

Biology Registration Newsletter: Spring Semester 2012
Fall 2011 REGISTRATION PERIOD
Tuesday Nov. 1th – Friday, Nov. 11th

I. Registration NEWS and UPDATES:

- A. New courses offered in Spring semester.** (See the Notes on Individual Courses in Section V of the Newsletter for a description of each course.)
- BIO 393 Biology Independent Research I.**
 - BIO 394 Honors Biology Independent Research I.**
 - BIO 470** (section B and B01) **Plant Genetics**, offered by Dr. Thornton.
- B. Important information about registration for Spring 2012:**
- BIO 211 Eukaryotic Cell Biology will be a prerequisite for BIO 231 Genetics, starting Fall 2012.** Although we have long advised students to not take BIO 231 before they have completed BIO 211, starting in Fall 2012, BIO 211 will be a prerequisite that will be enforced by PAWS.
 - Do not put off to next year any CORE courses that you need and could take this spring!** All first year biology majors should take BIO 211 Eukaryotic Cell in the spring semester. We have extra sections in BIO 211 to handle the extra demand. All current sophomores, juniors, and seniors who have not yet completed either BIO 221 Ecology and Field Biology or BIO 231 Genetics should plan on enrolling in these courses next semester. Again, we are offering extra sections of these courses to accommodate the back-log of students who need these core courses. Please be reminded that you need to be completing the core to take any 400-level course (except BIO 493/494), and you need to have already completed the core to take BIO 498 Senior Seminar.
 - BIO 393, 394, 399, 493, or 494 as biology option courses.**
Students graduating by August 2012 may count 2 course units (but students graduating after August 2012 may count only 1 course unit) of either BIO 393, 394, 399, 493, or 494 as biology option courses. Any additional course units in these courses will count as elective credit toward graduation. However, *any student graduating after August 2012 may substitute a second semester of BIO 493 or 494 for BIO 498 Senior Seminar (i.e., you would not have to take Senior Seminar.)*
 - Holding seats for other students.**
It appears that there continues to be a problem with individual students with earlier registration slots registering in course sections in order to hold a seat in that section for other students. Please be advised that this activity is considered to be a violation of the Academic Integrity Policy for both the student holding the seat and the student taking the held seat. It is possible for us to monitor such activity in PAWS.
 - New PAWS feature—getting permissions for courses before registration starts.**
As you put your choice of courses into your PAWS shopping cart, it also will tell you whether you meet the requirements for the course—restrictions, prerequisites, or permission of instructor/chair. You can go to the instructor to get permission before your registration window, so that the permission can be entered on line—and then you will be able to directly add the course when your registration window opens.
 - Biology course sections that are closed (full).**
For any biology course section that is full, please first check with the Biology office to see whether a waiting list is being kept. To put your name on the list, you must be prepared to indicate which other course section(s) you would drop in order to add the class if your name is next on the list. (You cannot put your name on a waiting list until after your registration window has opened.) For any course without a waiting list, please speak to the professor teaching the course to get permission to add (see Dr. Lovett if the instructor is STAFF).

7. Biology course sections that are zero-capped on PAWS.

A wait list will be maintained in the biology main office. **Note:** Priority will be given to students on the wait list who could not register for *any* other biology course during their assigned registration window. (It is possible for us to monitor this on PAWS.)

8. Chemistry and Physics course sections that are closed.

NO LABORATORY COURSES IN CHEMISTRY OR PHYSICS CAN ACCOMMODATE MORE THAN 24 STUDENTS. Therefore, do not ask to be signed into one of those courses over the cap. However, if you wish to take a chemistry or physics course that is full, you can go to the main office of Chemistry or Physics and put your name on a waiting list. This information will help the departments to decide whether they are able to open additional sections.

