting
-public and private partnership
-real-world focus in scholarly activity
-scholarship and education with impact
-leader in diversity
-Newark schools will work together to define the function of the campus, excluding the College of Nursing in discussions.

Dean Lewis responded to questions on the above subject matters. After some discussion, Dean Lewis concluded her report.

There was no New/Old Business.

Respectfully submitted,

[Signature]
Eduardo Moncada
Faculty Secretary
To: Faculty of Arts and Sciences - Newark

From: Harold Siegel, Chair of the Courses of Study Committee

Date: Monday, April 15, 2013

AGENDA
Monday, April 15, 2013

The committee recommends approval for the following course requests:

I. Arts Culture Media

Change in Credits:
From: 21:089:410 Video Art (3 credits)
To: 21:089:410 Video Art (4 credits)

Course Title and Number Change:
From: 21:082:340 Baroque and Rococo Art
To: 21:082:240 Baroque Art

II. Biology

Course Title Change:
From: 21:120:311 Taxonomy of Vascular Plants
To: 21:120:311 Flora of New Jersey

Course Title and Number Change:
From: 21:120:346 Neurobiology
To: 21:120:444 Cell Neurobiology

Creation of New Minors:
(Please see appendix I for details)
Minor in Ecology and Evolution
Minor in Cell Biology
Minor in Plant Biology
Minor in Neurobiology
Minor in Biology

Redesigning Areas of Concentration in the Biology Major:
(Please see appendix II for details)
From:
Biology (B.A.)
Biology (B.S.)
Zoology (B.A.)
Botany (B.A.)

To:
Ecology and Evolution (B.A.)
Cell Biology (B.A.)
Neurobiology (B.A.)
Plant Biology (B.A.)
Biology (B.A.)
Biology (B.S.)

III. EES

Course Title Change:
From: 21:460:311 Geologic Field Problems
To: 21:460:311 Geologic Field Methods

IV. English

Creation of New Courses:
21:350:225 Love Stories: Medieval to Modern

Course Number Changes:
From: 21:350:221 Survey of English Literature
To: 21:350:321 Survey of English Literature

From: 21:350:222 Survey of English Literature
To: 21:350:322 Survey of English Literature

From: 21:350:357 Children’s Literature
To: 21:350:211 Children’s Literature
From: 21:350:341 Myth in Literature
To: 21:350:212 Myth in Literature

From: 21:352:224 Survey of American Literature
To: 21:352:326 Survey of American Literature

From: 21:352:377 Contemporary American Literature
To: 21:352:211 Contemporary American Literature

From: 21:352:378 Contemporary American Literature
To: 21:352:212 Contemporary American Literature

V. History

Course Title Change:
From: 21:510:263 History of Africa
To: 21:510:263 History of Africa I

From: 21:510:264 History of Africa
To: 21:510:264 History of Africa II

From: 21:510:287 History of Islamic Civilization
To: 21:510:287 History of Islamic Civilization I

From: 21:510:288 History of Islamic Civilization
To: 21:510:288 History of Islamic Civilization II

From: 21:510:297 Far Eastern History
To: 21:510:297 Far Eastern History I

From: 21:510:298 Far Eastern History
To: 21:510:298 Far Eastern History II

From: 21:512:233 Afro-American History I
To: 21:512:233 African-American History I

From: 21:512:234 Afro-American History II
To: 21:512:234 African-American History II

VI. Physics

Creation of New Courses:
21:750:221 Statics
21:750:222 Dynamics
IV. Political Science

Course Title Change:
21:790:465 Topics in Urban Politics and Public Administration
21:790:465 Topics in Comparative Politics
Proposal for Minors in Ecology and Evolution, Cell Biology, Plant Biology, Neurobiology, and Biology

Federated Department of Biological Sciences
Rutgers, The State University of New Jersey
Campus at Newark

Start Date: September 2013

Accreditation or Licensure: None

Contact:
Dr. Edward M. Bonder
Boyden Hall 206
ebonder@andromeda.rutgers.edu
(973) 353-5347
Proposal for Minors in Ecology and Evolution, Cell Biology, Plant Biology, Neurobiology, and Biology

Rationale
In light of the new requirement for Rutgers-Newark students to complete a minor track in addition to a major, we will offer five minors: Ecology and Evolution, Cell Biology, Plant Biology, Neurobiology, and Biology. These reflect the strengths of our faculty and the needs of our students.

Objectives

- To provide students with an area of concentration in the biological sciences, as a complement to their chosen major.
- To offer students theoretical and practical preparation in areas that reflect both the strength of the Department of Biological Sciences at Rutgers-Newark and the current status of the field.
- To give students a deeper insight into the methods and state of knowledge in contemporary biological sciences.
- To present students with a general perspective of relevant branches of modern biological research.

These objectives are aligned with the general goals of the undergraduate academic programs in the Department of Biological Sciences, currently articulated as follows:

A. Reasoning and Problem-Solving Skills
Upon graduation, students in biological sciences should be able to:

1. Use observation and experiment to investigate biological phenomena and solve problems.
2. Analyze and interpret in writing scientific information gathered through laboratory, field, and library research.
3. Speak effectively about scientific topics, issues, and problems in formal and informal contexts.
4. Use quantitative methods to describe and analyze biological phenomena.
5. Use technical skills and equipment to describe and quantify biological phenomena.
6. Recognize and discuss the social and ethical implications of the conduct of research in biology and its technological application to human problems.
7. Interact with others in a skilled, cooperative fashion to discuss issues and solve problems.

B. Biological Principles
Upon graduation students in the biological sciences should be able to integrate the principles described in the outcomes below at several levels of biological organization.

8. Use the principles of gene structure and expression to deduce mechanisms by which characteristics of organisms and populations are inherited.
9. Relate biological structure to function at various levels of organization and in an evolutionary context.
10. Describe the mechanisms by which organisms develop from single cells.
11. Use the theory of biological evolution to explain the diversity of life.
12. Use the principles of bioenergetics to explain the activities of cells and the interactions of cells and organisms with each other and their environments.

Design

All minors in the biological sciences share a common core consisting of 12 credits: Concepts in Biology (4) Foundations of Biology: Cell and Molecular Biology (4), and Foundations of Biology: Ecology and Evolution (4).

Students pursuing a minor in the biological sciences must be aware of the specific mathematics and science requirements for some of the courses. Core courses require college algebra and general chemistry (160:115). Some of the cluster and elective courses have additional requirements; e.g., Organic Chemistry I (160:335) is a prerequisite for 120:360 Biochemistry and it is recommended for 120:355 Cell Biology.

Students must successfully complete a minimum of 9 credits beyond the required core courses. Depending on their area of concentration, students must take courses from a specific cluster and electives to complete 21 credits (22 for the biology minor). Students must pass all courses in the minor with grades of C or better. It is FASN policy that only 6 credits can be used to fulfill requirements for two different majors/minors, should a student decide to pursue courses of study with overlapping requirements.

