

## **A Focus on Academic and Career Advising: Spring 2016** **College of Natural Sciences – Academic Dean’s Office**

### **Part One**

Academic Advising in the College of Natural Sciences (CNS) is handled as a partnership between the CNS Advising office and advisors in our departments (majors). Although the majority of academic advising is handled by advisors (primarily faculty) within majors, the CNS advising office plays a crucial role in this vital university function.

#### **CNS Advising Center Staff:**

Martha Baker, Associate Dean for Undergraduate Education

Carolyn Cave, Senior Assistant Dean

Douglas Smith, Assistant Dean (20 hours/week; 9-month)

Libbie Kohler, Assistant Dean (10 hours/week; 9-month)

Charlana Simmons, Director of Student Success and Diversity

Elaine Moe, Academic Advisor (NSO and College requirement advising)

Kathy Conway, Academic Advisor (half-time/Stockbridge School; student petitions)

Erin Battistoni, Exploratory Track Advisor

Meghan Gerson, Exploratory Track Advisor

Cathy Eden, Pre-Med/Pre-Health Advisor

Sue Denis, Administrative Assistant

#### **Strengths**

The CNS advising center is staffed with qualified, highly motivated individuals who consider student success their top priority. Morale and productivity are high and the office maintains a collegial atmosphere.

CNS advising is available to students throughout the year and will work with students about any issue. We feel it is appropriate for students to seek advising about the completion of their major requirements from their advisor in their major and will refer students appropriately. Likewise, other issues that are more appropriately handled elsewhere are referred (e.g., for professional counseling, health issues, financial aid problems, etc.) Our connections with other resources on campus are strong.

#### **Weaknesses**

CNS advising staff is serving the largest undergraduate college on campus with a relatively small staff. CNS advising staff are not able to devote full-time service to advising our students. Our staff are also serving in other college and university capacities including university service on councils and committees:

Martha Baker: Assessment and Care Team (ACT), Academic Matters Council, Undergraduate Deans Council, Enrollment Management Team, Oversees 3 NATSCI Junior Year Writing Lecturers; Oversees CNS Special Projects and Outreach Manager and Director of Program Development; Eureka Team Member; Coordinates with CNS Director of Communications on Recruiting Materials; Coordinator CNS Student Leadership Committee.

Carolyn Cave: International Studies Council & Committee on Overseas Programs and Exchanges, Undergraduate Education Council, International Students Committee, Undergraduate Deans Council

Charlana Simmons is the Director of Student Success and Diversity is responsible for supporting the college's mission to increase the student success of undergraduate students from diverse populations with a specific focus on students who are underrepresented minority, low-income, first generation college, and transfer students. Charlana also provides career advising to undergraduates who are planning to attend graduate school to earn a Masters or PhD in STEM. Charlana recently became the Director of the Northeast Louis Stokes Alliance for Minority Participation in STEM (NeLSAMP). LSAMP is, of course, a great opportunity for underrepresented CNS students, but the program serves students beyond our college and Ms. Simmons' directorship takes a significant portion of her time.

Cathy Eden is the only full-time pre-med/pre-health advisor. At this writing there are well over 1000 active pre-med/pre-dent "majors." This number only captures students who are declared pre-med and who have a major but have an declared interest in pre-med. Just recently a pre/med advisor group has been added to SSC. While most of these students are majoring in CNS departments, a significant number are majoring in other colleges, especially from Public Health and Health Sciences. There is a serious need for at least one additional pre-med/pre-health advisor.

A Career Services advisor is assigned to CNS (Nessim Watson). Career advising is delivered by appointment to students at the CNS advising center on Wednesday afternoons during term time. This advisor also conducts relevant career workshops that make up part of the CNS Student Success Workshop series (see below). A college of our size needs at least one full-time career advisor. This would enhance targeted efforts to work with students in securing relevant internship experiences as well as enrich specific career fair opportunities, trainings, and other career outreach to students.

**Advising Advisors:** The CNS advising office trains and supports advisors in the college.

### **Strengths**

- CNS advising provides training and support to advisors who work with freshmen in New Student Orientation (NSO). Advisors receive important information about appropriate placement of students into classes according to placement test scores, General Education requirements, and other NSO information. This includes in-person training as well as provision of detailed written resource materials.

