



Development of startup projects

Work program of the discipline (Syllabus)

Requisites for basic discipline

Level of higher education	Second (master's)
Field of knowledge	16 Chemical and bioengineering
Specialty	163 Biomedical Engineering
Educational programs	Medical engineering
Discipline status	Mandatory discipline
Form of study	full-time / day / mixed / remote
Year of preparation, semester	1 course, autumn semester
The scope of discipline	3 credits (90 hours)
Semester control / control measures	Test / control of work on practical classes, performance of educational tasks, passing of testing, performance of modular and credit control works
Schedule of classes	according to the schedule: http://rozklad.kpi.ua
Language of instruction	Ukrainian/English
Information about the course leader / teachers	Lecturer: Candidate of Economic Sciences, Associate Professor of the Department of Enterprise Management Marina Anatoliyivna Pichugina
Course placement	Sikorsky platform

Curriculum of the discipline

1. Description of the discipline, its purpose, subject of study and learning outcomes

The discipline studies the theory, methodology and applied aspects of business project development based on an innovative business idea and building a startup company. It is designed to motivate students to try themselves in the role of entrepreneurs, give them the opportunity to comprehensively and contextually acquire knowledge and skills in management, marketing, psychology, sociology, economics, finance and law, necessary to build their own innovative business or be involved.

The purpose of teaching the discipline is the formation of students' competencies and learning outcomes: the ability to develop and implement startup projects, knowledge of scientific and theoretical provisions for the development and implementation of startup projects, the ability to form management decisions for the development and implementation of innovative products, the ability to use modern technologies and software technical means in the development and implementation of startups, the ability to form a team and a system of communications in the project team, skills in working with clients and time management.

2. Prerequisites and postrequisites of the discipline (place in the structural-logical scheme)

Prerequisites:

The study of the discipline is based on the knowledge and skills acquired by students as a result of mastering the disciplines of the bachelor's degree in higher education.

Postrequisites:

Competencies obtained by students in the study of the discipline applied in the areas of scientific work on the theme of master's theses and performance dissertation.

3. The content of the discipline

Topic 1. Startup as a form of innovative business.

Topic 2. Formation and development of a business idea and a startup product .

Topic 3. Marketing of startups.

Topic 4. Business modeling of a startup.

Topic 5. Forming a project team. Mentoring in a startup.

Topic 6. Management Project tools for startup.

Topic 7. Startup business planning .

Topic 8. Legal features of startups.

Topic 9. Scaling and strategizing startups. Management of interaction with consumers and other stakeholders

4. Training materials and resources

Basic literature:

1. Гавриш О. А., Бояринова К. О., Кравченко М. О., Копішинська К. О. Управління стартапами : підручник для здобувачів вищої освіти за економічними спеціальностями. Київ: КПІ ім. Ігоря Сікорського, Видавництво «Політехніка», 2020. 716 с.
2. Гавриш О. А., Дергачова В. В., Кравченко М. О. та ін. Менеджмент стартап проектів: підручник для студентів технічних спеціальностей другого (магістерського) рівня вищої освіти. Київ: КПІ ім. Ігоря Сікорського, Видавництво «Політехніка», 2019. 337 с.
3. Солнцев С. О., Зозульов О. В., Юдіна Н. В., Царьова Т. О., Язвінська Н. В. Маркетинг стартап-проектів: навчальний посібник для усіх спеціальностей другого освітнього ступеню «магістр». Київ: КПІ ім. Ігоря Сікорського, 2019. 218 с.
4. Розроблення стартап-проекту: Методичні рекомендації до виконання розділу магістерських дисертацій. За заг. ред. О. А. Гавриша. Київ : НТУУ «КПІ», 2016. 28 с.

