

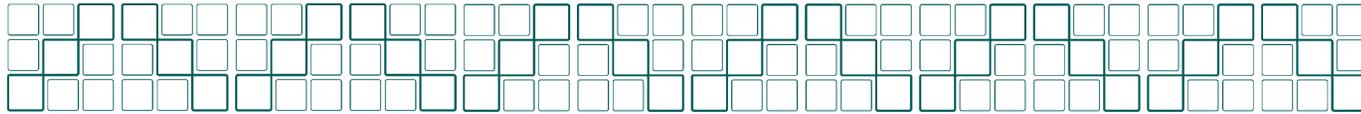
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# Preparing for the MCAT

William J. Higgins

# Disclaimer

No absolutes in this process, but  
the data don't lie!



# AMCAS Home

American Medical College  
Application Service

**AMCAS**



AMCAS® is a program  
of the Association of American Medical Colleges

Considering  
a Medical Career

Applying  
to Medical School

Succeeding  
as a Medical Student

Managing  
Your Residency

**AMCAS Home**

[How to Apply](#)

[FAQ](#)

[Participating Medical Schools](#)

[Medical School Deadlines](#)

## American Medical College Application Service (AMCAS®)



Welcome to the American Medical College Application Service® (AMCAS®) Web site. AMCAS is a non-profit, centralized application processing service that is only available to applicants to the first-year entering classes at participating U.S. medical schools. Most medical schools use AMCAS as the primary application method. Advanced standing and transfer applicants should contact the medical schools directly for assistance.

Regardless of the number of AMCAS schools to which you apply, you submit just one application to AMCAS via the Web. AMCAS does not render any admission decisions and does not advise applicants where to apply.

### What are your peers asking?

[Am I using the correct browser version? »](#)

[Can I make a change to my application once it's been submitted? »](#)

[What is the Verification process? »](#)

## First-Time Applicants

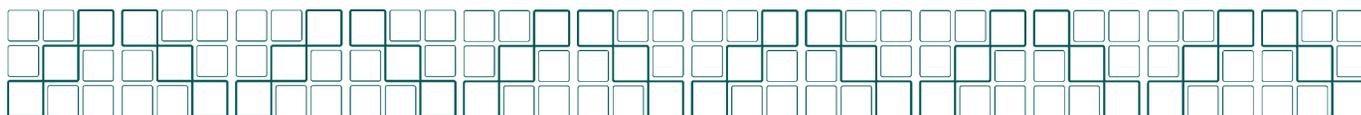
[Sign in to the 2011 AMCAS Application](#)

**AMCAS for Admission Officers**  
Learn about AMCAS products and services for medical schools, including technical resources and important communications.

**Pre-Health Advisors**  
Access the [AAMC Advisor Information System](#) [↗](#), [AMCAS Letter Writer Application](#) [↗](#), and more.

**Fee Assistance Program**  
For AMCAS applicants and MCAT® examinees with extreme financial need.

## Important Dates



# AMCAS: Applying to medical school

## Applying Home

[Admission Requirements](#)

[Fee Assistance Program](#)

[Medical School Programs](#)

## Applying to Medical School



You've decided to dedicate your life to the practice of medicine. Now you need to:

- Find the medical school programs that are right for you.
- Take the Medical College Admission Test® (MCAT®)
- Apply to medical school through the American Medical College Application Service (AMCAS®) or other appropriate service.

Sure, there are a lot of steps, but it's doable. This site can guide you through the process.

## Featured Resources

- ☒ [Admission Requirements](#)
- ☒ [Application and Admission Timeline](#)
- ☒ [AMCAS Medical School Application Deadlines for the 2011 Entering Class](#)
- ☒ [Financing Your Medical Education](#)

## Programs and Services for Applicants

- ☒ [Medical College Admission Test® \(MCAT®\)](#)
- ☒ [Fee Assistance Program \(FAP\)](#)
- ☒ [The Medical Minority Applicant Registry \(Med-MAR\)](#)
- ☒ [American Medical College Application Service® \(AMCAS®\)](#)
- ☒ [FIRST for Medical Education](#)
- ☒ [Early Decision Program \(EDP\)](#)

## Find Medical Schools

- ☒ [Search for AAMC-member institutions](#)
- ☒ [U.S. and Canadian Medical School Admissions Offices](#)
- ☒ [Medical Career Fairs](#)

[MCAT® Practice Test 11](#)

What % of applicants  
matriculate?

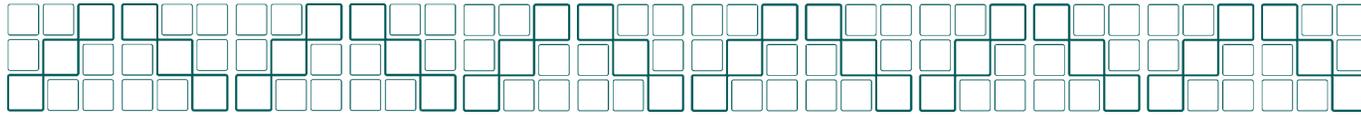
43.5%

18,390 matriculants out of 42,269 applicants in 2009

Table 17: Applicants and Matriculants to U.S. Medical Schools, 1996-2008

2002	2003	2004	2005	2006	2007	2008
33,625	34,791	35,735	37,737	39,108	42,315	42,231
16,488	16,541	16,648	17,003	17,361	17,759	18,036

<http://www.aamc.org/data/facts/2008/2008mcatgpa.htm>



# Selection Criteria

- GPA - overall and science
  - Strength of transcript
  - ALL grades reported
    - Repeated courses?
- MCAT scores
- Application essays
  - What do I tell the schools?
  - Are they really important?
- Experience
- Letters

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[FACTS Home](#)

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[Applicants and Matriculants](#)

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[Enrollment, Graduates, and MD/PhD](#)

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[ERAS Data](#)

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[Glossary](#)

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## Applicants and Matriculants Data

### By Institution

1. [U.S. Medical School Applications and Matriculants by School, State of Legal Residence, and Sex, 2009](#)
2. [Undergraduate Institutions Supplying Applicants to U.S. Medical Schools, by Applicant Race and Ethnicity, 2009](#)