- CNS advising provides advisor training to new major advisors. Written materials are provided explaining many of the most common university regulations and forms. In person trainings are offered periodically for new advisors and we are always available to answer questions from advisors in person, by phone, or email.
- Beginning in 2015 we launched a periodic CNS advisor newsletter. Three-four times each semester, we send an email newsletter to every CNS major advisor identified in SPIRE. Newsletters include important updates, reminders, policies, student opportunities, and other information.
- Each semester CNS advising offers a “speed advising” session open to all CNS advisors at which different student resource offices each provide a brief overview about their services (e.g, Center for Counseling & Psychological Health, Financial Aid, Center for Health Promotion, etc.). Advisors have found these sessions to be very helpful. While there are a plethora of resources available on campus widespread knowledge of these is not great among either students or advisors.
- Chief Undergraduate Advisors meet monthly to receive policy updates, share information, and “refresh” information relevant to advising.
- Advisor workshops on relevant topics such as “Difficult Dialogs” are offered to all advisors in the college.
- CNS deans have provided training and support for use of the Student Success Collaborative (SSC). We have also provided SSC worklists to advisors as requested.

### **Weaknesses**

- Limited resources mean that our outreach efforts to advisors are also limited.
- Departmental advisors generally have advising as one of many duties. Therefore, their availability to take advantage of advising trainings is often limited.

**Advising Students:** The CNS advising office provides direct advising to students.

### **Strengths**

- CNS academic deans provide new students an academic overview as well as a college overview during New Student Orientation (NSO). Our goal is to help students understand from the beginning of their college career where they can seek help. Beginning in 2015, CNS was one of only two colleges that video recorded our orientation meetings for students to view via Moodle for those unable to attend NSO in person.
- CNS advising staff perform the significant logistics of assigning students to NSO advisors according to student majors/ET. Incoming students are paired with

advisors who are from major departments and, therefore, knowledgeable of major requirements as well as the General Education curriculum. This system assures that students receive high-quality, specific, individual advising in choosing their first semester courses during NSO.

Trained advisors work with students at NSO. Transfer students are advised by departmental advisors who are knowledgeable about upper division requirements and able to advise on transfer equivalency.

- Each semester all new CNS students are required to come to a mandatory meeting with Dean Baker or Dean Cave. These meetings are designed to reinforce the NSO message about the availability of assistance from our office as well as advising within majors. In addition, many important topics are covered including essential policies such as academic standing, course withdrawals, course repeat policies, and the pass/fail option. Another emphasis of the meeting is on getting involved on campus and outlining important resources for assistance and development.

We believe that these meetings are important. While a great deal of vital information is disseminated in NSO, students leave NSO saturated with information. Another opportunity to reinforce and add to that information is very useful. We also think that these meetings should be relatively small. With a large incoming class, we hold approximately 25, 45-minute meetings of 90 or fewer students each in the fall semester and approximately another 6 meetings in the spring semester. Because UMass is new to both freshman and transfer students, all new students are required to attend a mandatory meeting. Students must register to attend a meeting, but prior to that must complete a short survey regarding their college selection process and their success on campus since arrival.

- CNS implemented an online appointment system in 2014 allowing students to schedule advising appointments at their convenience. This has also freed up time for our administrator that was formerly occupied with scheduling appointments. In the fall 2015 semester nearly 2000 appointments were scheduled in the CNS advising office. Generally, students can get an appointment in the CNS advising office within 48 hours, but appointments can also be scheduled up to 2-3 weeks in advance.
- With the advent of the Exploratory Track (ET) program, first-line advising for these students is now housed in the CNS advising office. Two full-time ET advisors serve these students with comprehensive advising assisting them in choosing courses, exploring options for majors, completing predictor courses for competitive majors, and adjusting to college.

Exploratory track advisors have developed a thorough Moodle site containing resources for career exploration, information about applying to closed majors, and general support resources. Students receive regular outreach with reminders and

updates. Workshops and information sessions are provided to help students research majors. And one-on-one advising is available to all ET students. In the fall 2015 semester 395 individual, 30-minute appointments were scheduled with our ET advisors. In the first half of the spring 2016 semester a further 154 appointments were scheduled. Students are supported in finding appropriate majors as quickly as possible. The explicit goal is to assist students in moving into a declared major within 3 semesters of matriculation.

