

Resonance Academy Unified Science Course

Index & Links Only

The Resonance Academy Science Foundation is a global non-profit based on Nassim Hamein's Unified Field Theory. The goal is to create a world where humanity's technological and social systems are in harmonious relationship with nature, earth and the cosmos. The Resonance Groups are a community that understand everything is connected and they have the science to prove it, and the tools to experience it.

One of those tools is the Resonance Academy Unified Science Course

<https://www.resonancescience.org/library> This document is an outline of all the course sections with each item also being a link to take you directly to the specific course content page.

There are two versions of this document content. The original (this document) lists the section titles along with the accompanying links only. It acts as a quick reference to the material by outlining the content and as a quick navigation mechanism to get to specific information more quickly. The outline numbers correspond to the numbering scheme used in the course e.g., below you will find that outline number 3.5.1 has the title - What Does Quantum Mean? In the Academy's online course, section 3.5.1 is also What Does Quantum Mean? The 2nd version of the content contains everything from the original plus notes to further describe the section material. This variant can be used as course crib notes. As I include additional notes or the Resonance group adds new information this document will change. The latest version can be downloaded at <http://www.randylangel.com/unified-physics-downloads.html>

This document is available in Microsoft Word format to allow for linking to an open browser signed-on to the Resonance Science Unified Science Course site.

Randy Langel randy.langel@gmail.com 4/4/20

1 Worldview Shift

1.1 Introduction

1.1.1 A Comprehensive Perspective

1.1.2 What is a Worldview and Why is it Important?

1.2 Two Worldview Lenses

1.3 The Disconnected World View

1.3.1 Scientific Perspective

1.3.2 The Importance of Shifting our Worldview

1.3.3 How Did the Disconnected Worldview Arise?

1.3.4 Consequences of a Disconnected Worldview

1.4 Shifting our Worldview

1.4.1 A Natural Evolution of a Society

1.4.2 Shifting from Disconnected to Connected

1.4.3 Feedback is Inherent in Cosmic Evolution

1.5 Roots of Unified Physics & a Connected Worldview

1.6 Implications of a Connected Worldview

1.7 Summary

2 Thinking Differently

2.1 Introduction

2.2 The Courage to be Bold

2.2.1 Revolutions in Thinking

2.3 Different Thinkers – Roots of Scientific Ideas (for better or worse)

2.3.1 Pythagoras

2.3.2 Plato

2.3.3 Euclid

2.3.4 Hypatia of Alexandria (circa 370-415 AD)

2.3.5 Leonardo Da Vinci (1452-1519)

2.3.6 Nicolaus Copernicus (1473-1543)

2.3.7 Giordano Bruno (1548-1600)

2.3.8 Galileo Galilei (1564-1642)

2.3.9 Johannes Kepler (1571-1630)

2.3.10 Rene Descartes (1596-1650)

2.3.11 Lady Anne Conway (1631-1679)

2.3.12 Isaac Newton (1642-1727)

2.3.13 Nikola Tesla (1856-1943)

2.3.14 Max Planck (1858-1947)

2.3.15 Albert Einstein (1879-1955)

2.3.16 Barbara McClintock (1902-1992)

2.4 Nassim's Personal Reflections on Thinking Differently

2.5 Principles of Thinking Differently

2.5.1 Question Everything

- 2.5.2 [Intuitive Knowing](#)
- 2.5.3 [Follow the Breadcrumbs](#)
- 2.5.4 [Confirmations from Nature](#)
- 2.5.5 [The Solution is Always Beautiful](#)
- 2.6 [Changing Course – From 2D Isolation to Holographic Wholeness](#)
- 2.6.1 [Modern Physics – 2D Isolation](#)
- 2.6.2 [Unified Physics – Holographic Wholeness](#)
- 2.7 [Summary](#)

3 [Modern Physics](#)

- 3.1 [Introduction](#)
- 3.2 [Reductionism](#)
 - 3.2.1 [Descartes](#)
 - 3.2.2 [Newton & his Contention to Cartesian Thinking](#)
 - 3.2.3 [A Flat Universe](#)
 - 3.2.4 [Summary](#)
- 3.3 [Closed Systems](#)
 - 3.3.1 [Energy](#)
 - 3.3.2 [The Laws of Thermodynamics](#)
 - 3.3.3 [Entropy](#)
 - 3.3.4 [Summary](#)
- 3.4 [Einstein & the Relativity Revolution](#)
 - 3.4.1 [Light & Special Relativity](#)
 - 3.4.2 [Mass Energy Equivalence](#)
 - 3.4.3 [Gravity & Einstein's General Theory of Relativity](#)
 - 3.4.4 [Black Holes](#)
 - 3.4.5 [Summary](#)
- 3.5 [Quantum Theory](#)
 - 3.5.1 [What Does Quantum Mean?](#)
 - 3.5.2 [Blackbody Radiation & the Ultraviolet Catastrophe](#)
 - 3.5.3 [Planck Units](#)
 - 3.5.4 [The Birth of Quantum Theory](#)
 - 3.5.5 [Copenhagen Interpretation](#)
 - 3.5.6 [Quantum Electrodynamics](#)
 - 3.5.7 [Quantum Field Theory – Vacuum Catastrophe](#)
 - 3.5.8 [Summary](#)
- 3.6 [The Standard Model](#)
 - 3.6.1 [Fundamental Questions](#)
 - 3.6.2 [Particles](#)
 - 3.6.3 [The Strong Force](#)
 - 3.6.4 [The Electroweak Interaction](#)
 - 3.6.5 [The Higgs Mechanism & Higgs Boson](#)

