

## MEMORANDUM

**TO:** Committee on Academic Programs (CAP)

**FROM:** Steering Committee

**RE:** Proposed Bachelor of Arts in Biology

**DATE:** February 7, 2018

### **Background:**

The Department of Biology has developed the attached proposal for a new Bachelor of Arts program. This proposal has been endorsed by the curriculum committee in the School of Science. The next step in the program approval process for consideration of this program is a review by CAP.

### **Charge:**

CAP should consider whether all units that might be affected by the proposal have been consulted and whether the proposal is consistent with the College's mission. If CAP determines that additional testimony is required, then CAP should solicit this testimony from the appropriate units. If CAP agrees that all affected units have been consulted and that the new program is consistent with the College's mission, it may prepare a final recommendation without seeking further testimony.

**Testimony Tier:** Tier I.

### **Timeline:**

CAP should complete its work on this charge by the end of February, 2018.

### **TCNJ Governance Processes**

**Step 1 – Steering issues a charge**

**Step 2 - Governance prepares a Preliminary Recommendation**

Once the appropriate standing committee or council has received the charge, it should start by collecting data needed to make a preliminary recommendation. It should receive input from affected individuals and all relevant stakeholder groups prior to making a preliminary recommendation. For issues that have broad implications or that affect a large number of individuals, initial testimony should be solicited from the campus community at large. For some issues, sufficient initial testimony may come from input through committee membership or solicitation from targeted constituent groups.

When, in the best judgment of the committee, adequate clarity of the principles contributing to the problem are known, a preliminary recommendation should be drafted and disseminated to the campus community.

### **Step 3 – The Relevant Stakeholders provide Testimony**

Once a preliminary recommendation has been completed, the standing committee or council should seek testimony from the campus community. The testimony should be gathered in accordance with the Testimony Tier (see page 24) assigned to the issue by Steering.

For issues that require public testimony from the campus community, the chair of the standing committee or council should approach the president of the appropriate representative bodies to schedule the next available time slot at a meeting of that body.

Testimony should be gathered in a way that allows stakeholders to weigh in fully on the issue. Members of the standing committee or council that wrote the preliminary recommendation should be present to hear and record the testimony.

### **Step 4 – Governance prepares a Final Recommendation**

Once the standing committee or council has received appropriate testimony, it should revise the preliminary recommendation into a final recommendation. Once the final recommendation is complete, the standing committee or council should use sound judgment to determine whether or not more public testimony is required. If, in its feedback to the original preliminary recommendation, a stakeholder representative body requests to review an issue again, the committee or council is bound to bring it back to that body. If a full calendar year has passed since the formal announcement of the preliminary recommendation, the committee must resubmit a preliminary recommendation to the campus community.

When the committee or council has completed the final recommendation, it should forward it to the Steering Committee. The final recommendation should be accompanied by a cover memo that summarizes the initial charge, how testimony was gathered and the nature of that testimony, and how the committee responded to that testimony, including a description of how the preliminary recommendation evolved as a result of testimony.

### **Step 5 – Steering considers the Final Recommendation**

### **Step 6 – The Provost and/or President and Board consider the Final Recommendation**

### **Step 7 – Steering notifies the Campus Community**

**Testimony Tier I** – The issue requires minimal testimony from the campus community. The assigned council or committee should consult with relevant stakeholders before preparing the final recommendation, but there is no need for surveys or open fora.

**For a complete description of all steps and of the other testimony tiers, see Governance Structures and Processes, 2017 Revision, pages 21 – 24.**

**The College of New Jersey**  
New Degree Program Approval Process Cover Page

Directions: Complete this cover page at Step 5 in the Degree Program Approval Process policy (<http://policies.tcnj.edu/policies/digest.php?docId=9525>) before sending the proposal to the Steering Committee. Submit as a packet the following documents to the co-chairs of the Steering Committee via email: a cover memo from the dean; this cover page; the degree program proposal; and any additional attachments. The Steering Committee will then forward these materials to the Committee on Academic Programs (CAP) for review. Note: the materials for proposed graduate programs should include documentation of review and recommendation by the Graduate Studies Council, and the materials for proposed teacher education programs should include documentation of review and recommendation by the Teacher Education Council.