C. Information on requirements:

1. **What requirements do you have left to meet in order to graduate?** The best way to determine which requirements you still need to meet is to go to the Academic Requirements page on PAWS. Please note that PAWS assumes that you will pass all courses that you currently are enrolled in, as well as any course in which you have an 'I' or and 'IP' grade. A second way to keep track of which requirements you need to meet is to consult the Biology Program Summary Sheets. These are one-page summaries of the graduation requirements for each major. A link to these is available in the left-hand column of the Biology home page.
2. **Organismal Biology Option Courses.** Please note that the organismal biology option requirement is *in addition to* the four biology option requirements. All BIOA students must take a total of FIVE biology options, at least one of which must be an organismal biology option.
3. **Study Abroad.** Any biology major interested in traveling abroad should contact the Office of Global Engagement **and** speak to your advisor **LONG** before you wish to travel abroad. Any course to be taken abroad for Biology Option credit must receive approval of the chair before you enroll in the abroad course. No credit will be given for on-line (distance learning) laboratory courses.

D. Special Area Advisement.

1. Students interested in the 7-year optometry program (BIOP) should see Dr. Nayak (Room 126).
2. Students interested in secondary education in biology (BIOT) can receive advisement from Dr. Thornton (Room 119).
3. Students interested in becoming a member of the Graduate Studies Club should contact Dr. Kress (Room 229) or Dr. Luke Butler (Room 240).
4. Students interested in Biology Departmental Honors please see Dr. Morrison (Room 227).
5. Students interested in applying to medical school should contact Dr. O'Connell (Rm 228).

II. See your advisor: ***NOTE:*** a registration hold has been placed on all biology majors; you must meet with your advisor to have the hold flag removed.

A. Bring the following with you when you meet with your advisor

1. Spring 2012 class choices, and tentative schedules.
2. Your Program Summary Sheet (filled in), available on the Biology web page.
3. Any questions about your coursework and future plans.

B. Who is your academic advisor? Advisor assignments are available through PAWS. There also is an updated list in the Main Office of the Biology Department. If you wish to change your advisor please see Luz Morales in the Biology Office.

III. When to register:

Your course registration window is based on EARNED CREDIT HOURS. The time of your registration windows is posted in PAWS. Transfer students and students who have credits from other institutions should check PAWS under "Transfer Credit" to verify that official transcripts have been received by the college and you have been given transfer credit for eligible courses.

IV. What to register for:

A. Numbering of courses in Biology:

100-level courses – those that have no prerequisite

200-level courses – core courses

300-level courses – those that require Themes (BIO 185) as a prerequisite

400-level courses – those that require completion of all CORE courses (does not apply to BIO 493/494).

B. Biology major courses offered in *Spring 2012* (*--courses that fulfill the organismal requirement)

BIO 185	Themes in Biology
BIO 211	Biology of the Eukaryotic Cell
BIO 221	Ecology and Field Biology
BIO 231	Genetics
BIO 311	Laboratory Techniques in Biotechnology
BIO 342*	Biology of the Invertebrates
BIO 360	Oceanography
BIO 393	Independent Research in Biology I
BIO 399	Biology Internship
BIO 450	Advanced Eukaryotic Cell Biology
BIO 451	Developmental Biology
BIO 470A*	Avian Biology
BIO 470B	Plant Genetics
BIO 493	Independent Research in Biology II
BIO 498-02	Biological Seminar – Molecular Basis of Human Disease
03	Biological Seminar – Plant Biology and Society
04	Biological Seminar – Pathology of Human Organ Systems

C. The following is a subset of biology options likely (but *not* guaranteed) to be taught in AY 2012-2013, (*--courses that fulfill the organismal requirement):

Fall 2012

BIO 312*	Microbiology
BIO 332*	Biology of the Vertebrates
BIO 342*	Biology of the Invertebrates
BIO 370	Conservation Genetics
BIO 444	Molecular Immunology
BIO 480	Neurobiology
BIO 471	Genomics and Bioinformatics

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BIO 311	Laboratory Techniques in Biotechnology
BIO 341*	Biology of Seed Plants
BIO 352	Biostatistics
BIO 365*	Natural History of the Galapagos Islands and Ecuador
BIO 450	Advanced Cell Biology
BIO 461	Evolution
BIO 470*	Animal Behavior
BIO 470	Molecular Biology of Gene Expression

V. Notes on individual courses: Below is a brief reference for courses that are either new or have special attributes. Be sure to refer to the Undergraduate Bulletin (<http://www.tcnj.edu/~bulletin>) for descriptions of all courses.

