Technology Realization Practicum

ENTR 501 /TECH 581

Spring 2023

Mondays 4:30 to 6:20pm

Professor: Dr. Tim Peoples

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Email: tpeoples@purdue.edu

Office Hours: by appointment

Course Description

This two-credit course targets graduate students with the objective of introducing these students to topics and skills needed to assess and commercialize high technology solutions. Teams will be created to act as startup companies and through the individual teams, lecture topics will be applied to the selected technology. The course will focus on the evaluation of novel technologies and the formulation of a business case (pitch), which includes a technology description, target market analysis, competitive landscape analysis, product development plans, and financial strategy. Emphasis will be placed on defining the Value Proposition and validating the Customer Segments.

Course Learning Objectives

Students will be able to:

- Conduct market research for a new technology.
- Define market segments through market analysis.
- Evaluate business models for a new technology.
- Develop a go to market strategy for a new venture.
- Create and deliver an investor pitch for a new venture.

Policies

General Course Policies

1. Students are expected to logon on time.

2. Students are expected to actively engage in class discussions and question & answer sessions.

3. Students are expected to respect one another, especially as they work in teams

4. Students may email questions to Dr. Peoples; however, an immediate reply may not be possible.

Performance Evaluation

Grading Policy: All assignments will receive a percentage score that will be converted into a numeric point grade. The overall grade in the course will be based on program grading
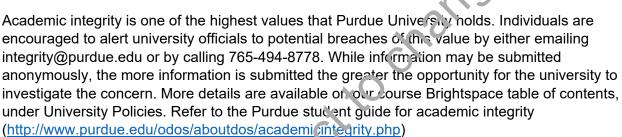
requirements. Late assignments incur a loss of 5% of the grade for each 24-hour period up to a maximum penalty of 40%.

Assignments: Individual Thought Papers are the result of individual effort and will be graded on believability, thoroughness, and clarity of thought. Team Updates and Final Pitches are graded based on quality of content, thoroughness of the information and believability of the information. Has the team addressed the topic completely and presented them in a credible manner?

Final course grades will be based on:

       (1) Class attendance and participation (10%)

       (2) Team participation (20%)

       (3) Team presentations (30%)

       (4) Final Pitch (40%)

Academic Integrity

Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert university officials to potential breaches of this value by either emailing integrity@purdue.edu or by calling 765-494-8778. While information may be submitted anonymously, the more information is submitted the greater the opportunity for the university to investigate the concern. More details are available on our course Brightspace table of contents, under University Policies. Refer to the Purdue student guide for academic integrity (http://www.purdue.edu/odos/aboutdos/academicintegrity.php)

Attendance

Students are expected to attend all classes unless they are ill or otherwise unable to attend class. If they feel ill, have any symptoms associated with COVID-19, or suspect they have been exposed to the virus, students should stay home and contact the Protect Purdue Health Center (496-INFO).

In the current context of COVID-19, in-person attendance cannot be a factor in the final grades. However, timely completion of alternative assessments can certainly be part of the final grade. Students need to inform the instructor of any conflict that can be anticipated and will affect the timely submission of an assignment or the ability to take an exam.

Classroom engagement is extremely important and associated with your overall success in the course. The importance and value of course engagement and ways in which you can engage with the course content even if you are in quarantine or isolation, will be discussed at the beginning of the semester. Student survey data from Fall 2020 emphasized students' views of in-person course opportunities as critical to their learning, engagement with faculty/TAs, and ability to interact with peers.

Only the instructor can excuse a student from a course requirement or responsibility. When conflicts can be anticipated, such as for many University-sponsored activities and religious observations, the student should inform the instructor of the situation as far in advance as possible. For unanticipated or emergency conflicts, when advance

notification to an instructor is not possible, the student should contact the instructor/instructional team as soon as possible by email, through Brightspace, or by phone. In cases of bereavement, quarantine, or isolation, the student or the student's representative should contact the Office of the Dean of Students via email or phone at 765-494-1747. Our course Brightspace includes a link to the Dean of Students under Campus Resources.