The design of the minor curricula mirrors plans of study for majors in biological sciences, which are currently under review by Biological Sciences faculty. Given the many subjects covered through our courses, the minor subjects are field-specific although they may overlap (for example, a plant biology minor may expand into aspects of cell biology peculiar to plants; or an ecology and evolution minor might want to explore molecular aspects of phylogeny).

Minors in biological sciences will not only complement other major areas. But they will be stand-alone concentrations that prepare individuals to understand quantitative and qualitative topics related to contemporary biological sciences. Students majoring in a non-scientific or non-biological area may use their minor as a way to better interrelate with professionals in academic or industrial research, law, and education.

The Departmental Coordinator of Undergraduate Studies will provide advisement to students in the biological sciences minors.

Other minors in biological sciences in New Jersey

A sampling of minors in biological sciences offered at several institutions in northern New Jersey shows that our programs stem from the strengths and expertise of our faculty. They have evolved from the interaction between the direction of biological sciences fields and how our Department, with new faculty, ongoing research, and continuous curricular development, has responded.
The New Brunswick/Piscataway campuses of Rutgers University offer some areas of minors concentration in which we also offer minors. The School of Arts and Sciences has minor curricula in Biological Sciences: Ecology, Evolution and Natural Resources; Plant Sciences (not Plant Biology); and Human Ecology. A minor in Ecology and Evolution is also offered through the School of Environmental and Biological Sciences. Although there is a major in Cell Biology and Neuroscience at the New Brunswick/Piscataway campuses, it does not have a corresponding minor. Ours will.

Rutgers-Camden offers an 18-credit minor in biology.

Our unique offerings for minors in Cell Biology, Neurosciences, and Plant Biology do not overlap with the minors in the New Brunswick/Piscataway campuses.

Other institutions in the area also offer biology minors with varying degrees of flexibility in their curricula. For example, biology minors at Montclair State University and William Paterson University must complete 23 and 20 credits, respectively; Fairleigh Dickinson University has minors in biology (20 credits) and marine biology (18 credits).

The Proposal for New Minors

After the summary table below, there is a description of the coursework proposed to complete the 21 credits for the new four minor concentrations (22 for the biology minor). A certain degree of flexibility will be allowed to accommodate students' particular interests within the scope of each minor.

At the end, there is a list of the courses cited as part of the proposed minors, but it is only a part of the Department's current offerings.

After approval, the new minors would start being offered as of Fall 2013.

Summary
(minimum credits)

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Core Courses</th>
<th>Concept Clusters</th>
<th>Electives</th>
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<tr>
<td>Minor in Ecology and Evolution</td>
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<td>6</td>
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<td>Minor in Cell Biology</td>
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<td>6</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>Minor in Neurobiology</td>
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<td>6</td>
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<tr>
<td>Minor in Biology</td>
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</table>
Description

ALL MINORS – Core Requirements (12 credits required)

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<tr>
<td>21:120:201 Foundations of Biology: Cellular and Molecular Biology</td>
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<td>21:120:202 Foundations of Biology: Cellular and Molecular Biology Laboratory</td>
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<tr>
<td>28:120:206 Foundations of Biology: Ecology and Evolution Laboratory</td>
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</tbody>
</table>

MINOR IN ECOLOGY AND EVOLUTION (21 credits minimum required)

Required Courses (two courses required–6 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>28:120:222 Evolution</td>
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</tr>
<tr>
<td>21:120:280 Ecology</td>
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Elective Courses (as necessary)

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<tr>
<th>Course</th>
<th>Credits</th>
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<td>21:120:328 Ecology of Birds</td>
<td>3</td>
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<tr>
<td>21:120:370 Plant Ecology</td>
<td>3</td>
</tr>
<tr>
<td>21:120:371 Field Plant Ecology</td>
<td>3</td>
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<tr>
<td>28:120:375 Conservation Biology</td>
<td>3</td>
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<td>21:120:380 Field Ecology</td>
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<tr>
<td>28:120:475 Ecological Field Methods</td>
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</table>
MINOR IN CELL AND MOLECULAR BIOLOGY (21 credits minimum required)

Required Courses (two courses required—6 credits)

- 21:120:355 Cell Biology 3
- 21:120:356 Molecular Biology 3

Elective Courses (as necessary)

- 28:120:313 Principles of Neurobiology 3
- 21:120:342/343 Developmental Biology 3
  and Dev. Biol. Laboratory 1
- 21:120:352 Genetics 3
- 21:120:360 Biochemistry 3
- 21:120:405 Microanatomy of tissues 4
- 21:120:446 Cellular Neurobiology 3
- 28:120:451 Cell Phys. and Imaging 4
- 21:120:456 Virology 3
- 21:120:452 Molecular Biotechniques Laboratory 4

MINOR IN PLANT BIOLOGY (21 credits minimum required)

Required Courses (one course required—4 credits)

- 21:120:211 Plant Kingdom 4

Elective Courses (as necessary)

- 21:120:430 Plant Growth and Development 4
- 21:120:311 Taxonomy of Vascular Plants 4
- 21:120:370 Plant Ecology 3
- 21:120:230 Biology of Seed Plants 4
- 21:120:330 Plant Physiology 4

MINOR IN NEUROBIOLOGY (21 credits minimum required)

Concepts cluster (one course required—3 credits)

- 28:120:315 Principles of Neurobiology 3

Minor electives (as necessary)

- 21:120:341 Introduction to Neuropysiology 3
- 21:120:383 Neural Bases of Behavior 3
- 21:120:446 Cellular Neurobiology 3
- NJIT Math430 Computational Neuroscience 3
**MINOR IN BIOLOGY (22 credits minimum required)**

**Required Courses (10 credits required)**

A) Ecological and Evolutionary Framework (one course required—3 credits)

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<th>Course Title</th>
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<td>21:120:282</td>
<td>Animal Behavior</td>
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<tr>
<td>21:120:280</td>
<td>Ecology</td>
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</tr>
<tr>
<td>21:120:370</td>
<td>Plant Ecology</td>
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B) The Functional Organism (one course required—4 credits)

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<td>21:120:335</td>
<td>General Microbiology</td>
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<td>21:120:330</td>
<td>Plant Physiology</td>
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<td>21:120:340</td>
<td>Mammalian Physiology</td>
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<td>21:120:342/343</td>
<td>Developmental Biology and Dev. Biol. Laboratory</td>
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<tr>
<td>21:120:230</td>
<td>Biology of Seed Plants</td>
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C) Molecular and Cellular Mechanisms (one course required—3 credits)

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<td>Biochemistry</td>
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### Course Roll For Minors In Biological Sciences/Fall 2013

