Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan

TAKE-UP

Mid Term Project Report

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15 December 2022

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1. Introduction

The Joint Project - TAKE-UP was conceived in February 2019, through intensive interactions amongst Universities in Pakistan and Europe to seek funding through European Union's Erasmus+ Program. Team of experts from University of Saarland (UdS) Germany visited Pakistan multiple times and finalize the project during 2019. The project was submitted by UdS as *Coordinator* of the consortium of two European and four Pakistani partner universities: Athens University of Business and Economics (Greece), COMSATS University Islamabad (Lahore Campus), GC University Lahore, University of Gujrat and Lahore University of Management Sciences, Lahore**.** The project was approved by EU in August 2019 for Erasmus+ funding of one million Euros to take a formal kick-off in early March 2020. This is Capacity Building in Higher Education (CBHE) Project under Erasmus + Program. The Project is of high importance of national stand point and is directly linked with some of the high profile initiatives of the Government of Pakistan including *Kamyab Nonawan* Program, Start up Loan Scheme of Punjab Small Industries Corporation (PSIC), Youth Skill Development Program, and recently Innovator Seed Fund (ISF) project of Higher Education Commission (Islamabad).

The TAKE-UP Project is designed to provide COMSATS University and other three partner universities the technical and financial assistance through two EU universities for the promotion of entrepreneurial mindset in Pakistani HEIs. UdS plays the leading role in terms of academic, administrative and financial matters of the project.

The Project also involves some non-academic Industrial/professional partners to provide a platform for undertaking entrepreneurial activities from regional perspectives as well as to increase project's visibility and its links to the industry. The Project in-builts utilization of their facilities for meetings and round table as well their participation in the meetings to provide feedback to project.

2. Objectives

The prime objective of the TAKE UP project is to transform partner Pakistani universities into an Entrepreneurial Universities. Other supporting objectives may include but are not

limited to the following:

a) Trainings / Capacity Building of students, faculty and SSBC & Cubator staff
b) Establishment/ uplifting of incubation facilities to foster entrepreneurial eco-system.
c) Establishment of Fabrication Lab (FabLab) to promote innovation and prototyping
d) Cross University and cross campus collaborations to boost the start-up activities.
e) Knowledge sharing/brain storming activities among students and faculty members from all Universities to boost innovation and entrepreneurial mindset.
f) Building a strong pipeline of ideas/ Final Year Projects for business incubation.
g) Establishing close liaison between Industry and academia for contribution towards entrepreneurial culture at HEIs in Pakistan. All stakeholders including private sector are to be taken onboard for creation of an environment to boost knowledge economy.
h) Expansion of SSBC program to accommodate larger number of students

3. **Consortium of Universities:** TAKE UP is a joint project of a consortium of following six universities.

   <u>European Universities</u>
   a) University of Saarland (UdS) Germany
   b) Athens University of Business and Economics (Greece),

   <u>Pakistani Universities</u>
   c) COMSATS University Islamabad (CUI) Lahore Campus
   d) Govt College University (GCU) Lahore,
   e) University of Gujrat (UoG) Gujrat and
   f) Lahore University of Management Sciences, (LUMS), Lahore

4. **Finances**

The maximum budget allocated to the six partner universities is as follows:

	Name of University	Country	Max. Budget (€)
1	UdS	Germany (Program Country)	277,750/-
2	AUEB	Greece (Program Country)	130,200/-
3	GCU	Pakistan (Partner Country)	159,060/-
4	UOG	Pakistan (Partner Country)	164,615/-
5	LUMS	Pakistan (Partner Country)	110,915/-
6	CUI	Pakistan (Partner Country)	157,460/-
	Total		**1,000,000/-**

5. Expected Outcome

The joint implementation of this project over a period of three years is anticipated to enable CUI and partner Pakistani Universities to transform into Innovative Entrepreneurial Universities. They shall adopt the culture of entrepreneurship by training the faculty, staff, and students for converting their business ideas into real businesses and sustainable job creating through businesses induced employment.

6. Duration

The project was approved to be completed for three years starting from January 2020. However, due to COVID 19- induced delays in some of the work packages, the request for the extension of one year i.,e. upto January 2024 is under consideration by European Union.

7. Key Activities

The key activities of the projects have been defined in the form of ten (10) interconnected *work packages* (WPs) for the partners to undertake individually or collectively with some specific deliverables/ outcomes within given time-lines, aimed at achieving following**:**

a) Assessment of the entrepreneurial culture at each partner HEI in Pakistan and the development of strategic action plans for each HEI;

b) Creation of localized training material for entrepreneurship course to be taught at undergraduate level at each partner university.

c) Training of coaches and academic staff, to promote entrepreneurship mindset among students through curriculum designing.

d) Establishment of FabLabs at Pakistani partner universities (CUI, GCU, and UoG) to improve entrepreneurial spirit of students and researchers. A FabLab, equipped properly under this project shall enable young entrepreneurs to be guided through   visualization and rapid prototyping to keep them engaged   in   their   ideas to materialize.

e) To run a train-the-trainer program to improve the skillset of entrepreneurial coaches and create a multiplier effect.

f) To establish a TAKE-UP network to share project results and increase capacity of non-partner HEIs.

g) Adding value to the modernization and internationalization agenda of universities by creating a diverse and heterogeneous group of partners   in Pakistan   and matching them with EU countries.

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8. Structure of the Project

TAKE-UP has adopted an endogenous needs- and competence-based approach to maximize the impact of activities in Pakistan. The proposed activities have been grouped into 10 work packages which are arranged in a logical sequence and are inter-related. During the project planning, cost-effectiveness and feasibility are well considered. In order to achieve the expected results, the project is divided into 5 phases:

Phase - I

A 360° assessment of the entrepreneurial culture at each partner HEI in Pakistan (WP1.1) and the development of strategic action plans for each HEI (WP2.1): A self-assessment tool leaning on HEInnovate will be developed and implemented in WP1. With the generated tool, partner universities in the EU and Pakistan will discuss and set benchmarks, compare their knowledge and practices, as well as get a better understanding of what exactly an entrepreneurial university is. The results will contain common and specific challenges, needs and resources of the Pakistani universities (GCU, UoG, CUI, LUMS). This sets up the basis for WP2 – the strategic action plans. The different Pakistani universities will develop specific plans for their localized and technical context. This process is an evaluative one which involves continuous results and findings for WP4 and WP5. The methodologies applied are interactive group learning, exchanges of expert knowledge and job shadowing/mentoring.

Phase - II

The creation of FabLabs at Pakistani HEIs (WP3.1), which we deem necessary to improve entrepreneurial spirit of students and researchers by creating the necessary environment for ideas to be developed and tested. Best practices will be shared for training format and on-site training provided.

Phase - III

The creation of localized and digitalized training material for teaching staff as well as entrepreneurial coaches (WP4.1 and WP4.2), which is to be used to train and guide students and researchers interested in starting their own company through different stages of business idea development. Materials for different target groups (e.g., lecturers, professors, (associated) staff of incubation centers, business development managers, mentors/coaches from the industry) will be developed (needed for WP6.5). These materials include materials used in class room settings, coaching settings as well as informal settings of coaching. In order to assure that contents are readily available to students, digitalization and pedagogical concepts will be developed to transform contents to E-Learning formats (WP4.2). Guidelines for coaching will be developed in order to improve the coaching process for individuals are an integral part for Phase IV. The methodology applied here is a mixture of self-regulated learning as well as model learning. Experts will support the different phases of development of coaching material. Guidelines for coaching developed to improve the coaching process for individuals are an integral part for Phase IV.

Phase - IV

A train-the-trainer program to improve the skillset of entrepreneurial coaches and create multiplier effects: Transferring the developed contents from WP4 and WP5, as well as adding further necessary knowledge areas for entrepreneurship coaching (e.g, business model analysis, rapid prototyping, pre-seed, seed, and growth related issues, innovative financing opportunities (e.g.,crowdfunding), and teambuilding aspects) are put into didactical training plans and after a piloting phase, future trainers are trained in the evidence-based coaching (WP6.1 to WP6.5). The methodology applied here is train the trainers.

Phase - V

The establishment of a TAKE-UP network to share project results and increase capacity of partner and non-partner HEIs: The knowledge and capacity created in WP4, WP5 and WP6 will be transformed into a representative TAKE-UP identity (WP7.1). A TAKE-UP networking website will be created to better connect academic and non-academic interested staff and founders (WP7.2). The identity and website will be presented in the framework of round table events with stakeholders, resulting in a publication of the best practices to transform Pakistani universities into truly entrepreneurial universities (WP7.5). The final TAKE-UP network will incorporate a database of experts on entrepreneurial coaching and trainers able and willing to share their knowledge. There are 3 WPs that run horizontally along the project: dissemination (WP8), quality control (WP9) and project management (WP10) to ensure project outreach, high quality outputs and smooth project execution.

It is worth to mention that apart from paper- and electronic-based promotion means, there will be two large national conferences and personal meetings to enhance TAKE-UPs exposure for dissemination purposes (WP7), which is why in the budget calculation WP7 can be seen as "Development" and "Dissemination" at the same time. Quality of project outputs will be enforced by inviting 3 experts for external monitoring (WP9.1) while an online project management tool will be introduced for effective management by UdS (WP10.1). Despite dividing the implementation into 5 milestones, some activities are to be occurred simultaneously and horizontally for optimizing project's objectives.

The activities of the TAKE UP project have been designed in ten packages (WPs) as described in the following table.

9. Brief Description of Work Packages

WP-1. Kick-Off and Self-Assessment	
Objectives	To create a common ground for a well-founded collaboration between Pakistani and EU universities. Revealing specific challenges in terms of entrepreneurship
Activities	1.1. Kickoff-Meeting

	Start of the project will be initiated by laying the groundwork for working together and establishing project management as well as intercultural skills. Quality board will be set up (see WP9.1 for further details) 1.2. <u>Self-Assessment and Report</u> Development of questionnaires and qualitative guidelines, gathering data, analysis and creating a report:
WP 2. Strategic Action Planning	
Objectives	Creating vision for individual universities on which areas to focus their efforts in becoming entrepreneurial universities by employing project management tools (e.g., SMART, milestone elaboration). The knowledge acquired here will be applied to the WP4, WP5 and WP6.

Activities	2.1. <u>Strategic Action Plans (SAPs)</u>
	  i. Defining working groups and key individuals that will take ownership of developing strategic action plans for their own institution
	  ii. Presentation of activities European universities and associated partners - Discussion of best practices in the European context and benchmarking them with Pakistani approaches
	  iii. Dialogue on theoretical and practical background of entrepreneurial activities, comparison of academic and economical working strategies
	  iv. Development of SMART goals specifically for each partner university
	  v. Development of specific Strategic Action Plans for each partner university depending on the identified areas of improvement in WP1
	  vi. Development of common milestones for the overall project
	  vii. Guidance on creating individualized strategies on improving entrepreneurial culture and efforts
	
	2.2 <u>Extended exposure to entrepreneurial universities and business incubators in the EU</u> (job shadowing)
	i. Development of a 6-week individualized and structured internship plan at German and Greek universities, and/or associated partners (IT Inkubator GmbH, CISPA Fusion, HIGGS) for key individuals identified in 2.1. (i.e. (associated) staff members of incubation centres, entrepreneurship coaches/business development managers depending on expertise and interest)
	ii. - Participation in the internship program by 1 person per year per partner university in the first two years of the project, i.e. 4 per year and a total of 8 during the lifespan of the project

WP 3. Development of FabLabs at partner university in Pakistan	
Objectives	To establish FabLabs at the partner universities that will assist entrepreneurial coaches in guiding students interested in starting up their own company to develop their ideas into visible prototypes

Activities	3.1. Preparation
	i. Study visit of 3 members per partner university to UdS (at least 1 technician per university), who will be in charge of FabLabs at their institution to understand setup and functioning of FabLabs (contents, for example, setup, maintenance, creativity, exploration, sustainability, possible projects and resource-saving aspects)
	ii. Requirement analysis workshop and site-visit by 1 member of UdS at Pakistani institutions to map strategic focus of institutions with most appropriate equipment for each institution
	iii. Development of short courses on how to use equipment for students and researchers interested in starting up their own company and needing prototypes (UdS will share course contents and material of short courses already being conducted at UdS)
	iv. Curated number of videos (Youtube, Vimeo, etc.) on simpler project implementations in FabLab for dissemination to students and self-administered learning
	v. Supervision, guidance and initial troubleshooting for technical staff via virtual meeting
	vi. Initial supervision of training courses via virtual meetings
	3.2 Installation of equipment and startup of FabLab
	i. Purchase and arranging logistics for shipping the equipment
	ii. Installation of equipment
	iii. - On-site training on proper usage, maintenance and troubleshooting of the FabLab equipment as well as training for users

WP 4.	**Development of locally relevant training and teaching material focused on developing entrepreneurial skills in students**
Objectives	need to improve upon training material (used at incubation centres of universities) for students and researchers interested in starting their own company, need to localize trainings that fit the environmental context of Pakistan, need to develop training material for mentors/coaches from the industry and for faculty members who are willing to mentor/coach students
Activities	4. 1. Generate teaching/training material for different target groups who are involved in sensitizing, motivating, developing and mentoring entrepreneurial ideas from within and outside universities.
	i. Developing innovative and localized case studies in the area of
	ii. entrepreneurship for usage in lectures by professors/lecturers within courses that have their main focus on non-entrepreneurship topics
	iii. Development of training courses and materials that are used for students having entrepreneurial intentions (e.g., agile project management, business model canvas)
	iv. Development of content for short courses on training mentors/coaches from the industry for the establishment of effective

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relationships (e.g., communication and relationship management, goal setting)
v. Development of content for training non-graduates/alumni in
vi. entrepreneurial basics (e.g., soft and hard skills)
vii. Development of conceptual and pedagogical/didactic plans on how to transform generated material into E-Learning formats

4.2. Digital transformation of generated material
i. Produced material and didactical plans from 3.1. will be handed over to an E-Learning company (ideally student start-ups in Pakistan will also be asked to provide an offer for this subcontracting) to convert the content into an interactive E-Learning formats

4.3. Implementation
i. Implementing at least two of the training materials/plans into the universities' entrepreneurial activities
ii. Training direct target groups and familiarizing them with the contents and pedagogical concepts behind them
iii. - Acquiring feedback to improve contents from indirect target groups

WP 5. Professionalizing entrepreneurial coaching	
Objectives	Assessing competencies of entrepreneurial/business development coaches, creating selection assistance for promising entrepreneurial coaches, creating guidelines for entrepreneurial coaching that help with onboarding but also existing staff to improve their general and domain-specific entrepreneurial coaching competences
Activities	5.1. Entrepreneurial coaches in Pakistan (current situation) i. Qualitative and quantitative task analysis tools are used to assess current situation of entrepreneurial coaches/business development managers across Pakistan (at least 60 participants from partner universities for quantitative task analysis, at least 15 for qualitative task analysis) ii. Psychometric assessment/description of successful coaches to, for example, name positive personality characteristics of coaches iii. Assessing competencies in the area of finances, business model analysis, venture capital acquisition, marketing strategies, networking iv. Collecting direct observations of coaching situations that produce successful results (using critical incident technique) v. Collecting challenges faced by entrepreneurial coaches and their perspective on how they could improve their work 5.2 Developing an evidence-based guideline for entrepreneurship coaching (general) i. Research literature on coaching to create an evidence-basis

	ii. Create a workshop plan to identify themes the planned guideline should address and are relevant to the Pakistani context iii. Conduct workshop with entrepreneurship coaches, business development managers and other associated staff with the aim to develop a guideline for coaching entrepreneurs iv. Feedback by every participating partner university and editing of the developed guideline if necessary v. Generation of an evidence-based and general entrepreneurial coaching guideline vi. Digitalization of coaching guidelines and situative questions for training purposes 5.3 Developing evidence-based guidelines for entrepreneurship coaching (domain specific) i. Similar to 4.3, however, focus on special focus areas of different HEIs in Pakistan (e.g., IT, life-science, nanotechnology, social entrepreneurship) ii. Development of coaching guidelines that can better address specific domains, which might benefit from better understanding of disruptive business models and hence would provide better results

WP 6. Training and certifying entrepreneurial coaches in Pakistan (Train-the-Trainer)

Objectives	To train entrepreneurship coaches on different levels to provide a more profound consulting inside and outside the incubation centres and train the trainers to become trainers themselves so that different target groups are able to benefit from an entrepreneurial coaching and spread their knowledge-
Activities	6.1 Develop training plans and implement a trainee scouting i. Workshop to define contents of a training, apart from coaching guidelines developed in WP5.2 and WP5.3, where experts having had extended exposure to EU universities and incubators (WP2.2) as well as trained experts for FabLabs (WP3.1) will participate (e.g., finances, marketing strategy analysis, business model analysis, rapid prototyping, pre-seed, seed, and growth related issues, teambuilding, motivating speeches) ii. Develop training plans and materials based on evidence-based best practices and adjusted to fit in the Pakistani context iii. Agreeing on a first batch of trainees (4 per university, i.e. 16 total) that would be best suited to lead by example iv. Train entrepreneurship coaches to function as an example and pass on their knowledge based on the training materials that jointly developed with the European project universities v. Develop videos of coaching situations that are good and worst practices - Editing and digitalizing of the training materials

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	6.2 Implement pilot capacity building training
	i. Piloting the design with a first batch of staff members based on training plan developed in WP6.1
	6.3 Conducting micro-coaching and an internal workshop for supervision and revision
	i. Online-Supervision of trained staff members (after 6 weeks of the training) to assure practical implementation of lessons learned and challenges
	ii. Internal workshop for updating/revisioning of material and training plan (if necessary)
	6.4 Creating a process for the TAKE-UP-certification for entrepreneurship coaches
	i. Development of a TAKE-UP certification process
	ii. Depending on the results from 6.2. and 6.3. and incorporating the feedback from the first batch, certification could include being trained by trained trainer, gaining practical experience by conducting coachings based on the TAKE-UP methodology, getting supervised (in micro-coachings or face-to-face), consulting again and passing an exam)
	iii. Creation of an online and/or offline examination procedure
	iv. The TAKE-UP-certificate for entrepreneurship coaches will not be limited to the project-HEIs but will rather disseminate through the TAKE-UP network that will result from WP7 (project certifications will be provided free of cost)
	6.5 Train the trainers
	i. Conduct workshop to train the trainers for their assignment to train further coaches within the university and non-partner universitas
	ii. Target groups for trainees: professors, lecturers, (associated) staff members of incubation centers, mentors/coaches from the industry, alumni
	iii. Using tools developed in WP5.1 selected trainees are made aware of their strengths and weaknesses
	iv. Each trained trainer commits to conduct at least 1 workshop for staff members of the own university with at least 10 participants
	v. Each trained trainer commits to conduct at least 2 workshops for non-partner universities, with at least 10 participants each (to be conducted in WP 7.3)

WP 7. Establishing TAKE-UP network

Objectives	To establish a national network – TAKE-UP – comprising entrepreneurship coaches, entrepreneurs, industry representatives interested in mentoring young entrepreneurs on a national level and enable steady exchange and learning from each other.
Activities	7.1 Establishment of the TAKE-UP network

i. Create and agree on the network vision, mission and objectives
ii. Establish constitutional documents for the network
iii. Develop a membership policy and strategy
iv. Identify institutions and individuals interested in joining the network or at least attending network activities.

7.2 Building the network identity and public presence
i. Develop a website and logo for the TAKE-UP network to frame the public presence
ii. Define the structure and first contents of the website
iii. Design promotional materials to enhance visibility of the network (e.g. posters, folders)
iv. Regularly update the network's website with current activities, news and events

7.3 Organizing training workshops for non-partner universities
i. Contacting other HEIs across Pakistan to extend the project output and enable further universities to provide young entrepreneurs with qualitative
ii. entrepreneurship coaching; asking HEC to assist with extending the project output
iii. Workshops for other Pakistani HEIs with adapted content and prepared materials conducted either in a co-training model (one trainer from UdS or AUEB and one trained Pakistani trainer) or solely by already trained and supervised Pakistani universities depending on whether they feel equipped to face this challenge

7.4 National TAKE-UP conferences to disseminate knowledge
i. 2 national conferences, 1 in the second year, 1 in the third year
ii. Develop a round table methodology and strategy to encourage exchange and bring together different stakeholders of the HEI system and the industry (e.g. HEIs, policy makers, venture capitalists, business representatives) primarily but not only from within Pakistan
iii. Organise round tables and invite relevant stakeholders to discuss prepared questions concerning national trends and potential next steps as well as recent and planned project activities and results obtained
iv. Generate public attention on different levels by inviting the media and publishing minutes and report
v. Sharing lessons learnt and success stories

7.5 Joint publication on best practices to transform Pakistani universities into entrepreneurial universities
i. A joint publication shall be designed by discussing content with the different project partners and summarising the best practices in

	transforming a Pakistani university into an entrepreneurial university
	ii. Single steps in reaching the aim of a joint publication: distributing tasks among the consortium, each partner drafting content, editing and publishing, disseminating soft copies (via email) and hard copies to relevant stakeholders

WP 8. Dissemination and exploitation of the results/outcome

Objectives	To develop a dissemination plan and publish a coherent project identity for a sustainable impact and enhanced national as well as international exposure of the project.
Activities	8.1 Development of a dissemination plan
	i. Identifying communication, visibility and PR activities that are necessary for achieving the project goals
	ii. Identifying and considering different mechanisms and channels for dissemination and communication (network website and other web-based tools e.g. social media, networking and pitch events, publications in printed and electronic media, internal publications)
	iii. Making use of additional dissemination channels during the project implementation (e.g. dissemination at external events)
	iv. Planning post-project dissemination activities to create a sustainable impact and ensure a long lasting and sustainable improvement in Pakistani entrepreneurship culture
	v. Considering possibilities for synergies and multiplier effects
	vi. Putting together a coherent dissemination plan containing the mentioned elements
	8.2 Project identity expression and national-international exposure of the project
	i. Express project identity by conducting dissemination actions determined in the dissemination plan (e.g. create social media accounts, organize events and participate in external events (national and international))

WP 9. Quality Management

Objectives	Objective: To ensure the quality of project impacts and outcomes
Activities	9.1 Setting up a quality board
	i. Setting up a quality board by recruiting a minimum of one member from each relevant institution to join the quality board
	ii. The board members will communicate regularly by using a project management tool (further information in WP10) among other ways of communication (including virtual meetings)
	iii. Further, the quality board will be joined by external experts for quality management to supervise the quality control of the project implementation, impacts and outcomes. As a result, the external experts will produce yearly reports and give recommendations.

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	iv. Consensus of the quality board will be scripted in a quality plan, each involved project institution receives a copy of the quality plan
	9.2 Developing feedback mechanisms
	i. Establish feedback forms and questionnaires to evaluate project progress - Check project progress in the light of the Logical Framework Matrix, indicators and work plan
	ii. Having yearly 360° feedback conversations with stakeholders (qualitative data)
	9.3 Designing a contingency plan
	i. Quality board members will develop a contingency plan to identify risks with alternative measures and will revise this plan on a regular basis to mitigate potential risks
WP 10. Sustainable Project Management	
Objectives	Ensure timely on budget and on target completion of all activities
Activities	**10.1 Ensuring a sustainable project management**
	i. Recruiting a person primarily responsible for the project management (coordinator) and surround this person with a management board comprising of members from the different project partner institutions
	ii. A digital project management tool (e.g., Trello) will be used to keep track of the project aims, actions and especially timeline. Within this tool representatives of the diverse project partner institutions can participate, actions can be coordinated, deadlines can be set and especially the person responsible for the project management can keep track of the project implementation and keep an eye on financial aspects.
	iii. The primary project manager and his surrounding management board will communicate on a regular basis through the digital project management tool, via video conferences and/or face to face to ensure that nothing is overlooked and allow a smooth project implementation.
	10.2 Establish a mechanism of regular reporting
	i. Coordinator develops reporting templates and drafts regularly reports - Management board and coordinator check the report for the need for further information and gather needed information as applicable
	ii. Coordinator submits the report to donor
	iii. External financial audit

10. Entrepreneurship Course

The Entrepreneurship Course was offered online, as a pilot course, to the students of CUI and other partner universities through Moodle Platform. Several hundred students registered the course but only a limited number of students completed. The salient statistics of the course offered to CUI students are tabulated below:

1	Title of the Course	Entrepreneurship–101 (COMSATS Entrepreneurship Course)
2	Web address	https://pakistan.entrepreneurship101.eu/course
3	Start date	August 2021
4	End date	November 2021
5	Number of students showed interest	350
6	Number of students attended Introductory Session	128
6	Number of students registered	65
7	Number of students completed the course	14
8	Number of business plans developed (Start ups).	14

The contents of the course, the activities that students performed, the list of successful students and an Interim Evaluation Report based on feedback from the participating students are appended to this report.

11. Fabrication Labs (FabLabs)

Institutions in Pakistan that struggle with funding, face serious difficulties to provide future entrepreneurs with adequate facilities and equipment to develop their ideas. Especially after the motivation phase where ideas have been developed, it is necessary for these young entrepreneurs to be guided through visualization and rapid prototyping to keep them invested in their ideas and see these come to light. On the other hand, many business ideas demand that there is a prototype available to better understand what inventors are trying to accomplish. For some IT-related ideas, these prototypes can be related to first mock-ups of "apps" but could also be related to a demonstrator (using Arduino boards and Raspberry Pis). For other ideas it might be necessary to develop 3D prototypes. Entrepreneurial coaches can play a crucial role in guiding students to rapid prototype development as it helps inventors to get a clearer thought on what their product could look like as well as include user feedback. FabLabs are the perfect solution to these needs and are also very crucial to adding value to the coaching process. Workpackag-3 (WP3) provides

comprehensive details and the mechanism for the establishment of FabLabs.

Partner universities (CUI, GCU, UoG) do not have any facilities that could be repurposed as a FabLab. Under WPP-3 of TAKE UP project these FabLabs are going to be established wherein a wide range of necessary equipment shall be available to the students and faculty members. The FabLabs were initially planned to be procured and shipped to Pakistan in 2020-21, but due to COVD-19 travel and insurance limitations the procurement and shipment could not have been finalized until first week of December 2022.

12. FabLab Equipment
The following equipment have been procured for FabLabs in each partner University:

Position	Equipment/Device	Brand	Quantity	Distribution
1	Soldering station	TOOLCRAFT ST-100D	6	CUI: 2 GCU: 2 UOG: 2
2	hot air soldering station	TOOLCRAFT LSH-880	6	CUI: 2 GCU: 2 UOG: 2
3	Solder fume extraction	TOOLCRAFT ZD-153A	6	CUI: 2 GCU: 2 UOG: 2
4	Laboratory power supply	VOLTCRAFT DPPS-32-20	3	CUI: 1 GCU: 1 UOG: 1
5	Digital oscilloscope	GW Instek GDS-1152A-U	6	CUI: 2 GCU: 2 UOG: 2
6	Digital multimeter	AMProbe AM-510-EUR	3	CUI: 1 GCU: 1 UOG: 1
7	Digital multimeter	Fluke 115	3	CUI: 1 GCU: 1 UOG: 1
8	Crimping pliers	TOOLCRAFT PZ-506 430461	3	CUI: 1 GCU: 1 UOG: 1
9	Professional Ear Protection	Peltor X5	15	CUI: 5 GCU: 5 UOG: 5

10	Professional Protection glasses	uvex ultrasonic 9302	15	CUI: 5 GCU: 5 UOG: 5
11	Professional Breathing protection	3M 6200 6200M	15	CUI: 5 GCU: 5 UOG: 5
12	Filter cover	3M 501 filter cover	15	CUI: 5 GCU: 5 UOG: 5
13	Battery operated multifunction tool	DREMEL 8220-5/65	3	CUI: 1 GCU: 1 UOG: 1
14	Hot glue gun	DREMEL Hot glue gun 940 (940-3)	10	CUI: 2 GCU: 2 UOG: 6
15	Multi purpose tool	Bosch Professional GRO 12 V LI 06019C5001	6	CUI: 2 GCU: 2 UOG: 2
16	Air compressor	Einhell TE-AC 36/6/8	3	CUI: 1 GCU: 1 UOG: 1
17	Combination belt sander	Metabo BS 175	3	CUI: 1 GCU: 1 UOG: 1
18	Bench drill	PBD 40	3	CUI: 1 GCU: 1 UOG: 1
19	Pillar drilling machine	SB 4116HN	1	CUI: 0 GCU: 0 UOG: 1
20	Cordless Drill and Screwdriver	Makita DDF485RTJ	6	CUI: 2 GCU: 2 UOG: 2
21	Straight grinder	Makita GD0800C	3	CUI: 1 GCU: 1 UOG: 1
22	Microscope with display	Digitales Mikroskop dnt UltraZoom PRO	6	CUI: 2 GCU: 2 UOG: 2
23	Laptops for workshops/control/administration	Lenovo L15	6	CUI: 2 GCU: 2 UOG: 2

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24	Desktop PC for machine control	HP 290 G4 MT Desktop PC	4	CUI: 1 GCU: 1 UOG: 1
25	Mobile suction unit	Bosch GAS 35 M AFC	3	CUI: 1 GCU: 1 UOG: 1
26	3D scanner (for small objects)	Matter and Form V2 3D Scanner	3	CUI: 1 GCU: 1 UOG: 1
27	3D printer	Ultimaker S3	3	CUI: 1 GCU: 1 UOG: 1
28	Resin	Monoprice 134610 Rapid UV Filament Resin Orange 1000 ml	20	CUI: 5 GCU: 10 UOG: 5
29	PLA Filament	PLA Filament 1.75mm white Verbatim	6	CUI: 2 GCU: 2 UOG: 2
30	PLA Filament	PLA Filament 1.75mm black Verbatim	6	CUI: 2 GCU: 2 UOG: 2
31	PLA Filament	PLA Filament 1.75mm red Verbatim	6	CUI: 2 GCU: 2 UOG: 2
32	PLA Filament	PLA Filament 1.75mm green Verbatim	6	CUI: 2 GCU: 2 UOG: 2
33	PLA Filament	PLA Filament 1.75mm blue Verbatim	6	CUI: 2 GCU: 2 UOG: 2
34	PLA Filament	PLA Filament 2.85mm Renkforce black	6	CUI: 2 GCU: 2 UOG: 2
35	PLA Filament	PLA Filament 2.85mm Renkforce white	6	CUI: 2 GCU: 2 UOG: 2
36	PLA Filament	PLA Filament 2.85mm Renkforce red	6	CUI: 2 GCU: 2 UOG: 2

37	PLA Filament	PLA Filament 2.85mm Renkforce silver	6	CUI: 2 GCU: 2 UOG: 2
38	PLA Filament	PLA Filament 2.85mm Renkforce orange	6	CUI: 2 GCU: 2 UOG: 2
39	Air compressor	Jun-Air OF 302-25B	1	CUI: 0 GCU: 0 UOG: 0
40	Laser cutter (laser engraver) inc. Inflation	Trotec Q400	3	CUI: 1 GCU: 1 UOG: 1
41	Extraction unit	Trotec Atmos Mono	3	CUI: 1 GCU: 1 UOG: 1
42	Cutting plotter and cutter	Secabo S120 II	3	CUI: 1 GCU: 1 UOG: 1
43	3D scanner (for rooms etc)	Matterport Pro2 + tripod	3	CUI: 1 GCU: 1 UOG: 1
44	3D printer	Prusa i3 MK3S+	12	CUI: 4 GCU: 4 UOG: 4
45	3D printer	Prusa SL1S + CW1S BUNDLE	6	CUI: 2 GCU: 2 UOG: 2
46	Mobile suction unit	Festool CLEANTEC CT 15 E-Set	3	CUI: 1 GCU: 1 UOG: 1
47	Mobile suction unit	Festool CLEANTEC CTL MIDI	3	CUI: 1 GCU: 1 UOG: 1
48	Mobile suction unit	Festool CLEANTEC CTM 26E AC	3	CUI: 1 GCU: 1 UOG: 1

13. "Train the trainers" activities and preparation of coaches' manual

Under WP5 and 6 several sessions were held to develop a Manual for the Trainers (Coaches). The first unfinished draft of the Coaches manual is attached at the end of this Mid Term Report.

14. Visit of project staff of partner universities to AUEB (Athens, Greece) and UdS (Saarland, Germany)

Several training sessions were held to train the trainers. Two major sessions were held at Saarland and Athens in which TAKE UP Coordinators and other relevant staff-faculty members from the partner universities participated.

First visit was two weeks long and was held in two phases. The first phase was organized at and by Athens Centre for Entrepreneurship and Innovation (ACEin) of AUEB during 21st to 25th March 2022. The second phase was organized by and held at UdS from 27th March to 1st April 2022.

In the second visit participants from partner universities spent five days at UdS from 25th to 29th July 2022 and took part in the events and discussion sessions organized by UdS.

The broad objective of both the visits was to gain practical experience of the workings and operations of the partner European universities and discuss the strategic outlook of the TAKE UP project. In addition, extensive discussions took place on the contents of Entrepreneurship Curriculum and the Coaches Manual.

Detailed reports of both the visits are appended to this Mid Term Report.

15. Development of Strategic Plans
As part of the TAKE-UP project, each partner university was assigned to develop strategic plans for the cultivation of entrepreneurial culture at the respective campuses. The draft strategic plan encompassing ten objectives, developed by COMSATS University Lahore Campus is appended to this Mid Term report. In addition, a proposal has also been developed for long term collaboration with German universities, which is also attached at the end of this report.

