MATH 1060H Background Books and Further Reading:

Partial Differential Equations:

W Craig. *A Course on Partial Differential Equations*. AMS, 2018.

LC Evans. *Partial Differential Equations*. AMS, 2nd ed, 2010.

D Gilbarg and N Trudinger. *Elliptic Partial Differential Equations of Second Order. 2nd Ed*. Springer, 1998.

J Jost *Partial Differential Equations*. New York, Springer, 2013.

Functional Analysis:

Adams and Fournier. *Sobolev Spaces.* Elsevier Academic Press 2003.

Brézis. *Analyse fonctionelle: Théorie et applications*. Dunod 1999.

Reed and Simon. *Functional Analysis* (volume 1 of Methods of Modern Mathematical Physics; Revised and Enlarged Edition). Academic Press 1980.

Rudin. *Functional Analysis*. McGraw-Hill 1973.

Measure Theory and Integration:

Adams and Guillemin. *Measure Theory and Probability* Birkhäuser, 1996.

Lieb and Loss. *Analysis*. American Mathematical Society 1997.

Royden. *Real Analysis. 3rd ed.* McMillan Publishing Co., 1988, 1963.

Rudin. *Real and Complex Analysis. 3rd ed.* McGraw- Hill 1987, 1966.

Geometric Analysis:

Evans and Gariepy. *Measure Theory and Fine Properties of Functions*. CRC Press 1992.

Federer. *Geometric Measure Theory.* Springer, 1969.

Giusti. *Minimal Surfaces and Functions of Bounded Variation*. Birkhäuser 1984.

Morgan. *Geometric Measure Theory. A Beginner's Guide.* Academic Press 1995.

Optimal Transportation:

Santambrogio. *Optimal Transport for Applied Mathematicians*. Springer 2015.

Villani. *Topics in Optimal Transportation*. American Math Society 2003.

Villani *Optimal Transport: Old and New*. Springer 2009.