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<td>Foundations Cell &amp; Molecular Biol</td>
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<td>General Microbiology</td>
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<td>FA</td>
</tr>
<tr>
<td>21:120:340</td>
<td>Mammalian Physiology</td>
<td>4</td>
<td>FA, SP</td>
</tr>
<tr>
<td>21:120:341</td>
<td>Introduction to Neurophysiology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>21:120:342</td>
<td>Developmental Biology Lecture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>21:120:343</td>
<td>Developmental Biology Lab</td>
<td>1</td>
<td>FA</td>
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<tr>
<td>21:120:352</td>
<td>Genetics</td>
<td>3</td>
<td>SP</td>
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<tr>
<td>21:120:355</td>
<td>Cell Biology</td>
<td>3</td>
<td>FA</td>
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<tr>
<td>21:120:356</td>
<td>Molecular Biology</td>
<td>3</td>
<td>FA</td>
</tr>
<tr>
<td>21:120:360</td>
<td>Biochemistry</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td>21:120:370</td>
<td>Plant Ecology</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td>21:120:371</td>
<td>Field Studies in Plant Ecology (WI)</td>
<td>3</td>
<td>FA, SP</td>
</tr>
<tr>
<td>21:120:380</td>
<td>Field Ecology (WI)</td>
<td>3</td>
<td>FA, SP</td>
</tr>
<tr>
<td>21:120:405</td>
<td>Microanatomy of Tissues</td>
<td>4</td>
<td>SP</td>
</tr>
<tr>
<td>28:120:405</td>
<td>Cell Physiology &amp; Imaging (WI)</td>
<td>4</td>
<td>VA</td>
</tr>
<tr>
<td>21:120:430</td>
<td>Plant Growth &amp; Development (WI)</td>
<td>4</td>
<td>SP</td>
</tr>
<tr>
<td>28:120:475</td>
<td>Ecological Field Methods (WI)</td>
<td>3</td>
<td>FA, SP</td>
</tr>
<tr>
<td>28:120:310</td>
<td>Foundations of Neurobiology</td>
<td>3</td>
<td>FA</td>
</tr>
<tr>
<td>21:120:346</td>
<td>Neurobiology (WI)</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td>28:120:375</td>
<td>Conservation Biology (WI)</td>
<td>3</td>
<td>FA</td>
</tr>
<tr>
<td>28:120:383</td>
<td>Neural Basis of Behavior (WI)</td>
<td>3</td>
<td>FA</td>
</tr>
<tr>
<td>21:120:446</td>
<td>Cellular Neurobiology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>28:120:447</td>
<td>Cell &amp; Systems Neurobiol (WI)</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td>21:120:456</td>
<td>Virology (WI)</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td><strong>NJIT Math 430</strong></td>
<td>Computational Neurosciences</td>
<td>3</td>
<td>FA</td>
</tr>
</tbody>
</table>

**Legend:**
- FA: Offered in the fall semester
- SP: Offered in the spring semester
- VA: Offered in unspecified semester
- odd: Offered in odd-numbered years
- even: Offered in even-numbered years
- WI: Writing intensive course
Proposal for Majors in Ecology and Evolution, Cell Biology, Plant Biology, Neurobiology, and Biology

Federated Department of Biological Sciences
Rutgers, The State University of New Jersey
Campus at Newark

Start Date: September 2013

Accreditation or Licensure: None

Contact:
Dr. Edward M. Bonder
Boyden Hall 206
ebonder@andromeda.rutgers.edu
(973) 353-5347
Proposal for Majors in Ecology and Evolution, Cell Biology, 
Plant Biology, Neurobiology, and Biology

Rationale
We are proposing four new areas of concentration in the biology major. These areas reflect the expertise of 
our faculty and the strength of the current undergraduate curriculum at the Rutgers-NJIT Federated  
Department of Biological Sciences. This proposal is the result of recent development of new courses, 
revamping of courses traditionally offered, and the restructuring of the core courses.

Current
- Biology (B.A.)
- Biology (B.S.)
- Zoology (B.A.)
- Botany (B.A.)

Proposed Subdivision
- Ecology and Evolution (B.A.)
- Cell Biology (B.A.)
- Neurobiology (B.A.)
- Plant Biology (B.A.)
- Biology (B.A.)
- Biology (B.S.)

Objectives
- To provide students pursuing a liberal arts curriculum at the College of Arts and Sciences-Newark 
  with several career-specific major areas of study in the biological sciences.
- To offer students theoretical and practical preparation in areas that reflect both the strength of the 
  Federated Department of Biological Sciences at Rutgers-Newark/NJIT and the current status of the 
  field.
- To give students deeper insight into the methods and state of knowledge in contemporary biological 
  sciences.
- To present students with a deeper perspective of relevant branches of modern biological research and 
  knowledge.
- To prepare students for further professional and post-graduate studies in biological sciences and 
  related fields.

These objectives are aligned with the general goals of the undergraduate academic programs in the 
Department of Biological Sciences, currently articulated as two broad aspects:

A. Reasoning and Problem-Solving Skills
Upon graduation, students in biological sciences should be able to:
1. Use observation and experiment to investigate biological phenomena and solve problems.
2. Analyze and interpret in writing scientific information gathered through laboratory, field, and library 
   research.
3. Speak effectively about scientific topics, issues, and problems in formal and informal contexts.
4. Use quantitative methods to describe and analyze biological phenomena.
5. Use technical skills and equipment to describe and quantify biological phenomena.
6. Recognize and discuss the social and ethical implications of the conduct of research in biology and its 
   technological application to human problems.
7. Interact with others in a skilled, cooperative fashion to discuss issues and solve problems.

B. Biological Principles
Upon graduation, students in the biological sciences should be able to integrate the principles described in 
the outcomes below at several levels of biological organization.
8. Use the principles of gene structure and expression to deduce mechanisms by which characteristics of 
   organisms and populations are inherited.
9. Relate biological structure to function at various levels of organization and in an evolutionary context.
10. Describe the mechanisms by which organisms develop from single cells.
11. Use the theory of biological evolution to explain the diversity of life.
12. Use the principles of bioenergetics to explain the activities of cells and the interactions of cells and 
   organisms with each other and their environments.
Proposal for Subdivision of Existing Majors

Background
The Rutgers-Newark/NJIT Federated Department of Biological Sciences has been offering a major (as B.A. or B.S.) and a minor in biology. The classical Botany and Zoology majors and minors have been phased-out over the last few years. The main force behind the proposed subdivision in five B.A. majors and one B.S. is the ongoing growth in the Federated Department of Biological Sciences, with new faculty members, each bringing their own particular lines of scientific inquiry and academic interests, generating new course offerings and novel opportunities for undergraduate research.

A single-track B.A., a one-size-fits-all model is no longer adequate to the needs of our students who face a changing job market with possibilities beyond classical fields such as academia, agriculture, pharmacy, and medicine. But even if biotechnology is now a well-established field, new technological developments and the fusion of biology with other fields has resulted in a more complex employment landscape. Science policy and legislation, environmental regulation, student-centered learning and modern science teaching, are among the fields our students may pursue as they develop their professional careers.

