Doc. 300.1.2

Higher Education Institution's Response

Date: 16/07/2021

- **Higher Education Institution:** EUROPEAN UNIVERSITY CYPRUS
- **Town:** NICOSIA
- **Programme of study Name (Duration, ECTS, Cycle)**

  In Greek:
  Διοίκηση Επιχειρήσεων (4 Έτη/240 ECTS, Πτυχίο)» Εξ' Αποστάσεως

  In English:
  Business Studies (4 Years, 240 ECTS, B.B.A.) E-Learning
- **Language(s) of instruction:** English & Greek
- **Programme's status:** Currently Operating
- **Concentrations (if any):**

  In Greek: Concentrations
  In English: Concentrations

The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the "Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2019" [N. 136 (I)/2015 to N. 35(I)/2019].

A. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4) must justify whether actions have been taken in improving the quality of the programme of study in each assessment area.*

- *In particular, under each assessment area, the HEI must respond on, without changing the format of the report:*

    - *the findings, strengths, areas of improvement and recommendations of the EEC*
    - *the conclusions and final remarks noted by the EEC*

- *The HEI's response must follow below the EEC's comments, which must be copied from the external evaluation report (Doc.300.1.1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4).*

- *In case of annexes, those should be attached and sent on a separate document.*

The Department of Management and Marketing of the European University Cyprus wishes to express its sincere gratitude to the External Evaluation Committee (EEC) for the re-accreditation of its Bachelor in Business Administration (B.B.A.) E-Learning program of study.

The Department of Management and Marketing appreciates the insightful recommendations, which provided us the opportunity to further improve the quality and ensure the future implementation of the program.

In the following pages, we respond in detail to all recommendations for improvement suggested by the EEC and we provide all relevant information to explain the actions taken to ensure that the newly accredited program is of high quality.

1. Study programme and study programme's design and development
(ESG 1.1, 1.2, 1.7, 1.8, 1.9)

Areas of improvement and recommendations
A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

1. Core fields of business studies are not listed under core requirements. For example, operations and management science (MGT325) is a core field in business studies but not a required module for the BBA students. A course in business logistics or supply chain management is not offered as part of the curriculum. The "major fields of study" are dominated by marketing courses. The students would benefit from a broader range of topics in the curriculum.

2. The EUC needs to explain the contribution of distance learning technology and resources to the intended learning outcomes of the modules.

3. The committee acknowledges that the flexibility provided by the recording of online sessions. However, this may also lead to low student-staff interaction. The committee recommends that minimum level of participation in the online sessions is a component of the student assessment.

***Response by EUC**:*

We thank the EEC for these important recommendations, which we have addressed as indicated below:

1. Based on the recommendations of the Committee two (2) Management courses were added to the Business Core Requirements. These two courses are the following:

a. Course MGD235 Fundamentals of Production and Operations Management;

b. Course MGD220 Managing and Developing Human Capital.

Moreover, to ensure that no discipline dominates the major fields of study and that there is an equal distribution of courses there, one more course was added to the Management major field of study:

c. MGD345 Supply Chain Management and Logistics.

Please find the two (2) new courses' syllabi in Appendix I, as well as the Study Guides of the two (2) new courses in Appendix II.

There will be four major fields of study which all offer eight (8) electives each:

- Management
- Marketing and Digital Communications
- Economics and Finance
- Hospitality and Tourism Management.

Please see Appendix III for the revised "Table 1: Structure of the Programme of Study" and Appendix IV "Table 2: Course Distribution per Semester".

2. E-Learning technology can substantially enhance the students' learning experience and can positively affect the attainment of each course's learning outcomes, in varied ways.

The digital platform used for e-learning programs of study at EUC, is Blackboard Collaborate, an embedded e-Learning collaboration tool of the Blackboard Learn LMS platform. This virtual classroom tool has a plethora of features which enable instructors to create an engaging and pedagogically innovative environment for students' on-line learning. Such features include from the mere recording of sessions, to Discussion forums, Break-out rooms, and Wikis, to name a few. To this end, students stay engaged with the material and student-instructor interaction is facilitated. It also allows students to effectively engage in peer discussions and group work.

In addition, to increase student motivation and engagement You-Tube videos, Social Media and engagement padlet tools are used, as well as Flashcards, and Kahoot, for game-based learning via formative evaluation. Moreover, as illustrated in the Study Guides, each week includes interactive activities that can uphold the interest of students, motivate consistent participation and long-term engagement. A brief list of such interactive activities includes role-play, simulations, real-life scenarios, online discussions for debating, use of visualization tools to come to a result, etc. In this sense, gamification strategies are embedded in the B.B.A. programme.

Furthermore, to the above digital tools, all EUC students have access to unlimited resources via the e-library, for studying and research purposed and for the completion of their assignments.

Microsoft Teams can be used as a complementary Collaboration Tool to support the interaction needs of students.

In order to further demonstrate **how the above digital technologies and resources support the learning outcomes of the B.B.A. E-Learning courses,** four (4) business and management courses, from the introductory to the senior level have been selected as examples. In more specific, it is illustrated below how the digital technologies and resources employed/available at EUC contribute to learning outcomes of these courses of the Business Studies programme.

<u>Course 1: MGD100- Principles of Management</u>

Learning Outcomes:

1. Describe the important role managers play in organizations and analyze the internal and external environment organizations operate.
2. Explain the importance of ethical management and corporate social responsibility as a long-term strategy.
3. Demonstrate the need for effective strategic planning.
4. Demonstrate basic/useful skills in planning and organizing.
5. Describe communication, motivation, leadership styles and control methods at the workplace.
6. Demonstrate critical thinking with managerial problems.
7. Recognize and appreciate trends in management such as TQM, organizational learning, creativity and innovation, etc.

Employment of digital tools to the learning outcomes of support the course MGD100:

1. All learning outcomes can be achieved by motivating students to actively participate in the online classrooms (scheduled teleconferences) where live discussions can take place and are recorded.

2. Answer questions or post comments though wikis or discussion forums for example on the importance of ethical management (LO 2).
3. Use flashcards for leadership styles and motivation theories (LO 5), use of social media in researching trends and issues from business environments. (LO 7).
4. Record a presentation of a SWOT analysis of a company, post it, and have the class comment on the presentations (LO 1).
5. Create a quiz on types of strategies (LO 3).

Course 2: MGD220 – Managing and Developing Human Capital

Learning Outcomes:

1. Describe the link between HRM and the organization's strategy.
2. Explain the basic concepts currently used in the practice of human resources and the need to design practices within the given legal environment.
3. Analyze the practices of HRM in the business environment (planning, recruitment and selection, training and development, performance management, compensation and labour relations).
4. Work in teams.
5. Demonstrate critical thinking with HRM problems.

Employment of digital tools to support the learning outcomes of the course MGD220:

1. Through the teleconferences the basic concepts currently used in HRM can be further explained (LO 1).
2. Additionally, an assignment would be for the students to choose an HRM practice and write a brief explanation of what it is and why they think it is important and then discuss the results in the teleconference or in discussion forums or in groups. (LO 3).
3. Conducting a literature review as a group from e-library sources, and then uploading in through Turnitin (LO 4).
4. Additionally, during the teleconferencing use Break out Groups to divide the class in groups to discuss and then present their finding in class, which is another way for digital technology to contribute to Learning Outcome 4.

Course 3: BUD300 – International Business

Learning Outcomes:

1. Describe global macro-environmental dimensions and trends (economic, political, social) and analyze their impact on international organizations.
2. Discuss non-universality of culture and how to avoid ethnocentrism in business interactions.
3. Analyze how policy decisions by governments affect other nations, world marketplaces and businesses.
4. Assess relevant information (economic, financial, legal) to assist companies in worldwide operations.
5. Explain the importance of formulating and implementing an international business strategy correctly (strategic planning, organizational structure, entry modes, and human resource strategy).

Employment of digital tools to support the learning outcomes of the course BUD300:

1. Assign different countries (culture, business practices) and have students briefly present their findings and then discuss this in the teleconference and in the discussion forum (LO 2).
2. Research through e-libraries policy decisions by governments affecting the business world (LO 3).
3. Upload a YouTube video of a global company and have students comment on it. (LO 1 and 5).

Course 4: BUD420 – Business Simulations

Learning Outcomes:

1. Demonstrate that they have integrated knowledge of all aspects of business.
2. Students will apply problem-solving processes within a business context. Demonstrate management practices and critical decision-making skills in real business situations.
3. Students will deal with ethical problems.
4. Students will recognize the links between business decisions and financial performance and see how decisions affect the organization as a whole.
5. Students will understand the importance of using market and production data as well as competitive signals to adjust strategies and business tactics.
6. Work as a member of a team in completing everyday business tasks and making decisions relating to the overall operation and growth of the business.

Employment of digital tools to support the learning outcomes of the course BUD420:

1. By using Blackboard and within it Blackboard Collaborate and Analytics (synchronous and asynchronous learning) the instructor can help students in achieving the above mentioned outcomes while they are conducting an online business simulation game which gives students hands- on experience, via operating a business in a simulated environment.

3. In regards to the minimum level of participation in the online sessions as a component of the student assessment, the School follows the internal policy of the University which mandates up to 6 teleconferences for the course duration which are recorded (noted by the Committee for its flexibility). Taking this into consideration student staff interaction is encouraged in both synchronous and asynchronous settings by various means:

1. As stated above up to six teleconferences are set up wherein graded and non-graded assignments, topics, case studies are discussed and analysed.
2. Additionally, during synchronous settings presentations and group work take place. To this effect, a plethora of learning methods are employed, such as class discussions, group work and group projects, as well as the use of technological applications (polls, kahoots, online quizzes, break out group rooms). In particular, in a number of courses, group work is not only embedded in class assignments and class work but is also part of the evaluation process and ensuring that there is student student-staff interaction. Examples of such courses would be ‘Innovation and Entrepreneurship’, ‘Strategic Management’, the ‘Undergraduate Thesis’ and ‘Business Simulations’.
3. During asynchronous settings, case studies and comments on various topics set by the instructor are discussed usually in teams set either by the instructor or by student choice.

Both individual and group work encourages engagement with both the instructor but also fellow students.

4. Students are requested to work both individually and in groups in order to conduct their self-assessment and interactive exercises/activities, which are described in detail in the Study Guide of each course, and are posted on a weekly basis on the platform. Examples of such interactive exercises include role playing, brainstorming activities for answering a theoretical question, problem-solving questions in groups, preparing group PowerPoint presentations, answering quizzes and peer reviewing assignments of other students. Two to five of such interactive activities/exercises are graded by the instructor. This element of the course further allows the students to engage in asynchronous interactive learning at three levels: interacting with other students, their instructor and the course material.

2. Student – centred learning, teaching and assessment
(ESG 1.3)

Click or tap here to enter text.

Areas of improvement and recommendations
A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

1. The programme is not well adapted to distance learning (see also Section 5).
2. The programme does not safeguard sufficient student-staff interaction.
3. The research development of the staff does not guarantee sufficient input from theory and research into the programme.
4. Although EUC has appropriate assessment methods. It could consider that assessment is carried out by more than one examiner. To ensure the quality of the exams, the committee recommends the inspection of the exams by a second expert, preferably from another institute.
5. Currently, the EUC does not apply minimum scores for the subcomponents of the assessment. The committee recommends applying at least a minimum score for each of the components to ensure that students have a sufficiently broad competence level.

Response by EUC:

1. In terms of the adaptation of the programme to e-learning mode of instruction, when the courses are “created” by the EUC Management Information System then the instructor provides relevant information on the learning of the students for that course. The course includes information related to the e-Learning experience, a short video about the course by the instructor, course outlines, study guides with all information about content, assignments, exams, books, links to articles, academic regulations, etc.

Below is an example of how a typical course is adapted to e-learning:

E-Learning Course Mode of Learning and Instruction:

Each course is carried out over 13 weeks, followed by a final exam week. Throughout the 13-week teaching period, up to six synchronous teleconferences are organised. The first of these is always scheduled for the first week of the semester after the orientation/familiarisation week (during which students become familiar with the platform and spend time studying the Course Outline and Study Guide of their courses); and the last is always scheduled in the last two weeks of the semester (always before the final examination week).

Each week is organised around a topic related to the learning outcomes and the syllabus. Each topic is supported by a plethora of learning materials, ranging from lecture notes, to case studies, videos, discussion forums. These enhance not only interaction among students-instructors and students themselves but also more importantly, self-study (an integral component of E-Learning). That is, the varied learning material enables students to reflect on the material of each week and apply the learned concepts in specific business scenarios. The instructor acts as a facilitator in the process (such student-staff interaction is further discussed in points 1.3 and 2.2)

During the teleconferences, the instructor, as facilitator, presents the main points of the topic under discussion, discusses with students related fundamental issues and provides guidance as to the content and materials to be studied at home by the students over the following weeks. The material is shared with students beforehand so that they have a chance to study it, conduct the necessary source search and study, prepare questions on the content and activities of the specific weeks, and

discuss these during the synchronous session that follows. The assignments and activities that are to be conducted asynchronously (approximate weekly study time is estimated at 10 hours – excluding assignment preparation time), are also discussed in these teleconferences. More importantly, through these teleconferences, interaction between students and instructor is achieved as students are given, *inter alia*, the opportunity to ask questions or share reflections with other students and their instructor. The instructor also prepares interactive activities (e.g., problem questions, case studies, role playing, etc.) to be prepared for and conducted during the synchronous teleconferences.

For each course, students need to carry out an individual and a group assignment. The type and nature of each assignment is presented to students at the start of the semester through multiple avenues of communication, such as in the course outline, course study guides, on the platform, as well as explained and discussed during the synchronous teleconferences (as noted above). These graded assignments may require preparing an answer to a theoretical question (for instance, discussion from an academic article or current issues) which involves extended research, rational analysis and critical thinking. Other graded assignments may include responding to a problem question, which involves comprehensive understanding of the business issues found therein and effective management techniques in resolving these issues. Specific assignment topics for each course, evaluation rubrics for assignments and weighted grade attached to each one, are described in detail in the Study Guide of each course and posted on the platform. Preparing these assignments, gives the students the opportunity to conduct research for example through e-libraries, either individually and/or in groups (thus interacting with each other, with the material of the course, and with the instructor), on a specific topic using the online databases of the University library as well as other electronic resources.

Apart from presenting their findings in a written form, students need to be ready to elaborate on these during a short oral presentation. These oral presentations are usually conducted asynchronously and are shared on the platform, in order to be viewed and commented on by fellow classmates, and more importantly to be evaluated by the instructor, as they form part of the overall grade ascribed to the two assignments.

The online collaboration between students for the formative and self-assessment assignments can be accomplished in an asynchronous mode, as students can post their contributions and respond at different times; assignment timelines are clearly defined, therefore students can interact asynchronously and complete assignments during this timeline.

Recorded teleconferences and video lectures:

To enhance its asynchronous element of instruction, in all EUC E-Learning programmes of study, in collaboration with the broadcast production company Semio Ltd, a broadcast production company, the Distance Education Unit prepares 25 professional videos for every (new and re-accredited programme of study). The duration of each video is around five (5) minutes and the focus is on focal issues/topics of each course for tutorial use. All videos include subtitles for accessibility and inform the student of the purpose of viewing the video. Additionally, the instructor guides the student to make observations and challenges him/her with questions related to information presented in the video.

2. As stated in 1.3 on student-staff interaction the B.B.A. programme follows the internal policy set by EUC which encompasses up to six (6) teleconferences complemented by self-study (an integral part of e-learning). Ensuring that our students have a diverse and interactive learning experience is central to our value proposition. To this effect, a plethora of learning methods are employed, such

as virtual class discussions, group work and group projects, as well as the use of technological applications (Kahoots, Blackboard Collaborate, Break out groups etc.). In particular, in a number of courses, group work is not only embedded in class assignments and class work but is also part of the evaluation process and ensuring that there is student student-staff interaction.

Examples of such self-assessment interactive exercises include: role playing, brainstorming activities for answering a theoretical question, problem-solving questions in groups, preparing group PowerPoint presentations, answering quizzes and peer reviewing assignments of other students.

Two to five of such interactive activities/exercises are graded by the instructor. This element of the course further allows the students to engage in asynchronous interactive learning at three levels: interacting with other students, their instructor and the course material.

For every week, the objectives and learning outcomes are clearly stated in all study guides, allowing students to self-assess progress by reflecting on their grasp of target concepts and knowledge. Self-assessment assignment outputs are either presented to the group, or finalized based on group consensus, giving students ample opportunities to ask questions, revise their work, and learn in the process. Students can also have the opportunity to interact with instructors during their office hours.

In line with the EEC's suggestion, the internal and external communication will be further strengthened through the dissemination of pertinent information through the Facebook group "The Business Society". Such information includes organised events, business collaborations, recruitment opportunities and any relevant information on the School's programs (see above 2.1 for an example of an e-learning typical course).

3. In terms of the comment of the research development of staff providing sufficient input from theory and research into the programme, we can provide evidence that the research development of faculty is not only ensured through the University's policies (i.e. Research Policy, Faculty Development Programme), but also through the research synergies and training within the Department. Such synergies are enabled through the School's research centers and the research clusters of common research interests. Research findings are incorporated in their courses as for example of the findings from PEAK programme, which were used in courses like Innovation and Entrepreneurship as well as International Business.

To add to this, as illustrated in the Table below, over the years, each faculty member has a steady research output in the areas that s/he instructs, which enables him/her to disseminate such knowledge in the programme of study and the specific courses s/he teaches.

Table 1: Instructors' Publications disseminated in courses

Publications per instructor	**Course**
Kythreotis, A. (2014), 'Measurement of Financial Reporting Quality Based on IFRS Conceptual Framework's Fundamental Qualitative Characteristics', European Journal of Accounting, Finance and Business, vol. 2, October, pp 4-29. Kythreotis, A. (2014), 'The Interrelation among Faithful Representation (Reliability), Corruption and IFRS Adoption: An Empirical Investigation', Conference Proceedings, International Interdisciplinary Business - Economics Advancement Conference (IIBA), ISBN 2333-4207.	Introduction to Managerial Accounting

Kythreotis, A. (2015), 'The Interrelation among Faithful Representation (Reliability), Corruption and IFRS Adoption: An Empirical Investigation' International Journal of Business and Economic Sciences Applied Research (IJBESAR), Vol. 8, Issue 1, October, pp 25-50. Kythreotis, A. (2015), ´Is the Adoption of IFRS Enough? What about Proper Implementation?' Conference Proceedings, AMIS Citation Index by Thomson Reuters, 2015, pp. 621-633, ISSN 2247-6245. Kythreotis, A. and Constantinou, C. (2016), 'The interrelation among Accounting Quality, Timeliness and Relevance', Global Business and Economics Review, Vol. 18, No. 5, pp.587–603. Kythreotis, A. and Constantinou, C. (2020). The Interrelation between IFRS Conceptual Framework's fundamental Qualitative Characteristics and Financial Reporting Quality; An Empirical Investigation of 15 European Countries. The Market. International Journal pf Business. Vol 1, pp. 2-32.	
D. Domic; & Boukas N. (2017) "Identifying Croatian museums' indigenous visitors in a post-war era: perceptual examinations of one's own heritage", Journal of Tourism and Cultural Change, Taylor and Francis V (15) Issue 3.	Consumer Behaviour
M. Kountouridou & D. Domic, "Brand Building in Higher Education: A Grounded Theory Investigation of the Impact of "Positive Visualisation Courses Upon Brand Identity", 19th Annual International Conference on Marketing 28-30 June & 1 July 2021, Athens, Greece. M, Kountouridou & D. Domic, "Brand building in higher education: A qualitative analysis of the impact of ''positive visualization courses in brand identity'' upon the perception of freshmen students towards a University's brand image", Cyprus Rectors Conference, 1st Doctoral Colloquium, 7th December 2019, UNESCO Amphitheatre, University of Nicosia.	Introduction to Marketing Advertising and Sales Promotion
Chourides P, Hadjiphanis L and Evripidou L, (2016) "The Inventive output, of an Effective implementation of Knowledge and Performance Management Perspectives" The Electronic Journal of Knowledge Management Volume 14 Issue 3 Evripidou, L, (2012), 'The Effects of Mergers on Systematic Risk of Airline Industry', International Journal of Organizational Analysis, Volume 20, Issue 4	Financial Management and Control
Evripidou, L. (2019), Post crisis mega mergers and their effect on shareholders' value, in Corporate Governance: Search for the Advanced Practices, 62, https://doi.org/10.22495/cpr19a19	Investments

Evripidou, L & Melantiou, Y (2013), 'Airline industry consolidation and its effect on shareholder value', Journal for Global Business Advancement, Volume 6, Issue 4	
Boukas, N., & Ziakas, V. (2016). Tourism policy and residents' well-being in Cyprus: Opportunities and challenges for developing an inside-out destination management approach. Journal of Destination Marketing & Management, 5(1), 44-54. Boukas, N., & Chourides, P. (2016). Niche tourism in Cyprus: Conceptualising the importance of social entrepreneurship for the sustainable development of islands. International Journal of Leisure and Tourism Marketing, 5(1), 26-43. Boukas, N., & Ziakas, V. (2013). Exploring perceptions for Cyprus as a sustainable golf destination: Motivational and attitudinal orientations of golf tourists. International Journal of Sport Management and Marketing, 14(1-4), 39-70. Boukas, N., Ziakas, V., & Boustras, G. (2013). Olympic legacy and cultural tourism: Exploring the facets of Athens' Olympic heritage. International Journal of Heritage Studies, 19(2), 203-228. Boukas, N. (2012). "Young faces in old places": perceptions of young cultural visitors for the archaeological site of Delphi. Journal of Cultural Heritage Management and Sustainable Development. Ziakas, V., & Boukas, N. (2014, September). Small-scale Sport Events in Island Communities: A Sustainable Fit? Presented at the EASM 2014 Conference, Social and Commercial Impact of Sport, European Association of Sport Management (EASM), Coventry, UK.	Fundamentals of Tourism and Global Change
Ioannou, M. and Zolkiewski, J. (2009) "Can retail bank-client relationships be developed online?" EuroMed Journal of Business, Vol.4, Issue 3, pp. 254-269 Ioannou, M., Boukas, N., & Skoufari, E. (2014) "Examining the role of advertising on the behaviour of co-operative bank consumers", Journal of Co-operative Organization and Management, Vol. 2, Issue 1, pp. 24-33 Book Chapter Ioannou, M. (2012) "Customer Relationship Management: A One-Size-Fits-All philosophy?" , Customer Centric Marketing Strategies: Tools for Building Organizational Performance, USA: IGI Global, pp. 150-170	Customer Engagement

Papageorgiou, G.,Mihai, S., Ioannou, M., Marouchou, D., Marneros, S. (2020) Towards the Development of a Digital Marketing (DM) Competencies Framework 2020 IEEE Communication Strategies in Digital Society Seminar (ComSDS), 145-149 Boukas, N. and Ioannou, M. (2020) Co-creating visitor experiences in cultural heritage museums: the avenue towards sustainable tourism development, International Journal of Tourism Policy 10 (2), 101-122	
Ioannou, M., Lewis, B. and Cui, C. (2003) "Service Quality in Retail Banking in Cyprus: Dimensions and Gaps" Journal of Business and Society, Vol. 16, No.1, pp. 5-30 Ioannou, M., and Melanthiou, Y. (2015) "The Effect of Interaction Quality on Trust, Loyalty and Cross-Selling", International Economics Letters, Vol. 4, Issue 1, pp. 1-14 Boukas, N. and Ioannou, M. (2017) "Investigating islands' visitors experiences in cultural heritage museums: the case of Cyprus", International Journal of Tourism Policy, Special Issue, Vol. 7, Issue 4 30 Boukas, N. and Ioannou, M. (2020) Co-creating visitor experiences in cultural heritage museums: the avenue towards sustainable tourism development, International Journal of Tourism Policy 10 (2), 101-122	Marketing of Services
Arnold, M., Jung, S., Fischer, H., Philippe, S., Radelet, V., Chevallier, P-C., Efstathiou, A., Boukas, N., and Sourouklis, C. (2021). Evaluation of User Experiences in an Immersive Role Play for Cross-institutional and Cross-national Virtual Collaborative Learning in Hospitality Management, Interactive Collaborative Learning (ICL) Conference, Dresden, Germany. Sourouklis, C., Boukas, N., Tofinis, P., & Iordanous, O. (2019), Environmental management practices implementation in island destinations; the case of 3 to 5 star hotels in Ayia Napa & Protaras coastal line resorts in Cyprus. International Conference on Tourism (ICOT) 2019 (26-29 June), Braga, Porto, Portugal. Boukas, N., Ioannou, M., & Sourouklis, C. (2016). Special issue on: Establishing innovative products and processes in tourism; the role of service experience. International Conference on Tourism (ICOT) 2016 (29 June – 2 July), Naples, Italy.	Innovation and Entrepreneurship Contemporary Challenges in Hospitality and Tourism Development and Management
Sourouklis, C., & Boukas, N. (2016). Workforce diversity management and hotel performance: Evidence from Cyprus, Greece and the UK. International Conference on Tourism (ICOT) 2016 (29 June – 2 July), Naples, Italy. Sourouklis, C., & Tsagdis, D. (2013). Workforce diversity and hotel performance: A systematic review and synthesis of the international	Organizational Behaviour Managing and Developing Human Capital

empirical evidence. International Journal of Hospitality Management, 34, 394-403.

Please also find below the EUC's Faculty Development policy and actions of the last three (3) years:

Professional Development on E-Learning:

At European University Cyprus, we consider Academic staff professional development not to be an optional or occasional activity. We believe that that regular participation in professional development activities should be an expectation for all. The well-known three-legged 'stool' of academic life - teaching, research, and service - has been assumed to cover the main responsibilities of academic staff. We consider that the academic staff professional development is the 'missing leg' that would add strength and stability to the 'stool'. We consider that professional development and learning promote continuous, career-long growth based upon not only the trial and error of experience, but also theory, research, and professional collaboration with colleagues. The understanding of instructional concepts and teaching processes can be expanded and deepened via professional development. Hence, we consider that 'good' teaching in tertiary education is not just a "you have it, or you don't" skill, nor is it an automatic companion of terminal, disciplinary degrees. It is an action, process, and way of thinking and as such, it constitutes serious, complex intellectual work. It thus requires regular reflection and exposure to new ideas and information that are inherently a part of good professional development activities. It is not, however, remedial or something only for those having problems, but should be an integral part of all academic staff's efforts to become more effective in the classroom. Further, any professional development activities connect instructors across disciplines and career stages, serving to create a pedagogical community within the University. Professional development provides opportunities to learn about learning, about teaching, about students, and about themselves. EUC has therefore established three (3) academic staff professional development schemes organized, offered, evaluated and revised by the Office of the Vice-Rector of Academic Affairs.

For all of the reasons above, the University through its Faculty Development Program (offered by the C.I.Q.A. Faculty Development Standing Committee) organizes and delivers various seminars on a semester basis on issues pertaining to teaching and learning, and research in higher education which emerge through feedback and needs identified by academic staff, as well as in the context of current needs and developments such as those brought by the pandemic. Seminars provided during the current academic year have aimed to support staff both in their teaching, particularly in the extreme circumstances brought by the current pandemic, as well as their research through the offering of various seminars on teaching and learning in online environments as well as on research ethics (see F2020-S2021 program and F2021 Preliminary Faculty Development Program in Appendix V). Seminars planned for the next academic year will involve the offering, as usual, of both compulsory and optional seminars. Compulsory seminars are addressed to newly hired staff (both full-time and part-time) and optional are addressed to all staff who are strongly encouraged to attend and, as previous experience has shown, in fact do so for there is an established University culture that values continuous education and professional development.

In line with current issues on professional development of the academic staff on E-Learning teaching and learning, EUC acknowledges among others (in more specific to E-Learning) the importance of Learning Analytics Tools because LA tools can firstly track student's usage of learning materials in order to identify potential issues or gaps, and secondly allow instructors to make deliberate decisions about modifying teaching approaches.

In the framework of EUC Staff Professional Development of 2021-22, a seminar will be offered on "How to Adapt Learning Analytics" and the scope will be in:

a. Data collection & metrics (completion rates, students' progress, quiz scores, answer attempts, time spending, etc.)

b. Analytic reports (learning activity, learning progress, potential problems, etc.)

c. Predictions & Prescriptions

In addition, following a recent decision by the University's Quality Assurance Committee and the University Rectorate (17.2.2021) in an effort to better address more program- and discipline specific needs in the various scientific fields, Schools and Departments are to organize and offer on a semester basis in-house professional development seminars catered to their needs so as to support the creation of a learning and research community within their Departments and Schools through the exchange of best practices, as well as recent scientific developments in their respective fields.

4. As far as the Committee's recommendation for the inspection of the exams by a second expert to ensure the examination and evaluation procedures are adhered to, we would like to inform the EEC that the University follows relevant practices based on the internal policies set by EUC. The following procedures are currently in place:

- Each Program Coordinator is responsible for assuring the quality of midterm and final exams by reviewing the exam papers for all courses of the program.
- An Appeal procedure allows any student who believes that the grade received in the Final Exam is different from what was expected, to ask for a re-evaluation of his/her final examination/project to a second examiner other than the original instructor. Before requesting a re-evaluation, the student must exhaust all possibilities of resolving the problem with the pertinent instructor first. If this does not lead to a resolution, the student may appeal against the Final Exam grade by filing a petition with the Office of the Registrar within four (4) weeks from the date the results are announced. The Registrar will forward a copy of the petition to the pertinent Chairperson of Department, who will first ascertain that no error was made by the instructor, and if so will assign an anonymous re-evaluation of the final examination/project to second examiner. In the case of major discrepancy between the instructor's evaluation and the re-evaluation that will require change of grade, the average of the two evaluations will be assigned as the final grade to the final examination/project. Changes of grades resulting from an appeal require the endorsement of the Dean of School.
- Since Fall 2020 semester, and due to the special pandemic restrictions, an ad-hoc Quality Assurance team consisting of three (3) members of the Department, offers to each instructor and each course feedback on the consistency of each exam paper according to the pertinent EUC framework and suggests possible amendments.
- In addition, since Fall 2020 semester the Department of Information Systems and Operations performs checks in selected exams to ensure that all exam settings in the online platform are properly in place.

Additionally, it should be noted that for the assessment of all B.B.A. senior projects the Department's policy dictates that a committee of two members reviews and gives feedback to the student and marks her/his project.