Degree Program Title and Designation: **Bachelor of Arts in Biology**

Home School: **Science**

Home Department: **Biology**

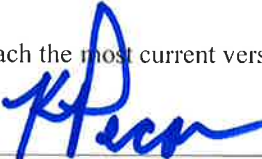
Contact Person for Information about this Proposal: **Keith Pecor, Biology Chair**

Proposed Semester/Year for Program to Begin: **Fall 2018**

Briefly describe the proposed program. If applicable, list other departments and schools with courses included in the program.

**To better serve the needs of our students, the Biology Department has developed a Bachelor of Arts (B.A.) in Biology degree program. This will be offered in addition to our current B.S. in Biology. We have designed our B.A. after carefully considering student needs, offerings at peer/aspirant institutions, and investigating requirements for academic and professional careers. We believe that the B.A. program will fulfill unmet needs amongst our student population by improving opportunities for interdisciplinary training and promoting retention of underserved students.**

Attach the most current version of the complete proposal. The signatures below indicate approval of the attached proposal.

  
\_\_\_\_\_  
Department Chair

**16 Nov. 17**  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
School Curriculum Committee






**11/16/17**  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Dean

**NOV 21 2017**  
\_\_\_\_\_  
Date

Consultation with Affected Units

Complete this section if the proposal includes elements that will have an impact on schools outside the proposing unit, such as, but not limited to, increases or decreases in enrollment. If additional library resources will be required, the dean of the library should complete this section as well. The signatures below indicate that the department chairs of affected units and deans of affected schools have had the opportunity to offer feedback on the proposal and that the proposing unit has responded to this feedback. If any affected units have remaining concerns after this process, they should attach a description of their concerns, to which the proposing unit may attach a response.

 Department Chair	<u>11/16/17</u> Date	COMPUTER SCIENCE
 _____	<u>11/16/17</u> Date	Chemistry
 _____	<u>11/16/17</u> Date	Math & Statistics
 Dean	<u>NOV 21 2017</u> Date	
 _____	<u>21 NOV 2017</u> Date	Physics

Final Steps in the Approval Process

After review through college governance, the Steering Committee will forward CAP's recommendation to the provost and president, who will submit the proposal to the Board of Trustees for review and approval. Before a new degree program may be implemented, it must be reviewed by the Academic Issues Committee of the New Jersey Presidents' Council and approved by the New Jersey Presidents' Council.

Program Announcement  
**The College of New Jersey**  
**Department of Biology, School of Science**  
**Proposed Bachelor of Arts in Biology**

To better serve the needs of our students, the Biology Department has developed a Bachelor of Arts (B.A.) in Biology degree program. This will be offered in addition to our current B.S. in Biology. We have designed our B.A. after carefully considering student needs, offerings at peer/aspirant institutions, and investigating requirements for academic and professional careers. We believe that the B.A. program will fulfill unmet needs amongst our student population by improving opportunities for interdisciplinary training and promoting retention of underserved students. In accordance with the guidelines in the *Academic Issues Committee Manual of the New Jersey Presidents' Council*, we have described the proposed B.A. program and how it integrates with the mission of The College of New Jersey.

### **Program Objectives**

The College of New Jersey offers students a personalized, collaborative, and rigorous education within and beyond the classroom. Toward this goal, the Biology Department offers hands-on transformative experiences for our students, fostering critical thinking and promoting lifelong learning. We strive to accommodate the academic interests and goals of all of our students and support them with a variety of course offerings, research opportunities, and individualized advising.

Currently, the Department of Biology offers students a single path through the Biology major, a Bachelor of Science (B.S.) degree. The current B.S. has 17 required School of Science courses, and additional language and liberal learning requirements means that up to 27 of the 32 courses required for graduation are in some way prescribed. To better serve the needs of our students, we have developed a second path for students, a Bachelor of Arts (B.A.) degree. The B.A. reduces the required School of Science courses to 12 (total prescribed courses, including language and liberal learning: 22/32). This B.A. degree will provide significantly more flexibility for students, allowing them to develop a personalized educational plan to match their specific interests. By offering a less-restrictive, yet equally-rigorous, B.A. degree we will provide students with an opportunity to explore a wider variety of interests and support the pursuit of a greater range of career paths. Moreover, the B.A. will aid retention of particular pools of students, such as transfer students, for whom the rigidity of the B.S. program is burdensome.