The Federated Department of Biological Sciences, which occupies several buildings and facilities at the Rutgers-Newark and the NJIT campuses, maintains strong lines of research in cell and molecular biology, ecology and evolution, plant biology, and neurobiology.

We propose here, in addition to the current B.A. and B.S. in biology majors, four specific major areas of study in biological sciences: ecology and evolution, cell biology, neurobiology, plant biology (all offered as a B.A. track).

Design
All majors in the biological sciences share a common core consisting of 12 credits, namely: Concepts in Biology (4) Foundations of Biology: Cell and Molecular Biology (4), and Foundations of Biology: Ecology and Evolution (4). After completion of the core, students continue specific coursework in concept clusters, laboratory and field subjects, and additional courses, for a minimum of 38 credits.

Coursework in biological sciences is complemented by cognate courses in chemistry, physics, mathematics and, for the bachelor of science track, computer programming. Some of these courses are pre-requisites to lower division subjects in biological sciences. Core courses require college algebra and general chemistry (160:115). Some of the cluster and elective courses have additional requirements; e.g., Organic Chemistry II (160:336) is a pre-requisite for 120:368 Biochemistry. Additional mathematics cognate courses are crucial for students pursuing a bachelor of science degree, as the computational biology cluster includes courses with specific requirements in mathematics and computer programming.

Majors in biological sciences will be separate concentrations that prepare individuals to understand quantitative and qualitative topics related to contemporary biological sciences. Students may use their major prior to entering a more advanced course of study (via a professional degree or graduate school) or as a way to better interrelate with professionals in academic or industrial research, engineering, law, and education, among others. For example, the neurobiology major’s approach is an integrative one. The major’s scope spans from specific molecular and cellular aspects of neurons, up to neuronal systems. Within the context of neurobiology, computational biology is an integral component in each one of these aspects, as opposed to being a standalone supporting course.

Advisement
As it is customary in the Department, faculty members will provide individual advisement to students in the biological sciences majors.
Other majors in biological sciences in northern New Jersey

An overview of biological sciences majors at other research universities in our region reveals that, like our own planned new majors, they reflect, among other factors, the strengths of their departments, the interests of their faculty members, and their particular missions.

When compared with these other programs, our proposed biological sciences majors show some overlap, but some aspects are unique to Rutgers-Newark’s strengths and our faculty’s expertise.

The campuses at Rutgers-New Brunswick/Piscataway have a wide variety of biology majors, some of them highly specialized. For example, the Department of Genetics, based at the Busch Campus, offers a major in genetics. Similarly, the Department of Molecular Biology and Biochemistry has a combined major in molecular biology and biochemistry.

At Rutgers-New Brunswick/Piscataway, Biochemistry and Microbiology are stand-alone majors, offered through the School of Biological and Environmental Sciences. The School of Biological and Environmental Sciences, historically the Rutgers agricultural school on the Cook Campus, has several majors in plant biology and agriculture, such as plant biology and pathology, entomology, and horticulture.

The biological sciences major at the School of Arts and Sciences of Rutgers at the campuses in New Brunswick and Piscataway has a similar academic structure to our own biology major B.A. The major is offered through the Division of Life Sciences. Whereas we offer separate majors in cell biology and neurobiology, the Division of Life Sciences has a combined major in cell biology and neurosciences. Specific majors in areas of ecology and evolution (i.e. human ecology, and ecology, evolution and natural resources) are offered at both Busch and Cook campuses.

Montclair State University’s biology majors (B.S.) comprise three areas of concentration: Biological Education, Environmental Sciences and Molecular Biology.

Fairleigh Dickinson University offers a B.S. in biology with three concentrations, Anatomy and Physiology, Cell and Molecular Biology, and Ecology and Environmental Biology. Their curricula are mostly aimed to prepare pre-health students, under agreements with UMDNJ and other medical colleges and universities. Fairleigh Dickinson also has a major in marine biology.

At Drew University there is a straightforward major in biology in addition to related majors in Biochemistry and Molecular Biology and Biological Anthropology.

At William Paterson University there are three concentrations within their B.S. in biology: Biology, Ecology, Physiology and Behavior. Majors in Biotechnology and Biopsychology are also available.

At Seton Hall University, the B.A. track of the biology major is intended for students who may show interest in combining studies in biology with fields such as education, psychology, computer science, history, law, writing or journalism. The B.S. degree at Seton Hall is for students interested in pursuing scientific careers in science and who might attend graduate or medical school.

Surprisingly, the Stevens Institute of Technology has majors in engineering fields related to applied biology, including chemical biology, but not in biology.

In conclusion, with the exception of broad biological sciences majors, the programs available at Rutgers-New Brunswick/Piscataway and regional research universities do not overlap with our four proposed B.A. major programs.

Integration with minors at the NCAS

Because of the newly established requirements for Rutgers-Newark students, particular consideration was given to the integration of the new majors in biological sciences with minors in other departments. For example, the major in ecology and evolution may be complemented with a minor in environmental sciences, offered by the Department of Earth and Environmental Sciences. In a similar manner, a student majoring in neurobiology might decide to work on a minor in cognitive neuroscience. Other minors that may complement some of the biology curricula are those offered by the chemistry and psychology departments. Students would
choose their minor under the guidance of the faculty mentors, being mindful of the allotted overlap of course credits.

**The Proposal for New Majors**

A description of the coursework proposed to complete the 38 credits for the new major concentrations. A certain degree of flexibility is allowed to accommodate students' particular interests within the scope of each major.

After approval, the new majors would start being offered as of Fall 2013.

**Summary**

(minimum credits)

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Core Courses</th>
<th>Concept Clusters</th>
<th>Lab/Field</th>
<th>Electives</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major in Ecology and Evolution (B.A.)</td>
<td>12</td>
<td>13</td>
<td>7-8</td>
<td>5-6</td>
<td>38</td>
</tr>
<tr>
<td>Major in Cell Biology (B.A.)</td>
<td>12</td>
<td>13</td>
<td>8</td>
<td>5</td>
<td>38</td>
</tr>
<tr>
<td>Major in Plant Biology (B.A.)</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td>Major in Neurobiology (B.A.)</td>
<td>12</td>
<td>16</td>
<td>8</td>
<td>1-3</td>
<td>38</td>
</tr>
<tr>
<td>Major in Biology (B.A.)</td>
<td>12</td>
<td>10</td>
<td>6-8</td>
<td>8-10</td>
<td>38</td>
</tr>
<tr>
<td>Major in Biology (B.S.)</td>
<td>12</td>
<td>13</td>
<td>6-8</td>
<td>5-7</td>
<td>38</td>
</tr>
</tbody>
</table>
Description

