



G D GOENKA
UNIVERSITY
FROM FOUNDATION TO FLIGHT



**SCHOOL OF
BASIC & APPLIED
SCIENCES**

Fun With Physics and Career Prospects

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Plan

- What is Physics & Who should pursue?
- Fun with Physics -1
- Fun with Physics -2
- Physics with Law, Medical Science and Other Streams
- Versatile Physicists

What is Physics ?

- One of the most fundamental Science disciplines.
- Explains what occurs in nature.
- Set of laws of nature that explain the natural phenomena.
- Incorporates with other disciplines of science to explain complex phenomenon.

Who should study physics ?

A natural phenomenon occurs next to you.

- Do you spend time to understand it?
- Do you analyse the situation and ask questions to understand it.
- If answer to both these questions are “Yes”, then you choose physics as a career.

Fun with Physics



Fun with Physics



Skills Required

- Research and problem solving
- Fluency in using scientific equipment
- Refined mathematical skills
- Programming
- Modeling and simulation
- Quality control protocol

Soft Skills:

Learning to work well on a team

Being a good listener

Cultivating strategic written and oral communication skills

Physics Bachelors in Law School

Average LSAT Scores* by Selected Majors, 2012

	Average Score*	Number of Applicants
Mathematics	162.2	254
Physics	162.1	126
Economics	159.1	2,468
Engineering	157.3	1,127
Chemistry	156.7	267
History	156.7	3,323
English	155.8	3,728
Biology	155.2	1,095
Political Science	154.3	12,215
Psychology	153.3	3,335
Computer Science	152.3	327
Pre-Law	149.0	994
Criminal Justice	145.3	2,878
All Majors	153.6	66,197

* Based on test takers who applied to Law School. Applicants are allowed to take the LSAT exam more than once; these averages are computed using each applicant's highest score on the LSAT exam.

Source: Compiled by the Statistical Research Center based on data collected by the Law School Admission Council

<http://www.aip.org/statistics>

About the LSAT

The Law School Admission Test (LSAT) is a half-day, standardized test administered four times each year at designated testing centers throughout the world. All law schools approved by the American Bar Association require applicants to take the LSAT as part of their admission process. According to the Law School Admission Council (LSAC), raw scores are converted to an LSAT scale that ranges from 120 to 180, with 120 being the lowest possible score and 180 the highest possible score. According to US News & World Report, the median LSAT score for applicants accepted by all 193 ranked schools is 157, and the median for applicants accepted to the top 13 schools is 170. If you're interested in a specific school, you can check the LSAC website for a matrix of LSAT scores by GPA, showing the probable likelihood of acceptance for each school.

As a group, the physics bachelor's who apply to law school achieve high scores on the LSAT exam.



focus on

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Statistical Research Center
www.aip.org/statistics

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December 2013

MCAT, LSAT and Physics Bachelor's

Physics majors pursue a wide variety of career paths, many of which are not what you might expect. Some pursue advanced training by applying to graduate schools, medical schools or law schools. The data in this report show that the physics majors who applied to either medical schools or law schools in the 2012 academic year scored quite well as a group on their admission tests. Although one should choose a major based on personal interests and goals, these data show that physics can be an excellent entry degree for programs outside of physics.

About the MCAT

The Medical College Admissions Test (MCAT) has three sections of standardized multiple choice questions with an additional writing sample comprised of two essays. Each section has a potential score range of 1-15.

Table 1

Average MCAT Scores* by Selected Majors, 2012

	Physical Science	Biological Science	Verbal Reasoning	Number of Applicants
Economics	10.8	10.8	9.9	633
Physics	11.1	10.4	9.8	228
Biomedical Engineering	11.1	10.6	9.6	1,147
Mathematics	10.6	10.4	9.3	340
Electrical Engineering	10.9	10.1	9.4	135
Neuroscience	10.1	10.6	9.5	1,615
English	9.6	10.1	10.2	380
Biochemistry	10.1	10.4	9.0	2,864
Chemistry	9.5	10.0	9.0	2,113
Microbiology	9.2	10.1	8.8	759
Psychology	9.1	9.6	9.1	2,327
Biology	9.0	9.7	8.7	13,605
Premedical	8.3	8.9	8.1	587
All Majors	9.5	9.9	9.0	44,464

* Sorted by total score. Based on test takers who applied to Medical School. Applicants are allowed to take the MCAT exam more than once; these averages are computed using each applicant's most recent MCAT exam scores.

Source: Compiled by the Statistical Research Center based on data collected by the Association of American Medical Colleges

<http://www.aip.org/statistics>

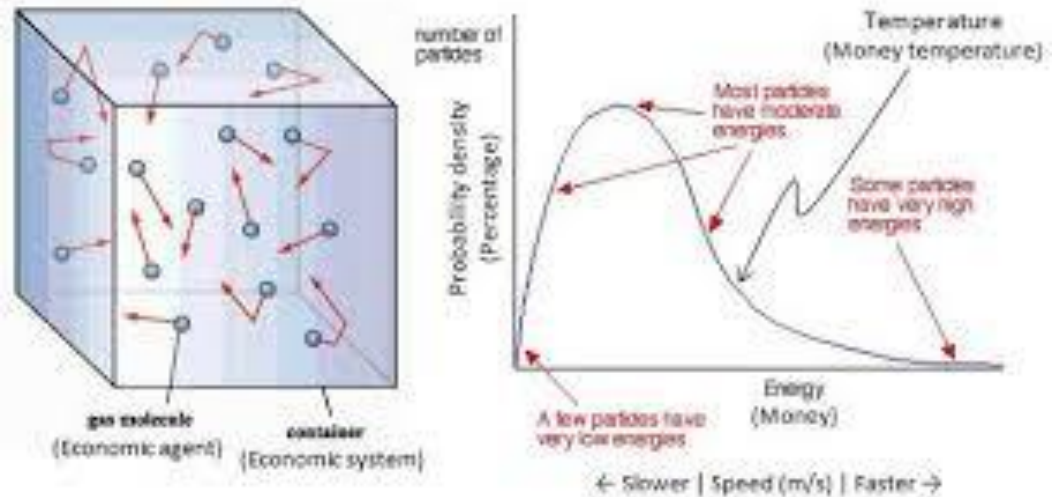
As a group, the physics bachelor's who apply to medical school achieve high scores on the MCAT exam

