Welcome to Science in the Evening (SIE)
The University of Maryland (UMD)

Director: Dr. Joelle Presson, Ph.D.
Assistant Dean
College of Computer, Mathematics, & Natural Sciences (CMNS)
Topics for consideration

- Introductions
- Overview of program
- Courses and schedules
- Career goals
- Expectations of students
- Common questions from students
- Special discussion for pre-meds regarding the 2015 Medical College Admission Test (MCAT)

Follow-up appointments with Dr. Joelle Presson may be booked here: go.umd.edu/pressonadvising
Introductions

- Dr. Joelle Presson, Assistant Dean, CMNS
  - SIE Director and Academic Advisor
  - Email: jpresson@umd.edu
  - Advising appointment link: https://go.umd.edu/pressonadvising

- General Information
  - Science in the Evening. Website: sie.umd.edu
  - CMNS Undergraduate Academic Programs Office
    - Elaine Shaw-Taylor, Coordinator
      - Email: estaylor@umd.edu
      - Telephone: 301-405-6892

- Admissions, Registration, Billing
  - Office of Extended Studies (OES). Website: oes@umd.edu

- The Reed-Yorke Health Professions Advising Office (HPAO)
  - Website: prehealth.umd.edu
  - Support for SIE medical and dental school applicants with 24 UMD science credits
Nature of program

- Started in 1996
- Administered in College of Computer, Mathematics, and Natural Science (CMNS)
- Part-time evening program. Take courses you need and what you have pre-requisites for
  - Courses and program follow UMD curricula, rules, schedules
  - Students are UMD, part-time, non-degree seeking
- UMD science courses
  - Same courses as taken by undergraduate UMD pre-health students
  - SIE is NOT accelerated - the full curriculum for medical or dental school takes five to six academic semesters plus one summer
  - Sections reserved for SIE students are small
  - Carries reputation of UMD undergraduate courses and curriculum - UMD transcript.
- Most students in SIE are interested in health professions. We offer courses related to these interests
  - But, we serve students with a wide range of career goals
- Course staffing
  - Faculty are UMD instructors & adjuncts
  - Teaching Assistants (TAs) are usually undergraduate degree seeking science majors
- Cost
  - In-state per credit tuition rate plus pro-rated fees
Admission to SIE is provisional

- SIE is a non-degree, part time, post baccalaureate program
- A Bachelor’s degree from an accredited university and an official transcript are required
- GPA 2.5
- International students…more challenging
  - SIE will accept foreign credits as pre-requisites
  - Many professional programs do not accept foreign credits as pre-requisites
  - Many professional schools do not accept non-citizens / non-residents
Science courses at UMD require a high degree of math proficiency

Math readiness is assessed by the Math Placement Exam (MPE) taken after provisional admission to SIE

SIE students must earn 90% on arithmetic and algebra sections, and around 50% on trigonometry section

- Arithmetic - 11 questions
- Algebra 1 - 18 questions
- Algebra 2 - 25 questions
- Trigonometry - 14 questions

Students must email Dr. Presson after they have taken the test to find out their results. Include your UID information in the email

The test can be taken twice in preparation for registration in any given semester. If after two attempts the scores are not adequate, the student must defer SIE admission for a semester and retake the math test before registering in that next semester
SIE courses

- Undergraduate Biology (BSCI), Biochemistry (BCHM), Chemistry (CHEM), and Physics (PHYS)
  - Recommended courses maximize Medical College Admission Test (MCAT) and Dental Admission Test (DAT) performance and competitiveness for admission
- Basic courses offered every semester
  - Biology 1, general microbiology, cell biology
  - General chemistry 1 & 2, organic chemistry 1 & 2, biochemistry
  - Physics 1 & 2
- Other courses offered once a year
  - Genetics, physiology, immunology, special topics
- SIE does not offer
  - English, math, statistics, social science
- All course pre-requisites must be met before registration
## Typical schedule

- **Two courses a semester**
  - CHEM course Mondays and Wednesdays
  - BSCI course Tuesdays and Thursdays
  - PHYS often taken in summer

- **Medical and Dental**
  - Optimal preparation to take tests and apply -- 3 years of course work
  - MCAT and DAT are critical. Preparation cannot be rushed
  - Best time of year to take the MCAT or DAT is late May to early June
  - Submit applications early June