### **Biology Degree Outcomes**

The Biology Department has defined the overall learning goals and outcomes for the B.S. in Biology degree (Table 1). All of these learning goals are addressed in our five core Biology courses (**Appendix 1**), and are built upon in our upper level classes. Because B.A. students would still participate in the same five core Biology courses (**see Table 3, below**), and complete four upper level courses, the learning goals for the B.A. in Biology degree would remain the same as for the B.S. program.

Students graduating with a degree in Biology should demonstrate skills in the areas of:

- Critical analysis and reasoning
- Scientific reasoning
- Quantitative reasoning
- Oral and written communication
- Technological competence
- Information reasoning

**Table 1: Learning goals for the B.S. and B.A. in Biology degrees**

<b>Domain I: Acquiring knowledge and skills</b>	<b>Domain II: developing skills to conduct biological research</b>	<b>Domain III: Understand the place of science in a broader context</b>
Master the major subdivisions within biology	Generate testable hypotheses	Communicate the broader impacts and/or applications of biological knowledge
Hands-on experience with a comprehensive range of techniques	Design valid experiments to test hypotheses	Gain awareness of career options in the biological sciences
Learn how to generate and/or quantitatively analyze data	Conduct experiments using skills appropriate to subdivisions	Prepare for graduate school, professional school, or a career in biology
Critically evaluate primary literature, in oral or written form	Analyze data using discipline appropriate assessments	
Develop oral communication skills	Interpret data, draw conclusions, and/or refine hypotheses based on data	
Develop written communication skills	Communicate research findings in a variety of formats adhere to ethical standards for biology	

**Assessment Plan**

*Assessment of Learning Outcomes:* Currently, learning gains are assessed both by rubric assessment of course assignments (lab reports, written assignments, poster and oral presentations) and scientific skills and critical thinking tests (in-class exams). In addition, we use the *Classroom Undergraduate Research Experience (CURE)* survey (<https://curenet.cns.utexas.edu/>) in our introductory biology course to measure student perceptions of how participating in the course has aided their acquisition of knowledge and skills. To assess students' outcomes related to experimental design, we use the *Experimental Design Ability Test (EDAT)* (Sirum and Humberg, 2011). The test is taken both by first semester freshmen and by seniors, allowing us to assess our curriculum in its entirety. We will continue to use these tools to assess learning outcomes for both the B.S. and B.A. in Biology going forward.

*Program Assessment:* To determine whether the B.A. in Biology meets our objectives of allowing students to study broadly, supporting diverse career paths and aiding retention, we will also gather data on the following:

1. The numbers of students who enroll in the B.A., and their four-year completion rate.
2. Retention in the Biology major.
3. The number of students completing the B.A. who also complete a minor or a second major.
4. The degree (B.S. vs. B.A.) completed by students who study abroad.
5. The proportion of Biology Secondary Education (BIOT) majors who complete the B.A. degree compared with the B.S. degree.
6. Employment/enrollment in graduate programs at the time of graduation.

## Need for the Program

### Unmet student needs

While the current B.S. undoubtedly serves many students well, it is extremely rigid. As a department, we are motivated to offer a rigorous, yet flexible curriculum that can increase retention in the major and allow students to pursue interdisciplinary training. The proposed B.A. program reduces the number of required Biology/correlate courses, providing a greater degree of flexibility that will meet student needs in three domains.

a) Facilitate greater breadth or depth of study: The B.A. will provide flexibility for those students in the Biology major who wish to pursue a breadth of academic interests not possible given the constraints of the current B.S. program. With the new B.A., students would be able to choose a greater variety of courses throughout the liberal arts or sciences. In addition, it would allow students who wish to deepen their engagement in a particular area, for example by adding a minor or a second major. In this regard, it is notable that the B.A. reduces the number of required courses by five, which directly correlates with the five courses required for completion of a minor. In addition, the B.A. could also make it easier for students to study abroad.

b) Support diverse career trajectories: Course requirements under our current B.S. strongly correlate with prerequisites for medical or graduate school. While a significant portion of graduates pursue these careers, many do not. Requiring all students to take these 'pre-med' courses without regard to their chosen career path is unnecessarily onerous. Pursuing science requires increasingly interdisciplinary approaches, and the B.A. would provide more flexibility to personalize a course of study to match career aspirations. In particular, the B.A. would support the Biology Secondary Education [BIOT] majors, who currently have to complete a large number of education classes and student teaching in addition to all of the regular Biology requirements.

c) Promote Retention: The constrained nature of the current B.S. curriculum results in some students struggling to complete the degree in four years. Moreover, some students leave the Biology major not because of a lack of interest in biology, but due challenges in completing all of the correlate courses. For example, students who are required to complete pre-calculus, WRI 101, or WRI 102, which do not count towards graduation, find it difficult to fit all the required B.S. courses into a four-year schedule. In addition, under the current B.S., transfer students who enter with an Associate's Degree often need to juggle three or four science or math classes each semester in order to finish in two years; this creates an extremely demanding schedule for a vulnerable student population.

