Departmental Advising Community

Advising Meeting Spring 2016
March, 2016

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Agenda

• Some data for our programs
• The advising meeting, Advising Notes
• Opportunities for our majors/minors
• Review of major rules
• News for program, updates on rules, notes on scheduling for purposes of advising
• Degree Audit
• Resources in the department
### Data: 420 Majors, 164 Minors
(majors = primary + secondary)

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<td>3/1/3</td>
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Our Advising Tasks

• University rules, general education requirements, GFR vs. GEP -> Advising Profile, Degree Audit
• Major/minor requirements -> departmental catalog entry, advising forms, Degree Audit
• Career advising: help student find resources to convert UMBC education into career path! (-> Career Center)
• Paperwork: 3rd repeats, exceptions of rules, VOT forms, reinstatements, BS/MS Program applications [but not: Degree Audit notes of exceptions, graduation review!]
• Help student understand rules to plan to graduate on time, warn of problems -> pathways, Degree Audit
• Maintain Advising Notes in myUMBC
The Advising Meeting

• What is/are your majors/minors/etc.? Are you interested in graduate school, pure vs. applied math, statistics/probability, actuarial science, education?
• What is your class standing (freshman, etc.)? When do you want to graduate?
• What are you currently taking? How is it going?
• What do you want to do with your life (professionally)?
• Are you interested in taking Summer or Winter courses?
• Have you looked at next semester? Your ideas?
• Have you thought about: Summer/Winter courses, internships/REU programs, study abroad, undergraduate research, BS/MS program?
• What is your main goal: Graduate as quickly as possible or by a certain semester? Graduate School?
Resources for Advising Meeting

- MyUMBC has list of your assigned advisees under Favorites > My Advisees, maintained by Janet Burgee. At beginning of advising season, you can send e-mail to all advisees.
- Ideas: ask them to read dept. catalog entry, read concentrations given there as self-advising help, give instructions how to schedule/contact you, fill out advising form, propose courses.
How to Write Advising Notes

• MyUMBC → Topics → Advising Center → My Advisees
  – Next to the student’s name, choose “View Student Details”
  – Choose “New Advising Notes”

• Advising clearance = registration authorization: ‘save’ once a semester with correct semester.
Ideas for Advising Notes

• Prepare text for advising notes in local editor (not in SA, since it can time out!); e-mail to student (and save record of e-mail)

• Most important categories:
  – Current Major/Minor/Concentration, Referral to Campus Resources
  – General Ed. Program (GEP, GFR), General Ed. Requirements Not Satisfied, University Requirements Not Satisfied
  – Planned Schedule for Upcoming Term
  – 45 Upper level Credits!!!

• Protection of department and self against future complaints: heavy load, pre-req, assumptions, cautions, warnings, instruction to read rules/catalog, instruction to confirm with other offices (Registrar, Modern Languages, OUE, etc.)
Services offered by Career Services

www.careers.umbc.edu

• Organizes job fairs and employer networking events
• Review of resume/CV, cover letter, personal statement
• UMBCworks: Internship, part-time job/on-campus/full time job database => contact Career Services early!
• Resource for career advice and skill development (e.g., interviewing, communication, time management, mentoring)
• Available for presentations to class
• Math/Stat liaison: Associate Director for Internships and Employment Kerry Kidwell-Slak, kerryk@umbc.edu, x5-3834
Career Services: PRAC 95/98/99

• Zero-credit, pass/fail course which recognizes successful completion of >120 hours of an internship, research or co-op experience (on- or off-campus). Full-time sections maintain student status at UMBC.
• Students document learning objectives and evaluations, attend professional development activities, and obtain an evaluation from their supervisors.
• Students concurrently in academic credit also participate in a mid-semester check-in with their Career Center coordinator and their site supervisor.
• Required by some departments as a co-requisite for credit. Reports can be shared with faculty at semester end.
• All registrants are recorded in UMBCworks, providing extensive data on student outcomes.
• Math/Stat liaison: Associate Director for Internships and Employment Kerry Kidwell-Slak, kerryk@umbc.edu, x5-3834
REU Sites and Research Internships

- Undergraduate research or Research Experiences for Undergraduates as residential full-time funded summer programs
- REU: NSF-funded, but also others exist, e.g., funded by NSA or affiliated with national labs, NIST (SURF), etc.
- 8 to 12 weeks, housing/food, stipend, travel paid
- Most often individual undergraduate with mentor
- Qualifications typically required: sophomore classes or more, programming skills (Matlab, R)
- U.S. citizen / permanent resident, for REU still undergraduate in fall following the summer of the program
- Google “NSF REU”, see AMS webpage; URL with links to many links (particularly to Statistics programs): http://www.amstat.org/committees/isostat/REUs.html
University Partnership with University of Kassel, Germany

- MOU for undergraduate exchange signed, first German students came in August, first UMBC students in Spring 2016 (Gobbert might travel with UMBC students)
- Study abroad for all, but particularly for Math majors/minors
- German Sommersemester April-July; deadline at UMBC International Education October 10!
- Ideas of concrete courses for the required 12 transferrable credits: Linear Algebra II [3 credits], ODEs [3], Numerik II [3], Matlab course [3], Seminar [2]; plus German course [6 credits]
- Weekly Study Abroad workshops by International Education http://studyabroad.umbc.edu
- Contact Matthias Gobbert, webpage forthcoming
All major/minor combinations are available!

