WAP 228 – Workplace Application II

Course Code	Course Name	Semester	
WAP 228	Workplace Application II	Fall ☐ Spring ☒ Summer ☐	
Hours		**Credit**	**ECTS**
Theory	**Practice**	**Lab**	
0	6	0	3	3

Course Details	
Department	Aerospace Engineering
Course Language	English
Course Level	Undergraduate ☒ Graduate ☐
Mode of Delivery	Face to Face ☒ Online ☐ Hybrid ☐
Course Type	Compulsory ☒ Elective ☐
Lecturer (s)	Departmental Academic Advisor & Workplace Mentor
Course Objectives	The primary objective of this course is to enable students to build upon the foundational experience gained in Workplace Application I. This course aims to deepen students' integration into the professional environment by assigning them more complex tasks and greater responsibilities. Students will transition from applying basic principles to analyzing engineering systems, proposing solutions, and contributing to medium-scale projects. The course focuses on enhancing analytical and problem-solving skills, fostering autonomy and initiative, and preparing students for significant contributions in their future engineering careers.
Course Content	This course requires students to spend one full day per week at a partner company, building on their previous placement. The content involves working on more complex, multi-stage tasks or a dedicated medium-scale project. Students will be expected to analyze existing processes, identify areas for improvement, and implement solutions under the guidance of a workplace mentor. The course emphasizes in-depth documentation, including technical analysis in weekly reports, and culminates in a comprehensive final report and presentation that details the project's methodology, outcomes, and the student's analytical contributions.
Course Method/ Techniques	Lecture ☐ Question & Answer ☐ Presentation ☐ Discussion ☐
Prerequisites/	Must be a 3rd-year student and have successfully completed WAP 227

Corequisites	(Workplace Application I).
Work Placement(s)	The placement continues for 16 weeks throughout the semester, requiring 1 full day (8 hours) per week.

Textbook/References/Materials

Workplace Education Guideline

Course Category				
Mathematics and Basic Sciences	☐		Education	☐
Engineering	☒		Science	☐
Engineering Design	☐		Health	☐
Social Sciences	☐		Profession	☒

Weekly Schedule

No	Topics	Materials/Notes
1	Re-orientation, review of WAP I outcomes, and setting advanced project goals with mentor.	Workplace Education Guideline
2	Analysis of a specific engineering system or process within the department.	Workplace Education Guideline
3	Developing a project plan and methodology; proposing initial solutions.	Weekly Report
4	Taking on simple tasks and understanding the workflow	Weekly Report
5	Taking on simple tasks and understanding the workflow	Weekly Report
6	Carrying out technical tasks requiring analysis and independent problem-solving.	Weekly Report
7	Carrying out technical tasks requiring analysis and independent problem-solving.	Weekly Report
8	Carrying out technical tasks requiring analysis and independent problem-solving.	Weekly Report
9	Carrying out technical tasks requiring analysis and independent problem-solving.	Weekly Report
10	Carrying out technical tasks requiring	Weekly Report

	analysis and independent problem-solving.	
11	Taking on more comprehensive tasks	Weekly Report
12	Taking on more comprehensive tasks	Weekly Report
13	Testing and validating proposed solutions or project outcomes.	Weekly Report
14	Documenting work according to technical standards	Weekly Report
15	Compiling all work and observations from the semester	Final Report Draft
16	Submission of the Final Report	Workplace Evaluation Form

Assessment Methods and Criteria		
In-term studies	**Quantity**	**Percentage**
Attendance	16	30
Lab	-	-
Practice	-	-
Fieldwork	-	-
Course-specific internship	-	-
Quiz/Studio/Criticize	-	-
Homework	-	-
Presentation / Seminar	-	-
Project	-	-
Report	16	70
Seminar	-	-
Midterm Exam	-	-
Final Exam	-	-
	Total	**100%**
Contribution of Midterm Studies to Success Grade	1	40
Contribution of End of Semester Studies to Success Grade	1	60
	Total	**100%**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration (Hrs)**	**Total Workload**
Course Hours	-	-	-
Lab	-	-	-
Practice	-	-	-
Fieldwork	-	-	-
Course-specific Work Placement	-	-	-
Out-of-class study time	-	-	-
Quiz/Studio/Criticize	-	-	-