16. TAKE UP Project Coordinators
1. Dr Theresa Zimmer, UdS, Germany
2. Dr Vasiliki Chronaki, AUEB, Greece
3. Dr Muhammad Ahmed Farooqui, CUI, Pakistan
4. Dr Ammad Uppal GCU, Pakistan
5. Dr Faiza Ali, LUMS, Pakistan
6. Dr Shahzada Babar, UoG, Pakistan

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Curriculum of Entrepreneurship Course
Designed under EU-Funded Project entitled
"Transforming Academic Knowledge to develop Entrepreneurial Skills in Pakistan" (TAKE-UP) 2020-2023

Module 1 - Problem Solution Fit		
Session	**Learning Objectives**	**Contents**
Session 1.1 **Basic concepts of Business, Startups and Entrepreneurship**	1. Team formation 2. Students understand the terms business, start-up, and entrepreneurship 3. Students know different types of entrepreneurs, their way of thinking and their role in our socio-economic system 4. Students know about the importance to reduce risks and make decisions	1. Definitions of business, start-ups, and entrepreneurship 2. Entrepreneurial mindset 3. Types of entrepreneurs and their role in the socio-economic system 4. Causes of success and failure 5. Risk reduction strategies 6. Decision-making strategies
Session 1.2 **Understanding the project management framework for start-ups**	1. Students understand entrepreneurship as a process of linking the opportunity & ideas, market gap, solution orientation, and resource mobilization 2. Understanding the conceptual difference of operations and projects. 3. Using the effectual and strategic thinking for identification of entrepreneurial opportunities for start-up 4. Identify one's resources (self, skills, network) for entrepreneurial actions 5. Understand and practice entrepreneurial networking for developing the know-who 6. Understand the principles and use of design thinking.	1. Entrepreneurial process 2. Effectuation 3. Identifying own resources 4. Networking 5. Design Thinking: Empathize & Define (theory and methodological tools)
Session 1.3 **Understand and practice creativity and design-thinking**	1. Understand the problem of creativity blocks 2. Understanding the structure of creativity processes & learning creativity techniques 3. Understand the principles of design thinking and use them for ideation 4. Understand how to evaluate and select ideas with the help of design-thinking/creative problem-solving methods	1. Definition of a creative attitude and explanation why everybody can be creative 2. What are creativity blocks 3. Perceptual and emotional creativity blocks 4. Design-thinking: Ideation, Evaluation, Selection (theory and methodological tools)
Session 1.4 **Visualize ideas via prototyping and communicate within the team for shared vision**	1. Team building and communication (team dynamics) 2. Traits of Leaders & styles and theories about leadership 3. Importance of prototyping Understand the importance of prototyping for visualizing and communicating the ideas within the team 4. Prevention of early surrender	Part1: 1. Leadership traits, theories & styles 2. Digital & intercultural communication 3. Strategies of communication analysis Part2: 4. Definition and methods of Prototyping 5. Paper & Digital Prototyping: Why & How? 6. Customer Involvement & User Testing in Prototyping Part3:

	Entrepreneurial risks & fears, learning to unlearn and relearn without early surrender/motivation loss 5. Increasing self-efficacy	7. Entrepreneurial risks, fears, and stress 8. Strategies to deal with failure (mindfulness methods, self-efficacy)
Module 2 - Marketing & Finance		
Session 2.1 **Market analysis**	1. Answer the questions: who is your customer? What is your product/service? 2. Value proposition – Why your product/service? 3. Select markets, segments and target customers 4. Knowledge about the market, including customers and competitors	1. What is marketing and today's global marketplace? 2. Traditional vs non-traditional marketing. 3. What is the market environment? How to evaluate internal and external environment of the organization? 4. Choosing a best fit value proposition to satisfy customers 5. Analysis of service available obtainable/target market SAM, SOM, TAM 6. Bottom-up and top-down methods of marketing 7. Marketing planning; strategic vs tactical planning 8. Competitor analysis, Persona & Customer journey 9. SWOT analysis and Marketing Mix
Session 2.2 **Market position**	1. Position and differentiate products and services from the competition 2. Develop and implement sales, marketing and distribution strategies 3. Create sustainable competitive advantage for their business	1. What are 4P's of products and 7P's for services? 2. Different distribution and communication instruments and objectives of marketing (AIDA) 3. Major steps in designing a customer-driven marketing strategy 4. Major pricing strategies & customer-value perceptions, company costs and competitor strategies for setting prices 5. Development of a brand/logo
Session 2.3 **Introduction to entrepreneurial finance**	1. Understand the basic concepts of modes of finance from entrepreneurial perspective 2. Discuss the financial management process in start-ups 3. Understand capital budgeting techniques in start-ups 4. Measuring & evaluating financial performance 5. Financial planning	1. Introduction to entrepreneurial finance* 2. Calculation of needed capital, income statement 3. Venture life-cycle 4. Forecasting and budgeting 5. Income statement and balance sheet 6. Break-even analysis
Session 2.4 **Funding opportunities**	1. Know the opportunities and sources of funds for business 2. Public and private funding sources 3. Type and repayment of investments and financial management of the funds.	1. Introduction to funding opportunities 2. Crowdfunding and Bootstrapping 3. Debt and equity financing 4. Government grants and Venture capital 5. Going public and share market
Module 3 - Legal Challenges, Intellectual Property Concepts and Management		

Session 3.1 Introduction to intellectual property	1. Students know what the term Intellectual Property means 2. Students know basic concepts and significance of intellectual property 3. Students know the benefits from IP/IP system 4. Students know the evolution of IP system 5. Students know the IP holder's rights 6. Students can understand how IP rights benefit society 7. Students get familiarized with different domains/types of IP/IP protections 8. Introduction of tools/domains to IPRs: Copyright	1. Introduction, Terms and Definitions 2. Protection under Intellectual Property Act 3. Importance, advantages, benefits and needs of IPRs. 4. Domains/types of intellectual property/protection 5. International Conventions/Treaties/Agreements 6. Copyright Office and Governing Legislation 7. Steps for registration of copyright
Session 3.2 Continuing tools/ domains of IRPs	1. Define/describe all domains of IP protection with examples 2. Nature, purpose, functions and time duration of different IP rights/protections 3. Conditions and prerequisites for various IP protections. 4. Explain in a few words the rights that are protected by different domains of IP rights along with limitations of each domain. 5. Benefits/beneficiaries of IP rights under various domains. 6. IP rights and protection under various systems, regulations, agreements, treaties and conventions etc. 7. Explain how the ownership of intellectual properties under various domains can be obtained and transferred/methods of IP protections. 8. Various measures that can be used to enforce such rights. 9. Remedies for infringements and violations of different domains of IP rights	A. Related rights 1. Rights granted to the beneficiaries of Related rights 2. Limitations and exceptions of Related rights 3. Duration and Enforcement of Related rights, the remedies for infringement or violation of Related rights B. Trademarks 4. Introduction and characteristics of trademarks 5. Trademarks versus service marks: Registration and Protection 6. Territorial vs. worldwide registration 7. Local and International TM Conventions/Treaties/Agreements. C. Geographical indications 13. Types of protections for geographical indications 15. Worldwide protection of GIs 16. International conventions/Treaties/agreements
Module 4 - Into Action		
Session 4.1 Analyze how the idea, market, and business structure are interlinked	1. Understanding components, scope, and the value of business plans 2. Understand the business model canvas and interlinkages in its nine building blocks 3. Use business model canvas as visual-communication tool within the team and other audience 4. Students know how to validate the business model from multiple perspectives (e.g., customer interview	1. Problem of unstructured plans and its solution; Business Model Canvas and its functions 2. Blocks: key activities, key partners, customers, customer relationships, value proposition, revenue, channels, costs, key resources 3. SMART Goals (Specific, Measurable, Achievable, time-bound) 4. Components, scope and value of the business plan

		5. Traditional business plans and Why some business plans fail
		6. Resources, information, and structure of the plan
		7. Validation of hypotheses with customer interviews
		8. PSP (structured project plan with milestones, work-packages, sub-tasks, responsibilities)
Session 4.2 **Presenting the business idea**	1. Understand how to structure a convincing sales pitch using effective persuasion skills in front of potential customers 2. Deliver a sales pitch and spot the early adopters, Mock pitches 3. Structure a persuasive investment pitch for potential investors 4. Practice key negotiation skills by using the concepts. 5. Visiting angel investors	1. Structure of a convincing pitch (and structure of a bad pitch) 2. Argumentation techniques 3. Persuading with credibility and pathos 4. Networking, Communication, persuasion skills and strategies 5. Location to meet different audiences/Planning to meet them 6. Negotiation with Harvard concept
Session 4.3 **Growth strategies, succession planning, harvesting and exit strategy**	1. Different ways to hand over/exit the business 2. What insolvency and bankruptcy are and how to deal with them 3. How good management works in terms of time, changes, pressure etc. 4. How to restructure and keep their company running in uncertain situations like COVID-19	1. Vision, Mission (cave: Overlap leadership and communication) 2. Strategic management and Growth strategies 3. Penetration, market development, product development and diversification strategies 4. Pressure, change and time management and Expansion 5. Merger, acquisitions, joint-venture, franchising etc. 6. Exit strategy, Selling the venture, transfer to family/non-family 7. Insolvency and bankruptcy 8. Keeping the business in uncertain situations such as COVID-19

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Transforming Academic Knowledge to
Develop Entrepreneurial Universities in Pakistan — (TAKE-UP)

A Project of **European Union** in collaboration with

University of Saarland (Germany)

Athens University of Business and Economics (Greece)
And
COMSATS University Islamabad, Lahore Campus

Introductory Sessions for a Short Course in

Entrepreneurial Skill Development

COMSATS University Islamabad, Lahore Campus

24th August 2021

Modules	Time	Topics	Resource Person
Opening Session	4:00- 4:15 PM	Introduction of TAKE-UP Project & Entrepreneurial Skill Development Course.	**Prof. Dr. M A Farooqui** Head, Academics and Research
Module: 1 Basics of Entrepreneurial Initiative	4:15- 4:45 PM	Basic Concepts of Business, Start-ups and Entrepreneurship, Understanding the Project Management framework for start-ups, Understand and practice creativity & design thinking, Visualize ideas via prototyping.	**Dr. Rana Nadir Idrees** Head, Management Sciences
Module: 2 Marketing & Financial Aspects		Market Analysis, Market Positioning, Introduction to Entrepreneurial Finance, Funding Opportunities, Brief of Potential Funding Providers	**Dr. Ali Iftikhar Choudhary** Management Sciences
Module: 3 Legal Aspects of Businesses	4:45- 5:15 PM	Legal and administrative requirements of start-up businesses: facilitation from SECP, and Intellectual Property Rights.	**Prof. Dr. M A Farooqui** Head, Academics and Research
Module: 4 Going Into Action	5:15- 5:45 PM	Analyze how the idea, market and business structure are Interlinked. Presenting the business idea. Communication within the team for shared vision. Growth Strategies, Succession Planning, harvesting and exit strategy Business Plan: a) Identify a business, b) Create a Company, c) Develop a Comprehensive Business model d) Presentations/ Submissions	**Dr. Ali Nawaz Khan** Electrical & Computer Engineering **Prof. Dr. M A Farooqui** Head, Academics and Research
Closing Session	5:45- 6:00 PM	Conclusions, Way Forward Vote of Thanks	

Learning Outcome: After completing the course you will be able to:
- ➢ *Learn and improve your entrepreneurial skills*
- ➢ *Develop your own business plan*
- ➢ *Get your business plan evaluated by Experts*
- ➢ *Receive a certificate of completion from Saarland University (Germany)*

Eligibility: Students of undergraduate programs studying in 5th and higher semesters

Last date to register: Monday 23rd August 2021 (2:00PM).

How to register: https://forms.gle/pEvhMqR7WGgQwJgz8

For more information: Ghulam Jilani, Course Organizer, *<TAKE-UPAdminCUI @cuilahore.edu.pk>*

COMSATS Entrepreneurship Course

⚙ ▾

Turn editing on

About the course

Your progress ❓

In this entrepreneurship course you will develop your own business idea in a team with three members. Each session will guide you through the different relevant development stages.

What to do?

*Watch the videos and get to know important theories and methods in each session [**Video**]*
*Test your knowledge working on the exercises [**Exercise**]*
*Meet in your team and develop your own business idea using your previously acquired knowledge [**Activity**]*
*Document your actions, writing minutes [**Minutes template**] and upload them [**Activity**]*
Get feedback from expert trainers

📣 Announcements

🌐 Welcome from Saarland University ☐

🌐 Kickoff Seminar CUI ☐

📕 Slides kickoff presentation ☐

  Hidden from students

📕 Business Cards ☐

📣 Forum ☐

📣 Announcements

🌐 Welcome from Saarland University ☐

🌐 Kickoff Seminar CUI ☐

📕 Slides kickoff presentation ☐

  Hidden from students

📣 Forum ☐

MODULE 1: Problem Solution Fit

Session 1: Starting a Start-up

Questions you will be able to answer after this session:

1. What is entrepreneurship?
2. How can I be an entrepreneur?
3. Why do start-ups fail?
4. Where can I start?

🌐 [Video 1](#)   ☐

🌐 [Video 2](#)   ☐

🌐 [Video 3](#)   ☐

📄 [Exercise](#)   ☐

📊 [Effectuation Grid](#)   ☐

📊 [Business Card Template](#)   ☐

📄 [Additional Material](#)   ☐

   For further understanding check out these videos and literature!

📄 [Upload minutes (Session 1)](#)   ☐

   1. Complete the [effectuation grid](#)!

   2. Create a business card with your key information and the kind of contact information you would like to share with the others and upload it.

   3. Participate in the team formation workshop (date to be announced).

   4. Form a team of 3 team members and do the [team registration](#)!

   Get to know team members in the team formation workshop!
   Get to know team members through checking their [business cards](#)!
   (List with all cards will be uploaded as soon as all participants uploaded their [business cards](#))

👥 [Team registration](#)   ☐

   Please register here with the team that you formed for this course.

🌐 [Video 1](#)   ☐

🌐 [Video 2](#)   ☐

🌐 [Video 3](#)   ☐

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📕 [Exercise](#)   ☐

📊 [Effectuation Grid](#)   ☐

📊 [Business Card Template](#)   ☐

📕 [Additional Material](#)   ☐

For further understanding check out these videos and literature!

📄 [Upload minutes (Session 1)](#)   ☐

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(List with all cards will be uploaded as soon as all participants uploaded their [business cards](#))

👥 [Team registration](#)   ☐

Please register here with the team that you formed for this course.

Session 2: Project management for start-ups
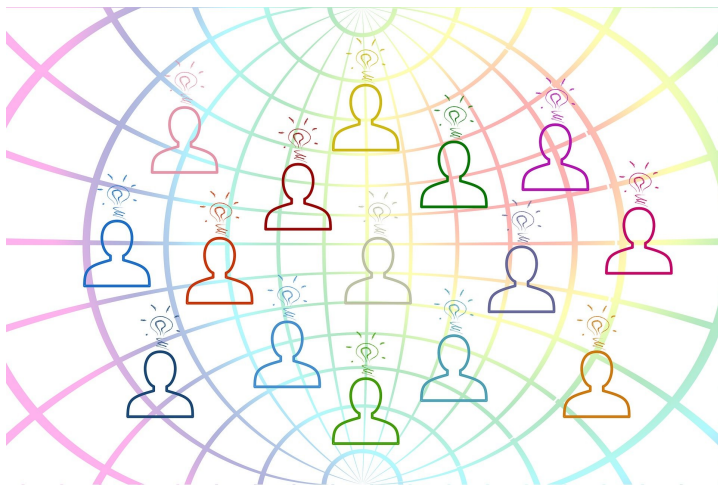
Questions you will be able to answer after this session:

1. What means and Resources does my team provide?
2. What is networking and how can I do it successfully?
3. What is Design Thinking?
4. How can I define a problem statement?

🌐 [Video 1](#)   ☐

📄 [Video 2](#) ☐

📄 [Video 3](#) ☐

📄 [Video 4](#) ☐

📕 [Exercise](#) ☐

📤 [Upload minutes (Session 2)](#) ☐

1. Teamwork on empathizing:

Meet in your team and try 1 learned method for empathising!
What are the relevant topics for people in your environment?
What are their concerns?
Try 1 learned method for defining!
Select one interesting topic out of your results from the empathizing [exercise](#) which matches your interest
Define your POV (Point of View)

2. Upload your minutes to show your progress!

📘 [Minutes Template](#) ☐

Please use this template to document your progress.

📕 [Additional Material](#) ☐

For further understanding check out these videos and literature!

📄 [Video 1](#) ☐

📄 [Video 2](#) ☐

📄 [Video 3](#) ☐

📄 [Video 4](#) ☐

📕 [Exercise](#) ☐

📤 [Upload minutes (Session 2)](#) ☐

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What are the relevant topics for people in your environment?
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Select one interesting topic out of your results from the empathizing [exercise](#) which matches your interest
Define your POV (Point of View)

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📘 [Minutes Template](#) ☐

Please use this template to document your progress.

📕 [Additional Material](#) ☐

For further understanding check out these videos and literature!

[Session 3: Getting your creative juices flowing](#)

Questions you will be able to answer after this session:

1. What are creativity blocks?
2. What are techniques I can use to be more creative?
3. How do I know an idea is a good one?
4. How do I select an idea?

🌐 Video 1		☐
🌐 Video 2		☐
🌐 Video 3		☐
🌐 Video 4		☐
📕 Exercise		☐
✅ Exercise Quiz		☐

Test your knowledge!

🤲 Upload minutes (Session 3)   ☐

1. Team work on ideation methods:

Meet in your team and try 1 learned method for ideation!
1 learned method for evaluation!
Try 1 learned method for selection!

2. Upload your minutes to show your progress!

📄 Minutes Template   ☐

Please use this template to document your progress.

📕 Additional Material   ☐

For further understanding check out these videos and literature!

🌐 Video 1		☐
🌐 Video 2		☐
🌐 Video 3		☐
🌐 Video 4		☐
📕 Exercise		☐
✅ Exercise Quiz		☐

Test your knowledge!

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📤 Upload minutes (Session 3)   ☐

    1. Team work on ideation methods:

     Meet in your team and try 1 learned method for ideation!
     1 learned method for evaluation!
     Try 1 learned method for selection!

    2. Upload your minutes to show your progress!

📄 Minutes Template   ☐

    Please use this template to document your progress.

📄 Additional Material   ☐

    For further understanding check out these videos and literature!

Session 4: Building your Team and a Prototype

Questions you will be able to answer after this session:

1. What are qualities of a good leader?
2. Why is a good communication in my team essential and how can prototyping help?
3. How can I prevent early surrender?
4. How can I increase self-efficacy?

🌐 Video 1   ☐

🌐 Video 2   ☐

🌐 Video 3   ☐

🌐 Video 4   ☐

🌐 Video 5   ☐

🌐 Video 6   ☐

🌐 Video 7   ☐

🌐 Video 8   ☐

📄 Exercise 1   ☐

📄 Exercise 2   ☐

✔️ Exercise Quiz   ☐

📤 Upload minutes (Session 4)   ☐

30 of 176

1. Meet in your team and discuss who of you is a good leader and why?

2. This selected leader is supposed to moderate now a discussion in your team to find and formulate a vision for your business idea!

3. Teamwork on prototyping:

 Meet in your team and try 1 learned method for prototyping!
 Built your first prototype!

4. Practice individually 1 mindfulness [exercise](#) for at least 3 times/week!

5. Upload your minutes to show your progress!

[Minutes Template](#)   ☐

Please use this template to document your progress.

[Additional Material](#)   ☐

For further understanding check out these videos and literature!

[Video 1](#)   ☐

[Video 2](#)   ☐

[Video 3](#)   ☐

[Video 4](#)   ☐

[Video 5](#)   ☐

[Video 6](#)   ☐

[Video 7](#)   ☐

[Video 8](#)   ☐

[Exercise 1](#)   ☐

[Exercise 2](#)   ☐

[Exercise Quiz](#)   ☐

[Upload minutes (Session 4)](#)   ☐

1. Meet in your team and discuss who of you is a good leader and why?

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 Meet in your team and try 1 learned method for prototyping!
 Built your first prototype!

4. Practice individually 1 mindfulness [exercise](#) for at least 3 times/week!

5. Upload your minutes to show your progress!

[Minutes Template](#)   ☐

Please use this template to document your progress.

[Additional Material](#)   ☐

For further understanding check out these videos and literature!

MODULE 2: Product Market Fit

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Session 5: Analysing the market

Questions you will be able to answer after this session:

1. What is a market?
2. What is a best fit value propositions?
3. What are methods of marketing?
4. How do I conduct a SWOT analysis?

📄 Video 1 ☐

📄 Video 2 ☐

📄 Video 3 ☐

📄 Video 4 ☐

📄 Video 5 ☐

✋ Upload minutes (Session 5) ☐

1. Team work:

Meet in your team and analyze the SAM and SOM for your business idea using at least 1 bottom-up and 1 top-down method!
Create a persona!
Write a customer journey!
Develop a business strategy for your product/service using the SWOT analysis tool
Meet in your team and decide for one prizing model matching your business idea!
Define your unique selling proposition
Create your logo!
Establish your own marketing strategy, including communication channels and distribution instruments

2. Upload your minutes to show your progress!

📄 Minutes Template ☐

Please use this template to document your progress.

📄 Additional Material ☐

For further understanding check out these videos and literature!

📄 Video 1 ☐

📄 Video 2 ☐

📄 Video 3 ☐

📄 Video 4 ☐

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📄 [Video 5](#)   ☐

📄 [Upload minutes (Session 5)](#)   ☐

    1. Team work:

    Meet in your team and analyze the SAM and SOM for your business idea using at least 1 bottom-up and 1 top-down method!
    Create a persona!
    Write a customer journey!
    Develop a business strategy for your product/service using the SWOT analysis tool
    Meet in your team and decide for one prizing model matching your business idea!
    Define your unique selling proposition
    Create your logo!
    Establish your own marketing strategy, including communication channels and distribution instruments

    2. Upload your minutes to show your progress!

📄 [Minutes Template](#)   ☐

    Please use this template to document your progress.

📄 [Additional Material](#)   ☐

    For further understanding check out these videos and literature!

Session 6: Facing the market

Questions you will be able to answer after this session:

1. What are distribution and communication instruments?
2. How can I set a price for my product?
3. Who are my competitors and how do I deal with them?
4. How should I proceed in developing a brand?

📄 [Video 1](#)   ☐

📄 [Video 2](#)   ☐

📄 [Video 3](#)   ☐

📄 [Video 4](#)   ☐

📄 [Upload minutes (Session 6)](#)   ☐

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1. Teamwork:

Meet in your team and discuss the marketing environment of a product of your choice.
Develop an initial marketing strategy for your preferred offering.
Develop a marketing mix.
Reading assignment: Marketing plan.
Prepare a poster about the 4P's and SMART analysis.

2. Upload your minutes to show your progress!

[W] **Minutes Template**   □

Please use this template to document your progress.

[PDF] **Additional Material**   □

For further understanding check out these videos and literature!

[] **Video 1**   □
[] **Video 2**   □
[] **Video 3**   □
[] **Video 4**   □
[] **Upload minutes (Session 6)**   □

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Develop an initial marketing strategy for your preferred offering.
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Prepare a poster about the 4P's and SMART analysis.

2. Upload your minutes to show your progress!

[W] **Minutes Template**   □

Please use this template to document your progress.

[PDF] **Additional Material**   □

For further understanding check out these videos and literature!

Session 7: Tending to your finances

Questions you will be able to answer after this session:

1. How much capital do I need?
2. How do I calculate my break even point?
3. How can I manage our finances?
4. What is an income statement or balance sheet?

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📄 [Video 1](#) ☐

📄 [Video 2](#) ☐

📄 [Video 3](#) ☐

📄 [Video 4](#) ☐

📄 [Video 5](#) ☐

📄 [Video 6](#) ☐

📄 [Video 7](#) ☐

📄 [Video 8](#) ☐

📄 [Video 9](#) ☐

📄 [Upload minutes (Session 7)](#) ☐

    1. Team work on the financial support plan:

    Meet in your team and calculate the capital you need to start your own business
    Calculate also the specific break-even point
    Write a concrete plan (including tasks, responsibilities, and deadlines) of how to get financial support

    2. Upload your minutes to show your progress!

📄 [Minutes Template](#) ☐

    Please use this template to document your progress.

📄 [Additional Material](#) ☐

    For further understanding check out these videos and literature!

📄 [Video 1](#) ☐

📄 [Video 2](#) ☐

📄 [Video 3](#) ☐

📄 [Video 4](#) ☐

📄 [Video 5](#) ☐

📄 [Video 6](#) ☐

📄 [Video 7](#) ☐

📄 [Video 8](#) ☐

📄 [Video 9](#) ☐

📄 [Upload minutes (Session 7)](#) ☐

    1. Team work on the financial support plan:

    Meet in your team and calculate the capital you need to start your own business
    Calculate also the specific break-even point
    Write a concrete plan (including tasks, responsibilities, and deadlines) of how to get financial support

    2. Upload your minutes to show your progress!

📄 [Minutes Template](#) ☐

    Please use this template to document your progress.

📄 [Additional Material](#) ☐

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For further understanding check out these videos and literature!

Session 8: Funding your idea

Questions you will be able to answer after this session:

1. What funding opportunities are available to me?
2. What is dept and equity financing?
3. Can I get support from the government?
4. How does Crowdfunding work?

🌐 Video 1   ☐

🌐 Video 2   ☐

🌐 Video 3   ☐

🌐 Video 4   ☐

🌐 Video 5   ☐

✋ Upload minutes (session 8)   ☐

    1. Team work on the financial support plan:

    Write a concrete plan (including tasks, responsibilities, and deadlines) of how to get financial support

    2. Missing

    3. Upload your minutes to show your progress!

📄 Minutes Template   ☐

Please use this template to document your progress.

📄 Additional Material   ☐

For further understanding check out these videos and literature!

🌐 Video 1   ☐

🌐 Video 2   ☐

🌐 Video 3   ☐

🌐 Video 4   ☐

🌐 Video 5   ☐

✋ Upload minutes (session 8)   ☐

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1. Team work on the financial support plan:

Write a concrete plan (including tasks, responsibilities, and deadlines) of how to get financial support

2. Missing

3. Upload your minutes to show your progress!

[W] Minutes Template   ☐

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[PDF] Additional Material   ☐

For further understanding check out these videos and literature!

MODULE 3: Intellectual Property

Session 9: Intellectual Property
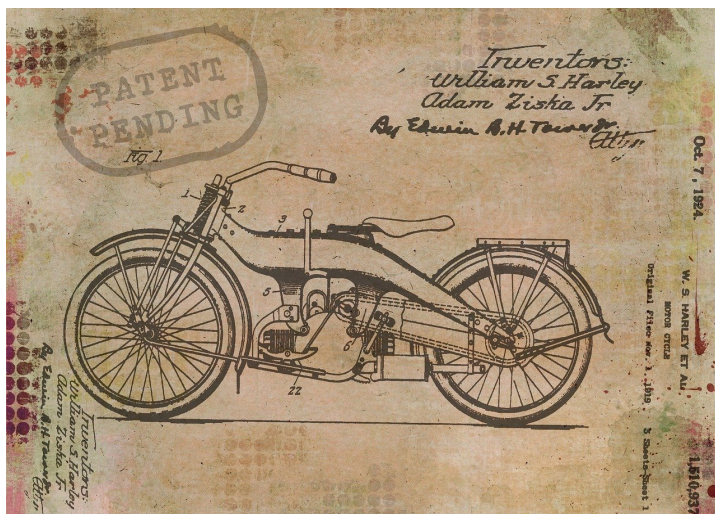
Questions you will be able to answer after this session:

1. What does intellectual property mean?
2. What are advantages of the intellectual property system?
3. What are the right of the intellectual property holder?
4. How can I protect my intellectual property?

[globe] Video 1   ☐

[PDF] Exercise   ☐

[page] Upload minutes (Session 9)   ☐

1. Do some research on Google and read details of the following as far as uses of Geographical Indications.

Silk Weaving in Thailand
Ceramic Bulls from Peru
Swiss Watches
Bottle of Argon Oil
Darjeeling for Tea
Havana for Tobacco
Cheese Processing Caves

2. Propose a few things/items/products etc. which can be protected under GI laws in Pakistan. (other than those mentioned before)

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Hala's Ajrak,
Kasuri methi,
Dates from Dera Ismail Khan, Turbat and Khairpur,
Sindhri mango,
Nili-Ravi buffalo,
Pashmina shawls.

3. Do some research on Google for a few new plant varieties of wheat, rice and cotton in Pakistan.

4. Think about and enlist a few examples of Trademark other than those mentioned before.

5. Recall or search at least five most famous examples of influential product designs other than mentioned before.

6. Read about the following enforcement provisions relating to the Copyright: conservatory or provisional measures; civil remedies; criminal sanctions; measures to be taken at the border; and measures, remedies and sanctions against abuses in respect of technical devices.

7. Read a summarised paragraph about each of the following:

Berne Convention, 1886
TRIPS Agreement, 1994
The WIPO Copyright Treaty (WCT), 1996
The Marrakesh Treaty, 2013, and
WIPO Performances and Phonograms Treaty

8. Upload your minutes to show your progress!

📕 [Additional Material](#)   ☐

For further understanding check out these videos and literature!

📘 [Minutes Template](#)   ☐

Please use this template to document your progress.

🌐 [Video 1](#)   ☐

📕 [Exercise](#)   ☐

📄 [Upload minutes (Session 9)](#)   ☐

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TRIPS Agreement, 1994

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The WIPO Copyright Treaty (WCT), 1996
The Marrakesh Treaty, 2013, and
WIPO Performances and Phonograms Treaty
8. Upload your minutes to show your progress!

📄 Additional Material   ☐

For further understanding check out these videos and literature!

📄 Minutes Template   ☐

Please use this template to document your progress.

Session 10: Domains of intellectual property

Questions you will be able to answer after this session:

1. What are different domains of intellectual property?
2. How long do certain intellectual properties last?
3. What are limitations and exceptions of related rights?
4. What happens if I violate related rights or if my rights are violated?

📄 Video 1   ☐
📄 Excersice   ☐
📄 Upload minutes (Session 10)   ☐

1. List 2 or 3 geographical indications that are used in Pakistan or Asia.

2. Read Introduction from

IPO Pakistan website: https://ipo.gov.pk/trademark_intro ;
IPO Pakistan online filing video tutorial: https://www.youtube.com/embed/pUXUKKdmDKI ;
IPO Pakistan Procedure for Online Registration: https://ipo.gov.pk/online_filing_guidelines ;
IPO Online Filing Guides:
Self-
user: https://ipo.gov.pk/system/files/How%20to%20Register%20as%20SELF%20%28Individual%29%20for%20IPO%E2%80%99s%20Online%20
Representative
user: https://ipo.gov.pk/system/files/How%20to%20Register%20as%20IP%20Attorney%20for%20IPO%E2%80%99s%20Online%20Filing%20Sy
Online filing: https://apply.ipo.gov.pk/ ;
Trademark filing
guidelines: https://ipo.gov.pk/system/files/final%20Guidelines%20for%20Filing%20Trademark%20Application%20in%20Pakistan%20%281%29

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2. Upload your minutes to show your progress!

📘 **Minutes Template**   ☐

Please use this template to document your progress.

📕 **Additional Material**   ☐

For further understanding check out these videos and literature!

✅ **Quiz**   ☐

🌐 **Video 1**   ☐

📕 **Excersice**   ☐

📄 **Upload minutes (Session 10)**   ☐

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IPO Pakistan online filing video tutorial: https://www.youtube.com/embed/pUXUKKdmDKI ;
IPO Pakistan Procedure for Online Registration: https://ipo.gov.pk/online_filing_guidelines ;
IPO Online Filing Guides:
Self-
user: https://ipo.gov.pk/system/files/How%20to%20Register%20as%20SELF%20%28Individual%29%20for%20IPO%E2%80%99s%20Online%20
Representative
user: https://ipo.gov.pk/system/files/How%20to%20Register%20as%20IP%20Attorney%20for%20IPO%E2%80%99s%20Online%20Filing%20Sy
Online filing: https://apply.ipo.gov.pk/ ;
Trademark filing
guidelines: https://ipo.gov.pk/system/files/final%20Guidelines%20for%20Filing%20Trademark%20Application%20in%20Pakistan%20%281%29
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2. Upload your minutes to show your progress!

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📕 **Additional Material**   ☐

For further understanding check out these videos and literature!

✅ **Quiz**   ☐

MODULE 4: Into Action

Session 11: Talking Business
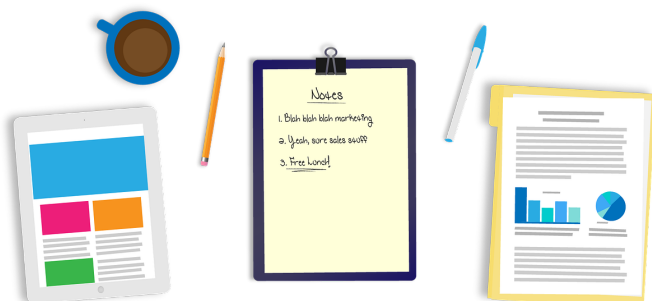
Questions you will be able to answer after this session:

1. How do I create a business plan?
2. What are SMART goals and how to define them?
3. Why do some business plans fail?
4. What is the Business Model Canvas?

📄 Video 1   ☐

📄 Video 2   ☐

📄 Video 3   ☐

📄 Video 4   ☐

📄 Video 5   ☐

📄 Video 6   ☐

📄 Video 7   ☐

📄 Video 8   ☐

📕 Exercise 1   ☐

📕 Exercise 2   ☐

📄 Upload minutes (Session 11)   ☐

1. Watch the YouTube videos.

2. Meet in your team and write a business model canvas for your business idea – be as concrete as possible!

3. Write a SWOT analysis for your business idea!

4. Analyse your business model canvas, define SMART goals to further develop your business idea!

5. Meet in your team and validate your business model canvas by conducting 10 customer interviews! (Take especially care for your assumptions of numbers)-

6. Write down 5 important insights of your customer interview.

7. Group Project: Business Plan Development

One vehicle for acquiring an understanding of the entrepreneurial process is creating a start-up business plan. The focus of this experience is to select a concept and create a complete and persuasive business plan that, among other things, will effectively accomplish the goal of acquiring financing. Writing a business plan requires you to ask tough questions about the nature of the business.

 What are the benefits of your product or service?
 What is the target market and how will you penetrate it?
 How will you develop and produce the product or service?
 What is required from the management team?
 What are the risks of the venture and what can you do to reduce these risks?
 What are the financial implications of the plan?
 What resources, including funding, are required to successfully create the business plan?

To understand the related entrepreneurial process, students will take a hands-on approach. Working in teams of up to five people, students will mutually decide upon a concept and develop a feasibility study. Based on that work, teams will develop a comprehensive business plan. In most cases, the primary objective of your team's business plan will be to receive funding. Your plan will be prepared in three phases and your team will present the plan as a written document and present it to the.

8. Upload your minutes to show your progress!

📄 Minutes Template   ☐

Please use this template to document your progress.

📕 Additional Material ☐

For further understanding check out these videos and literature!

📄 Video 1 ☐

📄 Video 2 ☐

📄 Video 3 ☐

📄 Video 4 ☐

📄 Video 5 ☐

📄 Video 6 ☐

📄 Video 7 ☐

📄 Video 8 ☐

📕 Exercise 1 ☐

📕 Exercise 2 ☐

✋ Upload minutes (Session 11) ☐

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8. Upload your minutes to show your progress!

📘 Minutes Template ☐

Please use this template to document your progress.

📕 Additional Material ☐

For further understanding check out these videos and literature!

Session 12: Pitch Perfect

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Questions you will be able to answer after this session:

1. How do I structure a sales pitch?
2. What are techniques I can use to improve my argumentation skills?
3. Where can I meet interested audiences?
4. Pathos? Isn't that a greek god? - What is pathos and why is it important?

🌐 Video 1	☐
🌐 Video 2	☐
🌐 Video 3	☐
🌐 Video 4	☐
📕 Exercise	☐
☝ Upload minutes (Session 12)	☐

🚩 Final task for your start-up.

Prepare a Business Plan as per below format by Monday, **January 31st ,2022.**

<div align="center">Business plan (max 500 words each)</div>

Name....................................... Student Number .... Date................

1. Executive Summary

(Explain who will purchase your team's product or service, what makes your business unique, how your team plans to grow, which countries your business operates/will operate in the future, and offer the results of your risk/opportunity-analysis)

Who will purchase:

......

What makes the business unique:

.....

Plans to grow:

Which countries/cities

Risk/opportunity analysis

2. Business Description

(Explain information of your industry, mission for the future, unique qualities of your product or service, their value for your customers, and basic financial objectives (sales, market share, and profitability etc.))

