# UNIVERSIDAD NACIONAL DEL SUR

BAHIA BLANCA                                             ARGENTINA

## DEPARTAMENTO DE MATEMÁTICA

| PROGRAMA DE: | Set Theory: An Introduction To Independence Proofs | Curso |
| --- | --- | --- |
| | | Posgrado |

| HORAS | PROFESOR RESPONSABLE |
| --- | --- |
| 40 (cuarenta) | Dr. Giorgio VENTURI |

## REQUISITOS PREVIOS

To have knowledge about Model Theory and Set Theory.

## DESCRIPCIÓN

We will give a full proof of the independence of CH from the ZFC axioms. We will discuss some model-theoric thecniques to applied set theory.

## OBJETIVOS

We aim to give tools for producing a new independeces proofs.

## MOTIVACIÓN O FUNDAMENTACIÓN DEL CURSO

The course will exhibit a presentation of the most fundamental constractions and techniques of the modern Set Theory; e.g., the Gödel class L of all constructible sets and Forcing.

## MECANISMO DE EVALUACIÓN

A seminar will be required to complete the the course.

## PROGRAMA

We will review some basic notion of set theory like cardinals and ordinals. Then, we will introduce the constructible hierarchy L to prove the consistency of ZFC + CH. Then, we will introduce the forcing technique and the relative notions of boolean valued to proof the consistency of ZFC+ ¬CH.

| AÑO | 2019 | | | | | | |
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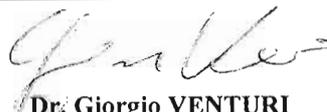| PROGRAMA DE: | Set Theory: An Introduction To Independence Proofs | Curso |
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## BIBLIOGRAFIA

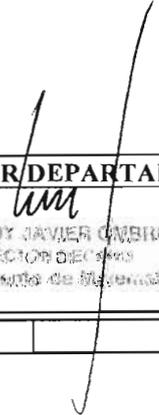- Kenneth Kunen, "Set Theory", College Publications (2011), segunda edición. Revised edition, 2013.

| AÑO | PROFESOR RESPONSABLE | DIRECTOR DEPARTAMENTO |
|---|---|---|
| 2019 | Dr. Giorgio VENTURI | Dr. SHELBY JAVIER CAMBRICS DIRECTOR DECANO Departamento de Matemática |

| AÑO | 2019 | | | | |