• Double major
  – Used to require at least 5 of the electives to be Math electives
  – Kal & Liz determined that additional extra classes are required for all combinations of Math BA/BS and Stat AT/MST

• Math major/Stat minor and Stat major/Math minor
  – At least two additional classes above & beyond major must be taken (in addition to regular requirements for minors)
BA vs. BS Mathematics

Mathematics minor: core as BA, 2 upper-division electives

BA Mathematics
• Math 151, 152, 221, 225, 251, CMSC 201 (core)
• Math 301 (core)
• 5 upper-division electives (MATH or STAT), including 2 400-level courses
• 3 supplemental electives
• 2 Culture classes!

BS Mathematics
• Math 151, 152, 221, 225, 251, CMSC 201
• Math 301 (core)
• Math 302 (core)
• 6 upper-division electives (MATH or STAT), including 3 400-level courses
• 2 supplemental electives plus PHYS 121, 122 (core)
• 1 Culture class!
Biomathematics Minor

In Math/Stat Department - Intended for Biology Majors!
Quantitative Biology Minor in Biol. Dept. for Math/Stat Majors!

Core Requirements:
- BIOL 141, 142, 302
- STAT 350 OR 355
- MATH 151, 152, 221
- MATH 355 Biomathematics
- Two of the core courses cannot be used to satisfy the requirements of any other major.

Elective Requirements:
- 6 credits from the list (including 3 from MATH):
  - MATH 385, 426, 447, 469
  - STAT 414, 419, 432, 454
- None of the electives can be used for any other major.
- UG Director may approve alternative courses upon petition.
Quantitative Biology Minor
In Biology Department - Intended for Math/Stat Majors!
Biomathematics Minor in Math/Stat for Biology Majors!

Core Requirements:
• BIOL 141, 142, 302
• STAT 350 OR 355
• MATH 151, 152, 221
• MATH 355 Biomathematics
• Two of the core courses cannot be used to satisfy the requirements of any other major.

Elective Requirements:
• 6 credits from the list:
  • BIOL 303, 312L, 313
  • BIOL 442, 445, 483, 495
• None of the electives can be used for any other major.
• UG Director may approve alternative courses upon petition.
Some Common Rule Issues

• All major courses with grade of C or better (regular grading), including transfer courses
• Only 1 of the upper-division electives can be bundled out of 1- and 2-credit courses (examples: MATH 426 [2], 479 [1-3], STAT 432 [1], MATH/STAT 496 [1-4], 499 [1-4])
  [No ‘bundling’ with 4-credit course like Stat 355!]
• Some courses do not count as electives: MATH 380, 432 (History of Mathematics), STAT 350, 351
• GEP requirement: WI = writing-intensive course, MATH 481 (Modeling), MATH 432 (History), ENGL 393
• Supplemental requirements: CMSC 203 (if taken before MATH 301), MATH 432 (History of Math), PHYS 121, 122
Summer and Winter Sessions

• Goal: decrease time-to-degree!
• Summer: two six-weeks sessions; full sequences MATH 150-151, 151-152, 152-251, as well as MATH 221, 225, STAT 355 available.
• Summer: make upper level electives available (for improved time-to-degree as well as to relieve enrollment pressure in Fall and Spring): STAT 355, 432, 451, MATH 301, 306, 385, 426
• Winter: Math 426, STAT 355, 432
Education Concentration

Elective requirements:
- STAT 355
- MATH 306
- MATH 341
- Math 385
- Math 407
- One or two additional 400-level electives for BA or BS, respectively.
- UG Director may approve alternative courses upon petition.

Supplemental requirements:
- Required: MATH 432 History of Math (writing-intensive)
- Required: EDUC 420 OR 426
- Recommended: PHYS 111, unless PHYS 121, 122 for BS, not CMSC 203 any more
- This is coordinated with Dr. Christopher Rakes, Math Education, in context of their APR.
Double vs. Dual Major

“Double” = 1 diploma:
• 2 degrees on transcript
• 120 credits
• Need to satisfy Gen Ed requirements of only the primary degree (e.g., BS)!
• This means: Math/CMSC double major should make BS CMSC primary and BA Math secondary degree to save one Culture class.

“Dual” = 2 diplomas:
• 2 degrees on transcript
• 150 credits if awarded at same time (really rule: after 1st degree, 30 more credits for 2nd degree!)
• Need to satisfy Gen Ed requirements of both degrees (BA vs. BS)!
• RT ticket for Degree Audit to display 150 credit
MATH 479 [1 credit]

- Mathematical Problem Solving Seminar
- Format: students solving problems on board.
- Instructor Tom Armstrong
- Consent required = by invitation only
- 1 credit, repeatable up to 3 credits; use as or towards bundled course in electives.
- Used as preparation for Putnam competition
MATH 426 and STAT 432

MATH 426 – MATLAB:
• 2 credits
• Pre-req 221 and CMSC 201.
• Useful as preparation for MATH 341, 355, 385, 441, and other courses
• Summer and Winter
• Use towards bundled course in electives.