Industry description

Mission

Unique qualities

Value for customers

Basic financials

3. Marketing

44 of 176

(Explain who buys your product or service = target market, size of that target market and its location, sales projections, offer figures of your industry (real data), and describe the strengths weaknesses of your primary competitors in this industry)

Who will buy:

Size of the target market and location

Sales projections

Figures of the industry

Strengths and weaknesses

4. Research, Design, and Development

(Explain the research you conducted of your industry and of your team's product or service (what the particular customers' need is), your team's offering, which should be designed to meet those needs, the planned research and development activity in the future, specifications of why this team's product or service is different to those already in the market, and results of your analysis of the potential success (including cost/revenue projections)

Research conducted

Team's offering

Planned R&D

Why the offering is different to those in the market

Analysis of potential success

5. Operations

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(Explain actual operations in detail; what types of employees/managers you hire and how many, which taxes you need to pay to operate, access to transportation, distance to your supplies, and distance to your customers)

What types of team members (employees/managers)

Taxes

Access to transportation

Distance to suppliers

Distance to customers

6. Management

(Describe the management team members and their roles (why those individuals in your team?), plans to replace these team members if needed (if someone leaves or gets fired), include an analysis of salaries paid/to be paid, levels of ownership, investment plans, introduce your firm's organization structure, and explain the legal structure of your firm)

Management team members' roles

Plans to replace if someone leaves

Analysis of salaries

Levels of ownership

Organization structure

7. Financial Plan

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(Explain where your start-up funding is coming from – as bank loans, equity (selling a part of your business), or from risk investors (business angels or venture capitalists) – as well as how you are going to use those funds, when you will be able to pay them back (if a payback is required), what type of communication you are planning to have with those investors, and if you are willing to gain knowledge from those investors)

Where the funds come from

How to use the funds

When to pay back

Communication with investors

Which knowledge to gain

8. Critical Risks
(Explain potential risks before they happen, including price cutting threats (your competitors), unfavourable industry-wide trends, design- and manufacturing costs (and their potential changes in the future), sales projections that may not be achieved, and risks that the climate change can cause) Potential risks before they happen Trends Design-/manufacturing costs Sales projections not achieved Climate change
9. Harvest Strategy

47 of 176

(Explain the detailed ideas of how your team keeps functioning (although there can be challenges and team member changes), plans for buying (or not buying) insurances to cover potential unforeseen accidents, the strategies of how to make things better than before (detailed roles of each team member), plans to educate your team members in accordance to the industry needs, and plans for the successor of the business)

How the team keeps functioning

Insurances against to accidents

How to make things better than before

Education/the industry trends

Successor

10. Milestone Schedule

(Explain your future plans in a precise manner, offer a concrete time schedule and explanations of how to achieve the objectives in that schedule, plan how and how often to monitor the achievements, and offer measurements of how to define an achieved target/objective in your business (in terms of sales etc.))

Future plans

Timeline

How to monitor achievements

Measurements how to know the target is achieved in general

Measurements how to know the target is achieved in sales

[Minutes Template](#)   ☐

Please use this template to document your progress.

[Additional Material](#)   ☐

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For further understanding check out these videos and literature!

📄 [Video 1](#)   ☐

📄 [Video 2](#)   ☐

📄 [Video 3](#)   ☐

📄 [Video 4](#)   ☐

📕 [Exercise](#)   ☐

📄 [Upload minutes (Session 12)](#)   ☐

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2. Business Description

<div align="center">

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</div>

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50 of 176

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Research conducted

Team's offering

Planned R&D

Why the offering is different to those in the market

Analysis of potential success

5. Operations

(Explain actual operations in detail; what types of employees/managers you hire and how many, which taxes you need to pay to operate, access to transportation, distance to your supplies, and distance to your customers)

What types of team members (employees/managers)

Taxes

Access to transportation

Distance to suppliers

Distance to customers

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51 of 176

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How to use the funds

When to pay back

Communication with investors

Which knowledge to gain

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Potential risks before they happen

Trends

Design-/manufacturing costs

Sales projections not achieved

Climate change

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How the team keeps functioning

Insurances against to accidents

How to make things better than before

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Successor

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53 of 176

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Future plans

Timeline

How to monitor achievements

Measurements how to know the target is achieved in general

Measurements how to know the target is achieved in sales

[W] Minutes Template ☐

Please use this template to document your progress.

[PDF] Additional Material ☐

For further understanding check out these videos and literature!

Session 13: Next steps - Growing your Business

Questions you will be able to answer after this session:

1. How can I grow my business?
2. What risks does growth bring?
3. What is an exit strategy?
4. How can I manage my business in uncertain situations such as COVID-19?

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Minutes Template ☐

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Additional Material ☐

For further understanding check out these videos and literature!

Minutes Template ☐

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Additional Material ☐

For further understanding check out these videos and literature!

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**Transforming Academic Knowledge to Develop
Entrepreneurial Universities in Pakistan**
(TAKE UP)

Brief Interim Report

**COMSATS Entrepreneurship Course
(Entrepreneurship-101)**

August-November 2021

1.   The offering of the online COMSATS entrepreneurship course was shared with the students through e-mail and student's interests /responses to enroll themselves in this course was recorded. More than 350 students showed their interest in taking this course.

2.   An Introductory session about this entrepreneurship course was organized in August 2021, in which 128 students from different departments of CUI, Lahore participated.

3.   Afterwards 65 students successfully registered themselves in this online course on the Moodle Platform.

4.   Following students performed best in this course:

      i.   Muhammad Wasil Shehzad
     ii.   Liaba Tariq
   iii.   Hajra Afzal
   iv.   Kashf Asad

5.   Finally, 14 students completed the course, and their performances were evaluated based on their participation and the business plans they submitted.

6.   At the end of the course a course evaluation Performa was shared with the students and below is the responses:

(Note: In all the graphs 1; Strongly Disagree, and 5; Strongly Agree

The course outline available on the portal was easy to comprehend
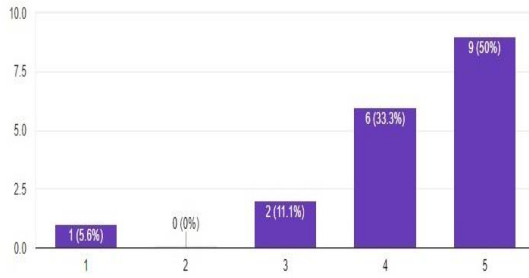
18 responses

I would recommend this course to other students.

18 responses
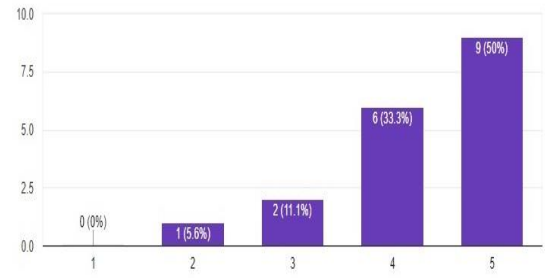
The course has adequate examples with Pakistani context to understand concepts of entrepreneurship in a local setup.

18 responses
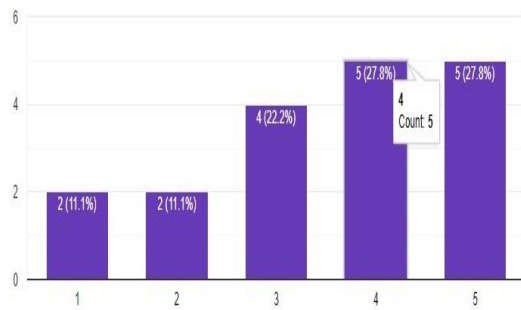
Overall, I am satisfied with the quality of the course.

18 responses
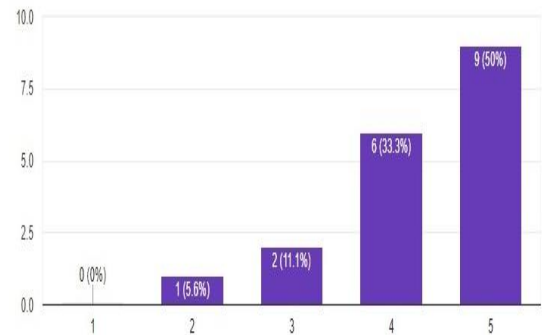
The course contents are well integrated with real world applications

18 responses
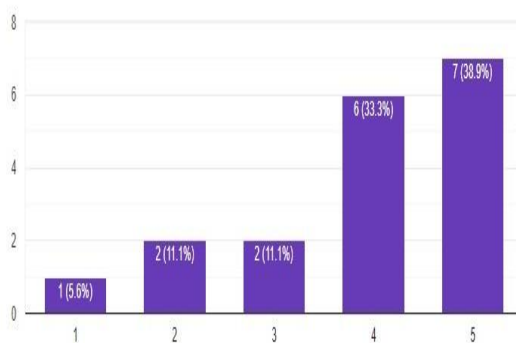
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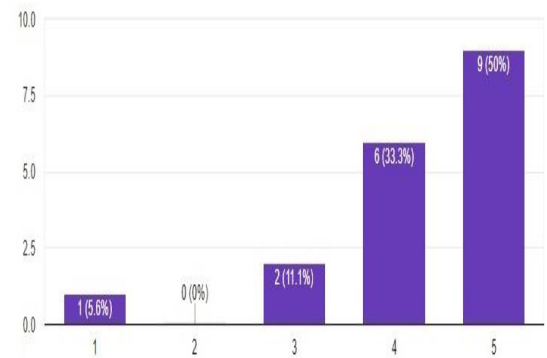
18 responses

The learning and teaching methods used in the course have helped me achieve the learning outcomes

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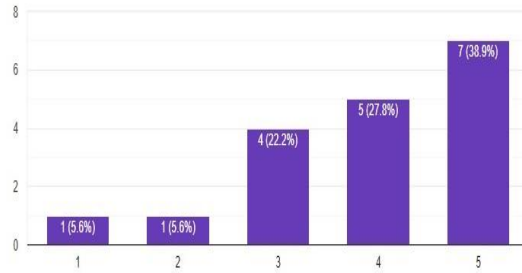
18 responses

This course has enabled me to develop my team and communicate with them.

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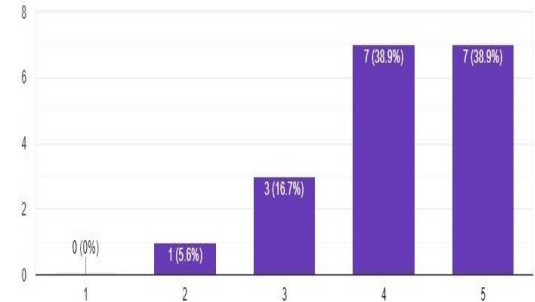
18 responses

The module objectives, learning outcomes and contents were clear

🗐 Copy
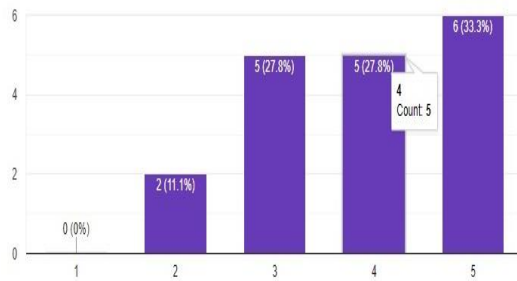
18 responses

I would like to attend this course again.

🗐 Copy
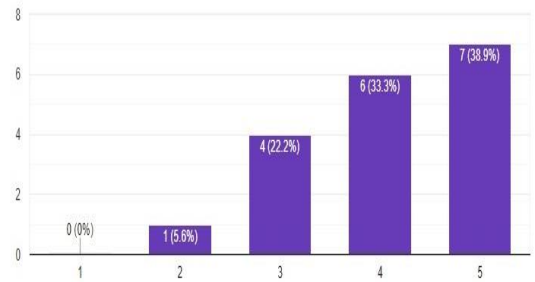
18 responses

The exercise materials were helpful

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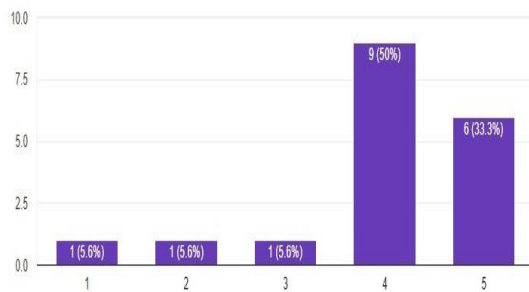
18 responses

The subject matter presented in the course has increased my knowledge of Entrepreneurship and has further motivated me to gain more knowledge.
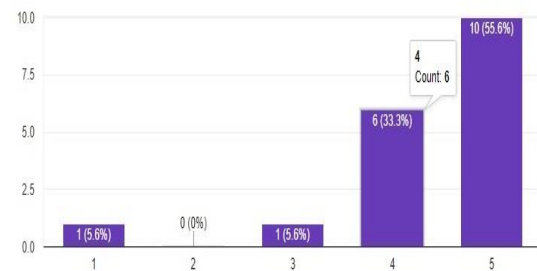
🗐 Copy

18 responses

Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan
(TAKE UP)
COMSATS Entrepreneurship Course (Entrepreneurship-101)
1st Badge of Successful Students (August-November 2021

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Co-funded by the
Erasmus+ Programme
of the European Union

Training Plan Entrepreneurial Thinking

Target group: Students with entrepreneurial intentions

Date: 08.09.2021

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I.   Information about objective and target group

The objective of this entrepreneurship course is to enhance the awareness for entrepreneurial activities, being a career opportunity for students at higher education institutions. Students will get a realistic overview of entrepreneurial knowledge and skills. Therefore, after completion they should have a solid basis to decide if they intend to start a business or not. In addition to that, students will acquire basic entrepreneurial skills and will therefore be able to act under uncertainty, think entrepreneurially and develop creative solutions for market needs in a team.

II.   Training information

Semester	No specific semester required
Resource Person	Teacher/Trainer with entrepreneurial background, mentors to guide entrepreneurial teams (e.g. alumni)
Supporting Team Members	Administrative staff to recruit and select student teams
Contact Hours	2
Working Hours	1

Course Introduction
This class addresses the unique entrepreneurial experience of conceiving, evaluating, creating, and managing a business. The goal is to provide a solid background with practical application of important concepts applicable to entrepreneurial environment. Entrepreneurial discussions regarding the key business areas of management, marketing, and finance, include the creative aspects of entrepreneurship. It examines the strategic challenges and managerial issues faced during entrepreneurial endeavors, including new product development, creating primary demand, viability of venture, acquiring resources and obtaining financing. The course relies on an E-learning, containing videos and online exercises as well as classroom presentations and discussions, case analysis and the creation of a business model to develop a comprehensive strategy for launching and managing a business. Students will need to work together in teams and to put their complementary expertise together. Exercises include interaction with the business community.

Learning Objectives
Learning Outcomes

- To introduce general entrepreneurship theory and its modern application in the current business environment, including local.
- Students should be able to recognize/create business opportunities in market, understand the external forces and conduct an environmental analysis, to analyze and integrate environmental forces into their strategy.
- To know the difference between planning and acting in an uncertain environment
- To enable students to develop creative solutions for business opportunities and to validate their business ideas in their teams and outside of the university.
- To enable students to select and evaluate promising business ideas and to adjust and further develop them according to market needs.
- To enable students to apply knowledge of marketing, management, and finance for entrepreneurial activities e.g. to manage resources, identify opportunities, maximize value, evaluate segment profitability, link product/service to segment as well as marketing mix, and conduct feasibility studies.
- To allow them to use relevant software to aid their entrepreneurial activities (MS Excel, MS PowerPoint and MS Project)

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- To demonstrate ability to work with others and in a professional manner and apply the professional and technical requirements to make business plans and present it in written/verbal form.
- To introduce an entrepreneurial mind-set.
- To know about various funding opportunities

Subject Specific Outcomes: Knowledge, Understanding and Skills
Students should be able to:
- Discover, understand and evaluate business opportunities in the market
- Understand the Resources requirements (Technical, Financial and Human)
- Evaluate the Direct/Indirect competitors, Alternative/Substitute products, and markets

General Outcomes: Knowledge, Understanding and Skills
Students should be able to:
- Understand various business development processes
- Prepare themselves to launch small sized businesses
- Understand financing and be enabled to finance their ventures

Course Content and Implementation

This entrepreneurship training consists out of an E-learning and live session and is offered for students who will work in teams. During E-learning sessions, students will become familiar with basic entrepreneurial knowledge, tools, necessary skills. They will consolidate their knowledge working on different tasks (quizzes, case studies, exercises), available on the E-learning platform. Reading material is available for those, who want to get a deeper understanding of the theoretical background. After completion of the online tasks, students are asked to implement the lessons learned in their teams, developing an own business idea. After completion of those weekly team tasks, students are going to present their progresses in class (live sessions). During these sessions, they will get feedback and individual support from trainers and peers. Discussions and constructive critiques are essential parts of those sessions.

Further Information

This course can be offered to students of any discipline. To inform students about the course content as well as its applied and practical character we highly recommend to offer information sessions. If this course is offered on a voluntary basis we also recommend an application and a selection procedure including the evaluation of student´s motivation.

III. Training manual

Module 1: Problem Solution Fit

Session 1: Entrepreneurial Mindset	
Learning objectives	1. Team formation 2. Students understand the terms business, start-up, and entrepreneurship 3. Students know different types of entrepreneurs, their way of thinking and their role in our socio-economic system 4. Students know about the importance to reduce risks and make decisions
Content	• Definitions of business, start-ups, and entrepreneurship • Entrepreneurial mindset • Types of entrepreneurs and their role in the socio-economic system • Causes of success and failure • Decision-making strategies • Entrepreneurial process • Effectuation/Risk reduction strategies • Identifying own resources
Teaching material	• **Course Video** 1_2 [Problem: Reasons of failure] https://www.youtube.com/watch?v=YjiaPWOyMks • **Course Video** 2_1 [Problem: No means] https://www.youtube.com/watch?v=OlMmsBQP1tQ • **Course Video** 2_2 [Solution: Effectuation] https://www.youtube.com/watch?v=wI7ZfhgZQAc
Exercises for students during session	Reading assignment (idea and team formation)
Activities for students	Students watch the YouTube videos Team formation (e.g. guided workshop to form teams, if students lack in team members) Team registration on the E-learning platform
Essential readings for students	For this session students/teachers should prepare with the following literature: Main Textbook Part 1.1
Material for students	• **YouTube Video** (ted talk, entrepreneurial mindset) https://www.youtube.com/watch?v=Ihs4VFZWwn4&feature=youtu.be • **YouTube Video** (the art of entrepreneurship) https://www.youtube.com/watch?v=ATLUouxwykM&feature=youtu.be • **YouTube Video** (Ted talk, what makes an entrepreneur) https://www.youtube.com/watch?v=r8nHptyS234&feature=youtu.be • **16 Personality Test:** https://www.16personalities.com/free-personality-test • **Test for entrepreneurial potential:** https://balinkbayan.ph/EntrepAssessment/ • **YouTube Video:** The power of entrepreneurship https://www.youtube.com/watch?v=cEvKknBShwE

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Complementary reading	For this session students/teachers could further benefit by reading: Entrepreneurial mindset: Lanivich, S. E., Bennett, A., Kessler, S. R., McIntyre, N., & Smith, A. W. (2020). RICH with well-being: An entrepreneurial mindset for thriving in early-stage entrepreneurship. Journal of Business Research…

Session 2: Getting to know the environment and own resources	
Learning objectives	1. Students understand entrepreneurship as a process of linking the opportunity & ideas, market gap (=problem area), solution orientation, and resource mobilization 2. Understanding and applying the conceptual difference of operations and projects. 3. Using the effectual and strategic thinking for identification of entrepreneurial opportunities for start-up 4. Identify one's resources (self, skills, network) from an entrepreneurial perspective 5. Understand and practice entrepreneurial networking for developing the know-who 6. Understand the principles of design thinking and use them for empathize and define your problem statement
Content	• Identifying own resources • Networking • Design Thinking: Empathize & Define (theory and methodological tools)
Teaching material	• **Course Video** 2_3 [Problem: Why is networking difficult] https://www.youtube.com/watch?v=lndGd-3dY-M • **Course Video** 2_4 [Solution: Increasing networking skills] https://www.youtube.com/watch?v=EDk2orJmPQI • **Course Video** 1_3 [Solution: Design Thinking, Empathize] https://www.youtube.com/watch?v=Xp4Oyl-TWwk • **Course Video** 1_4 [Solution: Design Thinking, Define] https://www.youtube.com/watch?v=ijVpxUBAXbk
Exercises for students during session	**Case Study:** JBnJAWS Productions: Decoding the Entrepreneurial DNA
Activities for students	**Effectuation:** • Complete the effectuation grid! • Meet in your team and discuss your resources and your networks! • What are your strengths as a team? **Team work on empathizing:** • Meet in your team and try 1 learned method for empathizing! • What are the relevant topics for people in your environment? • What are their concerns?

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	• Try 1 learned method for defining! • Select one interesting topic out of your results from the empathizing exercise which matches your interest • Define your POV (Point of View)
Essential readings for students	For this session students/teachers should prepare with the following literature: • Main Textbook Part 2.2 & 2.3 • **Design Thinking:** https://opentextbc.ca/organizationalbehavioropenstax/chapter/design-thinking/ • **Ethics & innovation:** Rodríguez-López, Á., Souto, J.E. Empowering entrepreneurial capacity: training, innovation and business ethics. Eurasian Bus Rev 10, 23–43 (2020). https://doi.org/10.1007/s40821-019-00133-w • **Ideation:** Clausen, T. H. (2020). Entrepreneurial thinking and action in opportunity development: A conceptual process model. International Small Business Journal, 38(1), 21–40. https://doi.org/10.1177/0266242619872883 • **Effectuation:** Sarasvathy D. S. (2001). Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency. Academy of Management26(2), 243-263. https://doi.org/10.5465/amr.2001.4378020 • **Design Thinking Bootleg Stanford** https://dschool.stanford.edu/resources/design-thinking-bootleg
Material for students	• **YouTube Video:** reasons for start-up success https://www.youtube.com/watch?v=bNpx7gpSqbY&feature=youtu.be • **YouTube Video:** Change your future https://www.youtube.com/watch?v=CZx4DTglHJc • **YouTube Video:** Empathy https://www.youtube.com/watch?v=IJyNoJCAuzA
Complementary reading	For this session students/teachers could further benefit by reading: **Design Thinking** An Educational Model towards Creative Confidence https://www.researchgate.net/publication/268436912_Design_Thinking_An_Educational_Model_towards_Creative_Confidence

Session 3: Understand and practice creativity and design-thinking	
Learning objectives	1. Understand the problem of creativity blocks 2. Understanding the structure of creativity processes & learning creativity techniques 3. Understand the principles of design thinking and use them for ideation 4. Understand how to evaluate and select ideas with the help of design-thinking/creative problem-solving methods
Content	• Definition of a creative attitude and explanation why everybody can be creative

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	• What are creativity blocks • Strategies to overcome perceptual and emotional creativity blocks • Design-thinking: Ideation, Evaluation, Selection (theory and methodological tools)
Teaching material	• **Course Video** 3_1 [Problem: Creativity blocks] https://www.youtube.com/watch?v=7gAaQgXdZsU • **Course Video** 3_2 [Solution: How to overcome creativity blocks] https://www.youtube.com/watch?v=juTUf-eB4dM • **Course Video** 3_3 [Solution: Design Thinking Ideation] https://www.youtube.com/watch?v=lN87Euyi5Nc • **Course Video** 3_4 [Solution: Design Thinking Evaluation and Selection] https://www.youtube.com/watch?v=z87ZXMezW_k
Exercises for students during session	Small case study on E-learning platform [Case 3: Oral-B Toothbrush] Quiz on E-learning platform
Activities for students	Team work on ideation methods • Meet in your team and try 1 learned method for ideation! • 1 learned method for evaluation! • Try 1 learned method for selection!
Essential readings for students	For this session students/teachers should prepare with the following literature: • **Fostering an entrepreneurial mindset by using a design thinking approach in entrepreneurship** https://journals.sagepub.com/doi/full/10.1177/0950422216653195 • **University entrepreneurship education:** A design thinking approach https://innovation-entrepreneurship.springeropen.com/articles/10.1186/s13731-018-0098-z
Material for students	• **YouTube Video** (Ted talk, how to come up with good ideas): https://www.youtube.com/watch?v=L1kbrlZRDvU&feature=youtu.be • **YouTube Video:** You still can if you believe! https://www.youtube.com/watch?v=mn6qqMwANms
Complementary reading	For this session students/teachers could further benefit by reading: **EntreComp:** Creativity https://entre-comp.eu/ficha.php?id_ficha=5

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Session 4: Visualize ideas via prototyping and communicate within the team for shared vision	
Learning objectives	1. Team building and communication (team dynamics) 2. Traits of Leaders & styles and theories about leadership 3. Importance of prototyping 4. Understand the importance of prototyping for visualizing and communicating the ideas within the team 5. Prevention of early surrender 6. Entrepreneurial risks & fears, learning to unlearn and relearn without early surrender/motivation loss ($\rightarrow$ mindfulness methods, effectuation principle) 7. Increasing self-efficacy
Content	**Part1:** • Leadership traits, theories & styles • Digital & intercultural communication • Strategies of communication analysis **Part2:** • Definition and methods of Prototyping • Paper & Digital Prototyping: Why & How? • Customer Involvement & User Testing in Prototyping **Part3:** • Entrepreneurial risks, fears, and stress • Strategies to deal with failure (mindfulness methods, self-efficacy)
Teaching material	• **Course Video** 4_1 [Problem: Abstract ideas] https://www.youtube.com/watch?v=ijVpxUBAXbk • **Course Video** 4_2 [Solution: Design Thinking Prototyping] https://www.youtube.com/watch?v=ijVpxUBAXbk • **Course Video** 4_3 [Problem: Early surrender] https://www.youtube.com/watch?v=tGz4kSX8uWs&feature=youtu.be • **Course Video** 4_4 [Solution: Effectuation and Self-Efficacy] https://www.youtube.com/watch?v=YA7I-QMC8Fg&feature=youtu.be • **Course Video** 9_1 [Problem: No leader] https://www.youtube.com/watch?v=YA7I-QMC8Fg&feature=youtu.be • **Course Video** 9_2 [Solution: Good leadership] https://www.youtube.com/watch?v=nfrbWhuNmhM&feature=youtu.be • **Course Video** 9_3 [Problem: No joint vision] https://www.youtube.com/watch?v=tH6OuRdtwoQ • **Course Video** 9_4 [Solution: Formulation of a joint vision] https://www.youtube.com/watch?v=tH6OuRdtwoQ&feature=youtu.be
Exercises for students during session	• Small case in E-learning platform [Case 9: Toro] • Small case in E-learning platform [Case 4: Henry Ford] • Quiz on E-learning platform [4] • Quiz on E-learning platform [9]
Activities for students	• Meet in your team and discuss who of you is a good leader and why?

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	• This selected leader is supposed to moderate now a discussion in your team to find and formulate a vision for your business idea! **Teamwork on prototyping** • Meet in your team and try 1 learned method for prototyping! • Built your first prototype! • Practice individually 1 mindfulness exercise for at least 3 times/week!
Essential readings for students	For this session students/teachers should prepare with the following literature: • Main Text Book Part 3.8, 3.9 • **Sarasvathy, S (2001): What makes entrepreneurs entrepreneurial?** https://22657557.fs1.hubspotusercontent-na1.net/hubfs/22657557/Public%20Documents%20For%20Site/what-makes-entrepreneurs-entrepreneurial-sarasvathy.pdf
Material for students	**YouTube Video:** ted talk, how leaders inspire people to act https://www.youtube.com/watch?v=qp0HIF3SfI4
Complementary reading	For this session students/teachers could further benefit by reading: • **The great man of leadership** https://www.verywellmind.com/the-great-man-theory-of-leadership-2795311 • **The major leadership theories** https://www.verywellmind.com/leadership-theories-2795323 • **EntreComp: Mobilizing Others** https://entre-comp.eu/ficha.php?id_ficha=8

Module 2: Marketing & Finance

Session 1: Market analysis	
Learning objectives	1. Answer the questions: who is your customer? What is your product/service? 2. Value proposition – Why your product/service? 3. Select markets, segments and target customers 4. Knowledge about the market, including customers and competitors
Content	• What is marketing and today's global marketplace? • Traditional vs non-traditional marketing. • What is the market environment? How to evaluate internal and external environment of the organization? • Choosing a best fit value proposition to satisfy customers • Analysis of service available obtainable/target market SAM, SOM, TAM • Bottom-up and top-down methods of marketing • Primary and secondary research • Marketing planning; strategic vs tactical planning • Competitor analysis • Persona & customer journey • SWOT analysis • Marketing Mix
Teaching material	• **Course Video** 5_1 [Problem: Total available market not reachable] https://www.youtube.com/watch?v=zQFUTfmGvbE • **Course Video** 5_2 [Solution: Market analysis, SAM, SOM] https://www.youtube.com/watch?v=KS-r7TxLAOo • **Course Video** 5_3 [Solution: Design Thinking Persona, Customer Journey] https://www.youtube.com/watch?v=nGsuEuoIYpc • **Course Video** 5_4 [Solution: SWOT analysis] https://www.youtube.com/watch?v=TvtRWUqOGK0
Exercises for students during session	Exercise n°1: Developing a segment profile (detailed description + discussion questions) Reading assignment: Business vision, mission and value Reading assignment: production plan, analysis report Case study: segmentation, positioning, and targeting
Activities for students	**Team work** Meet in your team and analyze the SAM and SOM for your business idea using at least 1 bottom-up and 1 top-down method! Create a persona! Write a customer journey! Develop a business strategy for your product/service using the SWOT analysis tool Meet in your team and decide for one prizing model matching your business idea! Define your unique selling proposition Create your logo!

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	Establish your own marketing strategy, including communication channels and distribution instruments
Essential readings for students	For this session students/teachers should prepare with the following literature: Main textbook Part 2.4, 2.5
Material for students	**YouTube Video:** There is No Luck. Only Good Marketing. | Franz Schrepf | TEDxAUCollege https://www.youtube.com/watch?v=AN-41JjIPEg
Complementary reading	For this session students/teachers could further benefit by reading: Putting entrepreneurship into marketing https://www.emerald.com/insight/content/doi/10.1108/14715200080001536/full/html

Session 2: Market position	
Learning objectives	1. Position and differentiate products and services from the competition 2. Develop and implement sales, marketing and distribution strategies 3. Create sustainable competitive advantage for their business
Content	• What is the marketing mix, 4P's of products and 7P's for services? • Different distribution and communication instruments and objectives of marketing (AIDA) • Major steps in designing a customer-driven marketing strategy • 3 major pricing strategies & customer-value perceptions, company costs and competitor strategies for setting prices • Development of a brand/logo
Teaching material	• **Course Video** 6_1 [Problem: Gap Customer-entrepreneur] https://www.youtube.com/watch?v=cIOcSGvEc-s • **Course Video** 6_2 [Solution: Marketing: Product Policy] https://www.youtube.com/watch?v=8_tCRrsYA-0 • **Course Video** 6_3 [Solution: Marketing: Price and Distribution Policy] https://www.youtube.com/watch?v=rbA7gLzNiII • **Course Video** 6_4 [Solution: Marketing: Communication Policy] https://www.youtube.com/watch?v=G7GyRoDK-Tc
Exercises for students during session	Watch the YouTube video Students read marketing case studies provided in the class. Students watch the video to understand how marketing concept works Student task: what is the role of marketing? Case study: What is marketing?
Activities for students	Teamwork

	• Meet in your team and discuss the marketing environment of the product of their choice. • Develop an initial marketing strategy for their preferred offering. • Developing a marketing mix • Reading assignment: Marketing plan • Students prepare posters for the 4P's and SMART analysis • https://pakistan.entrepreneurship101.eu/course/view.php?id=15 - section-4
Essential readings for students	For this session students/teachers should prepare with the following literature: Main Textbook Part 4.11, 4.12
Material for students	**YouTube Video:** Best marketing strategy ever https://www.youtube.com/watch?v=keCwRdbwNQY&feature=youtu.be
Complementary reading	For this session students/teachers could further benefit by reading: • Chernev, A. (2020). The marketing plan handbook. Cerebellum Press. • P. Kottler & G. Armstrong (2018). Principle of Marketing, 17th edition. Pearson Education. • Boone, L. & Kurtz, D.L. (2019). Contemporary Marketing. 18th Edition, Cengage Learning Publisher. • Goldstein, B.L. (2019). Entrepreneurial Marketing: A Blueprint for Customer Engagement. 1st Edition, SAGE Publication Inc

Session 3: Tending to your finances	
Learning objectives	1. Understand the basic concepts of modes of finance from entrepreneurial perspective 2. Discuss the financial management process in start-ups 3. Understand capital budgeting techniques in start-ups 4. Measuring & evaluating financial performance 5. Financial planning
Content	• Introduction to entrepreneurial finance* • Calculation of needed capital, income statement • Venture life-cycle* • Forecasting and budgeting* • Income statement and balance sheet* • Break-even analysis
Teaching material	• **Course Video** 10_1 [Problem: Miscalculations, non-profitable business] https://www.youtube.com/watch?v=Ub0pR7vy9Dw • **Course Video** 10_2 [Solution: Break-Even Point] https://www.youtube.com/watch?v=9E72psQOWIw • **Course Video** 7 1 Entrepreneurial finance https://www.youtube.com/watch?v=rUMAKYQ-AiU

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	• **Course Video** 7 2 Principles of entrepreneurial finance https://www.youtube.com/watch?v=7NPABfc89F0 • **Course Video** 7 3 Recording financial information https://www.youtube.com/watch?v=T62UStFkol4 • **Course Video** 7 4 Income statement https://www.youtube.com/watch?v=u9Zl4JNrdvc • **Course Video** 7 5 Balance Sheet https://www.youtube.com/watch?v=4Nl9lagRWmE • **Course Video** 7 6 Evaluating financial performance https://www.youtube.com/watch?v=a3DX7BENlqU • **Course Video** 7 7 Financial Ratios https://www.youtube.com/watch?v=-VqCdCF-ACQ • **Course Video** 7 8 Financial Planning https://www.youtube.com/watch?v=26L9SOmdJtk
Exercises for students during session	Reading assignment financing plan
Activities for students	**Team work on the financial support plan** • Meet in your team and calculate the capital you need to start your own business • Calculate also the specific break-even point • Write a concrete plan (including tasks, responsibilities, and deadlines) of how to get financial support
Essential readings for students	For this session students/teachers should prepare with the following literature: • Main Textbook Part 3.10 • Elert N., Henrekson M., Sanders M. (2019) Savings, Finance, and Capital for Entrepreneurial Ventures. In: The Entrepreneurial Society. International Studies in Entrepreneurship, vol 43. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-59586-2_4
Material for students	**YouTube Video:** You don't need money to make money https://www.youtube.com/watch?v=_K4TjS9u1t4&feature=youtu.be
Complementary reading	For this session students/teachers could further benefit by reading: Cumming, D. and Johan, S. (2017), The Problems with and Promise of Entrepreneurial Finance. Strat. Entrepreneurship J., 11: 357-370. https://doi.org/10.1002/sej.1265

Session 4 : Funding opportunities	
Learning objectives	1. Understand the basic concepts of modes of finance from entrepreneurial perspective 2. Discuss the financial management process in start-ups *3.* Understand capital budgeting techniques in start-ups 4. Measuring & evaluating financial performance

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	5. Financial planning
Content	• Introduction to funding opportunities • Crowdfunding* • Bootstrapping* • Debt and equity financing* • Government grants • Venture capital* • Going public and share market*
Teaching material	• **Course Video** 10_3 [Problem: No financial support] https://www.youtube.com/watch?v=iZxhVjWOR9g • **Course Video** 10_4 [Solution: Different options for financial support] https://www.youtube.com/watch?v=ndEamf0N49k • **Course Video** 8 1 Funding through life stages https://www.youtube.com/watch?v=tPeqFX0uu8g • **Course Video** 8 2 Financial Bootstrapping https://www.youtube.com/watch?v=nQyTxpyj3fQ • **Course Video** 8 3 Business Angel Funding https://www.youtube.com/watch?v=DDNkN7B5Eio
Exercises for students during session	Reading assignment financing plan
Activities for students	Team work on the financial support plan Write a concrete plan (including tasks, responsibilities, and deadlines) of how to get financial support
Essential readings for students	For this session students/teachers should prepare with the following literature: Elert, N., Henrekson, M., Sanders, M. (2019). Savings, Finance, and Capital for Entrepreneurial Ventures. In: The Entrepreneurial Society. International Studies in Entrepreneurship, vol 43. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-59586-2_4
Material for students	**YouTube Video:** You don't need money to make money https://www.youtube.com/watch?v=_K4TjS9u1t4&feature=youtu.be
Complementary reading	For this session students/teachers could further benefit by reading: Sarwary, Z. (2020). Strategy and capital budgeting techniques: The moderating role of entrepreneurial structure. International Journal of Managerial and Financial Accounting, 12(1), 48-70.