- Other health related programs may be found on the website: prehealth.umd.edu

- For other career paths contact Dr. Presson

### Plan 1. Optimal preparation for MCAT with coursework starting any Fall semester

<table>
<thead>
<tr>
<th>Semester</th>
<th>#</th>
<th>Courses</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>1</td>
<td>BSCI170 &amp; 171 Principles of Cellular and Molecular Biology</td>
<td>CHEM131/132 Gen Chem 1</td>
</tr>
<tr>
<td>Spring</td>
<td>2</td>
<td>BSCI222 Genetics</td>
<td>CHEM231/232 Orgo 1</td>
</tr>
<tr>
<td>Summer Term</td>
<td>3</td>
<td>PHYS121</td>
<td>PHYS122</td>
</tr>
<tr>
<td>Fall</td>
<td>4</td>
<td>BSCI223 General Microbiology</td>
<td>CHEM241/242 Orgo 2</td>
</tr>
<tr>
<td>Spring</td>
<td>5</td>
<td>CHEM271/272 Gen Chem 2</td>
<td>BSCI330 Cell Biology</td>
</tr>
<tr>
<td>Fall</td>
<td>6</td>
<td>BSCI Scientific Readings or other upper level BSCI</td>
<td>BCHM463 Biochem</td>
</tr>
<tr>
<td>Spring</td>
<td>7</td>
<td>BSCI440 Physiology</td>
<td>STAT464 Biostat; Prepare for MCAT Consider UMD MCAT Prep Program</td>
</tr>
</tbody>
</table>

Glide year: take MCAT in May; Apply in June
Consult with Dr. Presson
What classes should you start with?

- If you have NO undergraduate science courses - for *almost* all career paths
  - BSCI 170/171
  - CHEM 131/132

- If you have already taken science courses
  - Start in a place to ensure success
  - If you have Cs in past courses, you should retake these courses before moving on to the next course
  - We do NOT recommend taking a course if you had the pre-requisite more than 3 years ago. Retake the pre-requisite
  - If you are uncertain about where to start, make an appointment to talk with Dr. Presson
Day, Summer, Winter courses available to SIE students...with restrictions

- Day courses
  - SIE students can register first day of classes if seats are open

- Summer
  - Open registration to all students, but few courses in the evening
  - PHYS 1, 2 offered in the Summer in evening and are manageable
  - Few biology courses in Summer. All meet during the day
  - I do NOT recommend chemistry in the Summer

- Winter
  - Miscellaneous upper-level biology and online genetics courses
  - Winter session is only 3 weeks long and very hard to keep up with if you work

- In-state tuition for out-of-state SIE students DO NOT apply in day classes, Summer, and Winter semesters.
Is SIE right for you?
SIE is ideal for students who:

- are career changers and need all of the course pre-requisites for their graduate or professional school program
- have taken some but not all courses and need a flexible program to take just the courses they need
- have completed most lower-level pre-requisite courses and wish to take upper-level biology courses
- are not working more than 40 hours a week
  - to include limiting personal and work travel and taking work home.
SIE is not as useful for students who:

- have taken many science courses and are looking to increase their GPA by repeating courses. These students can enroll in SIE but…
  - A GPA based on 120 undergraduate credits is hard to raise
  - SIE students typically do better in SIE than they did as undergraduates, but sometimes not good enough to get into professional school
  - Professional schools are sometimes not impressed by repeated courses
How successful will you be in SIE courses?

- Most SIE students do better than they did as undergraduates, but often not a lot better
- Data from SIE students Fall 2016 through Spring 2021
- You want a SIE GPA above 3.5, which is less likely with an entering GPA below 3.0

Undergraduate vs SIE GPA. 795 students with 7 or more SIE credits
Black line represents when undergraduate vs SIE GPA are equal
Dotted line is trend line.
Is this the right time for you to start the program?

- Other commitments
  - Job
  - Family
- Financial situation
- Academic preparation
- Maturity
  - Students with low undergraduate GPAs benefit from taking a year or two off from school before coming to SIE
Advising resources

- **Website:** SIE.umd.edu
  - Plans of study for pre-med, pre-dent

- **Academic adviser - Dr. Presson**
  - Pre-health, pre-vet, graduate school, others
  - Advising appointment link: https://go.umd.edu/pressonadvising
  - Website: Prehealth.umd.edu
  - **HPAO has restrictions on who it will serve. Check SIE or pre-health website or email Dr. Presson**
Student Group

- Science in the Evening Non-Traditional Student Society (SIENTSS)
- https://sites.google.com/view/sientss
- https://twitter.com/SIENTSSUMD
- https://www.instagram.com/sientss/?utm_medium=copy_link
Rules, regulations

- Follows the same rules as all UMD programs
- Policies for repeats, drops, adds, withdrawals are dictated by UMD rules
- Exceptions to policy petitioned are the same rules that govern all UMD students
- Courses are the same as those taken by degree seeking students, same rules, same content
- If you have special circumstances that need to be addressed email Dr. Presson
Expectations of students