Noteworthy, based on the guidelines of CY.Q.A.A. (Cyprus Agency of Quality Assurance and Accreditation of Higher Education), we maintain final exams for a period of three years and also do a random sampling of all courses' assignments (Good-Average-Poor) and keep them for two years

(see CY.Q.A.A. instruction: https://www.dipae.ac.cy/index.php/el/nea-ekdiloseis/anakoinoseis-el/126-apofaseis-21-synodos). Courses' assignments and final exams are presented to external evaluation committees during quality assurance procedures conducted by the CY.Q.A.A.

In addition, it is noteworthy to clarify that within the framework of the University's 35-hour Professional Development Programme for all faculty members and scientific collaborators, which focuses on various aspects on teaching and learning, topics such as grading procedures and differentiation of grades, are offered every academic year.

5. In this point the internal policy of EUC is followed of 50% assessment of the final examination which need to be adhered to. EUC sets clear guidelines as to the percentage that each component carries. Specifically, as per EUC policy, in undergraduate programmes of study there is a minimum score of 60/100 in total as a passing grade, consisting of an amalgamation of assignments/projects/self-assessment interactive activities (50%) and a final exam (50%). Study guides contain specific instructions, resource guidance, rubrics for grading, assigned grade value for graded activities, and timelines. Students prepare and deliver their work, aiming to accumulate at least 60% of the total points (including the final examination) to successfully succeed a course. These internal policies allow for students to pass a course, without earning a minimum score for each assessment. Students do not really get passing grades on their assignments, but can track their progress through the grade sheet in the learning platform, where their progress is also color coded to facilitate their realization if they are at-risk of failing.

It should also be noted that a procedure is in place whereby the Chairperson and the Coordinator of each programme of study checks the grades at the end of the semester. This practice ensures that there was no mistake and that the scoring was done on the basis of national and international standards. Finally, according to the instructions of the CY.Q.A.A, the Department maintains the final examinations of the courses for a period of three years (see also response in item 2.4 above). At the same time, the Secretariat of the Department maintains examples of work (good, moderate and poor performance) of each course, which are kept for two years. Both the papers and the final examinations are available to the external evaluation committees, as instructed by the CY.Q.A.A.

3. Teaching staff
(ESG 1.5)

Click or tap here to enter text.

Areas of improvement and recommendations
A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.
1. Evaluation of research should be based on quality academic journal lists such as the journal list of the Association of Business Schools.
2. The programme would benefit from attracting more foreign staff.
3. Staff needs more time and resources to develop their research ambitions.

Response by EUC:

1. The Department acknowledges the need for more specific, transparent and ambitious criteria for research output and hence, in addition to those described in the University's Charter, and thus the following guidelines, specific to the Department have been agreed upon since Spring 2021.

These guidelines shift emphasis from mere quantity to quality publications, using standardized, worldwide criteria for Scopus, ABS, and FT50 articles, and provide clear, transparent and quantifiable targets. Given that the University largely bases its targets and international ranking position on Scopus papers, primary weight is given to the said publications.

The weight of each scientific work is presented below:

Journal Papers:

- Scopus indexed paper – 3 points
- ABS indexed papers (1) – 2 points
- ABS indexed papers (2) – 3 points
- ABS indexed papers (3) – 6 points
- ABS indexed paper (4 or 4*) – 8 points
- FT50 paper – 10 points

In case a paper falls within two or more of the above categories, the category with the highest points will be applicable. For example, if a paper is a Scopus indexed paper and falls within the ABS category 3, then the paper earns 6 points.

Applied Research:

Applied research relates to funded research projects, whether national or European research projects. The exact points awarded depend on the type of participation, as follows:

- Project coordinator:
  The project coordinators earn 3 or 4 points depending on whether the project is a national project (3 points) or a European project (4 points).
- Researcher:
  Researchers will receive 1 point for national projects and 2 points for European projects.

Book Chapter:

- Book chapter – 1 point

- Book chapter (Scopus indexed) – 1.5 points

Conference Papers:

Participation to conferences is also included in the awarded points, as they enhance the networking and the internationalization efforts of the Department, as follows:

- Conference – 0.5 point
- Conference (Scopus indexed) – 1.5 points

A minimum of 15, 30 and 60 points are required for each respective rank of Assistant Professor, Associate Professor and Professor. A further criterion should also be fulfilled for promotion, whereby a minimum of 10, 20 and 40 points for each rank should be earned from journal publications.

Rank	Total points	Minimum points from journal papers
From Lecturer to Assistant Professor	15	10
From Assistant Professor to Associate Professor	30	20
From Associate Professor to Professor	60	40

2. It is well within the aims of the e-Learning Business Studies program to attract international faculty to teach in both programmes. For the e-Learning Business Studies in Greek potential new faculty will need to speak Greek. Established colleagues from Greece have expressed interest in supporting the programme as part time staff. Similarly, when new scientific collaborator hirings are conducted, the e-Learning Business Studies in English will seek colleagues with expertise in specific areas to contribute to the courses by presenting and supervising specific learning modules within the course. Lastly, current staff consists of faculty from Greece, England, Germany, Croatia and faculty who have worked for many years in Greece, the US and UK.

Moreover, the international aspect is further pursued through the Erasmus exchanges of faculty. To this end, the University and the Department in particular, has paved the way since 2018. Specifically, since 2018, the University has held every year, an International Erasmus week, during which the Department of Management and Marketing had the majority of visit lecturers for each of those International Erasmus weeks. This will be further pursued and actively ensure that such visiting lecturers span across all the programs of the Department. Consequently, the International Week that was cancelled due to the COVID-19 pandemic will be rescheduled for late F2021.

The international exposure of faculty is also secured through the various international collaborations in applied research projects.

3. We thank the EEC for these important recommendations, which we have been addressed as indicated below:

The Department concurs with the EEC's recommendation for staff to have more time and resources to develop their research ambitions and to engage in training and support activities that positively affect publications in high quality international journals. To this end, the Department promotes research synergies of its faculty, through the School's research centers and through research clusters of common research interests. With respect to the latter, from Spring 2021, the Department further invests through organizing, for full-time faculty, a research meeting/workshop twice a year. In the said meetings/workshops faculty will discuss their research agenda, explore potential areas

for research synergies and support less active faculty. The first, online meeting is planned for September 2021.

In addition, to provide further academic support for academic writing and for top journal article submissions, the Department will develop during Fall 2021 a workshop, whereby through a presentation and discussion, full-time faculty members will explore best practices to this end. It has also been agreed, and a budget has been secured for a webinar on academic writing for top journals, to be delivered by an external expert.

Increasing the quality of the research output is a central pillar in both the University's and School's strategy. In practice, the culture of high quality research output is supported by a number of EUC's research support policies and mechanisms, including among others a policy on Teaching Hour Reduction (THR), the Sabbatical leave scheme, the "Annual Awards for Excellence in Research", as well as the available budgets for conference participation and membership in scientific and professional societies, and the Ph.D. Scholarships Award Scheme.

This culture of high quality research output is also supported by the EUC's policy of Teaching Hour Reduction (THR), the newly introduced Sabbatical leave scheme and the "Internal Research Awards".

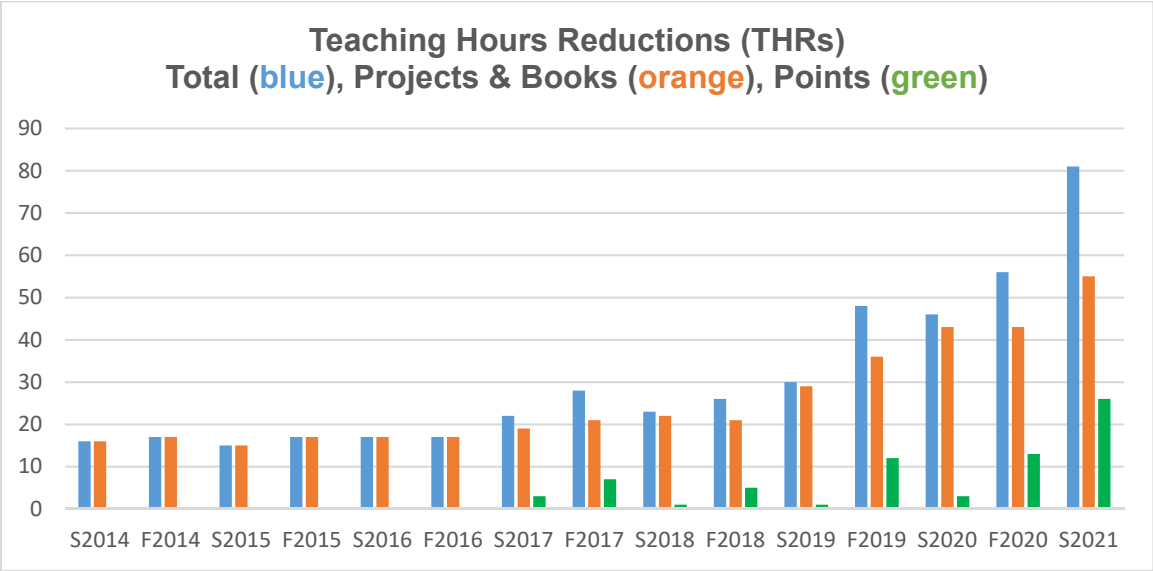
Specifically, through the THR policy, which is part of the wider University Research Policy (Appendix VI), faculty members may request and obtain a reduced workload to either 6 or 9 hours per week (vis-a-vis their contractual obligation of 12 hours). A number of the Department's faculty has systematically capitalized on the particular policy, while every year additional faculty members are eligible for the THR. Across the University at large, there is a steady increase in the number of allocation of THR per semester. For instance, in the last calendar year (Spring 2020-Spring 2021) there was an increase of 56% of the THR awarded across the University, which has led into a boost of the research output. This is the result of the strong growth in the research activity of the University as measured by external research funding, publications, and so on.

Faculty can get a THR either for participation in a funded research project, or for writing a book or by accumulation of points according to their publications, participation in conferences, submission of proposals etc.

Following the introduction of the THR policy, the research activities of full-time faculty of the University have substantially increased. This is evident from the steady increase in both the number of faculty who are granted a THR, and the parallel increase in research activities.

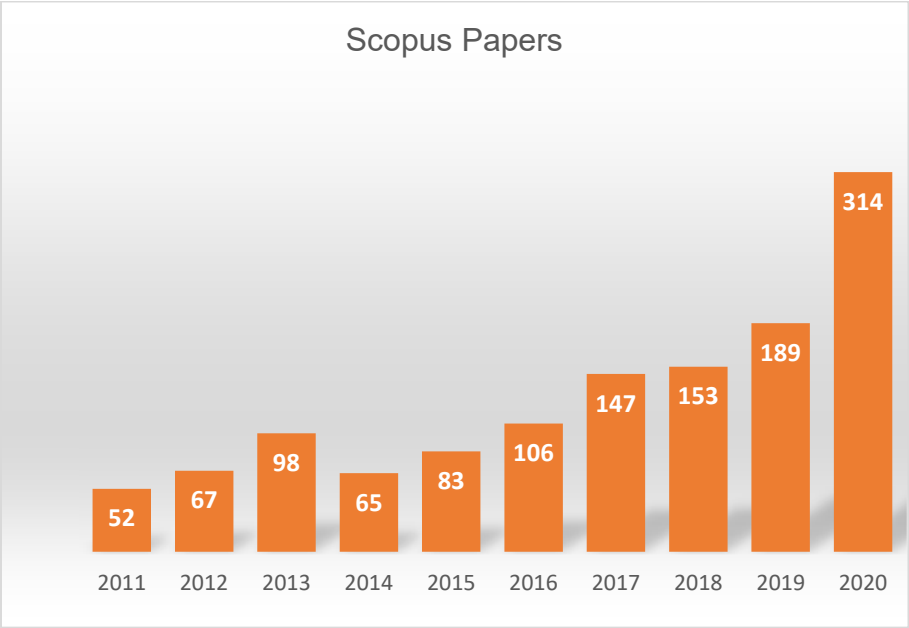
For instance, during the Spring 2020 semester, 35 full-time faculty members obtained a THR, 19 of which had a three (3) hour reduction, and 16 faculty members were granted a six (6) hour reduction. Within a year, the percentage of full-time faculty that was awarded a THR increased by 69% (February 2020–February 2021), whereby in the Spring 2021 semester alone, 59 full-time faculty members were granted a THR: 37 members obtained a three (3) hour reduction, and 22 faculty members were granted a six (6) hour reduction. A number of the School's faculty has systematically capitalized on the particular policy to get a reduction in their teaching, while every year additional faculty members are eligible for the THR. For instance, in the previous semesters Dr. Nicolaos Boukas and Dr. Simona Mihai were granted a three (3) hour reduction; Prof. George Papageorgiou was granted a six (6) hour reduction and in Spring 2021 Prof Andreas Eftstathiades was granted a (3) hour reduction.

The figure below demonstrates the steady increase in the number of allocation of THR per semester (2014 to date).



The THR policy has led into a boost of not only the quantity but also the quality of research output. Specifically, in the last five years, the University's output in Scopus indexed paper journals has **quintupled** as much. That is, for the years 2018, 2019 και 2020, the University's publications in Scopus indexed journals is of the order of 156, 192 and 312, respectively. On the basis of this track record, and provided that the University maintains the benchmark of 150 high quality journal articles in the years 2021 και 2022, it fulfils the criteria for the **Times Higher Education World rankings** in 2023.

The figure below depicts the steady increase in the number of University's output in Scopus indexed paper journals per calendar year (2011 to date).



Moreover, the positive effect of the THR policy is evident from the strong growth in the research activity of the University as measured through competitive external research projects. Such funding has **quadrupled** during the last 5 years.

Sabbatical Leave Scheme:

The Sabbatical Leave scheme aims at encouraging faculty members to engage in scholarly research and international networking, and it is granted with full remuneration (see attached Appendix VII. EUC Sabbatical Leave Policy). Sabbatical leave is granted for planned travel study, formal education, research, writing of papers, monographs and books or other experience of academic value. At the end of the Sabbatical period, the faculty member must submit a detailed report on the research activities performed under that period.

Annual Awards for Excellence in Research:

In addition, the “Annual Awards for Excellence in Research” may be seen as a further motivation for faculty to engage in high quality research. Specifically, two faculty members are awarded these Awards, on the basis of the quality and impact of their research. These two awards are:

- **The "EUC Research Award-Young Researcher**”, is awarded to young researchers that have demonstrated the ability to perform high-quality research. The Award aims to enhance young scientists' research activity who have shown an ability to produce significant and internationally recognized achievements from the early stages of their career.
- **The "EUC Research Award-Distinguished Researcher"** is granted to excellent scientists with extensive research experience who have demonstrated significant and internationally recognized research results. The Award aims to appraise and promote the work and personality of these distinguished scientists who honour European University Cyprus through their high-quality research and its impact.

To be eligible, full-time faculty members must be nominated by February 28 of each year. The nominations are assessed by a special committee, comprised of both internal and external members.

Other incentives:

A series of other incentives is also employed, so as to encourage and support full-time faculty in their research activities, as outlined below:

- Based on their research profile and activities (at the time of hiring), newly hired full-time faculty members may be granted a THR from the very first semester of employment. The Department encourages junior academic staff to apply for a 3 hours or 6 hours THR, supports their application when submitted and, in case such a THR is granted, it takes all necessary actions to facilitate them to implement it.
- The University has also introduced the Ph.D. Scholarships Award Scheme. The general aim of the scheme is to reward faculty members who have been able to demonstrate an excellent recent research record. The scholarships are awarded to faculty members who fulfil the selection criteria of the scheme and who have a suitable Ph.D. candidate in their field. All full-time faculty members of the University who hold the rank of Assistant Professor or higher are eligible to apply for the award. The Ph.D. scholarships are awarded to the most promising candidates of any nationality. They cover the tuition fees of new Ph.D. students for the whole duration of their studies. Five (5) such scholarships have been announced for the academic year 2021-22.
- In addition, an annual budget of 1470 Euro is available for each full-time faculty member, for participation in local and/or international conferences.

A further, annual budget of the order of 120 Euro is available for each full-time faculty member, for subscription in scientific and professional associations.

Lastly, the “Internal Research Awards” (IRA) which run on an annual basis may be seen as a further motivation for faculty to engage in high quality research. These awards are financed by the University Research Fund and external sponsors, and run under the Senate Research Committee.

4. Student admission, progression, recognition and certification *(ESG 1.4)*

Click or tap here to enter text.

Areas of improvement and recommendations
A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.
Increase the number of foreign students to enhance intercultural skills of the students.

***Response by EUC**:*

One of the main pillars of EUC vision is internalization. The Erasmus Office is in close collaboration with the Business School Erasmus coordinator and has signed learning agreements with many universities in most European countries. Noteworthy, EUC is actively trying to increase the number of international students to provide a more global and intercultural experience to our students. This is conducted through sales promotion events such as fairs (Cyprus and Overseas), Webinars and Digital presentations covering all the Schools and Departments of the University, the University Website and lastly, through search and Facebook campaigns earmarked for the Business Degree in selected countries.

A further development is that EUC has been awarded by the European Commission a new Erasmus Charter for Higher Education 2021-2027. Moreover, the international aspect is further pursued through the Erasmus exchanges of faculty. To this end, the University and the Department in particular, has paved the way since 2018. Specifically, since 2018, the University has held every year, an International Erasmus week, during which the Department of Management and Marketing had the majority of visit lecturers for each of those International Erasmus weeks.

A notable and fruitful inter-institutional agreement under our international mobility framework is with the PSB Paris School of Business. This collaboration is quite active, with mutual exchanges of faculty and students. To further enhance the international mobility framework, a further agreement was recently established (in September, 2020), between the School of Business with Ural Federal University, Ekaterinburg, Russia. In addition, the University and the Department continue to grow by attracting a consistently –but steady- larger number of students from China.

5.Learning resources and student support

(ESG 1.6)

Click or tap here to enter text.

Areas of improvement and recommendations

A list of problem areas to be dealt with followed by or linked to the recommendations of how to improve the situation.

1. In the discussion with the Head of IT it was asked whether the university is actively guarding its infrastructure for hacking (e.g. ransomware as happened to the University Maastricht and is still *not* solved by them today). The director answered that this would never happen to us, which is a sign of underestimating the threat. This is not acceptable for a serious online university offering.
2. The pedagogical model for DL that is provided is still underdeveloped, it does not give any guidance in its current form to course developers how to use digital means to attain certain categories of learning outcomes for specific learners/groups. The advice would be to put an effort in developing this into much more detail and use it as the base for teacher training and course development/test and evaluation.
3. The learning platform for online teaching is not yet integrated enough. From the very limited descriptions provided it seems to be a set of different tools/platforms, that are not heavily integrated. Also, we learned from students that teachers prefer email for assignments and feedback, making this communication completely out of control for the institute. Particularly worrying is that the plagiarism checks can be omitted in this way.
4. In the presentation we saw a system that was set to English, but still provided Greek information in the user interface. The explanation was that this was due to a 'last minute change'. In a professional environment this should not happen, and it is questioned whether the governance and testing of the learning environments is sufficiently organised.
5. The EUC has no clear privacy/safety policy for the online environment. This is particularly a concern for an online programme. The committee recommends that the EUC develops a privacy and security protocol that adequately secures the information and the privacy of the students.
6. The overall impression is that the DL variant of the BBA programme has been derived to directly from the existing programme without sufficient effort to adapt and support it as a real distance teaching programme that offers all the advantages of online learning, while preventing its disadvantages.

Response by EUC:

1. We thank the EEC for the opportunity to clarify its security policies/procedures. Overall on this issue, European University Cyprus would like to confirm to the EEC that it is taking security and business continuity very seriously. EUC follows a number of policies that fall under the category of IT General Controls as well as GDPR. Some of the security policies followed are:

1. Acceptable Use Policy
2. Bring Your Own Device Policy
3. Cloud Computing
4. Data Center Access Standard
5. Email Standard

6. Firewall Management Standard
7. Change Management Standard
8. Vpn Standard
9. Patch Management Standard
10. Backup And Recovery Standard
11. Hardware And Software Inventory Standard
12. User Account Management Standard
13. Password Standard
14. Incident Response Standard
15. Disaster Recovery Procedure Standard
16. Vendor Remote Access Standard
17. Data Privacy Policy

For backups, EUC is using the state of the art technology called NETAPP. EUC creates backups multiple times per day on premise but also at a remote location. The University has a procedure in place that is followed to systematically back up all the University's critical data. File backups have a predefined retention period, depending on the type of data. Also, EUC maintains a remote environment in case that we need to transfer critical services after a disaster.

Penetration test is done once every there (3) months for the critical servers and once a year for the network. At the same time, EUC buys services from outside partners for a full-scale penetration testing from external but also internal networks. EUC also has a SIEM system with vulnerability detection that ensures all vulnerabilities, including newly discovered ones, are found and remediated before they can be exploited.

Regarding the GDPR's Privacy Notice, information can be found on the University's website (please see here https://euc.ac.cy/en/privacy-notice-gdpr/)

Significantly, it should be noted that EUC is regularly audited by Ernst and Young and has been found to be **fully compliant** in all aspects of their security policies as stated above.

2. We thank the committee on its advice to strengthen teacher training and course development/test and evaluation especially in using digital means. All instructors of EUC that are engaged in E-Learning programmes of study are course developers and receive analytic guidelines by the Information Systems and Operations Department on how to build their course (user's profile, course content, BB tools etc.). Furthermore, at the beginning of each semester, in-service training on technical issues is organized by the Information Systems and Operations Department.

In addition, as explained in our response in section 2.2, EUC runs every year a Professional Development Program for all newly hired academic personnel (both full-time and part-time) that will be teaching in its E-Learning Programs of Study. Some of the topics covered are:

- The EUC E-Learning Fundamental Principles, Pedagogical Model & Infrastructure
- Conceptual clarifications: E-Learning & Online Education; E-teaching & E-learning
- The relationship between educator and learner in E-Learning
- Design & delivery of an E-Learning course
- The educational material & the digital transformation of educational material
- E- Assessment & feedback in E-Learning programmes of study

As also mentioned in the same section (2.2) seminars planned for the next academic year will involve the offering, as usual, of both compulsory and optional seminars. Compulsory seminars are addressed to newly hired staff (both full-time and part-time) and optional are addressed to all staff who are strongly encouraged to attend and, as previous experience has shown, in fact do so for there is an established University culture that values continuous education and professional development.

In addition, the Distance Education Unit provides to all instructors a Quality Assurance Policy Document based on five (5) elements: course development, teaching & learning, student support & assessment, faculty support, electronic security measures.

Noteworthy, in line with current issues on professional development of the academic staff on E-Learning teaching and learning, EUC acknowledges the importance of Learning Analytics Tools because LA tools can firstly track student's usage of learning materials in order to identify potential issues or gaps, and secondly allow instructors to make deliberate decisions about modifying teaching approaches. Thus, in the framework of EUC Staff Professional Development of 2021-22, a seminar will be offered on “How to Adapt Learning Analytics” and the scope will be in:

a. Data collection & metrics (completion rates, students’ progress, quiz scores, answer attempts, time spending, etc.)
b. Analytic reports (learning activity, learning progress, potential problems, etc.)
c. Predictions & Prescriptions

In addition, following a recent decision by the University’s Quality Assurance Committee and the University Rectorate (17.2.2021) in an effort to better address more program- and discipline specific needs in the various scientific fields, Schools and Departments are to organize and offer on a semester basis in-house professional development seminars catered to their needs so as to support the creation of a learning and research community within their Departments and Schools through the exchange of best practices, as well as recent scientific developments in their respective fields.

3 .We appreciate the comment from the Committee on assignments sent via email and the plagiarism issues. It is EUC policy that all assignments are to be uploaded in the respective Blackboard course and will not be accepted in any other format (e.g. email or discussion forum, etc.). Even so, some instances, albeit a few, were reported of students who were allowed to submit assignments via email, therefore an intensification of teacher training will be provided so as to facilitate instructors’ stricter adherence to the institutional policies.

When written assignments are submitted, these are automatically checked through Turnitin (https://www.turnitin.com/) for plagiarism through performing a similarity check in available databases. Instructors use also Turnitin as a pedagogical tool to help the students to improve the final draft of their assignment before the submission to the Blackboard platform. Flags for instances of similarity empower formative feedback and opportunities for revision during the writing process. Lastly, any correspondence between staff and students is **only accepted** through the university email provided to each student during their initial enrolment.

4. As far as Blackboard's language support, the Blackboard Platform tools are set by default in English but Blackboard's interface comes in both languages, English and Greek. Thus, the student can select the language of his/her preference. Instructors are provided the opportunity to select the preferred language of course content delivery following the EUC internal regulations that both the Blackboard interface and the content to be uploaded in each courses is the language that the program is offered.

5 . In terms of the privacy/safety protocol, the following are currently in place:

1. In the link below, please find the privacy notice of the university.

   https://euc.ac.cy/en/privacy-notice-gdpr/

2. Below is the link about the privacy/safety of the student information for the online environment, and is in itself part of the overall privacy policy of the university.

   https://euc.ac.cy/en/policy-for-online-teaching-and-learning/

3. Additional policies are the following:

   1. Incident Response Policy
   2. Disaster Recovery Policy
   3. Data Privacy Policy

4. Also there are policies about the security of the infrastructure that again secure the privacy of the data of the students like:
   1. Data Center Access Policy
   2. Firewall Policy
   3. Patch management Policy
   4. Backup and Recovery Policy

6 . The E-Learning Business Studies programme of study was re-designed along the conventional program. Nevertheless, in developing the E-Learning program, particular attention was paid in the distinct nature of e-learning course delivery, the need for student self-study, interaction among students and effective communication between students and instructors (please also see our extended responses of Section 2 above). The progamme is fully supported by Blackboard with all the benefits of the platform. Additionally, rigorous training of instructors in using it and providing e-learning instruction is conducted and will continue to be provided. Providing both synchronous as well as asynchronous meetings is believed to offer the advantages of e-learning to our students.

Nevertheless, continuous learning is an important theme for EUC and based on the recommendation of the Committee more intensive training will be taking place in September 2021 for staff to further support the programme as an e-learning programme and as mentioned in previous sections.

5. Additional for doctoral programmes

(ALL ESG)

N/A

7. Eligibility (Joint programme)
(ALL ESG)

N/A

B. Conclusions and final remarks

Click or tap here to enter text.

The committee thanks the EUC senior management, the academic faculty, support staff and students for their effort to inform the committee during the online visit. We also appreciate that the EEC had the opportunity to ask follow-up questions related to the programme. Faculty and the institution more broadly provided a constructive response when it was requested by the committee.

The EUC is a quality-driven institution that applies adequate internal quality control and monitoring procedures. Students appreciate the learning experience at EUC. However, the committee has the impression that the distance learning component has been insufficiently developed. Critical requirements of distance learning education are not met. Furthermore, in the areas of building synergies between research and teaching, increased cross-cultural competence building, external checks on assessment of quality and a clear vision on how individual modules contribute to the students' competence building in a distance learning environment are missing.

In the committee's assessment, these issues require substantial improvements that need to be addressed before the programme can be accredited as a distance learning BBA in Business Studies.

Response by EUC:

The Department would like to thank the EEC for the constructive discussion and comments, on which we have acted upon as summarized below:

(i) In order to further develop the e-learning component of the programme, rigorous training has been developed as demonstrated in sections 2.1, 5.2 and 5.6. Only to state one of the actions taken, we herewith copy one statement from the sections on some of the actions to be taken:

> Following a recent decision by the University's Quality Assurance Committee and the University Rectorate (17.2.2021) in an effort to better address more program- and discipline specific needs in the various scientific fields, Schools and Departments are to organize and offer on a semester basis in-house professional development seminars catered to their needs so as to support the creation of a learning and research community within their Departments and Schools through the exchange of best practices, as well as recent scientific developments in their respective fields.

(ii) In order to strengthen the quality of our research output and the synergies between research and teaching, the Department has agreed to identify its efforts through:

(a) Further promoting research synergies of its faculty, through the School's research centers and through research clusters of common research interests. To this end starting from the current year, the Department will organize twice a year, a research meeting/workshop for the full-time faculty. The online workshop is planned for September 2021.

This increased emphasis on research quality output is directly linked to the advancement of faculty with explicit, transparent, quantitative and ambitious targets incorporating the research experience into online teaching as demonstrated in Table 1 in section 2.3.

(iii) The Department has developed explicit, transparent, quantitative and ambitious guidelines pertaining to research output, which as suggested by the EEC are linked to promotions/career development. Specifically, the guidelines necessitate that a faculty earns a set quantifiable number, which is an amalgam of the quantity and the quality of the research work of the faculty member.

These guidelines supplement the promotion criteria outlined in the University's Charter and are conditioned by both the research targets/ambitions of the Department and the University at large, as well as the wider contractual obligations of faculty.

(iv) We also thank the EEC for its comment on our internal quality control and monitoring as well as the student's appreciation of the learning experience. Based on the EUC's internal policy on assessment the procedures on evaluation will be followed as demonstrated in detail in section 2.4

(v) In line with the EEC's comment, we will strive to strengthen and actively communicate the vision of how the programme's individual modules contribute to the students' competence building in an e-learning environment as demonstrated in section 1.2 and in particular, the example used to explain how the digital technologies and resources (used in e-learning) support the learning outcomes of e-learning courses – four (4) modules of different levels were used as examples.

(vi) The Department also concurs with the importance of furthering internationalization through strategic alliances, exchange programs and/or agreements for faculty, and students (Erasmus+) and through (future) international accreditations; and that this constitutes a virtuous circle with higher research quality output. To this effect, at a first level we aim, through the outlined activities to strengthen our research output and at a second level have started to pave the way with notable strategic alliances, such as the agreement with the University of Cambridge. We are also exploring certain strategic alliances with universities in China (e.g. Minjiang University). We are certain that as our research record solidifies, we will secure further alliances and agreements, and move on with international accreditations. This will address the areas of building synergies between research and teaching and increased cross-cultural competence building.

In closing, the Department of Management and Marketing would like to thank the EEC for the candid discussions and the constructive learning process. We believe that this review was a positive experience and feel that we were provided with important input and insights as to how to move effectively forward, strengthening our value proposition and our international reputation. To this end, we have thoroughly reviewed the findings, strengths and areas of improvement that were clearly indicated by the EEC, and attempted to respond to each item specifically and succinctly, indicating our actions.