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Module 3: Legal challenges and Intellectual property concepts and management	

Session 1: Introduction to intellectual property	
Learning objectives	1. Students know what the term Intellectual Property means 2. Students know basic concepts of intellectual property 3. Students know the significance of intellectual property 4. Students know the benefits from IP/IP system 5. Students know the evolution of IP system 6. Students know the IP holder's rights 7. Students can understand how IP rights benefit society 8. Students get familiarized with different domains/types of IP/IP protections 9. Introduction of tools/domains to IPRs: Copyright
Content	• Introduction: Terms and Definitions • Property, artistic work, novel, originality, prior art, intellectual property, • What is Intellectual Property? • Explanation of terms • What is entitled to protection as Intellectual Property • Examples of things protected under IP in different domains) including books, films etc. but also trademarks, industrial processes…) • Why do Intellectual Property Rights Matter? • Explanation of 3 important reasons: Financial reward, recognition, encouragement and growth • Intellectual Property and Society • Explanation of the interplay between owner of the rights and the state • Advantages, Benefits and Needs of IPRs • Listing of advantages: • The creators/inventors/entrepreneurs get exclusive rights of using, making, selling and transferring the product/its rights (whatever the case is). • Provides legal defence and offers the creators the incentive of their work. • The creators/inventors/entrepreneurs stand out from the competition. • Market value of the business in enhanced. • Ideas can be turned into profit-producing assets. • The creators/inventors/entrepreneurs become able to access or raise finances for business • Export opportunities are enhanced. • The creators/inventors/entrepreneurs distribute and share information and data. • Why should States design IP-related national legislation or sign treaties? • Listing of different reasons • For incentivising different creative and innovative entrepreneurship endeavours by offering protections; • For creating data banks and repositories of important information and data; • For recognition such creators officially; • For facilitating the growth of both domestic industry or culture, and international trade, by means of the treaties offering multi-lateral protections. • Different domains/types of intellectual property/protection → Short explanation of the following:

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- Copyright, related rights, geographical indications, industrial designs, patents, unfair competition, international registration, new plant variety protection, traditional knowledge
- Summarized Ideation and brief application of intellectual property rights

Copyright
- What is covered by copyright?
- 3 concepts literary, artistic works and derivative work (examples and short explanation)
- What are the rights protected by copyright?
- Exclusive use by the owner
- Two types of rights under copyright
- Acquisition of copyright
- Differentiation between Berne Convention countries and non-Berne convention countries
- Duration of copyright protection
- Explanation of duration principles
- Enforcement of rights and provisions
- conservatory or provisional measures;
- civil remedies;
- criminal sanctions;
- measures to be taken at the border; and
- measures, remedies and sanctions against abuses in respect of technical devices.
- International conventions/Treaties/Agreements concerning Copyright
- Berne Convention, 1886
- TRIPS Agreement, 1994
- The WIPO Copyright Treaty (WCT), 1996
- The Marrakesh Treaty, 2013, and
- WIPO Performances and Phonograms Treaty (WPPT)
- Copyright Office and Governing Legislation since Independence (Pakistan):
- After independence in 1947, Pakistan adopted the British Copyright Act, 1911;
- The British Copyright Act, 1911 was replaced by the Copyright Ordinance, 1962;
- The Copyright Office, at Karachi in 1963;
- The Copyright Rules of, 1967 as amended in 2002;
- Registration started in 1967;
- The International Copyright Order, 1968;
- The Copyright Board (Procedure) Regulations 1981;
- Branch office in 1984 at Lahore;
- Part of IPO-Pakistan since 2005.
- Copyright office in Pakistan provides: overview of services
- Steps for registration of copyright
- Filing of application
- Examination
- Publication in newspaper (Artistic Work only)
- Opposition, if any
- Issuance of Certificate by Registrar (Registration)

	• Copyright legislation in Pakistan • Copyright Ordinance, 1962 • Copyright Rules, 1967 • Notification of Free Revision, 2019 • Summary
Teaching material	**Course Video:** Module 4, Session I, Tutorial Video [Domains of intellectual property rights]
Exercises for students during session	**Assessment Question / Quiz 1** For each of the following intellectual property examples state the area of IP law that would be most appropriate for their protection: • A company wishes to ensure that no-one else can use their logo. (Trademark) • A singer wishes to assign the rights to reproduce a video she made of her concert. (Related Rights) • A new way to process milk so that there is no fat in any cheese made from it. (Patent) • A company has decided to invest in packaging, which is distinctive, and they wish to ensure that they have sole use. (Industrial Design) • A company decides to use a logo that has the same shape as its competitor but with a different color. (Unfair Competition) **Assessment Question / Quiz 2** Enlist a few advantages, benefits and needs of IPRs. (Ans 4.7) **Assessment Question / Quiz 3** Why should States enact national legislation, and to join as signatories to either (or both) regional or international treaties governing intellectual property rights? (Ans 4.6) **Assessment Question / Quiz 4** How many different systems of international registration does WIPO oversee? (Ans 4.8.8) **Assessment Question / Quiz 5** What are entitled to Intellectual Property Protection? (Ans 4.3) **Assessment Question / Quiz 6** Enlist different domains/types of intellectual property/protection. **Assessment Question / Quiz 7** Enlist a few products to which industrial designs can be applied. (Ans 4.8.1-4.8.10) **Assessment Question / Quiz 8** Following are the abbreviations of what? TK: Traditional Knowledge TCE: Traditional Cultural Expressions GR: Genetic Resources

	Assessment Quiz 9: Give example of any important intellectual work, which is not included in the list of "literary and artistic works"? Ans: The computer programs. These are products of intellectual creativity and are considered works. The important point to make is that the list in the Berne Convention is not meant to be complete and exhaustive. It is meant only to illustrate the nature of literary and artistic works. Another recent genre of work not listed in Article 2 of the Berne Convention, but which is clearly included in the notion of a creation "in the literary, scientific and artistic domain," is multimedia productions. While no acceptable legal definition has been developed, there is a consensus that the original combination of sound, text and images in a digital format, which is made accessible by a computer program, embodies an expression of authorship sufficient to justify the protection of multimedia productions under the umbrella of copyright. **Assessment Quiz 10**: What are the two types of rights mentioned in the section of copyright? Give an example for each of them. Ans: Two were mentioned and these were: The right of reproduction – examples of this right were the right to authorize photocopies, printed copies or copies of cassettes. The rights related to performance, etc. – examples here were the right to perform the work e.g. as a song and the rights to communicate the work to the public and to broadcast it. **Assessment Quiz 11:** What is the minimum duration of copyright protection under the Berne Convention? Ans: The minimum duration of protection under the Berne Convention is 50 years from the date of the author's death. This has been prolonged by some countries such as the European Union countries and the United States of America to 70 years from the author's death. However, in some cases, the protection, under the Berne Convention is less than 50 years after the death of the author.
Activities for students	**7 Home tasks** **Task 1:** Do Google search and read details of the following as far as uses of Geographical Indications. • Silk Weaving in Thailand • Ceramic Bulls from Peru • Swiss Watches • Bottle of Argon Oil • Darjeeling for Tea • Havana for Tobacco • Cheese Processing Caves **Task 2:** Propose a few things/items/products etc. which can be can be protected under GI laws in Pakistan. (other than those mentioned in 4.8.4) • Hala's Ajrak, • Kasuri methi, • Dates from Dera Ismail Khan, Turbat and Khairpur, • Sindhri mango, • Nili-Ravi buffalo, • Pashmina shawls.

	Task 3: Do Google search for a few new plant varieties of wheat, rice and cotton in Pakistan. **Task 4:** Think about and enlist a few examples of Trademark other than those mentioned in Section 4.8.3. **Tanks 5:** Recall or search out at least five most famous examples of influential product designs other than mentioned in the Section 4.8.5. **Task 6:** Read about the following enforcement provisions relating to the Copyright: conservatory or provisional measures; civil remedies; criminal sanctions; measures to be taken at the border; and measures, remedies and sanctions against abuses in respect of technical devices. **Task 7:** Read a summarized paragraph about each of the following: • Berne Convention, 1886 • TRIPS Agreement, 1994 • The WIPO Copyright Treaty (WCT), 1996 • The Marrakesh Treaty, 2013, and • WIPO Performances and Phonograms Treaty (WPPT)
Essential readings for students	For this session students/teachers should prepare with the following literature: • Main textbook Part 4.11 & 4.12 • Essential reading: article "Cases of Unfair Competition under the Unfair Competition and Trade Secrets Law and the Jordanian Judiciary" published in "International Journal of Business and Social Science "Vol. 6, No. 11; November 2015: https://ijbssnet.com/journals/Vol_6_No_11_November_2015/8.pdf
Material for students	Read at least one patent document/patent application relating to your subject area. **For Science students, e.g., Patent for Water Fueled Engine:** https://patentimages.storage.googleapis.com/f8/41/ae/80a8cc8861d4c3/US7552702.pdf **The patents/documents can be Google searched from:** https://patents.google.com/ **Forms and Fee for Copyright in Pakistan:** https://ipo.gov.pk/copyrights-fee-forms **Procedure and documents required for registration of Copyright in Pakistan:** https://ipo.gov.pk/system/files/Procedure%20for%20Registration%20%28Copyright%29_0.pdf **Average processing time for various steps for Copyright in Pakistan:** https://ipo.gov.pk/copyright_average_time

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	Public notices for Copyright in Pakistan: https://ipo.gov.pk/copyright_notifications **IPO Pakistan FAQ:** https://ipo.gov.pk/copyright_faqs **Notification of Fee Revision for Copyright, 2019:** https://ipo.gov.pk/system/files/Notification%20of%20Revision%20of%20fee-Copyright%20%2804.03.2019%29.pdf
Complement ary reading	For this session students/teachers could further benefit by reading XYZ: Intellectual Property Protection for Works of Applied Art" published in "Proceedings of 2016 International Conference on Applied System Innovation (ICASI)" in 2016. Soft copy is available at https://sci-hub.do/10.1109/icasi.2016.7539905 **Copyright Legislation in Pakistan** **Copyright Ordinance, 1962:** https://ipo.gov.pk/system/files/Copyright_Ordinance_1962_4.pdf **Copyright Rules, 1967:** https://ipo.gov.pk/system/files/Copyright_Rules_1967.pdf **Notification of Fee Revision, 2019:** https://ipo.gov.pk/system/files/Notification%20of%20Revision%20of%20fee-Copyright%20%2804.03.2019%29.pdf

Session 2: Continuing tools/domains of IRPs	
Learning objectives	1. Define/describe all domains of IP protection with examples 2. Nature, purpose, functions and time duration of different IP rights/protections 3. Conditions and prerequisites for various IP protections. 4. Explain in a few words the rights that are protected by different domains of IP rights along with limitations of each domain. 5. Benefits/beneficiaries of IP rights under various domains. 6. IP rights and protection under various systems, regulations, agreements, treaties and conventions etc. 7. Explain how the ownership of intellectual properties under various domains can be obtained and transferred/methods of IP protections. 8. Various measures that can be used to enforce such rights. 9. Remedies for infringements and violations of different domains of IP rights
Content	**Related rights** • Introduction • What are related rights? • Explanation of the term + examples • Groups with related rights • Performers, producers, broadcasters (and examples) • Purpose of related rights • Short explanation + example • Rights granted to the beneficiaries of related rights • Performers, producers of phonograms, broadcasting organizations • Limitations and exceptions of related rights • Brief thematization of limitations • Duration of related rights • Events to orient on when calculating the duration • Enforcement of rights, the remedies for infringement or violation of related rights • Summary **Trademarks** • Introduction • Characteristics of trademarks • Explanation of 2 characteristics: it must be distinctive, it should not be deceptive • Formal definition • Formal definitions + examples of trademarks • Trademarks versus service mark • Explanation of the difference • Descriptive examples of trademarks • Description + examples of a few well-known marks • Trademark registration and protection • Registration process and protection • Duration of trademark protection • Difference between trademark, certificate mark and collective marks • Explanation of each and mentioning the difference • Territorial vs. worldwide registration

	• international conventions/Treaties /agreements concerning trademark • Paris Convention • Trademark Law Treaty (TLT) • TRIPS Agreement • The Madrid System for the Registration of Marks • The Singapore on the Law of Trademarks • Trademark in Pakistan • Functions • reception desk, data capture section, examination section, journal section, opposition section, registration section, post registration section, renewal section, record section, legal section, IT section, administration/HR/Accounts section • Summary **Geographical indications** • Introduction • Geographical indications • Definition of the term + example • Difference between geographical indications and a trademark • GI Protection • Explanation of variety of types of protections for geographical indications • Worldwide protection of GI • Explanations of possibilities and burdens • Difference between appellations of origin and geographical indications • Examples • International conventions/Treaties/agreements concerning copyright • Lisbon Agreement for the Protection of Appellations of Origin and their International Registration • TRIPS Agreement • Paris Convention for the Protection of Industrial Property • Summary
Teaching material	**Course Video** Module 4, Session II, Tutorial Video [Intellectual property rights (IPR)] https://www.youtube.com/watch?v=FBygo0BclJc
Exercises for students during session	**Assessment Quiz 1**: What were the three groups of people or organizations, which were mentioned to have related rights? Ans: The three groups mentioned were: Performers such as the singer of a song; Producers of recordings such as record companies; Broadcasting Organizations. **AQ 2**: Do you think the made- up word, "FRUMATO", would make a good trademark for a drink made from a mixture of fruit juice and tomato juice? Ans: Looking at the specification of the goods the derivation of the mark is obvious; it is the combination of the words Fruit and tomato. It is not a word that exists in any dictionary and it is not one that would naturally occur to other traders to use. Therefore, it can be said to tend to be distinctive. There is, however, a cautionary tale of the Boots Pure Drug Company. They marketed a tonic medicine made from extracts of liver and iron and made up

the word LIVRON to indicate it. Unfortunately, a rival pharmaceutical firm had a manufacturing facility in the French town of Livorno. The use of this made-up word was refused.

AQ 3: Bearing in mind the two requirements of being distinctive and of not being deceptive, match the following possible trademarks with the explanations given with regard to their suitability, or failure to be registered as trademarks.

MOOTEL Portable cowsheds
SWISS FLAG Wrist watches
GOLD CAP Whisky
FYNPOWDA Cleaning preparations

Descriptive of a common trait among like products, but could, given long and widespread usage, result in public awareness and association of a particular trader's goods bearing this descriptive trait. Were no other trader to use a similar item, this mark may acquire distinctiveness in fact. And this usage may make this mark acceptable in jurisdictions where usage is a factor in the determination.

Humorous and unique: Distinctive and strong possibility of registration. This mark should have a high likelihood of being registered, if no opposition appears successful.

Misspelling a directly descriptive aspect in a laudatory sense; totally lacking in distinctiveness. This mark fails.

The use of certain criteria in a mark is generally forbidden in many countries; in conformity with the Paris Convention, one such criteria is the use of national flags or emblems. (gift answer!) As a representation of that symbol is inadmissible, so too would be words unmistakably describing such an emblem. This mark fails.

Ans: 1-B; 2-D; 3-A; 4-C.

AQ 4: What do you think of the suitability of a tree bearing many fruits, including grapes, pears, oranges, peaches, cherries etc. on one tree, for beverages made from fruit?

Ans: A fruit tree, such as an apple tree, by itself, is descriptive and not distinctive; one could argue that all apple growers could use such a symbolic design. However, the tree shown in the symbol has many different fruits, which does not occur in nature. Grapes, pears, oranges, peaches, cherries are all shown in a unique fashion; this symbol rises to the level of distinctiveness necessary to gain registration. This is a very good example of how inherently non-distinctive elements can be combined in such a creative way that the totality becomes distinctive.

AQ 5: What are the main methods mentioned that a company could use to protect its investment in a trademark?

Ans: The basis of trademark protection is in the laws of the country or region. Registering the trademark is often required before it can be protected.

AQ 6: List 2 or 3 geographical indications that are used in Pakistan or Asia, if any.

To sum up, "Champagne", "Cognac", "Roquefort", "Chianti", "Porto", "Havana", and "Tequila" – are some of the well-known examples of names which are associated throughout the world with products of a certain nature and quality

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Activities for students	List 2 or 3 geographical indications that are used in Pakistan or Asia **Home tasks:** Read Introduction from IPO Pakistan website: https://ipo.gov.pk/trademark_intro **IPO Pakistan online filing video tutorial:** https://www.youtube.com/embed/pUXUKKdmDKI **IPO Pakistan Procedure for Online Registration:** https://ipo.gov.pk/online_filing_guidelines **IPO Online Filing Guides:** **Self-user:** https://ipo.gov.pk/system/files/How%20to%20Register%20as%20SELF%20%28Individual%29%20for%20IPO%E2%80%99s%20Online%20Filing%20System.pdf **Representative user:** https://ipo.gov.pk/system/files/How%20to%20Register%20as%20IP%20Attorney%20for%20IPO%E2%80%99s%20Online%20Filing%20System.pdf **Online filing:** https://apply.ipo.gov.pk/ **Trademark filing guidelines:** https://ipo.gov.pk/system/files/final%20Guidelines%20for%20Filing%20Trademark%20Application%20in%20Pakistan%20%281%29%20-%2020032019_0.pdf#overlay-context=file_directory
Essential readings for students	For this session students/teachers should prepare with the following literature: Main Textbook Part 5.12
Material for students	**Trademark Legislation:** **Trademarks Ordinance, 2001:** https://ipo.gov.pk/system/files/Trade_Mark_Ordinance_2001_0.pdf **Trademark Rules, 2004:** https://ipo.gov.pk/system/files/Trade_Marks_Rules_2004.pdf **Notification of fee revision:** https://ipo.gov.pk/system/files/Notification%20of%20Revision%20of%20fee-Trademark%20%2804.03.2019%29.pdf **Fee and forms:** https://ipo.gov.pk/trademarks-fee-forms **Classification:** **Classification summary:** https://ipo.gov.pk/classification_summary

	Classification Details : https://ipo.gov.pk/system/files/Nice%20Classification_0.pdf **How to fill TM 1 form:** https://ipo.gov.pk/system/files/TM-1%20Form%20Filling%20Guidelines%20%28Version%201.1%29.pdf **Average process time:** https://ipo.gov.pk/trademark_average_time **FAQ´s :** https://ipo.gov.pk/trademark_faqs Geographical Indications (Registration and Protection) Act, 2020: https://ipo.gov.pk/system/files/17-The%20Geographical%20Indications%20%28Registration%20and%20Protection%29%20Act%2C%202020.pdf
Complementary reading	For this session students/teachers could further benefit by reading: • **Trademark Legislation:** Trademarks Ordinance, 2001: https://ipo.gov.pk/system/files/Trade_Mark_Ordinance_2001_0.pdf Trademark Rules, 2004: https://ipo.gov.pk/system/files/Trade_Marks_Rules_2004.pdf Notification of fee revision: https://ipo.gov.pk/system/files/Notification%20of%20Revision%20of%20fee-Trademark%20%2804.03.2019%29.pdf • **Fee and forms:** https://ipo.gov.pk/trademarks-fee-forms • **Classification:** Classification summary: https://ipo.gov.pk/classification_summary Classification Details: https://ipo.gov.pk/system/files/Nice%20Classification_0.pdf • **How to fill TM 1 form:** https://ipo.gov.pk/system/files/TM-1%20Form%20Filling%20Guidelines%20%28Version%201.1%29.pdf • **Average process time:** https://ipo.gov.pk/trademark_average_time • **FAQ´s:** https://ipo.gov.pk/trademark_faqs

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	- **Geographical Indications (Registration and Protection) Act, 2020:** https://ipo.gov.pk/system/files/17-The%20Geographical%20Indications%20%28Registration%20and%20Potection%29%20Act%2C%202020.

Module 4: Into action

Session 1: Analyze how the idea, market, and business structure are interlinked	
Learning objectives	1. Understanding components, scope, and the value of business plans 2. Understand the business model canvas and interlinkages in its nine building blocks 3. Use business model canvas as visual-communication tool within the team and other audience 4. Students know how to validate the business model from multiple perspectives (e.g., customer interview)
Content	• Problem of unstructured plans and its solution: Business Model canvas • 9 Blocks: key activities, key partner, customers, customer relationships, value proposition, revenue, channels, costs, key resources • Functions of BMC • SMART Goals (Specific, Measurable, Achievable, reasonable, time-bound) • Components of the business plan • Traditional business plans • Scope and value of a business plan • Resources, information, and structure of the plan • Why some business plans fail • Validation of hypotheses with customer interviews • PSP (structured project plan with milestones, work-packages, sub-tasks, responsibilities)
Teaching material	• **Course Video** 7_1 [Problem: No structure of a business plan] https://www.youtube.com/watch?v=oGEsWPh1JGs • **Course Video** 7_2 [Solution: BMC] https://www.youtube.com/watch?v=r44iwxykj1o • **Course Video** 7_3 [Problem: No clear goals] https://www.youtube.com/watch?v=L1qYpCMyqJI • **Course Video** 7_4 [Solution: SMART Goals] https://www.youtube.com/watch?v=dHbronaGbsc • **Course Video** 8_1 [Problem: BMC = hypothetical] https://www.youtube.com/watch?v=YEj9fahejaY • **Course Video** 8_2 [Solution: Validation of BMC with customer interview] https://www.youtube.com/watch?v=T3GsWC__x3c • **Course Video** 8 3[Problem: Confusion with responsibilities] https://www.youtube.com/watch?v=ytbpsb7XDdU • **Course Video** 8_4 [Solution: Structured project plan] https://www.youtube.com/watch?v=S6yP8Uao_Z8
Exercises for students during session	**Reading assignment:** Business plan **Reading assignment:** Financing plan **Reading assignment:** Business cash flows

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	Case Study: Gharpar: The Lean Beauty Start-up: Beauty done Comfortably (A) & Gharpar: The Lean Beauty Start-up: The Twin Cities Expansion (B)
Activities for students	• Students watch You Tube videos • Meet in your team and write a business model canvas for your business idea –be as concrete as possible! • Write a SWOT analysis for your business idea! • Analyze your business model canvas, define SMART goals to further develop your business idea! • Meet in your team and validate your business model canvas by conducting 10 customer interviews! (Take especially care for your assumptions of numbers) • Write down 5 important insights of your customer interview **Group Project: Business Plan Development** *One vehicle for acquiring an understanding of the entrepreneurial process is creating a start-up business plan. The focus of this experience is to select a concept and create a complete and persuasive business plan that, among other things, will effectively accomplish the goal of acquiring financing. Writing a business plan requires you to ask tough questions about the nature of the business:* • What are the benefits of your product or service? • What is the target market and how will you penetrate it? • How will you develop and produce the product or service? • What is required from the management team? • What are the risks of the venture and what can you do to reduce these risks? • What are the financial implications of the plan? • What resources, including funding, are required to successfully create the business plan? To understand the related entrepreneurial process, students will take a hands-on approach. Working in teams of up to five people, students will mutually decide upon a concept and develop a feasibility study. Based on that work, teams will develop a comprehensive business plan. In most cases, the primary objective of your team's business plan will be to receive funding. Your plan will be prepared in three phases and your team will present the plan as a written document and present it to the class.
Essential readings for students	For this session students/teachers should prepare with the following literature: • Main Textbook Part 2.4, 2.5, 2.6 • Martínez-Climent C, Rodríguez-García M, Zeng J. Ambidextrous Leadership, Social Entrepreneurial Orientation, and Operational Performance. Sustainability. 2019; 11(3):890. • McKenzie, D., & Sansone, D. (2019). Predicting entrepreneurial success is hard: Evidence from a business plan competition in Nigeria. Journal of Development Economics, 141, 102369. • Mazzarol T., Reboud S. (2020) Planning, Business Models and Strategy. In: Entrepreneurship and Innovation. Springer Texts in

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	Business and Economics. Springer, Singapore. https://doi.org/10.1007/978-981-13-9412-6_7
Material for students	• **YouTube Video** (the future is social entrepreneurship): https://www.youtube.com/watch?v=r8nHptyS234&feature=youtu.be • **YouTube Video**: how to write a business plan to start your own business: (week 6) https://www.youtube.com/watch?v=Fqch5OrUPvA&feature=youtu.be • **YouTube Video**: Why good leaders make people feel secure https://www.youtube.com/watch?v=lmyZMtPVodo • **SMART-Goal examples** https://www.ucop.edu/local-human-resources/_files/performance-appraisal/SMART%20Goal%20Examples.pdf
Complementary reading	For this session students/teachers could further benefit by reading: **S.M.A.R.T. - Smart Goal Setting Practices for Project Managers** https://www.proofhub.com/articles/smart-goal-setting-examples-for-project-managers

Session 2: Presenting the business idea	
Learning objectives	Students… 1. Understand how to structure a convincing sales pitch using effective persuasion skills in front of potential customers 2. Deliver a sales pitch and spot the early adopters 3. Structure a persuasive investment pitch for potential investors / financiers 4. Practice key negotiation skills by using the concepts. 5. Mock pitches 6. (Visiting angel investors) → **Goal**: finding customers and investors
Content	• Structure of a convincing pitch (and structure of a bad pitch) • Argumentation techniques • Persuading with credibility and pathos • Connection of networking, • Communication and persuasion skills and strategies • Location to meet different audiences/Planning to meet them • Negotiation with Harvard concept
Teaching material	• **Course Video** 11_1 [Problem: Lack of structure, credibility, pathos] https://www.youtube.com/watch?v=mCnI6I-yTRA • **Course Video** 11_2 [Solution: Structure of pitching, argumentation techniques] https://www.youtube.com/watch?v=Nkod8HBUX34 • **Course Video** 11_3 [Problem: Lack of negotiation skills https://www.youtube.com/watch?v=DHx7Dn25G38 • **Course Video** 11_4 [Solution: Negotiation methods] https://www.youtube.com/watch?v=cXRJ-_jjHDc
Exercises for students during session	Reading assignments: elevator pitch & Business presentations Watch videos good pitch, bad pitch Small case in E-learning platform [Case 11: Airbnb]
Activities for students	• Meet in your team and create a pitching video! • Prepare for the demonstration day (develop your prototype, think about how you could persuade and attract attention from your classmates concerning your business idea) • Discuss arguments for and against buying your product in your team and prepare a negotiation with a banker on that basis! • Students pitch their business idea (create a video or face to face at university)
Essential readings for students	For this session students/teachers should prepare with the following literature: Bruce Teague, M. David Gorton & Yanxin Liu (2020) Different pitches for different stages of entrepreneurial development: the practice of pitching to business angels, Entrepreneurship & Regional

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	Development, 32:3-4, 334-352, DOI: 10.1080/08985626.2019.1641977
Material for students	**YouTube Video:** Why VCs and Angel Investors say no to entrepreneurs: https://www.youtube.com/watch?v=IK7HkSp1KBI&feature=youtu.be Examples for a good and a bad pitch: https://www.ishmaelscorner.com/mashable-analyzes-good-pitch-bad-pitch/
Complementary reading	For this session students/teachers could further benefit by reading: **Journalist compares a bad media pitch with one that has a fighting chance** https://www.ishmaelscorner.com/mashable-analyzes-good-pitch-bad-pitch/

Essential Readings:

- Main Textbook:
  Entrepreneurship: Successfully Launching new Ventures, 6/E
  Bruce R. Barringer & R. Duane Ireland
  ISBN Textbook 9781292255330

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CUI Lahore

Mr. Awais Farooq
CUI Alumni, Lahore

Mr. Ghulam Jilani
CUI, Lahore

Day 1: Mon 15 March, 21

Session 1
15:00-15:30
Introduction
A: Introduction, Vision and Targets,
B: Introduction of participants,
C: Importance of entrepreneurial
education in Pakistani universities.
Prof. Dr. M A Farooqui
Head, Acad & Res CUI, Lahore
Dr. Vasiliki Chronaki
Athens University of Bus & Eco, Greece

Session 2
15:30-16:00
The Entrepreneurial frame work:
Entrepreneurial Personality,
Mindset, Characteristics,
Competences, and Motivation.
Dr. Rana Nadir Idrees
Dr. Ali Iftikhar Choudhary
CUI, Lahore

Session 3
16:00-16:30
Developing entrepreneurial mindset through
academic courses and trainings.
Dr. Nida Bajwa
University of Saarland, Germany
Prof. Dr. Muhammad A Farooqui
Head, Acad and Res., CUI, Lahore

Day 2: Tue 16 March, 21

Session 4
15:00-15:30
Signature Pedagogies for Entrepre-
neurial Education at Universities.
Dr. Theresa Zimmer
Saarland University, Germany
Dr. Ali Nawaz Khan
CUI, Lahore

Session 5
15:30-16:00
My Entrepreneurial Story.
Dr. Aqif Anwar
CUI, Lahore
Mr. Awais Farooq
CUI Alumni, Lahore

Session 6
16:00-16:30
Entrepreneurial communication:
Effectiveness, assessment & coaching.
Ms Javaria Farooqui
CUI, Lahore
Dr. Elli Diakanastasi
Athens University of Bus & Eco
Greece

Day 3: Wed 17 March, 21

Session 7
15:00-15:30
Startups and Innovation processes
Businesses Start-up Vs. Entrepreneurship
Critical thinking Vs. Creativity Vs. Innovation
Dr. Rana Nadir Idrees
CUI, Lahore

Session 8
15:30-16:00
My Entrepreneurial Story.
Dr. Muhammad Yar
CUI, Lahore
Mr. Abdur Rehman
CUI Alumni, Lahore

Session 9
16:00-16:30
Corporate aspects of entrepreneurial
curriculum.
Mr. Naveed Chohan
Mr. Ghulam Jilani
CUI, Lahore

Closing
16:30-16:45
Prof. Dr. M. A Farooqui
Head, Acad and Res CUI, Lahore
Dr.Ali Nawaz Khan
CUI, Lahore

COMSATS University Islamabad, Lahore Campus

Join us through Google Meet by clicking following links:
March 15: https://meet.google.com/bgh-zkmp-yff
March 16: https://meet.google.com/qsg-pkgb-ufs
March 17: https://meet.google.com/kwa-qexk-xuf

Transforming Academic Knowledge to Develop

Entrepreneurial Universities in Pakistan – (TAKE-UP)

Series of Webinars to "Train-the-Trainers"

COMSATS University Islamabad, Lahore Campus

In Collaboration with

**University of Saarland, Germany
&
Athens School of Business, Greece**

15-17th March, 2021

Sessions – Report

WebinarCo-coordinators:

Dr.Ali Nawaz Khan
Asst. Prof. Elect & Comp Engg, CUI Lahore

Mr. Ghulam Jilani
Senior Coordination Officer, CUI Lahore

Convener:

Prof. Dr. M. A Farooqui,
Head Academics &Research, CUI Lahore

COMSATS University Islamabad
Lahore Campus

PREAMBLE

Global paradigm for evolution of universities and centers of excellence includes promotion of Entrepreneurial culture among all stakeholders (students, academic staff and researchers, and Cubator staff. The development of Entrepreneurial Universities is the goal of TAKE-UP, a joint project of University of Saarland, Germany and Athens University of Business and Economics, Greece with four Pakistani Universities; COMSATS University Islamabad, Government College University, University of Gujrat and Lahore University of Management Sciences. TAKE-UP project is funded by European Union under the Erasmus+ program. The project spans three years and had been divided into ten work-packs (WP) for efficient development, deployment, and monitoring.

With Reference to the WP4 of TAKE-UP project,detailed plan must be developed for trainingof academic staff members andresource persons assigned to teach courses theory and practice of entrepreneurship to the students. In this regard, COMSATS University Islamabad (CUI), Lahore Campus, developed a series of webinars to cover the detailed aspects of training CUI, Lahore faculty from entrepreneurial perspective. The expected deliverables of this activity (as per WP4 outcome ref.nos: 4.1,4.2 &4.3)are;

- To develop locally relevant teaching /training material, todevelop e-learning platform with training/ teaching material and development of locally relevant training and teaching material focused on developing entrepreneurial skills in students.

A webinar series entitled "Train-the-Trainers" for entrepreneurial skill development was conducted from March 15-17, 2021by the CUI, Lahore campus with the support of partner universities in Germany and Greece.

WEBINAR DETAILS

There were 15 Resource Persons/ Trainers who participated in this webinar series.11 speakers represented CUI, Lahore Campus whereas the remaining 04 speakers were from the partner universities including 02 from University of Saarland, Germany and 02 from Athens University of Business & Economics, Greece.