ALL MAJORS

1) Course Requirements (12 credits required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>28:120:200 Concepts in Biology</td>
<td>4</td>
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<tr>
<td>21:120:201 Foundations of Biology:</td>
<td></td>
</tr>
<tr>
<td>Cellular and Molecular Biology</td>
<td>3</td>
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<tr>
<td>21:120:202 Foundations of Biology:</td>
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<tr>
<td>Cellular and Molecular Biology Laboratory</td>
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<tr>
<td>28:120:205 Foundations of Biology:</td>
<td></td>
</tr>
<tr>
<td>Ecology and Evolution</td>
<td>3</td>
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<tr>
<td>28:120:206 Foundations of Biology:</td>
<td></td>
</tr>
<tr>
<td>Ecology and Evolution Laboratory</td>
<td>1</td>
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</tbody>
</table>

B.A., MAJOR IN ECOLOGY AND EVOLUTION (38 credits minimum required)

2) Concept clusters (13 credits)

A) Ecological and Evolutionary Framework (two courses required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>28:120:222 Evolution (required)</td>
<td>3</td>
</tr>
<tr>
<td>21:120:280 Ecology (required)</td>
<td>3</td>
</tr>
</tbody>
</table>

B) The Functional Organism (one course required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>21:120:211 Plant Kingdom</td>
<td>4</td>
</tr>
</tbody>
</table>

C) Molecular and Cellular Mechanisms (one course required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>21:120:352 Genetics</td>
<td>3</td>
</tr>
<tr>
<td>21:120:356 Molecular Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

3) Laboratory/Field Experience (minimum of one lab and one field course required)

Laboratory Courses (1 required):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>21:120:311 Flora of New Jersey (formerly Taxonomy Vasc. Plants)</td>
<td>4</td>
</tr>
<tr>
<td>21:120:330 Plant Physiology</td>
<td>4</td>
</tr>
<tr>
<td>21:120:335 General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>21:120:342/343 Developmental Biology and Dev. Biol. Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>21:120:452 Laboratory in Molecular Biotechniques</td>
<td>4</td>
</tr>
</tbody>
</table>

Field Course (1 required):

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>21:120:371 Field Plant Ecology</td>
<td>3</td>
</tr>
<tr>
<td>21:120:380 Field Ecology</td>
<td>3</td>
</tr>
<tr>
<td>21:120:430 Plant Growth and Development</td>
<td>4</td>
</tr>
<tr>
<td>28:120:475 Ecological Field Methods</td>
<td>3</td>
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</tbody>
</table>

4) Ecology and Evolution Additional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>21:120:225 Insects and Human Society</td>
<td>3</td>
</tr>
<tr>
<td>21:120:282 Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>21:120:328 Ecology of Birds</td>
<td>3</td>
</tr>
<tr>
<td>28:120:338 Ecology of the Dining Hall</td>
<td>3</td>
</tr>
<tr>
<td>21:120:365 Evolution of Humans</td>
<td>3</td>
</tr>
<tr>
<td>28:120:368 Ecology and Evolution of Disease</td>
<td>3</td>
</tr>
<tr>
<td>21:120:370 Plant Ecology</td>
<td>3</td>
</tr>
<tr>
<td>26:120:375 Conservation Biology</td>
<td>3</td>
</tr>
<tr>
<td>21:120:381 Ecological History of North America</td>
<td>3</td>
</tr>
<tr>
<td>21:120:422 Biological Invasions</td>
<td>3</td>
</tr>
<tr>
<td>NJIT Math 372 Population Biology</td>
<td>3</td>
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</table>

5) Independent study

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>21:28:120:461 Problems in Biology</td>
<td>1-3</td>
</tr>
<tr>
<td>21:28:120:482 Problems in Biology</td>
<td>1-3</td>
</tr>
</tbody>
</table>
6) Cognate courses – Same for all B.A. Degrees

6A) Rutgers
- 21:21:160:115 General Chemistry I: 4
- 21:21:160:116 General Chemistry II: 4
- 21:21:160:113 General Chemistry Lab I: 1
- 21:21:160:114 General Chemistry Lab II: 1
- 21:160:331 Organic Chemistry Lab: 2
- 21:750:203 General Physics I or 21:750:213 University Physics I: 4
- 21:750:204 General Physics II or 21:750:214 University Physics II: 4
- 21:750:205 Intro Physics Lab I: 1
- 21:750:206 Intro Physics Lab II: 1
- 21:840:135 Calculus I: 4

6B) Cognate courses at NJIT
- Chem124 General Chemistry Lab: 1
- Chem125 General Chemistry I: 3
- Chem126 General Chemistry II: 3
- Chem243 Organic Chemistry: 3
- Chem244 Organic Chemistry: 3
- Chem244A Organic Chemistry Lab: 2
- Math111 Calculus I: 4
- Phys111 Physics I: 4
- Phys121 Physics II: 4
- Phys111A Physics Lab I: 1
- Phys121A Physics Lab II: 1
B.A., MAJOR IN CELL BIOLOGY (38 credits minimum required)

Core Courses (12 credits) – as usual

Required Courses

2) Concept clusters (13 credits)

A) Evolutionary Framework (one course required)
   28:120:222 Evolution
   3

B) The Functional Organism (one course required)
   21:120:342/343 Developmental Biology and Dev. Biol. Laboratory
   4

C) Molecular and Cellular Mechanisms (two courses required)
   21:120:355 Cell Biology
   3
   21:120:356 Molecular Biology
   3

3) Laboratory Experience (two courses required)
   21:120:325 Animal Parasites and Parasitology Laboratory
   4
   21:120:330 Plant Physiology
   4
   21:120:335 General Microbiology
   4
   28:120:451 Cell Physiology and Imaging
   4
   21:120:405 Microanatomy of Tissues
   4
   21:120:452 Laboratory in Molecular Biotechniques
   4

4) Cell Biology Additional Courses
   28:120:315 Principles of Neurobiology
   3
   21:120:325 Animal Parasites
   3
   21:120:350 Immunology
   3
   21:120:352 Genetics
   3
   21:120:360 Biochemistry
   3
   21:120:402 Biology of Cancer
   3
   21:120:444 Cellular Neurobiology
   3
   28:120:447 Systems Neurobiology
   3
   21:120:455 Molecular Cell Biology
   3
   21:120:456 Virology
   3

5) Independent study
   21/28:120:491 Problems in Biology
   1-3
   21/28:120:492 Problems in Biology
   1-3

6) Cognate Courses – as always
B.A., MAJOR IN PLANT BIOLOGY (38 credits minimum required)

Core Courses (12 credits) – as usual

Required Courses

2) Concept clusters and Plant Biology Laboratory Specific Courses (18 credits)

A) Ecological and Evolutionary Framework (one course required)
   28:120:222 Evolution 3
   21:120:280 Ecology 3

B) The Functional Organism (one course required)
   21:120:211 Plant Kingdom 4

C) Molecular and Cellular Mechanisms (one course required)
   21:120:352 Genetics 3

3) Plant Biology Laboratory Specific Courses (two courses required)
   21:120:311 Flora of New Jersey (formerly Taxonomy Vasc. Plants) 4
   21:120:330 Plant Physiology 4