C. Higher Education Institution academic representatives

Name	*Position*	*Signature*
Cathrin Lazarou	Program Coordinator	
Myria Ioannou	Chairperson, Department of Management and Marketing	
Pieris Chourides	Dean, Business Administration	

Date: 16.07.2021

Appendix I - Syllabi

Course Title	Fundamentals of Production and Operations Management				
Course Code	MGD235				
Course Type	Compulsory				
Level	Bachelor (1st Cycle)				
Year / Semester	2rd Year/4th Semester				
Teacher's Name	K. Christofi				
ECTS	6	Lectures / week	Up to 6 teleconferences	Laboratories / week	3 Hours/ 1 Week
Course Purpose and Objectives	The contemporary business environment shapes the way that organizations approach their operations functions since new technologies and rapid changes shape the costumers' expectations. Consequently, organizations should adjust their outputs and their associated production layouts in a way that overcome those challenges and ensure that operations contribute strategically to the overall competitiveness. The purpose of the course is to give a general understanding to students about the issues included in production and operations management. The objectives of the course are: • To highlight the strategic importance of operations management. • To examine the evolution and the scope expansion of processes and operations management. • To deliver an in-depth understanding on how various types of processes, are designed, applied, and evaluated. • To familiarize the students with the main production evaluation applications/techniques. • To embolism the students with applicable contemporary tools and techniques used in operations management.				
Learning Outcomes	**Learning Outcomes of the course unit:** Upon successful completion of this course students should be able to: • Evaluate the strategic importance of operations management. • Apply the performance indicators of operations in business case scenario • Distinguish the various types of products and services processes and production layouts.				

<table>
<tr><td></td><td colspan="3">Evaluate production proposals.
Compare and evaluate actual production results in business cases.
Design processes flow charts.
Design value stream maps with software application and identify areas for improvement.
Debate the main business excellence frameworks and their applications.
Explain and apply the concept of capacity management and its constrains in business applications.
Critically analyse the role of technology in operations management</td></tr>
<tr><td>Prerequisites</td><td>None</td><td>Co-requisites</td><td>None</td></tr>
<tr><td>Course Content</td><td colspan="3">Course content:
Introduction to Operations Management.
History and evolution of operations and process management.
Operations strategy and performance indicators
Four V’s analysis.
Process design (Types, layouts, and associated job designs).
Process design (Main analysis tools).
Process technology.
Productivity management.
Proposals evaluation through relevant costing.
Production evaluation through budgeting.
Capacity management.
Lean manufacturing
Value stream mapping with application software
Quality management and Business Excellence frameworks.</td></tr>
<tr><td>Teaching Methodology</td><td colspan="3">E-Learning</td></tr>
<tr><td>Bibliography</td><td colspan="3">Main Textbooks
Slack,N., Brandon, J, A., (Latest edition) (currently 2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education
Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (Global edition), Operations Management, Processes And Supply Chains. Pearson Education
E-Books
Slack,N., Brandon, J, A., (5th edition), Operations and Process Management: Principles and practice for strategic impact. Pearson Education
Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (11th edition), Operations Management, Processes And Supply Chains. Pearson Education</td></tr>
</table>

	Supplementary Textbooks • Liker, Jeffrey K. (2004). The Toyota way: 14 management principles from the world's greatest manufacturer. McGraw-Hill • Martin, K., and Osterling, M., (2013). Value Stream Mapping: How to Visualize Work and Align Leadership for Organizational Transformation. McGraw-Hill • Slack,N., Brandon, J, A., (Latest edition) (currently 2019), Operations Management. Pearson
Assessment	Examinations 50% Assignments 50% 100%
Language	English

Course Title	Supply Chain Management and Logistics				
Course Code	MGD345				
Course Type	Elective				
Level	Bachelor (1st Cycle)				
Year / Semester	From 3rd Year/5th Semester				
Teacher's Name	K. Christofi				
ECTS	6	Lectures / week	Up to 6 teleconferences	Laboratories / week	N/A
Course Purpose and Objectives	Intensive competition in today's global markets, the introduction of products with ever-shorter product life cycles, the increasing customer awareness and hence increased customer expectations, forces business firms to focus attention on their supply chains. Therefore, the purpose of this course is to provide a thorough understanding, in the concepts of supply chain and logistics management. The objectives of the course are: • To highlight the strategic importance of supply chain management. • To examine the value of logistics in supply chain. • To embolism the students with applicable contemporary tools and techniques used in supply chain and logistics management. • To examine the contemporary nature of supply chain management as are evolving through the global competition and integrated markets				
Learning Outcomes	**Learning Outcomes of the course unit:** Upon successful completion of this course students should be able to: • Classify the firm's supply environment • Evaluate means of transportation performance • Appraise alternative proposals for supply chain configurations in real business context • Evaluate the main supply chain drivers. • Calculate future demand and compare it with actual results • Evaluate the role of sustainability in the supply chain network • Analyze the evolving nature of supply chains				

<table>
<tr><td></td><td colspan="3">Evaluate the role of emerging technologies in supply chain networks</td></tr>
<tr><td>Prerequisites</td><td>None</td><td>Co-requisites</td><td>None</td></tr>
<tr><td>Course Content</td><td colspan="3">Course content:
Introduction to Supply chain management
The role of logistics in supply chain networks
Strategic fit between supply chain and corporate strategy
Evolving structure of supply chain.
Modes of transportation and performance indicators
Supply chain Drivers and areas of decisions.
Distribution networks
Proposals', evaluation under uncertainty based on decision trees
Demand Forecasting and analysis.
Strategic Challenges and Change for Supply Chains
Information technology and supply chain
Capacity management
Inventory management
Sustainability and supply chain</td></tr>
<tr><td>Teaching Methodology</td><td colspan="3">E-Learning</td></tr>
<tr><td>Bibliography</td><td colspan="3">Main Textbooks
Coyle, J., Langley, J., Novack, R., and Gibson, B., (Latest edition) (currently 2020), Supply Chain Management: A logistics perspective. Cengage Learning.
Chopra, S., and Meindl, P., (Latest edition) (currently 2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education
E-Books
Coyle, J., Langley, J., Novack, R., and Gibson, B., (11th edition) Supply Chain Management: A logistics perspective. Cengage Learning.
Supplementary Textbooks
Ross, D., (2011), Introduction to supply chain management technologies. CRC Press, Taylor, and Francis group.
Hugos, M., (2011)., Essentials of supply chain management. John Wiley & Sons, Icl.</td></tr>
<tr><td>Assessment</td><td colspan="3">Examinations 50%
Assignments 50%

100%</td></tr>
<tr><td>Language</td><td colspan="3">English</td></tr>
</table>

THE CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

European University Cyprus

FORM: 200.1.3

STUDY GUIDE

COURSE: Fundamentals of Production and Operations Management

Course Information

Institution	**European University Cyprus**		
Programme of Study	Business Studies (Bachelor)		
Course	MGD235	Fundamentals of Production and Operations Management	
Level	Undergraduate ☒	Postgraduate (Master) ☐	
Language of Instruction	English		
Course Type	Compulsory ☒	Elective ☐	
Number of Teleconferences	Total: Up to 6	Face to Face: -	Teleconferences: Up to 6
Number of Assignments	4 Graded Assignments		
Assessment	Assignments	Final Examination	
	50 %	50 %	
Number of ECTS Credits	6		

Study Guide drafted by:	Kyriakos Christofi
Editing and Final Approval of Study Guide by:	

CONTENTS

1ST TELECONFERENCE/GROUP CONSULTATION MEETING:
INTRODUCTION

Programme Presentation

- **Short description & objectives**

The Distance Learning Business Studies program is specifically designed to be very flexible, giving the opportunity to students to choose two or more areas of concentration rather than concentrate on only one. It provides students with theoretical as well as practical business skills in accounting, finance, human resource management strategy, management and marketing, as well as offering insight into different business sectors and their broader economic and regulatory environments. The program also offers students the chance to develop their own areas of study that meet their specific career goals not covered by other majors.

GENERAL OBJECTIVES:

- To develop the student's capacity to think, analyse and process information in an innovative and creative way;
- To develop an awareness, respect and appreciation of the social, moral and ethical values as the main principles of one's relationship towards others and to the community;
- To develop the students analytical, critical thinking, decision-making and communication competencies that will help promote their personal achievement and contribution to organizations;
- To build breath of perspective through the general education requirements and provide sufficient specialization to meet basic professional and career requirements;
- To provide the student with the necessary requirements for academic and/or career advancements.

SPECIFIC OBJECTIVES:

- To provide students with a foundation in Business Studies in terms of theory and practice;
- To allow students to choose two or three areas of concentration rather than the usual single major, and to offer students the opportunity to develop special programs of study that meet specific career goals not covered by other majors;
- The main attention is directed to the skills and knowledge required by the profession
- To assist the students in developing leadership, which can be used to motivate employees and also in reaching solutions to problems relating to Business enterprise

Presentation of the Course through the Study Guide

- **Short description & objectives**

The contemporary business environment shapes the way that organizations approach their operations functions since new technologies and rapid changes shape the costumers' expectations.
Consequently, organizations should adjust their outputs and their associated production layouts in a way that overcome those challenges and ensure that operations contribute strategically to the overall competitiveness.
The purpose of the course is to give a general understanding to students about the issues included in production and operations management.
The objectives of the course are:

- To highlight the strategic importance of operations management.
- To examine the evolution and the scope expansion of processes and operations management.
- To deliver an in-depth understanding on how various types of processes, are designed, applied, and evaluated.
- To familiarize the students with the main production evaluation applications/techniques.
- To embolism the students with applicable contemporary tools and techniques used in operations management.

Learning Outcomes of the course unit:
Upon successful completion of this course students should be able to:

- Evaluate the strategic importance of operations management.
- Apply the performance indicators of operations in business case scenario
- Distinguish the various types of products and services processes and production layouts.
- Evaluate production proposals.
- Compare and evaluate actual production results in business cases.
- Design processes flow charts.
- Design value stream maps with software application and identify areas for improvement.
- Debate the main business excellence frameworks and their applications.
- Explain and apply the concept of capacity management and its constrains in business applications.
- Critically analyse the role of technology in operations management

Recommended student work time
Approximately 5 hours (including the study of the Guide)

TITLE: Introduction to Operations Management

(1st Week)

Summary

Operations and process management is the activity of management resources and activities that produce products and services. Products refers to mainly tangible outputs while services are characterized by a simultaneous production and consumption. Both types of outcomes require such inputs and activities that allow them to transform. Outputs must deliver value to their customers who may be internal or external

Introductory Remarks

Operations and process management is the activity of management resources and activities that produced products and services. Products refers to mainly tangible outputs while services are characterized by a simultaneous production and consumption. Both types of outcomes require such inputs that include:

- Materials
- Facilities (Technologies, Buildings)
- Information
- Customers
- *People*

All processes and operations produce products and/or services, and although products and services are different, the distinction can be subtle. But whether classed as a product or service, the outputs from processes and operations are (or should be) intended to serve the requirements of customers.

For the operations function of a business, the customers who need to be served are likely to be external customers (those parties or organisations that use the business's products or services). For the individual processes within a business, customers are usually (although not always) internal customers. Internal customers can be other processes, individuals, or groups within the business; in fact, anyone who is affected by the product or service.

The obvious difference between serving external and internal customers is their freedom of choice. External customers provide an organisation directly with its reason for being since they provide revenue, while internalcustomers, do not usually have the option of 'going else- where'.

Aims/Objectives

The aim of this session is to introduce students on the process and operations management concepts. Special emphasis is given to the transformation nature of process and operations management.

Learning Outcomes

By the end of this session students should be able to:

- Define and discuss the term of operations and process management

- Distinguish the differences and similarities between internal and external customers
- Evaluate the evolution of process and operations management concept
- Distinguish the differences and similarities between manufacturing and services organizations

Key Words

Operations	Operations management	Transformation Process	Processes

Annotated Bibliography

- **Basic Sources/Material**

Slack,N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

- **Supplementary Sources/Material**

Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (2019), Operations Management, Processes And Supply Chains. Pearson Education

Self-Assessment Exercises/Activities
Exercise 1.1 (non-graded)
List the main inputs, operation activities and outputs on an Airline company.

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Operations strategy and performance indicators

(2nd Week)

Summary
Operations can have a real strategic impact on organization profitability and competitiveness. This week explores the strategic nature of operations management, evaluate the manufacturing function based on strategic contribution and outlines the key performance areas of operations

Introductory Remarks

In the long term, the major objective for operations and processes is to provide a business with some form of competitive advantage. Many remarkable corporations use their operations to gain competitive advantage. However, without a strong link between strategy and operations, a company lacks strategic direction and may result to failure.

Hayes and Wheelwright, (1984) acknowledge the fact that there are no weak or strong operations, but they found that operations follow a progression through four stages, namely Internally neutral, externally neutral, internally supportive and externally supportive. Stages one, two, and three approach operations as static and aim a superior performance, while stage 4 aims to shape the industry boundaries through manufacturing. This week also examines the various key performance indicators of operations. Those indicators fall under the following five aspects of operational performance.

Quality
Quality is consistent conformance to customers' expectations, in other words, 'doing things right',

Speed
Speed means the elapsed time between customers requesting products or services and them receiving them

Dependability
Dependability means doing things in time for customers to receive their goods or services exactly when they are needed, or at least when they were promised.

Cost
To the companies which compete directly on price, cost will clearly be their major operations objective.

Flexibility
Flexibility means being able to change the operation in some way. This may mean changing what the operation does, how it is doing it, or when it is doing it.

Aims/Objectives

The aim of the session is to explain students the business strategic concepts. This week emphases on the link between corporate strategies and operations strategies and explains the main performance indicators that are consider in operations management.

Learning Outcomes

By the end of this session, students should be able to:

- Describe the role of operations strategy as a source of competitive strength in a global marketplace.
- Explain how to link corporate strategy to operations strategy through the use of competitive priorities
- Evaluate an organizations operation under the Hayes and Wheelwright four stages model
- Apply key performance indicators on aspects of operational performance

Key Words

Corporate strategy	Operations strategy	Aspects of operational performance	Hayes and Wheelwright model

Annotated Bibliography

- **Basic Sources/Material**

Slack,N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

- **Supplementary Sources/Material**

Wheelwright and Hayes, (1985). *Competing Trough Manufacturing*, Harvard Business Review, Volume 63 (January-February)

Self-Assessment Exercises/Activities
Exercise 2.1(non-graded)
Select a real organization and briefly discuss their operation stage based on Wheelwright and Hayes Model.

Recommended number of work hours for the student
Approximately 9 hours

Title: Four V's Analysis

(3rd Week)

Summary

The session focuses on an in-depth analysis of the process four Vs. Vs analysis guides the operation decision in various aspects such as resources allocation, and layout. Trhought different scenarios, the students will obtain a rich and comprehensive understanding around the topic and set the foundation for the upcoming weeks in this course.

Introductory Remarks

All processes differ in some way, so, to some extent, all processes will need to be managed differently. Some of the differences between processes are 'technical' in the sense that different products and services require different skills and technologies to produce them. However, processes also differ in terms of the nature of demand for their products or services. Four characteristics have a significant effect on how processes need to be managed:

1. Volume: The volume of the products and services produced.
2. Variety: The variety of the different products and services produced.
3. Variation: The variation in the demand for products and services.
4. Visibility: The degree of visibility that customers have of the production of products and services.

Those effect have several implications to operational design, and strategy. For instance, low variety and high-volume processes are standardized, are ideal for automation, but on the other hand minizine the customization based on the clients' specific needs. Through business applications and real-life examples, students will experience the applicability and the implications of the 4V's

Aims/Objectives

The aim of the session is to provide to the students a comprehensive understanding around the concept of four V's analysis and its implications and serve as the foundation for the upcoming weeks since many majors concepts of processes and operations management are built around this topic

Learning Outcomes

By the end of this session students should be able to:

- Identify the nature of a process in terms of its four V's
- To explain the various implications of each type based on its level
- To explain the interconnection among the four V's

Key Words

4V' s Analysis	Process Volume	Process Variety	Demand Variation	Visibility

Annotated Bibliography

- **Basic Sources/Material**

Slack,N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities
Exercise 3.1 (non-graded)
Explain the process of *"cash with-drawn"* in a bank, and how it applies in respect to its volume and variety

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Process design (types, layouts, and associated job designs)

(4th Week)

Summary

Process design consists of two main components. First process positioning, and second process analysis. This week examines major concepts within the process positioning, explains their interconnections and how are applied to manufacturing and services organization.

Introductory Remarks

Process design consists of two main components. First process positioning, and second process analysis. This week examines major concepts within process positions such as the various types of the process in manufacturing and services organizations, their optimal layouts and discussed how are reflected to the volume and variety levels of the process, covered in the previous week. Overall, there are five main process types in manufacturing organizations and three in services organizations as follows:

Manufacturing organizations: Project processes, Jobbing processes, Batch processes, Mass processes and Continues process

Services organization: Professional services, Service Shops, Mass Services.

After the detailed explanation and application of each type with relevant examples, this week also examines the appropriate layout for each type and job design. The main processes layouts are

- Fixed position
- Functional
- Cell
- Product.

Aims/Objectives

The aim of this week is to deliver to the students a comprehensive understanding around the topic of process positioning, by explain the various process types in manufacturing and services organizations, and their associated layouts and job designs

Learning Outcomes

By the end of this week students should be able to:

- Classify the various process types in manufacturing and services organizations
- Explain the major types of layouts.
- Design the optimal layout for each process type.

- Explain the implication of process types and layouts on job design and individual specifications.

Key Words

Process Design	Process Positioning	Types of processes	Process Layouts	Job designs

Annotated Bibliography

- **Basic Sources/Material**

Slack,N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

- **Supplementary Sources/Material**

N/A
Self-Assessment Exercises/Activities
Exercise 4.1(non-graded)

Identify the layout the following processes

- A costa coffee white Americano
- The construction of a new library
- The manufacturing of Zara T-shits

Recommended number of work hours for the student

Approximately 9 hours

TITLE: Week 5 Process design (Main analysis tools).

(5th Week)

Summary

This week emphasizes to the second component of process design which reflects to process analysis. Process analysis is the virtualization, documentation, and detailed understanding of how work is performed and how it delivers value to the costumers. Through applicable techniques the students will experience how a certain process, work, and the involvement of the costumer in each process.

Introductory Remarks

Process analysis is the virtualization, documentation, and detailed understanding of how work is performed and how it delivers value to the costumers. This week examines two major process analysis techniques and familiarize the students with process mapping using sets of icons derived by both scientific management, and system analysis. The two major process techniques that is under examination are

Flowcharts
A flowchart traces the flow of information, customers, equipment, or materials through the various steps of a process. Flowcharts can be created for several levels in the organization such as at strategic level which virtualize all the functional lines of an organization, with their associated subprocess, and an operational level where flow chart provide a service blueprint with the customer interaction in a certain operation.

Process Charts
A process chart is an organized way of documenting all the activities performed by a person or group of people at a workstation, with customer, or working with certain materials. It analyzes a process using a table and provides information about each step in the process by classify them into five categories namely, operation, transportation, inspection, and storage.

Aims/Objectives

The aim of this session is to familiarize students to the process analysis tools and techniques that are used by operations managers to help them to gain a concrete understanding, on how the process delivers value to the costumers.

Learning Outcomes

By the end of this chapter the students should be able to:

- Discuss how to document and evaluate processes.
- Identify the customer involvement in an operation

- Design process flow diagrams
- Calculate the direct value of a process

Key Words

Process Analysis	Process Documentation	Process flow charts	Process Charts

Annotated Bibliography

- **Basic Sources/Material**

Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (2019), Operations Management, Processes And Supply Chains. Pearson Education

- **Supplementary Sources/Material**
- Slack,N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

Self-Assessment Exercises/Activities

Exercise 5.1 (Graded - 5 Marks)

Providing a summary of this process, and analyze it using a pie chart that shows the contribution of each category in the overall duration.

STEP No	Time (min)	Distance (ft)						Step Description
1	0.80	50.0		X				Direct customer into service bay
2	1.80		X					Record name and desired service
3	2.30				X			Open hood, verify engine type, inspect hoses, check fluids
4	0.80	30.0		X				Walk to customer in waiting area
5	0.60		X					Recommend additional services
6	0.70					X		Wait for customer decision
7	0.90	70.0		X				Walk to storeroom
8	1.90		X					Look up filter number(s), find filter(s)
9	0.40				X			Check filter number(s)
10	0.60	50.0		X				Carry filter(s) to service pit
11	4.20		X					Perform under-car services
12	0.70	40.0		X				Climb from pit, walk to automobile
13	2.70		X					Fill engine with oil, start engine
14	1.30				X			Inspect for leaks
15	0.50	40.0		X				Walk to pit
16	1.00				X			Inspect for leaks
17	3.00		X					Clean and organize work area
18	0.70	80.0		X				Return to auto, drive from bay
19	0.30						X	Park the car
20	0.50	60.0		X				Walk to customer waiting area
21	2.30		X					Total charges, receive payment

Recommended number of work hours for the student

Approximately 9 hours

TITLE: Process technology.

(6th Week)

Summary
This session focuses on the process technologies and examines the value of technology on operations management, while explain the main strategies of technology evaluation and sourcing.

Introductory Remarks

There is a lot of new process technology around. Few, if any, operations have been unaffected by the advances in process technology that have radically changed everyday life over the last two or three decades. And all indications are that the pace of technological development is not slowing down. This has important implications for operations managers because all operations use some kind of process technology, whether it is a simple internet link or the most complex and sophisticated of automated factories. But whatever the technology, all operations managers need to understand what emerging technologies can do, in broad terms how they do it, what advantages the technology can give, and what constraints it might impose on the operation.

Hence operations managers should be able to do three things. First, they need to understand the technology to the extent that they are able to articulate what it should be able to do. Second, they should be able to evaluate alternative technolo- gies and share in the decisions of which technology to choose. Third, they must implement the technology so that it can reach its full potential in contributing to the performance of the operation as a whole.

During this week, emphasis is given to the explanation of different types of process technologies based on their transformed resources (Material, information, costumer,) processing technologies and the exploration on how emergent technologies are assets to be integrated to the organization's operations.

Aims/Objectives

The aim of this session to provide to students a general understanding about process technologies, and to familiarize them with the main techniques and strategies of technology evaluation and sourcing.

Learning Outcomes

By the end of the session students should be able to:

- Discuss the value of technology in operations
- Classify various technologies based on their transformed resources

- Apply techniques of technology evaluation
- Explain the main strategies of technology sourcing

Key Words

Process Technology	Emerging Technologies	Corporate technology	Technology Evaluation

Annotated Bibliography

- **Basic Sources/Material**

Slack,N., Brandon, J, A., (2019), Operations Management. Pearson

- **Supplementary Sources/Material**

Slack,N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

Self-Assessment Exercises/Activities
Exercise 6.1 (non-graded)
Briefly explain how process technologies are evaluated

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Week 7 Productivity management

(7th Week)

Summary

Productivity is a major index in operations management. This week though mathematical applications and practical exercises the students will an overall understanding on the topic of productivity measurement

Introductory Remarks

Productivity is a basic measure of performance for economies, industries, firms, and processes, and operations managers play a key role in determining productivity. The challenge is to increase the value of output relative to the cost of input. Example where the level of productivity increases include:

- Generating more output or output of better quality using the same amount of input
- Maintaining the same level of output while reducing the use of resources.

Hence, the productivity can be calculated as: $\frac{\boldsymbol{Outputs}}{\boldsymbol{Inputs}}$

Measure Indicators should be time, actual units, or indicators, and productivity indexes allow operations managers to compare them internally, with previous time periods results as well as externally with competitors.

This week examines the concept productivity through mathematical applications and it also examines relevant contributions through break-given point and sensitivity analysis.

Aims/Objectives

The aim of this session is to familiarize the students with the concept of productivity management and deliver those techniques for an effective calculation and evaluation of productivity results

Learning Outcomes

By the end of the session students should be able to:

- Explain the main types and the nature of inputs in production.
- Calculate multifactor productivity in different working scenarios.
- Evaluate and explain the productivity results.
- Calculate the break-even point for a production.

Key Words

Labor Productivity	Multifactor Productivity	Value of Outputs	Break-even Point	Sensitivity Analysis

Annotated Bibliography

- **Basic Sources/Material**

Lee J. Krajewski, Larry P. Ritzman, and Manoj K. Malhotra (2019), Operations Management, Processes And Supply Chains. Pearson Education

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities
Exercise 7.1 (Graded- 5 points)
The weekly output of a fabrication process is shown below together with data for labor and material inputs. Standard selling price is €150 per unit. However, some units were sold to a significant costumer that exploits economies of scale, at a price of €100. Overhead is charged weekly at the rate of €1,000 plus 0.5 times direct labor cost. Assume a 40-hour week and an hourly wage of €16. Material cost is €13 per linear foot.

Week	Output (units)	Units to Premium Costumer	No. of workers
1	390	50	5
2	410	60	6
3	530	70	7

Requirements
- Calculate the multifactor productivity for the above operation
- Assume that previous the previous year index was 1.5 and critically compare your results against the previous year performance.

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Capacity management.

(8th Week)

Summary

The role of capacity management is to reconcile the demand and supply for products and services. This session focuses on the applicability on various techniques that allows an effective capacity planning and management various time-horizons and various operations layouts.

Introductory Remarks

Capacity refers the output that an operation can (or a single process) deliver in a defined unit of time. The role of capacity management is to reconcile the demand and supply for products and services. Managers are responsible for ensuring that the firm has the capacity to meet current and future demand. To do this, managers must understand and cope with two completing requirements:

1) The importance of delivering products and services to customers quickly to maintain satisfaction
2) The need for operations and their extended supply networks to maintaining efficiency by minimizing excess capacity (idle).

Overall, there are three levels of capacity based on its time horizon of planning.

Long term capacity which reflects to a time horizon to approximately 3 years,

Medium term capacity that reflects for a planning with a time horizon up to a year, and

Short-term capacity which refers to a minute-to-minute allocation of resources.

Each level requires its own techniques for an effective management of capacity. Through techniques applications this week focuses on the capacity estimation and planning in various time-horizons and various operations types.

Aims/Objectives

The aim of this session is to familiarize students with the concept of capacity management and its associated tools and applications

Learning Outcomes

By the end of the session students should be able to:

1. Calculate the long-term capacity based on input and out put measure

2. Design activity on note
3. Explain the various constrains in terms of capacity in different processes layout
4. Calculate the efficiency, balanced delay, and capacity utilization of operations
5. Identify Bottlenecks

Key Words

Capacity Planning	Theory of Constrains	Bottle neck	Cycle time	Idle time

Annotated Bibliography

- **Basic Sources/Material**

Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (2019), Operations Management, Processes And Supply Chains. Pearson Education

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities

Exercise 8.1 (non-graded)

A copy centre in an office building prepares bound reports for two exclusive Costumers. The center makes multiple copies (the lot size) of each report. The processing time to run, collate, and bind each copy depends on, among other factors, the number of pages. The center operates 250 days per year, with one 7-hour shift. The manager believes that a capacity cushion of 20 percent is sufficient. It currently has two copy machines. Based on the following table of information, determine how many machines are needed at the copy centre.

Item	Costumer A	Costumer B
Annual demand forecast (copies)	3,000	4,000
Standard processing time (hour/copy)	0,5	0.6
Average lot size (copies per report)	15	20
Standard setup time (hours)	0.3	0.40

Recommended number of work hours for the student

Approximately 9 hours

TITLE: Proposals evaluation through relevant costing

(9th Week)

Summary

Relevant costing is an incremental approach used, in decision making in production management. The technique is used to calculate the direct impact of a decision on the organization profitability. Such decision includes an outsourcing versus inhouse production scenario, and acceptance or rejection of a production proposal.

Introductory Remarks

Relevant costing is a term used in managerial accounting and it is highly relevant with operations management since it is used on proposals evaluations and decisions making. Specifically, relevant costs and revenues are those costs and revenues that change as a direct result of a decision taken. Relevant costs and revenues have the following features:

- They are future costs and revenues as it is not possible to change what has happened in the past, then relevant costs and revenues must be future costs and revenues.

- They are incremental relevant costs are incremental revenue, and it is the increase in costs and revenues that occurs as a direct result of a decision taken that is relevant. Common costs can be ignored for the purposes of decision making.

- They are cash flows in addition, future costs and revenues must be cash flows arising as a direct consequence of the decision taken. Relevant costs do not include items which do not involve cash flows (depreciation and notional costs for example).

This week focuses on the application of relevant costing as a technique to address strategic challenges though the examination of the production perspective of the decision. Such challenges include among others

- An outsourcing versus inhouse production scenario.
- Accept or reject a production proposal.

Aims/Objectives

The aim of this week is to familiarize students with the incremental approach of decision making in production. Through mathematical applications, the students will be able to examine various case scenarios in production decision making.

Learning Outcomes

By the end of the session students should be able to:

- Explain the usage of incremental approaches in decision making.
- Calculate a relevant contribution of an under-evaluation proposal.
- Draw conclusions on proposals evaluation using the relevant costing technique.

Key Words

Decision making	Relevant Cost	Proposals' evaluation	Opportunity Cost

Annotated Bibliography

Basic Sources/Material

Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (2019), Operations Management, Processes And Supply Chains. Pearson Education

Supplementary Sources/Material

Wild,J., and Shaw., (2019), Financial and managerial accounting: Information for decision. McgrawHills

Self-Assessment Exercises/Activities

Exercise 9.1(non-graded)

Coleman Company owns a machine that produces a component for the products the company makes and sells. The company uses 1,800 units of this component in production each year. The costs of making one unit of this component are

- Direct material: € 7
- Variable manufacturing overhead: € 6
- Direct labor: € 4
- Fixed manufacturing overhead: € 5
- The fixed overhead costs are unavoidable, and the unit cost is based on the present annual usage of 1,800 units of the component.
- An outside supplier has offered to sell Coleman this component for $18 per unit and can supply all the units it needs.

Reequipment

- If Coleman buys the component from the outside supplier instead of making it, how much will net income change?

- Should Coleman make or buy the component?

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Production evaluation through budgeting.

(10th Week)

Summary

Budgets allow co-ordination among the various departments and anticipate problems in the future and take remedial action on a timely basis, and allows a comparison based on the actual production results. This week emphasis on production budget and through flexed budgeting students will be able to calculate and critically evaluate variances between budgeted and actual.

Introductory Remarks

Investors and management want to know where the business is going. In general budgets allow co-ordination among the various departments and anticipate problems in the future and take remedial action on a timely basis, and allows a comparison based on the actual results. On the other hand, f targets are set too high too low may act negatively to employees' invectives. There are various types of budges, but this week focuses on production budget with main focus to be given on flexed budgeting. Flexed budgeting makes comparison between budgeted and actual production results with ultimate objective being to identify, variances. Variances can be classified in the following categories:

Material Price variance:
The material price variance shows how much of the total material variance is due to a change in price.

Material usage variance:
This variance shows whether the material has been used efficiently or inefficiently. It compares the budgeted material input per unit of production to the actual material input per unit of production.