- Courses are UMD CMNS undergraduate courses
- Expect to be treated like you are 19 years old
  - Follow the rules
  - Pay attention to the expectations
  - Respect your instructors and TAs
  - Be mindful of academic integrity
- The best predictor of success is class attendance
  - Don’t miss class
  - Don’t come late
  - Don’t expect special treatment “because I work”
    - Medical schools will not honor and respect our courses if we make exceptions to the undergraduate standards and rules
More expectations...grading

- Grading is determined by faculty, just like it was when you were an undergraduate
  - Don’t expect a better grade than you earned because “you worked so hard”
  - Don’t expect a better grade because your grade will keep you out of medical school
  - Don’t expect me to override faculty grading. I cannot do that in our day program and cannot do it in SIE program

- SIE courses are challenging and difficult
  - You can be successful if you put in enough time
Academic honesty

- Do Not Cheat!
- Do your own work
- Do not copy from any other source
- Make sure your work is in your own words, paraphrased, not quoted
- Pay attention to what each instructor considers cheating
- All cases of suspected academic dishonesty will be handled by the UMD Student Judicial Review Office
Tuition, financial aid, deadline dates and oes.umd.edu

- SIE students pay in-state tuition
  - Part-time per credit rate charged at UMD in-state rate (unclear)
  - Out of state per credit rate charged for Summer, Winter and daytime courses
  - No financial aid
  - Student Financial Services and Cashiering
    - Website: https://billpay.umd.edu/TPPSupplement

- SIE program follows all UMD undergraduate policies
  - Office of the Registrar
    - Website: Testudo.umd.edu.
    - Information on academic deadlines, drop/add dates, repeat policy, etc
  - CMNS Students Services Office, 1300 Symons Hall.
    - Website: https://cmns.umd.edu/undergraduate/advising-academic-planning/academic-policies.
    - Exceptions to academic policy request must be submitted to this office
  - Special rules for paying tuition applies to SIE students. Consult website and keep track of all OES emails
General questions about program

To schedule an appointment with Dr. Presson, please use the link on SIE.umd.edu
Can I take more than two courses a semester?

- Usually no because of:
  - nightly course schedule
  - course pre-requisites
- if you have questions consult Dr. Presson
Can I speed up my progress by taking summer courses?

- Not usually
- SIE does not run in the Summer
- Most students take two physics courses in the regular Summer session, which does not leave room for more
- Summer courses are mostly in the daytime, except for physics
- Taking chemistry courses in the Summer is almost always a mistake. Most students end up with a C grade
Can I take just the courses I want or need?

- Yes.
- Check with Dr. Presson because you probably need more than you think you do.
How can I catch up from low grades?

- You cannot!
- If you get a C grade or even a B- grade in a course you should repeat it. This will slow your progress.
- If you forge ahead to the next course you will be even further behind.
- If you earn a B- grade or lower in any course consult Dr. Presson about your overall progress and next steps.
Can I only take the required courses for my profession, not the recommended courses?

- Of course!
- You may take what you choose and have the pre-requisites for
- Remember that recommended courses are based on decades of UMD experience with who is successful and who is not
Why should I repeat a course in which I earned a C grade, rather than moving on to a higher-level course to earn an A grade?

- It is very unlikely you will earn an A grade in a higher-level course with a C grade in the prerequisite. This is especially true for chemistry.

- You should consult with Dr. Presson if you are considering moving on with a C grade in a prerequisite course.
Information for pre-med and pre-dent students
The application cycle, medical and dental school

- Take all recommended courses - not just those required
- Take MCAT or DAT in late May or early June
- Apply through central portal in June
- Do secondaries over the Summer
- Glide year, September through the following Summer
  - Interviews and acceptances September through April
  - Correct any deficiencies in your application in case you have to re-apply
MCAT, DAT, application

- Best time to take MCAT or DAT May – June
  - Late test dates reduce chances of admission
- Only one time to apply – June
  - Late application dates delay chances of admission
- MCAT tends to be conceptual, DAT tends to be fact oriented
- Practice, practice, practice
  - Should you pay for a prep course? It depends…
  - Yes, if you need the discipline of a regular schedule
  - Yes, if you need someone else to do content review for you
The glide year

- Assume you will have to apply again
  - Take more courses
  - Get more relevant experience
- Correct any weaknesses
Success factors for professional

- Grades, Grades, and did I say Grades?
- Test scores
- Passion for your chosen field
- Relevant experience
- Community service
- A pleasant, congenial presence
- Being special
Selling yourself

- Motivation for your new field
  - Why do you want to be…
  - Personal experience with your new field… A close relative or friend was sick, etc
    - Emphasize what you learned not a negative experience with health care
  - Clinical experience, what you learned
  - Criticisms of the health care system - ok not too strongly. This cannot be your only motivation
  - Do you find meaning and personal accomplishment in helping others?
  - Are you comfortable around patients?

