San Pablo Catholic University (UCSP)
Undergraduate Program in
Computer Science
SILABO

Universidad Católica San Pablo
2020-II

MA100. Mathematics I (Mandatory)

1. General information

1.1 School	:	Ciencia de la Computación
1.2 Course	:	MA100. Mathematics I
1.3 Semester	:	1^{er} Semestre.
1.4 Prerrequisites	:	None
1.5 Type of course	:	Mandatory
1.6 Learning modality	:	Virtual
1.7 Horas	:	2 HT; 6 HP;
1.8 Credits	:	5

2. Professors

3. Course foundation

The course aims to develop in students the skills to deal with models in science and engineering related to single variable differential calculus skills. In the course it is studied and applied concepts related to calculation limits, derivatives and integrals of real and vector functions of single real variables to be used as base and support for the study of new contents and subjects. Also seeks to achieve reasoning capabilities and applicability to interact with real-world problems by providing a mathematical basis for further professional development activities.

4. Summary

1. 2. 3. 4.

5. Generales Goals

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6. Contribution to Outcomes

This discipline contributes to the achievement of the following outcomes:

a) An ability to apply knowledge of mathematics, science. (**Assessment**)

j) Apply the mathematical basis, principles of algorithms and the theory of Computer Science in the modeling and design of computational systems in such a way as to demonstrate understanding of the equilibrium points involved in the chosen option. (**Assessment**)

7. Content

UNIT 1: (20)	
Competences:	
Content	**Generales Goals**
• . • .	• . • .
Readings: Stewart (2012), ión (2014)	

UNIT 2: (10)	
Competences:	
Content	**Generales Goals**
• . • . • . • . • . • .	• . • . • . • . • . • .
Readings: Stewart (2012), ión (2014)	

UNIT 3: (20)	
Competences:	
Content	**Generales Goals**
• . • . • . • . • .	• . • . • . • . • . • . • . • . • . • .
Readings: Stewart (2012), ión (2014)	

UNIT 4: (22)	
Competences:	
Content	**Generales Goals**
• . • . • . • .	• . • . • . • . • . • . • . • . • . • .
Readings: Stewart (2012), ión (2014)	

8. Methodology

El profesor del curso presentará clases teóricas de los temas señalados en el programa propiciando la intervención de los alumnos.

El profesor del curso presentará demostraciones para fundamentar clases teóricas.

El profesor y los alumnos realizarán prácticas

Los alumnos deberán asistir a clase habiendo leído lo que el profesor va a presentar. De esta manera se facilitará la comprensión y los estudiantes estarán en mejores condiciones de hacer consultas en clase.

9. Assessment

Continuous Assessment 1 : 20 %

Partial Exam : 30 %

Continuous Assessment 2 : 20 %

Final exam : 30 %

References

ión, ROn Larson (2014). *Calculus*. 10th.
Stewart, James (2012). *Calculus*. 7th.