4) Plant Biology Electives
   21:120:230 Biology of Seed Plants 4
   21:120:313 Mycology 4
   21:120:356 Molecular Biology 3
   21:120:370 Plant Ecology 3
   21:120:371 Field Plant Ecology 4
   28:120:375 Conservation Biology 3
   21:120:381 Ecological History of North America 3
   21:120:422 Biological Invasions 3
   21:120:430 Plant Growth and Development 4
   21:120:431 Developmental Plant Physiology 3
   21:120:452 Laboratory in Molecular Biotechniques 4

4) Independent study
   21/28:120:491 Problems in Biology 1-3
   21/28:120:492 Problems in Biology 1-3

5) Cognate Courses – as always
B.A. MAJOR IN NEUROBIOLOGY (38 credits minimum required)

Core Courses (12 credits) – as usual

Required Courses

2) Concept clusters (16 credits – required courses)
   A) Evolutionary Framework (one course required)
      21:120:222 Evolution 3
   
   B) The Functional Organism (one course required)
      21:120:340 Mammalian Physiology 4
   
   C) Molecular and Cellular Mechanisms (one course required)
      28:120:315 Principles of Neurobiology 3
   
   D) Cellular and Systems Neuroscience (two courses required)
      28:120:341 Introduction to Neurophysiology 3
      21:120:444 Cellular Neurobiology 3
      28:120:447 Systems Neurobiology 3

3) Laboratory Experience (2 courses required)
   21:120:285 Comparative Vertebrate Anatomy 4
   21:120:342/343 Developmental Biology and Dev. Biol. Laboratory 4
   28:120:451 Cell Physiology and Imaging 4
   21:120:452 Laboratory in Molecular Biotechniques 4

4) Neuroscience Electives
   21:120:282 Animal Behavior 3
   21:120:341 Introduction to Neurophysiology 3
   28:120:344 Physiological Mechanisms 3
   21:120:345 Comparative Vertebrate Physiology 3
   28:120:383 Neural Basis of Behavior 3
   21:120:444 Cellular Neurobiology 3
   28:120:447 Systems Neurobiology 3
   21/28:120:445 Endocrinology 3
   28:120:448 Neuropathophysiology 3
   NJIT Math430 Analytical and Computational Neuroscience 3
   NJIT Math431 Systems Computations Neuroscience 3

5) Independent study
   21/28:120:491 Problems in Biology 1-3
   21/28:120:492 Problems in Biology 1-3

6) Cognate Courses – as always
B.A., MAJOR IN BIOLOGY
(38 credits minimum required)

Core Courses (12 credits) – as usual

Required Courses

2) **Concept clusters (10 credits)**

A) Ecological and Evolutionary Framework (one course required)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>28:120:222</td>
<td>Evolution</td>
<td>3</td>
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<tr>
<td>21:120:282</td>
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B) The Functional Organism (one course required)

<table>
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<th>Course Code</th>
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<tbody>
<tr>
<td>21:120:211</td>
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<tr>
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<td>Mammalian Physiology</td>
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<td>21:120:342/343</td>
<td>Developmental Biology and Dev. Biol. Laboratory</td>
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<tr>
<td>21:120:230</td>
<td>Biology of Seed Plants</td>
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C) Molecular and Cellular Mechanisms (one course required)

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3) **Laboratory/Field Experience (2 courses – minimum 6 credits)**

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<td>Flora of New Jersey</td>
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<td>21:120:313</td>
<td>Mycology</td>
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<td>Cell Physiology and Imaging</td>
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<td>Microanatomy of tissues</td>
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B.A., MAJOR IN BIOLOGY (Continued)

4) **Biology B.A. Electives**

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5) **Independent study**

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B.S., MAJOR IN BIOLOGY  
(38 credits minimum required) 

Core Courses (12 credits) – as usual. 

Required Courses 

2) **Concept clusters (13 credits)** 

A) Ecological and Evolutionary Framework (one course required) 

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B) The Functional Organism (one course required) 

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C) Molecular and Cellular Mechanisms (one course required) 

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<td>Cell Biology</td>
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D) Computational Biology (one course required) 

<table>
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<td>Math373</td>
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<td>Computational Neuroscience</td>
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3) **Laboratory/Field Experience (two courses required)** 

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</table>
B.S., MAJOR IN BIOLOGY (Continued)

4) Biology B.S. Electives

- 28:120:315 Principles of Neurobiology 3
- 21:120:325 Animal Parasites 3
- 28:120:336 Ecology of the Dining Hall 3
- 21:120:342 Developmental Biology 3
- 21:120:346 Neurobiology 3
- 21:120:350 Immunology 3
- 28:120:368 Ecology and Evolution of Disease 3
- 28:120:375 Conservation Biology 3
- 28:120:383 Neural Basis of Behavior 3
- 28:120:385 Evolution of Animal Behavior Laboratory 3
- 28:120:400 Biology of Science Fiction 3
- 21:120:402 Biology of Cancer 3
- 21:120:422 Biological Invasions 3
- 21:120:444 Cellular Neurobiology 3
- 21:28:120:445 Endocrinology 3
- 21:120:455 Molecular Cell Biology 3

5) Independent study

- 21:28:120:491 Problems in Biology 1-3
- 21:28:120:492 Problems in Biology 1-3

6) B.S. Cognate courses

6A) Rutgers

- 21:21:160:115 General Chemistry I 4
- 21:21:160:116 General Chemistry II 4
- 21:21:160:113 General Chemistry Lab I 1
- 21:21:160:114 General Chemistry Lab II 1
- 21:21:160:335 Organic Chemistry I 4
- 21:160:331 Organic Chemistry Lab 2
- 21:750:203 General Physics I or 4
- 21:750:213 University Physics I 4
- 21:750:204 General Physics II or 4
- 21:750:214 University Physics II 4
- 21:750:205 Intro Physics Lab I 1
- 21:750:206 Intro Physics Lab II 1
- 21:640:135 Calculus I 4
- 21:640:136 Calculus II 4
- 21:640:235 Calculus III 4

Other Mathematics Courses

- 21:198:101/102 Comp and Prog I, II or 3
- BNFO135,136 Prog Bioinformatics I, II 3
- 21:870:473 Numerical Analysis or 3
- Math340 Applied Numerical Methods 3
- 21:540:314 Elementary Differential Equations 3
- Math222 Differential Equations 3
- 21:540:219 Basic Linear Algebra 3
- Math 225 Discrete Analysis or 3
- Math 337 Linear Algebra 3

* See note on next page regarding specific pre-requisites for Computational Biology Cluster

6B) B.S. Cognate courses at NJIT

- Chem124 General Chemistry Lab 1
- Chem125 General Chemistry I 3
- Chem126 General Chemistry II 3
- Chem243 Organic Chemistry 3
- Chem244 Organic Chemistry 3
- Chem244A Organic Chemistry Lab 2
- Math111 Calculus I 4
- Phys111 Physics I 4
- Phys121 Physics II 4
- Phys111A Physics Lab I 1
- Phys121A Physics Lab II 1
- Math111 Calculus I 4
D) Computational Biology Courses and Mathematics pre-requisites

