IENG 474

***Course: IENG 474***

***Instructor: Dr. Jack Byrd, Jr. PhD***[***jabyrd@mix.wvu.edu***](mailto:jabyrd@mix.wvu.edu) ***304-293-3612 x 1***

***Semester: Spring 2019***

***Number of Credit Hours: 3***

***Description: This course will present basic concepts and practices that are necessary to convert a technology idea into an entrepreneurial business.***

***Learning Outcomes***

At the end of the course students will be able to:

1. Develop a plan to develop an entrepreneurial business from a technology idea.
2. Apply the analytical tools they need to develop a realistic business plan.
3. Apply content from various engineering disciplines into the development of a business concept for the student’s technology idea.

***Course Topics***

**A. The Basics of Becoming an Entrepreneur**

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| Lesson 1 | Research an Entrepreneur DUE 1-09-19 |
| Lesson 2 | Identify Improvement Characteristic 1-11-19 |
| Lesson 3 | Research a Successful Entrepreneur 1-14-19 |
| Lesson 4 | Identify the Stages of Business Growth 1-16-19 |
| Lesson 5 | Chapter 1 Lesson 5 1-18-19 |
| Lesson 6 | Identify Personal Improvement Areas 1-23-19 |
| Lesson 7 | Define the Need for a Business Plan 1-25-19 |
| Lesson 8 | Create an Outline for your Business Plan 1-28-19 |
| Chapter 1 | Chapter 1 Assignment 1-28-19 |

**B. Where Entrepreneurial Ideas Come From**

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| Lesson 1 | Developing an Idea 1-30-19 |
| Lesson 2 | Case Study 2-01-19 |
| Lesson 3 | Forming a Business Concept 2-04-19 |
| Lesson 4 | Testing Your Idea 2-06-19 |
| Lesson 5 | Protecting Your Idea 2-08-19 |

**C. Assessing the Market for Your Idea**

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| Lesson 1 | Market Assessment Questions for Your Idea 2-11-19 |
| Lesson 2 | Gathering Information for Your Idea 2-13-19 |
| Lesson 3 | Conducting Focus Groups to Test Interest 2-15-19 |
| Lesson 4 | Case Study Evaluation 2-18-19 |
| Lesson 5 | Chapter 3 Lesson 5 2-20-19 |
| Lesson 6 | Assessing your Competition 2-22-19 |

**D. Developing a Commercialization Plan for Your Idea**

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| Lesson 1 | Commercializing Your Idea 2-25-19 |
| Lesson 2 | Choosing an Option 2-27-19 |
| Lesson 3 | Determining your Commercialization Costs 3-01-19 |
| Lesson 4 | Creating a Commercialization Schedule 3-04-19 |
| Chapter 4 | Chapter 4 Assignment 3-04-19 |

**E. Developing a Marketing Plan**

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| Lesson 1 | Basic Marketing for your Idea 3-06-19 |
| Lesson 2 | Identifying your Markets 3-08-19 |
| Lesson 3 | Chapter 5 Lesson 3 3-18-19 |
| Lesson 4 | Branding Your Idea 3-20-19 |
| Lesson 5 | Determining your Marketing Costs 3-22-19 |
| Lesson 6 | Putting Together your Marketing Team 3-25-19 |
| Chapter 5 | Chapter 5 Assignment 3-25-19 |

**F. Developing Your Business Organization**

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| Lesson 1 | The Classic Beverage Case Study 3-27-19 |
| Lesson 2 | The Case Study of Elena Rodriguez 3-29-19 |
| Lesson 3 | Recruiting a Team for your Business 4-01-19 |
| Lesson 4 | Organizing your Business Responsibilities 4-03-19 |
| Lesson 5 | Developing your Compensation Plan 4-05-19 |
| Lesson 6 | Chapter 6 Lesson 6 4-08-19 |

**G. Raising Money for Your Business**

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| Lesson 1 | Operations Plan 4-10-19 |
| Lesson 2 | Annual Cost Estimates 4-12-19 |
| Lesson 3 | Revenues Estimate 4-15-19 |
| Lesson 4 | Estimating your Cash Flow 4-17-19 |
| Lesson 5 | Estimating Your Financial Needs 4-22-19 |
| Lesson 6 | Sources for Financial Support 4-24-19 |
| Lesson 7 | Venture Capital Process 4-26-19 |
| Lesson 8 | Negotiating a Financial Agreement 4-29-19 |
| Chapter 7 | Chapter 7 Assignment 5-01-19 |
|  | Summary Business Plan 5-03-19 |

***Course Format***

This course will be taught as an internet based course, using the eCampus System.

***Student Evaluation***

The grade in this course will be based upon three components. The first component will be your response to each assignment. Each assignment is worth 10 points. These assignments will comprise 70% of the final grade in the course. See schedule above to follow to complete the lessons. You will lose one point out of 10 for every day the assignment is late.

The second component of the grade will be the quality of your business idea. You will be given frequent feedback on your business. Part of the grade will be determined by how you used the feedback. At the end of the semester, all business ideas will be evaluated based upon the viability of the idea. This component will be 20% of the final grade. You will be given an interim evaluation for your idea at the conclusion of the lessons for section C in the course.

The final component of the grade will be the written business plan. The specific elements of this grade include:

* The technology worthiness of the idea
* The identification of markets that are realistic
* The development of a commercialization plan including an R & D Plan
* The development of a realistic financial plan
* This part of your grade will be 10%

Students will complete on-line readings for each lesson. They will then apply what they read in the lesson to their own technology business idea. I will respond to each written assignment and students will be expected to adjust their plans to my suggestions. Assignments will be due according to the schedule above and as reflected on eCampus.

***Caution***

The work in the course is to be your own. In the past some students have had someone else do the work for them. It doesn’t take long for me to figure out that this is happening. Using someone else to do your work will result in an unforgivable F.

***TextBook***

Each Lesson contains a text chapter written by Dr. Jack Byrd, Jr. This is the only text used for the course. No other course materials are used in the course.

90-100 = A  
 80-89 = B  
 70-79 = C  
 60-69 = D  
 < 60 = F

West Virginia University is committed to social justice. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. The instructor of this course concurs with that commitment and expects to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. Any suggestion as to how to further such a positive and open environment in this class will be appreciated and given serious consideration. If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please advise the instructor and make appropriate arrangements with Disability Services (293-6700).