- The College of Natural Sciences has a college-level graduation requirement that differs for students pursuing BA and BS degrees. Advising students on fulfilling the college requirement happens in the CNS advising office. This includes advising students who are completing requirements for dual degree.
- All students on academic discipline are required to meet with a dean in the CNS advising office. Many of these students are asked to meet more than once to monitor progress following academic difficulties. These one-on-one meetings address the problems that led to academic difficulties and ensure that students are aware of campus resources to assist. Processing discipline appeals, responding to students returning from suspension, and working with students on campus who are on academic discipline requires a significant amount of time throughout the year. All students who receive academic warning are also invited to meet with a dean to discuss their status, but are not required to meet.

Students on academic discipline are now required to complete a self-assessment form prior to meeting with a dean. The goal of the assessment is to help students take ownership of the issues that prevented their success and learn how to address those issues. The self-assessment form also provides a handy method of summarizing the initial meeting and providing expectations and resources for recovery. See appendix for self-assessment form.

#### **Recent Academic Discipline Cases**

Semester	Probation	Suspension	Suspension Reinstated	Dismissal	Dismissal Reinstated
Spring 2014	97		17		15
Fall 2014	207	52	11	15	9
Spring 2015	85	88	16	25	12
Fall 2015	195	42	13	20	12

- CNS advising offers students several success workshops each year. These are aimed at assisting students in making the most of their overall college experience.

Workshops include:

- Academic discipline is often related to difficulties with study skills and time management. Our office has developed a study skills and time management workshop that we have recently required students reinstated from suspension or dismissal to attend. Students on probation are strongly encouraged to attend. The workshop is also open to all students in CNS (or any other student at UMass). For the last two years 7-9 workshops have been offered each year.
  - Research Experience Student Panels – Student peers discuss how to find research opportunities and what they gained from their research experiences.
  - Internship Experience Student Panels – Student peers discuss their experiences in gaining internship experience
  - Internships and REU Programs in STEM – Workshop with special emphasis on Mass Life Sciences Internship program, MASS CEC, and Mass Tech/Tech Gen
  - Graduate School Info Sessions – How to apply to graduate school
  - Resume Writing
  - Interview Skills
  - Linked-In – How to make the most of your online presence
  - Pre-Med/Pre-Dent Info Sessions – how to prepare for applying to medical and dental schools
  - Getting Hands-On Experience in Health Care – How to gain the necessary clinical experience for successful applications to medical/dental schools
  - Study Abroad Student Panel – Students discuss their study abroad experience and how others can follow in their footsteps
  - Alumni Career Networking – How to take best advantage of the Alumni Career Networking online matching site for students and alumni
  - The Real World is Coming – Workshop to help students prepare for life after graduation.
- Beginning in 2014, CNS began an email student newsletter. During fall and spring terms, our newsletter is sent to every CNS student bi-weekly. The goal of the newsletter is to provide a pithy (smart-phone friendly) summary of important announcements and opportunities. Topics generally include event/workshop announcements, internship opportunities, and reminders about topics such as registration or mid-semester date.

**CNS Advising houses the Pre-med/Pre-health advising office.** Under the new leadership of Prof. Wilmore Webley, the office has been modernized and is working to serve students more effectively using online tools, group advising, and increased outreach. One-on-one advising is also available by making appointments with Wilmore Webley, Cathy Eden, Doug Smith, or Libbie Kohler. These advising sessions can be in person, on the phone or through Skype.

*Scope of service:* Pre-health advising serves not only students in CNS, but any and all students on campus pursuing post-baccalaureate health programs. This is a large number of students who are difficult to track because they have other declared majors. Serving these students includes providing detailed, web-based curriculum information and advice and helping students understand the curriculum as well as the extra-curricular requirements for successful applications. Pre-med advisors work with students in one-on-one appointments as well as group advising/workshop settings. Starting in April 2016, the advising office will start offering a workshop on developing a strong personal essay for all interested students in collaboration with Ludmila Tyler in the Biochemistry department.