NJIT Math 371  Physiology and Medicine
Pre-requisites:
21:640:314 Elementary Differential Equations or
NJIT Math 222 Differential Equations

NJIT Math 372  Population Biology
Pre-requisites:
21:640:314 Elementary Differential Equations or
NJIT Math 222 Differential Equations

NJIT Math 373  Introduction to Mathematical Biology
Pre-requisites:
21:640:235 Calculus III
21:640:219 Basic Linear Algebra or
NJIT Math 337 Linear Algebra

NJIT Math 430  Computational Neuroscience
Pre-requisites:
21:640:235 Calculus III
21:750:204 General Physics II
21:198:101 Comp & Prog. I or
NJIT BIINFO 135, 136
### Federated Department of Biological Sciences

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<td>28:120:206</td>
<td>Foundations Ecol Evol Lab</td>
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<td>28:120:222</td>
<td>Evolution</td>
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<td>28:120:225</td>
<td>Insects and Human Society</td>
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<tr>
<td>28:120:315</td>
<td>Principles of Neurobiology</td>
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<td>28:120:338</td>
<td>Ecology of the Dining Hall</td>
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<td>28:120:344</td>
<td>Physiological Mechanisms</td>
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<td>28:120:368</td>
<td>Ecology &amp; Evolution of Disease</td>
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<td>28:120:375</td>
<td>Conservation Biology (WI)</td>
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<td>28:120:383</td>
<td>Neural Basis of Behavior (WI)</td>
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<td>28:120:385</td>
<td>Evolution of Animal Behavior Lab</td>
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<td>28:120:400</td>
<td>Biology of Science Fiction</td>
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<td>28:120:447</td>
<td>Systems Neurobiology (WI)</td>
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<td>28:120:448</td>
<td>Neuropathophysiology</td>
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<td>28:120:451</td>
<td>Cell Physiology &amp; Imaging (WI)</td>
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<td>28:120:475</td>
<td>Ecological Field Methods (WI)</td>
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**Cognate Courses/Rutgers-Newark**

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<td>21:160:113</td>
<td>General Chemistry Lab</td>
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<td>21:160:114</td>
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<td>21:160:115</td>
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<td>21:160:116</td>
<td>General Chemistry</td>
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<td>21:160:335</td>
<td>Organic Chemistry I</td>
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<td>21:160:331</td>
<td>Organic Chemistry Lab</td>
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<tr>
<td>21:160:336</td>
<td>Organic Chemistry II</td>
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<td>21:750:203</td>
<td>General Physics I</td>
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<td>21:750:204</td>
<td>General Physics II</td>
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<td>Intro Physics Lab I</td>
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<td>Intro Physics Lab II</td>
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<td>Calculus I</td>
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<td>21:640:136</td>
<td>Calculus II</td>
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<td>21:640:235</td>
<td>Calculus III</td>
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**Cognate Courses/NJIT**

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<td>NJIT CHEM 124</td>
<td>General Chem Lab</td>
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<td>NJIT CHEM 243,244</td>
<td>Organic Chemistry</td>
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<td>NJIT CHEM 244A</td>
<td>Organic Chem Lab</td>
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<td>NJIT PHYS 111,121</td>
<td>Physics I, II</td>
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<td>NJIT PHYS 111A, 121A</td>
<td>Physics Lab</td>
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<td>NJIT MATH 111,112,211</td>
<td>Calculus I, II, III</td>
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**B.S. Program - Cluster D**

<table>
<thead>
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<td>NJIT MATH 371</td>
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<td>NJIT MATH 372</td>
<td>Population Biology</td>
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<tr>
<td>NJIT MATH 373</td>
<td>Intro Mathematical Biology</td>
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<td>NJIT MATH 430</td>
<td>Computational Neurosci</td>
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**B.S. Program - Mathematics courses**

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<td>Prog Bioinformatics I</td>
<td>3</td>
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<td>Prog Bioinformatics I, II</td>
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<td>21:640:473</td>
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<td>Appl Num Methods or</td>
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<td>Elementary Diff Eq's or</td>
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<td>NJIT MATH 222</td>
<td>Differential Eq's or</td>
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<td>21:640:219</td>
<td>Basic Linear Algebra or</td>
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<td>NJIT MATH 226</td>
<td>Discrete Analysis or</td>
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<tr>
<td>NJIT MATH 340</td>
<td>Appl Num Methods or</td>
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To: Faculty of Arts and Sciences – Newark

From: Fran Bartkowski, Chair of the General Education Committee

Date: Wednesday, April 10, 2013

AGENDA
Wednesday, April 10, 2013

A. Course Items for Consideration

The committee recommends approval for the following course proposals:

I. Arts, Culture, Media

21:080:103 3-D Design Fundamentals
21:080:261 Intro to Photography
21:080:263 Intro to Digital Photography
21:082:280 Art of the Far East
21:082:240 Baroque Art
21:088:212 From Page to Stage

II. English

21:350:327 Literature and Medicine
21:350:212 Myth in Literature
21:350:211 Children’s Literature
21:350:215 Literary Masterpieces
21:352:211 Contemporary American Literature
21:352:212 Contemporary American Literature
21:352:230 Race, Nation, and Borders
21:352:250 Literature of the American Revolution
21:352:251 Literature of Social Protest in the United States
III. History

21:510:297 Far Eastern History
21:510:298 Far Eastern History
21:512:203 History of Newark
21:512:233 African American History I
21:512:234 African American History II
21:512:373 History of Women

IV. Sociology and Anthropology

21:070:204 Intro to Cultural Anthropology
21:920:201 Intro to Sociology

V. Spanish and Portuguese Studies

21:812:319 Intro to Brazilian Literature in English Translation
21:940:348 Hispanic Film and Literature

VI. Double Counting Courses Towards Major and Minor Requirements
Date: April 15, 2013

To: Faculty of Arts and Sciences-Newark

From: Committee on Governance, By-Laws and Nominations

Re: Standing Committee Slate

The following nominations (marked with an asterisk (*)) are presented to the faculty for consideration:

**Affirmative Action and Review**

*Rigoberto Gonzalez*  
English  
2014

*John Keene*  
English  
2014

*Alex Rodriguez*  
Biological Sciences  
2014

Vacant  
2014

**Appointments and Promotions**

**Humanities:**

*Gary Farney*  
History  
2014

*Fran Bartkowskis*  
English  
2014

*Tim Raphael*  
Arts, Culture, and Media  
2014

**Natural Sciences:**

*Mark Feighn*  
Mathematics and Computer Science  
2014

*Edward Kirby*  
Biological Sciences  
2014

*Lee Slater*  
Earth and Environmental Sciences  
2014

*Elena Galoppini*  
Chemistry  
2014

**Social Sciences:**

Vacant  
2014

Vacant  
2014

Vacant  
2014
Courses of Study

John Rollino  
Tim Raphael  
Annette Juliano  
Douglas Coate  
Laura Lomas  
Jyl Josephson  
Harold Siegel  
*Eva Giloi  
*Li Guo  
*Agostino Pietrangelo  