The details of the resources persons and the contents delivered are as follows:

Sessions	Time	Topics	Resource Persons/ Trainers
Monday 15 March			
Session No:1	15:00-15:30	Introduction: A)Introduction, Vision & Targets B) Introduction of participants C) Importance of entrepreneurial education inPakistani universities	**Prof. Dr. Muhammad A Farooqui** Head, Acad and Res. CUI, Lahore. **Dr. VasilikiChronaki**, Athens University of Business &Economics,Greece
Session No:2	15:30-16:00	The Entrepreneurial frame work: Entrepreneurial Personality, Mindset, Characteristics, Competences, and Motivation.	**Dr. Rana Nadir Idrees** Head, Mgt Sc., CUI, Lahore **Dr. Ali IftikharChoudhary**Asstt. Prof. Mgt. Sc, CUI Lahore
Session No:3	16:00-16:30	Developing entrepreneurial mindset through academic courses and trainings	**Dr. Nida Bajwa**, Professor of Entrepreneurial Education, Deptt of Industrial and Organizational Psychology, University of Saarland, Germany. **Prof. Dr. Muhammad A Farooqui** Head, Acad and Res., CUI, Lahore
Tuesday16 March			
Session	15:00-	Signature Pedagogies for	**Dr.Theresa Zimmer**

No:4	15:30	Entrepreneurial Education at Universities	Entrepreneurial Education University of Saarland, Germany **Dr.Ali Nawaz Khan** Asstt. Prof. Elect & Comp Engg Dept. CUI Lahore
Session No:5	15:30-16:00	My Entrepreneurial Story	**Dr. Aqif Anwar** Head, IRCBM, CUI Lahore **Mr. Awais Farooq** CUI Alumni, Lahore
Session No:6	16:00-16:30	Entrepreneurial communication: Effectiveness, assessment &coaching	**Ms.Javaria Farooqui** Asstt Prof. Humanities, CUI Lahore **Dr. Elli Diakanastasi,** Professor, Athens University of Business &Economics, Greece
Wednesday 17 March			
Session No:7	15:00-15:30	Startups and Innovation processes Businesses Start-up Vs. Entrepreneurship Critical thinking Vs. Creativity Vs. Innovation	**Dr. Ali Iftikhar Choudhary** Asstt. Prof. Mgt. Sc, CUI Lahore **Dr. Rana Nadir Idrees** Head, Mgt Sc., CUI, Lahore
Session No:8	15:30-16:00	My Entrepreneurial Story	**Dr. Muhammad Yar,** AssttProf.IRCBM, CUI, Lahore **Mr. Abdur Rehman** CUI Alumni, Lahore
Session No:9	16:00-16:30	Corporate aspects of entrepreneurial curriculum	**Mr. Naveed Chohan** Asstt Prof. Mngt Sc., CUI, Lahore **Mr. Ghulam Jilani** Senior Coordination Officer, CUI, Lahore
	16:30-16:45	Closing	**Prof. Dr. Muhammad A. Farooqui** Head, Acad and Res., CUI, Lahore. **Dr.Ali Nawaz Khan** Asstt. Prof. Elect & Comp Engg Dept. CUI Lahore

Note: All the relevant presentations are attached session wise.

PARTICIPANTS

More than 60 participants from CUI, Lahore faculty and partner institutes enthusiastically attended the webinar series.The details of participants in various sessions areas follows:

Webinar Series (TAKE-UP) 15-17 March 2021 (Attendees)			
Sr#	Name	Designation	E-mail
1	Dr. Syed Asad Hussain	Director	director@cuilahore.edu.pk
2	Dr. M.A Farooqui	Head A&R	farooqui@cuilahore.edu.pk
3	Dr.Ali Nawaz Khan	Assistant Professor	ankhan@cuilahore.edu.pk
4	Mr.Ghulam Jilani	Senior CO	ghulamjilani@cuilahore.edu.pk
5	Dr. Tariq Humayun	Assistant Professor	mhamayun@ciitlahore.edu.pk
6	Dr. Naeem Awais	Assistant Professor	naeem.awais@cuilahore.edu.pk
7	Mr. M. Hassan Aslam	Lecturer	mhassanaslam@cuilahore.edu.pk
8	Dr. Arif Hussain	Assistant Professor	arif.hussain@cuilahore.edu.pk
9	Dr. Muhammad Imran Hassan	Assistant Professor	imranhassan@cuilahore.edu.pk
10	Dr. Maria Mustafa	Assistant Professor	mariamustafa@cuilahore.edu.pk
11	Dr. Muhammad ShahazadKhuram	Assistant Professor	mskhurram@cuilahore.edu.pk
12	Dr. Muhammad Aslam	Lecturer	maslam@cuilahore.edu.pk
13	Syed Ali Taqi	Lecturer	syedalitaqi@cuilahore.edu.pk
14	Dr. Iftikhar Ahmed	Assistant Professor	driahmed@cuilahore.edu.pk
15	Dr. Fawad Azeem	Lecturer	fawadazeem@cuilahore.edu.pk
16	Mr. Anus Toqeer	Lecturer	anustoqeer@cuilahore.edu.pk
17	Ms. Zainab Naveed	Assistant Professor	zakram@cuilahore.edu.pk

18	Dr. Ayesha Sohail	Assistant Professor	asohail@cuilahore.edu.pk
19	Dr. Sadia Khalid	Assistant Professor	skhalid@cuilahore.edu.pk
20	Dr. Sadia Arshad	Assistant Professor	sadiaarshad@cuilahore.edu.pk
21	Dr. Kashif Nazar	Assistant Professor	knazar@cuilahore.edu.pk
22	Ms. Kanwal Rashid	Lecturer	krasheed@cuilahore.edu.pk
23	Ms. Shazia Aziz	Assistant Professor	shazia.aziz@cuilahore.edu.pk
24	Ms. Maryam Jahangir	Lecturer	maryamjahangir@cuilahore.edu.pk
25	Mr. Farhan Ahmad	Assistant Professor	fahmed@cuilahore.edu.pk
26	Dr. Ghulam Hussain	Assistant Professor	ghulamhussain@cuilahore.edu.pk
27	Mr. Abdul Qayyum	Lecturer	aqayyum@cuilahore.edu.pk
28	Mr. Abdul Karim Shahid	Assistant Professor	akarim@cuilahore.edu.pk
29	Dr. Sobia Tabassum	Assistant Professor	sobiatabassum@cuilahore.edu.pk
30	Dr. MustansaraYaqub	Assistant Professor	mustansarayaqub@cuilahore.edu.pk
31	Ms. Samra Syed	Lab Assistant	samrasyed@cuilahore.edu.pk
32	Dr. Abdul Wahab	Research Associate	abdul.wahab@cuilahore.edu.pk
33	Dr. Akbar Ali	Assistant Professor	drakbar.ali@cuilahore.edu.pk
34	Dr. Rana Nadir Idrees	Assistant Professor	rananadir@cuilahore.edu.pk
35	Dr. Shameem Fatima	Assistant Professor	shameemfatima@cuilahore.edu.pk
36	Mr. SohailRaiz	Assistant Professor	sohailriaz@cuilahore.edu.pk
37	Dr. Naeem Shahzad	Assistant Professor	naeem.shehzad@cuilahore.edu.pk
38	Dr. Tareq Manzoor	Assistant Professor	tareqmanzoor@cuilahore.edu.pk
39	Dr. Ahmad Nawaz	Assistant Professor	drahmadnawaz@cuilahore.edu.pk
40	Ms. Ayesha Mirza	Assistant Professor	ayesha.mirza@cuilahore.edu.pk
41	Dr. Main Hussnain Nawaz	Assistant Professor	mhnawaz@cuilahore.edu.pk
42	Dr. HafizaFakhera Ikram	Assistant Professor	fakhera.ikram@cuilahore.edu.pk
43	Dr. Muhammad Nasir	Assistant Professor	muhammadnasir@cuilahore.edu.pk
44	Dr. Farasat Iqbal	Assistant Professor	farasatiqbal@cuilahore.edu.pk
45	Dr. Abdur Rahim	Assistant Professor	abdurrahim@cuilahore.edu.pk
46	Dr. Hamad Khalid	Assistant Professor	hamadkhalid@cuilahore.edu.pk
47	Mr. M. Azhar Hayat Nawaz	Lecturer	azharhayat@cuilahore.edu.pk
48	Dr. Aqif Anwar Ch.	Associate Professor	aqifanwar@cuilahore.edu.pk
49	Javaria Farooqui	Assistant Professor	javariafarooqui@cuilahore.edu.pk
50	Dr. Muhammad Yar	Associate Professor	drmyar@cuilahore.edu.pk
51	Naveed Chohan	Assistant Professor	mnaveed@cuilahore.edu.pk
52	Dr. Bilal Zafar Amin	Assistant Professor	drbilalamin@cuilahore.edu.pk
53	Dr. Asma Tufail Shah	Assistant Professor	drasmashah@cuilahore.edu.pk
54	Hafiz Tareq	Assistant Professor	Hafiz tareqmanzoor@cuilahore.edu.pk
55	Dr.Ali Iftikhar Ch	Lecturer	ali.iftikhar@cuilahore.edu.pk
56	Talha Aslam	Lecturer	talha.aslam@cuilahore.edu.pk
57	Amjad Hussain	EX-Advisor CIO	jsa_il@yahoo.com,
58	Ghulam Hussain	Ex- Mgr SFAO	ghulamhussainm@hotmail.com
59	Dr. Nida Bajwa	Professor, University of Saarland, Germany.	n.bajwa@mx.uni-saarland.de
60	Dr. VasilikiChronaki	Athens University of Business &Economics,Greece	vxronaki@aueb.gr
61	Dr.Theresa Zimmer	University of Saarland, Germany	theresa-zimmer@t-online.de
62	Dr. Elli Diakanastasi,	Athens University of Business &Economics,Greece	diakanastasi@aueb.gr
63	Leaschmitt	University of Saarland, Germany	L.Schmitt@mx.uni-saarland.de
64	Awais Farooq	CUI, Alumini	awa.farooq@alfacybernetics.com
65	Abdur Rehman	CUI, Alumini	4420460@gmail.com

POST EVENT EVALUATION PERFORMA

A Post Event Evaluation Performa was also developedto obtain feedback from all participants. The link to online form is**https://forms.gle/aVSvJzxhpXr2gsJM8**

TAKE-UP- Series of Webinars to "Train-the-Trainers"15-17 March 2021, COMSATS University Islamabad, Lahore Campus Post Webinar Evaluation

Thank you for participating in our event. We hope you had as much fun attending as we did organizing it.

We want to hear your feedback so we can keep improving our logistics and content. Please fill this quick survey and let us know your thoughts (your answers will be anonymous).

* Required

Email address *

Your email

Name and affiliation

Your answer

I am interested to learn more about teaching entrepreneurship to my UG students *

○ Yes
○ No
○ Don't know

I am interested to acquire more knowledge and understanding about the latest concepts of entrepreneurship *

○ Yes
○ No
○ Don't know

I am interested to attend more lectures/webinars on following topics

Your answer

I would like to give presentation(s) on the following aspect(s) of entrepreneurship

Your answer

My concept of an "Entrepreneurial University" is

Your answer

Questions, if any (Answer will be sent via email)

Your answer

Remarks/Comments/suggestion
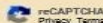
Your answer

◯⬤ Send me a copy of my responses.

Submit

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Google Forms

I am willing to teach entrepreneurship as a pilot course to UG students *

○ Yes
○ No
○ Don't know

I intend to get more involved in the TAKE_UP Project *

○ Yes
○ No
○ Don't know

I am already aware of the essential contents of a good Entrepreneurship UG course *

○ Yes
○ No
○ Don't know

I am interested to attend more lectures/webinars on following topics

Your answer

I would like to give presentation(s) on the following aspect(s) of entrepreneurship

Your answer

My concept of an "Entrepreneurial University" is

Your answer

PARTICIPANTS FEEDBACK

The feedback about the sessions collected from the participants will be considered to develop the entrepreneurial course contents for the students. The summary of collected feedback is presented below:

I am interested to learn more about teaching entrepreneurship to my UG students

25 responses
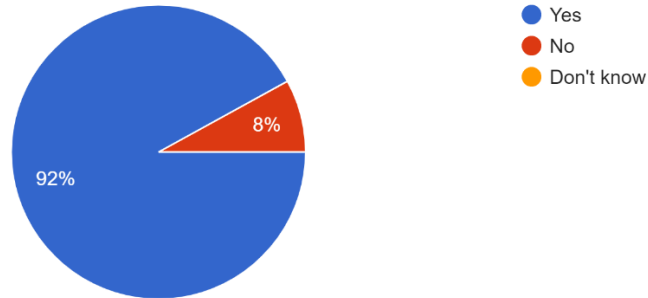
- Yes
- No
- Don't know

92%
8%

I am interested to acquire more knowledge and understanding about the latest concepts of entrepreneurship

25 responses

- Yes
- No
- Don't know

84%
16%
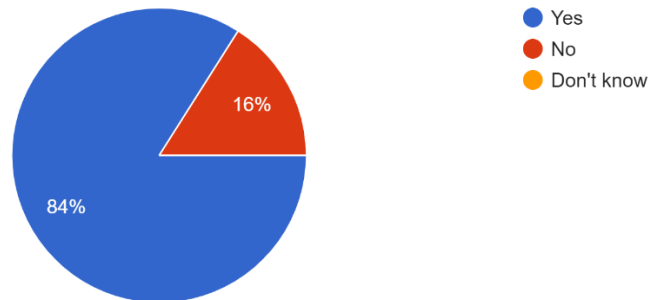
I am willing to teach entrepreneurship as a pilot course to UG students

25 responses

- Yes
- No
- Don't know

60%
28%
12%
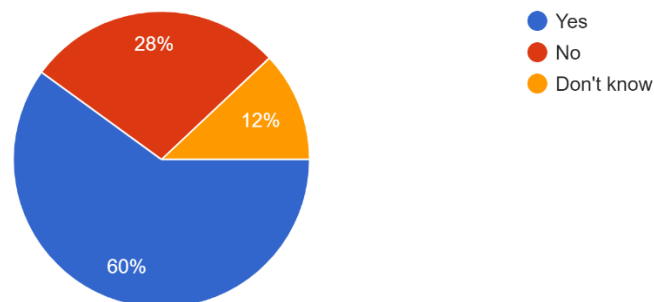
I intend to get more involved in the TAKE_UP Project
25 responses

- Yes — 60%
- No — 16%
- Don't know — 24%
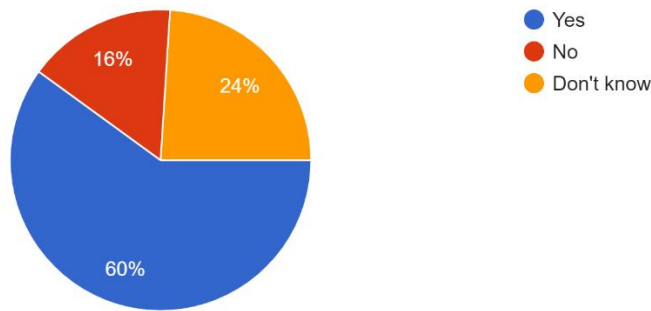
I am already aware of the essential contents of a good Entrepreneurship UG course
25 responses

- Yes — 40%
- No — 48%
- Don't know — 12%
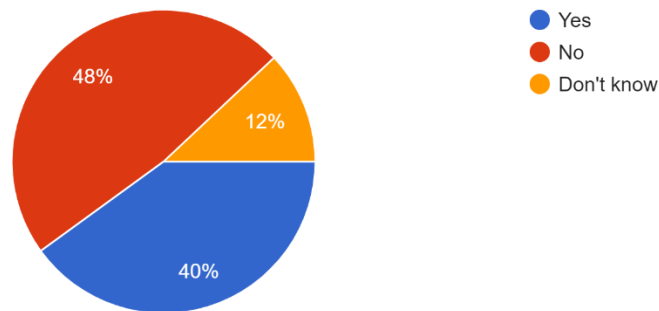
I am interested to attend for sessions on

How to originate unique ideas? How to register a company in Pakistan? How to acquire funding for my project? How to present my project? etc
Presentations by successful entrepreneurs; Linking theory and practice
Success stories regarding Entrepreneurship
funding for entrepreneurial ventures, assessment of course
Entrepreneurship in services marketing
Idea generation,Entrepreneurial Startups and Entrepreneurial venture sustainability factors
The importance of entrepreneurship in the engineering field

I would like to give presentation(s) on the following aspect(s) of entrepreneurship.

Legal, Regulatory and Governance Issues of Corporate Entities
Business Communication; Communication Skills workshop
Way out to be Successful Entrepreneurship
Teaching and Learning Entrepreneurship, Signature Pedagogies
How to become a Successful Enterprenuer, Entrepreneurial case Studies,Legalities/rules regulations to start Entrepreneurial venture
Engineer as entrepreneur
Academic research based startups

My concept of an "Entrepreneurial University" is

where students can learn and implement the concepts simultaneously
Teach fundamentals practically rather theoretically.
to have platform to equip students to form valuable startups through proper mentorship
Where students are trained to become innovative and given opportunities
Where research outputs and Final year projects are inline with the need of society.
University students must equipped with leadership quality
My concept of entrepreneurial university is when students can have practical experience of their projects.
It is a university with less bureaucratic hurdles, more focused on cultivation of innovation at various levels and with a mindset to flourish entrepreneurial activity rather than just filling the stuff on papers.
A university teaching and encouraging entrepreneurship and providing students hands on opportunities/activities of starts ups.
the realization of the ideas
Where entrepreneurial culture is embedded into each learning activity and course
To equip Students with the practical knowledge of starting an entrepreneurial venture
To me, Entrepreneurial University is defined as an university that have the ability to. innovate, recognize and create opportunities, work in teams, take risks and respond to. challenges, on its own, seeks to work out a substantial shift in organizational character. so as to arrive at a more promising posture for the future.
The final year projects of each discipline should be based on practical or applied nature topics.
free business opportunities for Faculty and student legally protected by univeristy admin
Where the faculty have good knowledge and experience to deliver practical skills to the students.
I am a big fan of university industry collaboration and entrepreneurial culture in the universities
that promotes creative thinking among students and faculty, facilitates to undertake entrepreneurial projects such as ideas testing, helps commercializing the products

CONCLUSION

The webinar series was successful at engaging academic staff and participants as we received more than 30 attendees at every session. Based on the received feedback, it is heartening that faculty members are eager and apt to embrace the transition to entrepreneurial university.The webinar series also included sessions on the curriculum design and signature pedagogies for entrepreneurship courses that would be offered to students in coming semesters. (Attached as Annex-A). The content used during webinars is shared with participants through online repository and all sessions were recorded for later reference. It is evident through summary of feedback and active participation of stake-holders that the webinar series has been successful at achieving it's objectives. It provided an effective platform for faculty to exchange ideas and self-actualization as teachers of entrepreneurial theory and practice to university students.

Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan - (TAKE-UP)

Series of Webinars to Train-the-Trainers for ENTREPRENEURIAL SKILL DEVELOPMENT

15-17 March 2021

Erasmus+

Prof. Dr. M A Farooqui
CUI, Lahore

Prof. Dr. Nida Bajwa
Saarland University Germany

Dr.Theresa Zimmer
Saarland University Germany

Dr. Elli Diakanastasi
Athens University of Bus & Eco, Greece

Dr. Vasiliki Chronaki
Athens University of Bus & Eco, Greece

Dr. Aqif Anwar
CUI Lahore

Dr. Rana Nadir Idrees
CUI Lahore

Dr. Ali Iftikhar Choudhary
CUI Lahore

Dr. Muhammad Yar
CUI Lahore

Dr. Ali Nawaz Khan
CUI Lahore

Ms. Javaria Farooqui
CUI Lahore

Mr. Naveed Chohan
CUI Lahore

Mr. Awais Farooq
CUI Alumni, Lahore

Mr. Ghulam Jilani
CUI, Lahore

Session 3
16:00-16:30
Developing entrepreneurial mindset through academic courses and trainings.
Dr. Nida Bajwa
University of Saarland, Germany
Prof. Dr. Muhammad A Farooqui
Head, Acad and Res., CUI, Lahore

Day 2: Tue 16 March, 21

Session 4
15:00-15:30
Signature Pedagogies for Entrepreneurial Education at Universities.
Dr. Theresa Zimmer
Saarland University, Germany
Dr. Ali Nawaz Khan
CUI, Lahore

Session 5
15:30-16:00
My Entrepreneurial Story.
Dr. Aqif Anwar
CUI, Lahore
Mr. Awais Farooq
CUI Alumni, Lahore

Session 6
16:00-16:30
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CUI, Lahore
Dr. Elli Diakanastasi
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CUI, Lahore

Closing
16:30-16:45
Prof. Dr. M. A Farooqui
Head, Acad and Res CUI, Lahore
Dr.Ali Nawaz Khan
CUI, Lahore

COMSATS University Islamabad, Lahore Campus
Join us through Google Meet by clicking following links:
March 15: https://meet.google.com/bgh-zkmp-yff
March 16: https://meet.google.com/qsg-pkgb-ufs
March 17: https://meet.google.com/kwa-qexk-xuf

Day 1: Mon 15 March, 21

Session 1
15:00-15:30
Introduction
A: Introduction, Vision and Targets,
B: Introduction of participants,
C: Importance of entrepreneurial education in Pakistani universities.
Prof. Dr. M A Farooqui
Head, Acad & Res CUI, Lahore
Dr. Vasiliki Chronaki
Athens University of Bus & Eco, Greece

Session 2
15:30-16:00
The Entrepreneurial frame work: Entrepreneurial Personality, Mindset, Characteristics, Competences, and Motivation.
Dr. Rana Nadir Idrees
Dr. Ali Iftikhar Choudhary
CUI, Lahore

TAKE-UP Webinar Series "Train the Trainers" Brochure

Pictorial Glimpses of the Webinar
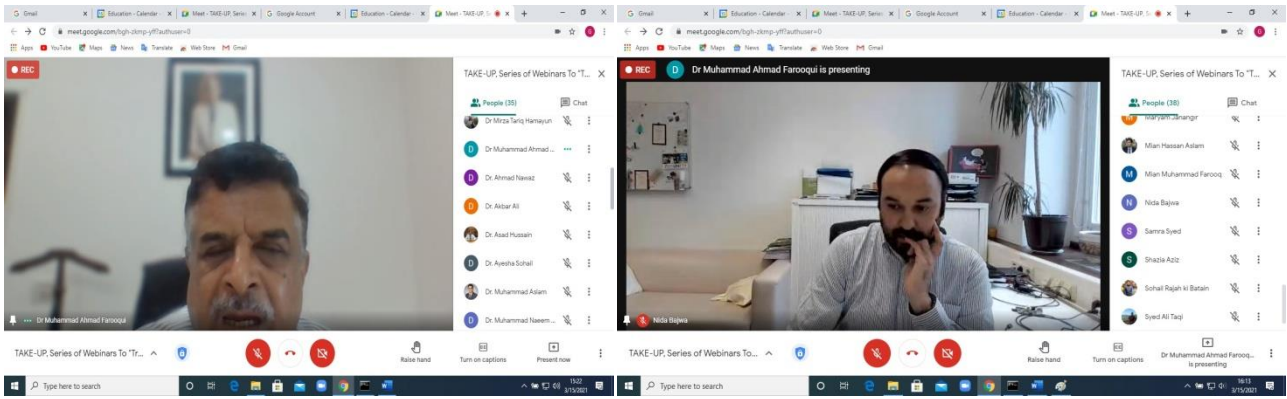
Prof.Dr.Muhammad Ahmed Farooqui in Session from CUI, Lahore

Prof. Dr. Nida Bajwa in Session from University of Saarland, Germany
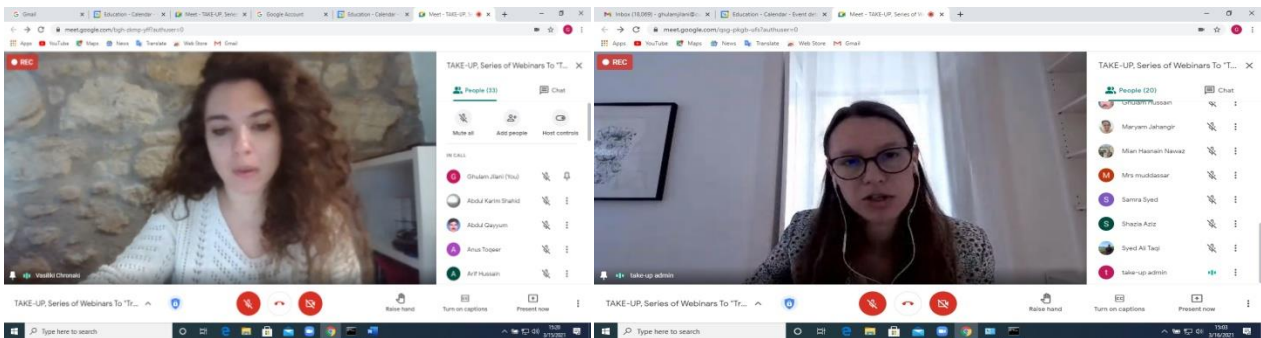
Dr. Vasiliki Chronaki in Session from Athens University of Business & Economics, Greece

Dr. Therisa Zimmer in Session from University of Saarland, Germany
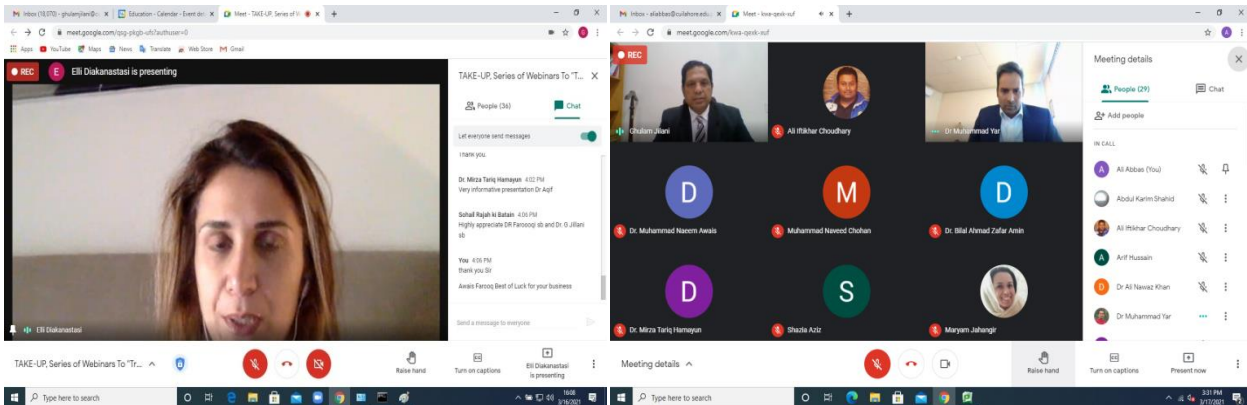
Dr. Elli Diakanastasi in Session from Athens University of Business & Economics, Greece

Participants from COMSATS University, Lahore Campus
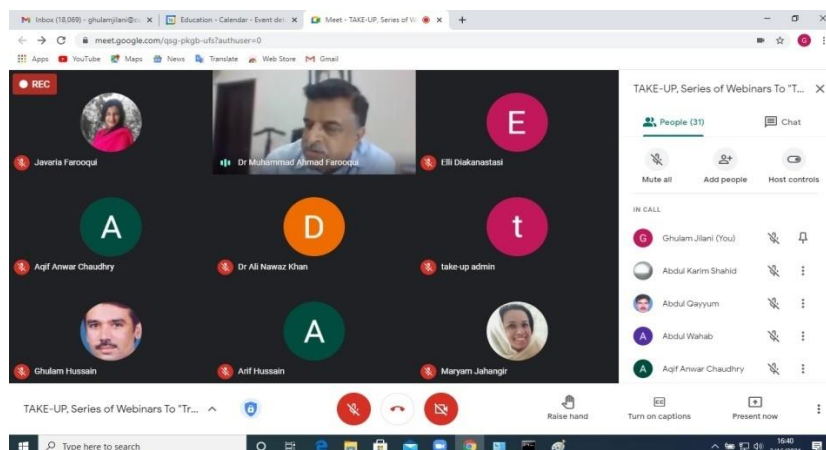
Training Plan Entrepreneurial Coaching

Target group: Faculty members, alumni, mentors involved in supporting entrepreneurs

Date: 09.12.2022

1

I. Information about objective and target group

The main objective of this training is to equip participants with the knowledge and skills to effectively support entrepreneurs on their journey to success. The main target group for this training are member of higher education institutions who have a personal interest in supporting entrepreneurs on an individual basis. They can be faculty members, alumni, mentors, or staff members of incubation centers.

II. Training information

Resource Person	Teacher/Trainer with entrepreneurial background, mentors to assist in group exercises
Contact Hours	Per session 3 hours, total 30 hours
Working Hours	6 hours

Course Introduction
This training is designed to provide you with the knowledge and skills needed to support entrepreneurs on their journey to success. We will cover topics such as why it is important to support entrepreneurs, who entrepreneurs are and how they operate, the phases of starting a business, business idea development, the challenges of entrepreneurs, an introduction to entrepreneurial coaching, developing your own identity as an entrepreneurial coach, and supporting specific entrepreneurial challenges such as lack of resources, ideas not being feasible, and social challenges with faculty members of higher education institutions.

Learning Objectives
Learning Outcomes • Understand why supporting entrepreneurs is important. • Identify who entrepreneurs are and how they operate. • Recognize the various phases of starting a business. • Ability to assess current phase and challenge of entrepreneurs. • Comprehend the process of business idea development. • Knowledge about tool, that can be used to structure a business idea. • Knowledge about how to use those tools in order to foster self-regulated learning in entrepreneurial teams Analyze the challenges faced by entrepreneurs. • Explain the basics of entrepreneurial coaching. • Knowledge about tasks of an entrepreneurial coach. • Establish an individual identity as an entrepreneurial coach. • Knowing how to implement personal resources as entrepreneurial coach. • Knowledge and ability to enlarge personal network and to link students to matching experts, related to their current challenge. • Ability to support students to structure their business ides. • Ability to give feedback on business ideas. • Support specific entrepreneurial challenges such as lack of resources, ideas not being feasible, and social challenges.

2

Methods
Module 1 • Explanation • Presentation • Examples • Stories • Exercises Module 2 • Self-reflection • Group work • Discussion Module 3 • Cases • Exercises • Role play • Reflection/reflecting team • Discussion

3

III.   Training manual

Module 1: Entrepreneurs

Session 1: Why supporting entrepreneurs	
Learning objectives	• Understand why supporting entrepreneurs is important.
Content	• Economic growth through entrepreneurship • Strategy to deal with high unemployment rates • Entrepreneurial skills ensure employability • Entrepreneurial mindset to develop a skillset for problem-solving under risk and uncertainty
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

Session 2: Who are entrepreneurs and how do they operate?	
Learning objectives	• Identify characteristics entrepreneurs are and typical strategies of their working mode
Content	• Are entrepreneurs born or made: skills can be developed • Start-up phases and typical challenges • What is entrepreneurial coaching ang what skills are needed? • Effectuation • Value of entrepreneurial teams and complementary skillsets
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

Session 3: Phases of starting a business	
Learning objectives	• Recognize the various phases of starting a business. • Ability to assess current phase and challenge of entrepreneurs. • Ability to give a realistic job preview for students who are interested in an entrepreneurial career.
Content	• Phases of starting a business • Realistic job preview (presentation of cases, interviews with entrepreneurs, stories, podcasts) • Supporting ecosystem related to phases of starting a business • Identification of the support system of own institution

4

Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

Session 4: Business idea development

Learning objectives	- Comprehend the process of business idea development. - Knowledge about tool, that can be used to structure a business idea. - Knowledge about how to use those tools in order to foster self-regulated learning in entrepreneurial teams Analyze the challenges faced by entrepreneurs.
Content	- Business Model Canvas - Marketing Tools (marketing mix, customer persona, value proposition) - Design Thinking - Funding opportunities - Knowledge what funding option matches to a specific team and business idea
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

Session 5: Specific challenges of entrepreneurs

Learning objectives	Understanding and recognizing different specific challenges of entrepreneurs
Content	- Lack of resources (knowledge/expertise in specific industry, team members, finance) - Business ideas is not feasible/Business idea failed - Social interaction challenges (team conflict, stress)
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

5

Module 2: Entrepreneurial coaches

Session 1: Entrepreneurial coaching	
Learning objectives	• Explain the basics of entrepreneurial coaching. • Knowledge about tasks of an entrepreneurial coach.
Content	• Who is an entrepreneurial coach • What is entrepreneurial coaching • Process of entrepreneurial coaching (Identifying challenges related to person, phase, or business idea) • GROW model
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

Session 2 : Own identity as entrepreneurial coach	
Learning objectives	• Establish an individual identity as an entrepreneurial coach. • Knowing how to implement personal resources as entrepreneurial coach.
Content	• Identifying own resources (expertise, knowledge, experience, skills) • Identifying own network • Identifying businesses in own field • Knowing process of registering and operating in businesses of own field • How to offer a workshop in own field of expertise • Self-promotion as entrepreneurial coach
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

Module 3: Providing support to particular entrepreneurial challenges

Session 1: Lack of resources	
Learning objectives	• Identify current and past resources available to entrepreneurs. • Utilize a coaching approach to link entrepreneurs to experts and other resources to help the entrepreneur succeed.

Content	• Identification of current and past resources
	• Identification of resources needed to achieve individual goal in the entrepreneurial team
	• Connecting the entrepreneurial team/entrepreneur to resources that will help them reach their goal.
	    o Experts in the respective field
	    o Offers (courses, workshops, trainings etc.)
	    o Information (research, sources, material)
	    o Other students/peers/alumni (human resources)

Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

Session 2: Business idea is not feasible/failed	
Learning objectives	• Identify when a business idea may not be feasible. • Utilize appropriate tools to structure entrepreneurial ideas. • Demonstrate effective communication skills for coaching entrepreneurs. • Listen actively to the entrepreneurs' explanation of their problem. • Provide constructive feedback to entrepreneurs. • Explanation and application of project management strategies
Content	• Explanation and support in application of tools that serve to structure the business idea (e.g. Business Model Canvas etc.) • Communication skills • Active listening • Giving constructive feedback • Project management
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

7

Session 3: Obstacles in social interaction	
Learning objectives	• Identify attributional patterns in a social situation causing trouble in an entrepreneurial team. • Differentiate between validating negative feelings and leading the perspective of entrepreneurs forward to their resources. • Develop a solution-oriented mindset. • Explain and practice goal-setting theories with the entrepreneur. • Plan next steps to solve a social interaction problem within the team.
Content	• Analyzing current problematic social interaction situation • Assessment of social challenge • Usage of common attribution errors as explanation for social challenges • Stress management • Goal-setting theory
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

8

Module 4: Into action

Session 1: Practice and transfer to individual working context	
Learning objectives	- Practice of acquired knowledge and skills as entrepreneurial coach in own working context - Identification of own strengths and potential for further development
Content	5 Coaching sessions incl. documentation of assessment of the challenge and agreed further possibilities for action 1 video of a coaching session 2 observations of colleagues who coached entrepreneurs 2 exchange sessions with colleagues - Ends with official certification
Teaching material	*To be developed*
Exercises for students during session	*To be developed*
Material for participants	*To be developed*

9

Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan (TAKE-UP)

(Project Reference Number: EU- Erasmus+ 609957-EPP-1-2019-1-DE-EPPKA2-CBHE-JP)

Tour Report

Visit to

Athens University of Economics and Business (AUEB), Athens (Greece)

and

University of Saarland (UdS), Saarbrücken, (Germany)

March 19 to April 03, 2022

24April2022

PREAMBLE

COMSATS University Islamabad, is one of the four local partners of the European Union (EU) funded Erasmus+ Project entitled "Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan" (TAKE-UP). The European partners are Athens University of Economics and Business (AUEB), Athens, Greece and University of Saarland (UdS), Saarbrücken, Germany, whereas the other three local universities are Lahore University of Management Sciences, (Lahore}, GC University, (Lahore), and the University of Gujrat, (Gujrat).

As provisioned in the project, under Work Package 1 and 2, a four member delegation from the Lahore Campus of COMSATS University Islamabad, visited the two partner European Universities for the purpose of developing "Cooperation for Innovation and the Exchange of Good Practices". The delegation was comprised of:

Dr. Muhammad Ahmed Farooqui, PI and Coordinator of the TAKE-UP Project
Dr. Rana Nadir Idrees, HoD and Assistant Professor of Management Sciences
Dr. Syed Muhammad Imran Hassan Naqvi, Assistant Professor, Chemical Engg.
Mr. Ghulam Jilani, Sr. C.O. and Manager for TAKE-UP project

As per objectives of the project the activities during the planned visit included strategic planning for promoting entrepreneurial culture in Pakistani Universities, visits to Athens Center for Entrepreneurship and Innovation, gain hands-on experience on the operation of Fabrication Labs and attend workshops/meetings with faculty and officials relevant to the project. The delegation visited AUEB, Athens (Greece), from 20-26 March 2022 followed by a visit to UdS, Saarbrücken (Germany) from 27 March to 3 April 2022. Expenditures of these visits were met from the funds of the TAKE-UP project.