### Peer and aspirant institutions offer comparable B.A. and B.S. programs in Biology

We compared B.A. and B.S. degrees offered at Biology department-defined peer and aspirant institutions and found that there is no established set or number of courses that defines a B.S. or B.A. degree (**see Table 2**). Among comparator institutions, the number of required courses for our current B.S. degree is at the upper end. Where an institution offers both a B.A. and a B.S. in Biology, the primary difference between the degree programs is a reduction in the number of correlate courses. Similarly our proposed B.A. would reduce the number of Biology and correlate science courses to levels comparable with B.A. offerings at peer/aspirant institutions.



**Table 2. Comparison of the number of Biology and correlate science course required for the TCNJ B.S./B.A. with degrees offered by peer and aspirant institutions**

Institution	Degree type (if known)	Courses		
		Biology	Correlate	Total
Bucknell	B.A.	8	4	12
	B.S.	9	8	17
Carleton		10	4	14
Davidson		10	1	11
Drew	B.A.	9	4	13
Franklin and Marshall		9	7	16
Gettysburg	B.S.	11	4	15
Grinnell		8	3	11
Middlebury		11	1	12
Oberlin		7	4	11
Reed		8	4	12
Richard Stockton	B.A.	8	3	11
	B.S.	11	7	18
Richmond	B.S.	8	5	13
Saint Mary's, MD	B.S.	9	3	12
SUNY Geneseo	B.S.	10	8	18
TCNJ	B.A.	9	3	12
	B.S.	10	7	17
UNC Asheville	B.S.	10	7	17
William & Mary		9	6	15

### **Strategic Planning and Effects on Other Programs**

One impact of the new B.A. in Biology will be to improve retention in the Biology major, particularly of underserved students. The constraints imposed by the current B.S. curriculum result in some students struggling to complete the degree in four years. Thus, the B.A. in Biology will meet the first priority of TCNJ's Strategic Plan, to 'attract and retain talented students'. The additional flexibility built into the B.A. in Biology will broadly aid retention and improve four-year graduation rate. This new major may also help us to recruit and retain more Biology majors who, in addition to pursuing a Biology degree, have interests that extend more broadly.

The B.A. in Biology will additionally support the second priority of the current strategic plan to 'enhance signature experiences'. The first signature experience is a 'personalized, collaborative and rigorous education'. The B.A. in Biology will maintain the rigor of the current Biology degree while enhancing students' ability to explore multiple academic interests. The flexibility of the B.A. allows students to personalize their program of

study and potentially to pursue a second major, or a minor, either within the School of Science or beyond. The B.A will allow students to gain the technical knowledge, communication skills and exposure to the ethical standards of science, while also majoring in areas such as education, business, or the humanities. The ability to combine diverse academic interests will aid their personal and professional development and prepare them to excel in a diverse array of careers. Similarly, the additional flexibility may enable students to study abroad, enhancing their 'global engagement', a second signature experience. A third signature experience focuses on undergraduate research. Students enrolled in the B.A. in Biology will still take four upper-level Biology classes, one of which may be independent research in Biology (research for credit) and in addition they can take Bio497/8 Research Capstone. Therefore, the B.A. in Biology will not limit a students' ability to engage in undergraduate research and may even provide the flexibility to engage more deeply.

#### *Effect on other programs*

We developed the B.A. in Biology with input from other departments in the School of Science. We do not anticipate that the proposed curriculum for the B.A. will place an additional burden on any specific academic departments, as B.A. students will replace the correlate science courses with a variety of additional courses of their choosing. As proposed, the structure of the B.A. eliminates some high-demand correlate courses and allows student to spread out the requirements for the major over a longer period of time. This may offer some relief for the the School of Science in general and reduce the use of adjuncts in high demand courses (e.g. BIO 211, CHE 331, MAT 127, PHY 201).

