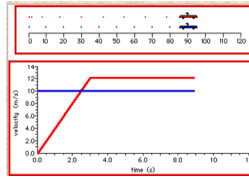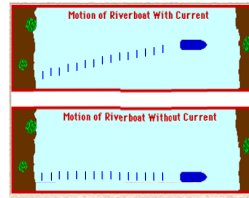## COURSE CONTENT:

Kinematics
Kinematics describes the motion of objects without considering the forces that caused the motion.
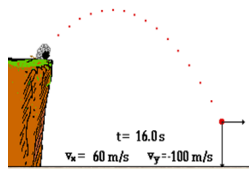
Relative Velocity
Relative velocity is a measurement of velocity between two objects moving in different frames of reference.
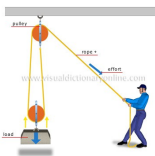
Ballistics
Ballistics is the study of Projectiles. "The wounding potential of projectiles is a complex matter". (*Fackler, 1996*)

Pulleys and Wedges
A pulley is an example of a simple machine and are used and designed in order to reduce the amount of force needed to lift a load.
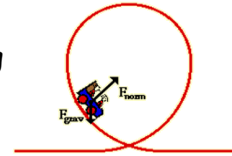
Momentum and Collisions
The outcome of a collision between bodies depends on the mass of each object and the direction and speed they were travelling just before the collision.
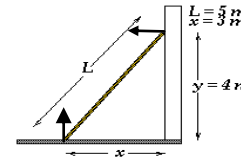
COURSE CONTENT:

Circular Motion and SHM
Circular Motion is the study of forces on bodies travelling in a circular path.

Statics
Statics is the study of forces and moments on systems in equilibrium.
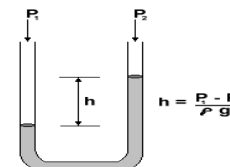
Moments of inertia
The moment of inertia of an object describes how difficult it is to change its angular motion about an axis.
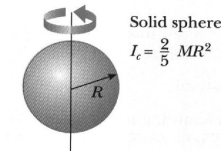
Hydrostatics
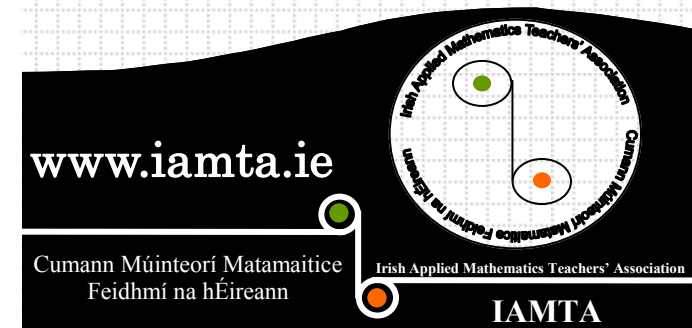Hydrostatics is the study of liquids and gases at rest.

Differential Equations
Differential Equations are the language in which the laws of nature are expressed.

