COURSE SYLLABUS

Pathway Mathematics 1, 7.5 Pre-education credits

Pathway Mathematics 1, 7,5 förutbildningspoäng

Course Code:	PM1X00	**Education Cycle:**	Pre-university level
Confirmed by:	Dean Jun 22, 2020	**Disciplinary domain:**	Natural sciences
Valid From:	Aug 24, 2020	**Subject group:**	MA1
Version:	1	**Specialised in:**	XXX

Intended Learning Outcomes (ILO)

On completion of the course, the students will be able to

Knowledge and understanding

1. display knowledge of polynomial functions, power functions and exponential functions, including their basic properties
2. display knowledge of the concept of geometric sum and linear optimization

Skills and abilities

3. demonstrate ability to transform and simplify algebraic expressions
4. demonstrate skills of solving equations of various sorts
5. demonstrate skills of calculating derivatives and basic integrals involving the above mentioned elementary functions
6. demonstrate ability to use derivatives in order to analyze the properties of a given function and to methodically solve optimization problems

Contents

The course includes the following elements:

- Basic algebra
- Geometric sums
- Studies of polynomial, power and exponential functions
- Derivatives, differentiation rules for the functions mentioned above
- Applications using the derivative to solve optimization problems
- Integrals

Type of instruction

Lectures and tutorials.

The teaching is conducted in English.

Prerequisites

High School Diploma and English Language skills corresponding to:

IELTS 5.5 or the equivalent
Mathematics 2a, 2b, 2c or the equivalent

Examination and grades

The course is graded Fail (U) or Pass (G).

The examination consist of a written exam.
The ILOs are sssessed by the following means:
Written exam: ILO 1; ILO 2; ILO 3; ILO 4; ILO 5; ILO 6

Registration of examination:

Name of the Test	Value	Grading
Examination	7.5 credits	U/G

Other information

The course corresponds to Ma 3b from Swedish High School.

Course literature

Ibrahim, Wazir. (2012). Pearsons Baccalaureate, Standard Level Mathematics, Developed specifically for the IB Diploma. 2. uppl. Pearson Education