

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



UNIVERSITY OF  
MARYLAND

**FEARLESSLY  
FORWARD**



# 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](http://go.umd.edu/pressonadvising)**



# Introduction

- Dr. Joelle Presson, Assistant Dean, CMNS
  - SIE Director and Academic Advisor
  - Email: [jpresson@umd.edu](mailto:jpresson@umd.edu)
  - Advising appointment link: <https://go.umd.edu/pressonadvising>
- General Information
  - Science in the Evening. Website: [sie.umd.edu](http://sie.umd.edu)
  - CMNS Undergraduate Academic Programs Office
    - Elaine Shaw-Taylor, Coordinator
      - Email: [estaylor@umd.edu](mailto:estaylor@umd.edu)
      - Telephone: 301-405-6892
- Admission, Registration, Billing
  - Extended Studies [website](#)
- The Reed-Yorke Health Professions Advising Office
  - Website: [prehealth.umd.edu](http://prehealth.umd.edu)
  - Support for SIE medical and dental school applicants with 24 UMD science credits



# Nature of program

- Started in 1996
- Administered by the College of Computer, Mathematics and Natural Science (CMNS)
- Part-time evening program. Take courses you need and have pre-requisites for
  - Program follow UMD rules, schedules
  - SIE students are UMD, part-time, non-degree seeking
- UMD science courses
  - Same as those taken by undergraduate UMD pre-health students
  - SIE is NOT accelerated – the 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 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
- Once admitted students must pass a math test for full admission
- 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



# Math test

- Science courses at UMD require high degree of math proficiency
- Math readiness is assessed by the Math Placement Exam (MPE)
- SIE students must earn 90% on arithmetic and algebra sections, and 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 students 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



# Course schedule

- Students can start SIE in fall or spring semester
- SIE does not run in summer
- Two courses a semester is typical
- CHEM course Mondays and Wednesday
  - BSCI course Tuesdays and Thursdays
  - PHYS often taken in summer school which is not SIE–
    - Out of state students pay out of state tuition for summer courses
    - Talk with Dr. Presson if this affects you
  - You cannot take courses out of pre-requisite sequence
- Information about course requirements for health related programs may be found on the website: [prehealth.umd.edu](http://prehealth.umd.edu)
- For other career paths contact Dr. Presson





# Typical schedule for a student needing all courses.

Discuss your specific course requirements with Dr. Presson

Plan 1. Optimal preparation for MCAT with coursework starting any Fall semester			
Semester	#	Courses	
Fall	1	BSCI170 & 171 Principles of Cellular and Molecular Biology	CHEM131/132 Gen Chem 1
Spring	2	BSCI222 Genetics	CHEM231/232 Orgo 1
Summer Term	3	PHYS121	PHYS122
Fall	4	BSCI223 General Microbiology	CHEM241/242 Orgo 2
Spring	5	CHEM271/272 Gen Chem 2	BSCI330 Cell Biology
Fall	6	BSCI Scientific Readings or other upper level BSCI	BCHM463 Biochem
Spring	7	BSCI440 Physiology	STAT464 Biostat; Prepare for MCAT Consider UMD MCAT Prep Program
		take MCAT in May; Apply in June	
Glide year		Consult with Dr. Presson	



# What classes should take first?

- If you have NO undergraduate science courses – for most 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
- You will discuss your first semester courses with Dr. Presson before you register.



# Day, Summer, Winter courses available to SIE students...with restrictions

- In-state tuition for out-of-state SIE students DOES NOT apply in day classes, Summer, and Winter semesters. Out-of-state SIE students will pay out of state tuition for non SIE classes,
- Day courses
  - SIE students can register first day of classes if seats are open
- Summer
  - Open registration to all students, but few courses are in the evening
  - PHYS 1, 2 offered in the Summer in evening and are manageable
  - Biology courses in Summer 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





**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
  - Minimal personal and work travel and taking work home



# 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**
  - **before coming to SIE**



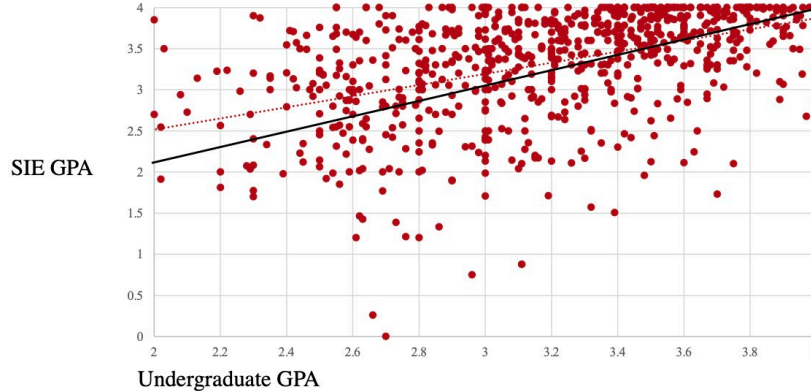
# SIE is not as useful for students who:

- 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
  - Students typically do better in SIE than they did as undergraduates, but often 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





# Advising resources

- Website: [SIE.umd.edu](https://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](https://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](https://www.instagram.com/sientss/?utm_medium)



# 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.
- SIE courses are challenging and difficult
  - You can be successful if you put in enough time to master the material
  - SIE provides extensive advice and reference material on how to study and be successful



# 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 exst.umd.edu

- SIE students pay in-state tuition for SIE courses- not for day, summer, or winter courses
  - 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](https://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/current-students/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 EXST emails





# General questions about program

To schedule an appointment with Dr. Presson, please use the link on [SIE.umd.edu](https://sle.uvm.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 or lower.



# Can I take just the courses I want or need?

- Yes
- As long as you have taken the pre-requisites
- Check with Dr. Presson because you probably need more than you think you do



# How can I catch up from low grades?

- If you get a C grade or even a B- grade in a course you should repeat it. This will slow your progress, but it is the only path to success.
- 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
- SIE provides a student resources page with considerable information on how to study.



# Can I only take the required courses for my profession, not the recommended courses?

- Yes, but that will decrease your chances of success
- 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

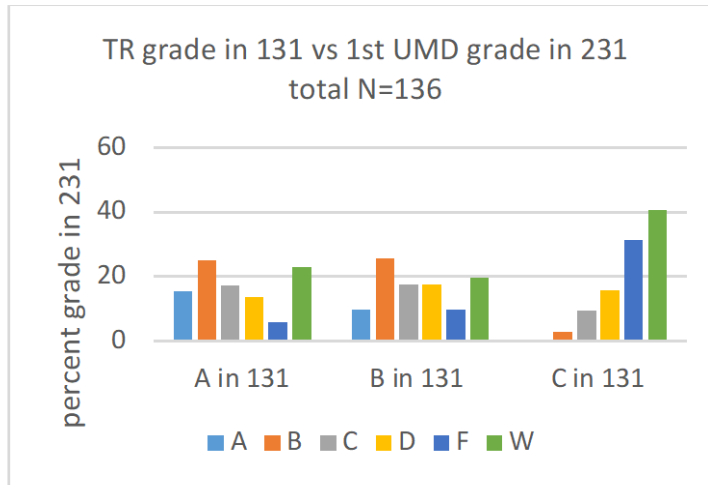
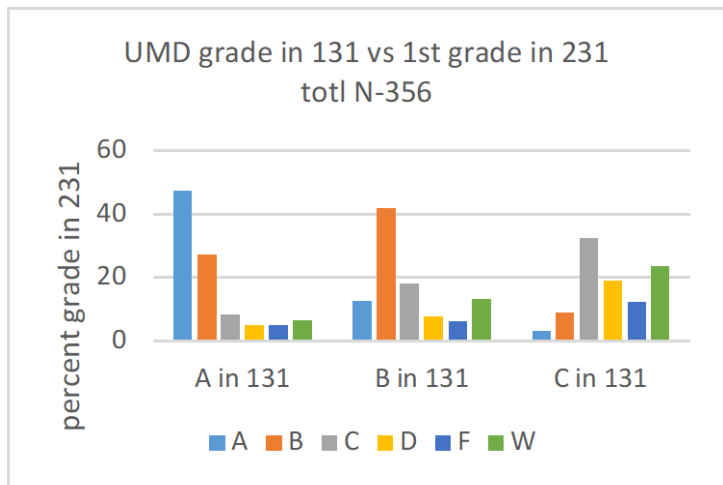


# Why should I repeat a course in which I earned a C grade, rather than moving on to a higher-level course to earn an A grade?

- It is very unlikely you will earn an A grade in a higher-level course with a C grade in the pre-requisite. This is especially true for chemistry- see data in next slide
- At UMD the chem sequence goes:
  - Gen chem 1>>orgo 1>>orgo2>> gen chem 2<<biochem
  - Below are data on grades in gen chem 1 vs orgo 1, for gen chem at UMD and gen chem at a transfer institutions
  - The conclusions are self evident.