The Pre-med/Pre-health Advising Office participates fully in Fall and Spring Open Houses and NSO events. The advising office maintains and up-to-date website with relevant content. It sends out targeted emails and runs announcements on the CNS as well as the PreMed display screen, as it strives to inform students about what will make them a competitive candidate for graduate study in medicine and other health professions. The Advising Office regularly invite admissions professionals from graduate programs in the health professions such as pharmacy (MCPHS), optometry (NECO), physician assistant (MCPHS), and medicine (UMMS, University of Chicago Pritzker). Advisors work closely with admissions professionals at many medical schools. The advisors stay current with new advising and admissions trends through personal communications and attendance to regional and national conferences for advisors in the health professions.

The advising office maintains regular contact with and offers support to the executive boards of the Pre-Med Society, Pre-Dent Society, and the Vision Care Club.

*Monthly Newsletter:* Frequent email newsletters are also sent to all students who register on a pre-med mailing list. Newsletters include advice and announcements such as MCAT prep or registration dates. The newsletter informs students on important issues and trends in graduate level study in medicine and other health professions, announces important events and opportunities, and highlights careers in the health professions including and beyond nursing and medicine. It also features the profile of a UMass alum who has matriculated into a health profession school.

*Committee Letter:* A very important component of pre-health advising is writing letters of recommendation for students applying to programs. In a short summer season, each year two advisors write approximately 250 letters for both currently enrolled as well as alumni applicants to medical, dental, and other health programs. This herculean effort requires collecting and summarizing faculty and other letters of recommendation as well as including their personal recommendations about students with whom they have developed a relationship.

*Support for students in underrepresented groups:* The advising office support students from underrepresented groups in medicine by working closely with the CNS Director of Student Success and Diversity, CMASS, and UMass Medical School. Every year we recruit students for the **Baccalaureate MD Pathway Program**, which accepts approximately 12 students each year from the UMass system for a summer enrichment program on the medical school campus. For the last 2 years, nearly half of the program has been filled with students from UMass Amherst. This year four of our students were granted provisional acceptance to the Medical School for matriculation in 2017.

*Efficient Handling of Letters of Recommendation:* PreMed Advising now utilize the services of Virtual Evals (VeCollect) to handle letters of recommendations. This has streamlined the process where each student is able to create a validated account, input the information for each of their evaluators and an email is sent to the evaluator with a link to upload the letter of recommendation. The student is able to see which evaluators have already submitted letters although they cannot read the letters submitted. At the time writing the students committee letter, an advisor can just log in and download all the letters as a packet and add the committee letter to complete the letter packet which is transmitted to the relevant health professions portal. This system has significantly streamlined the process which previously consisted of letters being mailed to the office or submitted to the advisors through email.

- CNS also maintains a significant web presence. The CNS student website is a vital link for students to find information and inspiration. Students are profiled, announcements are posted, news is disseminated, questions are answered. A new website is currently in development and will emerge even better and more user-friendly. The website includes (among other topics) information about advising, pre-med/pre-health, first-year opportunities, promoting student success, scholarships, internships, LSAMP, CNS Academic Leadership Fellows Program, and undergraduate commencement. CNS advising also has a presence on Facebook and twitter. Dean Baker maintains a blog page as well.

On the website, students can make an advising appointment in the CNS advising center (including pre-med), learn more about the center and campus resources and complete various petition forms. Because of the number of CNS students, we have put forms for petitions online. This is more streamlined for our processing, saves the time of our administrator in answering questions about petitions, and is more convenient for students completing petitions. We have become a campus model for other colleges in creating and implementing online forms for: credit overload, late withdrawals, and course repeats. Other advising forms are available online including an academic plan form (for 10-semester holds and SAP Appeals) and the academic discipline self-assessment form. A web presence for these forms also allows for clear written instructions for form completion. We have also recently worked to clarify expectations and student responsibility relating to withdrawals and course repeats by providing more

guidance on our website. A new internship database is described below in the career advising section.