### By Legal Residence, Age, Sex

3. [Applicants to U.S. Medical Schools by State of Legal Residence, 1998-2009](#)
4. [Matriculants to U.S. Medical Schools by State of Legal Residence, 1998-2009](#)
5. [Applicants to U.S. Medical Schools by In or Out-of-State Matriculation Status, 2009](#)
6. [Age of Applicants to U.S. Medical Schools at Anticipated Matriculation by Sex and Race and Ethnicity, 2006-2009](#)
7. [Applicants, First-Time Applicants, Acceptees, and Matriculants to U.S. Medical Schools by Sex, 1998-2009](#)

### By Race and Ethnicity

8. [Applicants to U.S. Medical Schools by Race, Selected Combinations within Hispanic or Latino Ethnicity, and Sex, 2009](#)
9. [Matriculants to U.S. Medical Schools by Race, Selected Combinations within Hispanic or Latino Ethnicity, and Sex, 2009](#)
10. [Applicants to U.S. Medical Schools by Hispanic or Latino Ethnicity, Non-Hispanic or Latino Race, and State of Legal Residence, 2009](#)
11. [Matriculants to U.S. Medical Schools by Hispanic or Latino Ethnicity, Non-Hispanic or Latino Race, and State of Legal Residence, 2009](#)
12. [Applicants, First-Time Applicants, Acceptees, and Matriculants to U.S. Medical Schools by Hispanic or Latino Ethnicity, Non-Hispanic or Latino Race, and Sex, 2006-2009](#)
13. [Race and Ethnicity Responses of Applicants to U.S. Medical Schools, 2002-2009](#)
14. [Race and Ethnicity Responses \(Alone and In Combination\) of Applicants to U.S. Medical Schools, 2002-2009](#)
15. [Race and Ethnicity \(One Race Response\) of Applicants to U.S. Medical Schools, 2002-2009](#)
16. [Applicants to U.S. Medical Schools by Race and Ethnicity, Selected Combinations, 2002-2009](#)

### Related

[U.S. Medical School Applicants and Students \(PDF\)](#) These charts include longitudinal data back to 1982.

For MCAT examinee data, see "MCAT Exam Statistics" on [For Admissions Officers and Pre-Health Advisors](#).

### Contact FACTS

For additional data on medical school applicants, matriculants, enrollment, and graduates, please e-mail [facts@aamc.org](mailto:facts@aamc.org).

# Numerical Selection Criteria

Matriculants, 1998-2009		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MCAT VR	Mean	9.5	9.5	9.5	9.5	9.5	9.5	9.7	9.7	9.8	9.9	9.9	9.8
	SD*	1.7	1.7	1.8	1.8	1.8	1.7	1.7	1.8	1.7	1.8	1.8	1.7
MCAT PS	Mean	9.9	10.0	10.0	10.0	10.0	9.9	9.9	10.0	10.1	10.3	10.3	10.3
	SD	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
MCAT BS	Mean	10.2	10.2	10.2	10.1	10.2	10.2	10.3	10.4	10.5	10.6	10.7	10.8
	SD	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7
Total MCAT	Mean	29.6	29.7	29.7	29.6	29.6	29.6	29.9	30.2	30.3	30.8	30.9	30.8
	SD	4.5	4.4	4.4	4.3	4.3	4.2	4.1	4.3	4.2	4.2	4.2	4.1
MCAT WS	Median	P	P	P	P	P	P	P	P	P	P	P	P
GPA science	Mean	3.52	3.53	3.54	3.54	3.54	3.55	3.56	3.56	3.57	3.59	3.60	3.60
	SD	0.37	0.36	0.35	0.35	0.36	0.35	0.35	0.35	0.34	0.33	0.33	0.32
GPA non-science	Mean	3.64	3.66	3.67	3.68	3.69	3.70	3.70	3.70	3.71	3.73	3.73	3.74
	SD	0.30	0.30	0.29	0.28	0.27	0.26	0.26	0.26	0.26	0.25	0.25	0.25
GPA total	Mean	3.57	3.59	3.60	3.60	3.61	3.62	3.62	3.63	3.64	3.65	3.66	3.66
	SD	0.31	0.30	0.30	0.29	0.29	0.28	0.28	0.28	0.27	0.26	0.26	0.26
Total Matriculants		16,170	16,221	16,301	16,365	16,488	16,541	16,648	17,003	17,361	17,759	18,036	18,390

# Statistics, 2009

	<u>Applicants</u>		<u>Matriculants</u>
#	42,269		18,390
VR	9.0		9.8
PHYS	9.2		10.3
BIOL	9.8		10.8
Writing	0		P

*Subject Averages* 28.1  30.9

<http://www.aamc.org/data/facts/applicantmatriculant/table18-facts09mcatgpabymaj1-web.pdf>

# Applicant Facts

## Average MCAT Scores

MCAT	2006		2007		2008	
	Applicants	Matriculants	Applicants	Matriculants	Applicants	Matriculants
Physical	9.1	10.1	9.2	10.3	9.3	10.3
Verbal	9.0	9.8	9	9.5	9.0	9.9
Writing	O	P	O	P	P	P
Biological	9.5	10.5	9.5	10.6	9.8	10.7

Table 24: MCAT and GPA Grid for Applicants and Acceptees to U.S. Medical Schools, 2007-2009 (aggregated)



The table below displays the acceptance rates at different MCAT and GPA levels for applicants and accepted applicants from 2007 to 2009. The frequencies are combined totals of all three years. Please email us at [facts@aamc.org](mailto:facts@aamc.org) if you need further assistance or have additional inquiries.