Classroom Guidance Regarding Protect Purdue

The Protect Purdue Plan, which includes the Protect Purdue Pledge, is campus policy and as such all members of the Purdue community must comply with the required health and safety guidelines. Required behaviors in this class include: staying home and contacting the Protect Purdue Health Center (496-INFO) if you feel ill or know you have been exposed to the virus, properly wearing a mask in classrooms and campus building, at all times (e.g., mask covers nose and mouth, no eating/drinking in the classroom), disinfecting desk/workspace before and after use, maintaining appropriate social distancing with peers and instructors (including when entering/exiting classrooms), refraining from moving furniture, avoiding shared use of personal items, maintaining robust hygiene (e.g., handwashing, disposal of tissues) prior to, during and after class, and following all safety directions from the instructor.

Students who are not engaging in these behaviors (e.g. wearing a mask) will be offered the opportunity to comply. If non-compliance continues, possible results include instructors asking the student to leave class and instructors dismissing the whole class. Students who do not comply with the required health behaviors are violating the University Code of Conduct and will be reported to the Dean of Students Office with sanctions ranging from educational requirements to dismissal from the university.

Any student who has substantial reason to believe that another person in a campus room (e.g., classroom) is threatening the safety of others by not complying (e.g., not properly wearing a mask) may leave the room without consequence. The student is encouraged to report the behavior to and discuss the next steps with their instructor. Students also have the option of reporting the behavior to the Office of the Student Rights and Responsibilities. See also Purdue University Bill of Student Rights.

Violent Behavior Policy

Purdue University is committed to providing a safe and secure campus environment for members of the university community. Purdue strives to create an educational environment for students and a work environment for employees that promote educational and career goals. Violent Behavior impedes such goals. Therefore, Violent Behavior is prohibited in or on any University Facility or while participating in any university activity.

Accessibility

Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are welcome to

let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247.

Emergencies

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course can be obtained by contacting Dr. Peoples via email or phone. You are expected to read your @purdue.edu email on a frequent basis.

Nondiscrimination Statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. A hyperlink to Purdue's full Nondiscrimination Policy Statement is included in our course Brightspace under University Policies.

Class Schedule*

Session One (1/9)

>   Course introduction and review of syllabus

>   Technology idea pitches and team formation

No Class (1/16)

Session Two (1/23)

>   Team introduction presentations

>   Introduction to Entrepreneurship

>   Introduction to Business Model Canvas

Session Three (1/30)

>   Value Proposition

>   Define what value your product/service provides to your customer

>   Problem Identification

>   Define what is the problem you are solving

>   Customer Segments

>   Define your customers and customer segments

Session Four (2/6)

Intellectual property protection

    What are the types of Intellectual Properties

    How do you protect your Intellectual Property

Session Five (2/13)

    Team presentations – Value Proposition/Customer Segments

    Market analysis and segmentation

        How big is the market opportunity

        How do you divide the market into smaller segments

    Customer archetype

        How do you define your customers

Session Six (2/20)

    Industry analysis

        What industry does your product/service fit

        What is the status of the industry

    Competitive analysis

        Who are your direct and indirect customers

        How do you define your competitive advantages

Session Seven (2/27)

    Revenue streams

        What are your income streams

    Business models

        How will you sell your product/service

        How do your customers expect to buy your product/service

Session Eight (3/6)

    Team Presentations – Market opportunity/ market segments

    Customer Acquisition Cost/Lifetime Value

    Channels of distribution

        How will you deliver your product/service to your customers

No Class 3/13

Session Nine (3/20)

Key Partners/Activities/Resources

Who are your partners

What are your key activities

What resources do you require

Session Ten (3/27)

Team presentations – Revenue streams/Business model

Finance for startups

Basic finance information for startup companies

Raising capital

How do you raise capital to support your startup company

Session Eleven (4/3)

Company formation

How do you create a legal entity

What are the types of entities

Contracts

How do you engage with other companies and people

Session Twelve (4/10)

Presentation Skills

Session Thirteen (4/17)

Business planning

Entrepreneurial resources at Purdue

Session Fourteen (4/24)

Final Presentations

*This schedule is subject to change