

## Syllabus

[cmcd.economia@fgv.br]

**Course:** Measure and Probability Theory

**Professor:** V. Filipe Martins-da-Rocha

2018WINTER

## PROGRAM

Basic concepts of Measure, Integration, and Probability Theory.

## BIBLIOGRAPHY

1. Williams, D.: "Probability with Martingales". Cambridge University Press, 1991.
2. Royden, H. L. and P. M. Fitzpatrick: "Real Analysis". Prentice Hall, 1988.
3. Capinski, M. and E. Kopp: "Measure, Integral and Probability". Springer, 2004.

## GRADING

Final examination or an equivalent exercise due at the time of the final examination.

## PROFESSOR-EMAIL

[victor.rocha@fgv.br](mailto:victor.rocha@fgv.br)

## DETAILED PROGRAM

- |                              |                            |
|------------------------------|----------------------------|
| 1. What's Wrong with Riemann | 9. Conditional Expectation |
| 2. Measure Spaces            | 10. Martingales            |
| 3. Events                    | 11. Convergence Theorems   |
| 4. Random Variables          | 12. Uniform Integrability  |
| 5. Independence              |                            |
| 6. Integration               |                            |
| 7. Expectation               |                            |
| 8. Product Measure           |                            |