Acceptance rate for applicants, 2007-2009 (aggregated)	Total MCAT Scores										All	
	5-14	15-17	18-20	21-23	24-26	27-29	30-32	33-35	36-38	39-45		
<b>GPA total</b>												
<b>3.80-4.00</b>	Acceptees	5	9	91	357	1,374	3,830	5,640	4,584	2,777	1,116	19,783
	Applicants	79	177	523	1,345	3,230	5,606	6,825	5,272	3,073	1,205	27,335
	Acceptance rate %	6.3	5.1	17.4	26.5	42.5	68.3	82.6	86.9	90.4	92.6	72.4
<b>3.60-3.79</b>	Acceptees	3	14	135	426	1,387	3,707	5,256	3,545	1,605	380	16,438
	Applicants	204	367	1,011	2,275	4,498	6,985	7,178	4,399	1,891	445	29,233
	Acceptance rate %	1.5	3.8	13.4	18.7	30.8	53.1	73.2	80.6	84.9	85.4	56.3
<b>3.40-3.59</b>	Acceptees	9	14	126	422	1,081	2,547	3,443	2,106	840	175	10,763
	Applicants	354	538	1,234	2,557	4,337	6,599	6,049	3,083	1,142	226	26,319
	Acceptance rate %	2.5	2.6	10.2	16.5	23.8	38.6	56.9	68.3	73.6	77.4	40.9
<b>3.20-3.39</b>	Acceptees	3	11	102	302	627	1,204	1,511	892	333	62	5,047
	Applicants	412	616	1,181	2,265	3,473	4,428	3,807	1,739	551	93	18,565
	Acceptance rate %	0.7	1.8	8.6	13.3	18.1	27.2	39.7	51.3	60.4	66.7	27.2
<b>3.00-3.19</b>	Acceptees	3	15	57	177	358	541	550	320	125	18	2,164
	Applicants	491	609	957	1,619	2,139	2,468	1,804	863	256	44	11,250
	Acceptance rate %	0.6	2.5	6.0	10.9	16.7	21.9	30.5	37.1	48.8	40.9	19.2
<b>2.80-2.99</b>	Acceptees	.	6	36	101	163	180	167	102	23	10	788
	Applicants	429	425	667	935	1,132	1,051	742	336	89	18	5,824
	Acceptance rate %	.	1.4	5.4	10.8	14.4	17.1	22.5	30.4	25.8	55.6	13.5
<b>2.60-2.79</b>	Acceptees	.	3	22	41	56	61	55	28	7	1	274
	Applicants	356	235	393	523	532	469	287	142	40	8	2,985
	Acceptance rate %	.	1.3	5.6	7.8	10.5	13.0	19.2	19.7	17.5	12.5	9.2
<b>2.40-2.59</b>	Acceptees	.	1	3	13	19	21	25	13	1	.	96
	Applicants	232	156	189	251	228	192	137	48	11	.	1,444
	Acceptance rate %	.	0.6	1.6	5.2	8.3	10.9	18.2	27.1	9.1	.	6.6
<b>2.20-2.39</b>	Acceptees	.	.	2	5	3	3	5	1	1	.	20
	Applicants	165	92	103	86	85	67	39	17	6	.	660
	Acceptance rate %	.	.	1.9	5.8	3.5	4.5	12.8	5.9	16.7	.	3.0
<b>2.00-2.19</b>	Acceptees	.	1	.	1	1	.	.	3	.	.	6
	Applicants	78	40	40	27	26	25	10	7	1	.	234
	Acceptance rate %	.	2.5	.	3.7	3.8	.	.	42.9	.	.	2.4
<b>1.47-1.99</b>	Acceptees	.	1	.	.	1	.	1	.	.	.	3
	Applicants	28	25	18	14	8	4	3	3	.	.	103
	Acceptance rate %	.	4.0	.	.	12.5	.	33.3	.	.	.	2.9
<b>All</b>	Acceptees	23	75	574	1,845	5,070	12,094	16,653	11,594	5,712	1,762	55,402
	Applicants	2,828	3,280	6,316	11,897	19,888	27,894	26,881	15,909	7,060	2,039	123,992
	Acceptance rate %	0.8	2.3	9.1	15.5	25.5	43.4	62.0	72.9	80.9	86.4	44.7

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Source: AAMC Data Warehouse: Applicant Matriculant File, as of 4/20/2010.

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<http://www.aamc.org/data/facts/applicantmatriculant/table24-mcatgpagridall2007-09.pdf>

# Applicant Facts

For more applicant data, go to:

<http://www.aamc.org/data/facts/start.htm>

*Previous data and slides from:*

<http://www.aamc.org/students/applying/advisors/>

toolbox.htm

Range of MCAT scores  
submitted by matriculants  
“never” falls below an  
8!

Why is the MCAT important to medical schools?

# The MCAT

What is it?

# MCAT Home Page

- Considering a Medical Career
- Applying to Medical School
- Succeeding as a Medical Student
- Managing Your Residency

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[About the MCAT Exam](#)

**▶ [Preparing for the MCAT Exam](#)**

[Reserving a Seat](#)

[Taking the MCAT Exam](#)

[Releasing Scores](#)

[Contacting MCAT](#)

## Preparing for the MCAT® Exam

### What's on the MCAT Exam

Our content outlines will help you familiarize yourself with the Physical Sciences and Biological Sciences topics that may be covered on the test. The Verbal Reasoning outline helps you understand which skills the MCAT® exam is designed to assess. MCAT Writing Sample items (topic statements and instructions) may help you prepare for that section of the test.

- [Physical Sciences PDF](#)
- [Verbal Reasoning PDF](#)
- [Biological Sciences PDF](#)
- [Writing Prompts](#)

### Tools to Help You Prepare

#### [The Official Guide to the MCAT Exam >](#)

This guidebook, developed under the direction of the MCAT staff, provides you with extensive information on "everything MCAT." It includes questions from real MCAT exams, thoroughly explained answers, and valuable data.

#### [Ordering Practice Tests >](#)

Eight practice tests, updated versions of retired exams, offer low cost opportunities to become familiar with the content and format of the MCAT exam. Practice tests include solutions for each item, automated scoring and diagnostics, customizable feedback, and test assistance features such as the ability to highlight and search the passage text.

#### [Creating a Study Plan](#)

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### ▣ [2011 MCAT® Essentials](#)

Required reading for all MCAT exam registrants. Includes information on registration, preparation, and administration.

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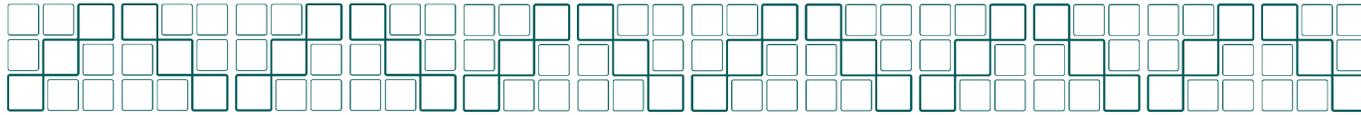
### ▣ [The Official Guide to the MCAT® Exam](#)

 This guidebook was developed under the direction of the MCAT staff to provide you with extensive information on "everything MCAT."