Labour rate variance:
This relates to the difference between actual labour cost per hour and budgeted labour cost per hour

Labour efficiency variance:
This compares actual labour efficiency to budgeted labour efficiency. In other words we compare actual hours spent per carpet to budgeted hours per carpet.

By calculating all the above variances we are able to draw conclusions about the causes of the variances noted on the flexed budget. For example, a favourable material budget may consist of a favourable material price variance and an adverse usage variance. By favourable price variance we mean that we paid a lower price for the raw material than

initially budgeted. However, by adverse usage variance we mean that we consumed more raw material per unit of production than originally budgeted

Aims/Objectives
The aim of this session is to explain the role of budgeting in production, its association with master budgets and to familiarize students with the comparison between budgeted and actual production performance

Learning Outcomes

By the end of the session students should be able to:

- To evaluate the role of budgeting in production.
- To explain the main challenges on budget preparation.
- Compare budgeted with actual production results with the application of flexed budgeting.
- To evaluate possible reason for those variances

Key Words

Production Budget	Master Budget	Production evaluation	Production Variance	Flexed budget

Annotated Bibliography

Basic Sources/Material

Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (2019), Operations Management, Processes And Supply Chains. Pearson Education

Supplementary Sources/Material

Wild,J., and Shaw., (2019), Financial and managerial accounting: Information for decision. McgrawHill

Self-Assessment Exercises/Activities
Exercise 10.1 (Graded 10 marks)

Epsilon Ltd has a budgeted production of 1000 carpets for 2020.

The **budgeted information is as follows**:

Selling price: €1200/carpet

Raw material: 5m^2 /carpet
Raw material price: €50/m^2
Labour: 20 hours/carpet
Labour wages: €8/hour

<u>However, by the end of 2020 the actual information were as follow:</u>

Selling price: €1200
Production: 1000 carpets
Raw materials used: 6m^2/carpet
Total raw material cost: €270000
Labour hours: 18000 hours
Actual labour cost: €180000

REQUIRED

a. By Using the flexed budgeting calculate the following variances:
    i. Material price variance
    ii. Material usage variance
    iii. Labour rate variance
    iv. Labour efficiency variance
b. Comment on the above variances

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Lean manufacturing

(11th Week)

Summary

As the contemporary business environment erodes competitive advantage quickly, organizations explore new ways to improves their operations and the overall customer experience. Lean manufacturing synchronization shares the idea of just in time production and aims to improve the end-to-end costumer experience through the identification and minimization of various waste types.

Introductory Remarks

This session focuses on just-in-time production. Contemporary definitions to describe just in time production can be found with such concepts as Lean manufacturing, Lean production and Lean synchronization.

Synchronization means that the flow of items (materials, information or customers) that constitute services and products always delivers exactly what customers want (perfect quality), in exact quantities (neither too much nor too little), exactly when needed (not too early or too late), and exactly where required (not to the wrong location). Lean synchronization is to do all this at the lowest possible cost. It results in items flowing rapidly and smoothly through processes, operations and supply networks.

The concept of ‘lean’ stresses the elimination of waste, while ‘just-in-time’ emphasizes the idea of producing items only when they are needed. In other words, Lean aims to identify and eliminate “wastes” on the end-to-end process, with ultimate objective being to create production lines and processes that maximizes the direct value to customers, while is a dynamic approach that constantly exploring for improvements.

Following the Toyota classification of waste types, can be found seven types of waste that will be examined this week

1. *Over-production*
2. *Waiting time*
3. Transport
4. Process
5. Inventory
6. Motion
7. Defectiveness

Between them, these seven types of waste contribute to four barriers to any operation achieving lean synchronization. They are waste from irregular (non-streamlined) flow, waste from inexact supply, waste from inflexible response, and waste from variability.

Aims/Objectives

The aim of this week is to provide a comprehensive understanding around the topic of just in time production with the lean synchronization perspective. Furthermore, this session aims to prepare students to identify various types of waste in a specific end to end process and take measures towards their elimination.

Learning Outcomes

By the end of the session the students should be able to:

- Explain the value to Lean synchronization in the dynamic business environment.
- Compare the concept of Lean with other alternative philosophies
- Evaluate the seven waste types
- Explain the main strategies of eliminating waste in lean synchronization

Key Words

Lean synchronization	Just in time production	Types of Waste	Toyota production system	End-to-end Process

Annotated Bibliography

Basic Sources/Material

Slack,N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

Supplementary Sources/Material

Liker, Jeffrey K. (2004). The Toyota way: 14 management principles from the world's greatest manufacturer. McGraw-Hill

Self-Assessment Exercises/Activities
Exercise 11.1 (non-graded)

Critically evaluate the concept of lean synchronization, and explain how it eliminates waste

Recommended number of work hours for the student
Approximately 9 hours

Week 12 Value stream mapping with software application

(12th Week)

Summary

This week is the application part of the lean synchronization session. A value stream mapping provides virtualization of a specific process, operation or a supply chain network, and consequently surfaces the areas that needs improvements. Overall, it consists of two main maps namely, “the current stage”, and “the future stage”.

Introductory Remarks

This week emphasis in the design of a value stream map with the application software. Such software may be Microsoft PowerPoint, Microsoft Visio, or other alternatives.

Value stream mapping (also known as ‘end-to-end’ system mapping) is a simple but effective approach to understanding the flow of material and information as a product or service has value added as it progresses through a process, operation, or supply chain. It visually maps a product or services ‘production’ path from start to finish.

In doing so it records, not only the direct activities of creating products and services, but also the ‘indirect’ information systems that support the direct process. It is called ‘value stream’ mapping because it focuses on value-adding activities and distinguishes between value-adding and non-value-adding activities. It is similar to process mapping but different in four ways:

- It uses a broader range of information than most process maps.
- It is usually at a higher level than most process maps.
- It often has a wider scope, frequently spanning the whole supply chain.
- It can be used to identify where to focus future improvement activities.

A value stream perspective involves working on (and improving) the ‘big picture’, rather than just optimizing individual processes. Value stream mapping is seen by many practitioners as a starting point to help recognize waste and identify its causes. It is a four-step technique that identifies waste and suggests ways in which activities can be streamlined.

First, it involves identifying the value stream (the process, operation or supply chain) to map. Second, it involves physically mapping a process, then above it mapping the information flow that enables the process to occur. This is the ‘current state’ map. Third, problems are diagnosed and changes suggested, making a ‘future state’ map that represents the improved process, operation or supply chain. Finally, the changes are implemented.

Aims/Objectives

The aim of this week is to familiarize students with the applicability and implementation of lean synchronization, based on software application. This week also aims to provide an understanding of operation management techniques that are used in the real business environment.

Learning Outcomes

By the end of the session students should be able to:

- Design a value stream mapping in software
- Identify areas for improvement in a real-life operation
- Improve this process based on Lean Synchronization
- Measure the improved results

Key Words

Lean Synchronization	Value Stream Mapping	Current stage Map	Future Stage Map	End-to-end process

Annotated Bibliography

Basic Sources/Material

- Martin, K., and Osterling, M., (2013). Value Stream Mapping: How to Visualize Work and Align Leadership for Organizational Transformation. McGraw-Hill

Supplementary Sources/Material

- Slack, N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

Self-Assessment Exercises/Activities
Exercise 12.1
Select a real process from your daily life. Then produce a high-level value stream map (up to 8 phases/activities). Identify and list the relevant types of waste in this operation. Recommend changes to improve the costumer experience and based on those recommendations design a future stage value stream mapping that captures those improvements.

Recommended number of work hours for the student
Approximately 9 hours

Exercise 12.2 (Graded – 30 marks)

Groups of 3 students

This exercise focuses on a detailed explanation on an operation. As a first step select a real organization that will serves as a case study and proceed with the following instructions.

- Provide an overview of the organization
- Critically discuss how its operation function supports its corporate strategy based on the Wheelwright and Hayes four stages model.

Then, select a specific operation and procced with the following

- Design a 4V's diagram for the selected operation
- Design a value stream map that includes the current state and the future stage.

In the value stream section, you should explain in detailed your improvement strategy, types of waste after the current stage map, and clearly definition of improvements after the future stage.

Specifications
Word Limit: 2000 words
Referencing style: Harvard referencing style.

Recommended number of work hours for the student
Approximately 20 hours

TITLE: Quality management and Business Excellence frameworks

(13th Week)

Summary

Quality is an important element of operation management. This week focuses on the detailed explanation of quality management, discusses the main views of quality, explain the cost types of quality and familiarise students with business excellence framework.

Introductory Remarks

Quality is an important element of operation management and this week focus on the systematic explanation of this concept. In the first half on this session the definition and the different views of quality will be explained with certain examples. The technical view of quality focuses on the technical requirements of a certain product and the final judge is the quality assurance department. Competitive view on the other hand, analyses the concept of quality as strategy, compares the outcomes with the competition and the final judge is the customer. Furthermore, this session introduces the various "costs of quality". Cost of quality can be classified into four categories:

Prevention cost of quality: Those costs incurred in trying to prevent problems, failures and errors from occurring in the first place

Appraisal cost of quality: Those costs associated with controlling quality to check to see if problems or errors have occurred during and after the creation of the product or service

Internal failure cost of quality: Failure costs that are associated with errors dealt with inside the operation

External failure cost of quality: Failure costs that are associated with errors being experienced by customers

After a detailed explanation of each type, the second half of this session emphasises on the explanation of comprehensive systems for quality management. Finally, this week introduces business excellence frameworks that are used worldwide including:

- The ISO 9000 series approach
- The Malcolm Baldrige National Quality Award
- The EFQM Excellence Model

Aims/Objectives

The aim of this week is to provide a detail explanation around the topic of quality management and to familiarize students with the main business excellence frameworks

Learning Outcomes

By the end of the session, students should be able to:

- Evaluate the concept of quality management with various perspectives
- Explain critically the main types of costs of quality
- Discuss critically the concept of total quality management
- Compare the main business excellence frameworks
- Develop a quality management plan

Key Words

Quality Management	Cost of Quality	Benchmarking	EFQM	Total Quality Management	Business Excellence

Annotated Bibliography

Basic Sources/Material

Slack, N., Brandon, J, A., (2021), Operations and Process Management: Principles and practice for strategic impact. Pearson Education

Supplementary Sources/Material

Lee J. Krajewski, Larry P. Ritzman,and Manoj K. Malhotra (2019), Operations Management, Processes And Supply Chains. Pearson Education

Self-Assessment Exercises/Activities
Exercise 13.1
Briefly explain the concept of total quality management

Recommended number of work hours for the student
Approximately 9 hours

FINAL TELECONFERENCE/GROUP CONSULTATION MEETING

During this final teleconference, students are informed about the format of the final exam (e.g. multiple-choice questions, short or long answers, case studies, etc.) and if the exam will be open-book or not.

TITLE:

FINAL EXAM

(14th week)

Recommended number of work hours for the student
Approximately 35 hours.

INDICATIVE ANSWERS FOR SELF-ASSESSMENT EXERCISES

Title: Introduction to Operations management

(1st Week)

Exercise 1.1

Industry	Inputs	Operation activities	Outputs
Airline	Aircrafts Pilots and air crew Ground Crew Passengers	Move passengers and freight (goods) around the world	Transported passengers

Title Operations strategy and performance indicators

(2nd Week)

Exercise 2.1

The under-examination company is Pfizer corporation. The company falls under the stage 4 of Wheelwright and Hayes model which reflects to dynamic nature of operations that act proactively and shape the industry boundaries. Especially, during the pandemic period the corporation integrated a new technology (MRna) into their vaccines and hence paving the path towards a new era on the vaccination development.

Title: Four V's Analysis

(3rd Week)

Exercise 3.1

Cash with-drawn is a high volume and low variety process, since is characterized by high standardization. That' s mean that each activity is standard and repeated. Hence, it does not require an individual that have a special financial knowledge and is ideal for automation. A great example is the automation of this process by all the banks with the application of ATM machines.

Title: Process design (types, layouts, and associated job designs)

(4TH WEEK)

Exercise 4.1

Process/Operation	Optimal Type
A costa coffee white Americano	Product Layout
The construction of a new library	Fixed Layout
The manufacturing of Zara T-shits	Cell or Functional Layout

Title: Process design (Main analysis tools).

(5th Week)

Exercise 5.1 (Graded – 5 Marks)

Title: Week 6 Process technology

(6th Week)

Exercise 6.1

All technologies should be appropriate for the activities that they have to undertake. In practice this means making sure that the degree of automation of the technology, the scale or scalability of the technology and the degree of coupling or connectivity of the technology fit the volume and variety characteristics of the operation. They should be evaluated by assessing the impact that the process technology will have on the operation's performance objectives (quality, speed, dependability, flexibility and cost). Furthermore, all technologies should be evaluated financially, with the relevant application such as net present value (NPV).

Title: Week 7 Productivity management

(7th Week)

Exercise 7.1 (Graded – 10 Marks)

Title: Week 8: Capacity management.

(8th Week)

Exercise 8.1

$$M = \frac{\left[Dp + \left(\frac{D}{Q}\right)s\right] product\ 1 + \left[Dp + \left(\frac{D}{Q}\right)s\right] product\ 2 + \cdots + \left[Dp + \left(\frac{D}{Q}\right)s\right] product\ n}{N[1 - \left(\frac{C}{100}\right)}$$

$$= \frac{\left[3000 * 0.5 + \left(\frac{3000}{15}\right)0.3\right] + \left[4000 * 0.6 + \left(\frac{4000}{20}\right)0.40\right]}{250 * 7\ [1 - \left(\frac{20}{100}\right)]}$$

$$= \frac{(1500 + 60) + (2400 + 80)}{250 * 5.6}$$

= 2.89

Based on the given assumptions the copy centre needs 3 Machines

Title: Proposals evaluation through relevant costing
(9th Week)

Exercise 9.1

Variable cost per unit
= (Material + Variable manufacturing overhead + Direct labor)
= 7 + 6 + 4
= € 17/unit

Description	Calculations	Total
Relevant production cost	(variable*units) = 17*1800	€ 30600
Relevant proposal cost for buying	(Offer price* units) = 18*1800	€ 32400

Answers
30600 – 32400 = - €1,800

- If Colemans buys the components instead of making it, the income decreases by € 1,800.
- Hence, Colemans should continue making these components instead of buy it and should reject the supplier proposal

Title: Production evaluation through budgeting.

(10th Week)

Exercise 10.1 (Graded)

Title: Linear Programming

(11th Week)

Exercise 11.1

Lean synchronization is an approach to operations which tries to meet demand instantaneously with perfect quality and no waste. It is an approach which differs from traditional operations practices insomuch as it stresses waste elimination and fast throughput, both of which contribute to low inventories. The ability to deliver just in time not only saves working capital but also has a significant impact on the ability of an operation to improve its intrinsic efficiency. The lean synchronization philosophy can be summarized as concerning three overlap- ping elements:

- The elimination of waste in all its forms,
- The inclusion of all staff of the operation in its improvement, and
- The idea that all improvement should be on a continuous basis.

The most significant part of the lean philosophy is its focus on the elimination of all forms of waste, defined as any activity that does not add value. Lean synchronization identifies seven types of waste that, together, form four barriers to achieving lean synchronization. They are: waste from irregular (non-streamlined) flow, waste from inexact supply, waste from inflexible response, and waste from variability.

Title: Value stream mapping with software application

(12th Week)

Exercise 12.1

The selected operation focuses on a university registration operation that take place annually. Currently the registrations are implemented only physically, by the students. Currently, for a student in order to be able to register should pay him or her fees first, activity that is available only on campus. Furthermore, the students should obtain the previous year transcripts from the administration of each department. The recommended improvement that is capture on the future stage map, is the automation of this operation.

Current stage Map

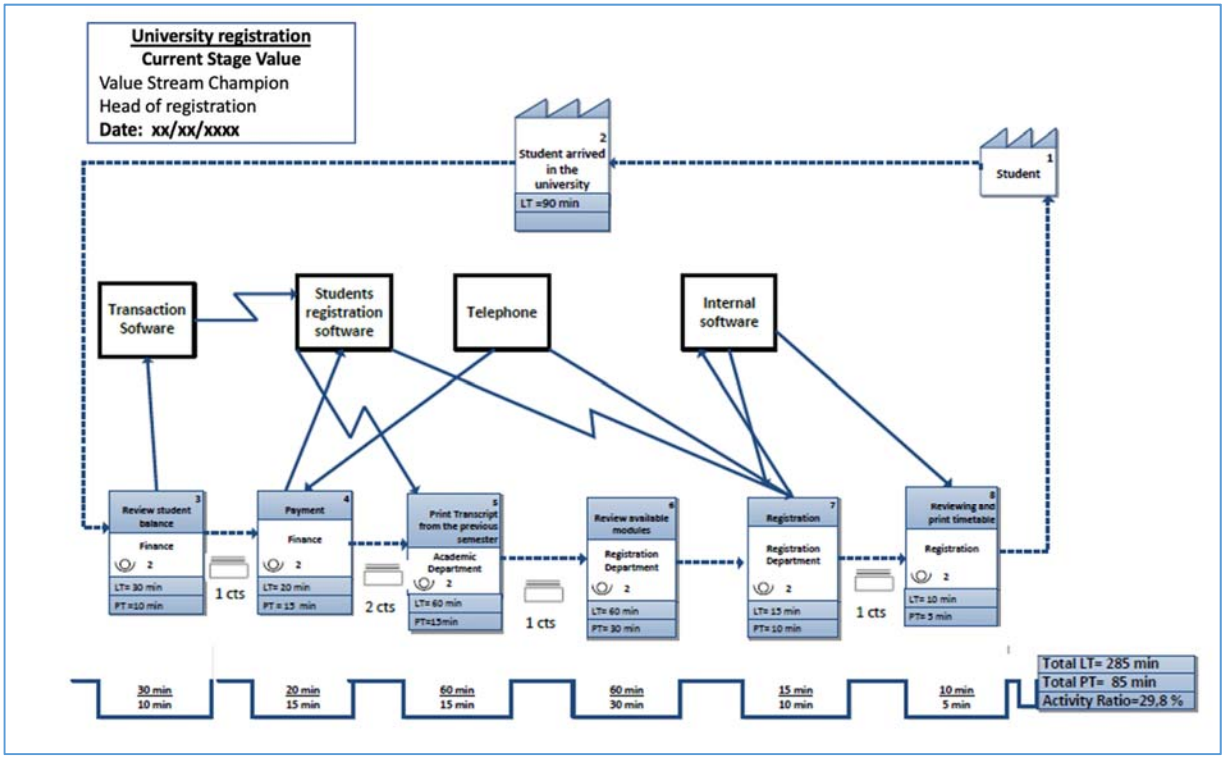
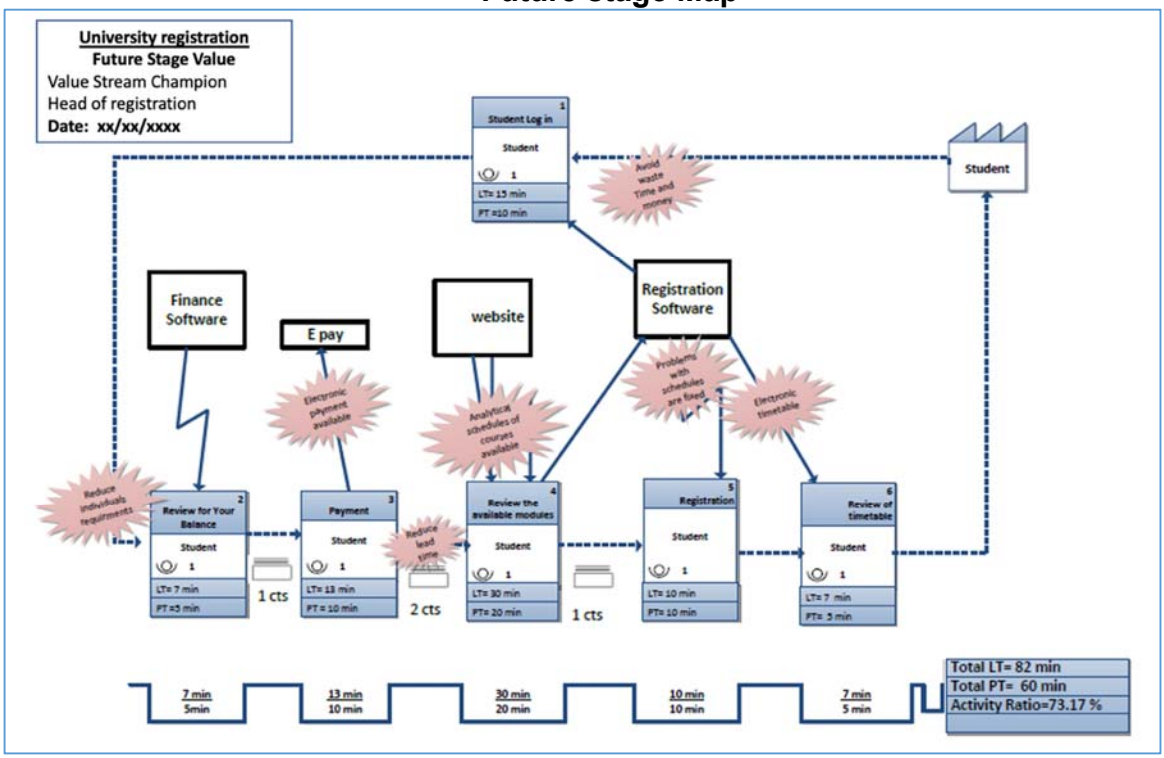


Table 1: Process Waste		
Phase	**Resource of waste**	**Explanation**
2	Unnecessary transport	The students need to travel to the university
2,3,5,6	Waiting	The students face a long waiting line because of the increasing demand
5	Unnecessary movement (Transport)	The students must go to the department to obtain their transcript from the previous semester
3	Unnecessary movement (Transport)	The students must go to the financial department because there is no e-pay service available
6,7,8	Unexploited Employee creativity (Motion)	With high volume and standard processes the employees cannot take initiatives for anything
7	Defects	Many mistakes in the structure of the course due to the pressure the employees face

Future stage Map



Metric	Current stage	Future Stage	Improvement
Lead time (L/T)	285 minutes	82 minutes	**81,3%**
Process Time (P/T)	85 minutes	60 minutes	**29,5%**
Activity Ratio	29,8%	73,17%	**43.37%**

Exercise 12.2 (Graded- 25 marks)

Title: Quality management and Business Excellence frameworks

(13th Week)

Exercise 13.1

Total Quality Management (TQM) is an effective system for integrating the quality development, quality maintenance and quality improvement efforts of the various groups in an organization so as to enable production and service at the most economical levels which allow for full customer satisfaction. It is best through of as a philosophy that stresses the 'total' of TQM and puts quality at the heart of everything that is done by an operation. Total' in TQM means the following:

● meeting the needs and expectations of customers;

● covering all parts of the organization;

● including every person in the organization;

● examining all costs which are related to quality, and getting things 'right first time';

● developing the systems and procedures which support quality and improvement;

● developing a continuous process of improvement.

THE CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

European University Cyprus

FORM: 200.1.3

STUDY GUIDE

COURSE: Supply Chain Management and Logistics

Course Information

Institution	**European University Cyprus**		
Programme of Study	Business Studies (Bachelor)		
Course	MGD345	Supply Chain Management and Logistics	
Level	Undergraduate ☒	Postgraduate (Master) ☐	
Language of Instruction	English		
Course Type	Compulsory ☐	Elective ☒	
Number of Teleconferences	Total: Up to 6	Face to Face: -	Teleconferences: Up to 6
Number of Assignments	4 Graded Assignments		
Assessment	Assignments	Final Examination	
	50 %	50 %	
Number of ECTS Credits	6		

Study Guide drafted by:	Kyriakos Christofi
Editing and Final Approval of Study Guide by:	

CONTENTS

1ST TELECONFERENCE/GROUP CONSULTATION MEETING: INTRODUCTION

Programme Presentation

- **Short description & objectives**

The Distance Learning Business Studies program is specifically designed to be very flexible, giving the opportunity to students to choose two or more areas of concentration rather than concentrate on only one. It provides students with theoretical as well as practical business skills in accounting, finance, human resource management strategy, management and marketing, as well as offering insight into different business sectors and their broader economic and regulatory environments. The program also offers students the chance to develop their own areas of study that meet their specific career goals not covered by other majors.

GENERAL OBJECTIVES:

- To develop the student's capacity to think, analyse and process information in an innovative and creative way;
- To develop an awareness, respect and appreciation of the social, moral and ethical values as the main principles of one's relationship towards others and to the community;
- To develop the students analytical, critical thinking, decision-making and communication competencies that will help promote their personal achievement and contribution to organizations;
- To build breath of perspective through the general education requirements and provide sufficient specialization to meet basic professional and career requirements;
- To provide the student with the necessary requirements for academic and/or career advancements.

SPECIFIC OBJECTIVES:

- To provide students with a foundation in Business Studies in terms of theory and practice;
- To allow students to choose two or three areas of concentration rather than the usual single major, and to offer students the opportunity to develop special programs of study that meet specific career goals not covered by other majors;
- The main attention is directed to the skills and knowledge required by the profession
- To assist the students in developing leadership, which can be used to motivate employees and also in reaching solutions to problems relating to Business enterprise

Presentation of the Course through the Study Guide

- **Short description & objectives**

Intensive competition in today's global markets, the introduction of products with ever-shorter product life cycles, the increasing customer awareness and hence increase customer expectations, forces business firms to focus attention on their supply chains.
There is a major evolution on the structure of supply chains, in the contemporary business environment where organizations shift from the traditional structure towards the development of supply chain networks.

Therefore, the purpose of this course is to provide a thorough understanding, in the concepts of supply chain and logistics management.
The objectives of the course are:

- To highlight the strategic importance of supply chain management.
- To examine the value of logistics in supply chain.
- To embolism the students with applicable contemporary tools and techniques used in supply chain and logistics management.
- To examine the contemporary nature of supply chain management as are evolving through the global competition and integrated markets.

Learning Outcomes of the course unit:
Upon successful completion of this course students should be able to:

- Classify the firm's supply environment
- Evaluate means of transportation performance
- Appraise alternative proposals for supply chain configurations in real business context
- Evaluate the main supply chain drivers.
- Calculate future demand and compare it with actual results
- Evaluate the role of sustainability in the supply chain network
- Analyze the evolving nature of supply chains
- Evaluate the role of emerging technologies in supply chain networks

Recommended student work time
Approximately 5 hours (including the study of the Guide)

TITLE: Introduction to supply chain

(1st Week)

Summary

Supply chain involved all parties that contribute either directly or indirectly in fulling costumer request. It characterizes by constantly flow of information, products and funds and successful supply chains require many decisions related in these flows. Decisions are classified to three phases depending on the time horizon of their scope and effects.

Introductory Remarks

A supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. The supply chain includes not only the manufacturer and suppliers, but also transporters, warehouses, retailers, and even customers themselves. Furthermore, a supply chain is dynamic and involves the constant flow of:

- Information.
- Product.
- Funds.

For instance, a manufacturer provides the product, as well as pricing and availability information, to the customer. The customer transfers funds to the manufacturer. The manufacturer conveys point-of-sales data and replenishment orders to the warehouse or distributor, which transfers the replenishment order via trucks back to the store, and transfers funds to the distributor after the replenishment. The distributor also provides pricing information and sends delivery schedules to the manufacturer. These flows often occur in both directions and may be managed by one of the stages or an intermediary and there is a close connection between the design and management of supply chain flows (product, information, and funds) and the success of a supply chain.

Successful supply chain management requires many decisions relating to the flow of information, product, and funds. These decisions fall into three categories or phases, depending on the frequency of each decision and the time frame during which a decision phase has an impact. These categories are:

Supply chain strategy or design: An organization decides how to structure the supply chain over the next several years

Supply chain planning: Decisions made during this phase, with the time frame to be considered for a quarter to a year.

Supply chain operation: The time horizon under this phase is weekly or daily

Aims/Objectives

The aim of this session is to introduce to the students the holistic nature of supply chain management, and to provide a general overview of objective of supply chain, and the flows and areas of decisions embedded on this concept.

Learning Outcomes

By the end of this session students should be able to:

- Describe the concept and the scope of supply chain
- Evaluate the flows embedded in supply chain
- Discuss the main decisions phases of developing supply chain.
- Evaluate and match an under-investigation decision with relevant decision phase

Key Words

Supply chain management	Supply Chain	Supply chain flows	Phases of decisions

Annotated Bibliography

- **Basic Sources/Material**

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities
Exercise 1.1 (non-graded)
Match the following quotes with their relevant phase of decision.

Quote
“We will open a new warehouse in Nicosia”
“We need a new distributor to satisfy the needs for the following months”
“These ten packages must be delivered by Friday”
“We can serve customers around Europe by delivering our goods via Airplane”
“Yesterday we had 10 more orders”

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Supply chain Drivers and evolving structure

(2nd Week)

Summary
The contemporary and dynamic business environment shapes the traditional structure of supply chains and require supply chain networks. Responsiveness versus efficiency in a major trade-off that manager must consider in supply chain decisions. This trade-off applies to the five major supply chain drivers.

Introductory Remarks

The contemporary and dynamic business environment shapes the traditional structure of supply chains. Specifically, from a vertical integrated supply chains which used to serve slow-moved mass markets, rapid change environment requires more flexible and responsive supply chains. These supply chains share the idea of an extended integrated networks, with additional participants such as product designers. However, for an effective supply chain, managers should take decisions that compromise the efficiency responsiveness trade-off among five areas that constitute the supply chain drivers. These drivers are:

Production: Refers to the capacity of a supply chain to make and store products. If factories and warehouses are built with a lot of excess capacity, they can be very flexible and respond quickly to wide swings in product demand.

Inventory: Inventory is spread throughout the supply chain and includes everything from raw material to work in process to finished goods that are held by the manufacturers, distributors, and retailers in a supply chain. Holding large amounts of inventory allows a company or an entire supply chain to be very responsive to fluctuations demand. However, the creation and storage of inventory is a cost and to achieve high levels of efficiency, the cost of inventory should be kept as low as possible.

Location: Location refers to the geographical site of supply chain facilities. It also includes the decisions related to which activities should be performed in each facility. The responsiveness versus efficiency tradeoff here is the decision whether to centralize activities in fewer locations to gain economies of scale and efficiency, or to decentralize activities in many locations close to customers and suppliers in order for operations to be more responsive.