- [3.6.6 Attempts at Unification](#)
- [3.6.7 Quantum Gravity](#)
- [3.6.8 Summary](#)
- [3.7 Summary of Modern Physics](#)

[4 Unified Physics](#)

- [4.1 Introduction to Unified Physics](#)
 - [4.1.1 What is Unified Physics?](#)
 - [4.1.2 Big Unsolved Problems in Physics](#)
 - [4.1.3 Holographic Universe](#)
 - [4.1.4 Fractal Universe](#)
 - [4.1.5 Black Holes](#)
- [4.2 Space](#)
 - [4.2.1 Modern Unified Theories & Space](#)
 - [4.2.2 99.9999999999996% Space](#)
 - [4.2.3 What is Spacetime?](#)
 - [4.2.4 Dividing Spacetime \(Quantization\)](#)
 - [4.2.5 The Density of Spacetime & Holographic Information Storage](#)
 - [4.2.6 Dark Energy & the Expanding Universe](#)
- [4.3 Quantum Gravity](#)
 - [4.3.1 Resolving the Vacuum Catastrophe](#)
 - [4.3.2 A Quantized Solution for Gravity](#)
 - [4.3.3 Gravity at the Quantum Scale](#)
 - [4.3.4 Predicting the Radius of the Proton](#)
 - [4.3.5 Publishing the Solution & Predictions](#)
 - [4.3.6 Collective Quantum Coherence & the Source of Mass](#)
- [4.4 The Confining Force](#)
 - [4.4.1 Introduction](#)
 - [4.4.2 The Hierarchy Problem](#)
 - [4.4.3 The Gravitational Coupling Constant](#)
 - [4.4.4 Energy & Spin of a Proton](#)
 - [4.4.5 A Unified View Emerges](#)
 - [4.4.6 Gravitational Falloff & the Yukawa Potential](#)
 - [4.4.7 Summary of Hamein's Solutions](#)
- [4.5 The Connected Universe](#)
 - [4.5.1 The Holographic Network of Spacetime](#)
 - [4.5.2 Entanglement](#)
 - [4.5.3 The Universe is a Black Hole](#)
 - [4.5.4 Experiencing the Unified Network](#)
 - [4.5.5 Fundamental Harmonics of the Planck Scale](#)
 - [4.5.6 The Large Number Hypothesis](#)
 - [4.5.7 Cosmogenesis](#)
 - [4.5.8 Continuous Creation Model](#)

[4.6 Geometry & Spin](#)

[4.6.1 The Torus](#)

[4.6.2 The Origin of Spin](#)

[4.6.3 The Geometry of Spacetime](#)

[4.7 Summary](#)

[5 Ancient Origins](#)

[5.1 Patterns, Symbols & Buckminster Fuller](#)

[5.1.1 Cosmic Patterns & Ancient Origins](#)

[5.1.2 Buckminster Fuller](#)

[5.1.3 Pattern Integrity & Fractal Structures](#)

[5.2 The Tetrahedral Structure of Space](#)

[5.2.1 Fuller's Tangential Sphere-Packing Model](#)

[5.2.2 The Tetrahedron & Teotihuacan](#)

[5.2.3 Tetrahedron Matrix](#)

[5.3 All-Space Sphere Packing](#)

[5.3.1 Haremein's Overlapping Sphere-Packing](#)

[5.3.2 Combining Spheres & the 64 Tetrahedron Matrix](#)

[5.3.3 PSU Tiling & the Flower of Life](#)

[5.4 Signs from Ancient Times](#)

[5.4.1 Controversy at Abydos](#)

[5.4.2 Cultural Synergy](#)

[5.4.3 The Chinese Connection](#)

[5.4.4 I Ching & Taijitsu Symbology](#)

[5.4.5 Continuing our Journey](#)

[5.4.6 The Face & Name of God](#)

[5.4.7 Kabbalistic Tradition](#)

[5.4.8 Pythagoras, Egyptians & the Tetragrammaton](#)

[5.5 Journey of the Ark](#)

[5.5.1 The Ark & the Bible](#)

[5.5.2 Box within Boxes](#)

[5.5.3 Gravity Control](#)

[5.5.4 Evidence of Gravity Control in Egypt](#)

[5.5.5 Codes Through the Ages](#)

[5.5.6 Newton's Ancient Sources](#)

[5.5.7 The Order of the Knights Templar](#)

[5.5.8 The Ark in Ethiopia](#)

[5.5.9 The Templars in Europe](#)

[5.5.10 Ancient Origins in Modern Times](#)

[5.6 Summary](#)

6 Implications & Applications

6.1 Energy Generation & Gravity Control

6.1.1 Quantum Vacuum Engineering

6.1.2 Isolated Systems & Their Impact on Society

6.1.3 Overunity Energy Generation & Gravitational Modulation

6.1.4 Civilization's Graduation from Type 0 to Type 1 or More

6.1.5 The EMDrive

6.1.6 Engineering the Spacetime Vacuum

6.1.7 Ladies & Gentlemen, Spin up your Drives

6.1.8 The So-Called Tajmar Effect

6.2 ARK Crystal

6.3 Biology & Awareness

6.3.1 On the Unified Physics of Biology & Awareness

6.3.2 Cellular & Molecular Information Processes

6.3.3 The Cellular Membrane

6.3.4 The Deep Dive: Cubic Membranes

6.3.5 The Cytoskeleton

6.3.6 Mitochondria & Electromagnetic Signaling

6.3.7 The Ubiquitous Presence of Awareness

6.3.8 Summary

6.4 The Bright Future of Humanity

6.4.1 Ecological Restoration

6.4.2 Planetary Terraforming

6.4.3 Traveling Through Wormholes

6.4.4 Humanity's Interstellar Future

6.5 Summary & Course Completion