- A. **BIO 302 Human Anatomy and Physiology II – *Note: This course does not serve as a biology option for BIOA majors.*** This is the Human Anatomy and Physiology course recommended for students wishing to pursue Physical or Occupational Therapy, Physician Assistant programs, and for those who are BIOT, ELBI and ECBI. BIO 302 is not recommended for medical school preparation.
- B. **BIO 393 Biology Independent Research I – Students interested in enrolling in this course for next semester will not be able to submit the enrollment paperwork until January, 2012. It will not be available on PAWS.** This course offers students an opportunity to learn more about techniques used for biology research during the sophomore year. Under the direct supervision of a faculty member, students engage in original research experiments, generating new knowledge in the laboratory and/or field. This course is designed to give the student an opportunity to explore research methods and experimental techniques needed to develop an independent research project. Students are permitted to repeat the course one time, if more exploration is needed, or they may proceed directly to BIO 493 to develop an independent project. Interested students should contact individual faculty members with whom they are interested in working in order to register for Independent Research. (Note: Students in the honors program should enroll in BIO 394—see note below.) *****NOTE: Students graduating by August 2012 may count 2 course units, and students graduating after August 2012 may count only 1 course unit of either BIO 393, 394, 399, 493, or 494 as biology option courses. Any additional course units in these courses will count as elective credit toward graduation.**
- C. **BIO 399 Biology Research Internship.** Internship involves the application of intellectual and laboratory research skills acquired in course work at TCNJ to an investigative laboratory or field research project at a site off campus (pharmaceutical/biotechnology companies, colleges/universities, field stations, NJ Forensic Lab, etc.) Internships may be paid or unpaid. Students who perform research during the summer may earn up to 2 course units in the ensuing fall and spring semesters. An oral presentation and a poster presentation is required (in the fall, 1 course unit), as well as a research thesis written in the form of a scientific paper that is mentored by a faculty member (in the spring, 1 course unit). Students who have obtained a research position and wish to pursue an internship for credit should contact Dr. Erickson (erickson@tcnj.edu). Prerequisites: Sophomore status as of May, a 2.5 cumulative GPA, and approval of the project by Dr. Erickson. *****NOTE: Students graduating by August 2012 may count 2 course units, and students graduating after August 2012 may count only 1 course unit of either BIO 393, 394, 399, 493, or 494 as biology option courses. Any additional course units in these courses will count as elective credit toward graduation.**

- D. **BIO 470** (section A and A01) Avian Biology. **Prerequisite:** BIO 221 Ecology (can be taken concurrently). In this course students will investigate the behavior, ecology, evolution, morphology, and physiology of birds. While some course goals, such as being able to identify a variety of bird species, are rooted solidly in the field of avian biology, other course goals, such as being able to apply broader concepts in organismal biology, are common to a wide variety of organisms. Field-based and literature-based research are major components of the coursework. **Please note:** Field trips will require students to depart campus before 7:00 am on some Fridays (returning by 11:20 am). In addition, a required field trip to Cape May, New Jersey, will take place on the weekend of 21-22 April 2012.
- E. **BIO 470** (section B and B01) Plant Genetics. **Prerequisite:** BIO 231 Genetics (cannot be taken concurrently). This course is building from the foundation of the Genetics class to explore the genetic basis of many plant biology principles, such as the genetic regulation of plant development, nutrient uptake, and photosynthesis. The students will learn how plants function and how plant genes can be (have been) manipulated to get plants to synthesize useful products for humans. This course will be taught without a lab, but with an extra hour each week to facilitate exploration of the topic in research discussions.
- F. **BIO 493** Biology Independent Research II— This course involves laboratory or field research under the direction of a faculty member at TCNJ and can be taken for up to 1 course unit/semester (a two semester project is recommended). Typically juniors and seniors enroll in Independent Research, though sophomores may inquire with individual faculty about starting on a research project. Interested students should *contact individual faculty members* with whom they are interested in working in order to register for Independent Research. (*Note: Students in the honors program should enroll in BIO 494—see note below.*)
*****NOTE: Students graduating by August 2012 may count 2 course units, and students graduating after August 2012 may count only 1 course unit of either BIO 393, 394, 399, 493, or 494 as biology option courses. Any additional course units in these courses will count as elective credit toward graduation.**