- Link your accomplishments in your current field to clinical skills

- Making up for past academic mistakes
  - Rule of thumb - two or more years of mostly A grades in rigorous science courses
Medical school and MCAT$_{2015}$
The medical school landscape

- Admission requirements & MCAT preparation
  - 5 CHEM courses
    - General chem 1, organic chem 1, organic chem 2, general chem 2, and biochem
  - Minimum of two biology courses but should take four or five for MCAT preparation
    - Introduction to cells & molecules, genetics, general microbiology, upper-level cell biology, mammalian physiology
  - Two semesters of physics

- Choosing schools use Medical School Admission Requirements (MSAR)
  - https://apps.aamc.org/msar-ui/#/landing
The medical school landscape

**MCAT 2015**
- First offered January 2015
  - Based on Howard Hughes Medical Institute (HHMI) Scientific Foundations for Future Physicians & input from medical school faculty
- Broad and integrative
- Passages test ability to read and interpret scientific studies
- Biology section includes lots of biochemistry as applied to biology
- Physics and chemistry passages often in life sciences context
- Social science section
  - Includes neurobiology, biological basis of behavior
- Normalized scores
  - 472 – 528
MCAT resources

- Association of American Colleges (AAMC) is number one
  - Create PDFs of what is on the MCAT
  - Create section bank questions
  - Practice tests
    - Take at least two full length practice tests in a setting that comes close to the actual test situation
- Kahn Academy worked with AAMC to develop review and practice material
- Read your own textbooks for content review. These are written by scientist educators. Use them
- Take prep course if you need the discipline
  - Look carefully as each offers different approaches
Acceptance to medical school

- Probabilities
- Best chance
  - Undergraduate GPA over 3.0
  - SIE GPA 3.5 or higher
  - The more SIE credits the better, especially if low undergraduate GPA
  - MCAT score 510 or higher, the higher the better
AAMC best place for everything about medical school admission

### Total GPA

<table>
<thead>
<tr>
<th>GPA Range</th>
<th>Acceptees</th>
<th>Applicants</th>
<th>Acceptance Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 3.79</td>
<td>2</td>
<td>169</td>
<td>1.2</td>
</tr>
<tr>
<td>Acceptees</td>
<td>7</td>
<td>327</td>
<td>2.1</td>
</tr>
<tr>
<td>Applicants</td>
<td>44</td>
<td>793</td>
<td>5.5</td>
</tr>
<tr>
<td>Acceptance rate %</td>
<td>297</td>
<td>1,741</td>
<td>17.1</td>
</tr>
<tr>
<td>486-489</td>
<td>1,002</td>
<td>3,541</td>
<td>28.3</td>
</tr>
<tr>
<td>490-493</td>
<td>2,466</td>
<td>6,127</td>
<td>40.2</td>
</tr>
<tr>
<td>494-497</td>
<td>5,092</td>
<td>9,251</td>
<td>55.0</td>
</tr>
<tr>
<td>498-501</td>
<td>7,630</td>
<td>11,044</td>
<td>69.1</td>
</tr>
<tr>
<td>502-505</td>
<td>7,790</td>
<td>10,046</td>
<td>77.5</td>
</tr>
<tr>
<td>506-509</td>
<td>8,819</td>
<td>10,473</td>
<td>84.2</td>
</tr>
<tr>
<td>510-513</td>
<td>33,149</td>
<td>53,512</td>
<td>61.9</td>
</tr>
<tr>
<td>514-517</td>
<td>514-517</td>
<td>514-517</td>
<td>514-517</td>
</tr>
</tbody>
</table>