Supporting literature:

1. Арчибалд Р. Д. Управление высокотехнологичными программами и проектами. Пер. с англ. Москва: ДМК Пресс, 2010. 462 с.
2. Бланк С. Дорф Б. Стартап: Настольная книга основателя. Пер. с англ. Москва: Альпина Паблишер, 2013. 616 с.
3. Бланк С. Четыре шага к озарению: Стратегии создания успешных стартапов. Пер. с англ. Москва: Альпина Паблишер, 2014. 368 с.
4. Браун Т. Дизайн-мышление в бизнесе. От разработки новых продуктов до проектирования бизнес-моделей. Пер. с англ. Москва: Манн, Иванов и Фербер, 2013. 256 с.
5. Гильбо К. Стартап за \$100. Создай новое будущее, делая то, что ты любишь. Пер. с англ. Москва: Манн, Иванов и Фербер, 2013. 240 с.
6. Довгань Л. Є, Мохонько Г. А., Малик І. П. Управління проектами: навчальний посібник. Київ: КПІ ім. Ігоря Сікорського, 2017. 420 с.
7. Євсейчев А.И. Основы стартап менеджмента. URL: <http://www.tstu.ru/book/elib3/mm/2014/Evseychev>.
8. Заблоцкий Б. Ф., Петров К. Н. Как разработать бизнес-план. Практическое пособие с примерами и шаблонами. Москва: Вильямс, 2008. 384 с.
9. Купер Б., Власковиц П. Стартап вокруг клиента. Как построить бизнес правильно с самого начала. Пер. с англ. Москва: Манн, Иванов и Фербер, 2011. 168 с.
10. Кэтлин К., Мэтьюз Д. Управление стартапом. Как руководить компанией на разных этапах. Пер. с англ. Москва: Манн, Иванов и Фербер, 2011. 176 с.
11. Маллинс Д., Комисар Р. Поиск бизнес-модели. Как спасти стартап, вовремя сменив план. Пер. с англ. Москва: Манн, Иванов и Фербер, 2012. 329 с.
12. Менеджмент технологических инноваций: учебное пособие. Под ред. С. В. Валдайцева, Н. Н. Молчанова. Санкт-Петербург, 2003. 333 с.
13. Михайловиц М. Стартап без бюджета. Пер. с англ. Москва: Манн, Иванов и Фербер, 2012. 200 с.
14. Пинье И. Остервальдер А. Построение бизнес-моделей: настольная книга стратега и новатора. Пер. с англ. Москва: Альпина Паблишер, 2017. 288 с.
15. Рис Э. Бизнес с нуля: метод Lean Startup для быстрого тестирования идей и выбора бизнес-модели. Пер. с англ. Москва: Альпина Паблишер, 2012. 251 с.
16. Савельев Є. В., Чеботар С. І., Штефанич Д. А. Новітній маркетинг: навчальний посібник. Київ: Знання, 2008. 420 с.
17. Тиль П., Мастерс Б. От нуля к единице. Как создать стартап, который изменит будущее. Пер. с англ. Москва: Альпина Паблишер, 2014. 192 с.

18. Фелд Б., Мендельсон Д. Привлечение инвестиций в стартап: как договориться с инвестором об условиях финансирования. Пер. с англ. Москва: Манн, Иванов и Фербер, 2013. 281 с.
19. Харниш В. Правила прибыльных стартапов. Как расти и зарабатывать деньги. Пер. с англ. Москва: Манн, Иванов и Фербер, 2012. 280 с.
20. Хоффман Р., Касноча Б. Жизнь как стартап: Строй карьеру по законам Кремниевой долины. Пер. с англ. Москва: Альпина Паблицер, 2013. 237 с.

Educational content

5. Methods of mastering the discipline (educational component)

The plan provides for 18 lectures (L) and 36 practical (P) classes. The distribution of types of training sessions, work performed and control measures for their mastering by course topics is given in the table.

6. Independent work of a student / graduate student

The plan provides for 54 hours of independent student work (VTS). It covers the preparation of students for classroom classes and independent performance of educational calculation and analytical tasks, business games and cases. Distribution of independent work students on topics shown in the table.

Week	The topic being studied	Types of classes *			Types of work **
		L.	P	IWS	
1-2	Topic 1. Startup as a form of innovative business	2	4	6	W, E, T
3-4	Topic 2. Formation and development of a business idea and a startup product	2	4	6	W, E, T
5-6	Topic 3. Marketing of startups	2	4	6	W, E, T, MCW-1
7-8	Topic 4. Business modeling of a startup	2	4	6	W, E, T
9-10	Topic 5. Forming a project team. Mentoring in a startup.	2	4	6	W, E, T
11-12	Subject 6. Management Project tools for startup.	2	4	6	W, E, T
13-14	Topic 7. Startup business planning	2	4	6	W, E, T, MCW-2
15-16	Topic 8. Legal features of startups	2	4	6	W, E, T
17-18	Topic 9. Scaling and strategizing startups. Management interaction with consumers and other stakeholders	2	4	6	W, E, T, CCW
Together		18	36	36	

* L - lectures, P - practical classes, IVS - independent work of students;

** W - work in practical classes, E - performance of educational tasks, T - testing, MCW-1 - the first part of modular control work, MCW-2 - the second part of modular control work, CCW - credit control work.

