March 2016

**Spring 2016 Advising Newsletter  
Department of Mathematics and Statistics**

Dear Majors and Minors in the Department of Mathematics and Statistics,

Registration for Fall 2016 classes will take place April 5-15th and advising is now starting. I cannot emphasize enough the importance of meeting with your advisor to discuss your academic plans, progress, and career goals. To encourage you to meet with your advisor, every non-graduating student (so seniors graduating this Spring aren’t eligible, sorry!) who meets with their advisor will be entered to win a **$25 gift card** from the bookstore. To enter the raffle, please pick up an entry form when you meet with your advisor. Fill out the information and drop the form into the box in the department office. We’ll draw and announce the winner once registration is over. If you have already met with your advisor, you can pick up the form in the office. If you haven’t set up an advising appointment yet, please contact your advisor. Good luck in the drawing!

Here are a number of general department announcements that you should be aware of:

1. *Waiting Lists.* The Department will again have a waiting list for all closed classes. Once your registration time opens up, if a class is closed, you should fill out the Google wait list form (the link is at the top right of our web site). As students change courses, and spots open up in closed classes, the Department will fill the spots with students from the wait-list. The wait list should be used only when there is a closed section that you need to enroll in and there is no open section that fits your schedule.
2. *Differential Equations.* All students in the Applied Mathematics specialization, and all students considering switching to the Applied Mathematics specialization should take MAT 326: Differential Equations as early as possible in their college career. It should be taken no later than the end of their sophomore year. We have reserved some seats in the course for applied math students and sophomore math majors (any specialization).
3. *Applied Math 400-level Option:* The required 400-level MAT 454 course for Applied Mathematics students is offered in the fall semester. Applied mathematics majors should plan their schedules accordingly.
4. *Capstone Courses Requirements:* Each specialization’s capstone course has prerequisites. Please ensure that you take the following before you take the capstone course:
   * For Applied Mathematics: Senior Standing and completion of MAT 310, MAT 326, CSC 220 (or CSC 250), and four 300/400 math options.
   * For Liberal Arts Mathematics: Senior Standing, and completion of MAT 128, 200, 205, 229, 305, and 310, and at least one 400-level MAT course.
   * For Statistics: Senior Standing, and completion of CRI 215, STA 305, MAT 316, and two other 300-level STA courses.
5. *Capstone Courses*: All senior Mathematics and Statistics majors are required to complete a capstone course (MAT/STA 498). These courses are only offered in the Spring semester. When planning your fall schedule, you should ensure that your schedule will allow you to take the capstone course in the spring. Also, students who expect to graduate in Fall 2017 will need to take the capstone course in the Spring 2017 semester. Education students take the capstone course that accompanies their student teaching experience which can be done in either semester. Please make sure that you have completed the necessary prerequisites for the capstone. Remember that one of the prerequisites for the capstone is to attend four seminar/colloquium presentations in your junior and senior years prior to taking the capstone course. Students currently enrolled in a capstone will be giving presentations at the end of this semester. Other students, especially juniors, are encouraged to attend.
6. *Mathematics Education.* Students “entering the program” (this is defined as beginning the Junior Field Experience) after September 1, 2015 will need at least a 2.75 in order to do JFE.  They also need to have either 1660 combined SAT score, ACT score of 23, or pass the Praxis Core Exam for Educators. Students graduating after September 1, 2016 will need at least a 3.0 GPA to be recommended for certification.
7. *Departmental Honors.* Departmental honors are awarded by our department at graduation and appear on one’s transcript. They are independent of the College’s Honors Program, and the Latin honors (*summa cum laude*, …) awarded at graduation. To earn departmental honors, students must have a 3.5 GPA in mathematics and statistics courses and complete the following:
   * A student must engage in independent research during their junior or senior year. The student should successfully complete an Independent Research 493 course during a semester they spend on-campus, and prepare a paper which will be due the middle of their last (graduating) term. A presentation (which we envision being a 40 minute talk, perhaps during a lunch period) will be given in the two week period following the submission of the paper. The members of the student's Honors Committee will be present, and be given ample opportunity to ask the students questions about their research to gauge their level of understanding.

There will be Honors presentations in April in the department. Students considering departmental honors should attend these presentations.

1. *Sections of Courses.* The following list shows the currently anticipated number of sections to be offered for the upper level courses in the major. The list of all regular offerings can be found on the course offering page of our web site: <http://mathstat.pages.tcnj.edu/information-for-students/courses-2/courses/>. The courses listed in bold are courses that were not offered during the current 2015-16 year or are being offered in a new semester. Please take advantage of the opportunity to take them!

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| *Fall 2015 Semester (# of sections)* | | *Spring 2016 Semester (# of sections)* | |
|  | MAT 301: Number Theory (1) |  | MAT 301: Number Theory (2) |
|  | MAT 305: Abstract Algebra (1) |  | MAT 305: Abstract Algebra (1) |
|  | MAT 310: Real Analysis (1) |  | **MAT 310: Real Analysis (1)** |
|  |  |  | **MAT 315: Topics in Linear Algebra** |
|  | MAT 316: Probability\* (1) |  | MAT 316: Probability\* (2) |
|  | MAT 326: Differential Equations (1) |  | MAT 326: Differential Equations (2) |
|  | **MAT 330: Mathematical Biology\* (1)** |  |  |
|  | MAT 351: Geometry (1) |  | MAT 351: Geometry (1) |
|  | **MAT 370: Topics in Mathematics   (Moebius Transformations) (1)** |  |  |
|  | **MAT 403: Advanced Calculus with  Topology (1)**  **MAT 454: Seminar in Applied   Mathematics (Partial Differential  Equations)\* (1)** |  | **MAT 451: Seminar in Algebra  (Group Theory) (1)**  MAT 498: Capstone |
|  |  |  |  |
|  | MTT 380: Methods of Teaching  Mathematics I (1) |  | MTT 390: Methods of Teaching   Mathematics II (1) |
|  | MTT 490: Student Teaching (as needed) |  | MTT 490: Student Teaching (as needed) |
|  |  |  |  |
|  | STA 305: Regression Analysis (1)  **STA 306: Applied Multivariate Analysis (2)** |  | **STA 304: Sampling and Nonparametric  Statistics (1)**  **STA 318: Operations Research\* (1)** |
|  | STA 410/ MAT 318: Mathematical  Statistics (1) |  | STA 498: Capstone (1) |

\* indicates an Applied Mathematics Option

I wish you a successful registration session. Please write or see me if you have any questions!

Sincerely,

Professor Hagedorn  
Chair, Department of Mathematics and Statistics