- Carolyn Cave is the primary major advisor for those students in the science major. This is a very small interdisciplinary major well suited for students interested in middle school science teaching, for instance. Since taking on this role, she has placed registration holds on science majors requiring that each visit at least once each semester to discuss progress and upcoming registration.
- CNS advising staff (particularly Deans Baker and Cave) are available by appointment or walk-in depending upon availability to advise on a wide range of issues. These conversations include advising on withdrawal from the university, 10-semester holds, SAP appeals for financial aid, personal and family problems, questions about change of major, and general advising.
- Other success and diversity programs include participation in the Provost's Undergraduate Research Fellowship (PURF) and a new CNS initiative the CNS Academic Leadership Fellows Program.
  - Starting in Fall 2015 CNS had 23 students participating in the PURF program. CNS has taken a leadership role in ensuring that students in the program (in CNS and in other colleges) understand the program and derive full benefit from it. We provided a mentoring training workshop for the PURF mentors. We also held an interactive workshop on "Launching your Research Mindset" for PURF and other CNS students.
  - The CNS Academic Leadership Fellows program started this spring 2016 semester. The program encourages and supports students' academic success and leadership. Programs focus on professional and career development, multicultural events and more. Students can earn a certificate of completion each semester. In this inaugural semester 65 students are participating in the program (see appendix)
- Other activities of the CNS advising office contribute indirectly to the advising mission of the office by providing information and support to students and parents and preparing students to attend UMass.
  - Fall Open House: CNS participates fully in fall open house ensuring that students are available to answer questions during the resource fair and that each major provides an information session in addition to premed info sessions and a tour of the Hadley farm.
  - Spring Open Houses: For spring open houses for admitted students, the CNS advising office coordinates efforts similar to the fall open house. In addition to our college welcome, we arrange for each major to be represented in addition to an information session for ET students. Chemistry labs are opened and there are information sessions for premed students and those interested in the biology talent advancement residential academic program.

- New Student Orientation is organized by Elaine Moe in terms of logistics and day to day running of the program. Dean Baker and Dean Cave are responsible for meeting with new students for the “Academic Perspective” and they advise students in all eight sessions each week.
- CNS advising partners with the colleges of engineering and information and computer sciences to host an annual Community College Day. Students and faculty from area community colleges come to new about opportunities and initiatives as well as touring campus facilities.
- CNS advising is working with STEM Starter Academy programs at Springfield Technical Community College, Holyoke Community College, and Greenfield Community College to support the successful transition of students from community college to UMass. These efforts include work on curriculum alignment and providing advising to transferring students.
- CNS advising centers staff play a central role in organizing programs on the UMass campus for girls from the Holyoke community participating in Girl’s Inc. Eureka! program. This month long program brings 8<sup>th</sup>-12<sup>th</sup> grades girls to campus to participate in programs encouraging them towards post-secondary education and career paths in mathematical, scientific, and technical fields.

**Weaknesses:**

The direct student advising efforts of the CNS advising office are strong. Advisors are knowledgeable (of CNS and university-wide requirements, policies, and resources). Weaknesses are related primarily to the sheer number of students to be served.

- There is a serious need for at least one additional full-time Pre-Med/PreHealth advisor as well as a full time professional advisor
- Another weakness is the challenge of getting student uptake of events and opportunities that already are offered.
- Although students have available advising support at both a departmental (or ET) and college level, there is some lingering confusion about where students should go for advising. A suggested solution is to develop a *single, university wide* advising website that includes a one-stop shop for FAQs, resource lists, advising directory, and information about how to change majors that is accessed from the university homepage.

**Career Advising:** The CNS advising office provides the following career advising opportunities.

**Strengths**

- CNS advising, in cooperation with Campus Career Services, offers workshops each semester that are mentioned above. These include internship and research panels, finding internships and REUs, resume writing, interview skills.
- One of the most important new components of the CNS website is a searchable database of internship opportunities. This database was opened in fall 2015 and

includes internships that CNS students completed over the last couple of years. The database includes anonymous descriptions of internship opportunities and is searchable by major and keyword (including location). The database currently includes over 250 internships that students have completed either for experience and/or credit. We will be soliciting new entries to the database each year.

Opportunities for students to seek and secure internships are great practice in real-world skills, but the database gives students a place to start with their search in the words of students who have already been there. With student permission, contact information that allows students to contact the entry writer is available through secure login.