Policy and control

7. Policy training courses

The key measures in teaching the discipline are those that form the semester rating of the student. Students must complete tasks in a timely manner in accordance with the conditions of the first and second calendar control, write modular tests.

Penalty points for the discipline are not provided.

The student may be re-credited points that he received for this or a similar course related to the development and management of startups, in another institution of higher education.

Students can be awarded incentive points (in total - no more than 10 points) for the following types of scientific and research work:

- performance of research work on topics submitted for independent study, the results of which are presented in the form of scientific theses, presentations, reviews of scientific papers, etc. (weight score - 5), in the form of a scientific article (weight score - 10);

- participation in olympiads of I and II levels that correspond to the subject of the discipline (weight score - 5); - participate in competitions of scientific works that correspond to the subject of discipline (weight score - 5). Visit classes are free, the points for attendance at lectures and practical classes are not included. However, a significant part of the student's rating is formed through active participation in the implementation of educational tasks in practical classes, so in case of their omission, the student will not be able to obtain the appropriate rating points. If control measures are missing from valid reasons (illness or other significant life circumstances), the student is given an additional opportunity to their warehouse ting for the next week. In case of violation of the terms and conditions of admission of failure to semester control for no reason, students are not allowed to take his passage in the main session.

8. Types of control and rating system for assessing learning outcomes (RSO)

As the semester control of discipline provided in the form of test, the rating score is formed as the sum of all received it during the term of rating points.

1. The student's rating consists of points that he receives for the following types of work:

- work on practical exercises (W) - provides participate in discussion discussing issues and resolving problems (the estimated number of responses the student during the semester - 10 weight Ball - 2);

- performance of educational tasks (E) - provides for the presentation of independently performed and (or) in groups calculation and analytical tasks, business games and cases (approximate number of student answers during the semester - 6, weight score - 5);

- passing the test (T) - is carried out at the beginning of the practical lesson after the completion of the study of a certain section (number of tests - 6, weight score - 5).

- performance of modular control work (MCW) - is divided into two parts (two written works) lasting one academic hour each (MCW-1, MCW-2), which are performed in practical classes during the 1st and 2nd calendar control (number of works - 2, weight score - 10);

The condition for a positive passing of the first calendar control is that the student receives at least 20 points at the time of its holding .

The condition for passing the second calendar control is to receive at least 35 points. The maximum rating of a student is 100 points.

Students who have a rating of at least 60 points receive a corresponding positive grade without additional tests.

2. Semester control in the form of writing a test (CCW) is performed for students who have a rating of less than 60 points, as well as those who want to increase the score. In this case, the points that the student scored during the semester are canceled.

Scoring control work consists of the following tasks:

- disclosure of theoretical issues (number of questions - 4, weight score - 5); -
- performance of test tasks (number of tasks - 40, weight score - 1);
- performance calculation and analytical tasks (number of tasks – 4, weight score - 10).

The maximum credit score is 100 points.

The maximum score for the course is 100 points.

Table of correspondence of rating points to grades on the university scale:

Number of points	Rating
100-95	Perfectly
94-85	Very good
84-75	Good
74-65	Satisfactorily
64-60	Enough
Less than 60	Unsatisfactorily
Admission conditions are not met	Not allowed

9. Additional information on the discipline

At the discretion of the teacher, students may be credited with certificates of full-time, distance or online courses on relevant topics.

In case of introduction of restrictions on visiting the University related to the introduction of quarantine, the teaching of the discipline is transferred to a remote or online format.

Work program of the discipline (syllabus):

Compiled by: professor of the department of enterprise management, Doctor of Economics, Assoc. Prof. Kravchenko M. A., associate professor of the department of enterprise management companies PhD Pichuhina M.A.

Approved by the Department of Enterprise Management (Protocol №1 of 30.08.2021)

Approved by the Methodical Commission of FBMI (Protocol № 12 of August 30, 2021.)