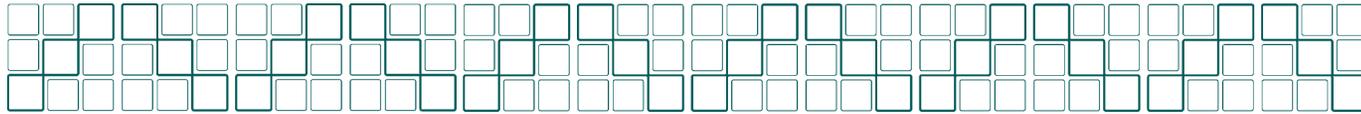
# The MCAT

Test Section	Questions	Time
Tutorial (optional)		10 minutes
Examinee Agreement		10 minutes
Physical Sciences	52	70 minutes
Break (optional)		10 minutes
Verbal Reasoning	40	60 minutes
Break (optional)		10 minutes
Writing Sample	2	60 minutes
Break (optional)		10 minutes
Biological Sciences	52	70 minutes
Void Question		5 minutes
Survey (optional)	12	10 minutes
Total Content Time		4 hours, 25 minutes
Total "Seat" Time		5 hours, 25 minutes
Total time does not include check-in time on arrival at the test center.		



# The MCAT

## When?



### 2011 Registration Deadline and Score Release Schedule

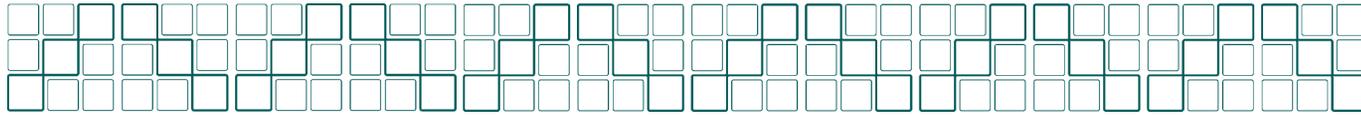
Test Date	Exam Start Time	Registration Opens	Regular Registration Closes* 11:59 p.m. ET	Late Registration Closes** 11:59 p.m. ET	Tentative Score Release Date After 5 p.m. ET
Friday, January 28, 2011	8 a.m.	October 6, 2010	January 14, 2011	January 21, 2011	March 1, 2011
Saturday, January 29, 2011	1 p.m.	October 6	January 15	January 22	March 1
Saturday, March 26, 2011	8 a.m.	October 6	March 12	March 19	April 26
Saturday, April 9, 2011	8 a.m.	October 6	March 26	April 2	May 10
Saturday, April 16, 2011	8 a.m.	October 6	April 2	April 9	May 17
Friday, April 29, 2011	1 p.m.	October 6	April 15	April 22	June 1
Saturday, May 7, 2011	8 a.m.	October 6	April 23	April 30	June 7
Friday, May 20, 2011	8 a.m.	October 6	May 6	May 13	June 21
Saturday, May 21, 2011	8 a.m.	October 6	May 7	May 14	June 21
Thursday, May 26, 2011	1 p.m.	October 6	May 12	May 19	June 28
Thursday, June 16, 2011	8 a.m. and 2 p.m.	TBD	June 2	June 9	July 19



# Schools accepting September MCATs ?

# The MCAT

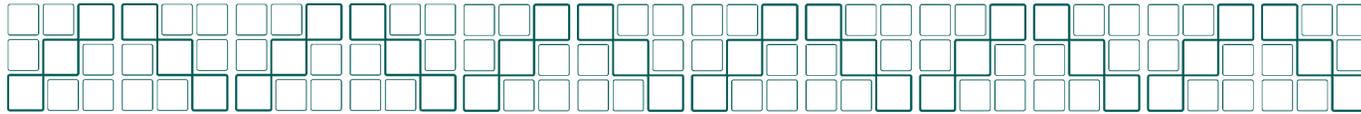
How well must I do?  
How to do well?



# The MCAT

- Biological Sciences (1 - 15)
- Physical Sciences (1 - 15)
- Verbal Reasoning (1 - 15)
- Writing Sample (J - T)

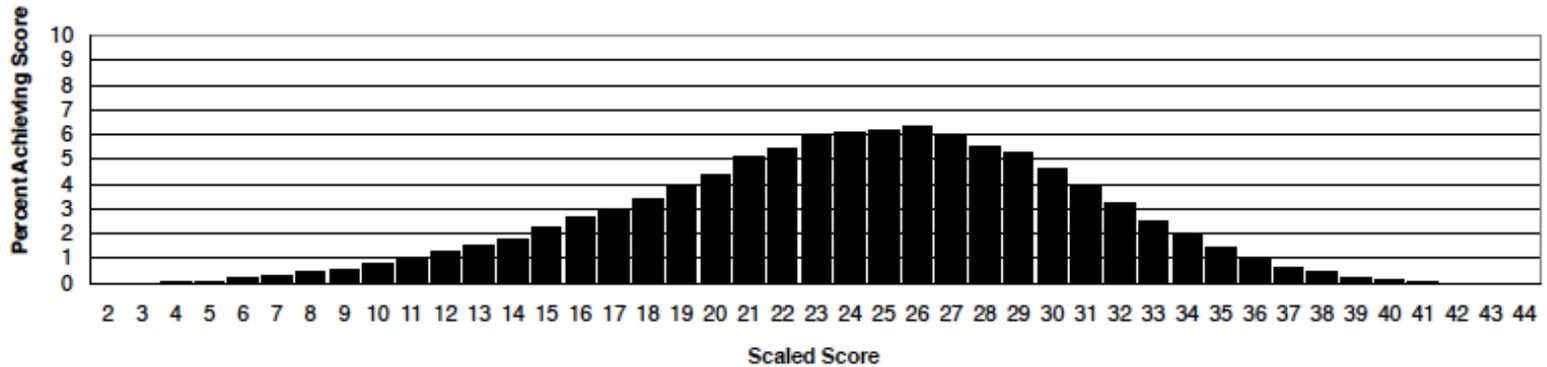
*Note: these scores are scaled, not absolute.*

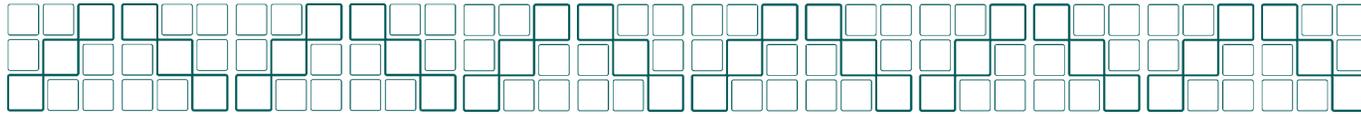


**Table 1**  
Percentages of MCAT Examinees Achieving Scaled Score Levels and  
Associated Percentile Rank Ranges by Area of Assessment  
Combined 2010 Administrations N = 82,004