- Central to ET advising is discussion of career pathways. Our ET advisors have these discussions regularly when they meet with students seeking a major. Career information is also included on the ET Moodle website and includes self-assessment tools and links to career information.
- Announcements about career fairs, internship opportunities and other broadly relevant career information are regularly included in the CNS student newsletter, which goes out to students by email bi-weekly.
- The requirement that students find and secure internship and job opportunities on their own initiative is a strength. Students can receive assistance in preparing resumes and cover letters, preparing for interviews, and finding possible internship sites. Making contacts with potential internships or jobs is great practice for students to strengthen their initiative and to practice important real-life skills. CNS does provide the scaffolding for these student-initiated efforts.

### **Weaknesses**

- Career advising must be strengthened. There is a need for more concentrated efforts to develop targeted career opportunities for our students. Although we currently provide information about preparing for careers through workshops, informational databases, and our communication efforts, a full-time career advisor housed in CNS would help us develop more career fair opportunities, alumni networking events and other career-related events. These efforts could be more seamlessly coordinated with the efforts occurring in departments to maximize benefit and communications and minimize duplication of effort. A CNS career counselor could develop relationship with companies that would assist students in employment opportunities.
- ET advisors are comfortable talking with students about career direction and choice of majors, but these advisors are not trained career advisors.

### **Data Analytics/Tracking**

Precise monitoring of movement of students into and out of the college is not easily accomplished with the tools at our disposal. Of course, one of the topics we discuss at our mandatory meeting for new students is now to declare majors (change or secondary) and minors. We regularly advise students who come with questions about majors, minors, and certificates. Our focus is on helping students find opportunities that maximize their potential and enrich their overall college experience. Many students are focused on piling up credentials rather than developing skillsets and nurturing relationships that will lead to valuable letters of recommendation. We help students see the nuanced differences between these approaches.

Our ET advisors regularly monitor the progress of their advisees in declaring appropriate majors as well as completing tasks to explore majors. ET students are required to meet with an advisor and/or to complete exploration tasks to have their registration holds removed. A new query under development in the registrar's office will assist in identifying changes of major since a certain date, which will be helpful to monitoring movement of students.

All students on probation or reinstated from probation or suspension are notified by email about their status and a requirement to meet with a dean. They are required to complete a self-assessment form described previously. Many of these students meet with us more than once. We monitor whether these students have attended meetings with us so that we can follow up at appropriate times during the semester (prior to mid-semester date or registration) if students have missed meetings. When students have been suspended and not immediately reinstated, we send an email that provides a detailed outline of what they need to do during their suspension semester including information about potentially studying at another institution during suspension. This way, students understand how to successfully return from suspension. Students on academic discipline are asked to see a dean during the add/drop period so that needed schedule adjustments are possible. Not all students achieve this timeframe, but most do. Many students returning from suspension or dismissal are required to see a dean more than once in their returning semester.

Each semester we get a list of students on academic warning from SPIRE and contact these students by email requesting that they make an appointment with a dean. These appointments are not required, but are highly recommended.

We have contacted students by email to recommend seeking advice based on lists from the Student Success Collaborative (SSC). Example campaigns include contacting all psychology students with GPA 2.0 – 2.2, contacting students with C- or below in Chem 111, or C- or below in bio 151. Students who responded to these campaigns were grateful for the outreach, but uptake was not high. There is also a lack of clarity about whether the college or majors should be doing this kind of outreach, which can contribute to student confusion about where they are receiving their primary advising.

Our online appointment system gives us some information about how many students we see in a given semester and for what reasons (within the limits of students selecting appropriate reasons).

Reasons for appointments are not always precise, but our appointment system gives us an approximate idea of how appointments are distributed.

### **CNS Advising Appointments**

	Academic Standing (including academic warning)	Career Advising	Pre-Med/Pre-Health	Other (Withdrawal, General Advising, Personal, college requirements, etc.)	Exploratory Track
Fall 2014	211	35	393	329	
Spring - Summer 2015	344	42	566	363	
Fall 2015	144	38	870	516	395
Spring 2016 (through mid-term)	212	26	374	250	151

We do track whether students who are required to see a dean for academic discipline or to attend a mandatory meeting. Otherwise, students are not required to visit CNS advising.