This report covers the summaries of the presentations, interactive sessions, visits to places and Labs, and other events that took place during the trip. The purpose of this report is to record the activities of the CUI delegation during this visit and make recommendations based of objectives of the TAKE-UP project.

Introduction
TAKE-UP project is joint project of six universities; two European and four Pakistani, funded by Erasmus+ Program of European Union. The project is meat to create and establish entrepreneurial culture in Pakistani universities so that the universities may be transformed into Entrepreneurial Universities. A brief of the TAKE-UP project is provided in **Annexure-A**.

This particular visit had two segments: In the first segment, the workshop sessions and related activities were held at the Athens Centre for Entrepreneurship and Innovation, Athens University of Economics and Business (AUEB), Athens (Greece), whereas for second segment, the activities were held at University de Saarland, (UdS) Saarbrucken (Germany). All the sessions and activities were predefined, and an itinerary developed by European Coordinators of the TAKE-UP Project was followed.

PART-A: Athens Segment of the Tour

The Athens segment was five days long, 21st to 25th March 2022 (excluding travel days), in which following activities were carried out.

1. Welcome by the Vice-Rector of International Affairs • Prof. Dr. Vasilios Papadakis
2. Welcome by the Director of the Cultural Unit of the German Embassy in Greece • Sonja Bohnet
3. Presentation of the Pakistani and the German University • Representatives of the German and the Pakistani Universities (Ali Baba) •
4. Discussion on the Coaching Manual
5. Presentation about Athens Centre for Entrepreneurship and Innovation (ACEin) • Dr. Angeliki Karagiannaki, Managing Director (ACEin)
6. Incubation Stages and Coaching Process • Mr. Andreas Zerkoulis, StartUp Teams Growth Specialist (ACEin)
7. Branding for Startups and the guidance process. The EUAccel Project • Ms.Mara Doukidi, StartUp Teams Growth Specialist (ACEin)
8. Building entrepreneurship networks all over Europe: The EUFORIA Project • Mr.Timoleon Farmakis, Researcher (ACEin)
9. The creation of a Technology-Transfer Office. The promotion of entrepreneurship in the Greek HEIs. • Dr. Erifili Chatzopoulou, Project Manager (ACEin)
10. The essence of coaching and how to guide startups into success • Ms. Elli Diakanastasi, Network Manager (ACEin)
11. The ennovation competition and Open Innovation Programs • Ms.Marianna Galani, Project Manager (ACEin)
12. NBG and AUEB: Lessons learnt and knowledge transfer between public- private cooperation • Dr. Arsenis Spyros, Head of Business Development Innovation Unit.
13. The Astra project and the new European Universities Initiatives • Mr. Panourgias Papaioannou, Project Manager (ACEin)
14. The Inter-Departmental Entrepreneurial Assignment (IDEA) Project explained. Engaging the Youth: The Youth Entrepreneurship Summer Program. • Ms. Vasiliki Chronaki, Entrepreneurial Education Manager

15. The startup journey • ClioMuse,
16. Presentation of the visit in Saarbrucken, Discussion on the Entrepreneurial Manual • Ms. Theresa Zimmer and Ms. Aysenur Bilgin-Cabuk, Saarland University
17. Feedback and Open Discussion • Moderators: Ms. Vasiliki Chronaki and Mr. Panourgias Papaioannou.
18. Cultural evening: dinner at Myrtillo; A WWII historical Place. (Trifillias and Efstathiou Lampsa, Athina)

Daily Reports of Athens Segment

Day-1 (Saturday) 19th March
Travel from Lahore to Athens via Doha on Qatar Airlines. Arrival at Athens and local travel to hotel.

Day-2 (Sunday) 20th March
Meeting of CUI delegates for the review and finalization of the Presentations on Pakistan, Lahore and CUI in the context of TAKE-UP project. Visits to Acropolis and selected historical places of Athens in the evening.

Day-3 (Monday) 21st March
1. All the guests were welcomed by Ms. Vasiliki and Mr. Papaioannou at the Athens Center for Entrepreneurship & Innovation.
2. The session started with the introduction of the participants from COMSATS Univ, GCU, University of Gujrat, and LUMS.
3. Participants presented a brief introduction of their universities and Pakistan and about the current socioeconomic conditions of Pakistan.
4. Ms. Sonja from the Cultural unit of the German Embassy in Greece presented an overview of the historical, political, economic, and cultural relationships between Germany and Greece.
5. Mr. Papaioannou briefed the participants about the geography, religion, and culture of Greece.
6. Ms. Theresa from Saarland University presented the overall summery of TAKEUP project and different phases of the project along with its timelines.
7. Dr. Ammad and his team from GCU presented Module 1 of the Manual designed for the Entrepreneurial coaches.

Day-4: (Tuesday) 22nd March
Session 1: *Presentation of Athens Center for Entrepreneurship and Innovation (ACEin) by Dr Angelliki Karagiannaki, Managing Director (ACEin)*

Miss Angelliki talked about the ACEin of Athens University of Business and Economics. She provided a brief overview of what they are doing. Following were the main points of her session:

1. She emphasized on the following three aspects:
   a) Inspiration and entrepreneurial education
   b) start-ups incubators and acceleration
   c) open innovation and growth
2. She explained how they engaged high school students who were interested in acquiring business know-how and entrepreneurial skills.
3. She elaborated on her center's working on different inter-departmental entrepreneurial assignments.
4. She explained the industry focus in Greece of her center. Their center's startups focus is on agriculture, e-commerce, retail, food, logistics, data analytics type of industries.
5. She discussed the list and role of various industry partners, including multinational companies like Nestle and Ernst & Young (EY)) and innovation ecosystem partners in the success of her center.
6. She elaborated on six months incubation process from the idea to execution as follows:
   a) Phase A: Call to Action
   b) Phase B: Business Model Innovation and Designing
   c) Phase C: From Vision to Execution
7. She explained the composition, structure and role of her center's team. They have 15 members team. Most of them are engineers, full-time faculty members, and are Ph.D. candidates.

Session 2: *Incubation Stages and Coaching Process by Mr. Andreas Zerkoulis, StratUp Teams Growth specialist (ACEin)*
The main highlights of his session are as follows:

1. ACEin provides 360-degree entrepreneurial support based on every team's needs. Mainly the center support undergraduate students/teams, Ph.D. and MS candidates, researchers, and startups.
2. They do three things for the teams:
   a) They provide teams necessary <u>education</u>. It is a kind of compulsory part. Group discussions are mainly done. Team members attend the discussions and sessions in person on account of the practical nature of things to do.
   b) They give appropriate direction through <u>coaching</u>. He regarded coaching as the most important thing for his center. They provide general guidelines to the teams for the path to be followed in order to achieve the set goals. They also keep them motivated to achieve their goals. The teams in startups have long-term vision and time comes when they do not know how to keep themselves

motivated. Reading the books and stories of successful entrepreneurs can help to motivate them.

c) They provide a big picture of the market through the <u>mentoring</u> type of training strategy also. Mentors provide insight into the market, feedback, and help with networking by connecting you with some colleagues.

3. The first progress presentation is after 3 months and another one is after 6 months. The teams can discuss in these progress review presentations the problems they faced and the help they require for specific topics. These kinds of interactions are considered significant.

4. She discussed the selection and acceleration processes in detail. The selection process of the individual depends upon some procedures/testing. They build teams by focusing on both the soft and hard skills of the individuals. Skills like the level of an individual's engagement are crucial. The passion in an individual to become an entrepreneur is the key to success. There are three stages of the acceleration process:

Stage 1: Formation
Stage 2: Validation
Stage 3: Grow

Session 3: *Branding for Startups and the guiding process by Ms. Mara Doukidi, Creative and Marketing specialist, Ste. Ma Consulting, StartUp Teams Growth specialist (ACEin)* The main points of her session are as follows:

1. She defined a brand as a sum total of identity and image where *identity* means 'who you really are' and *image* means 'how you want to be perceived'.

2. She also discussed developing a strong brand with the help of 3C's formula (1) consistency, (2) compelling, and (3) clarity.

3. She gave a number of exercises. She gave the concept of storytelling with 5Ws who, what, where, when, why, and how.

4. She discussed the concept of niche, competition map, is/is not adjectives for describing brand. An exercise was given to find 5 adjectives that describe a certain brand and 5 adjectives that are not related to your brand.

5. She discussed items of Checklist # 1 regarding brand strategy:
   a) Your why
   b) Mission
   c) Vision
   d) Target audience
   e) Ideal client profile
   f) Brand goals
   g) Brand offers
   h) Positioning
   i) Core values
   j) Brand voice

k) Tagline
l) Messaging
6. Checklist # 2 was about brand identity that included mood board, main logo, alternative logo, colour palette, font printing, pattern/texture, brand guide, etc. She also discussed checklist # 3 regarding brand touchpoints. The questions regarding the protectability, upgradability, and transferability of the brand name/trademark/logo, copyrights, and patent rights were asked and answered.
7. In the second part of her presentation, she elaborated on the internalization of entrepreneurship education and incubation- the start for the future program. She also discussed the three phases of startups with the timelines:
   Phase 1: Entrepreneurial education
   Phase 2: Start for future- Pre-Incubation sprint
   Phase 3: Open incubators
8. She also elaborated that they provide the team members with different challenge areas after doing necessary desk and field research.
9. In the last, the concept of entrepreneurial universities was also discussed.

Day-5 (Wednesday) 23rd March
Session 1. Mr Timoleon Farmakis, (a researcher at ACEin) presented the details of the EUFORIA project, which is being financed by EIT Urban Mobility, a funding organization in Europe and supported by the region of Munich as a co-creation partner
1. The EdUcation Framework fOr Urban Resilience Innovation Activities (EUFORIA)), is about empowering entrepreneurial ecosystems by developing and implementing an education framework that ignites the creation of hubs in four cities (Aveiro, Athens, Varna, and Osijek), with universities as aggregators of relevant stakeholders.
2. Five Partners of EUFORIA are
   a) ACEin-AUEB (Greece)
   b) The Edge: R&BD (Bulgaria)
   c) J.J. Strossmayer University in Osijek (Croatia)
   d) University of Aveiro (Portugal)
   e) Strascheg Center for Entrepreneurship (SCE) (Germany)
3. The project has four major components
   a) Definition of relevant challenges for each region requires the engagement of relevant stakeholders and a co-creation, collaborative, framework able to properly "give a voice" to these stakeholders
   b) Universities have a role in helping to create this collaborative framework, establishing bridges and communication
   c) The process towards the definition of these relevant challenges is a driver force (the path is also a goal!)

d) It is our responsibility (academia, research, business sector, government/city officials, and civil society) to see ahead these challenges, for each region, and move towards collaborative solutions

Session 2. A detailed presentation was given by Dr. Erifili Chatzopoulou, Project Manager at ACEin. on how the entrepreneurship is being promoted in Greek HEIs through creating a Technology-Transfer Office.

Session 3. Ms Elli Diakanastasi, Network Manager at ACEin, presented her ideas about the essence of coaching and how to guide startups into successes. She identified four pillars of an Entrepreneurship Centre:

1st Pillar	Developing an entrepreneurial mindset
2nd Pillar	Educational services
3rd Pillar	Provision of pre-incubation services
4th Pillar	Provision of incubation/acceleration services

Session 4. Ms. Marianna Galani, Project Manager (ACEin) explained in detail the concepts and aspects of "The Ennovation Competition and Open Innovation Programs.

1. *Ennovation* is a yearly University Competition on Entrepreneurship and Innovation with 8 months duration. The competition runs by a network of 20 universities in Greece and Cyprus under the coordination of Athens Center for Entrepreneurship and Innovation (ACEin) of the Athens University of Economics & Business.
2. The main objective of *Ennovation* is to accelerate innovative "University Born" ideas by providing the participants with the knowledge, skill set, tools and the confidence required in order to turn them into action.
3. *Ennovation* puts significant effort in supporting students pursuing either undergraduate studies and executive master's or doctoral degrees and researchers who wish to turn their innovative entrepreneurial ideas or scientific research results into a sustainable business.
4. The program has three distinct streams:
   a) The *Entrepreneurship Stream* that focuses on innovative ideas that address a specific market need or opportunity
   b) The *Research Stream,* is specifically addressed to researchers and research teams wishing to take the outcome of their research efforts to the market
   c) The *Young Entrepreneurship Stream* that is specifically addressed to very early stage innovative ideas

Day-6 (Thursday) 24ʳᵗʰ March
Session 1.   Dr. Arsenis Spyros, Head of Business Development Innovation Unit presented about the Lessons learned and knowledge transfer between public-private cooperation he highlighted the role of his organization in the enhancement of entrepreneurship in Greece.

Session 2. Mr. Panourgias Papaioannou, Project Manager (ACEin), presented the Astra project and the new European Universities Initiatives. He briefed the audience about the website DIGIBUDY, it is a platform to work on similar projects and track common challenges together. 36 months duration under Astra projects will help conduct in-depth study and field research, Develop and design comprehensive blended training programs, and organize a large-scale capacity building

Session 3. Ms. Vasiliki Chronaki, Entrepreneurial Education Manager presented The Inter-Departmental Entrepreneurial Assignment (IDEA) Project explained. Engaging the Youth: The Youth Entrepreneurship Summer Program. The core objectives of the program are to change the mindset of the students, to bring together students from different backgrounds to work as an entrepreneurial team, and to bring youngsters in contact with experts to create an entrepreneurial ecosystem.

Session 4. Two young startups presented their idea for starting a company. Their idea is to use human hair for plant fertilizer. They had conducted the market study and worked on the supply chain of raw material (hair) for the compost preparation.

Day-7: (Friday) 25th March

Session 1: *Video about some facts and figures of Greece by Mr. Panourgias Papaioannou.* The video contained information regarding Greece at its 200th Independence Day celebrations.

Session 2: *Presentation of the visit in Saarbrucken by Dr Theresa Zimmer, Saarland University and Ms Aysenur Bilgine-Cabuk, Saarland University*

Dr. Theresa gave a presentation on the upcoming visit to Saarbrucken, Germany. She provided an overview of the plan to visit Saarbrucken and covered following topics;
1. Basic understanding of what is where
2. Use of Metro instead of a taxi in Germany.
3. How to reach the hotel from Frankfurt?
4. What time does it take to be in Saarbrucken from Frankfurt?
5. Time required from the station/hotel to campus
6. The contact number of the focal person/presenter
7. Location of the Saarland University via Google Maps
8. The cost of the train ticket there in Germany
9. To get a European Covid screening test.
10. Visit to Luxemburg on Saturday and have Dinner on the same day at Saarland University.

Session 3: *The role of the Higher education commission (HEC) of Pakistan in promoting the culture of entrepreneurship in Pakistan by Ms. Noshaba Awais, HEC Director*

The main highlights of her session were as follows:
1.   She provided us with a brief overview of the education system of Pakistan and the endeavors and initiatives of HEC for bringing a change in the culture not only in on-campus learning but also a change in the mindset to think of start-ups as another way to seek a job.
2.   She stated that globally all the nations are currently engaged to promote the culture of entrepreneurship. She termed the movement of inculcating the culture of entrepreneurship as a paradigm shift in the whole echo systems of knowledge and education. She discussed that the university/campus was previously mandated only to create knowledge but not necessarily to bring the result of or the impact of knowledge to the layman. It is evident that now the universities are working on benefiting the layman.
3.   Key points of her presentation are listed below, whereas, considering the importance of the information shared in this session, the actual PowerPoint Presentation is also attached with this report as **Annexure-B**.

1) She presented HEC as an engine for the socio-economic development of Pakistan.
2) She talked about quality, access, and relevance, the key challenges in higher education.
3) She also discussed the core strategic aims and objectives of HEC
    a) equitable access, quality, and standards
    b) technology readiness,
    c) research innovation and
    d) leadership, governance, and management.
4) She provided a brief higher education journey of Pakistan by comparing the years 2002 and 2020 on the parameters of gross enrolment of the students in universities, the number of universities established, female students' enrolment percentage, the number of publications, and the number of PhDs produced.
5) She also provided information about the landscape of research grants by highlighting strategic research (targeted and basic research) and need-driven applied research (targeted and applied research). Research grants provided to the scholars/faculty are as follows;
    a) National Research Program for Universities (NRPU) for unsolicited basic research
    b) Technology Development Fund (TDF) for unsolicited applied research and
    c) Local Challenge Fund (LCF), Grand Challenge Fund (GCF), and Technology Transfer Support Fund (TTSF) for need-driven applied research.
6) She also described the objectives of the ORIC program and the role of HEC in it. The number of universities having an established office of Research, Innovation,

and Commercialisation (ORIC) is 76 out of 233. She also provided the last 3 years' performance depicting the progress of ORICs concerning the number of research proposals funded, joint research projects, contract research, patents filed, and patents granted. Over two-thirds of ORIC offices are in public sector universities and one-third are in private universities.

7) She also talked about the establishment of Business Incubations Centres (BICs). She said that 29 BICs are currently working in public sector universities in Pakistan. Private sector BICs are also working but the HEC of Pakistan is not allowed to extend support to private sector universities of Pakistan. Some facts and figures from the last three years about the progress of BICs are as follows;

      1298 start-ups incubated
      847 start-ups graduated
      300 start-ups are in incubation
      PKR 1153 million revenue generated

8) She discussed innovation, commercialization, strategies, and future course by providing examples of different successful start-ups and the establishment of 8 new BICs.

Session 4: *Feedback and Open Discussion by Moderatos Miss Vasiliki Chronaki and Mr. Panourgias Papaioannou.* The main points of their sessions are listed below:

1. Mr. Panourgias gave a farewell speech by discussing the presentations throughout the week on the following topics:
   a) Pakistan, City, and the Campus
   b) German-Greek relationship
   c) Course manual discussions
   d) Innovation and entrepreneurial setups in Athens
   e) Opportunities to meet the start-ups
   f) Meeting with the networking n technology transfer officers
   g) Orientation of different programs run at European union levels
1. They gave a feedback form to fill out and submit online on the presentations given throughout the week.
2. In the end, they took an oral review of the week from the participants. Dr. Theresa also asked the following two questions:
   a) What is the disease? (What are the problems and challenges students face when they want to start their own business? What are the different problems/challenges teachers face concerning start-ups?)
   b) How can we adapt the concept to a broad, interdisciplinary audience?

Day-8 (Saturday) 26th March
Travel from Athens to Frankfurt via Lufthansa Air and by road travel to Saarbrucken, the home town of University of Saarland.

PART-B Saarbrucken Segment of the Tour

The Saarbrucken segment was also five days long, 27th March to 1st April, (excluding travel and excursion) during which following activities were carried out:

1. Welcome & structure of program by Theresa Zimmer and Dr. Nida Bajwa (Project coordinators)
2. Welcome address by Manfred Schmitt (President of Saarland University)
3. Welcome address Prof. Cornelius König (Vice President European and International Affairs)
4. Potentials of international networks - examples of international cooperation at Saarland University, by Johannes Abele (Director International Office)
5. Supporting start-ups at different stages during their entrepreneurial journey by Natalie Rau (Office for Knowledge and Technology Transfer of Saarland University)
6. Campus tour including Starter Center lead by Theresa Zimmer and Dr. Nida Bajwa Moderated discussion and reflection about strategic action plans (WP2) by Theresa Zimmer
7. Knowledge exchange and collaboration: ZeMA – Introduction and guided tour by Attique Bashir (KI-trainer)
8. The internationalized institution: EUSMAT, European School of Materials by Flavio Soldera (Managing Director)
9. Entrepreneurial Teaching and Learning by Dr. Benedikt Schnellbächer (Digital Transformation and Business Creation)
10. Excursion to the World Cultural Heritage Site Völklingen Ironwork
11. Two examples of start-ups, incubated within Saarland University: Mondata, and Quantpi
12. Incubation of IT startups by Matthias Eßling (Max Planck Innovation and Saarland University Technology Transfer Joint Venture IT-Incubator)
13. Strategic digital transformation and capability by Ammar Alkassar (Chief Information Officer of Saarland U)
14. Moderated discussion about entrepreneurship course (WP4) by Theresa Zimmer
15. Visit of FabLab at HBK (established FabLab) and CoHub (new FabLab): Guided tour and practical exercises lead by Thorsten Müller (Technician and instructor at FabLab HBK)
16. CISPA, Helmholtz Center for Information Security by Marc Schickhaus (CISPA Incubator), Anne Weyland (Coordinator of new program: Entrepreneurial cybersecurity)
17. Introduction of European Institute for Advanced Behavioural Management by Prof. Bastian Popp (Business administration)
18. Review of the trip and way forward; moderation by Theresa
19. Next steps: Organization and Management of TAKE-UP by Theresa Zimmer and Dr. Nida Bajwa

Daily Reports of the Saarbrucken Segment of the Tour

Day-9 (Sunday) 27ᵗʰ March

      Dr. Nida Bajwa (Project Coordinator) welcomed all the participants and after a brief introduction about the Saarland city and its strategic importance in the region, he introduced the COMSATS delegation with the members of the other international partner universities who were there for another project training activities.

The UdS team then took the delegation to a trip to Luxembourg- a business hub of Europe. On the way Dr. Nida provided useful information about the different sightseeing places and explained the strong economic measures which Luxemburg has taken to become a wealthy country.

The trip ended with a brief session about the coming week's activities at University of Saarland.

Day-10 (Monday) 28ᵗʰ March

Session 1: Welcome and structure of the program were discussed by Dr. Nida Bajwa

Session 2: Welcome address by Mr. Manfred Schmitt, President of Saarland University

Session 3: Welcome address by Prof. Cornelius, Vice President European and International Affairs, Saarland University.

Some of the key points discussed in the welcome addresses are as follows:

1. Recommendations for collaboration and exploration.
2. Collaboration with European Institute for advances behavioral management. The signing of MOU to collaborate for further studies.
3. Focus on increasing the employability of our students' Preparation for take-up projects.
4. Facilitating people to be in contact with each other.

Session 4: Potential of International Networks-examples of international cooperation at Saarland University by Mr. Johannes Abele, Director of International Office. Following were the main points in the presentation of *Mr. Johannes Abele*:

1. Internationalization is one of the means to enhance the quality of education. There are several exchange programs and research collaborations.
2. He shared the number of batches (43) and master programs (47) they are offering.
3. They described Saarland University as an international university with having supportive and welcoming environment. No tuition fee for bachelor's or master's programs. Leisure and cultural activities around the campus.

4. He told us about the application procedure for admissions.
5. He shared the website address www.uni-assist.de and highlighted the procedure of application service for international students.
6. He talked about the welcome center. The central consultation and services point for international scholars at Saarland university. More focus on international Ph.D. students, junior scientists, and academicians.
7. He discussed the international partnerships and exchange of under and graduate students with faculty and staff.
8. He discussed the funding opportunities such as Erasmus with learning mobility of individuals, Erasmus plus capacity building, DAAD, short-term grants for research, and the Alexander Von Humboldt Foundation.
9. In answer to the question, what is the structure of the international office? He said that they have a 10-member team and 400 partnerships worldwide. Most partnerships are student exchange partnerships.

Session 5: Supporting start-ups at different stages during their entrepreneurial journey by Miss Nathalie Rau, office for knowledge and technology transfer of Sarrland university. The main points of her presentation were as follows;
1. She provided information regarding technology transfer at Saarland University, Saarland university campuses, and research institutions. She said Saarland university is a nominated entrepreneurial university. She discussed the role of KWT and WUT Gmbh in business planning preparation, pitch training, financing issues, and recruiting advice.
2. She discussed the organizational chart and start-up infrastructure.
3. She discussed the science sparks 1 and 2, the history of science parks, and the vision.
4. She also discussed how we establish an entrepreneurial culture. She also discussed the founding of a start-up as a process that includes a stage of motivation, ideas stage, stage of preparation, founding stage, and the lat stage of establishing.
5. She talked about the awareness, ideas, and qualifications of students, graduates, and scientists.
6. She discussed the certification of entrepreneurship and crash course for business start-ups.
7. She explained the concept of community and exchanged experiences by networking with the relevant stakeholders.
8. She elaborated on the funding programs with the help of Exist business start-up grant and Exist transfer of research.

Session 6: Campus tour including visit to stater center lead by Dr. Nida Bajwa

Session 7: Moderated discussion and reflection about coaching material by Miss Theresa Zimmer. She took the feedback of participants regarding two main questions

1. What problems do students face in starting the business. She termed these problems as disease.
2. How we may make the content adjusted to a larger audience

Day-11 (Tuesday) 29th March

Session 1. The session started with the presentation of Mr. Attique Bashir (KI-trainer) Knowledge exchange and collaboration: ZeMA – Introduction and guided tour. The three main objectives of ZeMA are: Research, Technology transfer and Networking

1. The financial model of ZeMA:
   a) Twenty-five percent federal State
   b) Twenty percent Industrial Projects
   c) Fifty-five percent Publicly Funded Projects
2. The specialty of ZeMA is
   a) Cooperative Research
   b) Cooperation of UdS and HTW
   c) Application-oriented research for national and international industries
   d) Strengthen Saarland's science and technology base.
3. Following research, areas are available in ZeMA
   a) Sensors and Actuators
   b) Manufacturing processes and Automation
   c) Assembly

Session 2. Mr. Flavio Soldera (Managing Director) The internationalized institution: EUSMAT, European School of Materials briefed the participants about the school of material science and engineering at Saarland University. The department offers Bachelor in materials science and engineering as well as Masters' and Doctorate degrees (Dr. ing/ Dr.rer.nat). The department also offers summer school to the undergraduate students. The focus of the summer school is to develop language skills, international experience, lifelong learning, development of technical skill and networking

At the end of the presentation, all the participants were taken for a tour of the material department to see the facilities available for the students.

Session 3. Mr. Dr. Benedikt Schnellbächer presented to the audience about Entrepreneurial Teaching and Learning. The center offers different courses for startups. Some of the courses offered in the center are as follows:
1. Digital Transformation and Business Creation: The course consists of Lectures (2 SWS) and tutorials (2 SWS)
2. Management of Digital Transformation: case studies (4 SWS)
3. Makers of tomorrow (Lectures 2 SWS)
4. Digital Entrepreneurship (4 SWS)
5. Additive Manufacturing (3D Printing)

Session 4. At 4:00 all the participants were taken to a visit to the World Cultural Heritage Site Völklingen Ironworks. It is 150 years old steel mill that is now converted in a museum and tourist site. The museum portrays the incipient stages and history of the industrial development of Germany.

Day-12 (Wednesday): 30th March
Session 1: Two examples of start-ups incubated within Saarland University: Delfasys, Escra

Session 1(a): DELFA Systems GmbH-2022 by Steffen Ha, Smart Material Specialist
Some of the key points discussed in Mr. Steffen Hau's presentation on the start-up of Delfa incubated within Saarland University are as follow
1. He provided a brief introduction of himself.
2. He talked about sensors and actuators with their particular limitations. Some are heavy, noisy, expensive, bulky, high-power consumption, and limited feedback. He discussed the merits of the sensors if they are lightweight, silent, have low-cost material, have a flat design, with low power consumption and sensor-less position feedback.
3. Regarding the limitations and advantages of sensors and actuators, he stressed the need for novel sensors and actuators/next-generation sensors and actuators
4. He discussed the product portfolio like pressure and displacement, force sensors, and power electronics and its application like the use of force sensors in automation, industrial handling, joining process, and force measurement.
5. He also explained the concept of force measurement in his slides in terms of questioning the following:
   a) component reliability picked
   b) right component picked
   c) getting pickup force correct and
   d) gripping structure needs maintenance
6. He provided examples of fore sensors and industrial automation.
7. He gave us the year-wise road map of his product as follows:
   a) Manufacturing process, material development, system design, and customer and vendor contract of the product during 2020-21
   b) Foundation of Delfa Systems GmbH during 2022-23 with prototype in the application, development project with customer and product launch and product customer and
   c) From 2023-to 24, they will start mass production of the product titled ItinKubator.
8. He also discussed the support structure for the product of Exist Phases, university, knowledge, and technology transfer (KWT), IT incubators, and labor office.

9. He also said that he had to face challenges like licensing his start-up and talking to the clients about his product.

Session 1(b): Start-up Kopply by Janine Wagner

Janine Wagner founded the start-up Kopply together with her husband Björn. Following were the main points in her online interaction with the audience on her start-up incubated within Saarland University:

1. She provided information about kopply her app for providing services as follows:

For makers, entrepreneurs, influencers, and all those who want to become one. Kopply is an app that allows you to create a professional online presence in just a few minutes. No matter where you are. Share your Kopplys via a link or QR code, your customers can save the pages and contact you. Kopply connects and brings you one step closer to your customers. Manage your contacts in Kopply and make sure your data is always up to date - from your smartphone. Would you say, you just need some kind of digital extension to your business card? Then you don't need a website, you need Kopply! Combine your photo, short description, video, pdf, and contact information on a mobile-optimized page. Everything on Kopply is designed to motivate visitors to interact and generate leads for you.

2. She described the journey of her start-up. She studied media informatics in Saarbrücken and then worked as a programmer for a credit card processor. Her husband introduced her to the topic of founding and start-ups. Her husband is one of those people who sees room for improvement everywhere and constantly comes up with new ideas. It probably jumped over to her at some point and she got an idea that there are other ways of life than the ones she knew before. So, they quit their jobs to experience more and see the world and ended up founding Kopply.

3. She launched her project in June 2020, just in time for the pandemic, which meant that they had to adapt their sales strategy and asked themselves how best to use that time for themselves. That led to a complete overhaul of the product and a second launch in the fall of that year.

4. She talked about the advantages of a digital business card, her drive to start a business, and tips that she would give to prospective founders

5. They help freelancers to better represent themselves and stay in touch with their clients by providing a combination of a digital business card and a personal landing page

6. She described her attributes of personality to be very curious and enthusiastic.

7. She discussed different phases in her particularly challenging start-up foundation.

8. She provided some tips for those who are just start

9. She also discussed what were her reasons for starting a business that she could pass on to others. The main reason for her personally was freedom.

10. In answering a question about how is she promoting Kapplan, she said that they are planning to do campaigns. They intend to include people who are doing

amazing stuff. They are visiting big cities. They are interviewing people and creating web pages.

11. In answering another question what is the structure of her start-up? She said that she and her husband have the same pay. They have to control the other people. They do some personality tests to hire them. They have internship programs. They have advisors. They are working as teams. They give 3 months to train and after 6 months, they expect to get results. They have to be careful with their resources.

12. In answering the question would they share their revenue-generating model, she said that they spent so much time dealing with the customers. Soon they would go back to a subscription model. They have to increase their product prices otherwise they do not value our products.

13. In answer to the question do you have a feedback mechanism for your customers to improve your business? She said that they do not have it yet. Customers can write on her Instagram, there is no need to worry about it.

Session 2: *Presentation on the topic of Strategic digital transformation and capability by Mr. Ammar Alkassar, Chief information officer of Saarland*

Mr. Ammar is a state commissioner for strategy and chief digital officer. He is located in US. He gave a presentation on **Strategic digital transformation and capability**. The main points of his presentation were as follows;

1. He provided a brief introduction of himself. He said that there are a lot of benefits to organizing such an event. He started as a student to promote cyber security. After doing his master's, he started his Ph.D. He had served as an associate professor. He delivered a lot of lecturers, supervised master theses, and conducted a lot of research. He then become an entrepreneur and started a cyber security company. He is heading now 3rd largest cyber security company in Europe.

2. It is not an easy thing to operate such a company as we need to put some ideas at the governmental level. He said that all big organizations have a strong appearance with respect to research. The real question is how we can turn this asset into real value

3. What are the areas we should focus on?

4. What are the guidelines we should follow to have a good position in this competitive environment? As you are under pressure to become competitive. Goods and services are coming from neighboring countries and we have to provide services through physical and electronic means.

5. New technology has changed the way of business models. We need an economic system supported by technologies.

6. We need to do whatever we can to be number 1. You need to have the capability to address the needs of the public in your area.

7. In the second part of her presentation, he discussed the following points:

8. We have more digitalization; we still lack in answering the question of whether cyber security is addressed in a sufficient way. Cyber security technology will enable cyber attackers.

9. Cyber security will help to avoid massive cyber attackers. Army examples include gun machines and jets/planes.

10. Seeing our infrastructure, our services, cyber security technology aspect is important. Now we have to think about the challenges we are facing and what we can do/solution

11. The world has changed. we need to be # 1 and not 2. If you are working in uncertainty. You will be at the losing end. For example, if you write a research paper with the same technology/technique that will not help you. Just think of it.

12. It does not make sense if you start from zero. Strat from your strong areas/strengths. What are the stronger things you have?

13. We think that artificial intelligence (AI) is going to change the world same as the internet has changed the world in form last 20 years. We in Germany have AI facilities. We have a lot of automobile industries. We put it with the AI (smart products and smart machines)

14. His third part of the presentation includes the following points

15. Just build things you already have. Instead of focusing on a lot of other things, focusing on a couple of things is important. It is also important in a governmental context and the private sector is already doing i

16. You need to focus. Some people are generating ideas continuously. But if people are the same, they lose the capability of innovativeness. We need to make a system that ideas should come on a consistent basis with innovation

17. You need to be open. You need to be transparent. You need to have a transparent government. A government that focuses on real targets, not processes. People should be independent of what they do and what they achieve.

18. In answer to a question about the legal framework of cyber security at the global level, he said that it is a hot topic and it will take 15-20 years to reach for creating the legal framework.

19. In a question about the cybersecurity, he said that malware and ransomware are the biggest and most challenging threats to Germany and Europe. It is still not clear whether the cyber-attacks are considered as a war or a technology challenge.

20. Regarding growth in emerging technologies, he explained two types of developments (1) step by step development where risk is low and (2) disruptive technologies, you are at risk. You need to have a nationwide strategy that how much resources you are putting in step by step or disruptive technologies. In disruptive technologies, you think of what are the results, what is the result on any other day.

21. In Germany, the cyber agency works for the ministry of defense. The idea is to think in a strategic way what are the hot spots, to have a real intelligence system to handle malware, how malware acts, and such types of projects are required. We have to put themes for very smart people. Most data are coming from intelligence agencies. So, it

is difficult to share. Government companies can provide private solutions to doing things. We can have less formal collaboration to change and have knowledge for having future ways of doing things. We have a lot of running material from social media. A lot can be done at the governmental level.