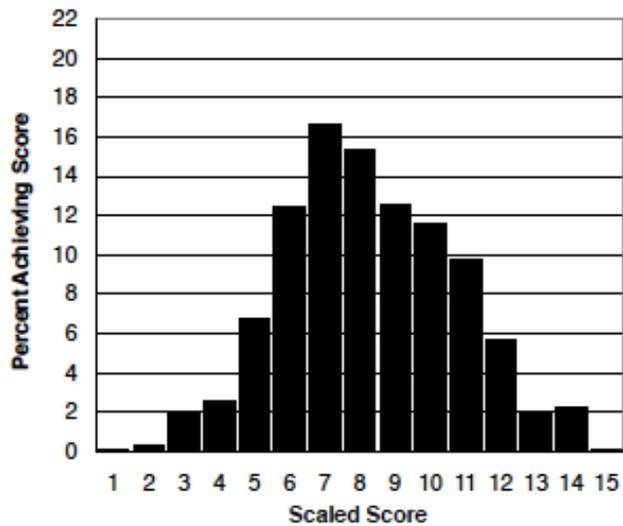
**Total Score**

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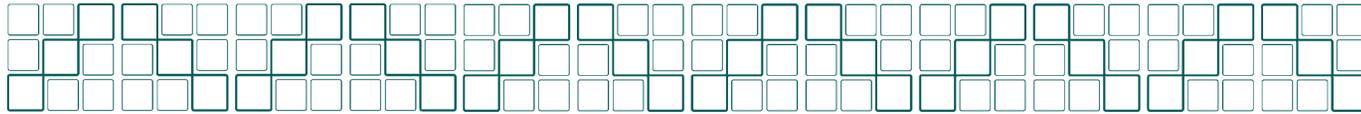


**Physical Sciences**

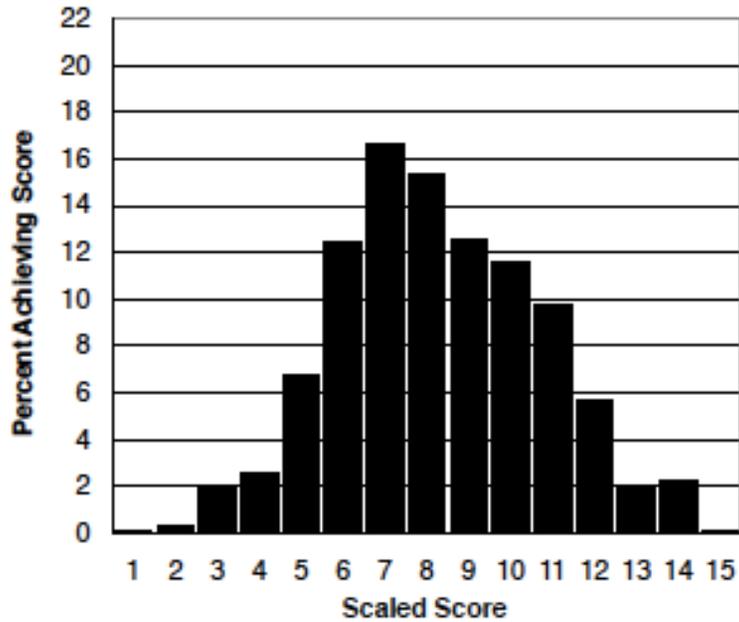


Scaled Score	Percent Achieving Score	Percentile Rank Range
15	0.1	99.9—99.9
14	2.2	97.7—99.9
13	1.9	95.8—97.6
12	5.7	90.1—95.7
11	9.8	80.3—90.0
10	11.6	68.7—80.2
9	12.5	56.2—68.6
8	15.3	40.9—56.1
7	16.6	24.3—40.8
6	12.4	11.9—24.2
5	6.8	5.1—11.8
4	2.6	2.5—5.0
3	2.0	0.5—2.4
2	0.3	0.2—0.4
1	0.1	0.0—0.1

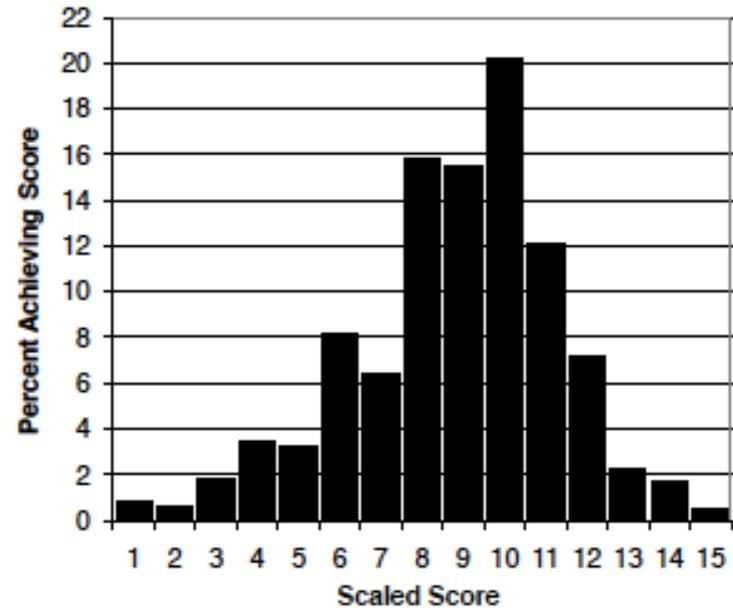
**Scaled Score**  
 Mean = 8.3  
 Std Deviation = 2.5