Homework	-	-	-
Presentation / Seminar	-	-	-
Project	-	-	-
Report	16	4	64
Midterm Exam and Preparation for Midterm	-	-	-
Final Exam and Preparation for Final Exam	-	-	-
Total Workload			**64**
Total Workload / 25			**2.56**
ECTS Credit			**3**

Course Learning Outcomes	
No	**Outcome**
L1	Proposes improvements to organizational structures, professional culture, and project workflows based on critical analysis.
L2	Develops and implements effective solutions for moderately complex engineering problems and projects.
L3	Justifies the selection of and proficiently utilizes advanced engineering tools, software, and techniques for assigned projects.
L4	Demonstrates initiative and leadership within a team, effectively managing responsibilities and fostering collaboration.
L5	Prepares comprehensive technical reports and presentations that include in-depth analysis, results, and strategic recommendations.
L6	Proactively identifies and contributes to the implementation of workplace practices that enhance occupational health and safety.

Contribution of Course Learning Outcomes to Program Competencies/Outcomes

Contribution Level: 1: Very Slight, 2: Slight, 3: Moderate, 4: Significant, 5: Very Significant

	P1	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11**					**Total**
L1	4	4	3	4	3	4	3	3	5	4	3					40
L2	5	5	5	4	4	3	4	4	4	4	3					45
L3	4	4	4	3	5	4	4	3	4	4	3					42
L4	5	4	4	5	5	4	3	5	5	5	3					48
L5	4	4	4	4	4	4	3	4	4	5	4					44
L6	4	3	3	3	5	5	4	5	4	3	4					43
															Total	**262**

i. The ability to actively integrate theoretical engineering knowledge with practical applications; to understand and apply the operational, organizational, and cultural dynamics of a professional workplace within the context of assigned projects and tasks.

ii. The ability to identify, analyze, and actively contribute to the solution of technical problems and engineering tasks encountered in the workplace; the ability to adapt and implement problem- solving methods according to real-world business objectives and constraints.

iii. The ability to take ownership of and execute workplace projects, processes, and tasks in accordance with defined requirements and deadlines; the ability to develop systematic and proactive approaches to assigned responsibilities.

iv. The ability to effectively select and apply modern engineering tools, software, and technologies specific to the industry and assigned tasks; the ability to analyze and manage technical information and data within a professional context.

v. The ability to actively participate in workplace processes, gather technical information, analyze business outcomes, and constructively interpret and apply feedback from supervisors and colleagues to improve personal and team performance.

vi. The ability to work productively as a member of intra-departmental and cross-departmental teams and to collaborate with colleagues; the ability to manage individual tasks and project responsibilities and work independently.

vii. The ability to communicate effectively both orally and in writing in a professional setting; proficiency in preparing technical reports and professional correspondence, making meaningful contributions to project meetings, delivering technical presentations, and understanding and applying workplace instructions.

viii. To embrace the need for continuous professional development and lifelong learning; the ability to assess personal competencies, seek new learning opportunities, and rapidly adapt to evolving industry trends and technologies.

ix. The ability to act in full accordance with professional ethical principles and corporate policies; demonstrating professional responsibilities and the high standards of conduct expected in the workplace.

x. The ability to implement fundamental business practices such as project workflows, time management, and quality assurance; to reflect an understanding of the importance of customer focus, efficiency, and innovation in a competitive environment through one's work.

xi. The ability to evaluate the impact of one's activities on health, safety, and the environment; demonstrating an awareness of corporate social responsibility and the organization's role within the broader society and marketplace.