### **Experiential Opportunities**

A topic of our mandatory meetings with new students is how to declare majors and secondary majors as well as minors. We have also started a workshop on study abroad to encourage students to take up this opportunity.

An innovative and exciting program to engage students in research matches first year students with authentic research opportunities. There are three application deadlines that seek to match students with research labs on campus in the fall, winter/spring, and summer terms. These research placements can earn students one-three credits of independent study. No prior research experience is required for students to participate.

The iCons program (Integrated Concentration in Science) is an 18-credit curriculum that is centered around experiential learning and focused on real-world problem solving. Students apply to the program in the fall of the first year and complete the program in

parallel with their other studies. Students are also encouraged and prepared to engage in internships while in the iCons program and the curriculum uniquely prepares them to dive into an internship and contribute to that organization from their first day on the job.

A number of 6-week research-intensive programs reside in CNS that are available in the summer preceding the first year. These programs provide a springboard to research and vary from summer to summer.

Although nomenclature and mechanics differ, all CNS departments offer opportunities for students to gain academic credit for participating in research and internships. Some also offer credit-bearing undergraduate teaching assistantships. In most cases, these opportunities fulfill credits towards graduation and, perhaps, an elective within the major, they are not core major requirements. According to the 2015 Senior Survey, 61% of graduates participated in internships; 47% in research outside of course requirements; 60% in community service or volunteer work; 16% studied abroad; and 32% did a culminating senior experience.

### **Informational Data**

Retention and graduation rates for the college are consistent with those across the university. These could be improved, but reflect the complex climate in which students are attending university. Retention issues relate not only to student support and opportunities but also to financial pressures, family problems, and many other factors.

The unit of analysis for the senior survey is at the departmental level. CNS departments will be addressing these metrics.

A high proportion of CNS students complete some sort of practical experience prior to graduation. A significant number of these are not credit-bearing opportunities.

Following summer of 2015, the CNS advising office solicited information from our students about their internship experiences. These include both credit and non-credit internships from 2014-2015. The database includes entries from students who voluntarily responded and currently contains 255 entries.

## **Part Two. Goals for Academic and Career Advising and the Student Experience**

### **Academic Advising**

- Dean Baker and Dean Cave meet with students in the summer and provide the “academic perspective” as part of the New Student Orientation. We meet with students a second time in the session when they are registering for classes. We also hold mandatory meetings for all new students – freshmen and transfer – to orient them to the university and the college and to review academic policies and procedures. This takes a tremendous amount of time – we average about 20 meetings in the fall and 7 in the spring. A challenge is confirming classroom space to

meet with students early in the semester. A continued effort will be made to reach out to students to ensure they are aware of academic policies and procedures and that they take advantage of seeking assistance when needed.

- An issue that we deal with is appeals for late withdrawals from students. We have an online appeal form that students submit and then provide documentation. One issue is that faculty often do not provide feedback to students prior to the mid-semester date and therefore students find it difficult to make a decision to withdraw or not. An early alert system would certainly benefit students.
- Developing a sense of community is so important. The college hosts CNS Day in the fall – this is an opportunity for the entire college to gather as a community. Other events like this, but on a smaller scale, would help students to identify and to feel part of CNS.
- A continued effort to encourage students to pursue internship opportunities is needed. Identifying students who participate in an internship is difficult given that some students work with Career Services and earn credit, but other students find opportunities on the web, via personal or departmental contacts. Our website includes a survey that students can complete after their internship – this provides important information for other students.
- CNS was one of the first colleges to gain access to SSC. Dean Baker, Dean Cave and the exploratory track advisors have used the platform to reach out to students.
- With the increase in the recruitment and acceptance of international students pursuing a degree in CNS, it has become evident that this population needs special attention. Last semester, we held a focus group of students from different countries to ask about their experiences on campus. It was evident that better advising of these students is needed. In the fall, Dean Baker and Dean Cave will each be teaching a 1-credit course for international students. The course will satisfy the freshmen seminar requirement and will be limited to 19 students. We will continue to partner with IPO in developing programs for international students.
- We also want to increase the number of students who take advantage of study abroad programs specifically targeting low-participation populations – STEM majors, men, first generation college students, students from low income families and under-represented minorities. CNS advising will work with IPO and departments to eliminate any curricular barriers that inhibit or restrict students' participation. International partners can be identified where specific courses can be pre-approved to satisfy departmental requirements. (See appendix)