Transportation: This refers to the movement of everything from raw material to finished goods between different facilities in a supply chain. In transportation the tradeoff between responsiveness and efficiency is manifested in the choice of transport mode. Fast modes of transport such as airplanes are very responsive but also more costly. Other factors are also applied but we will examine them in a different week specialized on transportation

Information: Information is the basis upon which to make decisions regarding the other four supply chain drivers. It is the connection between all of the activities and operations in a supply chain. To the extent that this connection is a strong one the companies in a supply chain will each be able to make good decisions for their own operations.

Aims/Objectives

The aim of the session is to explain the evolving structure of supply chains, including the expansion of the main participants. This week also aims to evaluate the responsiveness versus efficiency trade-off, and its application on the main supply chain drives

Learning Outcomes

By the end of this session, students should be able to:

- Evaluate the evolving structure of supply chains.
- Discuss the main participants in a supply chain
- Explain the main supply chain drivers
- Evaluate the efficiency versus responsiveness trade-off and its application on the supply chain drivers

Key Words

Supply-chain participants	Supply-chain drivers	Trade-off	Supply chain Networks

Annotated Bibliography

- **Basic Sources/Material**

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

- **Supplementary Sources/Material**

Hugos, M., (2011)., Essentials of supply chain management. John Wiley & Sons, Icl.

Self-Assessment Exercises/Activities

Exercise 2.1(non-graded)
Briefly explain the main advantages and disadvantages of safety inventory and how it is applied on the responsiveness versus efficiency tradeoff

Recommended number of work hours for the student
Approximately 9 hours

Title: Strategic fit between supply chain and corporate strategy

(3rd Week)

Summary

This session explains the role of strategic fit between supply chains and organizations' competitive strategy. It begins with an overview of the value chain, and through the examination of leading corporations discuss the main principles and of step of achieving strategic fit.

Introductory Remarks

A company's competitive strategy defines, relative to its competitors, the set of customer needs that it seeks to satisfy through its products and services. In the week, we will focus on this notion of fit and seek to answer how supply chains are developed and what are their ultimate objective based on the organization competitive strategy.

The alignment between supply chain operations and targets and corporate/competitive strategy is called strategic fit. Hence, strategic fit requires that both the competitive and supply chain strategies of a company have aligned goals. It refers to consistency between the customer priorities that the competitive strategy hopes to satisfy and the supply chain capabilities that the supply chain strategy aims to build. For a company to achieve strategic fit, it must accomplish the following:

1. The competitive strategy and all functional strategies must fit together to form a coordinated overall strategy. Each functional strategy must support other functional strategies and help a firm reach its competitive strategy goal.
2. The different functions in a company must appropriately structure their processes and resources to be able to execute these strategies successfully.
3. The design of the overall supply chain and the role of each stage must be aligned to support the supply chain strategy.

By examining the corporate strategy of real organizations based on their vision and mission statements, students will experience how strategic fit are achieved by leading organizations. In general, strategic fit follows three basic steps as follow:

First Step: Understanding the customer and supply chain uncertainty

Second Step: Understanding the supply chain capabilities

Third Step: Achieving strategic fit

Aims/Objectives

The aim of this session to provide a comprehensive explanation regarding the topic of achieving strategic fit by the examination of leading corporations and the exploration of their supply chain operations based on their strategic priorities.

Learning Outcomes

By the end of this session students should be able to:

- Explain why achieving strategic fit is critical to a company's overall success.
- Describe how a company achieves strategic fit between its supply chain strategy and its competitive strategy
- Discuss the importance of expanding the scope of strategic fit across the supply chain.

Key Words

Corporate Strategy	Supply chain strategy	Strategic fit	Value chain

Annotated Bibliography

- **Basic Sources/Material**

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities
Exercise 3.1 (non-graded)
Briefly Explain why achieving strategic fit is critical to a company's overall success and competitiveness

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Supply chain in global settings.

(4th Week)

Summary

This session discusses, the concept of globalization, and its effects in supply chains. One of the major effects of globalization is the integration of markets which briefly means monetary, labor, and costumer flow across geographical boundaries. Hence, there is great emphasis by the organizations on how can expand their supply chain at global levels. In this attempt, great attention should be given in numerous factors that affect expansion decisions.

Introductory Remarks

Global supply chains are dependent on the efficient and effective flow of commerce between and among the countries and regions of the world. There are numerous factors that can impact and influence the flow of global goods and services, especially economic and political factors. Additional factors such as sociocultural are also important to global supply chains.

The current more complex global economy means that there are more variables than the traditional factors of production that can provide advantages to countries and be a basis for global trade flows. Essential factors for economic growth and increased development of global trade flows include:

- Population growth and age distribution
- Urbanization
- Land and resources
- Economic integration
- Knowledge dissemination
- Labor mobility
- Financial flows and investment in infrastructure by public and/or private sources
- Faster communication systems

After the detail explanation of the above factors', we will examine the main barriers and potential opportunities, in competing in global environments and to we will evaluate key areas of decision regarding a possible of a global expansion of an organizations supply chain. For instance, the public infrastructure of an under-investigation country is a key element for assessment. Furthermore, export barriers and cultural differences are also important factors that needs investigation

Aims/Objectives

The aim of this week is to explain to the students the effects of globalization and to highlight the nature of the contemporary integrated markets. Furthermore, this session

also aims to familiarize the students with the key elements that needs investigation before a potential global expansion.

Learning Outcomes

By the end of this week students should be able to:

- Explain the rationale for global trade flows
- Discuss the role and importance of the factors of production in providing a trade advantage to countries for participating in global trade
- Explain the characteristics of globalization and its effect on supply chains
- Identify and describe key investigation areas prior a potential global expansion

Key Words

Globalization	Global Supply Chain	Integrated markets	Trade

Annotated Bibliography

- **Basic Sources/Material**

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

- **Supplementary Sources/Material**

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

Self-Assessment Exercises/Activities
Exercise 4.1(non-graded)

The *"Two Barbers"* is a small business located in Greece. Visit the company's website in the following link https://www.thetwobarbers.com/hair-products-en and briefly explain how globalization affect its operations and supply chain.

Recommended number of work hours for the student

Approximately 9 hours

TITLE: The role of logistics in supply chain networks

(5th Week)

Summary

The term and value of logistics has gaining the momentum in organizations and academic literature. Logistics covers a wide range of activities within organization and can be a valuable component for other functional areas of organization such as marketing and production. Through various applications this week explores the value added of logistics in respect to time, quantity, procession.

Introductory Remarks

The term logistics has become much more widely recognized by the general public. In the last 20 years, television, radio, and print advertising have lauded the importance of logistics. Leading transportation corporations, such as UPS, DHL, and FedEx, frequently refer to themselves as logistics companies and stress the importance of their service to overall logistics success.

Supply chain management requires a more dynamic, collaborative, and coordinated flow of materials and goods through the logistics systems of all the organizations in the network. Hence with the lens of business perspective, logistics refers to that part of the supply chain that plans, implements, and controls the efficient, effective, flow and storage of goods, services, and related information from point of origin to point of consumption with ultimate objective being to meet customer requirements.
Logistics can provide various types of economic utilities that can add value to the supply chain and to the overall product or service. These types of utilities can be classified as

Place Utility Logistics extends the physical boundaries of the market area, thus adding economic value to the goods

Time Utility Logistics creates time utility through proper inventory maintenance, the strategic location of goods and services, and transportation.

Quantity Utility: Competition requires that products not only be delivered on time to the correct destination but also be delivered in the correct quantities to minimize inventory cost and prevent stockouts. The role of logistics is to deliver products at the right time, to the right pace, and in the right quantities to add utility and economic value to a product

Procession Utility: Possession utility is primarily created through the basic marketing activities related to the promotion and sales of products and service. While this type of utility can be approach as a marketing purpose, marketing also depends on logistics, since possession utility cannot be accomplished unless time, place, and quantity utilities are provided.

Therefore, logistics take a holistic approach within organizations, and are responsible to perform a wide range of activities. Furthermore, logistics can be approach with a macro perspective which refers to their contribution on the economic development and micro perspective.

Aims/Objectives

This session aims to familiarize students with the concept of logistics based on various perspectives, to provide an in-depth understanding of the logistics scope, and to explain the value of logistics on the supply networks, organizations and economies.

Learning Outcomes

By the end of this chapter the students should be able to:

- Evaluate the contributions of logistics in improving organizational supply chains.
- Explain the value-added roles of logistics on both a macro and micro level.
- Examine the relationship between logistics and other important functional areas in an organization
- Analyze logistics systems from several different perspectives to meet different objectives.

Key Words

Logistics	Logistics Management	Micro view of logistics	Macro view of logistics

Annotated Bibliography

- **Basic Sources/Material**

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities
Exercise 5.1 (Non-Graded)

Briefly explain the micro level of logistics, and their importance in the organizations' competitiveness.

Recommended number of work hours for the student
Approximately 9 hours

Week 6 Distribution networks.

(6th Week)

Summary

This week focuses on the importance of distribution in meeting customer needs across the supply chain. It examines the role of distribution in supply chains, the main tradeoff of distribution, highlights the main distribution challenges and explores the main distribution performance metrics.

Introductory Remarks

Distribution in the twenty-first century focuses on the continuous flows of product to fulfill customer requirements at the lowest possible cost. No longer focused on long-term storage of inventory in static warehouses, distribution operations provide a variety of capabilities for the supply chain.

In a perfect world, supply and demand would be balanced, with desired products being assembled when needed and delivered directly to the point of use. However, this goal is not feasible for most consumer products because production and consumption are not perfectly synchronized, transportation of individual units is very costly, and coordination of activities between such a large number of origin and destination points is complex. To overcome such issues, distribution operations, distribution centers, warehouses, cross docks, and retail stores are established within the supply chain.

Distribution facilities can provide numerous services, depending on the requirements of the supply chain. In traditional distribution operations, four primary functions are carried out namely accumulation, sortation, allocation, and assortment.

A crucial element for an effective distribution management is the understanding of the main trade-offs faces in distribution networks. These trade-offs can be classify in three main categories as:

- Warehouse–Transportation Tradeoff
- Warehouse–Inventory Tradeoff
- Warehouse–Service Tradeoff

Understanding the role of distribution in the supply chain is the foundation of effective fulfilment processes. The next step is to develop distribution strategies that are tailored to the products being handled, customer requirements, and available internal expertise and resources. A series of interrelated distribution planning decisions must be made to ensure that the strategy can be executed at a reasonable cost while supporting supply chain demands. These planning issues considers three main components. First capacity requirements, second network design issues and third facility considerations.

Aims/Objectives

The aim of this session is to provide a comprehensive explanation around the topic of distribution. Furthermore, this session aims to familiarize students with the added value of distributions networks, to explore the main challenges face at distribution networks and to provide performance evaluation indicators and techniques

Learning Outcomes

By the end of the session students should be able to:

- Discuss the strategic value-adding role distribution plays in the supply chain.
- Evaluate the tradeoffs between distribution and other supply chain functions.
- Apply productivity and quality metrics to analyze fulfillment performance.
- Evaluate fulfillment strategies and distribution methods.

Key Words

Distribution Network	Distribution planning	Distribution Tradeoff	Distribution performance evaluation

Annotated Bibliography

- **Basic Sources/Material**

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities
Exercise 6.1 (Graded- 5 points)

Kyknos company is facing challenges in its distribution operations. The company's manager calls you, as expert on supply chain and logistics management to evaluate the logistics performance. After an evaluation of the last two months operation, you have the following data.

FULFILLMENT DATA	SEPTEMBER	AUGUST
Customer Orders Processed	**52,000**	**45,000**

Units Ordered	**290,000**	**190,000**
Units Shipped	**270,000**	**185,000**
Correct Units Shipped	**250,000**	**178,000**
Correct Customer Invoices	**47,000**	**39,500**
Orders Ready by Deadline	**48,000**	**38,200**
Total Labor Hours Paid	**1,900**	**1,500**

Requirements

a) Calculate relevant distribution KPIs (per month)
b) Calculate the Perfect order index (per moth)
c) Compare the distribution performance with the following targets.

KPI	Target
Unit Fill Rate	94%
Fulfillment Accuracy	93%
Document Accuracy	92%
On-Time Dispatch	92%
Productivity	120 units shipped per labor hour

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Week 7 Modes of transportation and performance indicators

(7h Week)

Summary
Through transportation, organizations can extend the reach of their supply chains beyond local supplier capabilities and market demand. This week emphasizes on a detailed explanation on the main modes of transportation and familiarize students with performance evaluation techniques of transportation.

Introductory Remarks

Transportation involves the movement of people and goods between origin and destination points. As individuals, we rely on transportation to get to work, school, and home, to bring us the products that we need, and to increase our access to society. From a business standpoint, the transportation system links geographically separated partners and facilities in a company's supply chain. As we explain up to this week, a supply chain is a network of organizations that are separated by distance and time.

Transportation provides the critical links between these organizations, permitting goods to flow between their facilities. Through transportation, organizations can extend the reach of their supply chains beyond local supplier capabilities and market demand. With efficient, effective transportation capabilities, organizations can build global supply chains that leverage low-cost sourcing opportunities and allow them to compete in new markets. The main modes of transportation can be classified as follow:

- Motor Carriers
- Rails
- Airplanes
- Pipelines
- Ships

For find the optimal mode of transportation and it is suited to the supply chain strategy, organizations need to examine the nature of the product and the desired trade-off between efficiently and time of delivery. For instance, ship, is cheaper mode of transportation in with airplane, and consequently allows greater efficiency, but delivery times are longer.

The performance evaluation of a transportation mode (or of an individual distributor) is also an important element consider in transportation. Organizations should evaluate constantly the performance of transportations using key performance indicators that reflect the costumer experience. Through scorecards with defined KPI's students will explore such evaluation techniques that capture holistically the outcomes of transportation

Aims/Objectives

The aim of this session to provide to students an in-depth undertaking around the topic of transportation and to provide to the students, application techniques that evaluate the transportation performance holistically, in a way that capture the costumer experience.

Learning Outcomes

By the end of the session students should be able to:

- Explain the role transportation plays in the supply chain.
- Discuss the service and cost characteristics of the primary transportation modes.
- Discuss the key activities involved in transportation planning and execution.
- Use service and cost metrics to analyze transportation performance.

Key Words

Modes of transportation	Key Performance Indicators	Transportation Activities	Performance Evaluation

Annotated Bibliography

- **Basic Sources/Material**

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

- **Supplementary Sources/Material**

None

Self-Assessment Exercises/Activities
Exercise 7.1 (Graded- 5 Marks)

ABC Custom B BQs, a manufacturer of outdoor g rills, uses three primary carriers to move grills from its factory to home improvement retailers. The logistics manager, wants to evaluate the performance of the three carriers, and collected data for the following metrics over a three-month period.

PERFORMANCE CRITERIA	Carrier A	Carrier B	Carrier C
On-time delivery	99.50%	98.70%	98.20%
Loads with damage claims	0.90%	1.60%	0.40%
Customer satisfaction ratings	4.6	4.2	3.9
Billing accuracy	99.30%	99.60%	98.20%
Loads rejected	1.30%	2.10%	0.90%

The manager developed the following scorecard to help him/her compare the carriers performance.

PERFORMANCE CRITERIA	WEIGHT FACTOR	PERFORMANCE EVALUATION	POTENTIAL SCORE
On-time delivery	30	>98.5% = 5 96.01−98.5% = 4 93−96% = 2 <93% = 0	150
Loads with damage claims	30	<0.5% = 5 0.5−1% = 4 1.01−2% = 2 >2% = 0	150
Customer satisfaction ratings	20	>4.5 = 5 4.01−4.5 = 4 3−4 = 2 <3 = 0	100
Billing accuracy	10	>99% = 5 97.01−99% = 4 95−97% = 2 <95% = 0	50
Loads rejected	10	<1% = 5 1%−2% = 4 2.01−3% = 2 >3% = 0	50
Maximum Score			**500**

Requirements

1. Calculate the performance score for each of the three carriers.
2. Which carrier would you recommend that the manager consider for elimination? Why?

Recommended number of work hours for the student

Approximately 9 hours

TITLE: Demand Forecasting

(8th Week)

Summary

Forecasting is a powerful tool in supply chain management. This week introduces the main techniques used for demand forecasting and discusses applications and criteria for the evaluation of the forecast accuracy

Introductory Remarks

Forecasting demand is a major component in supply chain management. The common strategy that is used in supply chain management is through repeated observations of demand for a product or a service. This strategy is known as time series

Time-series analysis is a statistical approach that relies heavily on historical demand data to project the future size of demand and recognizes trends and seasonal patterns These methods are based on the assumption that the dependent variable's past pattern will continue in the future. Time series analysis identifies the underlying, patterns of demand that combine to produce an observed historical pattern of the dependent variable and then develops a model to replicate it. This week examines the following time series techniques.

Simple Moving Averages
The simple moving average method is used to estimate the average of a demand time series and thereby remove the effects of random fluctuation. It is most useful when demand has no pronounced trend or seasonal influences. Applying a moving average model simply involves calculating the average demand for the η most recent time periods and using it as the forecast for the next time period.

Weighted Moving Averages
In the simple moving average method, each demand has the same weight in the average. In the weighted moving average method, each historical demand in the average can have its own weight. The sum of the weights equals 1.0.

Exponential Smoothing.
The exponential smoothing is a sophisticated method that calculates the average of a time series by giving recent demands more weight than earlier demands. It is the most frequently used formal forecasting method because of its simplicity and the small amount of data needed to support it. Exponential smoothing requires only three items of data: the last period's forecast; the demand for this period; and a smoothing parameter, alpha a, which has a value between 0 and 1.0. To obtain an exponentially smoothed forecast we simply calculate a weighted average of the most recent demand and the forecast calculated last period.

Another crucial component of forecasting is their accuracy. Hence, after the explanation of each technique mentioned above, this week explains the main calculations and indexes that used to capture the forecasting error.

Aims/Objectives

This week aims to familiarize students with the main demand forecasting techniques used in supply chain. Furthermore, this session aims to provide to the student the analytical techniques to evaluate the forecasting accuracy

Learning Outcomes

By the end of the session students should be able to:

- Discuss the growing need for effective demand management as part of an organization's overall logistics and supply chain expertise.
- Apply timeseries techniques to calculate future demand
- Calculate and evaluate the accuracy of a forecast.

Key Words

Timeseries	Demand Forecasting	Simple Moving Averages	Weighted Moving Averages	Exponential Smoothing.	Error

Annotated Bibliography

Basic Sources/Material

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

Supplementary Sources/Material

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

Self-Assessment Exercises/Activities

Exercise 8.1(Graded-5 Marks)

This is a team-based exercise. (Teams of 3)

A manager is struggling to forecast the demand of his/her organization products for the upcoming year and invite you to perform this task. You, as experts in supply chain and logistics demand the previous year demand to perform your calculations. The manager came with the following information.

Month	Demand
September 2018	8,500
October 2018	11,619
November 2018	7,500
December 2018	8,300
January 2019	10,000
February 2019	11,850
March 2019	9,750
April 2019	11,250
May 2019	9,220
June 2019	9,460
July 2019	10,702
August 2019	11,300
September 2019	10,500
October 2019	12,000
November 2019	11,950
December 2019	11,520

Requirements:

1) Forecast the four-period monthly demand for 2020 by using the following techniques

- Simple Moving Average
- Weighted Moving Average based one the following weights

t-1	0.5
t-2	0.3
t-3	0.15
t-4	0.05

- Exponential Smoothing Moving Average with an initial forecast assumption of 10,300 and $\alpha=0.6$

2) By the end of the year, you demand the actual results of the manager in order to evaluate the accuracy of each technique that you used. The manager shares with you the following results.

Month	Demand
January	8,750
February	8,765
March	9,231
April	10,664
May	10,200
June	9,700
July	10,166
August	10,650
September	12,000
October	11,200
November	11,570
December	11,100

Provide a summary that evaluates the accuracy of the forecast per technique. The summary should include the following indicators:

- The mean absolute percent error (MAPE)
- Tracking signal
- Mean squared error
- Mean absolute deviation
- Cumulative sum of forecast errors

Recommended number of work hours for the student
Approximately 9 hours

TITLE: Demand Management

(9th Week)

Summary

Forecasting is powerful tool to estimate the future need for capacity. However, an effective demand management strategy, requires balancing the supply chain capacity and demand. This week explain various strategies that are used for capacity-demand alignment and explain the main framework for an effective coordination across the organization

Introductory Remarks

Forecasting includes powerful tools to estimate the future demand. However, as we saw in the previous week it is very difficult to estimate the demand accuracy. The ultimate objective of organizations is to align their capacity with demand. Capacity refers to the number units that a system is capable to supply to its customers in a given period of time. In general, there are three main strategies/plans for an effective capacity-demand alignment

Level capacity plan: In a level capacity plan, the capacity is fixed throughout the planning period, regardless of the fluctuations in forecast demand. This means that the same number of staff or machines operate the same processes and should therefore be capable of producing the same aggregate output in each period.

Chase demand plan: Chase demand plans attempt to match capacity closely to the varying levels of forecast demand. This is much more difficult to achieve than a level capacity plan, so for this reason, pure chase demand plans are unlikely to appeal to organizations producing standard, nonperishable products, especially where their operations are capital-intensive.

Demand management: The objective of demand management is to change the pattern of demand to bring it closer to available capacity, usually by transferring customer demand from peak periods to quiet periods. This can be achieved mainly with price differences.

However, both capacity and demand plans and forecasts that explained during the previous week, requires coordination across the organization. One of the most recent initiatives aimed at achieving true supply chain integration is collaborative planning, forecasting, and replenishment (CPFR). CPFR has become recognized as a breakthrough business model for planning, forecasting, and replenishment. Using this approach, retailers, distributors, and manufacturers can utilize available Internet-based technologies to collaborate on operational planning through execution. Transportation

providers have now been included with the concept of collaborative transportation management (CTM)

Aims/Objectives

The aim of this session is to explain to the students the concept of capacity-demand alignment, and to explore the main strategies that organization can achieve it. Furthermore, this session aims to familiarize the students with integration strategies, that used for a better coordination and better demand management in supply chain networks.

Learning Outcomes

By the end of the session students should be able to:

- To critically explain the value of capacity-demand alignment
- To discuss the main strategies used to align capacity and demand
- Discuss the growing need for effective demand management as part of an organization's overall logistics and supply chain expertise.
- Evaluate contemporary techniques and models used for an effective demand management

Key Words

Capacity-demand Alignment	Demand Management	CPRF Model	Sales and operations planning

Annotated Bibliography

Basic Sources/Material

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

Supplementary Sources/Material

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

Self-Assessment Exercises/Activities
Exercise 9.1 (non-graded)

Critically discuss what are some of the logistical problems that may arise when supply and demand for a product are not aligned properly.

TITLE: Managing Inventory

(10th Week)

Summary

This session provides an in-depth discussion around the topic of inventory management. It explains the crucial role of inventories in the economy, evaluates various techniques to calculate the optimal level of inventories within an organization, and discuss a range of approaches to inventory management.

Introductory Remarks

The effective management of inventories in the supply chain is one of the key factors for success in any organization. Inventory as an asset on the balance sheet and as a variable expense on the income statement has taken on greater importance as organizations attempt to more effectively manage assets and working capital. However, inventory takes on added importance because of its direct impacts on service levels. As such, inventory management has taken a strategic position in many firms today. Inventory plays a dual role in organizations and it impacts the cost of goods sold as well as supporting order fulfillment (customer service). This week evaluates the following concepts and their applications

Batching Economies or Cycle Stocks Batching economies or cycle stocks usually arise from three sources—procurement, production, and/or transportation. Scale economies are often associated with all three, which can result in the accumulation of inventory that will not be used or sold immediately.

Uncertainty and Safety Stocks: All organizations are faced with uncertainty. Trade-off analysis is appropriate and can be accomplished using the appropriate tools to assess the risk and measure the inventory cost

Time/In-Transit and Work-in-Process Stocks: Refers to the time associated with transportation (e.g., supplier to manufacturing plant) and with the manufacture or assembly of a complex product means that even while goods are in motion, an inventory cost is associated with the time period

Seasonal Stocks: Seasonality can occur in the supply of raw materials, in the demand for finished product, or in both. Organizations that are faced with seasonality issues are constantly challenged when determining how much inventory to accumulate.

Inventory Cost: Inventory costs are important for three reasons. First, inventory costs represent a significant component of logistics costs in many organizations. Second, the inventory levels that an organization maintains at nodes in its logistics network will affect the level of service the organization can offer its customers. Third, cost trade-off

decisions in logistics frequently depend on and ultimately impact inventory carrying costs.

Additional Approaches to Inventory Management: The interest in reducing inventory levels along the supply chain is indicative of the importance of inventory as a cost of doing business as for many, inventory is the first or second largest asset on the balance sheet. Firms can reduce their costs of doing business and improve their return on investment or assets (ROI/ROA) by decreasing inventory levels as long as service levels are met when decreasing inventories. There are several approaches to inventory management which will be examined: JIT, MRP, and DRP.

Aims/Objectives

The aim of this session is to provide an in-depth understanding to inventory management, and to familiarize the students with the main approaches, tools and applications used in inventory management

Learning Outcomes

By the end of the session students should be able to:

- Appreciate the role and importance of inventory in the economy.
- Discuss the major reasons for carrying inventory.
- Evaluate the fundamental differences among approaches to managing inventory.
- Explain how inventory items can be classified.
- Evaluate alternative approaches to managing inventory—just-in-time (JIT), materials requirement planning (MRP), distribution requirements planning (DRP), and vendor-managed inventory (VMI).

Key Words

Inventory	Inventory Management	Seasonality	Cost of Inventory

Annotated Bibliography

- **Basic Sources/Material**

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

- **Supplementary Sources/Material**

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

Self-Assessment Exercises/Activities
Exercise 10.1 (non-graded)
Critically discuss what are push and pull systems, and name at least one inventory management system that is a push or pull system.

Recommended number of work hours for the student
Approximately 9 hours

Week 11 Information technology and supply chain.

(11th Week)

Summary

Technological advancements can increase the effectiveness of supply chain. At the same time bring several challenges that organizations must deal with. This session explains the valuable role of information technology on supply chains, and supply chain management, explores various systems used by leading organizations and evaluates the main challenges of adopting them.

Introductory Remarks

Knowledge is essential for supply chain success. Information, along with materials and money, must readily flow across the supply chain to enable the planning, execution, and evaluation of key functions. Existing supply chain information technologies support timely, cost efficient sharing of information between suppliers, manufacturers, intermediaries, logistics services providers, and customers. The changing nature of supply chains underlies the need for information and the investment in technology.

There are three principles supply chain information requirements that support effective decision-making. First, the information in a system must meet quality standards to support fact-based decision making. Second, the information must readily flow within and between organizations. Third, the information must support multiple types of supply chain decisions.

Furthermore, as supply chains grow increasingly complex, organizations need technology to help them thrive. Managing global relationships, collaborating with logistics service providers, and serving omnichannel consumers requires advanced information systems functionality. That is, information systems must support cross-chain visibility, agility, velocity, synchronization, adaptability, segmentation, and optimization.

Briefly listed here such systems and applications that provide critical links between supply chain processes, the organization, and external stakeholders. Collectively, they create a holistic view of the supply chain.

Enterprise Resource Planning (ERP): ERP systems incorporate internal and external systems into a single unified solution that spans the enterprise

Supplier Relationship Management (SRM): SRM is a controlled and systematic approach to managing an organization's sourcing activities for goods and services.

Customer Relationship Management: Customer relationship management (CRM) focuses on the practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the relationship lifecycle.

Finally, to achieve success, supply chain managers must effectively leverage current and emerging technologies. Many emergent technologies such as internet of things (IoT), artificial intelligence and mobile connectivity have gaining momentum, and while they can be very beneficial for an effective supply chain, they need careful examinations to avoid any problem (such as security issues) that may arise.

Aims/Objectives

The aim of this session is to provide a comprehensive explanation on how information technology contributes to supply chains, and supply chain management. It is also aims to explain the main challenges of evaluating, sourcing, and integrated such technologies to the existing supply chains.

Learning Outcomes

By the end of the session the students should be able to:

- Evaluate the importance of information to supply chain management.
- Discuss information requirements in the supply chain.
- Explain the capabilities of an integrated supply chain information system
- Evaluate the technological innovations that are influencing supply chain management.

Key Words

Information Technology	Technological Innovations	Integration	Internet of things (IoT)

Annotated Bibliography

Basic Sources/Material

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

Supplementary Sources/Material

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

Self-Assessment Exercises/Activities
Exercise 11.1 (non-graded)

Critically discuss the role of enterprise resource planning systems in supply chain management

Recommended number of work hours for the student
Approximately 9 hours

Week 12 Sustainability and supply chain

(12th Week)

Summary

Sustainability has become a key priority in the design and operation of supply chains in the twenty-first century. A focus on sustainability allows a supply chain to better serve more environmentally conscious customers while often improving supply chain performance. This session explores the importance of sustainability, highlights some challenges to designing and operating more sustainable supply chains, and evaluate the role of different supply chain drivers in improving sustainability.

Introductory Remarks

The health and survival of every supply chain and every individual depend on the health of the surrounding world. It is thus important to expand the goal of a supply chain beyond the interests of its participants (which the supply chain surplus represents) to others that may be affected by supply chain decisions. It is in this context that the twenty-first century has seen a growing focus on sustainability. The Brundtland Commission of the United Nations defined sustainable development as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*

The focus on sustainability has increased as the economies in large countries such as Brazil, China, and India have grown. On the one hand, the growth of emerging markets is improving global living standards in a way that perhaps has not happened before in human history. On the other hand, this growth puts pressure on resources and the environment in a way that has also never happened. It has become increasingly clear that if supply chains do not become more sustainable than they have been in the past, the world's resources and environment will not be able to maintain this level of growth. The factors driving an increased focus on supply chain sustainability can be divided into three distinct categories:

- Reducing risk and improving the financial performance of the supply chain
- Community pressures and government mandates
- Attracting customers that value sustainability

This week explores the overall concept of sustainability and evaluates its implications though practical cases. Sustainable leading corporations not only concerns sustainability in their operations and supply chains, but the recent years have developed sustainability policies that are integrated in their overall strategies and directions.

Aims/Objectives

The aim of this session is to explain the concept of sustainability, and to evaluate how leading corporation integrated this concept in their strategies and supply chains.

Learning Outcomes

By the end of the session students should be able to:

- Evaluate the importance of sustainability in a supply chain
- Describe key dimensions of sustainability for a supply chain.
- Understand the role of incentives for successful sustainability efforts.
- Explain how corporation integrate sustainability policies in their supply chains

Key Words

Sustainability	Sustainable Development	Pillars of sustainability	Sustainable strategies

Annotated Bibliography

Basic Sources/Material

Chopra, S., and Meindl, P., (2019), Supply Chain Management: Strategy, Planning and Operation. Pearson Education

Supplementary Sources/Material

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

Self-Assessment Exercises/Activities
Exercise 12.1
Briefly, Describe the importance of sustainability, and evaluate key dimensions of sustainability for a supply chain.

