


Physics 3 "Modern Essentials"

Excited to teach this course!

Pretty clearly Best Physics course around
( As you will see ...)

Subject matter intently intensity / Crazier than Science Fiction
(time travel, Parallel universes)
and has enormous
reach / impact on the way we live

- Changed the way we think about Science/Physics

Went from knowing almost nothing about our everyday
things (1920's) to knowing almost everything

- Completely changed Philosophy

- The way we think about the world / what
can exist

- Completely changed Society

- Electronics
- Communication
- Warfare
- ect.

Start by unpacking the name

- Unusual but fitting name (unpack)
- "Physics 3" appropriate / not typical
Assumes knowledge of Physics 1+2, but doesn't build on them, replaces (overwrites them)
- Course really about "Revolution in Physics"

Space-time

Q. M.

- "Modern"

Many different meanings of modern

"post-Industrial revolution" vs "like the iPhone"

Both usages are fitting

-> Revolution happened in early 20th C

-> They are directly responsible (Esp QM) for the modern

economy
world
as is


- "Essential"

- Understand modern economy
- Modern view of the world (Still some disagreement here actually...)
- Conception of Science / Physics
- Players at the heart of Drama in developing SM
+ understanding what lies beyond

Why ST + QM such a big deal?

Story starts w/ Newton. Newton's Dream

↓ ↓ ↓ - Unification

- Direction of Science
- Fact about the world
 - Could have been otherwise
 - Drama in modern Physics 
- Impact of 20th C revolutions
 - Maybe discuss atom stability(?)
- SR + QM "Mission Barely Possible"
- Standard Model completely ruled by SR + QM