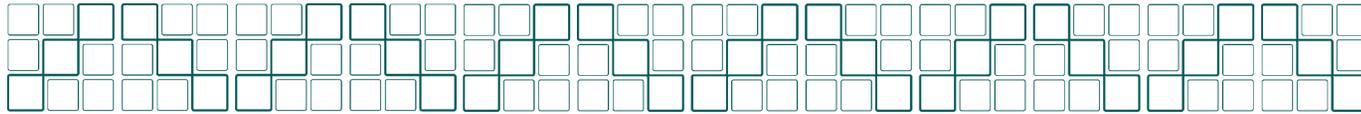


### Physical Sciences



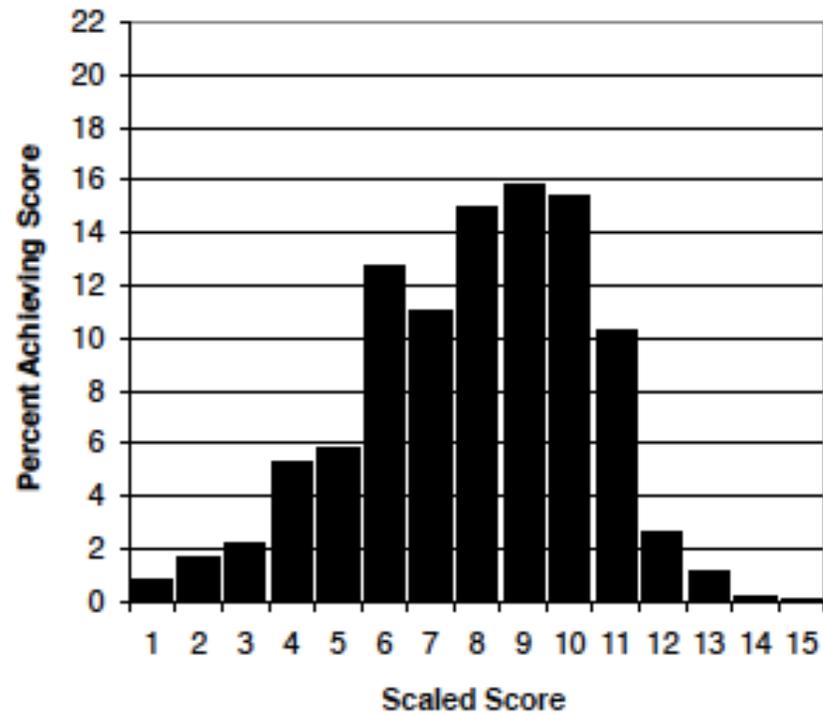
### Biological Sciences





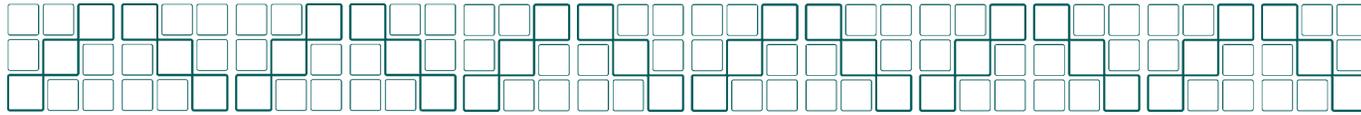
### Verbal Reasoning

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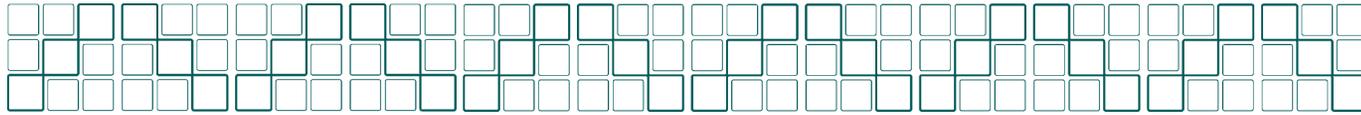
*Question:*

How many questions (out of 52 total) separate a score of 10 from a 9 or an 11 ?



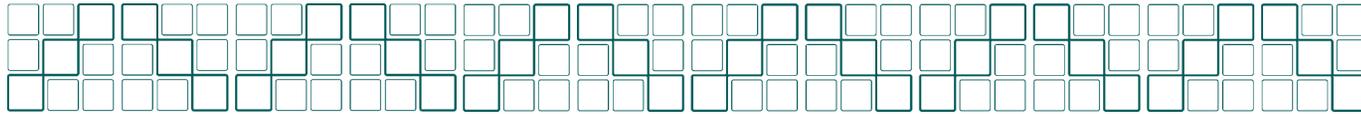
# The Message:



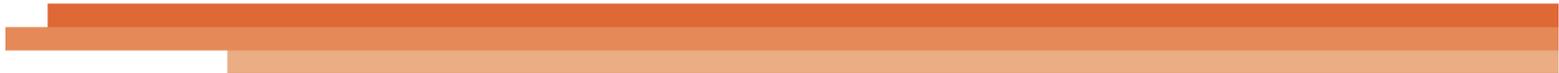


# Things to remember about MCAT Preparation

1. You are studying to get a score, not learn tons of material.
2. You do not need to know the enzymes of the Krebs Cycle.
3. You only need to know a relatively small number of facts.
4. Content study yields diminishing returns. Practice pays larger dividends.



MCAT® is a program of the Association of American Medical Colleges



Considering a Medical Career

Applying to Medical School

Succeeding as a Medical Student

Managing Your Residency

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Contacting MCAT

Medical College Admission Test® (MCAT®)



Are you beginning to prepare for the MCAT® exam, getting ready to register, or heading off to the test center? We have all the official information you need.

Preparing for the MCAT Exam

- ☒ [Creating a Study Plan](#)
- ☒ [Ordering Practice Tests](#)
- ☒ [The Official Guide to the MCAT® Exam](#) ↗
- ☒ [More about Preparing for the MCAT Exam](#)

Updates

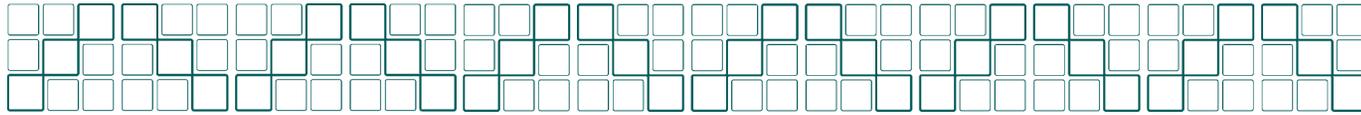
The MCAT Scheduling and Registration will not be available on December 5, 2010 between 7:30am - 3:30pm (Eastern Time).

MCAT® Exam with Accommodations

Examinees with disabilities or medical conditions who feel adjustments are necessary to the testing environment are encouraged to apply for accommodated testing.

[Learn about the MCAT Exam with Accommodations](#) »

For Admissions Officers and Pre-Health Advisors



# So how do I begin to study?

1. Download Content!
2. Set up study schedule
3. Analyze Practice Tests
4. Textbooks !!!
5. Sample problems !!!



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## Preparing for the MCAT® Exam

### What's on the MCAT Exam

Our content outlines will help you familiarize yourself with the Physical Sciences and Biological Sciences topics that may be covered on the test. The Verbal Reasoning outline helps you understand which skills the MCAT® exam is designed to assess. MCAT Writing Sample items (topic statements and instructions) may help you prepare for that section of the test.