Recommended number of work hours for the student
Approximately 9 hours

Exercise 12.2 (Graded – 35 marks)

This coursework is a team-based case analysis. Hence, in teams of 4 the student will proceed with the following assignment.

Select a real organization and proceed with the following:

A) Provide an overview of the organization
B) Describe its main supply chain network
C) Evaluate how the organization competes in global settings and how supply chain networks contribute to this attempt.
D) Evaluate the main strategies that are followed by the organization to prevent any misalignment between capacity and demand.
E) Describe how organization manage/integrate information technology in its supply chain
F) Evaluate how the organization approach the concept of sustainability.
G) Provide your recommendations for the future

Note
You can access archive data that includes both qualitative reports (e.g., annual reports) and financial data from the S&P Capital IQ provided by the university. The relevant link and instructions on how you can access as a European University student are uploaded to the platform.

Specifications
Word Limit: 3500 words
Referencing style: Harvard referencing style.

Recommended number of work hours for the student
Approximately 20 hours

TITLE: Strategic Challenges and Change for Supply Chains

(13th Week)

Summary

This session provides a critical summarize of the module. It first describes the enduring principles of supply chain and alignment them with the contemporary business environment settings. Secondly it describes contemporary and emergent concept in supply chain and evaluate their potentials and challenges

Introductory Remarks

This session serves as a capstone to the overall module and consist of two main parts. First it describes seven key principles of supply chain management, ones that have been proven to have a lasting value, with main focus being on updating students understanding of these principles to align with today's supply chain issues and challenges. The seven principles are briefly summarizing as:

Principle 1: Segment Customers Based on Service Needs: Suggests a departure from traditional approaches to customer segmentation based on industry, product, or trade channel to an approach that segments customers based on logistics and supply chain needs

Principle 2: Customize the Logistics Network Stresses the need for supply chains to be sufficiently adaptable, to be responsive to the needs of individual customer segments.

Principle 3: Listen to Signals of Market Demand and Plan Accordingly: This principle is a critical component of contemporary processes such as S&OP (sales and operations planning), IBP (integrated business planning), and IBM (integrated business management)

Principle 4: Differentiate Products Closer to the Customer: When successfully implemented, this principle helps to improve customer service via fewer stockouts and also takes significant inventory carrying cost out of the supply chain.

Principle 5: Source Strategically: The current interest in "strategic sourcing" is based on the need for a process that is of greater strategic value to the overall supply chain than the traditional functions of purchasing and procurement, and strategic sourcing process can be a great facilitator of improved functioning of supply chains.

Principle 6: Develop a Supply Chain-Wide Technology Strategy: The objective here is to utilize enterprise-wide systems to replace inflexible, poorly integrated transactional systems

Principle 7: Adopt Channel-Spanning Performance Measures When individual companies in a supply chain are asked a general question about how well their supply chains are doing, the response should be in the context of the extended supply chain that includes the roles played by both customers and suppliers.

The second half of this session discusses key areas that will be of great significance to the future growth, development, and transformation of supply chains. Included among these areas are: (1) supply chain analytics and big data; (2) omni-channel; (3) sustainability; (4) 3-D manufacturing; and (5) talent.

Aims/Objectives

The aim of this session is to provide a capstone integration of the module. This session will provide students with an opportunity to reflect on past and current advances and accomplishments in supply chain management, and to think about key factors and issues that will help to shape and direct the future.

Learning Outcomes

By the end of the session, students should be able to:

- Evaluate current and future strategic challenges and opportunities for supply chains.
- Identify several key principles for supply chain success that have retained their relevance over time.
- Explain the richness of information and insight that can result from the application of supply chain analytics to big data.
- Understand the changing roles of supply chain professionals and the process for developing related skills.

Key Words

Contemporary issues	Future in supply chain	Supply chain change	Enduring principles of supply chain

Annotated Bibliography

Basic Sources/Material

Coyle, J., Langley, J., Novack, R., and Gibson, B., (2020), Supply Chain Management: A logistics perspective. Cengage Learning.

Supplementary Sources/Material

None

Self-Assessment Exercises/Activities
Exercise 13.1

Discuss how the role of supply chain professionals is evolving and qhat skills will managers need in the future to succeed in this profession

Recommended number of work hours for the student
Approximately 9 hours

FINAL TELECONFERENCE/GROUP CONSULTATION MEETING

During this final teleconference, students are informed about the format of the final exam (e.g. multiple-choice questions, short or long answers, case studies, etc.) and if the exam will be open-book or not.

TITLE:

FINAL EXAM

(14th week)

Recommended number of work hours for the student
Approximately 35 hours.

INDICATIVE ANSWERS FOR SELF-ASSESSMENT EXERCISES

Title: Introduction to Operations management

(1st Week)

Exercise 1.1

Quote	Phase/ Level
"We will open a new warehouse in Nicosia"	Strategy
"We need a new distributor to satisfy the needs for the following months"	Planning
"These ten packages must be delivered by Friday"	Operation
"We can serve customers around Europe by delivering our goods via Airplane"	Strategy
"Yesterday we had 10 more orders"	Operation

Title Supply chain Drivers and evolving structure

(2nd Week)

Exercise 2.1

Inventory that is held as a buffer against uncertainty. It is kept in situations where forecast could not be done perfectly. By keeping a safety inventory an organization is able to effectively respond to a possible unexpected increase on demand. For instance, a retailer that sells mobile phones is very likely to lose a costumer and perhaps him or her loyalty if the desired mobile devise is out of stock. On the other hand, keeping a safety inventory is costly and sacrifice efficiency since requires place and other possible maintenance.

Title: Strategic fit between supply chain and corporate strategy

(3RD WEEK)

Exercise 3.1

Strategic fit refers to the alignment between supply chain operations and strategy, with the overall corporate strategy of the organization. A misalignment between the competitive and supply chain operations and strategies can result in the supply chain taking actions that are not consistent with customer needs, leading to a reduction in supply chain surplus and decreasing supply chain profitability. Strategic fit requires that

all functions within a firm and stages in the supply chain target the same goal that is consistent with customer needs.

Title: Supply chain in global settings.

(4th Week)

Exercise 4.1

Globalization affect this corporation in a variety of ways. First allows to the organization to expand its products portfolio. As can be seen from its website, the organization acts as a retailer from products and other corporation located outside Greece. Examples:

- Floris London products (UK)
- Muhle Products (Germany)

Furthermore, the company can attract clients beyond the geographical boundaries of Greece. With the usage of technology, allows access to client worldwide. Finally, it uses partners in its distribution and can deliver its products worldwide. However, due to trade barriers the corporation cannot serve specific markets with certain products. For instance, there are importation restrictions on alcoholic products in many countries and this affect fragrances sales. As it is stated at the company's website.

"Unfortunately, certain items we cannot ship overseas, if they are on the order we will have to cancel it... sorry in advance. Before placing your order, please be aware of any shipping/importation restrictions your particular country might impose on grooming products"

Title: The role of logistics in supply chain networks

(5th Week)

Exercise 5.1

The micro dimension of logistics examines the relationships between logistics and other functional areas in an organization such as

- Marketing
- Manufacturing or operations
- Finance and accounting, and others.

Logistics focuses on processes that cut across traditional functional boundaries, particularly in today's environment with emphasis on the supply chain. Consequently, logistics interfaces in many important ways with other functional areas since the logistics-related flows, as well as supply chain flows, tend to be horizontal in an organization, cutting across other functions. With an effective management of logistics, organizations can capitalize value in respect to time, quantity, place, and possession utility.

Title: Week 6 Distribution networks.

(6th Week)

Exercise 6.1 (Graded – 5 marks)

Title: Week 7 Modes of transportation and performance indicators

(7th Week)

Exercise 7.1 (Graded – 5 Marks)

Title: Week 8: Demand Forecasting

(8th Week)

Exercise 8.1 (Graded- 5 Marks)

Title: Demand Management

(9th Week)

Exercise 9.1

Among logistical problems, the lack of coordination between departments (i.e., the existence of "functional silos") results in little or no coordinated response to demand information. Second is that too much emphasis is placed on forecasts of demand, with

less attention on the collaborative efforts and the strategic and operational plans that need to be developed from the forecasts. Third is that demand information is used more for tactical and operational than for strategic purposes. In essence, and since in many cases historical performance is not a very good predictor of the future, demand information should be used to create collective and realistic scenarios of the future.

Title: Inventory Management

(10th Week)

Exercise 10.1

The “pull” approach relies on customer orders to move product through a logistics system, while the “push” approach uses inventory replenishment techniques in anticipation of demand to move products.

A principal attribute of pull systems is that they can respond quickly to sudden or abrupt changes in demand because they produce to an order and have very little, if any, finished goods inventory. This is especially true for products where the final addition of value can be postponed. Alternatively, push systems produce to inventory in anticipation of demand, thus making their ability to adapt to changing demand volumes and preferences limited.

Pull systems usually run on short-term forecasts, allowing them the flexibility to adapt to swings in demand. On the other hand, push systems use longer-term forecasts that allow for scale economies in manufacturing but result in high finished goods inventories. These high levels of finished goods inventories can make shelf life a problem in push systems, while this is not an issue for pull systems.

Characteristically, JIT is a pull system since organizations place orders for more inventory only when the amount on hand reaches a certain minimum level, thus “pulling” inventory through the logistics system as needed. Having established a master production schedule, MRP develops a time-phased approach to inventory scheduling receipt. Because they generate a list of required materials in order to assemble or manufacture a specific amount of finished products, MRP and MRP II approaches are push based.

Title: Information technology and supply chain.

(11th Week)

Exercise 11.1

Enterprise resource planning (ERP) systems incorporate internal and external systems into a single unified solution that spans the enterprise. ERP systems includes the software

that supports business functions and processes, computing hardware for hosting and executing software applications, and back-end network architecture for data communication across and within information systems. A centralized and shared database system links the business processes, allowing information to be entered once and made available to all users.

Though they can be quite expensive and challenging to implement, ERP systems are widely used. A primary appeal lies in the ability of ERP systems to update and share accurate information across business processes. ERP-linked processes typically include accounting and finance, planning, engineering, human resources, purchasing, production, inventory/materials management, order processing, and more. Primary benefits include: process automation, technology cost savings, improved visibility of sales, inventory, and receivables, standardization of processes, and regulatory compliance.

Over time, the traditional separation of supply chain technologies from ERP systems has faded. First, the boundaries are blurring as supply chain tools need to share the information stored in an ERP system. Second, the major ERP systems vendors offer supply chain software that can be readily linked to the ERP system.

Title: Sustainability and supply chain

(12th Week)

Exercise 12.1

As supply chains have globalized and emerging countries have grown, it has become increasingly clear that the world's resources and environment will not be able to support this growth unless supply chains become more sustainable. Besides the need to make the world more sustainable, an increased focus on sustainability has allowed some supply chains to reduce risk, become more efficient, and attract some customers who value these efforts. Supply chain sustainability can be evaluated in terms of social, environmental, and economic impacts. The social pillar includes the impact on the workforce, customers, and society. The environmental pillar includes resource reduction, emission reduction, and environmental product innovation.

Exercise 12.2 (Graded – 35 marks)

Title: Strategic Challenges and Change for Supply Chains

(13th Week)

Exercise 13.1

Predictions regarding future developments in SCM tend to focus on technological advancement and process innovation. Additionally, organizations need the right people with the proper skills to staff supply chain leadership roles. These roles are expanding and will continue to do so as C-level executives recognize the value of strong, integrated SCM capabilities for driving business success. These executives are beginning to elevate supply chain leaders to strategic roles and are investing in SCM capabilities to create competitive advantage.

Though the outlook is bright for supply chain professionals, organizations face a future talent supply-demand gap. Numerous studies have highlighted the shortage of promotable SCM talent as a potential roadblock to success. Qualified candidates with the appropriate mix of supply chain skills, general management aptitude, and relevant industry knowledge are in short supply. This problem will continue into the future unless organizations take steps to actively manage and enhance their talent supply chain.

APPENDIX III – TABLE 1: STRUCTURE OF THE PROGRAM OF STUDY

DEGREE REQUIREMENTS	ECTS
All students pursuing a Bachelor of Business Administration in the “Business Studies” program must complete the following requirements:	
General Education Requirements	**30**
Business Core Requirements	**126**
Major Fields of Studies	**66**
Free Electives	**18**
Total Requirements	**240**

General Education Requirements		**30 ECTS**
English and Communication		**18**
Code	**Course Title**	**ECTS**
COM215	Public Speaking and Human Communication	6
EBD220	Writing for Business Studies*	6
EBD230	Business Communication in English	6
Humanities & Social Sciences		**12**
Code	**Course Title**	**ECTS**
N/A	Psychology, Sociology	12

Business Core Requirements		**126 ECTS**
Code	**Course Title**	**ECTS**
BUD100	Introduction to Business	6
BUD210	Numerical Applications and Methods in Business	6
BUD220	Innovation and Entrepreneurship	6
BUD230	Computer Applications for Business	6
BUD300	International Business	6
BUD400	Strategic Management	6
BUD315	Business Research	6
BUD405	Undergraduate Thesis	12
MRD100	Introduction to Marketing	6
MGD100	Principles of Management	6
MGD150	Organizational Behavior	6
MGD220	Managing and Developing Human Capital	6
MGD235	Fundamentals of Production and Operations Management	6
AED105	Business Statistics	6
AED110	Introduction to Financial Accounting	6
AED125	Introduction to Managerial Accounting	6
AED100	Principles of Microeconomics	6
AED115	Principles of Macroeconomics	6
AED135	Essentials of Financial Analysis	6
AED320	Corporate and Business Law I	6

Major Fields of Studies Electives		**66 ECTS**
Students will select 10 courses from at least two (2) of the major fields of study listed below, and one (1) course from the following two courses: • BUD420 Business Simulations • PLC300 Placement		
Management		
MGD200	Contemporary Leadership and Communication	6
MGD215	Leading Change and Teambuilding	6
MGD225	Sustainability Management	6
MGD300	SMEs Management	6
MGD315	Special Topics in Business	6
MGD325	Operations and Management Science	6
MGD335	Project Management	6
MGD345	Supply Chain Management and Logistics	6
Marketing and Digital Communications		
MRD110	Social Media and Marketing Communications	6
MRD130	Advertising and Sales Promotion	6
MRD225	Professional Selling	6
MRD230	Consumer Behaviour	6
MRD335	Digital Marketing	6
MRD355	Brand Management	6
MRD415	Customer Engagement	6
MRD440	Marketing of Services	6
Economics and Finance		
AED310	Financial Management and Control	6
AED315	Money and Banking	6
AED350	Investments	6
AED355	Portfolio Management	6
AED370	Intermediate Macroeconomics	6

AED375	Managerial Economics	6
AED390	Labour Economics	6
AED395	International Economics	6
Hospitality and Tourism Management		
HTD100	The Hospitality Business	6
HTD110	Designing and Managing Bar and Beverage Operations	6
HTD115	Fundamentals of Tourism and Global Changes	6
HTD120	Managing Front office, Technology and Reservation Systems	6
HTD220	Revenues and Cost Control in Hospitality and Tourism	6
HTD320	Contemporary Challenges in Hospitality and Tourism Development and Management	6
HTD330	Managing Casino, Spa and Wellness Services	6
HTD410	Research Methods and Data Analysis in Hospitality and Tourism	6

APPENDIX IV: TABLE 2: COURSE DISTRIBUTION PER SEMESTER

A/A	Course Type	Course Name	Course Code	Periods per week	Period duration	Number of weeks/ Academic semester	Total periods/ Academic semester	Number of ECTS
1st Semester								
1.	Compulsory	Introduction to Marketing	MRD100	N/A	N/A	14	N/A	6
2.	Compulsory	Introduction to Business	BUD100	N/A	N/A	14	N/A	6
3.	Compulsory	Principles of Management	MGD100	N/A	N/A	14	N/A	6
4.	Compulsory	Writing for Business Studies	EBD220	N/A	N/A	14	N/A	6
5.	Compulsory	Business Statistics	AED105	N/A	N/A	14	N/A	6
2nd Semester								
6.	Compulsory	Business Communication in English	EBD230	N/A	N/A	14	N/A	6
7.	Compulsory	Principles of Microeconomics	AED100	N/A	N/A	14	N/A	6
8.	Elective	Humanities and Social Sciences Elective	---	N/A	N/A	14	N/A	6
9.	Compulsory	Introduction to Financial Accounting	AED110	N/A	N/A	14	N/A	6
10.	Compulsory	Organizational Behaviour	MGD150	N/A	N/A	14	N/A	6
3rd Semester								
11.	Compulsory	Numerical Applications and	BUD210	N/A	N/A	14	N/A	6

		Methods for Business						
12.	Compulsory	Introduction to Managerial Accounting	AED125	N/A	N/A	14	N/A	6
13.	Compulsory	Public Speaking and Human Communication	COD215	N/A	N/A	14	N/A	6
14.	Elective	Humanities and Social Sciences Elective	---	N/A	N/A	14	N/A	6
15.	Compulsory	Innovation and Entrepreneurship	BUD220	N/A	N/A	14	N/A	6
4th Semester								
1.	Compulsory	Computer Applications for Business	BUD230	N/A	N/A	14	N/A	6
2.	Elective	Free Elective	---	N/A	N/A	14	N/A	6
3.	Compulsory	Principles of Macroeconomics	AED115	N/A	N/A	14	N/A	6
4.	Compulsory	Managing and Developing Human Capital	MGD220	N/A	N/A	14	N/A	6
5.	Compulsory	Fundamentals of Production and Operations Management	MGD235	N/A	N/A	14	N/A	6
5th Semester								
6.	Compulsory	Essentials of Financial Analysis	AED135	N/A	N/A	14	N/A	6
7.	Elective	Free elective	---	N/A	N/A	14	N/A	6
8.	Compulsory	International Business	BUD300	N/A	N/A	14	N/A	6

9.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
10.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
6th Semester								
1.	Compulsory	Business Research	BUD315	N/A	N/A	14	N/A	6
2.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
3.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
4.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
5.	Elective	Free Elective	---	N/A	N/A	14	N/A	6
7th Semester								
6.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
7.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
8.	Compulsory	Strategic Management	BUD400	N/A	N/A	14	N/A	6
9.	Compulsory	Undergraduate Thesis	BUD405	--	--	--	--	12
8th Semester								
1.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
2.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6
3.	Elective	Major Field of Studies Elective	---	N/A	N/A	14	N/A	6

4.	Elective	Placement, or Business Simulations	PLC300/ BUD420	N/A	N/A	14	N/A	6
5.	Compulsory	Corporate and Business Law I	AED320	N/A	N/A	14	N/A	6

Major Fields of Studies Electives		**66 ECTS**
Students will select 10 courses from at least two (2) of the major fields of study listed below, and one (1) course from the following two courses: • BUD420 Business Simulations • PLC300 Placement		
Management		
MGD200	Contemporary Leadership and Communication	6
MGD215	Leading Change and Teambuilding	6
MGD225	Sustainability Management	6
MGD300	SMEs Management	6
MGD315	Special Topics in Business	6
MGD325	Operations and Management Science	6
MGD335	Project Management	6
MGD345	Supply Chain Management and Logistics	6
Marketing and Digital Communications		
MRD110	Social Media and Marketing Communications	6
MRD130	Advertising and Sales Promotion	6
MRD225	Professional Selling	6
MRD230	Consumer Behaviour	6
MRD335	Digital Marketing	6
MRD355	Brand Management	6
MRD415	Customer Engagement	6
MRD440	Marketing of Services	6
Economics and Finance		

AED310	Financial Management and Control	6
AED315	Money and Banking	6
AED350	Investments	6
AED355	Portfolio Management	6
AED370	Intermediate Macroeconomics	6
AED375	Managerial Economics	6
AED390	Labour Economics	6
AED395	International Economics	6
Hospitality and Tourism Management		
HTD100	The Hospitality Business	6
HTD110	Designing and Managing Bar and Beverage Operations	6
HTD115	Fundamentals of Tourism and Global Changes	6
HTD120	Managing Front office, Technology and Reservation Systems	6
HTD220	Revenues and Cost Control in Hospitality and Tourism	6
HTD320	Contemporary Challenges in Hospitality and Tourism Development and Management	6
HTD330	Managing Casino, Spa and Wellness Services	6
HTD410	Research Methods and Data Analysis in Hospitality and Tourism	6

European University Cyprus

APPENDIX V

Πρόγραμμα Επαγγελματικής Ανάπτυξης Φθινόπωρο 2022

No.	Faculty Development Seminar Topic (F2020 Series)	Date	Offered by
1	EUC LMS Platforms: Creating and managing Moodle Courses	22.9.2020	Militades Hadjioannou, MIS
	EUC LMS Platforms: Creating and managing Blackboard Courses	23.9.20	Militades Hadjioannou, MIS
2	Welcome All New Academic Staff Meetings	25.9.2020	Professor Loizos Symeou, Vice Rector of Academic Affairs
3	Preparing for your Courses and your Course Outline	25.9.2020	Professor Loizos Symeou, Vice Rector of Academic Affairs
4	Pedagogical Approaches to Online Teaching and Learning	25.9.2020	Dr. Loucas Louca, Department of Education Sciences
5	Designing an online course:Tools and practices	20.10.2020	Professor Maria Meletiou, Dr. Maria Papazachariou, Dr. Philippe Jougleux, Dr. Lycourgos Hadjiphanis, Dr. Andreas Avgerinos, EUC academic staff
6	Inclusive Education in the Context of Higher Education and supporting services	27.11.2020	Dr Katerina Mavrou and Dr. Maria Tsakiri, Department of Education Sciences/ Dr. Panagiotis Parpottas & staff of CSSEN Ms Yianna Christofi and Ms Ioanna Ioannou
7	Assessment in online teaching	16.12.2020	Professor Loizos Symeou, Professor

			Marios Vryonides and Dr. Eleni Theodorou, Department of Education Sciences
8	Framework of implementation exams in online teaching (F2020)	29.10.2020	Dr. Loucas Louca, Department of Education Sciences & Mlitiades Hadjioannou, MIS
9	The implementation of the HyFlex Course Model delivery: The Docking Station	14-25.9.2020	Mlitiades Hadjioannou, MIS
10	The EUC Distance Learning Fundamental Principles, Pedagogical Model and Infrastructure	28.9.2020	Dr Paraskevi Chatzipanagiotou, Director of DEU
11	Design and delivery of a distance learning course, the educational material and the digital transformation of the educational material, e-assessment and feedback in distance learning	29.10.2020	Dr. Ioanna Vekyri, Scientific Collaborator, Department of Education Sciences

European University Cyprus

Πρόγραμμα Επαγγελματικής Ανάπτυξης Άνοιξη 2021

No.	Faculty Development Seminar Topic (S2021 Series)	Date	Offered by
1	Interactive activities in online and distance education teaching and learning	3.2.2021	Distance Education Unit
2	Research Ethics	17.3.21	Professor Constantinos Phellas, Chairman of the Cyprus National Bioethics Committee & Professor A. Efstathiou Vice Rector of External Affairs and Research,
3	Personal data management in Research	12.4.21	Mr. Alexandros Schizas, University Data Protection Officer
4	Internationalization in Higher Education	12.5.21	Professor A. Efstathiou, Vice Rector of Research and External Affairs & Ms Efi Michael, Erasmus Advisor
5	Introduction to Open Science: Fundamental concepts, Importance, Incentives, and Barriers to the Open Science Movement	9.6.2021	Discussant: Professor Maria Meletiou Mavrotheris & Dr. Christos Dimopoulos, EUC

			Facilitator: Professor Andreas Efstathiou, Vice Rector of Research and External Affairs.

Appendix VI

INTERNAL REGULATION ON

RESEARCH POLICY

54th Senate Decision: 21 December 2017
60th Senate Decision: 2 October 2018
70th Senate Decision: 13 December 2019
80th Senate Decision: 28 January 2021

Table of Contents

Introduction

Within the framework of further contribution to the research community, the mission of the European University Cyprus (from now on referred to as the University or EUC) is to develop a pioneering and innovative research infrastructure with the objective of generating new knowledge. The university focuses on both fundamental and applied research and wherever possible the commercial application or exploitation of the research results.

The policy is guided by the following broad objectives:

1) The establishment of an interdisciplinary approach for researchers with attractive conditions for accessible movement among institutions, disciplines, sectors and countries, without financial and administrative obstacles.

2) The creation of state of the art research infrastructures, including research centres, foundations, units and/or laboratories, which are integrated and networked and accessible to research teams from across the EUC.

3) Introduction of a simple and harmonized regime for intellectual property rights in order to enhance the efficiency of knowledge transfer, in particular between public research and industry.

4) Optimization of research programs and priorities, for example by developing joint principles for the administration of European, national and regional funding programs.

5) The strengthening of international cooperation enabling faculty and other scholars in the world to participate in various research areas, with special emphasis on developing multilateral initiatives to address global challenges.

6) The transfer of research-based knowledge to EUC students

Research is conducted by faculty members, research associates/research personnel and PhD students either on their own or within the framework of external (national, European, international) and internal funding programs that are launched by the University.

The Research Policy provides a code of conduct for research and is intended for all staff, including people with honorary positions, faculty members, special teaching personnel, scientific collaborators, special scientists, research associates, and students carrying out research at or on behalf of the University.

All groups mentioned above must familiarize themselves with the Research Policy to ensure that its provisions are observed.

1. EUC Research Ethics Policy

1.1 Scope and Purpose

1. The aim of the EUC Research Ethics policy is to promote and encourage a high quality research and enterprise culture, with the highest possible standards of integrity and practice. The policy applies to all academic, contract research and administrative staff, all research students, as well as undergraduate and masters students who are undertaking research. In short, the policy applies to all disciplines and research activities within the University, or sub-contracted on its behalf.

2. All staff and students are expected to act ethically when engaged in University business. Any research involving animals, human participants, human tissue or the collection of data on individuals requires ethical consideration. While particular attention must be paid to the interests of potentially vulnerable groups, such as children, the University recognises that it has a duty of care towards all members of the wider community affected by its activities. The University also recognises that it has a duty of care to its own staff, and that this includes the avoidance of harm to those undertaking research.

3. The University will establish a framework for research ethics governance in which its Research Ethics Committee will have a central approval, monitoring and training role. The University will establish a Research Ethics Committee with representatives from all the Schools. The Research Ethics Committee will put in place the procedures needed to obtain approval.

   It is, however, recognised that it may not always be appropriate or practicable for ethical approval to be sought from the Research Ethics Committee especially when it comes to short or undergraduate projects. Normally undergraduate or taught projects will not require clearance from the Research Ethics Committee and the matter can be dealt with at School and/or Department level. However, when active intervention is involved whether physically invasive or psychologically intrusive the Research Ethics Committee will need to be consulted. In particular, university staff has an obligation to ensure that not only their own research but any undergraduate or masters student research conducted under their supervision is ethically sound. Where research projects are subject to external approval, the School or Department responsible must ensure that this approval is sought and given. Where approval for a project has been given by a Research Ethics Committee at another university, as may be the case with a collaborative project, the EUC Research Ethics Committee must be provided with proof of this.

4. For some research projects it may be necessary to obtain the approval of the Cyprus National Bioethics Committee. Researchers should consult directly with the Cyprus National Bioethics Committee. Contact details and more information on the approval process can be found on http://www.bioethics.gov.cy .

1.2 General Principles

1. The EUC Research Ethics Policy is based on widely accepted principles and practices governing research involving human participants. The key elements are:
   - Minimal risk of harm to participants and researchers;
   - Potential for benefit to the society;
   - Maintenance of the dignity of participants:
   - Minimal risk of harm to the environment;
   - Voluntary informed consent by participants, or special safeguards where this is not possible;
   - Transparency in declaring funding sources;
   - Confidentiality of information supplied by research participants and anonymity of respondents;
   - Acknowledgement of assistance;
   - Appropriate publication and dissemination of research results;
   - Independence and impartiality of researchers.

1.3 The Definition of Human-Related Research

1. All human-related research which includes one or more of the following require ethical assessment and approval at the appropriate level:
   - Direct involvement through physically invasive procedures, such as the taking of blood samples
   - Direct involvement through non-invasive procedures, such as laboratory-based experiments, interviews, questionnaires, surveys, observation
   - Indirect involvement through access to personal information and/or tissue
   - Involvement requiring consent on behalf of others, such as by parents for a child participant

1.4 Vulnerable Participants

1. Some participants may be particularly vulnerable to harm and may require special safeguards for their welfare. In general, it may be inappropriate for undergraduates to undertake research projects involving such participants.
2. Particularly vulnerable participants might be:
   - Infants and children under the age of eighteen

- People with physiological and/or psychological impairments and/or learning difficulties.
- People in poverty
- Relatives of sick, or recently–deceased, people

1.5 The Legal Framework, the Role of Professional Associations and Research Councils

1. All research undertaken under the auspices of EUC must meet statutory requirements. Of particular relevance is the Bioethics Law (N.150 (I)/2001 and 53 (I)/2010), the Data Protection Law (2001), the Patients Protection Law (2005), and all those laws that create the legal framework for the Cyprus National Bioethics Committee.
2. Researchers in particular disciplines should comply with any research ethics guidelines set out by their professional associations.
3. Research Councils, charitable trusts and other research funding bodies in most cases require an undertaking from grant applicants that research proposals involving human participants have been approved by the University Research Ethics Committee or another appropriate body. Some also require audited compliance with their guidelines.

2. Good Research Practices / Code of Ethical Conduct in Research

2.1 Code of ethical conduct in research

Scholarly inquiry and the dissemination of knowledge are central functions of the University. They can be carried out only if faculty and research personnel abide by certain rules of conduct and accept responsibilities stemming from their research. And they can only be carried out if faculty and research personnel are guaranteed certain freedoms. The University expects that faculty and research personnel will be bound by the following research practices:

All faculty and research personnel are free to choose any research matter, to receive support from any legitimate source, and to create, analyse and derive their own findings and conclusions.

Research methods, techniques, and practices should not violate any established professional ethics, or infringe on health, safety, privacy and other personal rights of human beings and/or animals.

The above principles define the university's role with respect to research carried out on its premises. They are set forth to reinforce, and not diminish each faculty and research personnel's personal responsibilities toward their research, and to assure that each faculty and research personnel's source of funding and research applications are consistent with moral and societal conscience.