Students must have an overall GPA of 2.5 or better to enroll in BIO 493. In order to enroll, students must obtain the form available in Biology Main Office, fill it out with the faculty mentor, obtain the appropriate signatures, and turn in a copy to Records and Registration *no later than the end of the first week of the spring semester.*

G. HONORS PROGRAM Courses

1. **BIO 394 and BIO 494** Honors Independent Research in Biology I & II – Independent Research can simultaneously count as biology option courses and as courses that fulfill requirements for the College-wide honors program. See note under BIO 393 and BIO 493 above. See Dr. Lovett with any questions.
*****NOTE: Students graduating by August 2012 may count 2 course units, and students graduating after August 2012 may count only 1 course unit of either BIO 393, 394, 399, 493, or 494 as biology option courses. Any additional course units in these courses will count as elective credit toward graduation.**
2. Departmental Honors – If interested, see Dr. Morrison.

VII. Alerts

- A. **EXIT CUMULATIVE GPA IN SCIENCE:** In order to graduate, you must have an overall GPA of 2.0 or better; a 2.0 cumulative GPA in all sciences (you may include only 2 course units of research-related courses in this calculation); and a cumulative GPA of C- (1.67) or higher in all core courses (BIO 185, Themes in Biology; BIO 211, Eukaryotic Cell Biology; BIO 221, Ecology and Field Biology; BIO 231, Genetics; and BIO 498 Biological Seminar).

- B. All graduating seniors are encouraged to visit Career Service to begin work on a resume and to open a permanent credentials file. Seniors seeking employment will need these materials immediately.
- C. OVERLOAD- You may carry up to 4.5 course units without special permission. To carry an overload (4.75 or more) course units, a 3.3 cumulative GPA, sophomore status or above, *permission from your advisor* (i.e., meet with them first!), permission from Dr. Lovett, *and* permission from the dean are required.
- D. Be aware of course ***prerequisites***. If you have taken a prerequisite at another college, make sure that it has been added to your PAWS account. If the credit has been posted and you are denied enrollment in a TCNJ course because PAWS does not recognize this fact, obtain a note from Dr. Lovett and register in person.
- E. HOW TO HANDLE TIME CONFLICTS- If two desirable courses overlap in their scheduled times, it is sometimes possible that arrangements can be made with the respective instructors so that you can take both courses. Consult with both parties involved. If some arrangement can be made, bring a note from the faculty involved to Dr. Lovett, who will need to approve the time conflict override before you register.

Remember: it is ultimately each student's responsibility to monitor his or her progress toward graduation, so USE THE WEB!!!!!! There are all sorts of excellent resources at YOUR disposal on the web, so be sure to get yourself completely informed before seeing your advisor. Two pages that are of particular value are an advising site which can be found at <http://www.tcnj.edu/~advising>, and the liberal learning site which can be found at <http://www.tcnj.edu/~liberal>.

The last day to register for Spring 2012 is the end of the first week of classes of Spring 2012

The final responsibility for the success of your advisement rests with you!