- [Physical Sciences PDF](#)
- [Verbal Reasoning PDF](#)
- [Biological Sciences PDF](#)
- [Writing Prompts](#)

### Tools to Help You Prepare

#### The Official Guide to the MCAT Exam >

This guidebook, developed under the direction of the MCAT staff, provides you with extensive information on "everything MCAT." It includes questions from real MCAT exams, thoroughly explained answers, and valuable data.

#### Ordering Practice Tests >

Eight practice tests, updated versions of retired exams, offer low cost opportunities to become familiar with the content and format of the MCAT exam. Practice tests include solutions for each item, automated scoring and diagnostics, customizable feedback, and test assistance features such as the ability to highlight and search the passage text.

### Creating a Study Plan

## Learn More About Preparing for the MCAT Exam

### 2011 MCAT® Essentials

Required reading for all MCAT exam registrants. Includes information on registration, preparation, and administration.

### MCAT® Practice Test 11

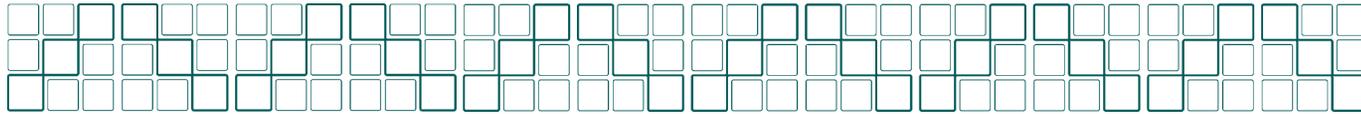
Just released! Prepare with an actual MCAT® exam that includes timed online practice and detailed score reports.

[Buy MCAT® Practice Test 11 >](#)

### The Official Guide to the MCAT® Exam



This guidebook was developed under the direction of the MCAT staff to provide you with extensive information on "everything MCAT."



## Topics for Biological Sciences Section of the MCAT

### **Biology**

#### **Molecular Biology: Enzymes and Metabolism**

##### **A. ENZYME STRUCTURE AND FUNCTION**

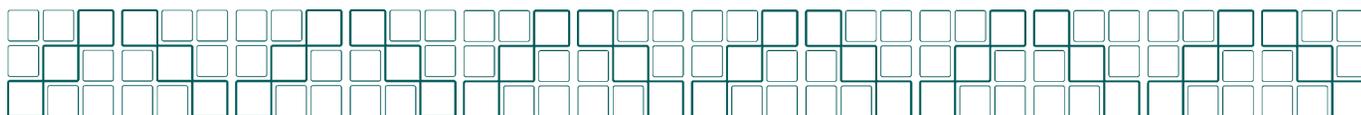
1. Function of enzymes in catalyzing biological reactions
2. Reduction of activation energy
3. Substrates and enzyme specificity

##### **B. CONTROL OF ENZYME ACTIVITY**

1. Feedback inhibition
2. Competitive inhibition
3. Non-competitive inhibition

##### **C. BASIC METABOLISM**

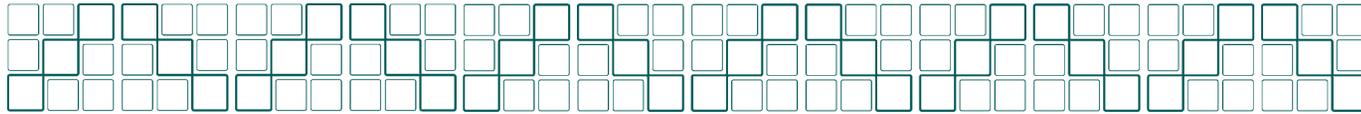
1. Glycolysis, anaerobic and aerobic, substrates and products
2. Krebs cycle, substrates and products, general features of the pathway
3. Electron transport chain and oxidative phosphorylation, substrates and products, general features of the pathway
4. Metabolism of fats and proteins



## Oxygen Containing Compounds

### A. ALCOHOLS

1. Description
  - a. nomenclature
  - b. physical properties
  - c. infrared absorption of OH group
2. Important reactions
  - a. substitution reactions:  $S_N1$  or  $S_N2$ , depending on alcohol and derived alkyl halide
  - b. oxidation
  - c. pinacol rearrangement in polyhydroxyalcohols; synthetic uses
  - d. protection of alcohols
  - e. reactions with  $SOCl_2$  and  $PBr_3$
  - f. preparation of mesylates and tosylates
  - g. esterification
  - h. inorganic esters
3. General principles
  - a. hydrogen bonding
  - b. acidity of alcohols compared to other classes of oxygen-containing compounds
  - c. effect of chain branching on physical properties



## **Physics**

### **Translational Motion**

1. Units and dimensions
2. Vectors, components
3. Vector addition
4. Speed, velocity (average and instantaneous)
5. Acceleration
6. Freely falling bodies

### **Force and Motion, Gravitation**

1. Center of mass
2. Newton's first law, inertia
3. Newton's second law ( $F = ma$ )
4. Newton's third law, forces equal and opposite
5. Concept of a field
6. Law of gravitation ( $F = K_G m_1 m_2 / r^2$ )
7. Uniform circular motion
8. Centripetal acceleration ( $F = mv^2/r$ )
9. Weight
10. Friction, static and kinetic
11. Motion on an inclined plane
12. Analysis of pulley systems
13. Force

The most beneficial, helpful, and useful thing you can do to prepare.....

Take practice tests under **game** conditions!

# Practice MCATs at

- [www.e-mcat.com](http://www.e-mcat.com)

- Online

- [www.aamc.org](http://www.aamc.org)

- Online and paper for sale

- Sample questions in PDF manual

- Helpful site:

- <http://silenttimer.com/handbook/standardizedtest/mcat/index.php>*

Do I need a review course ?

# Writing sample

1. Developing a central idea
2. Synthesizing concepts and ideas
3. Presenting ideas cohesively and logically
4. Writing clearly using good grammar, syntax and punctuation consistent with a timed, first draft

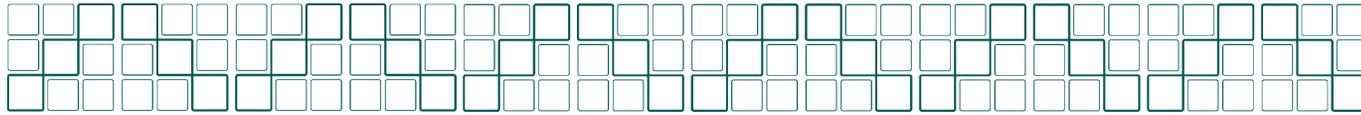
# Writing sample

You are given a statement expressing an opinion.