2.2 Openness in research

The University recognizes and supports the need for faculty and research personnel to protect their own rights, be they academic or intellectual property rights. Even so, the University encourages all faculty and research personnel to be as open as possible when discussing their research with other researchers and the public. This aims at the dissemination of research performed in the University to enhance the international research community's knowledge and understanding.

2.3 Integrity

Faculty and research personnel must be honest about their research and in their review of research coming from other researchers. This applies to all types of research work, including, but not limited to, analysing data, applying for funding, and publishing findings. The contributions of all involved parties should be acknowledged in all published forms of findings.

Faculty and research personnel are liable to the society, their professions, the University, their students and any funding agency that may fund their research. For this reason, faculty and research personnel are expected to understand that any form of plagiarism, deception, fabrication or falsification of research results are regarded as grave disciplinary offences managed by procedures described in detail in Section 2.4.

Any real or potential conflict of interest should be reported by faculty and research personnel to any affected party in a timely manner in all matters concerning research and peer review. According to the United States National Institute of Health "Conflict of interest occurs when individuals involved with the conduct, reporting, oversight, or review of research also have financial or other interests, from which they can benefit, depending on the results of the research." (http://www.nih.gov).

2.4 Misconduct in research

Misconduct in research may involve Fabrication, Falsification, or Plagiarism in proposing, performing, or reviewing research, or in reporting research results. To prove that there has been misconduct in research, the following conditions must be met: The performance of said research has significantly deviated from accepted practices used in the field that the research was performed, and there was intention in the misconduct by the researcher(s).

Any allegations about misconduct in research will be investigated by the University thoroughly, through a special committee formed as described in the University Charter, Annex 11, Article VII.

3. Intellectual Property Policy

3.1 Introduction

The EUC is dedicated to teaching, research, and the extension of knowledge to the public. Faculty, research personnel, and students at the University, hereafter referred to as "University Employees," recognize as two of their major objectives the production of new knowledge and the dissemination of both old and new knowledge. Because of these objectives, the need is created to encourage the production of creative and scholarly works and to develop new and useful materials, devices, processes, and other inventions, some of which may have potential for commercialization.

The University acknowledges the need for an Intellectual Property Rights (IPR) policy, which will promote the University's reputation as socially relevant, leading research and teaching organisation and will directly contribute to the financial position of the EUC if its commercial value is realised.

The policy is based on the principles that will govern the ownership rights emanating from research of and/or materials produced by the EUC's members of staff and students, and to establish objectively fair and equitable criteria for the transfer of knowledge. The EUC thus aims to provide support services to promote the creation of Intellectual Property (IP) whilst seeking to maximise the commercial exploitation of the resulting IPR.

Intellectual Property includes, but is not limited to, patents, registered designs, registered trademarks and applications and the right to apply for any of the foregoing, copyright, design rights, topography rights, database rights, brands, trademarks, utility model rights, rights in the nature of copyright, knowhow, rights in proprietary and confidential information and any other rights in inventions.

The EUC acknowledges that registration and commercial exploitation of Intellectual Property is often a long and costly process that is justified once it is ascertained that there exists a business case for such registration and exploitation. It is known that in practice, only a small number of works can be commercially exploited in a viable manner, depending on the nature and marketability of the work in question.

3.2 Definitions

For the purposes of this Policy:

Creator - "Creator" shall mean, employees of EUC, a student, non-employees contracted to EUC for contracts and services, or a member of a Visiting Teaching Staff involved in the production of Disclosable Work.

Disclosable Work – "Disclosable Work" shall mean such work that is novel, original, and/or important and is likely to bring impact and enhance the Creator's reputation. This work is characterised by the IP rights it generates.

Intellectual Property Policy – “IP Policy” is the name of the policy described here that outlines the regulations of the EUC in regard to disclosure and exploitation of Intellectual Property Rights (IPR).

Organisation – “Organisation” for the purpose of this document is the European University Cyprus (EUC).

Intellectual Property Adjudication Committee – is the name of the committee established to resolve disputes over interpretation or claims arising out of or relating to this policy, or dispute as to ownership rights of Intellectual Property under this policy.

Office of the Vice Rector for Research and External Affairs – is the office within the EUC responsible for the development of and enacting this IP Policy and is the interface between the EUC and the Technology Transfer Facility.

Technology Transfer Facility – “TTF” for the purpose of this policy, is the relevant body responsible for Technology Transfer support in Cyprus.

3.3 Intellectual Property Regulations

3.3.1 Responsibility

1. The IP Policy acknowledges that all members of staff and students have responsibilities with regard to IPR arising from and/or used by them in the course of their teaching/employment.
2. The IP Policy also recognises that all members of staff and students require support and assistance to help them to meet their responsibilities and this will be provided by the Office of the Vice Rector for Research and External Affairs and, subsequently, by the Technology Transfer Facility.

3.3.2 Identification of IP (including duty of confidentiality)

1. It is expected that identification will take place when employees, students, or members of staff are involved in creating and developing IP. Much of the IP which will be created by the EUC’s employees may be anticipated prior to its creation depending on the nature of the project in question and outputs and results that are expected to be generated. Examples of such outputs which are likely to have potential IP rights arising include (but are not limited to):
   - Inventions (whether or not patentable);
   - Methodologies;
   - Software;
   - Databases;
   - Educational/training materials and tools;
   - Modelling tools;
   - Solutions to technical problems; and
   - Design/artistic products.

2. A Summary of the main classes of IPR is listed below:

Patent

A registered patent provides a time-defined (up to 20 years) geographically defined monopoly right to exploit a new commercially valuable invention or process. The basis of the permission to exploit is that the invention's working is disclosed, although patenting is not possible if there has been ANY prior disclosure of the invention. Patents are governed by Cyprus Law or EU Law such as the New Patent Law of Cyprus (Law No. 16(I)/1998).

Copyright

This time-limited right (which varies between 25 and 70 years according to the material) arises automatically on the physical creation (not the idea) of software, original literary, dramatic, artistic or musical work, and in recorded (e.g. film) or published (e.g. layout) derivations. Use of the © mark and owner's name and date is the internationally recognised way of alerting the public to the copyright ownership but the protection (the right to preventing unauthorised copying) exists regardless. Copyright is governed by the Copyright Law, 59/76.

Copyright may be assigned to a third party, but until that point or until a licence is agreed it remains the property of the Creator, unless s/he creates the work 'in the course of his/her employment', in which case it is the property of the employer.

Moral rights

All European countries recognise an author's moral rights. In Cyprus, there are two moral rights: the right of paternity and the right of integrity. These rights relate to the reputation or standing of the creator in the eyes of fellow human beings. To infringe a moral right involves denigrating or harming the author's reputation. The right of integrity means the creator has the right to object to derogatory treatment of his/her work. Basically, this means changing it in a way that affects the nature of the work without permission. Moral rights can be waived (i.e. the author chooses not to exercise the rights) or they can be bequeathed. They cannot be assigned.

Performing rights

Creators of copyright works have the right to protect the physical form in which those works are created – words on the page, pigment on a canvas, or the clay or metal of a sculpture. Performers such as teachers, actors, musicians and dancers also enjoy protection of their performance, especially when recorded on film, video, tape, CD, or in other form.

Performing rights may affect the multimedia elements of online courseware, as well as the Creator's copyright in the material itself.

Database Right

This time-limited (15 years) right arises without registration to protect the compilers of non-original information from losing the benefit of their work through unauthorised copying or re-use.

Industrial Designs

There is automatic time-limited (15 years) protection (the right to prevent unauthorised copying) for unregistered designs, provided authorship can be proved, under the Legal Protection of Industrial Designs and Models Law 4(I)/2002 This design right covers “the appearance of the whole or a part of a product resulting from the features of, in particular, the lines, contours, colours, shape, texture and/or materials of the product itself and/or its ornamentation" on condition of novelty of the design.

On registration under Legal Protection of Industrial Designs and Models Law, the designer of the new pattern or shape which has aesthetic appeal (can be 2 or 3 dimensional) acquires a monopoly right of commercialisation for a maximum of 25 years from the filing of the application, divided into 5 periods of 5 years.

An unregistered community design (UCD) gives its owner the right to prevent unauthorised copying of their design throughout the European Union. It is not a monopoly right and lasts for 3 years from the date on which the design was first made available to the public within the Community.

Domain Names

Registering a domain name for Internet use gives a right to use the domain name typically for a period of two years, registered with bodies like ICANN internationally and the University of Cyprus in Cyprus. Owners of trademarks can have established rights to domain names.

Trade Marks

Registering a trade mark under the Cyprus Trade Marks Law, Chapter 268, gives a monopoly right for the use of graphically distinct trading identification signs. Unregistered trade marks have some protection through court actions against "passing off" (piracy), provided that their use has not lapsed for a period of 5 years. Cyprus legislation is fully harmonised with EU Standards applicable in trade mark protection.

3. EUC’s members of staff and students undertake to keep confidential and not disclose any confidential information, data, materials, knowhow, trade secrets or any other IP, to any unauthorised third party and shall also undertake to keep such information secure and strictly confidential both during the course of research activity, be it of an Academic or Collaborative/Contract nature, and also on and following completion thereof.

4. Any breach of this confidentiality and non-disclosure obligation constitutes a serious breach and may lead to disciplinary action and does not prejudice the rights of the EUC to file any action for damages or any other rights available at law.

3.3.3 Coverage of the Regulations

1. Whom does this IP Policy apply to?
   - Employees:
     By persons employed by the EUC in the course of their employment.
   - Students:
     By student members in the course of or incidentally to their studies at EUC.
   - Non-employees contracted to the EUC:
     By persons engaged by EUC under contracts for services during the course of or incidentally to that engagement.
2. Sabbatical, Seconded, Visiting Academics and others:
   By other persons engaged in study or research in the University who, as a condition of their being granted access to the EUC's premises or facilities, have agreed in writing that this Part shall apply to them.
3. Participation of the EUC members of staff/employees and or students in Collaborative and/or Contracted Research.
   The preparation and negotiation of any IP agreements or contracts involving the allocation of rights in and to IP will be undertaken by a competent person authorised for this purpose by the EUC.
   Issues that will be addressed in such agreements include, but will not always be limited to:
   - ownership of Foreground IP;
   - licences to Foreground IP for uses outside the project;
   - ownership of Background IP;
   - licences to use Background IP in the project or activity in question and in relation to the use of the Foreground IP arising from such project or activity;
   - allocation of rights to use or commercialise IP arising from any such project or activity and the sharing of revenues; and
   - publications arising from the relevant project or activity and the rights arising from such projects or activities.

The terms of such agreements may be subject to negotiation.

3.3.4 Exceptions to the Regulations

1. Unless specifically commissioned, typically the EUC will NOT claim ownership of copyright in certain types of Disclosable Work described in this policy as "Creator Copyright Works":
   - artistic works;
   - text and artwork for publication in books;
   - articles written for publication in journals;
   - papers to be presented at conferences;
   - theses and dissertations;
   - oral presentations at conferences;
   - posters for presentation at conferences; and
   - musical scores.

2. Where IP has been generated under the exception clause of this regulation, the EUC may assign the copyright to the Creator.
3. Students – undergraduate and/or postgraduate.

3.3.5 Disclosure of IP

1. All persons bound by these Regulations are required to make reasonably prompt written disclosure to the EUC's Office of the Vice Rector for Research and External Affairs at the outset of the work or as soon as they become aware of it (by completion of the Invention Disclosure Form, the information required for which is provided in Appendix B):
   - any IP of potential commercial value arising from their work;
   - the ownership by a third party of any IP referred to or used for their work;
   - any use to be made of existing EUC IP during their work;
   - any IP which they themselves own which is proposed to be used by the EUC.
2. Creators shall keep all Disclosable Work confidential and avoid disclosing this prematurely and without consent;
3. Only disclose any Disclosable Work and the IP relating to it in accordance with the EUC's policy and instructions;
4. Seek EUC's consent to any publication of information relating to any Disclosable Work;
5. Creators must NOT:
   i. apply for patents or other protection in relation to the Disclosable Work; and
   ii. use any Disclosable Work for their own personal and/or business purposes and/or on their own account.

3.3.6 Ownership of IP

1. Ownership of IP created by an individual who is an employee is generally determined by considering:
   - Who created the IP?
   - Was the IP created in the course of the Creator's employment?
   - Are there any contractual conditions that affect ownership?
2. Assignment of ownership rights

   Generally, the Creator of IP is its legal owner. From the EUC's point of view, the most important exception to this is the general rule that IP is owned by a person's employer where the IP is created as part of, or through the auspices of, the person's employment.
3. The EUC claims ownership of all the Intellectual Property specified in section 2.2, which is devised, made or created by those specified in section 3 and under the exceptions to the regulations in Section 4. It also includes but is not limited to the following:
   i. Any work generated by computer hardware/software owned/operated by the EUC.
   ii. Any work generated that is patentable or non-patentable.
   iii. Any work generated with the aid of the EUC's resources and facilities including but not limited to films, videos, field and laboratory notebooks, multimedia works, photographs, typographic arrangements.
   iv. Any work that is registered and any unregistered designs, plant varieties and topographies.
   v. Any University commissioned work generated. Commissioned work is defined as work which the EUC has specifically employed or requested the person concerned to produce, whether in return of special payment or not and whether solely for the University or as part of a consortium.
   vi. Know-how and information related to the above
   vii. Any work generated as a result of the teaching process including but not limited to teaching materials, methodologies and course outlines.
   viii. Material produced for the purposes of the design, content and delivery of an EUC course or other teaching on behalf of the school, whether used at the school's premises or used in relation to a distance learning and/or e-learning project. This type of material includes slides, examination papers, questions, case studies, and assignments ("course materials").
   ix. Material for projects specifically commissioned by the EUC
   x. All administrative materials and official EUC documents, e.g. software, finance records, administration reports, results and data.

3.3.7 Modus Operandi for Commercial Exploitation of the IPR

1. The EUC is entitled to commercially exploit any result obtained under its aegis (unless this entitlement is relinquished). The Office of the Vice Rector for Research and External Affairs has the responsibility for administration of Disclosures and will work with the TTF of Cyprus, which has responsibility for

commercialisation of Disclosures. As guidance to the commercialisation process, the EUC/TTF will follow a standard process, graphically presented in Appendix A.

2. The Creator/s shall notify the Office of the Vice Rector for Research and External Affairs of all IP which might be commercially exploitable and of any associated materials, including research results, as early as possible in the research project. This notification shall be effected by means of an Invention Disclosure Form (contents as noted in Appendix B). In case of doubt as to whether research is commercially exploitable or otherwise, the Creator/s undertake/s to seek the advice of Cyprus Central TTF.
3. The Office of the Vice Rector for Research and External Affairs shall immediately acknowledge receipt of the Disclosure Form. In consultation with the TTF and the Creator/s, shall decide whether the EUC and the TTF has an interest to protect and exploit the relevant IPR.
4. The TTF shall communicate the decision in writing to the Office of the Vice Rector and the Creator/s by not later than three months from the date of receipt of the Invention Disclosure Form. If the EUC and TTF decide to protect and exploit the IPR, it is understood that:
    - the Creator/s shall collaborate with the EUC and the TTF, to develop an action plan for the protection and commercial exploitation of the IP;
    - the TTF in collaboration with the Creator/s shall ensure that third party rights are not infringed in any way through the process; and
    - the EUC/TTF shall seek to protect the right of the Creator/s to use the said IP for strictly non-commercial purposes.
5. Should the EUC and TTF decide that there is no interest in protecting and exploiting the relevant IPR, or should it fail to inform the Creator/s about its decision within the stipulated time, the EUC may assign all its rights, title and interest in such IP to the Creator/s concerned, whilst the EUC retains the right to use the said IP in whichever manifestation for strictly non-commercial purposes.

6. The Creator/s SHALL NOT enter into any sponsorships or commercial agreements with third parties related to their research at EUC without prior written authorisation by the Office of the Vice Rector for Research and External Affairs. This said, it is understood that consent shall generally be granted to Creator/s for such requests as long as the IPRs of the EUC are safeguarded; otherwise the claims on IPR expected by the third party must be agreed upon explicitly upfront.

3.3.8 IPR protection

1. Some forms of IP require active steps to be taken to obtain protection (e.g.: patents, registered trademarks and registered designs). Other forms of IP rights are protected on creation (e.g. Copyright, EU Database Rights) but still require appropriate management in order to maximise the protection available. Best practices in patent protection require that all materials made publicly available by any employees, members of staff and/or students should include a copyright notice.

2. Any decisions relating to the registration of any IP rights such as making an application for a patent or a registered trade mark or a registered design (including any decisions to continue or discontinue any such application) should be made in consultation with the Office of the Vice Rector for Research and External Affairs and the TTF. The IP registration process can be very expensive and IP protection costs should not be incurred without appropriate consideration of how such costs will be recovered.

3.3.9 Revenue Sharing Mechanism

The EUC's employees and students can benefit from the Revenue Sharing Scheme if their work generates income for the EUC. The scheme is presented in Appendix C. Note that such revenue to be shared is typically calculated after deduction of all costs incurred by the EUC and TTF in developing, protecting, exploiting, and marketing the Disclosable Work and the Intellectual Property it contains.

3.3.10 Leaving the EUC

Cessation of employment, under normal circumstances, will not affect an individual's right to receive a share of revenue. Exceptions to this rule include: cessation of employment due to disciplinary actions.

3.3.11 Applications to use the EUC's IP

1. The EUC may be willing to consider requests from its staff and/or students for a licence to use specific IP, owned by EUC for their use although the terms and decision to grant any such licences is a decision wholly made by the EUC.
2. Applications for such licence should be made in writing to the Office of the Vice Rector for Research and External Affairs.

3.3.12 Breach of the Regulations

1. Breach of the regulations listed in this Policy may be a disciplinary matter for the EUC's staff and students under the normal procedures.
2. The EUC shall consider all avenues available to it, including legal action if necessary, in respect to persons bound by these regulations who acted in breach of them.

3.3.13 Discretion to assign/licence back

1. If the EUC does not wish to pursue the commercialisation of any Intellectual Property or does not wish to maintain an interest in the IPR, it has the right to assign such IPR rights to the Creator/s of the IPR by entering into an agreement to enable the IP to be used by the Creators. This will generally only be granted where there is clear evidence that the IP provides no other benefit to the EUC and is not related to other IP, which the EUC has an interest in.
   However, the EUC shall not assign its IP if they consider that the commercialisation of the IP could potentially bring harm to the name of the EUC. Decisions regarding potential harm will be taken by the Research Ethics Committee of EUC.

2. Requests for any transfer of rights from the EUC to another party with rights should be made in the first instance to the Vice Rector for Research and External Affairs.

3.3.14 Amendments to the Regulations

These Regulations may be amended by the Senate of the EUC on the recommendation of the Vice Rector for Research and External Affairs.

3.3.15 Death

In the event of a researcher's death, the entitlement shall continue for the benefit of his or her estate.

3.3.16 Disputes

1. Any question of interpretation or claim arising out of or relating to this policy, or dispute as to ownership rights of intellectual property under this policy, will be settled by submitting to the EUC's Intellectual Property Adjudication Committee a letter setting forth the grievance or issue to be resolved. The committee will review the matter and then advise the parties of its decision within 60 days of submission of the letter.
2. The Intellectual Property Adjudication Committee will consist of a chair who is a member of the tenured faculty, at the rank of either a Professor or an Associate Professor, one member of the faculty from each School, at the rank of either Assistant Professor or Associate Professor or Professor, an individual from the EUC with knowledge of Intellectual Property and experience in commercialisation of Intellectual Property, and two other members representing, respectively, the EUC administration, and the student body. The chair will be appointed by the Vice Rector for Research and External Affairs, with the advice and consent of the Senate Research Committee, and the remaining members of the committee will be appointed: the faculty members, each by their School's Council, the administration representative by the University Council or its designee, and the student representative by the Student Union.
   The committee will use the guidelines set forth in this policy to decide upon a fair resolution of any dispute.
3. Any disputes regarding the revenue distribution from the exploitation of Disclosable Works will be dealt with in accordance with the EUC's normal member of staff or student dispute procedures as outlined in the contractual terms of conditions.
4. The Parties shall attempt to settle any claim, dispute or controversy arising in connection with this Policy, including without limitation any controversy regarding the interpretation of this Policy, through consultation and negotiation in good faith and spirit of mutual cooperation. Where such claims or disputes cannot be settled amicably, they may be taken to court.
5. This Agreement shall be governed by, and construed in accordance with the laws of Cyprus.

4. Offices, Committees and Centres for Research

4.1 Vice Rector for Research and External Affairs

The Vice Rector for Research and External Affairs (from now on referred to as the Vice Rector) is the person responsible for representing the University on research matters and enhancing activities related to research within the University. Moreover the Vice Rector facilitates and supports, when asked by faculty or research members, all research activities, including the implementation of research projects, the organization of scientific conferences and the establishment of research units/labs. In addition, the Vice Rector is responsible for the smooth implementation of the University's Research Policy.

4.2 Senate Research Committee

The administration of the research activity is facilitated by the Senate Research Committee of the University. The Committee composition is prescribed in the University Charter and the Committee is accountable to the Senate of the University.

4.3 Research Foundations and Centres

Research is carried out in university departments, research foundations, and centres. The Senate suggests to the University Council the formation of new foundations and research centres or the discontinuation of existing ones, if necessary.

The University Council approves the establishment of these foundations and research centres. Separate regulations are issued for the establishment of University research centres. Detailed description of the mission, area of specialization, and operation of each foundation or research centre is given in a separate document.

4.4 Research Office

Detailed description of the mission, area of specialization, and operation of the Research Office is given in a separate document.

5. Rules Governing External Research Programmes

5.1 Suggested procedure for submitting and implementing a funded research project

The following rules apply for externally funded research projects:

5.1.1 Submission of research proposals:

Faculty and research personnel that are interested in submitting a proposal or participate in a proposal for ANY kind of externally funded research project

(commercial, consultancy, RPF, European etc) should consult and get the approval of the EUC Research Office. The formal procedures developed by the Research Office pertaining to the development of a research proposal and to participation in a research project should be followed in all cases. Given that in all research and consulting application forms a budget also needs to be prepared, the budget will be developed in collaboration with the EUC Research Office, sharing their expertise with the faculty and research personnel and advising them accordingly about the cost models and cost categories used in each case. This procedure should make sure that the proposal satisfies all the necessary criteria of the particular research call.

The final approval for financial and administrative issues of proposals or projects will be signed by the legal representative of EUC.

5.1.2 Project implementation

The formal procedures developed by the Research Office pertaining to the administration of a research project should be followed in all cases.

In the case where a project is awarded, a copy of the contract and all the original receipts, invoices, contracts and other accounting documents regarding expenses of the project will be maintained by the EUC Research Office without any additional remuneration or personnel costs added to the budget of a project. The researcher/s involved in an externally funded project are responsible for submitting all receipts, invoices, contracts and other accounting documents relevant to their project to this department. No payment will be processed before the submission of the aforementioned documents to the Research Office.

Timesheets should be kept for all projects. These will be used as the basis for calculating the money to be paid to researchers for all types of projects. The EUC Research Office will assist researchers to calculate the hourly and daily rate for each staff member.

The researcher must also inform the Chief Financial Officer of the University, through the EUC Research Office, in order to create a separate ledger (account) in the University's Accounts Department. After completion of the project, the Accounts Department will keep the file on record for 5 years or more if needed by the contractual agreement.

The EUC Research Office should keep a file with all the details concerning the project. The file must be made available to the Senate Research Committee upon request.

5.1.3 Financial issues concerning externally funded research projects

All incoming funds for the execution of a project are deposited in a separate account (ledger) of the University and all necessary expenses with their receipts relating to the project are paid/signed by the Vice Rector for Research and External Affairs, the CFO and the CEO of the University.

The time spent by faculty and research personnel on national, European or international research projects is, with rare exceptions, an eligible cost for inclusion in a project budget at a level which reflects the time to be spent by faculty and research personnel on the project and the employer's cost. These are real project costs and their inclusion in project budgets is strongly required.

Salary payments to faculty and research personnel will be paid out regularly by the Accounts department upon the project coordinator's request to the Research Office and provided that the allocated amount for the previous period has been received from the funding agency and all reporting requirements for the previous period to the funding agency have been met.

In cases of delay in receiving the predetermined instalment, the University will grant to the researcher the required funds (not his/her compensation/remuneration but costs such as equipment, consumables, traveling) to initiate the research, provided that a copy of the contract and all necessary documentation had been submitted to the Research Office.

Employment of additional temporary staff, budgeted for completion of the research project, will be the responsibility of the project coordinator. The remuneration for temporary staff will depend on the corresponding budget of the project and the possible allocation of funds for this purpose.

Subcontracting activities within the framework of a research project will be the responsibility of the project coordinator. These activities should be in alignment with the corresponding budget of the project, the grant rules, and the EUC subcontracting policy.

In the case where a faculty or research personnel fails to complete a research project due to failure to meet his/her contractual obligations, or if it is clear that there was an intention of misconduct and there are financial damages laid upon the University relating to this event, the faculty or research personnel is liable to pay these damages. This will not be applied in cases such as health problem, etc, where there is clearly not an intention of misconduct.

5.1.4 University research fund

All funds allocated for research from externally-funded research projects, the University as well as funds offered for research purposes from third parties will be deposited in the University Research Fund. Recommendations for the allocation of funds are made by the Senate Research Committee and are subject

to the final approval of the Management of the University. These funds can be used to finance such activities as:

(a) Participation of academic researchers in conferences, seminars, and meetings to co-ordinate activities, which are needed for submission of external programmes.
(b) The administration costs associated with providing support services to academic researchers.
(c) Organisation of training seminars for the faculty and research personnel of the University; these seminars shall be organized if and only will help/assist and/or facilitate researchers to enhance and further develop their knowledge in subjects related to their research fields and help them design and implement research projects.
(d) Purchase of software, hardware and equipment that are needed by faculty and research personnel for research projects.
(e) The funding for the University's Internal Research Awards such as PhD scholarships
(f) Development of Infrastructure related to the research activity of the University.
(g) Funding of the activities of the Research Office of the University.

6. Rules Governing Internal Research Awards

The University's "Internal Research Awards" (IRA) are launched on an annual basis by the Senate Research Committee, are announced by the Vice Rector for Research & External Affairs and financed by the University Research Fund and external sponsors as described in Section 5.1.4 above.

6.1 Purpose

IRAs are awarded to EUC faculty in order to pursue research and other creative work. IRAs provide support for exploratory research projects which might result in proposals submitted for external funding or in creative work that is likely to enhance the recognition of the faculty and research personnel and the University at large. IRAs may be used for funding travel, equipment, supplies, PhD student assistants' scholarships, student assistants, research assistants and other expenses. Funding for this programme comes from the University Research Fund.

6.2 Eligibility for the awards

All full-time faculty members of the University who have the rank of Assistant Professor or higher are eligible to apply for the awards. Specific eligibility criteria may apply for each type of award.

6.3 Application Procedure

The Vice Rector for Research and External Affairs initiates the selection process by issuing a call for proposals. The deadline for the submission of proposals will be announced. Application materials will be available from the office of the Vice Rector for Research and External Affairs and the proposals will be submitted electronically to the office of the Vice Rector.

7. Teaching Hours Reduction for Research Purposes

The University rewards members of staff who excel in research by awarding them Teaching Hours Reduction (THR). A THR may be awarded if the member of staff fulfils the conditions in one or more of the three schemes outlined below.

A member of staff may be awarded a THR under more than one of the schemes described below if he/she is eligible. The minimum teaching per semester can be reduced down to 6 hours per week based on the accumulated research load reduction hours. An exemption may be considered for Deans and Chairs.

All allocations of THR under the three schemes outlined below will be made after a recommendation of an ad-hoc committee chaired by the Vice Rector for Research and External Affairs. The committee will take into account scheduling constraints and other considerations for the sustainable development of research activity at the university. The committee will meet at an appropriate time in each semester in order to make the THR allocations in time for the preparation of the schedule of classes for the next semester.

7.1 Award of a THR for participation in research projects

Members of staff are eligible to apply for a Teaching Hours Reduction (THR) when conducting funded research for the full duration and until the completion of relevant funded projects. Should their application meets with success, funded project coordinators are entitled to a three-hour teaching reduction per semester for the whole duration of the project, whereas research partners are eligible for a THR equivalent to at least one third of the duration of the project.

Based on the policy of the University with regard to THR requests, Faculty, research and Other Teaching Personnel (OTP) members are expected to submit a written request to the Chairperson of his/her Department before the beginning of the academic year/semester. The Chairperson will process the THR request by way of making a relevant recommendation to the Dean of School. The Dean will then forward his/her recommendation to the Vice Rector for final approval. After the deadline expires, applications for teaching hours reduction will not be accepted.

The deadlines for submitting a request for teaching load reduction per semester are the following:

For the Fall Semester: 1st of May
For the Spring Semester: 31st of October

If a research proposal was awarded a grant after the special case of approval of a research/grant proposal (i.e. RPF, EU etc) while an academic year is in progress, a THR request should be submitted and be approved prior to the beginning of the next semester, during which the teaching load reduction will be applied. The research project should commence at least one month before the beginning of the next semester for the THR to be awarded.

7.2 Award of a THR for writing a book

A three-hour teaching reduction per semester will be awarded for the purpose of writing a book upon submission of a publishing contract by a reputable publisher. A total of two THR allocations (maximum 6 credits) will be made under the scheme for each book contract. The same deadlines and application procedure apply as in the scheme described in section 7.1.

7.3 Award of a THR by accumulation of points

A third scheme for the award of a THR takes into account the research activity of members of staff and the points they have accumulated according to the tables given in Appendix D. A THR of 3 hours per week is awarded to faculty members once they accumulate 100 (one hundred) points and the same number of points are automatically deducted from his/her accumulated total. Points accumulated over time but not utilized by a member of staff will simply remain at his/her disposal.

Note that members of staff may consider the year 2016 as the starting point for calculating points accumulated through research. The calculation of points will be valid after it has been approved by the Dean of the School and the Vice Rector for Research and External Affairs.

New faculty members can also get THRs under this scheme from the first semester of their employment. The points accumulated from their publications in the five (5) years prior to their appointment will be taken into account.

8. Equipment Acquired through Internal and External Funding

8.1 Equipment acquired through University funds

All equipment that has been acquired through funds that come directly through the university's funds (internal research grants, university research funds) will belong solely to the University and will be used by the faculty and research personnel's affiliated department or lab, according to the affiliation used by said faculty and research personnel in the funded research proposal and/or project. The faculty and research member is entitled to use the equipment throughout the duration of the funded project and this remains within the research unit/laboratory once the project

is completed, or within the faculty member's department, under his/her direct supervision if s/he does not belong to a unit / lab. Any required maintenance of the equipment should be undertaken by the University.