# Grades in organic vs gen chem 1





# **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
- SIE students have access to a document that summarizes all aspects of applying and preparing for MCAT and DAT



# 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 Schools 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
- CARS is logic of critical reasoning
- Normalized scores
  - 472 – 528





# MCAT resources

- Association of American Colleges (AAC&S) 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 AAC&S 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

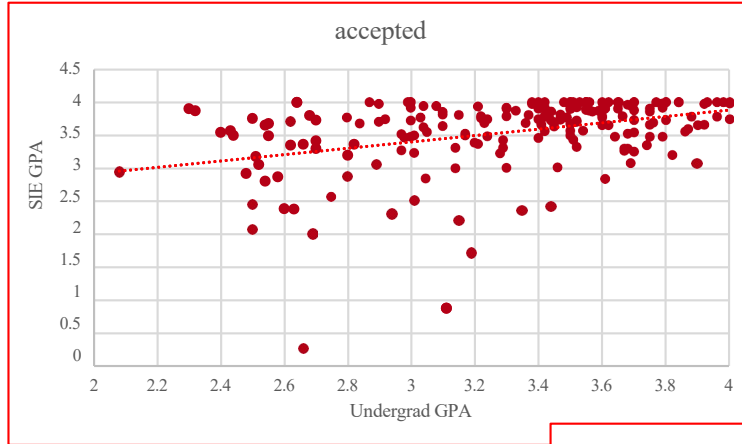
- Aamc.org

Acceptance Rate for Applicants		Total MCAT Scores									All Applicants	
		Less than 486	486-489	490-493	494-497	498-501	502-505	506-509	510-513	514-517		Greater than 517
<b>Total GPA</b>												
<b>Greater than 3.79</b>	Acceptees	2	7	44	297	1,002	2,466	5,092	7,630	7,790	8,819	33,149
	Applicants	169	327	793	1,741	3,541	6,127	9,251	11,044	10,046	10,473	53,512
	Acceptance rate %	1.2	2.1	5.5	17.1	28.3	40.2	55.0	69.1	77.5	84.2	61.9
<b>3.60-3.79</b>	Acceptees	5	5	60	299	938	1,917	3,433	4,924	3,984	2,573	18,138
	Applicants	460	650	1,334	2,605	4,414	6,437	8,228	8,426	5,784	3,463	41,801
	Acceptance rate %	1.1	0.8	4.5	11.5	21.3	29.8	41.7	58.4	68.9	74.3	43.4
<b>3.40-3.59</b>	Acceptees	9	10	39	260	701	1,244	1,963	2,386	1,647	872	9,131
	Applicants	689	855	1,574	2,702	3,989	5,084	5,842	5,026	2,875	1,357	29,993
	Acceptance rate %	1.3	1.2	2.5	9.6	17.6	24.5	33.6	47.5	57.3	64.3	30.4
<b>3.20-3.39</b>	Acceptees	3	9	31	150	411	700	882	957	628	280	4,051
	Applicants	823	898	1,468	2,057	2,790	3,154	2,993	2,418	1,259	509	18,369
	Acceptance rate %	0.4	1.0	2.1	7.3	14.7	22.2	29.5	39.6	49.9	55.0	22.1
<b>3.00-3.19</b>	Acceptees	3	4	16	95	248	348	405	352	203	121	1,795
	Applicants	903	743	985	1,416	1,623	1,684	1,542	1,095	479	230	10,700
	Acceptance rate %	0.3	0.5	1.6	6.7	15.3	20.7	26.3	32.1	42.4	52.6	16.8
<b>2.80-2.99</b>	Acceptees	3	5	9	25	86	137	137	106	56	35	599
	Applicants	686	528	607	679	765	777	601	367	173	75	5,258
	Acceptance rate %	0.4	0.9	1.5	3.7	11.2	17.6	22.8	28.9	32.4	46.7	11.4
<b>2.60-2.79</b>	Acceptees	0	4	3	14	38	45	49	35	18	7	213
	Applicants	523	325	350	346	383	273	210	146	59	25	2,640
	Acceptance rate %	0.0	1.2	0.9	4.0	9.9	16.5	23.3	24.0	30.5	28.0	8.1
<b>2.40-2.59</b>	Acceptees	0	0	2	5	6	7	19	7	4	3	53
	Applicants	383	171	169	152	127	102	77	38	17	10	1,246
	Acceptance rate %	0.0	0.0	1.2	3.3	4.7	6.9	24.7	18.4	23.5	30.0	4.3
<b>2.20-2.39</b>	Acceptees	0	0	0	3	5	3	8	3	-	-	24
	Applicants	229	76	75	65	48	36	33	18	-	-	584
	Acceptance rate %	0.0	0.0	0.0	4.6	10.4	8.3	24.2	16.7	-	-	4.1
<b>2.00-2.19</b>	Acceptees	0	0	0	0	0	0	-	-	-	-	4
	Applicants	109	36	37	10	11	13	-	-	-	-	235
	Acceptance rate %	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	1.7
<b>Less than 2.00</b>	Acceptees	0	1	0	-	-	-	-	-	-	-	1
	Applicants	50	13	10	-	-	-	-	-	-	-	90
	Acceptance rate %	0.0	7.7	0.0	-	-	-	-	-	-	-	1.1
<b>All Applicants</b>	Acceptees	25	45	204	1,148	3,435	6,867	11,988	16,402	14,334	12,710	67,158
	Applicants	5,024	4,622	7,402	11,780	17,692	23,690	28,791	28,582	20,701	16,144	164,428
	Acceptance rate %	0.5	1.0	2.8	9.7	19.4	29.0	41.6	57.4	69.2	78.7	40.8