#### **Anticipated student enrollments**

##### Enrollment management at admission

Instead of selecting a B.A. or B.S. prior to any coursework or exploring their interests, students would be admitted to The College as "Biology" majors. We plan to maintain the total number of students (B.A + B.S) in the entering class at current levels. Thus, other than the change to the admission designation, no changes are anticipated.

##### Selection of B.A or B.S

Students would be required to select either the B.A. or the B.S. by the end of their sophomore year. This window of time will give all students a chance to sample multiple courses in the Biology major and complete several of the correlate courses that are common to both the B.A. and B.S. It would also give students time to identify other areas of interest should they decide to add a minor or second major. Transfer students would select the B.A. or the B.S at the time of enrollment at TCNJ.

#### **Degree requirements**

The degree requirements for the B.A. in Biology (Table 3) were developed with a focus on the Mission of the College, the goals of the Biology Department, and a survey of peer/aspirant institutions. The B.A. will require 9 courses in Biology and 3 correlate courses, including one School of Science approved option. The School of Science approved options include majors-level courses offered in the Chemistry, Physics, Math/Statistics and Computer Science departments\*. All language, liberal learning, and civic responsibility proficiencies will be identical to the current B.S. in Biology. A total of 32 course units are required for graduation. For the B.A. in Biology these would be made up as follows: 12 in-major requirements, 10 liberal learning requirements and 10 free electives.

The B.A. degree requirements for students in the Biology Secondary Education program will include the same 12 in-major requirements as for the other Biology B.A. students. In addition to their Biology coursework, these students will follow the same School of Education and Liberal Learning curriculum as the BIOTs who earn a B.S. This coursework includes 7 education courses, student teaching (Clinical Experiences I and II), and 5 additional liberal learning requirements (14 total course units).

**Table 3. School of Science courses required for the B.S. and proposed B.A degrees**

<b>Course</b>	<b>B.S.</b>	<b>B.A.</b>
BIO 201	1	1
BIO 211	1	1
BIO 221	1	1
BIO 231	1	1
Organismal	1	1
BIO options	4	3
Capstone	1	1
CHE 201	1	1
CHE 202	1	*
CHE 331	1	
CHE 332	1	
MAT 127	1	1
MAT 128 or STA 215	1	*
PHY 201	1	*
PHY 202	#	
SoS approved option^		1
<b>TOTAL</b>	<b>17</b>	<b>12</b>

\*This course would count as a 'SOS approved option' for the B.A.

#This course is not required for the current B.S, however the majority of students (approx. 70%) take the course.

^For example: Chemistry 202, Computer Science 220, Math 128 (Calculus B), Physics 201, Statistics 215

**Appendix 1: General learning outcomes of the Bachelor of Science in Biology.** Indicated is where each learning outcome is addressed within the Biology Department curriculum.