STAT 432 – SAS:
• 1 credit
• Pre-req STAT 355 or similar!
• Useful for other 400-level STAT courses.
• Summer and Winter
• Use towards bundled course in electives.
MATH/STAT 497 Senior Thesis

• Idea is to encourage and reward undergraduate research, for both student and faculty.
• Student approach faculty as mentor, then blue sheet at office.
• Counts as one upper level elective, unless used for graduation with departmental honors (see bullet below)!
• Requirements: (i) public presentation (e.g., in colloquium in May or Dec.), (ii) thesis (no format req., approved by mentor)
• Graduation with departmental honors:
  (i) MATH/STAT 497 in addition to upper level electives,
  (ii) MATH/STAT 497 with grade of A or B,
  (iii) (major) GPA of 3.6.
Special Topics:
MATH 290, 390, 490, STAT 290, 490

• Used to prototype course or teach single time
• Should be on appropriate level of difficulty
• Variable credit 1 to 4, repeatable, up to total of 8; that is: For typical special topics course of 3 (or 4) credits, two (of each type) can be taken for credit, if the topics are different.
• Counts as one upper level elective, if 3 or 4 credits in one semester, or towards bundled course if 1 or 2 credits.
• Notice: Degree Audit only counts under bundling, i.e., may not count automatically as single-course elective.
MATH/STAT 499 Independent Study

- Opportunity to give credit for undergraduate research in preparation for MATH/STAT 497 Senior Thesis, but also can cover non-standard topic (that does not have a course) or ‘regular’ topic if course not offered.
- Should be on level of upper division difficulty
- Variable credit 1 to 4, repeatable, up to total of 4
- Counts as one upper level elective, if 3 or 4 credits in one semester, or towards bundled course if 1 or 2 credits or 3 or 4 taken over several semesters.
- **Notice:** Degree Audit only counts under bundling, i.e., may not count automatically as single-course elective.
MATH/STAT 496 Practicum

- Opportunity to give credit for math/stat related internship
- Should be on level of upper division difficulty
- Idea: foot in door for career! Work with Career Services
- 1 credit = 50 hours of work
- Variable credit 1 to 4, repeatable, up to total of 4
- Counts as one upper level elective, if 3 or 4 credits in one semester, or towards bundled course if 1 or 2 credits or 3 or 4 taken over several semesters.
- Notice: Degree Audit only counts under bundling, i.e., may not count automatically as single-course elective.
MATH/STAT 496 Practicum cont’d

Suggestions for instructor:

• Blue sheet paperwork early (in case Janet has to create section for instructor)

• Have student put you in (e-mail) contact with supervisor; confirm (i) okay with academic credit, (ii) no issues with proprietary information, (iii) willing to supervise and confirm afterwards that student worked

• Have student write report; nice ideas: (i) Write short introduction about company and the job; (ii) write log entry after each workday; (iii) interview colleagues and supervisors about their career history.

• Collect confirmation (e-mail) from supervisor that everything went well; thank for cooperation.
Degree Audit: UMBC / GenEd

• Caution: **While course repeat in progress,** it is counted twice (affects total credits, upper level credits, major requirements)!

• **Degree Audit may not recognize primary major vs. secondary major;** Advising Profile page does **not** display this.

• Issue with PE classes in transcript

• Issue with H section double count in case of repeat (e.g., STAT 355 and 355H)

• **Close to graduation, false positives are the issue to watch out for!** Do manual checking in Course History

• **Report problems (with student name) to Janet Burgee**
Degree Audit: Department

- Departmental Degree Audit has been active since Spring 2014:
  - Bundling (combo of 1-/2-credit courses counted as one elective) implemented by separate elective category that contains list of all 1-/2-/variable-credit courses; okay in most cases (but: does not show 1-/2-credit class until bundling complete!), but cannot recognize variable-credit courses with 3 or 4 credits as standalone elective.
  - 2 / 3 electives at 400-level implemented using separate category
  - All 600-level courses accepted as electives
  - Work with graduation reviewer to record exceptions in Audit!
- Close to graduation, false positives are the issue to watch out for! Do manual checking in Course History; check grades (C or better).
- Report problems (with student name and ID) to Janet Burgee
Resources in Department

• Departmental webpage’s Undergraduate tab
• Program Coordinator: Ms. Janet Burgee
  – Major/minor declaration/change (e.g., BA <-> BS)
  – Advisor assignment
  – Communication to other offices
  – Record keeper for all outgoing material
• Advising coordinators, graduation reviewers; waiving of departmental requirements; notes for graduation review:
  – Mathematics: Dr. Kalman Nanes
  – Statistics: Dr. Elizabeth Stanwyck