Key Topics in Technological Entrepreneurship Dr. Jack M. Wilson

Please know the key points and issues in the cases we have discussed:

Weeks 1-5: ILinc, SELCO, CRISPR, Segway, Theranos, Uber, Dell, Privo, UMass Rabies Monoclonal Antibody

Weeks 6-8: Invisawear, Tesla, ZipCar, KickStarter, Google,

The first exam covers weeks 1-5. The final exam is comprehensive over all weeks and chapters.

Terms that you should know, understand, and be able to cite examples of:

Weeks 1 to 5.

- 1. Schumpeter: Creative Destruction
- 2. Christensen: Disruptive Innovation
- 3. Sustaining Innovation
- 4. Characteristics (and Myths) of Entrepreneurs.
- 5. Types of Entrepreneurship new ventures, technological, social, corporate, lifestyle, salary substitute, etc.
- 6. Opportunity Gap
- 7. Opportunity Recognition and Entrepreneurial Awareness
- 8. Moore's Law-doubling computer power
- 9. Gilder's Law doubling bandwidth
- 10. Metcalf's Law-value of a network is proportional to the square of the number of people in the network.
- 11. Trends and Forces: Technological, Social, Economic, Political/Legal/Regulatory
- 12. Feasibility Analysis: Product/Service; Industry/Target Market; Organizational; Financial
- 13. Concept statement, Concept test
- 14. Sources of irrational decision making (confirmation bias, availability bias, overconfidence bias, prospect theory, priming and anchor points.)
- 15. Primary and Secondary Research
- 16. Teams and characteristics -homogeneity versus heterogeneity
- 17. Management, Board of Directors, Investors, Advisory Board, Legal advisors, Inside Director, Outside Director
- 18. Patents, characteristics, and types, advantages and disadvantages, changes in 2013.
- 19. Idea flow- patents, licensing, new ventures, and human capital flow.
- 20. Opportunity: Attractive, timely, durable, adds value to customer.
- 21. Founders agreement
- 22. Exit Strategy
- 23. Sole Proprietorship
- 24. Corporation (C and S Corps)
- 25. Partnership (and Limited Liability Partnerships)
- 26. Limited Liability Corporation
- 27. 501 C (3) non-profit corporation
- 28. Be able to explain how each form deals with liability, profits, taxation, and ownership
- 29. "Tone from the Top"
- 30. Crossing the chasm.
- 31. Bayh-Dole act
- 32. Patent Trolls
- 33. Trademarks
- 34. Copyright
- 35. Trade Secrets
- 36. Causal and Effectual Models
- 37. Business Model and its components
- 38. Business model innovation

- 39. Core Strategy
- 40. Strategic Resources
- 41. Business Model Canvas
- 42. Lean Launchpad
- 43. Steve Blank
- 44. NSF iCore Program
- 45. Minimum Viable Product (MVP)
- 46. Iterate and Pivot
- 47. Get out of the building
- 48. No business plan survives first contact with customers
- 49. Customer Discovery, Validation, Creation
- 50. Parts of Any Business Plan
- 51. Elevator Pitch

Part 2

Weeks 5-8 (The final exam is comprehensive over all eight weeks.)

- 1. Emerging, Fragmented, Mature, Declining, and Global Industries. Examples of each.
- 2. Porter 5 Force Analysis
- 3. Angel Investors, Friends and Family, Bootstrapping -characteristics of each
- 4. Crowd-funding
- 5. Venture Capital
- 6. IPO
- 7. Loans and conditions
- 8. 4 P's of Marketing -Product, Price, Promotion, Place (and strategies for each)
- 9. Segmenting the market, Target Market
- 10. Brand management
- 11. Forming an effective team (size, composition, etc)
- 12. Profitability, Liquidity, Efficiency
- 13. ROI, ROA, Leverage, Debt to Equity
- 14. Average Inventory Turnover Rate
- 15. Return on Assets
- 16. Net Sales to Total Assets
- 17. Financial statements versus pro-forma financial statements
- 18. Income Statement, Balance Sheet, Cash flow statement,
- 19. Profit Margin
- 20. Price to Earnings (P/E) Ratio for publicly traded corporations
- 21. Current Assets, Fixed Assets, Quick Assets
- 22. Working Capital, Current Ratio, Debt Ratio
- 23. Current Liabilities, Long Term Liabilities, Owners Equity