Course #	Course Title	General Learning Outcomes						
		Critical analysis and reasoning	Scientific reasoning	Quantitative reasoning	Oral communication	Written communication	Technological competence	Information reasoning
<b>Courses for Non-majors/Support Courses</b>								
BIO 104	Inquiries in the Life Sciences	X	X			X	X	
BIO 141	Princ Human Anatomy and Physiology I							
BIO 142	Princ Human Anatomy and Physiology II							
BIO 144	Principles of Microbiology							
BIO 171	Human Form and Function							
BIO 173	Humanity and the Natural World							
<b>Core Courses</b>								
BIO 099	Orientation to Biology						X	X
BIO 185	Themes in Biology	X	X	X	X	X	X	X
BIO 211	Biology of the Eukaryotic Cell	X	X	X		X		
BIO 221	Ecology and Field Biology	X	X	X		X	X	X
BIO 231	Genetics	X	X	X	X	X	X	X
BIO 495/6/8	Biology Capstone	X	X	X	X	X	X	X
<b>Option Courses</b>								
BIO 301	Human Anatomy and Physiology I							
BIO 302	Human Anatomy and Physiology II							
BIO 312	Microbiology							
BIO 315	Plants and People	X	X	X	X	X	X	X
BIO 332	Biology of the Vertebrates	X	X			X	X	X
BIO 341	Biology of Seed Plants	X	X	X	X	X	X	X
BIO 342	Biology of the Invertebrates	X	X			X		X
BIO 344	Avian Biology	X	X	X	X	X	X	X
BIO 350	Biology of the Fungi	X	X	X		X		X
BIO 352	Biostatistics	X	X	X		X	X	X
BIO 360	Oceanography	X	X	X		X		X
BIO 365/6	Natural History of the Galapagos	X	X		X	X	X	X
BIO 370	Topics in Biology							
BIO 393/4	Independent Research in Biology	X	X	X	X	X	X	X
BIO 399	Research Internship in Biology							
BIO 410	Advances in Molecular Biology							
BIO 411	Animal Physiology	X	X	X	X	X	X	X
BIO 413	Microscopic Anatomy and Technique	X	X			X	X	X
BIO 434	Molecular Biology of Gene Expression	X	X		X	X	X	X
BIO 444	Molecular Immunology and Human Dis	X	X			X	X	X
BIO 450	Advanced Eukaryotic Cell Biology	X	X		X	X	X	X
BIO 451	Developmental Biology	X	X		X	X	X	X
BIO 461	Evolution	X	X	X		X	X	X
BIO 465	Physiological Behavior and Ecol	X	X	X	X	X	X	X
BIO 470	Topics in Biology--Animal Behavior	X	X	X	X	X	X	X
BIO 470	Topics in Biology -- Bacterial Pathogenes	X	X		X	X	X	X
BIO 470	Topics in Biology - Freshwater Ecology	X	X	X		X	X	X
BIO 470	Topics in Biology - Plant Genetics	X	X		X	X	X	X
BIO 471	Genomics and Bioinformatics	X	X	X	X	X	X	X
BIO 480	Neurobiology	X	X	X	X	X	X	X
BIO 490	Student Teaching in Biology				X	X	X	X
BIO 493/4	Independent Research in Biology	X	X	X	X	X	X	X

## **SCHOOL OF SCIENCE CURRICULUM COMMITTEE MEETING SUMMARY NOVEMBER 14, 2017**

Committee Members Participating: Joseph Baker (Chemistry), Cynthia Curtis (Math and Statistics), Jikai Lee (Computer Science), Tuan Nguyen (Physics), Matthew Wund (Chair, Biology)

### **SUMMARY NARRATIVE:**

The Curriculum Committee met on 11/14/17 to discuss the proposed Bachelor of Arts in Biology degree program (“B.A.”). If approved, this degree program will be offered in addition to the existing B.S. in Biology program. The B.A. curriculum differs from the existing B.S. in reducing the number of Biology course requirements by one upper-level option, and by four School of Science correlate courses. In total, it requires five fewer courses, which (by design) is the equivalent number of courses required to complete a minor. The Biology Department has identified several groups of students who would likely benefit from this more flexible program, such as students interested in adding a minor or second major, students who transfer from two-year colleges and wish to graduate in two years, students pursuing a degree in Biology Secondary Education, students who are interested in attending interdisciplinary graduate programs, and students who are interested in more broadly exploring the liberal arts and sciences. The Biology Department does not anticipate that the B.A. will increase enrollment, but rather will improve retention by offering more curricular choices to their existing students.

The Curriculum Committee felt that the proposal makes a strong case that the B.A. program will benefit Biology students who are not optimally served by the B.S. track, which was designed to meet medical school requirements, and to a lesser degree, graduate school requirements. It is also clear that the proposed B.A. program is comparable to many Biology degree programs at peer and aspirant institutions, and that it aligns well with the broader TCNJ Strategic Plan. We appreciated the effort the Biology Department made to evaluate the potential impacts on other SoS departments and the Department of Secondary Education. While it is impossible to tell exactly how many students will choose the B.A. option, and of those who do, which SoS courses they might take as their flex correlate or elective credit, we expect that it will not present an undue burden. It is probably more likely that fewer students taking foundational courses in Chemistry and Physics will relieve some need to hire adjuncts. Biology Secondary Education students who choose to follow the B.A. track will not experience a change in their education curriculum, and the Secondary Education Department is supportive of allowing these students to follow the B.A. program if they so choose. These students often need to take summer courses and/or to overload during the academic year in order to complete their degree in four years, so the B.A. should be an attractive option.

While the Curriculum Committee did not have any specific questions or concerns, we did suggest that the Biology Department rearrange a few of the sections of the proposal to improve logical flow. These suggestions have been incorporated in the attached proposal.

Committee Recommendation: The Curriculum Committee recommends the approval of the B.A. in Biology degree program.