Physics & Economics

Statistical Mechanics to model the wealth of society

Econophysics a new branch!

Maxwell-Boltzmann Distribution | Money Model



Phys.Org

Stock market forces can be modeled with a quantum harmonic oscillator

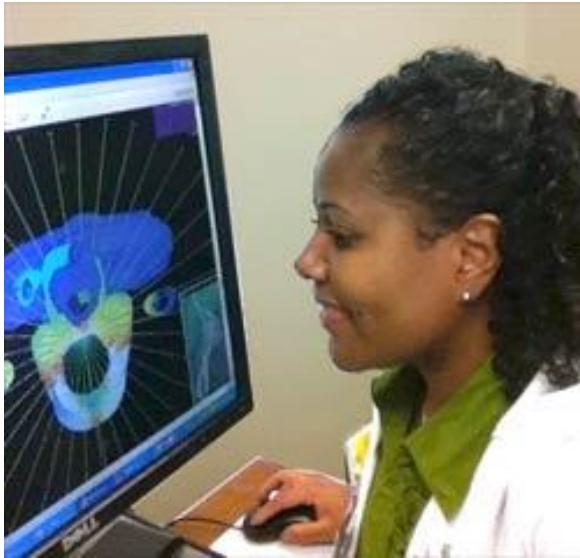
Traditionally, a quantum harmonic oscillator model is used to ... of physics concepts in the context of economics and finance sheds light on the ...

Feb 14, 2018



Quantum Mechanics to model the Stock Market

Physics & Medical Science



Christina Barrow, Physics BS

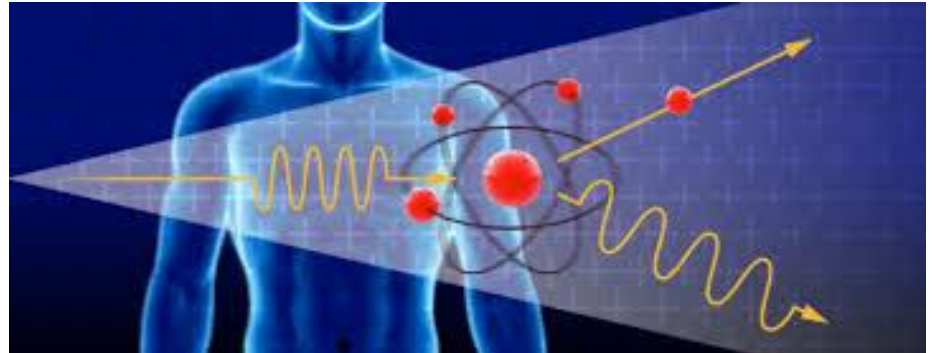
Medical Physicist

Department of Veteran Affairs, Baton Rouge, LA

Educational Background

BS – Physics

MS – Medical Physics

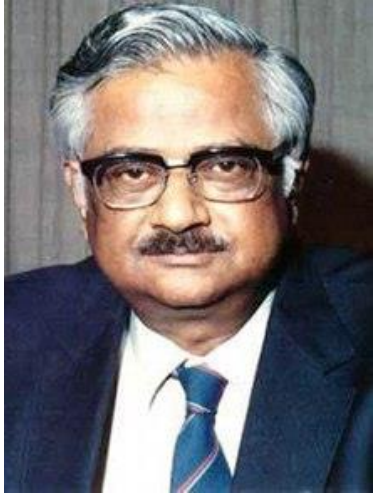


A medical physicist is a professional who specializes in the application of the concepts and methods of physics to the diagnosis and treatment of human disease.

Typical Career Opportunities

- Research scientist careers
- Physics careers in space and astronomy
- Physics careers in healthcare
- Physics careers in engineering
- Physics careers in energy
- Physics careers in technology
- Geophysics and meteorology careers

Physicists in Policy making



Raja Ramanna
Nuclear Test (1971)
Union Minister (Defence)



Prof MGK Menon
Union Minister (Science
& Technology)



Vikram Sarabhai
Founder ISRO, IIM (Ahmadabad)
and many industrial units



Akito Arima,
Minister of Education,
Japan

Physicists with Unusual Career



Ginger Kerrick, Physics MS
Flight Director
NASA Johnson Space Center – Houston, TX

Educational Background

BS – Physics, Texas Tech University
MS – Physics, Texas Tech University



Olivia Tsang, PhD (MPI)
Patent Attorney, UK

Elon Musk, Physics MS

Founder and CEO
Tesla Motors, Space-X – Hawthorne, CA

Educational Background

BS – Physics, University of Pennsylvania
MS – Applied Physics/Materials Science, Stanford



<https://physicstoday.scitation.org/doi/pdf/10.1063/1.3022107>



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- <https://www.imperial.ac.uk/news/123547/from-physics-career-patent/>
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Thank You