$=7$
$=1$

<div align="center">

Special Topics in Physics

Cian Luke Martin

March 2, 2023

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Contents

1 Lecture: Introduction

<div align="right">21/02/2023</div>

Schedule

- Week 2: Path Integral Methods in QFT - Statistical Field Theory (Euclidean QFT) - **James & I**
- LeBellac Chap 8
- Week 3- 6: Renormalisation in QFT (φ^4) - **Achintya, James, Greg & I**
- LeBellac Chap 5 & 6
- Assignment: Renormalisation of $\frac{\lambda}{3!}\varphi^3$ in 6D (1 loop).
- Week 7-9: QED Scattering amplitudes.
- Week 10-13: Renormalisation of QED, SM and QFT on curved spacetime.

2 Lecture: Path Integral Formalism

<div align="right">03/03/2023</div>

This lecture and accompanying notes follow closely LeBellac Chapter 8.