Session 3: *Incubation of IT start-ups by Mr. Matthias Essling, Max Planck innovation and Saarland University technology transfer joint-venture IT-incubator*
The main points of her session were as follows
1. He is a manager of IT-Inkubator GmbH (http://www.it-inkubator.de) in Saarbrücken (Germany) founded by Max-Planck Innovation GmbH and Universität des Saarlandes Wissens- und Technologietransfer GmbH. They unlock the economic potential of inventions in information technology, which emerge from the research facilities of the University of Saarland and the Max Planck Institutes.
2. Focus on business informatics and innovation management.
3. He provided us with successful start-ups from the incubation center like Innoshine, Playcare, ESCRA, and SoulTable.
4. There are three phases of the incubation process (1) preparation phase (max 2-3 months), (2) acceleration phase (product development, business plan development, and workshops on leadership and sales), and (3) funding phase
5. According to him, ITI offers infrastructure and expertise to support entrepreneurial mindset and innovation by doing the following three things:
   a) Office spaces with the possibility to use specialized facilities and environments, if needed, for development and
   b) Access to shared resources such as Accounting, software development, marketing, legal counselling.
   c) Secure financing for the incubation period of 9-12 months

Session 4: *Moderated discussion about entrepreneurial course (WP4) by Moderatos Miss Vasiliki Chronaki and Miss Theresa Zimmer. At the end* an exercise was also conducted by her to generate ideas to support students who want to start a business across the following three phases.
> Phase 1: Students heard about entrepreneurship as a career option and have basic ideas
> Phase 2: Students have a business idea, but that idea is not yet elaborated
> Phase 3: Students have an elaborated idea

Day-13 (Thursday) 31st March
1. The participants visited the FabLab at HBK (established FabLab) and CoHub (new FabLab): for a guided tour and practical exercises. Mr. Thorsten Müller (Technician and instructor at FabLab HBK) briefed the participants about the different facilities available at the Fab Lab. It is a multi-purpose lab for performing different tasks.

2. Fabrication Lab (FabLab) consists of four different areas related to product development namely, 3D Printing, Wood work, Metal work, and Ceramics
Those who want to use the Fab Lab facilities must attend 5 basic training sessions (Not lengthy) for the safe and secure use of the equipment in the lab.
3. Mr. Marc Schickhaus (CISPA Incubator) and Mr. Anne Weyland (Coordinator of the new program: Entrepreneurial cybersecurity) from CISPA, Helmholtz Center for Information Security presented an overview of their center.
4. The center has 350+ staff members (260+ research and support) and is ranked #1 worldwide by CS ranking.org with 350+ publications since 2019. The mission of CISPA is to "Start your company while studying cybersecurity"

Day-14 (Friday): 1ˢᵗ April

Session 1: *MIGRIS: An example program to support migrant entrepreneurs by Miss. Sera Bebakus (FITT-Institute for technology transfer).* Key points discussed in the presentation are as follows:
1. Institute for technology transfer (FITT) is a larger supplier of diversity training in Germany
2. Free initial consulting sessions for immigrants and refugees.
3. Non-profit and non-governmental organization
4. She discussed that they have highly motivated and experienced immigrants and refugees and 70% were already entrepreneurs in their home countries

Session 2: *European Institute for Advanced Behavioural Management by Ms. Julia Senni, Program Manager.* Following are the main points of the presentation
1. She introduced us to the MBA program in European Management. She highlighted the characteristics of the MBA like excellent quality content, internationality, flexibility, a great learning environment, and high learning focus. She described the degree as tailor-made European management for practitioners, academics, and international students.
2. She provided key facts about the program, such as the required number of years to complete the MBA and the benefits of doing an MBA.
3. She informed us about the European institute of advanced behavioral management (EIABM). It is the business section of Europa-institute. She discussed the four-member team of EIABM
4. She discussed the students' countries of origin for the academic year 2021/22
5. She also shared the hard copy of the said MBA program for further information and guidance.

Session 3: *Review of the trip and way forward by Miss Theresa Zimmer*

Based on discussions throughout the visit regarding the tasks of the TAKE-UP project the short and long term targets were set. These targets will be shared separately by Ms Theresa shortly after the workshop session.

Day-15 (Saturday): 2nd April
Free Day for personal activities

Day 16 (Sunday): 3rd April
Travel from Saarbrucken to Frankfurt (by Road) and to Lahore via Doha on Qatar Airways. Arrival at Lahore on 04 April (Monday) 8:00 AM.

RECOMMENDATIONS

1. A detailed proposal is recommended to be developed for funding from HEC for the establishment of a state-of-the-art Business Incubation Center at CUI Lahore campus. HEC has allocated sufficient funds for this purpose, and it will not a very challenging to secure funding for the BIC. It is strongly recommended that a small committee may be constituted at CUI Lahore Campus to develop the proposal. More details about the TORs, scope, format and eligibility criteria are available at HEC website.

2. Given that Start-ups in Germany are also facing regulatory/licensing issues, it is recommended to develop business licensing guidelines. The guidelines may include the scope and SOPs for obtaining consents/approvals, registration/licensing process, mechanism of record keeping and other legal/codal formalities.

3. As part of the Entrepreneurial echosystem, Alumni and faculty with relevant competency knowledge and experience can be incentivized to mentor the young entrepreneurs and their start-ups. These mentors may further link up the entrepreneurs with experts (including professionals like accountants, lawyers, bankers, engineers, Traders, etc.) to help the start-ups in the initial stages.

4. From the platform of BIC, a panel of financiers/donors (such as commercial banks, large business houses, venture capitalists, national and international doner agencies, NGO, etc.) to allow pre-screened start-ups to gain an opportunity to pitch their business plan to this panel. This can help in mitigating the financing risk for start-ups and attract the patronage of prestigious organizations for the process. Naturally, this will require concentrated efforts and financial resources for providing seed funding to selected few start-ups.

5. Collaborations and partnerships with HEIs having a mature incubator setup like ITU, LUMS, and IBA can are4 recommended to be established to learn from their experiences. This will allow the exchange of knowledge and experiences of such HEIs for a better and swift learning effect.

6. Given the new reality that emerged post-Covid and the accelerated pace of digital disruption in the industry and public service delivery, a robust and fully equipped Technology Hub supported with multidimensional Fabrication Lab is also recommended to be established and Lahore Campus.

7. A strong and fully empowered project office of BIC should be established to take this whole activity forward with a SMART set of goals, under the supervision and guidance of an experienced manager. A dedicated marketing team, fully equipped with IT tools, branding strategies for BIC is also recommended.

8. Head of Business Development Innovation Unit Mr. Dr. Arsenis Spyros from the National Bank of Greece presented the role of his organization in the enhancement of entrepreneurship in Greece. A similar activity can also be done in the CUI campus by inviting the concerned heads of the major banks so that the students can get a clear view of the opportunities available in terms of funding for their startups. The banks can also be pursued to introduce some special incentives and schemes for the students of CUI.

9. DIGIBUDY, which is a platform to work on similar projects and track common challenges together. A similar platform can be developed by the MS and Computer Science department in CUI, where the startups can interact with each other and the platform could be used to develop and design comprehensive blended training programs and organize a large-scale capacity building activities.

10. Youth Entrepreneurship Summer Program is recommended to be initiated in the CUI with the help of MS and other Engineering departments to change the mindset of the students and to bring together students from different backgrounds to work as an entrepreneurial team. This can be done by inviting successful entrepreneurs so that the students can interact and gain knowledge and improve their decision making skills as entrepreneur.

11. Establishment of a fabrication lab is already in progress in CUI Lahore Campus, under the technical and financial support of TAKE-UP project. It is an essential component for the entrepreneurs for the product development. Its scope can be further enhanced by adding some more facilities like ceramics, metal shops, and state-of-the-art computer labs for the startup students.

12. The CISPA initiative of Saarland University is an innovative idea in Pakistani context. The CISPA model provides a comprehensive and holistic treatment of the pressing grand cybersecurity and privacy research challenges that societies around the globe are facing in the age of digitalization. CISPA's Technology Transfer method provides support to researchers in transferring research results into novel business models or existing corporations whenever and however desired. This model can be replicated in Pakistan with required modifications as per local needs and limitations.

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Transforming Academic Knowledge to develop Entrepreneurial Universities in Pakistan (TAKE-UP)

The Joint *Project - TAKE-UP was conceived in February 2019, through intensive interactions amongst Universities in Pakistan and Europe to seek funding through EU Erasmus+ Program. A 2-member expert* team from University *of Saarland (UdS) Germany visited CUI-Lahore Campus. The* project was *submitted by* UdS as *Coordinator. As* a pre-*requisite for submission of the* Project, a joint *Letter of Mandate (LoM) agreed by all partner universities, and it was signed on behalf of CUI by the Rector.* The project stands approved *since August* 2019 for Erasmus+ *funding of Euro one million, to take a formal kick-off in early March 2020. This is first ever Capacity Building in Higher Education (CBHE) Project CUI will take part under Erasmus+ Program. The Project is of high importance of national stand point and is directly linked with Prime Minister's Kamyab Nonawan* Program *launched this year.*

2.   The TAKE-UP Project *will provide CUI* and other *3 partner universities* (viz. *GCU, UoG and LUMS), a technical and financial assistance of more than 592,000 Euros (= Rs. 101 million) through* two EU *universities* in Germany *(UdS) and AUEB= Athens University of Business and Economics in Greece. CUI's share in this* project is *estimated to* be equivalent to Rs*. 27.00 million.*

3.   The Project also involve some non-academic partners like Lahore Chamber of Commerce & Industry and the Saar.iSeV of Germany as both will provide a platform for undertaking entrepreneurial activities from regional perspectives as well as support to increase project's visibility and its links to the industry. The Project in-builts utilization of their facilities for meetings and round table as well their participation in the meetings to provide feedback to project.

4.   **Major Objective :** *"Transforming CUI into an Entrepreneurial University'* and other supporting objectives that may include but are not limited to following points:

1) Trainings / Capacity Building of students, faculty and SSBC & Cubator staff
2) Establishment/ uplifting of CUI incubation facilities to foster entrepreneurial eco-system.
3) Cross University and cross campus collaborations to boost the start-up activities.
4) Knowledge sharing/brain storming activities between students and faculties from all Universities to boost innovation, entrepreneurship eco-system.
5) Building a strong pipeline of ideas/ Final Year Projects for business incubation.
6) Meet up sessions may be arranged between Industry and academia for contribution towards University policy development
7) All stake holders including Private sector to be brought on board for creation of enabling environment to boost knowledge economy
8) Faculty FYP supervisors / departments may be facilitated to search out industry problems for development of their students Final Year Projects.
9) Activities/ Efforts to be made to Motivate and reach out to industry for identifying their problems by close liaison with industry and design its solution through pool of entrepreneurial students. Alumni can play a vital role.
10) Expansion of SSBC program to all r campuses of CUI.
11) Expansion of CUBATOR 1ne program to other campuses

5*.   **Out-come:** The* Joint implementation *of this Project over a period of 3 years shall be enabling CUI and partner Pakistani Universities to develop as Innovative Entrepreneurial Universities for promoting a cultur of entrepreneurship by training the faculty /staff to*

motivate graduating students and researchers for their business ideas and sustainable job creating businesses/employment in Pakistan besides achieving a number of supportive

6. The **Key activities of the projects** have been well-defined in the form of Ten (10) different work packages for the partners to undertake individually or collectively (Annex-A) with some specific deliverables/outcomes within given time-lines, aimed at achieving following:

1) Assessment of the entrepreneurial culture at each partner HEI in Pakistan and the development of strategic action plans for each HEI;
2) Creation of localized training material for entrepreneurial coaches and academic staff, irrespective of their association directly with BIC or teaching entrepreneurship.
3) Establishment of FabLabs at Pakistani partner universities (GCU, CUI and UoG) to improve entrepreneurial spirit of students and researchers. *A FabLab, equipped properly under this project shall enable young entrepreneurs to be guided through visualization and rapid prototyping to keep them engaged in their ideas to materialize.*
4) To run a train-the-trainer program to improve the skillset of entrepreneurial coaches and create a multiplier effect
5) To establish a TAKE-UP network to share project results and increase capacity of non-partner HEIs.
6) Adding value to the modernization and internationalization agenda of universities by creating a diverse and heterogeneous group of partners in Pakistan matching them with EU partners that will be delivering on the needs of these partners.

7. The Role of CUI in the project has been defined as to undertake activities in different work packages (WPs), transforming *CUI into an Entrepreneurial University* through:

1) Participation in Workshops, Self-Assessment, Feedback—**WP1**
2) Participation in Workshop, reflecting and discussing best practices, development of SAP, giving feedback on interests for internship, sending participants for internship- **WP-2**
3) Preparation and installation of equipment and startup of FabLab with cost of equipment of Euro 60,000/= - **WP3**
4) screening material, creating material, participating in the activities, implementation of developed material- **WP4**
5) Participation in Workshops, taking charge for the development of the IT-related guidelines in one of the workshops and allocating space and material for the workshops concerning the IT-related guideline- **WP5**
6) co-work- package leader, trainee scouting, feedback on training plans, participate in capacity building trainings, supervision and train the trainer sessions, revision and feedback on WP - **WP6**
7) *Work-package leader:* Establishment of the TAKE-UP network, organizing training workshops for non-partner universities, joint publication for best practices to transform Pakistani universities into entrepreneurial universities as well as giving feedback and developing network identity, developing website for incubated startups- **WP7**
8) co-work package leader: developing the dissemination plan and participating in dissemination actions- **WP8**
9) joining quality board, agreeing on feedback mechanisms, giving feedback on contingency plan- **WP9**
10) to join the management board, members of the management board are in charge to participate in video-conferences and support the interactive use of the project management tool by updating contents and checking deadlines- **WP10**

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Higher Education Commission

Developing Entrepreneurial Skills in Pakistan

Higher Education Commission

Serving as an Engine for the Socio-Economic Development of Pakistan

Economic Uplift

Research & Development

Human Resource Development
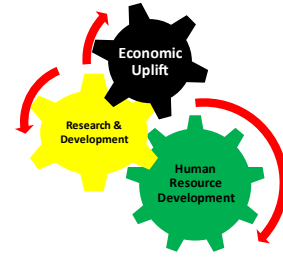
Core Strategic Aims and objectives of HEC

Equitable Access, Quality & Standards	Technology Readiness	Research & Innovation	Leadership, Governance & Management
• Enhancing Nation wide Equitable Access • Quality & Standards consistent with Global HE Standards • Create a Critical Mass of qualified Human Resources • Qualified Faculty with Advanced Degrees	• Nation wide availability and use of ICTs • Provide necessary Scientific Equipment and Technology resources for High Quality Research • Provide PERN3 Facilities through Global high speed connectivity • Digital research and instructional Resources for faculty and students	• Universities, Industry& Government nexus • Knowledge Economy • Critical National Problems and solutions • Discovery of new knowledge, competences and skills in Engineering specializations • Solve critical national problems and create solution	• Improve Management and Governance of UETs to offer UG and Grad interdisciplinary, rigorous and relevant engineering programs • Merit based selection of key university leaders, faculty and students • Strategic planning, institutional development and improving academic quality of all programs offered at universities.

Key Challenges in Higher Education

Quality	Access	Relevance
• Standard of Education, Faculty & Research	• Enrollment in higher education	• Addressing the needs for Socio-Economic Development of Pakistan

Higher Education Journey of Pakistan

2002	2020
276,274 Gross Enrollment	**2,003,705** Gross Enrollment
59 Universities	**233** Universities
0.26 Million Enrollment	**2.003** Million Enrollment
32% Female Enrollment	**45.3%** Female Enrollment
800 Publication	**28,870** Publication
3,110 PhD's	**17,575** PhD's

Landscape of Research Grants

Unsolicited Research   Targeted Research

Basic Research

Unsolicited Basic Research — NRPU

Strategic Research

Applied Research

Unsolicited Applied R...

TDF   LCF   GCF   TTSF

Objectives of the ORIC Program

- Support HEIs into becoming centers of Innovation, High-Impact Applied Research & Commercialization

- Enhance Research Quality, Competitiveness and Promote Innovation & Commercialization at HEIs

HEC's Role

- Notifying New ORICs at HEIs that are complying with HEC's ORIC Policy

- Provide Support through Capacity Building Programs for ORIC Management

- Providing Performance Overhead to ORICs through HEC Sponsored Competitive Research Grants

ORIC Responsibilities

- Support, Advise & Monitor Quality of Research at HEI

- Institutional Collaborations with Government, Industry & Communities

- Ethical Institutional Review Board (IRB)

- Develop, Protect, Build & Market IP through IP Policy

- Liaison with AS&RB

Progress of Offices of Research, Innovation & Commercialization (ORICs)

4544 — Research Proposals Funded
1094 — Joint Research Projects
1243 — Contract Research
797 — Patents Filed
201 — Patents Granted

ORICs Performance for Past 03 Years

ORICs Recognized by HEC	76

ORICs Representation

34% / 66%

■ Public Sector   ■ Private Sector
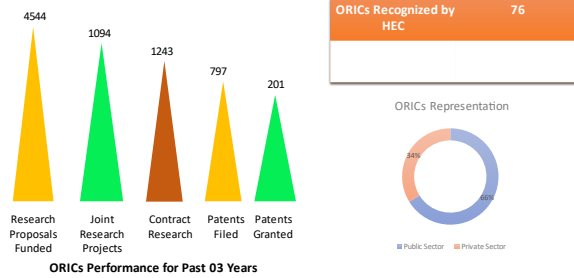
Establishment of Business Incubation Centers (BICs)

Objectives of the BIC Program
- Fostering Entrepreneurial Spirit at HEIs and Encouraging Students & Faculty to Create New Enterprises
- Support the Development of Innovation Ecosystem at HEIs

HEC's Role
- Establishing New BICs at HEIs that are complying with HEC's BIC Policy and Providing 2-years Funding
- Provide Support through Capacity Building Programs for BIC Management
- Remodeling of Established BICs through Seed Funding Programs (such as ISF) and Other Initiatives

BICs Responsibilities

- Provide Guidance, Mentoring, Business Strategies to Startups
- Helping Startups to Protect their IP
- Providing Access to Labs, Libraries, ICT-Facilities, Technical Workforce, and Funding Opportunities for Startups
- Enhancing Competitiveness and Societal Relevance of HEIs
- Forging Connections with Industrial and Government Organizations

Progress of Business Incubation Centers (BICs)

1298 — Startups Incubated
847 — Startups Graduated
300 — Startups in Incubation
Rs. 1153 M — Revenue Generated

BICs Performance for Past 03 Years

BICs Established by HEC	29

Funding for BICs (in Past 03 Years)	Rs. 28m
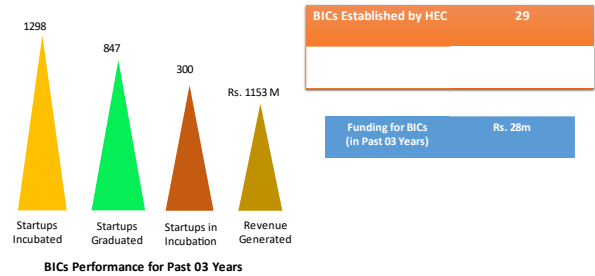
Innovation & Commercialization:

Strategies and Future Course of Action

Uplift of Research, Innovation, Commercialization & Entrepreneurial Ecosystem:
- Establishment of **08** New BICs in 2021-22 at Public Sector HEIs, having Functional ORICs – **Individual BIC Grant Up To Rs. 24m**
- Establishment and Recognition of New ORICs in Accordance with HEC's ORIC Policy 2021
- Development of ORIC and BIC Automation Platform under HEDP to consolidate RIC activities on single online portal.
- Technology Innovation Support Centers (TISCs) being established in collaboration with IPO Pakistan and WIPO Pakistan to facilitate IP Rights
- *Launching Innovation Seed Fund (ISF) Program under HEDP for Promotion of Innovation & Entrepreneurship:*
  - 15 grants to be awarded annually with individual grant value of USD 35,000
  - Strengthening Entrepreneurial Culture, involving extensive capacity building of ORICs and BICs

Questions & Feedback

Selected Photographs of visit to ACEIn, Athens University of Economics and Business, Athens (Greece). March 20-26, 2022

Selected photographs of visit to University of Saarland, Saarbrucken, (Germany). 26th March to 1st April, 2022

A Report

on

Study Visit
and
Strategic Meeting

at

Saarland Des University, Saarbrücken, Germany
From July 25 to 29, 2022

under

TAKEUP

Contents

1. **The Visit's Route**
2. **Introduction**
3. **Objectives**
4. **Agenda & Program**
5. **Attendance**
6. **Daily Activity Report**
7. **Strategic Action Plan**

The Visit's Route
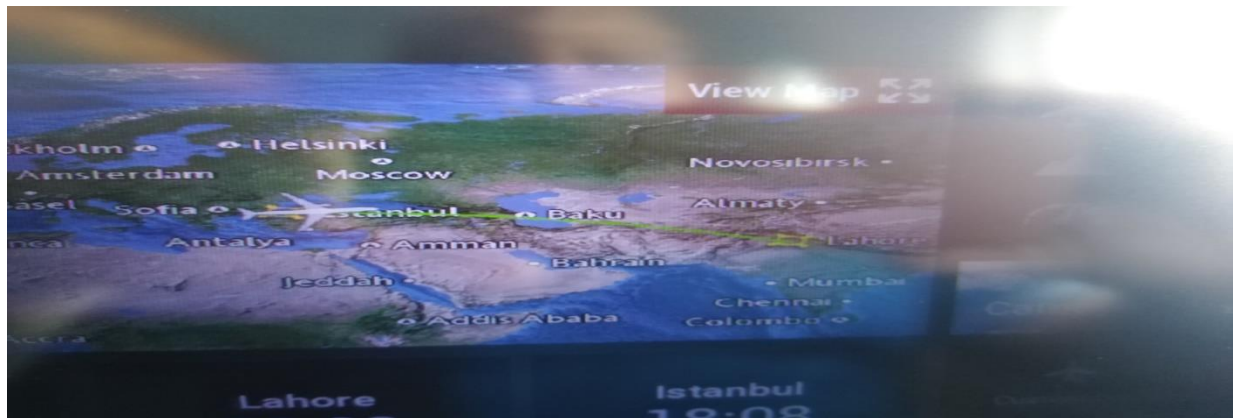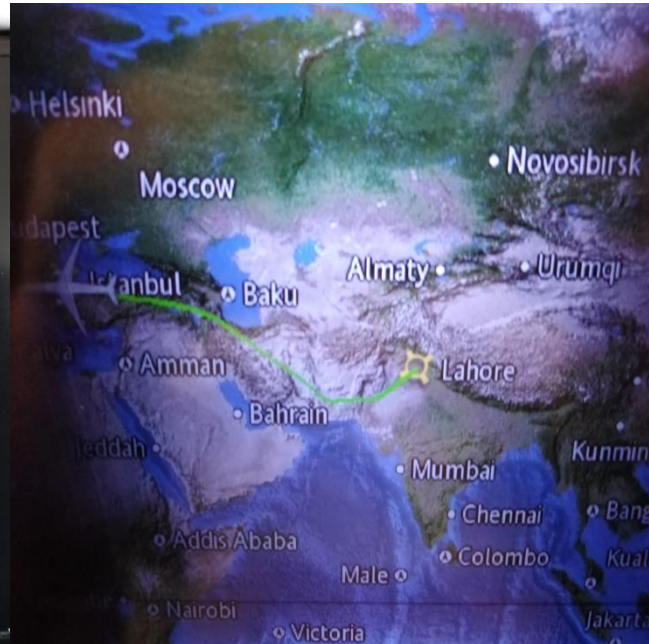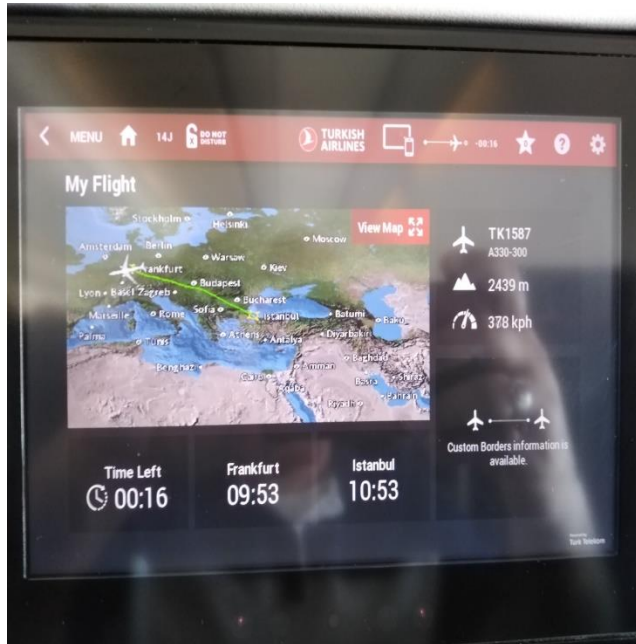
Introduction

With reference to invitations to the officials of COMSATS University Islamabad, Lahore Campus (CUI) for a study visit and strategic action plan meeting for the EU funded Erasmus + Project titled, "Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan (TAKE-UP)", under project reference 609957-EPP-1-DE-EPPKA2-CBHE-JP for its planned program given on next under activity # 5 of TAKE-UP. It is reported that a group of the following three officials of CUI, Lahore Campus visited University of Saarland, Saarbrücken, Germany for representing CUI as per the agenda from July 25 to 29, 2022:

1. Dr. Syed Muhammad Imran Haider Naqvi, Senior Manager HR
2. Dr. Usama Ijaz Ahmed Bajwa, Tenured Associate Professor, Department of Computer Science
3. Dr. Muhammad Naeem Shehzad, Tenured Associate Professor, Department of Electrical & Computer Engineering

It is pertinent to mention that officials from other partner universities in Pakistan also attended the program whose details are as under:

1. Prof. Dr. Asghar Zaidi, Vice Chancellor, Government College University, Lahore
2. Dr. Ammad, Assistant Professor & Director Management Sciences, Government College University, Lahore
3. Ms. Zunaira, Lecturer Management Sciences, Government College University, Lahore
4. Prof. Dr. Syed Jawad Naqvi, Lahore University of Management Sciences
5. Prof. Dr. Faiza Jawad, Lahore University of Management Sciences
6. Dr. Shehreyar, Assistant Professor, Lahore University of Management Sciences
7. Mr. Shahzada Babar Shykh, Manager ORIC, University of Gujrat
8. Dr. Hammad Ismail, Assistant Professor Bio Sciences, University of Gujrat
9. Dr. Ghulam Abbas, Assistant Professor Chemical Engineering, University of Gujrat
10. Mr. Panourgias Papaioannou, Deputy In-Charge Entrepreneurial Center, Athens University of Economics & Business

From the host side, following members represented Saarland University:

1. Prof. Dr. Cornelius Konig, Vice President, International Affairs, Saarland University

2. Dr. Nida ul Habib Bajwa, Project Manager TAKEUP Associate Professor, Saarland Des University
3. Ms. Theresa Zimmer, Project Coordinator & RA Psychology, Saarland Des University
4. Ms. Kiran, Project Coordinator TAKEUP, Pakistan Chapter, Saarland Des University

Objectives

The program was conducted to achieve the following objectives under TAKE-UP:

1. To train faculty members from diversified fields, especially from areas other than management sciences, on to the subject knowledge of entrepreneurship as coaches,

2. To encourage the trained coaches to impart and propagate their learnt knowledge and skills to other faculty members at their respective universities, and

3. To strategize further action plans and way forward under TAKE-UP for activities during next year, and

4. To disseminate the achievements and contributions invested for TAKEUP.

Agenda & Program

Due to delay in flight schedule of certain members and overlapping or left over topics by certain speakers, the program had to be adjusted during run time. The study visit and strategic meeting were thus conducted adopting the agenda and program provided next, which was further adjusted during run time.

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TAKE-UP

Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan

Meeting Agenda

25th July – 29th July 2022

Saarland University, Saarbrücken Campus

TAKE-UP

UNIVERSITÄT
DES
SAARLANDES

LUMS

COMSATS UNIVERSITY
ISLAMABAD

GCU
EDUCATING PEOPLE FOR TOMORROW
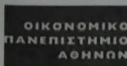
OIKONOMIKO
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΑΘΗΝΩΝ
ATHENS UNIVERSITY
OF ECONOMICS
AND BUSINESS
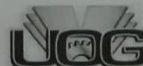
UNIVERSITY OF
UOG GUJRAT

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25. July (Monday)

Room 1.17, Building C 7.4

9:00	Welcome T. Zimmer, Dr. Bajwa, Prof. König (Vice-President for Internationalization and European Relations)	
9:30	TAKE UP project review and outlook	T. Zimmer
11:00	Individual experiences in entrepreneurial coaching at the university	T. Zimmer
13:00	Lunch	
14:00	Typos of motivation	Dr. Imran Naqvi
16:00	Sources of motivational problems and procrastination	Dr. Imran Naqvi
17:30	End	

26. July (Tuesday)

Room 1.17, Building C 7.4

9:00	Who is an entrepreneurial coach	Dr. Amaad
11:00	What is entrepreneurship? Traits of entrepreneurs and why start-ups fail	Dr. Amaad
13:00	Lunch	
14:00	Effectuation and BMC	Dr. Amaad
16:00	Generating ideas and screening good ideas	
17:30	End	Dr. Amaad

27. July (Wednesday)

Room 1.17, Building C 7.4

9:00	Project management	Dr. Amaad
11:00	Marketing and Legal IP Management	Dr. Amaad
13:00	Lunch	
14:00	Team Management, Feedback, Leadership styles, Teambuilding	Dr. Faiza
16:00	Team Management, Feedback, Leadership styles, Teambuilding	Dr. Faiza
17:30	End	

28. July (Thursday)

Room 1.17, Building C 7.4

9:00	Communication skills	Dr. Faiza
11:00	Communication skills	Dr. Faiza
13:00	Lunch	
14:00	Conflict Management and Negotiation	Dr. Faiza
16:00	Change and Stress Management	Dr. Faiza
17:30	End	

29. July (Friday)

Room 2.05/2.06, Building A 5.4

9:00	Introduction: Defining target group	Dr. Imran Naqvi
10:00	Attracting customers and building a network	Dr. Imran Naqvi
13:00	Lunch	
14:00	Transfer of entrepreneurial coaching to individual context at the university	T. Zimmer
15:00	Review of the week and way forward	T. Zimmer
16:00	End	

30. July (Saturday)

09:00	Cultural event (Trip to Saarburg and Trier)

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Attendance

TAKE UP Pilot Training Entrepreneurial Coaching
25.07.2022 – 30.07.2022
Saarland University, Saarbrücken Campus

Name	Affiliation	Programm Day 1 25.07.2022	Programm Day 2 26.07.2022	Programm Day 3 27.07.2022	Programm Day 4 28.07.2022	Programm Day 5 29.07.2022	Programm Day 6 30.07.2022
Theresa Zimmer	Saarland University (UDS)						
Syed Muhammad Imran Haider Naqvi	COMSATS University Islamabad (CUI)						
Usama Ijaz Ahmed Bajwa	COMSATS University Islamabad (CUI)						
Muhammad Naeem Shehzad	COMSATS University Islamabad (CUI)						

Daily Activity Report – July 25, 2022

The three officials of CUI participated in all the sessions held in seminar room C7 – 4 of Saarland Des University (UdS). The activity was started at 0930 on July 25, 2022. Initially Dr. Nida ul Habib Bajwa, Project Manager TAKE-UP addressed the participants with a welcome speech. Subsequently Dr. Collin, Vice President, International Affairs, UdS apprised the audience about history, significance, faculty, students and others strengths of UdS and the city of Saarbrücken, Germany. Later Ms. Theresa Zimmer, Project Coordinator & RS, UdS discussed with the audience the agenda, objectives and targets of the TAKEUP and that program.

After these introductory sessions and a lunch break, Dr. Syed Muhammad Imran Haider Naqvi, Senior Manager HR, CUI Lahore Campus contributed his talk on, "Motivation to Entrepreneurship through Faculty and Relevant Progress at CUI". Dr. Naqvi after a while engaged the participants into a group activity for brainstorming ideas for startups in an open environment due to weather condition. The participants were divided into two groups and later each group leader presented the findings and contributions of the group. The exercise was appreciated as useful for the objectives.

Daily Activity Report – July 26, 2022

On the second day all the representatives of CUI joined at 0830, however formal activity could be started at 1000 due to delay in flight of Dr. Ammad Uppal, Director MS, GCU. During wait state, Dr. Zaidi contributed thoughts and recommendations on the subject. Then Dr. Uppal contributed a talk on entrepreneurial coaching, effectuation and business canvas model during the first half. He engaged the audience in relevant group assignments, discussions and presentations on their exercises. Dr. Naeem Shehzad & Dr. Usama Bajwa from CUI presented an exemplary exercise on business modeling. The lectures and activities were very well appreciated.

In the lunch break, an informal meeting was held with Ms. Ingrida, Deputy In-Charge of Business Incubation Center, UdS and Dr. Nida Bajwa with officials of CUI. It led the partners to exchange of useful ideas on contemporary practices, networking and industrial outreach.

After lunch the remaining session was concluded at 1545 to enable participants on to a site seeing visit. Dr. Usama Bajwa and Dr. Naeem Shehzad from CUI volunteered to join the group to visit the Volklingen Iron Works (a former Steel Mill that was declared World heritage site by UNESCO). Dr. Naqvi on the other side accepted request of Dr. Asghar Zaidi, Vice Chancellor, GCU for discussion on possible collaboration among GCU and CUI on the subject.

Daily Activity Report – July 27, 2022

On start of the third day Dr. Ammad Uppal, Director Management Sciences, GCU continued his lecture on entrepreneurial exercises and marketing segmentation for addressing targets groups. He added explanation of GROW model. All participants were engaged into group exercises and individual presentations.

CUI participated effectively in the exercises for GROW model. Dr. Usama presented his experience of RashCAM product for cars/vehicles and mold it into GROW model. Dr. Naeem Shehzad shared his experience for Islamic scarf selling in Australia in partnership with a friend and also another idea of solar panel business. Dr. Naqvi presented his idea of restoring and offer a vintage car for ceremonial events, such as marriage, convocations etc. following GROW model. Dr. Ismail, UoG shared his idea of flavored organic yogurt. Other participants also shared useful entrepreneurial ideas in their respective exercises.

Subsequently, Prof. Dr. Faiza, LUMS delivered her talk on business communication. The details relevant to encoding, decoding, and transcription were discussed in entrepreneurial context. She motivated and engaged audience into case studies, videos and relevant discussions.

The participants made through the exercises on given case studies very well. Later the workings of each group on the case studies were discussed. After videos display, Dr. Faiza moderated the inputs & workings of groups onto given questions. The activities were appreciated as beneficial for training coaches on entrepreneurship.