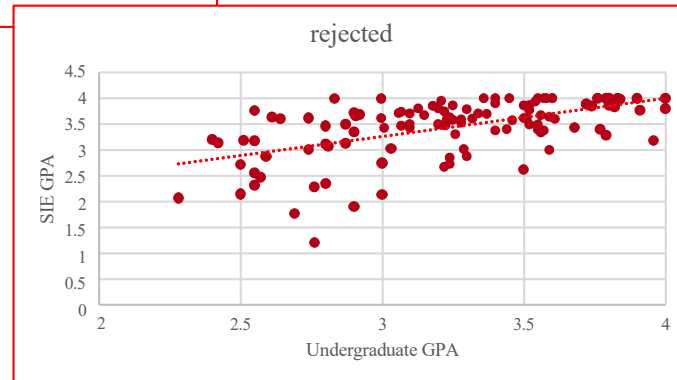


# GPA's of SIE medical school accepted and rejected.

## Data from from AAMCAS 2016 to 2021 database



	rejected	accepted
Mean Undergrad GPA	3.22	3.29
Mean SIE GPA	3.41	3.54
all SIE rejected	37%	
all SIE accepted	63%	



# Medical school acceptances

## 50 SIE students who applied through UMD prehealth services

2019 - 2021

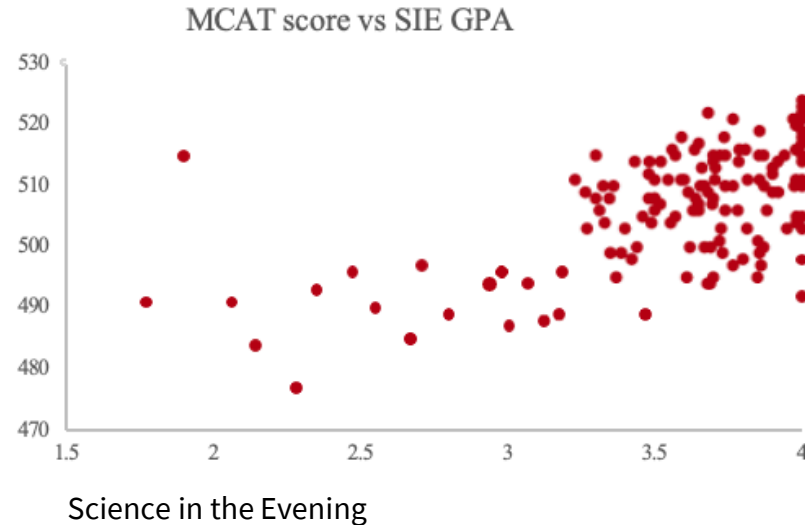
total # students	admits	rejects	re-apply	re-apply admits
50	40	10	5	4
	80%			80%
mean mcat	510	501		
range MCAT	500 522	484 519		
mean SIE GPA	3.77	3.4		
range SIE GPA	3.33 4.0	2.6 4.0		
mean UG GPA	3.5	3.11		



# UMD SIE data on MCAT and admissions

- 147 SIE students
- Data from AAMC

MCAT score	% acceptance
< 500	17.6
500 - 505	41
506 - 510	80
511 -- 515	78.1
516 -- 520	87.5
> 520	100
mean	67





A vibrant campus scene featuring a large green lawn, trees with autumn foliage, and a building in the background. The text 'FEARLESSLY FORWARD' is overlaid in a white, bold, sans-serif font. The letters are cut out, revealing the background scene through them. The text is slightly tilted to the right.

**FEARLESSLY**

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