**First**, explain what you think this means.

**Second**, explore the meaning by considering a circumstance in which the statement might not apply or be true.

**Third**, discuss ways in which the conflict might be resolved.



# Writing Sample

- Two scores for each of two sections
  - Each evaluator awards a score of 1 to 6
- Sum of scores on two questions is converted to J to T scale (11 units on scores from 4 - 24)
- For example:
  - 3 & 3 on Part 1 and 5 & 6 on Part 2
  - Raw score of 17 converted to alphabetic to give distribution

# Writing Sample Scores

Year	Applicants	Matriculants
1999	P	P
2000	P	P
2001	P	P
2002	P	P
2003	P	P
2004 - 2008	O	P

To get a score of P?

≥ 59.5 percentile

# So what do you do now?

- Strunk & White, *The Elements of Style*
- Examine and **analyze** sample essays on web site
- Practice writing timed essays with your study group, each analyzing the work of the group after understanding the scoring and letting them lay dormant for a few days.
- Get a logic or rhetoric book and formally examine some structures for arguments.
  - *If you have time to do this, call me! I will help you find a life!*



Medical College  
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### About the MCAT® Exam

The Medical College Admission Test® (MCAT®) is a standardized, multiple-choice examination designed to assess the examinee's problem solving, critical thinking, writing skills, and knowledge of science concepts and principles prerequisite to the study of medicine. Scores are reported in Verbal Reasoning, Physical Sciences, Writing Sample, and Biological Sciences. Medical colleges consider MCAT exam scores as part of their admission process.

Almost all U.S. medical schools require applicants to submit MCAT exam scores. Many schools do not accept MCAT exam scores that are more than three years old.

### Are You Eligible to Take the MCAT Exam?

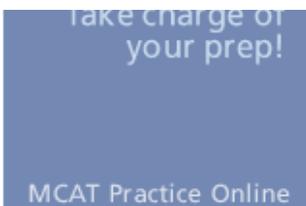
You may sit for the MCAT exam if you are preparing to apply to a health professions school. These include the following types of schools: allopathic, osteopathic, podiatric, and veterinary medicine.

[Learn more about who is eligible to take the MCAT exam >](#)

### MCAT® Exam Statistics

Percentages and scaled score tables as well as retesters data tables.

[MCAT® Exam Statistics >](#)



[Examples of MCAT Writing Sample Prompts](#)

[How is the Writing Sample scored?](#)

[How do I get ready for the Verbal Reasoning Skills section?](#)

[Verbal Reasoning Skills Topics \(PDF, 1 page\)](#)

# Can you cover all of the content?

- What % of what you study will be on YOUR version of the exam?
- So you do the best you can with the study time you have left before test day
- Is your situation any different than that of other test takers?
- **Remember:** Our mission is to.....

# Your study calendar

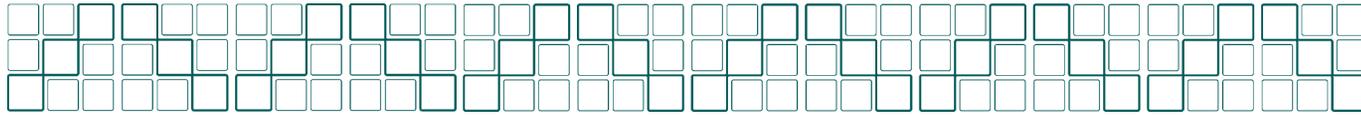
- How many hours per week?
  - How many hours on each day of the week?
- When ?
- What ?
- Where ?
- Check for understanding !

Don't let the  
situation confuse  
you...



As the MCAT day approaches, you should be spending less time on content and more time on practice tests!

With three weeks to go,  
you should be spending 80% time with  
practice tests, 20% on content study  
based on what you missed on practice tests!



# Your Weekly Schedule:

- Monday: one 70 minute Biology section
- Tuesday: grade, review & study
- Wednesday: one 70 min Physics section
- Thursday: grade, review & study
- Friday: Happy Hour
- Sat & Sun: VR

# Time / Question

Section	# of Questions	Time Allowed	Time/ Question
Physical Sciences	52	70 min	~1.3 min or 80 sec
Verbal Reasoning	40	60	1.5 min or 90 sec
Writing	2	60	30 min
Biological Sciences	52	70	~1.3 min or 80 sec

What to do with this information?

Make a table of questions  
completed by certain time points  
for each section!

# Example: Biology

Question #	Time elapsed
10	13.5 minutes
20	27 minutes
30	40.5 minutes
40	53.5 minutes
50	64 minutes

Know your Question # vs. Time  
progress

# Attacking the Biological Sciences & Physical Sciences sections

- Questions associated with 7 passages (39 and 4 - 7 per passage) and 13 stand alone questions
- Step One: There are FOUR (4) types of questions !

# The Four Types of Questions:

- The answer:
  - is in the passage
  - is in the graph or table
  - must be recalled from your knowledge
  - must be arrived at by deductive or inductive reasoning

Always look at where you're going...



# So now...

- For passages,
  - Skim / read the questions first
  - Label questions as to type
  - Read the passage and data, looking for answers
  - Go back to questions and ....

Do not look at the answers until  
you have answered the question  
if the answer isn't in the passage  
or data!

# Other thoughts...

- Process of elimination when required
- Guessing is not penalized
  - Especially if the answer is not in the passage or data
- Keep up the pace
- Keep up the emotional energy
  - Example from 2000

Always be ready for any surprises in life...



# Verbal Reasoning

- Seven passages of ~600 words, each with 5 - 7 questions
- Practice, practice, practice.....
- Keep up the pace or plod along?
  - Your personal strategy must be applied
- Remember when you can find the answer in the passage and when inference is required
- You must stay with it in practice and on the test!

# Possible strategies:

- Outline passage?
- Read passage, read & answer Q's going back to passages as necessary
- Skim & then read passage, then do Q's
- Skim, read Q's, read passage, do Q's
- Read Q's, read passage, do Q's
- Read the first two sentences and 'guess' your way through that passage.