### **Part Three. Academic and Career Advising Action Plan**

#### **Looking Ahead CNS Advising**

- Additional resources are desperately needed to provide CNS students with adequate academic and career advising. We need to hire a full time professional advisor who can develop programs to ensure student success and satisfaction. Space is also an issue. The current advising space was designed for the College of Natural Science and Mathematics (NSM), but then the creation of CNS happened and the space was not adequate. With the addition of two ET advisors, additional offices had to be

built. We have literally outgrown the space. This new position would allow greater usage of the SSC platform and more outreach to all students. There is a need to investigate an early alert program so students in jeopardy are identified prior to the mid semester date. Specific 1-credit seminars could be offered for students in academic difficulty focusing on time management and study skills as well as a seminar for transfer students to help them make the transition to this campus. Next semester, Dean Baker and Dean Cave will be offering a 1-credit work for international students but other initiatives for this population would be beneficial. Expansion of student focus groups exploring how students perceive satisfaction in their departments would help identify areas that need support.

- CNS must hire a full time career counselor, (preferably two career counselors to meet the needs of students). Given the undergraduate enrollment in CNS it is essential that we have a career center to assist students in career development and experiential learning. Students need help in developing professional skills in order to be prepared when opportunities for internships, coops, and jobs arise. A career counselor could assist students with resume and cover letter writing, interview tips, networking and developing a social media presence. A Career Development Handbook could be produce to help students prepare for life after graduation. The counselor would connect employers with students through job and internship announcements, career fairs, corporate information sessions, networking events and on site tours. CNS needs a robust web site on career development for students. This position would also help to bring alumni back to campus to interact with students and faculty in and out of the classroom.

### **Looking Ahead Pre Med**

CNS must hire another full time PreMed/PreHealth advisor to advise the almost 1000 pre-med students that are not only in CNS but in other colleges as well. Currently we advise over 140 students from SPHHS; 25 students from ISOM; 11 from HFA; 17 from ENGIN and 4 from BDIC. The demand is just too much for a part-time director and one full time advisor.

As we continue to explore new avenues to better serve our students, PreMed advising has two three major program initiatives:

- *PreMed/PreHealth Seminar*: designed to strengthen the candidacy of UMass students as they prepare for the medical school application process. We plan to develop a 1-credit seminar course for sophomore and junior students. This course will be designed to better inform students about the process of pre-professional school application – including academic requirements, clinical experience needed, extracurricular leadership activities and strategies to improve study habits. The course will provide students with information about the application process, resources to prepare them to apply, and hands-on workshops and activities to refine their application materials. The expectation is that sophomore students will mostly be presented with health career choices and prerequisite courses while junior students will focus more on the application process, writing a personal statement,

critical reading assessment and strategic plans to improve them, MCAT/DAT preparation and school selections.

Students will participate in personal statement writing workshops, Medical/Dental school interview preparation, peer review communication workshops and formatting narratives to effectively communicate their volunteer and clinical experiences.

- *PreMed/PreHealth Advising MCAT Prep Course.* Medical school is a costly investment for any student and their families. Tuition averages around \$50K per year and it is no secret that the wallets of perspective students start taking a hit simply from preparing to enter medical school. A quick online survey reveals that test preparation courses range from \$2K to 12K! In many instances, students who have not given themselves enough time to prepare for the exam are not aware of the resources available to them and therefore pay exorbitant sums of money for prep courses at the last moments prior to taking the test. Our goal is to create prep courses designed to review the key concepts needed to master the MCAT exam content. To be successful we would hire an instructor for each of the major disciplines represented on the MCAT exam: Biology, Chemistry, Biochemistry, Physics and Psychology/Sociology.
- *Hiring a Part-time Letter Writer.* Each year over 200 students from UMass apply to medical and dental schools. A major part of the workload associated with these applications is writing a committee letter for each student. With only two advisors writing letters while simultaneously advising students and running NSO, this is a monumental task. The advising office would therefore benefit significantly from the assistance of a professional letter writer over these summer months when we are at the height of the application season to assist with drafting letters. These letters would be completed and signed by the advisors.