Physics  
Arts, Culture, and Media  
Arts, Culture, and Media  
Economics  
English  
Political Science  
Psychology  
History  
Mathematics and Computer Science  
Chemistry  

Faculty Secretary

Vacant  

General Education

Jennifer Arena  
Fran Bartkowski  
Karen Caplan  
Doug Morrison  
Gabriela Kutting  
Jennifer Austin  
John Randall  
*Huixin He  
*Malcolm Kiniry  
Vacant  
Vacant  
Vacant  

Writing Program  
English  
History  
Biological Sciences  
Political Science  
Classical & Modern Languages & Literatures  
Mathematics and Computer Science  
Chemistry  
English  

Governance, Bylaws, and Nominations

Lisa Hull  
Gary Farney  
Jacob Sturm  
Vacant  
Vacant  

Political Science  
History  
Mathematics and Computer Science  

Library and Computer

Carol Heffernan  
Elena Galoppini  
Xiaowei Wang  
Yiannis Sakelaridis  
*Patricia Akhimie  
*John Keene  

English  
Chemistry  
Mathematics and Computer Science  
Mathematics and Computer Science  
English  
English  

2014  
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2016  

Newark Faculty Council
(Chancellor’s Advisory Committee)

Arthur Powell  Urban Education  2014
Lee Mosher  Mathematics and Computer Science  2014
Piotr Piotrowiak  Chemistry  2014
Paul Boxer  Psychology  2015
Janet Larson  English  2015
*James Tepper  Neuroscience  2016
*Jane Gilman  Mathematics and Computer Science  2016
*Barry Komisaruk  Psychology  2016
Vacant

Planning and Budget

Robert Sczech  Mathematics and Computer Science  2014
Yuan Gao  Earth and Environmental Sciences  2014
Jane Gilman  Mathematics and Computer Science  2015
Roger Lalancette  Chemistry  2015
*Carolyn White  Urban Education  2016
*Li Guo  Mathematics and Computer Science  2016

Scholastic Standing

Barbara Foley  English  2014
Darren Hansen  Chemistry  2014
Phil Huskey  Chemistry  2015
William Keigher  Mathematics and Computer Science  2015
*Robert Snyder  Arts, Culture, and Media  2016
*John Rollino  Physics  2016
Vacant

Student Affairs, Admissions
& Financial Aid

Robert Snyder  Arts, Culture, and Media  2014
Yusuf Abdi  Mathematics and Computer Science  2014
Huixin He  Chemistry  2015
John Rollino  Physics  2015
*Barbara Foley  English  2016
Vacant

Teaching Effectiveness

Ruth Feldstein  History  2014
Rachel Hadas  English  2015
*Ruth Feldstein  History  2016
*Robert Snyder  Arts, Culture, and Media  2016
Vacant
University Senate
Jim Vanderhoff  Economics  2014
Asela Laguna-Diaz  Spanish & Portuguese Studies  2014
Sean Mitchell  Sociology and Anthropology and Criminal Justice  2015
*Robert Puhak  Mathematics and Computer Science
*Jane Gilman  Mathematics and Computer Science
*Katalin Balog  Philosophy
*Kenneth Kressel  Psychology
Vacant
Memorial Minutes for Professor Denyse Thomasos

Denyse Thomasos, Professor of Painting in the Department of Arts, Culture and Media died suddenly on July 19th, 2012 due to complications during a routine medical procedure.

Denyse is survived by her husband, Samein Priester, and daughter, Syan; as well as her mother, sisters, and a large extended family mainly from Canada that we were fortunate enough to host in ACM this past March at a memorial to celebrate Denyse’s life.

Denyse was 48 years old when she died. She was taken from us far too young.

Denyse was a graduate of the Yale School of Art where she received her MFA in 1989. Prior to coming to Rutgers-Newark, she was on the faculty of the Tyler School of Art at Temple University.

Denyse was a dedicated teacher much loved by her students. She was also an internationally recognized painter whose work was exhibited in leading galleries, particularly in the United States and in her native Canada. Her work is represented in both private and public collections, including at the Art Gallery of Ontario, the University of Toronto collection, and at our own Rutgers-Newark.

Denyse received numerous awards and honors to support her work, develop research – which was fundamental to her art making, to travel, and to lecture. She was the recipient of the Guggenheim Painting Fellowship, A Rockefeller Foundation Award, she received the Pew Fellowship in the Arts, The Joan Michel Foundation Award, several Canadian Council for the Arts Awards, and she was the first recipient of the Genevieve McMillan/Reba Stewart Award established to recognize an outstanding female artist in the United States.

Denyse was also awarded many national and international artist residencies. Most notably, the Bellagio residency in Italy, the Sanskrit Pratishthan Foundation Residency in New Delhi, India, as well as residencies in the United States at Yaddo (twice), MacDowell, and at Ucross.

Denyse traveled extensively throughout her career, primarily as part of the research that informed her work. She invariably combined this research with visiting residencies at art schools, particularly outside the Euro-American mainstream. She taught and/or lectured at the Tianjin Academy of Fine Arts in China; The Maharaja Sayaji Rao University, in Baroda, India; in Thrissur, India, and at the National Institute of the Arts in Bamako, Mali.

Denyse was an abstract painter. But she was no simple formalist as is clear from the opening lines of what she wrote about her creative process in 2010:

For the past 18 years I have developed a visual language dedicated to depicting the human indignities of slavery and confinement. I have been interested in the psychological
inheritance of the experience of incarceration and its impact on society. Rather than 
illustrative translations of these ideas I have focused on developing a structural language that 
translates oppression and the psychosomatic ramifications of imprisonment. After many 
years of analytical investigation of abstract space and line I embarked on a yearlong travel of 
the East to document indigenous architectural structures to add specificity to my concept.

This research has produced a major body of work on paper, canvas, and also on huge wall work 
installations that engage with what Denyse termed “the architectural nuances of the given gallery 
space.”

When Denyse went to have a simple medical test done last summer she had everything to live 
for. She was so much in love that she married her husband no less than twice, even though they 
had been at each other’s side from the day she married the first time. She and her husband had 
adopted the most beautiful baby daughter several years earlier who was the light of both their 
eyes. She had been promoted to full professor less than twelve months before. With the pressure 
of promotion behind her, Denyse’s career had a new lease of life and she was very busy 
preparing a new exhibition for her gallery in Toronto as well as working on another show in 
North Carolina with a colleague.

It gives us all pause to realize how fragile life is....may our colleague Professor Denyse 
Thomasos rest in peace.