Daily Activity Report – July 28, 2022

The training was started at 0900 with talk of Dr. Faiza on team and group management and relevant cases studies with exercises. She divided audience into teams with materials and provided them task to build tower of noodles and a marshmallow to exercise team management. All three teams built the tower successfully, however only the tower of one team passed the evaluation criterion set by Dr. Faiza. In continuation, tasks of presenting elevator pitch for selling electric skates cum scooter were assigned, to Dr. Bajwa, Dr. Naeem, Dr. Ammad and Dr. Ismail for which they played well, while the others assumed the role of potential customers. Later she invited Prof. Dr. Jawad Naqvi to lecture on negotiation skills which he contributed effectively. Finally, Dr. Faiza resumed talks on stress and conflict management providing notes. At the end of her lectures she shed light on significance of feedback from customers.
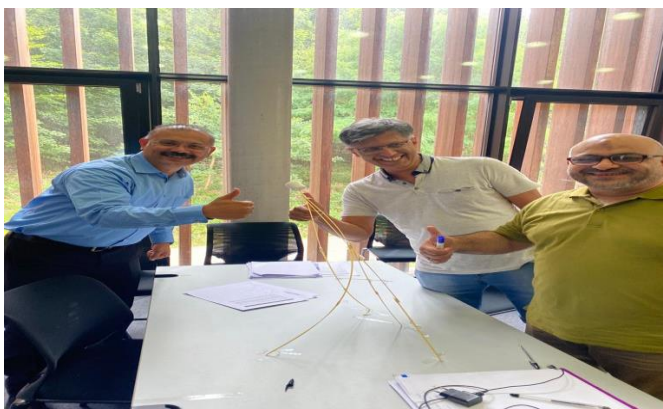
After a daylong lectures and learning activities on July 28, 2022, the participants were invited by Dr. Nida ul Habib Bajwa, Project Manager TAKEUP, UdS for a get together at a dinner in a restaurant at Syrian Street of Saarbrücken. The participants enjoyed walking to the distant venue on the river side. On the evening, UdS had also invited Dr. Sarjaan, an Engineer & Specialist of Fabrication Laboratory Equipment who would install & operationalize the Fab. Labs in the partner universities of Pakistan and also impart trainings to their resources on the needful during October – November, 2022. Dr. Nida Bajwa also hinted on the next activities planned under TAKEUP in Pakistan, however he left its details on to Ms. Theresa that were provided on the last day. The get together remained useful for informal discussions and networking.

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Daily Activity Report – July 29, 2022

The activity was started at 0900 on an adjusted program agenda to avoid certain overlapping and/or left over topics. The last day was initiated with a talk of Dr. Imran Naqvi, SM HR, CUI, on the types of business entities in Pakistan and legal requirements to establish them. He referred the participants to an online available source of knowledge and engaged them in discussion. In this interactive session, the participants learnt/refreshed knowledge on types of business entities with Registrar of Firms and/or SECP, Pakistan, IP management & patents registration with IPO, and exchange of ideas on commercialization of possible knowledge economy with and without innovation. Dr. Shehreyar, LUMS exhibited keen interest in Associated Limited Partnership (ALP), & Limited Liability Partnership (LLP). Dr. Usama Bajwa, CUI shared his experience of making a company for his engineered product RashCAM and reasons of its closure. Prof. Dr. Jawad Naqvi, LUMS argued intellectually on commercialization and patenting in the academia of Pakistan. Dr. Naqvi, CUI also provided a detail reference material on the documents needed to establish such legal startups/business entities as per the standards of SECP, PEC, FBR and associated banks in Pakistan. He finally moderated the ongoing discussion to a conclusion that coaches in universities ought to guide their students towards establishment of an applicable legal entity in Pakistan since the beginning of their entrepreneurial projects.

Subsequently, Dr. Naqvi, CUI provided an overview on the basics of project management (PM) and tactics to link with entrepreneurship. In context, he shared basics of project, project management, its ten (10) knowledge areas, project life cycle and an example of linking work breakdown structure (WBS) with entrepreneurial project. In response to queries of Ms. Zunaira, GCU on advanced topics of PERT & CPM, he rationalized that although that were significant for PM, but the present participants by then required an initial level know how of the subject. Dr. Naqvi, CUI then engaged the participants into a group exercise of molding their entrepreneurial ideas into a pragmatic WBS. Finally, Dr. Naqvi, CUI also shared an optimized version of business canvas model encompassing financial planning and WBS to enable faculty on effective entrepreneurial trainings of their students.

After that, Ms. Theresa Zimmer, Project Coordinator & RA UdS involved participants into an exercise on networking, its details & significance of entrepreneurship. In the concluding round, Ms. Zimmer reviewed all the talks and summarized their key points. Finally, she collected an online feedback from the participants.

Strategic Meeting & Deliverables – July 29, 2022

Dr. Nida Bajwa, Project Manager TAKEUP and Ms. Theresa Zimmer, Project Coordinator & RA, UdS invited thoughts and discussions on the followings by the participants:

1. Ms. Theresa urged all the trainees in the group to **Record Video/s** and provide for TAKEUP's projection on return. She requested Trainers to extend the same service. Dr. Naqvi, CUI recommended UdS to record the trainings during run time in next phases, while this time videos might be contributed by trainers explicitly on return.

2. **Dissemination** of workshop activities through Dr. Syed Imran Hassan Naqvi, Tenured Associate Professor, Chemical Engineering CUI. Ms. Zimmer informed that the TAKUP Dissemination Board comprised on Dr. Nida Bajwa, Ms. Theresa and Mr. Kiran at UdS that interacts with concerned faculty members at partner universities to ensure the projection of activities, videos, audios, photographs on the websites and other social media. They stressed on its effective continuity, timeliness and quantum as European Union (EU) expects and monitors it before disbursement of next phases of funding. Dr. Nida Bajwa, in this context apprised that subject to fulfillment of project plan, next 40% funding for HRD at partner universities in Pakistan and finally 20% funding on closure of the TAKEUP have been committed by the EU. He thus encouraged partners on to timely and vigorous dissemination activities for TAKEUP.

3. Ms. Theresa then stressed on **Micro Coaching** among the members and their colleagues in respective universities. The members discussed this dynamics of the needful at length and finally reached a consensus that relevant WhatsApp group was the best medium for sharing slides, materials and videos. However, Ms. Theresa added that the manuals and videos heavy in size were to be uploaded on the TAKEUP's Google drive. She emphasized on the use of Slack for coordinator's meetings and furthering micro coaching. Members of the group also agreed to hold similar workshops on return for physical micro coaching of faculty at their premises/departments and subsequently share its photographs, videos etc. on TAKEUP's dissemination channels. It was further suggested that GCU, UOG, LUMS and CUI may also benefit from the coaches of each other as possible.

4. At the end, plans for next activities under TAKEUP during August 2022 to December 2023 were shared and discussed at length. Ms. Theresa apprised that equipment of Fabrication Laboratories in partner universities in Pakistan would be procured, installed and operationalized during October – November, 2022, while August 4, 2022 was the due date for the tender opening for procuring the equipment at UdS. She added UdS will send its expert (Mr. Sarjaan) to install Fab. Labs in partner universities and train resources on the needful somewhere in mid of October, 2022 and onwards.

5. Dr. Nida Bajwa and Ms. Theresa further apprised that as per oral negotiations with EU, it had extended time up to 2024 for accomplishing TAKEUP as planned

within same funding provision. However, the written approval from EU of the same is awaited. In this context, UdS, to meet the requirements of EU, is obliged to organize a one (1) day **Conference to Project TAKEUP Progress**, **Accomplishments and Way Forward** inviting maximum number of stakeholders in Pakistan including media coverage. It was discussed at length and UdS finally informed that it had decided the required one (1) day conference on **December 19, 2022 at COMSATS University Islamabad, Lahore Campus,** considering CUI's contributions for TAKEUP in this group and earlier. Ms. Theresa committed to have online meeting with Dr. Imran Naqvi, SM HR for the purpose in near future.

6. Ms. Theresa and Dr. Nida Bajwa informed the audience that under TAKEUP, the **Next Trainings at UdS** of additional/new faculty members and including trainers from the existing group are planned in March and July, 2023.

The strategic meeting ended at 1500 and all members returned with votes of appreciation and thanks to each other.

As the return flight could be found at economical price for August 1 & 2, 2022 via Istanbul, Turkey, the officials of CUI were obliged to save cost by seeking accommodation with friends/relatives in Paris, France and Darmstadt, Germany for passing dates from July 30, 2022 to August 1, 2022. All three officials of CUI returned to Pakistan at 0055 on August 3, 2022 as per approved plan and resumed duties on the same date.

Prepared & Submitted by:

_____

Dr. Syed Muhammad Imran Haider Naqvi, SM HR

Endorsed By:

_____

Dr. Usama Ijaz Ahmed Bajwa, Tenured Associate Professor, CS

_____

Dr. Muhammad Naeem Shehzad, Tenured Associate Professor, ECE

Strategic Action Planning for CUI Lahore Campus

Focus Areas/Dimensions for developing a culture of Entrepreneurship and Innovation at Higher Education Institution

Ref: HEInnovat - https://heinnovate.eu/en

Being an entrepreneurial higher education institution depends upon individuals, and innovative ways of doing things.

HEInnovate is a self-assessment tool for Higher Education Institutions who wish to explore their innovative potential. It guides you through a process of identification, prioritisation and action planning in eight key areas. HEInnovate also diagnoses areas of strengths and weaknesses, opens up discussion and debate on the entrepreneurial / innovative nature of your institution and it allows you to compare and contrast evolution over time. You can have instant access to your results, learning materials and a pool of experts.

The European Commission and the OECD have joined forces in the development of HEInnovate. It is free, confidential and open to anyone to use. HEInnovate can be used by all types of higher education institutions. This website offers more than just an interactive tool; it also contains case studies, user stories and supporting material to help you to design solutions tailored to your needs

HEInnovate

It is an initiative of the European Commission, DG Education and Culture and the OECD LEED Forum, and supported by a panel of six independent experts. HEInnovate is a free self-assessment tool for all types of higher education institution. It allows you to assess your institution using a number of statements related to its entrepreneurial activities, including leadership, staffing and links with business. Extensive training and support materials, including practical case studies, are available to support workshops and further development within your institution.

HEInnovate is intended for higher education institutions (Universities, University Colleges, Polytechnics etc) who are interested in assessing themselves against a number of statements related to the entrepreneurial and innovative nature of their higher education environment.

HEInnovate covers eight areas for self-assessment:

1.   Leadership and Governance: in order to develop an entrepreneurial culture in an institution, strong leadership and good governance are crucial

2.   Organisational Capacity: Funding, People and Incentives: key areas a higher education institution might wish to consider to minimise the organisational constraints to fulfilling its entrepreneurial agenda

3.   Entrepreneurial Teaching and Learning: areas in which entrepreneurial development can take place and tools to deliver education and training opportunities

4.   Preparing and Supporting Entrepreneurs: ways in which HEIs can provide internal and external opportunities and expertise to support staff or students in their career development or enterprising individuals on their pathway to becoming an entrepreneur

5.   Digital Transformation and Capability: the institution's ability to integrate, optimise and transform digital technologies to support innovation and entrepreneurship

6.   Knowledge Exchange and Collaboration: Building and sustaining relationship with key partners and collaborators to create value for the higher education institution and society

7.   The Internationalised Institution: the influence of the international environment on the entrepreneurial aspects of teaching, research, talent development, new opportunities and culture

8.   Measuring Impact: areas a higher education institution might want to measure the impact of its activities to become more entrepreneurial / innovative

Under each of the eight areas, statements have been designed so that individuals can rate them on a scale of 'not applicable' (n/a) to 5, according to how much they agree or disagree with the statement in relation to their institution. On the scale, 1 represents the lowest and 5 the highest score.

**Transforming Academic Knowledge to
Develop Entrepreneurial Universities in Pakistan
(TAKE-UP)**

Smart Goals for CUI Lahore Campus

(Draft-1)

1. To incorporate Entrepreneurship in the curriculum of Undergraduate Degree Programs

2. To develop state of the art Business Incubation Centre (BIC).

3. To develop expertise and establish state of the art IT services for e-business and e-marketing

4. To develop and maintain a network of COMSIAN/Pakistani entrepreneurs for regular engagements in emerging entrepreneurial concepts and initiatives.

5. To facilitate and create at least fifty businesses per year through Business Incubation Centre

6. To acquire funding for start up businesses from HEC/GOP/PSF/EU/other funding agencies. Proposal is to be developed by March 2022.

7. To establish a Fabrication Lab (FabLab)

8. To organize a mega event on yearly basis to identify and reward the best entrepreneur of the year (In Fall 2023 and onwards. To be organized by BIC).

9. Capacity building of faculty in entrepreneurial teaching and learning through workshops/ seminars/short courses for introducing new tools and techniques.

10. To develop long term relationship with University of Saarland, Germany for joint teaching and training, knowledge exchange, faculty exchange, student exchange, capacity building of faculty and development of joint start-up business plans.

**Transforming Academic Knowledge to
Develop Entrepreneurial Universities in Pakistan
(TAKE-UP)**

CUI Lahore Campus: Weak Areas for Improvement:

1. Lack of entrepreneurial mindset in leadership and management.

2. Non-friendly financial rules and procedures for entrepreneurial incentives

3. Less trained faculty for developing entrepreneurial skills in students

4. Difficult rules and procedures for developing foreign collaborations

5. Limited financial support for students to become entrepreneurs

6. Limited building space for expansion – Land ownership issue of Lahore campus

7. No funding from Government for developmental activities

8. Old and outdated IT infrastructures and computing equipment

9. Old and slow procedures for

    i) Curriculum development and revision,

    ii) Faculty/Staff hiring,

    iii) Infrastructural maintenance, and

    iv) Procurement.

10. Budget deficits due to less popular but cost-induced degree programs and free education to 30% students (in exchange of land).

11. Non availability of formal Business Incubation Centre.

12. Less developed platform for Industrial Liaison

Transforming Academic Knowledge to
Develop Entrepreneurial Universities in Pakistan
(TAKE-UP)

Strategic Action Plan for CUI Lahore Campus
(Draft-1)

Broad Objective   To convert Lahore campus of CUI into an Entrepreneurial Campus in which every student will have a start-up business plan at the time of graduation.

Objective-1	To incorporate Entrepreneurship in the curriculum of Undergraduate Degree Programs

Strategies	Currently there are seventeen UG degree programs at Lahore campus. Curriculum will be revised or new course/s of Entrepreneurship will the introduced in each program. The revised curriculum shall be placed in the agenda of respective Board of Studies and Board of Faculties as per following groups:
	 Faculty of Engineering
	    1. BS Chemical Engineering, 2. BS Computer Engineering,
	    3. BS Electrical Engineering
	 Faculty of Information Technology
	    4. BS Computer Science 5. BS Software Engineering
	 Faculty of Science
	    6. BS Physics 7. BS Mathematics
	    8. BS Statistics 9. Doctor of Pharmacy (Pharm D)
	 Faculty of Business Administration
	    10. BS Business Administration 11. BS Economics
	    12. BS Accounting & Finance 13. BS Media and Com. Studies
	    14. BS Psychology
	 Faculty of Architecture and Design
	    15. BS Architecture 16. BS Design
	    17. BS Interior Design

Activities	Proposals for the revision of curriculum shall be developed by Head, A&R on behalf of HoDs for the approval by the respective Academic Bodies (Board of Studies [BoS], Board pf Faculty [BoF], and Academic Council [AC])

Resources & Support	1. HoDs, Curriculum development committee, and DARCs to contribute in designing the curriculum specific to the UG degree program being offered at the department. 2. Relevant Faculty shall be trained to teach the revised course. Some of the faculty members are already in the process of getting trained under the TAKE-UP project
Responsible Employees	Head A&R shall be the initiator. Others include HoDs, Members of the DARC, Chairpersons, Deans, and members of the BoS, BoF and AC.
Stake Holders	Students, Faculty members, HoDs, Chairpersons, Deans, Head of Academics and Research, Campus Director
Timeline	September 2021 to January 2022
Milestones	First draft of the Entrepreneueship Course will be presented in the BoS meeting of Faculty of Business Administration scheduled to be held in February 2022.
Measure of Success	The revised curriculum is approved by the Statutory Bodies. The HoDs shall make sure that the revised curriculum is included in the agenda of the meetings of all respective academic bodies.
Results (how did it go)	Number of revised curriculum approved by the AC for implementation from Fall 2022. Left over, if any will be presented for approval in the next round of meetings of academic bodies.
Barriers/Interventions	1. Motivation for faculty 2. Motivation to students to change their mindset from Job-focused education to business-focused education
Remarks	Once the revised curriculum approved, some of the leading success Indicators may be 1. Amount of time to develop business plan 2. Number of students involved in the business plan development 3. Number business plans produced per semester 4. Number of startups 5. Number of jobs created

Objective-2	To develop a Business Incubation Centre (BIC) at Lahore Campus
Strategies	An updated proposal will be prepared for the establishing and running of BIC. The proposal will be based on the National Incubation Centre (NIC) Model recently revised by HEC. The proposal shall have the mission, vision, administrative management model, financial model, and SoPs for the routine functioning of BIC. The BIC shall function under the managerial control of the Head, Management Sciences Department. With the passage of time and after attaining maturity, the BIC shall become an independent "Cost Centre" with its own budget and financial control.
Activities	Documentation and hiring of consultant for the construction of a new building for BIC is already in progress. The construction process will be monitored and recorded by the Works Department (Campus Engineer) on regular basis
Resources & Support	Campus Works Committee, Office of Additional Treasurer and Campus Director
Responsible Employees	Director Lahore Campus, Head A&R, HoD MS, In-Charge BIC, Convener Works Committee and Additional Treasurer
Stake Holders	HoD, Management Sciences, staff of BUI, entrepreneur students
Timeline	Proposal development by 30 October 2021 Building Construction by 30 March 2022
Milestones	1. Comprehensive proposal of BIC approved by the CUI Lahore Campus 2. Submission of Proposal to HEC for funding 3. Approval of Proposal 4. Release of funding 5. Achieving of targets as set in the approved proposal
Measure of Success	1. Approval of proposal by CARC Lahore Campus 2. Monitoring of the construction of building. 3. Hiring of proper staff 4. Number of business start ups
Result (how did it go)	1. Completion of civil work 2. Placement of students/proto type student companies for start-up businesses activities
Remarks	This objectives is subject t the approval of funding as seed money for a selected number of initial level startups.

Objective-3	To develop expertise and establish state of the art IT services for e-business and e-marketing
Strategies	Identify key areas, techniques, and infra structural facilities required for e-business and e-marketing.
Activities	Conduct two workshops for faculty members by inviting experts in e-marketing and e-business as resource person. A detailed proposal/working paper will be developed for the provision of these IT facilities or infrastructure.
Resources & Support	An expert / Resource person. Coordination by Mr Ghulam Jilani to hold workshop via video links.
Stake Holders	
Responsible Employees	Senior Manager IT Services, Dr Ali Nawaz Khan (Asstt. Professor Electrical Engg), Dr Rana Nadir Adrees (HoD Management Sciences) and Ghulam Jilani (Senior CO)
Timeline	1st August to 30th November 2021
Milestones	
Measure of Success	A manual/set of guidelines for E-business and E-marketing will be developed for students
Result (how did it go)	Number of students participate in the activities and provide feedback in the post-event survey.
Remarks	

Objective-4	**To develop and maintain a network of COMSIAN/Pakistani entrepreneurs for regular engagements in emerging entrepreneurial concepts and initiatives.**
Strategies	1. Data collection through Google Form using the email addresses and mobile numbers of CUI alumni. 2. Engage registered entrepreneurs in activities of common interest for example, workshops and seminars on emerging strategies in e-marketing and e-business activities
Activities	1. Development of Google form 2. Data collection
Resources & Support	Google Form and support form IT section
Stake Holders	
Responsible Employees	Sr Manager IT and Mr Ghulam Jilani (offrice of A&R)
Timeline	1st November 2021
Milestones	
Measure of Success	Number of entrepreneurs registered
Result (how did it go)	A network of 100 entrepreneurs registered by 1st June 2022 will be considered successfully achieved target
Remarks	

Objective-5	To facilitate and create at least fifty businesses per year through Business Incubation Centre
Strategies	At least 10 students (potential entrepreneurs) from each program per year shall be selected for further training in entrepreneurship. Faculty advisors shall be given incentives to become Mentors for selected students
Activities	1. Workshops/Short courses in "Entrepreneurship" shall be offered to students to determine the interest and desire to become an entrepreneur. 2. A data base will be maintained by BIC starting from Fall 2022 3. Faculty advisors shall be appointed as Mentors
Resources & Support	1. One or two Faculty members or Resource persons 2. IT support for conducting online short course/workshops
Stake Holders	Student Entrepreneurs, Incharge abd Staff of BIC, Faculty members (Mentors),
Responsible Employees	In-Charge BIC, Concerned HoDs and the departmental Focal Person for entrepreneurial activities
Timeline	Once in each semester beginning from Spring 2022
Milestones	1. Potential entrepreneurs are identified through Google Survey form 2. Short course offered 3. Short course completed 4. First draft of Business plans by each participant
Measure of Success	Number of students registered and complete the short course/Workshop
Result (how did it go)	Number of start-up businesses plans emerged 1. First Start up Business goes into action 2. First ten start-up businesses go into action 3. First twenty five start-up businesses go into action 4. Fifty start up business go into action.
Remarks	The process of offering short courses shall be a regular feature in each semester.

Objective-6	To acquire funding for start-up businesses/BIC from HEC/GOP/PSF/EU/ other funding agencies.
Strategies	At least three comprehensive proposals will be developed in the light of latest policy of HEC regarding BIC and Entrepreneurship. Proposals will be submitted to different funding agencies.
Activities	1. Brainstorming 2. Idea generation and theme setting 3. Proposal writing 4. Submission of proposal
Resources & Support	Head of Academics and Research shall facilitate and provide guidelines to develop the proposals.
Stake Holders	
Responsible Employees	Head of Academics and Research Head of concerned department Departmental Focal Persons.
Timeline	Proposal is to be developed by March 2022.
Milestones	
Measure of Success	Number of proposals developed
Result (how did it go)	Number of proposals accepted for funding and the amount of funds received.
Remarks	

Objective-7	To establish a Fabrication Lab (FabLab) at CUI Lahore Campus
Strategies	1. Visit FabLabs already functional at various instuitutions e.g LUMS, U of Saarland, and develop the list of equipment to be procured for the Lab 2. Develop a working model for the establishment, operation, and maintenance of FabLab.
Activities	1. FabLabs of UdS Germany and LUMS (Makers Lab) are to be visited physically or virtually. 2. List of equipment for the Lab is to be finalized in consultation with UdS 3. Procurement of equipment is to be done by UdS under TAKE-UP project. 4. Necessary documentation is to be done by UdS and CUI Lahore Campus for the import of FabLab equipment 5. NOC is to be acquired from Govt of Pakistan for the import of 3D Printer 6. Space for the FabLab at Lahore campus is to be provided and furnished. 7. A working model is to be prepared for the operation and maintenance of FabLab. 8. Manager FabLab is to be appointed.
Resources & Support	SM Works to create space for the Lab Treasurer office and Purchase office to facilitate the import, custom clearance and transport of the equipment.
Stake Holders	TAKE UP Coordinator Incharge FabLab (Dr Imran Hassan, Chem Engineering) Camous Engineer Technical Staff for the FabLab Students Faculty members
Responsible Employees	Head, A&R, Departmental Focal Persons for the FabLab (Dr Ali Nawaz, Dr. Naeem Awais, Dr Imran Hassan)
Timeline	December 2021
Milestones	
Measure of Success	Procurement, Installation, and operation of equipment.
Result (how did it go)	Number of students and faculty to use the FabLab facilities
Remarks	

Objective-8	To organize a mega event on yearly basis to identify and reward the best entrepreneur of the year.
Strategies	Advertise the event through print, electronic and social media and solicit participation from individual/group entrepreneurs for competition
Activities	1. Develop a concept paper for the event by defining, the purpose, types and number of award, mode of event (physical or virtual) feasibility, structure, management, conduction and sources of funding. 2. Develop marketing and publicity plan of the event 3. Post event activities: Publicity and marketing of success stories 4. A committee is to be constituted for event management.
Resources & Support	1. Funding 2. Head, Media and Communication Studies to lead the event under the umbrella of BIC.
Stake Holders	1. Director Lahore Campus, 2. BIC, 3. Student entrepreneurs and 4. Concerned faculty member/FYP supervisor
Responsible Employees	Incharge BIC and Incharge Media and Communication Studies.
Timeline	In Fall 2023 and onwards
Milestones	
Measure of Success	1. Number of participants (successful or unsuccessful entrepreneurs) who attend the event 2. Number and amount of awards given.
Result (how did it go)	Post event survey through google form
Remarks	

Objective-9	Capacity building of faculty in entrepreneurial teaching and learning through workshops/ seminars/short courses for introducing new tools and techniques.
Strategies	Need analysis activities to determine new topics and areas in entrepreneurial education in which training or refresher courses are required to be conducted for the capacity building of faculty.
Activities	One day (3-4 hours a day) Workshops One or two days (3-4 hours per day) short courses
Resources & Support	Area Experts from within CUI or outside the CUI
Stake Holders	Faculty members, HoDs, Administrators (Head of Academics and Research)
Responsible Employees	Head of Academics and Research and HoDs
Timeline	Starting from Fall 2022
Milestones	At least one Workshop/short course per semester
Measure of Success	Number faculty members participate in each activity and translate the new ideas into curriculum
Result (how did it go)	Revision of Curriculum and generation of new business ideas/startup business
Remarks	

Objective-10	**To develop long term relationship with University of Saarland, Germany for joint teaching and training, knowledge exchange, faculty exchange, student exchange, capacity building of faculty and development of joint start-up business plans.**
Strategies	Convene a meeting of relevant stake holders of CUI Lahore and UdS to deliberate upon the possibility pf developing long term partnership Identify areas of common interest for collaboration Draft a proposed MoU to be signed with UdS
Activities	Constitution of Committee Drafting of an MoU Consensus on MoU through exchange of drafts and online meetings Approval of MoU by CUI bodis, HEC amd MOST Signing of MoU
Resources & Support	Consultations with and support o HoDs, Chairmen, Deans and Director
Stake Holders	HoDs, Chairmen, Registrar, Treasurer, Deans, Head A&R, Director and Rector
Responsible Employees	Head A&R
Timeline	To be started by Sep 2021 and finalize by Feb 2022
Milestones	1. Consensus on agreement to collaborate 2. Major ToRs of the MoU 3. Writing of draft MoU 4. Approval of MoU by relevant bodies of UdS, CUI, and regulatory agencies 5. MoU signing ceremony and launch of collaborative activities
Measure of Success	MoU signed and collaborative activities started
Result (how did it go)	Approval of the proposal by Principal Seat offices, Ministry of Science and Technology, and HEC.
Remarks	

CONCEPT PAPER FOR UPGRADING CUI LAHORE CAMPUS
WITH GERMAN ASSISTANCE
(DRAFT-1   10Sep2021)

A - Preamble

At the turn of the 21st century, the Government of Pakistan adopted a dynamic and proactive approach to restructure and strengthen the higher education sector in the country in order to prepare it for the challenges of the then future. Several new initiatives were introduced in this regard including establishment of campuses of foreign Universities, foreign faculty hiring, Tenure Track System for faculty hiring, NRPU, opening of new universities in or closer to the urbanized areas and many similar high profile programs, The prime objective of all these initiatives was to raise the standard of higher (and technical) education and research in Pakistan to a level comparable to the international standards. It was the intention to equip Pakistani graduates with the multidimensional expertise and skills they need to cope with the increasingly dynamic and competitive national and global challenges. Some of these initiatives brought healthy improvement in the higher education sector. One of the most obvious result has been the unprecedented growth in the number of Universities in Pakistan from merely 32 in 1998 to more than 200 in 2021. This increase undeniably brought several important advantages - partially overcoming the acute shortage of qualified manpower in Pakistan, improved human resource development and knowledge capital, more domestic and foreign investment and higher economic growth to name but a few. However, some over-ambitious initiatives, for example establishment of Universities of Engineering Science and Technology (UEST Project) in collaboration with foreign universities of technologically advanced countries, could not be matured due to multiple reasons.

Now, in 2021, after twenty years since the revolutionary changes occurred in the HE sector, the Government of Pakistan, through HEC, is inspiring again to set new targets for the future and has recently launched "P-15 Universities" Project with the overall objective to bring the standard of education and research of fifteen selected universities of Pakistan to the level of top ranking universities of the World. This time it is the intention of the HEC to break the stalemate by not throwing the money into the basket of problems, but by using money to create incentives for improved decisions by all stakeholders. Under "P-15 Universities" the public and private institutions of higher education are required to develop short (4 years) and long (15 years) term strategic framework to receive funding.

By taking advantage of the "P-15 Universities" the Lahore campus of COMSATS University Islamabad (CUI), is proposed to be upgrade to a world class teaching and research institution for the engineering, computing, and natural sciences in collaboration with a high ranking German University. It is intended to develop German-Pakistan joint venture on the pattern of similar high-class technical institutions which Germany helped set up in several developing countries over the years. The initiative will be the first in a series of bilateral undertakings which

the HEC intends to pursue in future with foreign collaboration under recently announced "P-15 Universities" project.

B - The CUI Lahore Campus

The Lahore campus of CUI has many reasons to be chosen for upgradation with German collaboration. Its sprawling campus which is spread over an area of 185 acres with only 7% constructed area allows enormous potential for growth. During the past twenty years of its existence, it has already acquired a reputation for academic excellence and for its vibrant, creative and challenging teaching and learning environment. It has a good technical infrastructure, being equipped with state-of-the-art Labs and IT equipment, research facilities, a comparatively young but qualified (mostly PhD) faculty, and enjoys a significant advantage of being located in the middle of a major industrial zone of the Lahore region.

C – Objectives

Primary Long Term Objective

The CUI Lahore offers undergraduate and graduate degree programs in several disciplines of engineering, computing, basic, natural, social, and pharmaceutical sciences. The prime objective of German-CUI Collaborative Program (GCCP) will be to cooperate and work jointly for the continuous and sustainable improvement of the quality of teaching, learning and research in undergraduate, graduate and other academic programs.

CUI Lahore Campus will strive for, and maintain, a standard of education which will be comparable to the standard being offered to students in the corresponding fields in the top ranking institution of higher education in Germany, and which, moreover, would be acceptable for admission to post-graduate and doctoral level degree programs at leading universities world-wide. In revising and improving its syllabi and instructional material, CUI Lahore will be guided primarily by the German *Fachhochschulmodell*, which emphasizes the applied learning approach and the acquisition of the technical and practical expertise specifically required by industry, which will be a major stakeholder and whose input in the re-structuring/redesigning of the curriculum will be systematically sought after.

Secondary and Short Term Objectives

1. To improve curriculum for the purpose of meeting the emerging targets and challenges in university level education and research

2. To improve capacity of faculty for high level teaching and re

3. To evaluate, introduce and innovate pedagogical techniques for university level education.

4. To digitize all managerial, financial, academic and examination related processes of the CUI Lahore Campus

5. To develop state-of-the-art IT System at Lahore Campus

D – Anticipated German Contribution

Initial thrust areas of German-Pakistan cooperation have tentatively been identified for the project and are annexed at the end of this concept paper. The following inputs from the German side are anticipated for a successful collaboration:

1. To identify professors and experts in the engineering and other relevant fields who could come to Lahore to work during the project's implementation phase. These German expatriates will help in developing the syllabi for the entire gamut of subjects. In doing so, they will be guided by the twin criteria of strict adherence to the qualitatively highest possible teaching standard, as is being applied in Germany, and, suitability of the syllabi for the Pakistani context.

2. To assist in developing testing and examination systems, identifying research areas and programs for doctoral research, and assessing prospective joint venture schemes involving industry and the institution's teaching and research staff.

3. To coordinate the exchange of German teaching staff and training instructors who will work alongside their Pakistani counterparts at CUI Lahore for specific task within the preview of the collaboration.

4. As a faculty development measure, to arrange or coordinate short and longer term training programs in, and research visits to Germany for the benefit of the Pakistani faculty members, both during the project's implementation phase, and on a sustained basis once the campus has been upgraded.

It is intended that the campus will be equipped with start-of-the-art technical teaching and research laboratories, workshops, and infrastructural facilities for the benefit of the undergraduates and graduate students, as well as for the purpose of research. In addition to laboratories or workshops for basic, and applied science subjects such as Physics, Chemistry, Biology and Mathematics, will also be established. In equipping its laboratories and workshops, high priority will be given to acquire German equipment after consultation with the German collaborator. Equipment manufactured in other countries will not be procured unless absolutely unavoidable.

E – Institutional Networking and Collaboration

Considering the need to promote institutional networking and collaboration with a view to sharing information, technology and expertise, CUI Lahore will prioritize establishing and consolidating partnerships with counterpart institutions in Pakistan and overseas. High priority will especially be accorded to facilitating visits by faculty members and students on a reciprocal basis, and for the execution of high-quality joint research and development projects in the engineering, computing, basic sciences and other related disciplines of mutual interest.

In striving for institutional partnerships, special consideration will be given to entering into agreements with academic institutions and research centers in Germany, and other European Union countries, and also selected universities of developing countries.

F – The Time-Frame

The time-frame for upgrading the CUI Lahore to German level standard is proposed to be eight years.

The project will commence after its approval from all relevant committees/fora including statutory bodies of the both the universities, the relevant government departments (e.g. Ministry of Science and Technology, Pakistan) and regulatory bodies of both the universities (e.g. Higher Education Commission, Pakistan). For this purpose a Team of experts from CUI will be founded to identify the most suitable and interested German University for the intended collaboration. Once the German University is identified, a working group having representatives of both the universities, will jointly device a comprehensive feasibility report, plan of action for the timely, efficient, and successful execution and completion of the project.

Major Thrust Areas for Collaboration between a German University and COMSATS University Islamabad, Lahore Campus

1. Engineering	**2. Information Sciences and Technology**
a) Electrical Engineering b) Computer Engineering c) Mechanical and Industrial Engineering d) Mechatronics e) Bio-Engineering f) Metals and Metallurgical Engineering g) Chemical Engineering h) Textile Engineering i) Civil Engineering j) Software Engineering k) Energy	a) Informatics b) Computer Science c) Artificial Intelligence d) Data Science e) Cybersecurity f) Human-Computer Interaction g) Graphics
3. Basic and Applied Sciences	**4. Social Sciences**
a) Physics b) Mathematics c) Chemistry d) Biology / Biosciences e) Statistics f) Earth and Environmental Sciences g) Water and Food Science h) Pharmaceutical Sciences	a) Economics b) Liberal Arts c) Political Science d) History and Anthropology e) Philosophy f) Education g) Languages h) Media and Communication Science
5. Management and Business Administration	
a) Entrepreneurship b) Business Administration c) Project Management d) Technology Management e) International Business f) Strategic Alliances g) Interest Free Islamic Finance h) Industrial Management	

<u>Strategic Plan</u>

Objective   To develop long term relationship with University of Saarland, Germany for joint teaching and training, knowledge exchange, faculty exchange, student exchange, capacity building of faculty and development of joint start-up business plans.

Strategies   1. Convene a meeting of relevant stake holders of CUI Lahore and UdS to deliberate upon the possibility pf developing long term partnership
2. Identify areas of common interest for collaboration
3. Draft a proposed MoU to be signed with UdS

Activities   1. Constitution of Committee
2. Drafting of an MoU
3. Consensus on MoU through exchange of drafts and online meetings
4. Approval of MoU by CUI bodis, HEC amd MOST
5. Signing of MoU

Resources & Support   1. Consultations with and support of HoDs, Chairmen, Deans and Director

Stake Holders   HoDs, Chairmen, Registrar, Treasurer, Deans, Head A&R, Director and Rector

Responsible Employees   Head A&R (Dr Muhammad Ahmed Farooqui)

Timeline   To be started by Oct 2021 and finalize by Aug 2022

Milestones   1.   Consensus on agreement to collaborate
2.   Major ToRs of the MoU
3.   Writing of draft MoU
4.   Approval of MoU by relevant bodies of UdS, CUI, and regulatory agencies
5.   Conversion of MoU intio MoA
6.   Signing ceremony and launch of collaborative activities

Measure of Success   MoA signed and collaborative activities started

Result   Capacity building in teaching, research, development and internationalizing of CUI Lahore Campus and the UdS.