

## Measurement

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Measurement is a central part of scientific practice. As Lord Kelvin once put it, in words now inscribed on the facade of a building at the University of Chicago, "If you cannot measure, your knowledge is meager and unsatisfactory." What is measurement, and is Kelvin right to view it as an essential part of scientific knowledge? Histories of science often focus on successful measurements as anchoring a field of study. Similarly, in philosophy of science, successful measurements are often taken to decide among competing theories. Recently there has been a renewed interest in understanding measurement among philosophers of science, and this seminar will survey this work. We will approach questions regarding measurement from three different perspectives: (i) historical analysis of case studies, including Smith and Seth *Brownian Motion*, and Chang's *Inventing Temperature*; (ii) recent work on the epistemology of measurement, including papers by Cartwright and Tal; (iii) challenges regarding how to introduce and justify measurable quantities in the social sciences. The course will not presume background knowledge of the relevant scientific areas.