APPLIED MATHEMATICS FOR LEAVING CERTIFICATE
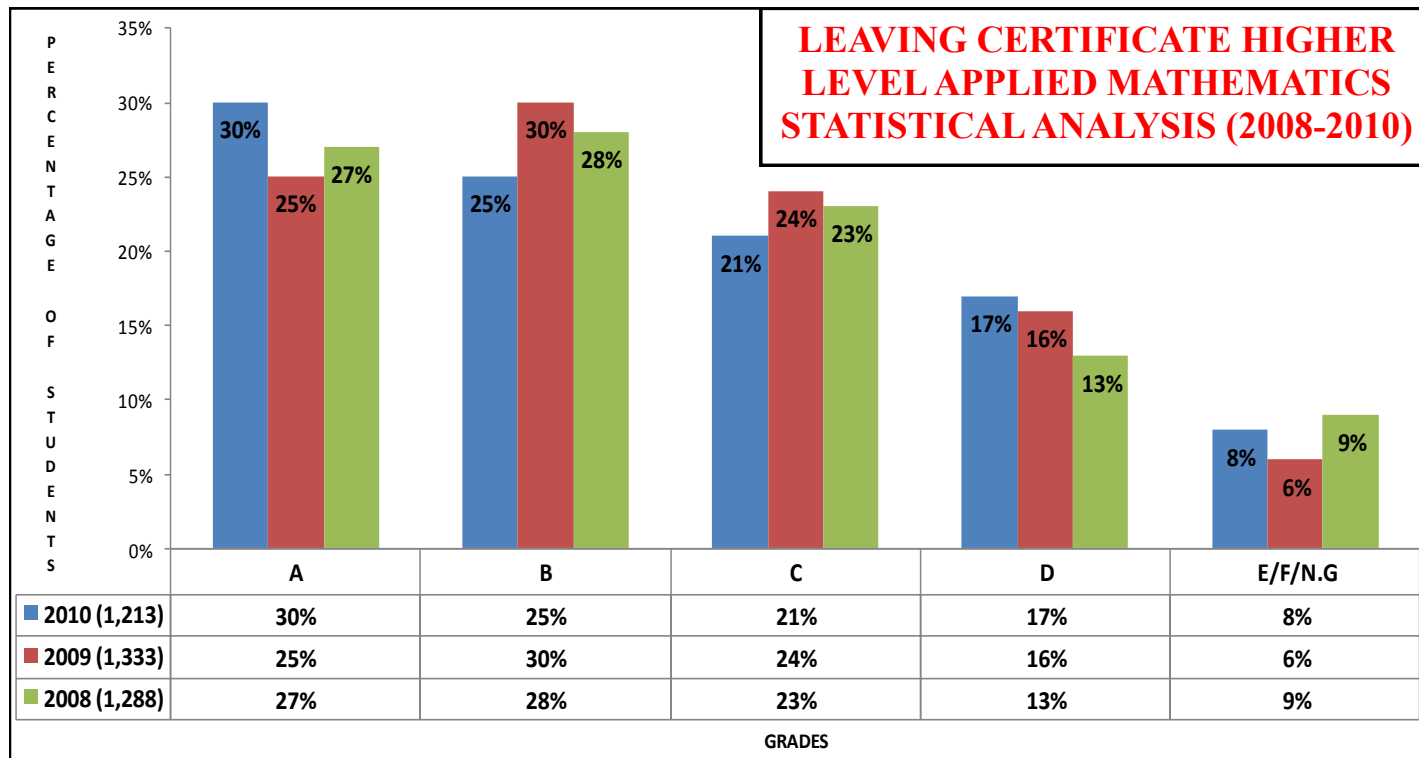
What is Applied Mathematics?

Applied Mathematics is used to help understand the real world and to help to change parts of it for man's benefit. It is used in such diverse fields as engineering, business, finance, physics, biology, economics, environmental studies, chemistry, political studies, medicine etc. The Applied Mathematics course at Leaving Certificate is really a course on Theoretical Mechanics or Mathematical Physics. This is one of many branches of Applied Mathematics which enhances students problem solving skills.

This course is suitable for any of the following:

- Students considering a career in any area of Engineering, Science, Information Technology, Business, Architecture or Education.
- Students who are studying Leaving Cert. higher level maths. This course also helps students studying Physics.
- Students who need high entry points to get into university. On average over the past 3 years 27% of students get an 'A' grade in the Leaving Certificate examination.

Note:

There is a public perception that only the top students in the country do Applied Mathematics. This perception will stand favourably to students when attending interviews for high-profile jobs in the near future.

LEAVING CERTIFICATE HIGHER LEVEL APPLIED MATHEMATICS STATISTICAL ANALYSIS (2008-2010)

PERCENTAGE OF STUDENTS vs GRADES

	A	B	C	D	E/F/N.G
2010 (1,213)	30%	25%	21%	17%	8%
2009 (1,333)	25%	30%	24%	16%	6%
2008 (1,288)	27%	28%	23%	13%	9%

Testimony of former Applied Maths Student

Gaurav Verma did his leaving Certificate in 2008 and achieved a C1 in Applied Maths.

Applied Maths build's up a person's investigating and calculating abilities. A student gets to know many alternative ways of working out a problem, coming at it from different angles and often needing some lateral thinking. I definitely would recommend students to give *Applied Maths* a shot, especially those interested in *Physics* and *Maths*. It would be a huge benefit to those interested in doing *Engineering* or *Architecture* in college. It can only turn out to be a benefit, nothing less than that.

Testimony of former Applied Maths Student

Michelle Madden is from Blackrock and achieved an A1 in Applied Maths in 2009

I soon discovered that Applied Maths is a hugely under-rated subject with a lot of benefits. Firstly, for those people who, like me, have lazy tendencies, and can think of better ways to spend an afternoon than memorising dates until you can't even remember what year it is any more, Applied Maths is the ideal subject. There is almost no theory and very little writing involved, which is something I greatly appreciated when trying to write poetry essays every weekend.