### MCAT Scores

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Acceptees</th>
<th>Applicants</th>
<th>Acceptance Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 517</td>
<td>25</td>
<td>5,024</td>
<td>0.5</td>
</tr>
<tr>
<td>Acceptees</td>
<td>45</td>
<td>4,622</td>
<td>1.0</td>
</tr>
<tr>
<td>Applicants</td>
<td>204</td>
<td>7,402</td>
<td>2.8</td>
</tr>
<tr>
<td>Acceptance rate %</td>
<td>1,148</td>
<td>11,780</td>
<td>9.7</td>
</tr>
<tr>
<td>486-489</td>
<td>3,435</td>
<td>17,692</td>
<td>19.4</td>
</tr>
<tr>
<td>490-493</td>
<td>6,867</td>
<td>23,690</td>
<td>29.0</td>
</tr>
<tr>
<td>494-497</td>
<td>11,988</td>
<td>28,791</td>
<td>41.6</td>
</tr>
<tr>
<td>498-501</td>
<td>16,402</td>
<td>28,582</td>
<td>57.4</td>
</tr>
<tr>
<td>502-505</td>
<td>14,334</td>
<td>20,701</td>
<td>69.2</td>
</tr>
<tr>
<td>506-509</td>
<td>12,710</td>
<td>14,342</td>
<td>78.7</td>
</tr>
<tr>
<td>510-513</td>
<td>67,158</td>
<td>164,428</td>
<td>40.8</td>
</tr>
<tr>
<td>514-517</td>
<td>67,158</td>
<td>164,428</td>
<td>40.8</td>
</tr>
</tbody>
</table>

### MCAT Scores Greater than 517

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Acceptees</th>
<th>Applicants</th>
<th>Acceptance Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 517</td>
<td>25</td>
<td>5,024</td>
<td>0.5</td>
</tr>
<tr>
<td>Acceptees</td>
<td>45</td>
<td>4,622</td>
<td>1.0</td>
</tr>
<tr>
<td>Applicants</td>
<td>204</td>
<td>7,402</td>
<td>2.8</td>
</tr>
<tr>
<td>Acceptance rate %</td>
<td>1,148</td>
<td>11,780</td>
<td>9.7</td>
</tr>
<tr>
<td>486-489</td>
<td>3,435</td>
<td>17,692</td>
<td>19.4</td>
</tr>
<tr>
<td>490-493</td>
<td>6,867</td>
<td>23,690</td>
<td>29.0</td>
</tr>
<tr>
<td>494-497</td>
<td>11,988</td>
<td>28,791</td>
<td>41.6</td>
</tr>
<tr>
<td>498-501</td>
<td>16,402</td>
<td>28,582</td>
<td>57.4</td>
</tr>
<tr>
<td>502-505</td>
<td>14,334</td>
<td>20,701</td>
<td>69.2</td>
</tr>
<tr>
<td>506-509</td>
<td>12,710</td>
<td>14,342</td>
<td>78.7</td>
</tr>
<tr>
<td>510-513</td>
<td>67,158</td>
<td>164,428</td>
<td>40.8</td>
</tr>
<tr>
<td>514-517</td>
<td>67,158</td>
<td>164,428</td>
<td>40.8</td>
</tr>
</tbody>
</table>
GPAs of SIE medical school accepted and rejected. Data from AAMCAS 2016 to 2021 database.

<table>
<thead>
<tr>
<th></th>
<th>rejected</th>
<th>accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Undergrad GPA</td>
<td>3.22</td>
<td>3.29</td>
</tr>
<tr>
<td>Mean SIE GPA</td>
<td>3.41</td>
<td>3.54</td>
</tr>
<tr>
<td>all SIE rejected</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>all SIE accepted</td>
<td></td>
<td>63%</td>
</tr>
</tbody>
</table>
Medical school acceptances
50 SIE students who applied through HPAO 2019 - 2021

<table>
<thead>
<tr>
<th>total # students</th>
<th>admits</th>
<th>rejects</th>
<th>re-apply</th>
<th>re-apply admits</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>40</td>
<td>10</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>80%</td>
<td></td>
<td></td>
<td>80%</td>
</tr>
</tbody>
</table>

| mean mcat        | 510    | 501     |
| range MCAT       | 500 522| 484 519|
| mean SIE GPA     | 3.77   | 3.4     |
| range SIE GPA    | 3.33 4.0| 2.6 4.0|
| mean UG GPA      | 3.5    | 3.11    |
UMD SIE data on MCAT and admissions

- 147 SIE students
- Data from AAMC, not just HPAO applicants

<table>
<thead>
<tr>
<th>MCAT score</th>
<th>% acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 500</td>
<td>17.6</td>
</tr>
<tr>
<td>500 - 505</td>
<td>41</td>
</tr>
<tr>
<td>506 - 510</td>
<td>80</td>
</tr>
<tr>
<td>511 -- 515</td>
<td>78.1</td>
</tr>
<tr>
<td>516 -- 520</td>
<td>87.5</td>
</tr>
<tr>
<td>&gt; 520</td>
<td>100</td>
</tr>
<tr>
<td>mean</td>
<td>67</td>
</tr>
</tbody>
</table>

MCAT score vs SIE GPA