8.2 Equipment purchased through external funding

Equipment (software and hardware) is often provided in full or partly in the budget of proposals for external funding to enable the faculty and research member to carry out research effectively. This kind of equipment (computers, projectors, software programmes, fax and printing machines, etc.) is the property of the University but remains in the faculty or research personnel's research unit/laboratory or when this is not applicable in his/her department, under his/her supervision. The faculty member is entitled to use the equipment throughout the duration of the externally funded project. When faculty or research personnel who have had externally funded research projects leave the University, the status of any equipment purchased remains a property of the unit/lab or department that the faculty or research personnel belonged.

Any required maintenance of the equipment should again be undertaken by the University.

In the unlikely event that a faculty or research personnel obtains equipment via external funding that is not processed through the University's budget, the status of the equipment should be negotiated with the Vice Rector to determine ownership and responsibility for repair and replacement. Faculty or research personnel are encouraged to seek outside funding to upgrade, or replace their research equipment.

The Research Office is committed to working with faculty or research personnel to develop proposals for research and teaching equipment. Equipment grants usually require an institutional match, and faculty or research members are advised to consult with the Research Office and the Director of MIS early in the process about this matter. The MIS should be able to help faculty or research personnel to identify the best hardware and software products and estimate costs for proposal budgets.

8.3 Provision of computing equipment by MIS

The MIS department supplies desktop office computers, computer teaching labs, copy and printing machines and other types of equipment needed for research (software and hardware). The Director of the MIS department is responsible for keeping the University's inventory records and adjust these in the case of equipment purchases or wearing out of equipment (being fully depreciated).

9. Policy on Research Staff

9.1 Introduction

Academic Research Staff are EUC contract employees hired to work on EUC research activities as defined below. As EUC employees, Academic Research Staff are subject to all policies and procedures related to EUC employment, and receive all benefits implied by the employment law.

9.2 Definitions of Roles

The following positions for research staff are being described in the following sections:

- Research Associate
- Research Fellow
- Senior Research Fellow
- Honorary Research Staff

9.2.1 Job Description for the Position of Research Associate

9.2.1.1 Overall Role

For researchers who are educated to first degree level (and Master's degree) and who possess sufficient breadth or depth of knowledge in the discipline of research methods and techniques to work within their own area. Role holders who gain their doctorate during the course of employment will normally be recommended for promotion to Research Fellow, if this is appropriate for the duties and responsibilities of the post.

As a team member of the Research Laboratory/Programme the Research Associate will contribute quality research outputs and conceptual support to projects. With the guidance of the supervisor/programme leader, and within the bounds of the Research Laboratory/Programme mandate, the Research Associate will:

9.2.1.2 Key Responsibilities

• Conceptualize and conduct short-term experiments and research activities in support of broadbased/longitudinal research projects, ensuring consistency with established methodological approaches and models, adherence to project timelines, and completeness of documentation;
• Conduct studies of related literature and research to support the design and implementation of projects and development of reports, ensuring conceptual relevance, comprehensiveness, and currency of information;

• Write and publish articles in peer-reviewed journals that highlight findings from research and experimental activities ensuring consistency with the highest standards of academic publication and showcasing the Centre's/Programme's scientific leadership;
• Communicate to Programme/Project team developments/progress and results of research activities ensuring that relevant information and issues in the implementation of projects/experiments are captured in as comprehensive and timely manner as possible;
• Develop collaborative links with core scientific personnel in related programme areas to gain exposure to, and build knowledge on experimental/research activities and approaches, in order to subsequently improve conceptual development and implementation of existing programmes;
• Utilize appropriate and current techniques/protocols in experimental laboratory management to ensure integrity and security of experimental process, comprehensive documentation, and replicability of experimental procedures;
• Design and organize databases along project frameworks and experimental research design that support overall research management, including the monitoring and evaluation of project inputs, actions, and outcomes, as well as the subsequent integration of these databases to other databanks;
• Identify areas of improvement within the research structure using integrated management approaches in pursuit of capacity building/strengthening and the preservation of scientific rigor in research studies.
• To contribute to the design of a range of experiments/fieldwork/research methodologies in relation to the specific project that they are working on
• To set up and run experiments/fieldwork in consultation with the Principal Investigator, ensuring that the experiments/fieldwork are appropriately supervised and supported. To record, analyse and write up the results of these experiments/fieldwork.
• To prepare and present findings of research activity to colleagues for review purposes.
• To contribute to the drafting and submitting of papers to appropriate peer reviewed journals.
• To prepare progress reports on research for funding bodies when required.
• To contribute to the preparation and drafting of research bids and proposals.
• To contribute to the overall activities of the research team and department as required.
• To analyse and interpret the results of their own research

9.2.1.3 Skills and Qualifications

Education: Level Bachelor and/or Master's in the Programme Area
Experience and Skills:
Basic research skills and knowledge of research techniques
Ability to analyse and write up data
Ability to present and communicate research results effectively to a range of audiences

9.2.1.4 EUC Pertaining Benefits

Researchers will have access to facilities which are necessary and appropriate for the performance of their duties.
- Desk, Telephone line and PC
- MS Office, SPSS, Email and Printing Rights
- Business Cards with the University Emblem and the Research Laboratory they belong to
- Full access to the library

All researchers must receive the same forms of employment documentation as other academic-related staff of the University:
- a formal contract signed by the relevant appointing authority;
- written confirmation of any changes in the terms of employment;
- job description or the generic description of the role and, where appropriate, a list of expected research goals;
- further to the completion of the contract, researchers are responsible for returning in good condition all the equipment as well as business cards that have been provided to them.

9.2.2 Job Description for the Position of Research Fellow

9.2.2.1 Overall Role

A Research Fellow is a researcher with some research experience and who has typically been awarded a doctoral degree. A Research Fellow will often have supervisory responsibilities for more junior researchers and will often lead a team of researchers to achieve a research project's aims. They will initiate, develop, design and be responsible for the delivery of a programme of high quality research and may have full authority over several phases of project work.

9.2.2.2 Key Responsibilities

• Design, Conceptualize and conduct short-term experiments and research activities in support of broadbased/longitudinal research projects, ensuring consistency with established methodological approaches and models, adherence to project timelines, and completeness of documentation;
• Supervise and Conduct studies of related literature and research to support the design and implementation of projects and development of reports, ensuring conceptual relevance, comprehensiveness, and currency of information;
• Write and publish articles in peer-reviewed journals that highlight findings from research and experimental activities ensuring consistency with the highest standards of academic publication and showcasing the Centre's/Programme's scientific leadership;
• Take the lead within the team and communicate to Programme/Project team developments/progress and results of research activities ensuring that relevant

information and issues in the implementation of projects/experiments are captured in as comprehensive and timely manner as possible;
• Develop collaborative links with core scientific personnel in related programme areas to gain exposure to, and build knowledge on experimental/research activities and approaches, in order to subsequently improve conceptual development and implementation of existing programmes;
• Utilize appropriate and current techniques/protocols in experimental laboratory management to ensure integrity and security of experimental process, comprehensive documentation, and replicability of experimental procedures;
• Design and organize databases along project frameworks and experimental research design that support overall research management, including the monitoring and evaluation of project inputs, actions, and outcomes, as well as the subsequent integration of these databases to other databanks;
• Identify areas of improvement within the research structure using integrated management approaches in pursuit of capacity building/strengthening and the preservation of scientific rigor in research studies.
• Develop research objectives, projects and proposals.
• Conduct individual or collaborative research projects.
• Identify sources of funding and contribute to the process of securing funds.

• Act as principal investigator on research projects.
• Manage and lead a team of researchers to achieve the aims of a research project.
• Oversee and appropriately supervise and support the research activities (experiments, fieldwork etc.) of a research programme/project.
• Ensure that research results are recorded, analysed and written up in a timely fashion.
• Manage research grants in accordance with EUC Financial Regulations and the conditions of the funding body (e.g. EU, RPF etc.)
• Prepare and present findings of research activity to colleagues for review purposes.
• Submit papers to relevant peer reviewed journals and attend and present findings at relevant conferences.
• Prepare progress reports on research for funding bodies when required
• Participate in and develop external networks, for example to identify sources of funding or to build relationships for future research activities

9.2.2.3 Skills and Qualifications

Education: Level PhD in the Programme Area
Experience: at least 1-3 years relevant experience.
The candidate must possess sufficient specialist knowledge in the specific discipline to develop research programmes and methodologies*.*

9.2.2.4 EUC Pertaining Benefits

Researchers will have access to facilities which are necessary and appropriate for the performance of their duties.

- Desk, Telephone line and PC
- MS Office, SPSS, Email and Printing Rights
- Business Cards with the University Emblem and the Research Laboratory they belong to
- Full access to the library

All researchers must receive the same forms of employment documentation as other academic-related staff of the University:

• a formal contract signed by the relevant appointing authority;
• written confirmation of any changes in the terms of employment;
• job description or the generic description of the role and, where appropriate, a list of expected research goals;
• further to the completion of the contract, researchers are responsible for returning in good condition all the equipment as well as business cards that have been provided to them

9.2.3 Job Description for the Position of Senior Research Fellow

9.2.3.1 Overall Role

A Senior Research Fellow is an experienced researcher holding a leadership role in a research group/centre/institute. Post-holders are expected to undertake the role of Principal Investigator on major research projects, exhibit a strong reputation for independent research, and provide academic leadership. They are also expected to support the management activity of the relevant School/Research Centre, and contribute to the delivery of the School's/ Centre's/Laboratory's research strategy.

9.2.3.2 Key Responsibilities

- Supervise postgraduate research students
- Contribute to the development of research strategies for the relevant School/Centre/Laboratory.
- Define research objectives and questions
- Develop proposals for research projects which will make a significant impact by leading to an increase in knowledge and understanding
- Actively seek research funding and secure it as far as it is reasonably possible
- Generate new research approaches
- Review and synthesise the outcomes of research studies
- Interpret findings obtained from research projects and develop new insights
- Contribute generally to the development of thought and practice in the field
- Provide academic leadership to those working within research areas - for example, by co-ordinating the work of others to ensure that research projects are delivered effectively and to time
- Contribute to the development of teams and individuals through the appraisal system and providing advice on personal development

- Act as line manager (e.g. of research teams)
- Act as a personal mentor to peers and colleagues
- Provide advice on issues such as ensuring the appropriate balance of research projects, appointment of researchers and other performance related issues
- Identify opportunities for strategic development of new projects or other areas of research activity and contribute to the development of such ideas

9.2.3.3 Skills and Qualifications

Education: Level PhD in the Programme Area
Experience: at least 7-10 years relevant experience. Significant post-qualification research experience with a track record of high-quality publications.
Experience of successful supervision of students
Experience in a leadership role in a Research Group/Centre or Laboratory

9.2.3.4 EUC Pertaining Benefits

Researchers will have access to facilities which are necessary and appropriate for the performance of their duties.
- Desk, Telephone line and PC
- MS Office, SPSS, Email and Printing Rights
- Business Cards with the University Emblem and the Research Laboratory they belong to
- Full access to the library

All researchers must receive the same forms of employment documentation as other academic-related staff of the University:
• a formal contract signed by the relevant appointing authority;
• written confirmation of any changes in the terms of employment;
• job description or the generic description of the role and, where appropriate, a list of expected research goals;
• further to the completion of the contract, researchers are responsible for returning in good condition all the equipment as well as business cards that have been provided to them

9.3 Procedures for Appointment

9.3.1 Selection and Search Procedures

As a general rule, an appointment to the Academic Research Staff requires a search for a suitable candidate. Searches are initiated with a written vacancy announcement, such as in relevant professional journals or other publications.

The text for the announcement should be sent to the Office of the Vice Rector of Research and External Affairs and the Office of the Director of Human Resources, clearly describing the terms of employment, length of employment, identity and duration of funding sources contributing to his or her salary and line manager (the person the

researcher will be reporting to). The text should be advertised for a reasonable amount of time. A copy of a current CV, a cover letter and at least one recommendation should be sought for. A short list of the potential candidates will be created based on merit and the top part of the list will be called for a structured interview with the line manager. At the end of the procedure, the line manager will report back to the Office of the Vice Rector of Research and External Affairs and the Office of the Director of Human Resources, the name(s) of the proposed Researcher.

9.3.2 Criteria for the Appointment to Rank of Research Associate

Minimum qualifications as described in Section 9.2.1.

9.3.3 Criteria and Procedures for the Promotion to the Rank of Research Fellow

A Research Associate may, during the course of his/her appointment obtain, his/her PhD. In such cases, the employee (provided that he/she fulfills the work experience as described in Section 9.2.2) is promoted to the rank of Research Fellow. If the funding source that sponsors the program the researcher is assigned to accounts for a pay rise this is immediately applied.

9.4 Honorary Research Staff

The work of Research Centers is enhanced by the involvement and collaboration in the Research Centers' activities of personnel who are not employees of the University. To recognise the association, EUC may confer an honorary title to such individuals during the period of their association. An honorary title may not be conferred on an employee of EUC.

The title to be conferred will depend on the level of distinction and qualification of the candidate. Applications should come from the Dean of the School with:

- a copy of the person's CV
- a citation that should include:
    - a description of contributions to teaching
    - research being undertaken with academic staff as evidenced by joint publications/research projects and research grants or contracts being held jointly or a significant involvement in industry/academic joint activities within the College
    - rationale for offering the association
    - the start date and end date of the association

Honorary titles are intended to recognise ongoing attachments and are awarded for a fixed term, normally up to three years in the first instance. No monetary honorarium is associated with the offer.

The honorary research titles that can be awarded are:

9.4.1 Honorary Principal Research Fellow

Will have made an outstanding contribution to teaching and research

9.4.2 Honorary Senior Research Fellow

Extensive research experience required, the quality of which is determined by refereed publications, invitations to speak at conferences, hold an established national reputation and a known or developing international reputation. Have the ability to attract significant external research funding. Will usually lead a team of other research staff, possibly drawn from several disciplines

9.4.3 Honorary Research Fellow

Proven ability of high quality research, evidenced by authorship of a range of publications. Capable of attracting external research funding. May be required to undertake project management and/or supervise teams and other research staff; expected to provide expert advice and guidance to others

9.4.4 Honorary Research Associate

Required to produce independent original research and to take initiatives in planning of research.

9.5 Intellectual Property Rights

All IP generated throughout the employment of an Academic Research Staff Member belongs to EUC. In such cases that the Researcher is employed in a project that assigns explicit IP rights (e.g. an EU funded project) then the rules as set out by the funding agency are followed.

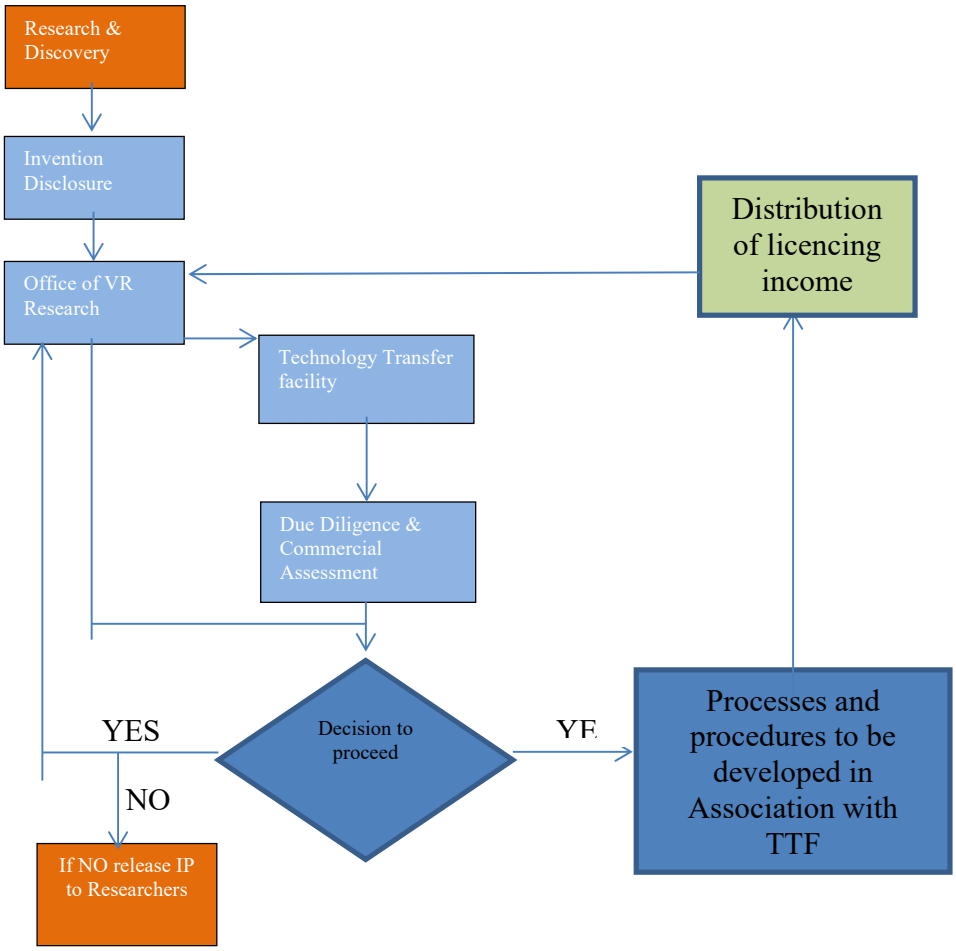
Honorary Research Staff may be required to assign the rights to any IP they create in the course of their academic activities to EUC. EUC may have obligations to organisations which are funding the research (e.g. an EU funded project) in question which it will not be able to honour without such an assignment of rights being in place. Associates are treated as if they were EUC Employees for the purposes of revenue sharing.

9.6 Involvement of Research Staff

Wherever possible, Academic Research staff should be encouraged to take part in university decision making processes, for example by inclusion in relevant departmental committees. Where appropriate, researchers should be included at University level, for example as representatives in working groups and staff consultation exercises.

Appendix A:

A Technology Transfer Process Map – to be completed when the TTF has been established.



Appendix B:

Invention Disclosure Guidelines

Invention Disclosure Form - Example

An Invention Disclosure Form (IDF) is designed to determine the basic facts relating to an invention, design, or copyright material. It is a way of capturing an invention and establishing who the inventors are, what the invention is, who is funding it, what the anticipated product/ market is and initiate Intellectual Property (IP) due diligence. Information on the following aspects of an invention should be included in an Invention Disclosure Form.

1. Descriptive Title of the Invention.
2. Who was involved? Please specify for each individual who contributed, invented or authored (if software):
    a. Their names and if any are foreign nationals;
    b. Who their employer is; are any contracts or arrangements in place?
    c. What they contributed to the development of the technology (e.g. came up with the original idea; designed experiments; carried out experimental work; wrote code)
3. Detail of your invention:
    a. What do you think your invention is?
    b. What will your invention be used for?
    c. What are the advantages of your invention and how does it improve on the present situation?
    d. What is new about your invention?
    e. How and why does it work? What is the science behind the invention
    f. Are there any other uses of the invention?
4. Interest from external organisations and their details.
5. Information on published literature (including patents) relevant to your invention?
6. When and where the invention was first conceived?
7. What are your future plans for developing the technology?
8. Who have you told about the invention, when and where?
9. When did you first describe the invention in writing or electronically?
10. Publications, abstracts, conferences to date.
11. Publication and conference plans.
12. Funding information (comprehensive), e.g including third party support, Material Sales or Transfers, patient consents.

    For inventions that include software, please provide the following additional information.

13. Application name and version number.

14. For source code developed by the researchers identified in question 2 above, include: source files used, programming languages, development tools, copyright protection in source code.
15. For new versions, include: source files changed, added or removed since the previous version, documentation required for others to use, if the source files have been distributed outside the university, and in what form, and are the source files available as a web-download – inc. URL and terms under which the download is available.
16. For other source files or libraries that are required to build the software application (external software), list the following: all external software required to use the application; who owns that software, how was the software obtained, licence terms or FOSS – name of the licence.

Appendix C:

Suggested Revenue Sharing Scheme

The EUC will share royalty income with employees and/or students involved in producing Disclosable Work whose exploitation generates revenue for the EUC. Payments are made at the Organisation's sole discretion, but the EUC will normally share royalty income in accordance with the table below. This may be either as a lump sum or as royalty income over a period of time.

Table C1

Net Revenue	Allocated to the Creator/s	Allocated to the EUC Central Budget	Allocated to the Creator'/s School of Study or Department Budget	Allocated to Support the TTF
100%	50%	20%	20%	10%

Appendix D

D1. Points accumulation from Research

Table D1 details the evaluation categories which will be used for the calculation of research points allocated to EUC researchers. The table has been constructed taking into account the following:

1. The points awarded are based on the evaluation of research accomplishments, not on the estimation / calculation of hours spent during the implementation of a research activity.
2. A research accomplishment is any research-related activity which strengthens the research portfolio and enhances the research esteem of a researcher in particular, and the EUC in general
3. It is apparent that specific research accomplishments cannot be evaluated in a similar manner across the range of research disciplines. Therefore, the following table is implicitly "averaging" the weight of these accomplishments, so that the scheme can be operational and fair.
4. The term "national", when used in association with a conference, refers to one which is local in nature (i.e. only researchers from Cypriot Universities and other Cypriot research establishments participated in it).
5. The term "international", when used in association with a conference, refers to one which is international in nature (i.e. researchers from Universities and other research establishments from at least two countries participated in it).
6. The term "national", when used in association with a publication refers to one published by a Cypriot university or other Cypriot academic publishing house.
7. The term "international", when used in association with a publication refers to one published by an international university or other international academic publishing house.

Where a publication of any type (conference, journal, book chapter, monograph, textbook, book, or other) concerns two or more authors, the following points' calculation rules will apply: For cases up to (and including) two (2) authors, full points are awarded to the author in consideration. For each additional co-author (three (3) authors or more), a deduction of 2 points will be implemented on the full points' allocation for the category considered. The minimum points that an author will be awarded cannot be smaller than 50% of the full points' allocation for the category considered.

Table D1

Points	Conferences	Journals	Books	Research Projects	Other*
5	1. Presentation of poster / article in national conference (refereed) 2. Presentation as invited keynote speaker (refereed national conference)			1. Unsuccessful submission of funded research proposal in national / international organization (research partner)	Member of scientific / conference organizing committee (national / international)
10	1. Presentation of refereed poster / article in international conference (refereed) 2. Presentation as invited keynote speaker (refereed international conference) 3. Editor of national conference proceedings (refereed)	1. Publication of refereed journal article (journal not in ISI / Scopus / ACM / IEEE/etc.) 2. Editor of refereed journal special issue (journal not in ISI / Scopus / ACM / IEEE/etc.)	Publication of refereed book chapter (national)	1. Unsuccessful submission of funded research proposal in national organisation (project coordinator)	General Chair or Program Chair of refereed national conference
15	1. Editor of international conference proceedings (refereed)		Publication of refereed book chapter (international)	1. Unsuccessful submission of funded research proposal in international organization (project coordinator)	General Chair or Program Chair of refereed international conference

Table D1 (continues)

Points	Conferences	Journals	Book Chapters / Editors	Research Projects	Other*
20		1. Editor of refereed journal special issue (journal in ISI / Scopus / ACM / IEEE/etc.)	Editor of refereed book / book series		
25		1. Publication of refereed journal article (journal in ISI / Scopus / ACM / IEEE/etc.)			

* For these categories only 50% of the points will be accumulated

D2. Points accumulation from Research / Department of Arts

Due to the nature of the research conducted in the Department of Arts, Table D2 has been produced to address the research output of the Department. For all other research outputs such as journal papers, conferences, books, etc. the European University Cyprus' "Points' accumulation" table given in section D1 must be followed.

Table D2

Points	Other				
	Performance /Exhibition (Artist		Creative works		Workshop/Seminars/Festivals /Competitions/ Broadcasts/Residencies
	Music	Graphic Design/Visual Arts	Music	Graphic Design/Visual Arts	
5	**A01** Performance - National level (partial performance)	**A02** Participation in local group exhibition	**A03** Composition for up to 4 musicians		**A04** • National Performance or Broadcast of a composition/arrangement • Adjudication of Competition • Invited workshop / art lecture in national conference/festival
10	**A05** Performance - International level (partial performance) Part of ensemble studio recording/ less than 3 tracks	**A06** Participation in international group exhibition	**A07** Composition from 5-10 musicians	**A08** Publication design (national/international) - booklets covers	**A09** • International Performance or Broadcast of a composition/arrangement • Competition Finalist • Invited workshop / art lecture in international conference/festival • Invited Artist (Workshop)
15	**A10** Performance - National level (entire concert) Performance with Large Ensemble Part of ensemble studio recording/ more than 3 tracks	**A11** Editor of exhibition catalogue (national/international)	**A12** Composition for 10 musicians and above	**A13** Publication design (international) - books and exhibition catalogues	**A14A** • Competition Winner • Invited Artist (Festival – duration more than three days) **A14B** Chair of international arts/music festival

20	**A15** Performer – International level (entire concert) / Solo studio Recording (CD) less than 3 tracks	**A16** Participation in national solo exhibition	**A17** Composition for Symphonic Orchestra	**A18** Commissioned work by government/museum/ other cultural institution	**A19** Participation in funded international residency
25	**A20** Solo studio Recording (CD) more than 3 tracks	**A21** Participation in international solo exhibition	**A22** Publication of a composition (Score/CD) by an International Music Publishing House /Recording company	**A23** Project: Curation of national / international exhibition	

Appendix VII

INTERNAL REGULATION ON

SABBATICAL LEAVE

73rd Senate Decision: 22 May 2020

Policy on Sabbatical Leave

1. Purpose

The objective of a Sabbatical Leave is to increase a faculty's value to the University and thereby improve and enrich its programs. Such leave is not regarded as a reward for service or as a vacation or rest period occurring automatically at stated intervals. Sabbatical leaves are granted for planned travelstudy, formal education, research, writing of papers, monographs and books or other experience of academic value.

A Sabbatical Leave, as distinguished from a terminal leave, a leave without compensation, or a leave for reasons of health, is defined at EUC as a leave for encouraging faculty members to engage in scholarly research and international networking that will increase their scholarly achievement or their capacity for service to the University internationalization policy. A Sabbatical Leave is not granted for taking regular academic or other employment with a financial advantage elsewhere.

2. Terms

A Sabbatical Leave is granted to a faculty member, beginning September 1, for the usual teaching terms (i.e., September to June complete) of one academic year (two semesters). However, as an alternative, a faculty member who has qualified for a full year of Sabbatical Leave may apply for such sabbatical to be divided into two terms falling within a six-year period, each such term representing one semester.

The cost of replacing a faculty member during Sabbatical Leave is to be kept as low as possible by arrangements such as rotating courses, employing part-time academic staff, and making internal adjustments in the academic Departments concerned. In all cases, the relevant School must give the final approval for the implementation of the Sabbatical Leave in a particular semester so that the smooth operation of the academic programs offered by the School is not affected by severe staff shortage.

3. Procedure for Granting a Sabbatical Leave

Application for a Sabbatical Leave should be made by the faculty member and submitted to the Department Chairperson no later than December 1, preceding

the academic year in which the leave will be carried out. The faculty member should submit the completed application form which will include a plan of activities during the Sabbatical Leave. Letters of acceptance from the institutions which will host the faculty member during his/her leave should also be attached.

The Department Chairperson must forward the application with an accompanying recommendation to the appropriate Dean by the following December 15. The recommendation shall include a statement of the proposed method of handling the normal duties of the faculty member while on leave.

The Dean must forward each application and the accompanying recommendation of the Department Chairperson, together with the Dean's own recommendation, to the Office of the Rector by January 15.

The Office of the Rector will forward all applications to the Chair of the Ad-hoc Committee which will evaluate the proposals. The Ad-hoc Committee will consist of the Vice-Rector of Research & External Affairs (chair), the Vice-Rector of Academic Affairs and the Director of Human Resources. The evaluation procedure for the awards is described in the following section.

4. Evaluation Procedure for the Sabbatical Awards

The Committee will decide each year the number of new sabbatical awards which will be made to the whole University. This will not be less than 3% of EUC faculty in the current academic year.

The Committee will determine the number of new sabbatical awards which will be made to each School in the current academic year. To do this, the Committee will consider the proportion of sabbatical leave awards which have been made to faculty members of each School of the University in the last three years including the current academic year. The Committee will ensure that with the new awards this proportion for each School does not deviate by more than 20% from its proportion of faculty members. Deviations exceeding 20% from these proportions may be allowed in the first three years of the implementation of the policy (starting academic year: 2020-21).

Once the number of new sabbatical awards to each School is determined, the Committee will select the applicant(s) from each School who have the highest number of points as calculated with the scheme described in Appendix A (below).

Applicants will be notified about the outcome of their application by March 15.

5. Sabbatical Leave and Sponsored Research

A faculty member is entitled to supplement the salary provided by the University during the period of leave with funding provided by an institutional, national or international source for academic activities.

6. Eligibility

Eligibility for a Sabbatical Leave is limited to full-time faculty members who have achieved tenure rights and who have completed six years of full-time service as faculty at European University Cyprus. In general, at least six years must elapse between consecutive sabbaticals.

At the end of a sabbatical leave, the faculty member should forward to the Department Chairperson and the Dean copies of a report on activities undertaken during the period of the leave.

Chairs of Departments, Deans of Schools, Vice-Rectors and the Rector are not eligible for a sabbatical leave award during their term of office.

Appendix A

Point calculation system for Sabbatical Awards

This Appendix describes the point calculation system which will be used for selecting the candidates in each School which will be awarded a Sabbatical Leave (see section 4).

The point calculation system awards points by considering the research activity of faculty in the past 5 years.

- Scopus document in the past 5 years: 30 points
- Scopus citations to documents published in the past 5 years: 2 points per citation
- Successful research proposals–National:

Principal investigator (PI) of the whole proposal	Local Coordinator of the proposal	Participant in the proposal
50 points	20 points	10 points

- Successful research proposals–European Union

Principal investigator (PI) of the whole proposal	Local Coordinator of the proposal	Participant in the proposal
100 points	40 points	20 points

Example: A faculty member published 3 Scopus papers in the past 5 years which have 10, 1, 3 Scopus citations respectively. He/she submitted one national proposal as a PI. What are his/her total points?

The total points are calculated as follows:

Papers: 3*30=90pts

Citations: (10+1+3)*2=28pts

Proposals: 50=50pts

Total points 90+28+50=168pts