

MS4090 – Work Study Degree Final Year Project

Course Code	MS4090					
Course Title	Work Study Degree Final Year Project					
Pre-requisites	<ul style="list-style-type: none"> • Work Study Degree Programme student confirmed for Block 3 • Year 4 standing 					
No of AUs	8					
Contact Hours	LECTURES	0	TUTORIAL	0	LAB	320

Course Aims

The proposed 2 semester long WSDeg Final Year Project offered under the NTU Work Study Degree Programme is offered as part of the programme requirement requirements.

The main objective of the WSDeg project under the NTU Work Study Degree Programme is to enable the application of knowledge and skills you have learned in the university in an authentic work environment. This is such that you can gain relevant exposures and develop practical industry experiences and skills that will facilitate your career decision and future transition into your selected vocation. It aims for you to develop professional competencies that will enhance your employability and lifelong learning capabilities to support your career and life endeavours and your readiness for the future of work.

Students are allocated at least 8 hours per week onsite with the organisation to work on their sponsored project, spread over 2 semesters. In practice, you may spend more time than this and may be allowed to use any free time slots to complete the project.

Intended Learning Outcomes (ILO)

At the end of WSDeg FYP course, you (as a student) should be able to progressively:

Research / WSDeg FYP (To be assessed by Faculty Supervisor for Grading Purposes)

1. Undertake research projects within a workplace setting independently and successfully within the given time and resources.
2. Apply appropriate research approaches and technical knowledge to determine, make sense and address the problem or issues faced by the stakeholders/sponsors.
3. Discuss and recommend sound solutions, responses and/or future directions based on the findings.
4. Write quality technical reports that communicate the significance of the problems, the application of technical knowledge and research methodology to reach the recommendations presented in the reports.
5. Deliver presentations that clearly communicate the research findings in the reports.

Work Performance (To be evaluated by Organisation Project Supervisor for Employability Testimonial Purpose)

I. Cognitive

1. Apply knowledge and skills relevantly and appropriately in the workplace.
2. Identify your own competency gaps at the internship workplace.
3. Evaluate and develop personal learning and development pathways towards bridging competency gaps identified in point (2) above.
4. Develop and apply strategies to solve problems effectively (involves critical thinking and creativity, generating questions, resourcing, application, and reiteration).
5. Evaluate resources and develop insights to make informed judgements and recommendations.

II. Context

6. Discuss the internship organisation's nature and context of business.
7. Reflect on the organisational culture at the internship organisation.
8. Appraise the significance and impact of the project/work/assignment undertaken at the internship organisation.
9. Describe the career pathways within the internship organisation as well as the broader industry.
10. Reflect on personal and professional development needs within the internship organisation as well as the broader industry and set strategic goals for advancing along an intended career path.
11. Apply time and task management strategies effectively.

III. Relationship

12. Apply effective written and oral communication skills in professional settings when communicating and connecting with relevant stakeholders.
13. Assimilate into the work environment (people, team, hierarchy) and function effectively.

IV. Affective/Moral

14. Tolerate ambiguity and handle anxiety.
15. Contribute proactively to the internship organisation.
16. Demonstrate responsibility, integrity and professionalism in the fulfilment of all workplace and internship requirements.
17. Demonstrate the persistence to learn, overcome and improve.

V. Technical

18. Use tools that enable and facilitate effective project/work/assignment undertaken at the internship organisation.
19. Execute projects by managing stakeholders, resources, budgets and resolving problems and resolving problems effectively
20. Manage stakeholder expectations to ensure continuous levels of engagement by identifying and addressing needs and resolving issues in accordance with procedures

21. Analyse, prioritise and document different task requirements at various stages to ensure meeting of goals.
22. Design, redesign & develop plans and approaches to maximise the impact throughout the project process in alignment with goals
23. Identify, analyse risks and develop risk management solutions to support the continuity of operations and services.
24. Use of design thinking methodologies and processes to solve specific challenges.
25. identify and scope business requirements and priorities through rigorous information gathering and analysis as well as clarification of the solutions, initiatives and programmes to enable effective delivery.

Course Content

The WSDeg FYP is a work-integrated education course and has its educational content embedded within the work environment and assignments that students will undertake at each internship organisation. For this reason, the internship job scope will be evaluated by the course instructor/coordinator using the following criteria:

1. It is relevant to the student's discipline of study;
2. It provides sufficient structure and rigour that will enable students to achieve the intended learning outcomes listed above;
3. It enhances the career prospects of the student;
4. The internship workplace is safe and conducive for student learning and development;
5. The internship workplace is equipped with the necessary tools and resources for the project work;
6. The internship organisation has standing policies to safeguard the welfare of interns;
7. The internship organisation supervisor possesses the competencies, experience, and commitment to provide guidance to the students;
8. The internship organisation will use NTU's internship assessment scheme for students.

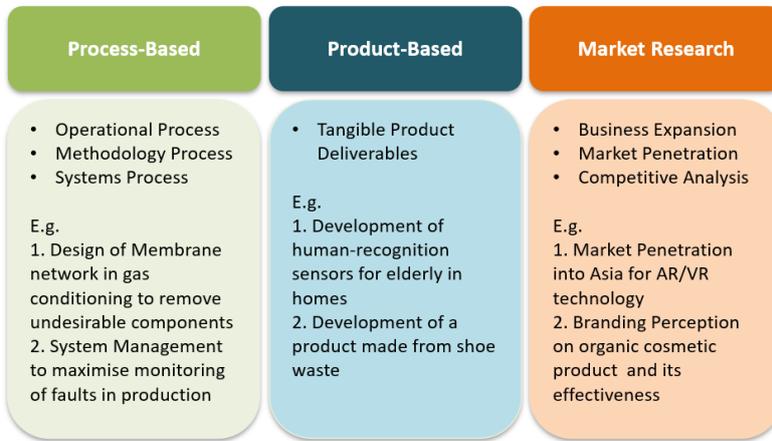
Parameters of WSDeg FYP

Parameters for Work Study Degree Application-Based Project



WSDeg FYP Project Types

Work Study Degree Application-Based Project Types



Formative Feedback

Continuous feedback on progress and performance can be expected from both Faculty Supervisor and Organisation Supervisor.

You should maintain your project milestone summary and use it as evidence and artefact for discussions with your supervisors.

Faculty Supervisor will help you to achieve the learning academic requirements required for this course. He or she would provide formative feedback to you during the regular meetings with Organisation Supervisor and/or teammates. Formative feedback may be provided verbally and/or in writing over the 2 semesters.

Learning and Teaching Approach

Approach	How does this approach support students in achieving the learning outcomes?
Research and Inquiry	Engaging in undergraduate research is a way to deepen your understanding of your discipline through a process of inquiry. It will encourage you to synthesize existing literature to critically inform a new problem, and to analyse and interpret results to draw appropriate conclusions and suggest meaningful recommendations. This will also promote self-regulated learning that can sustain lifelong learning and continuous improvement.

	This may involve literature review, problem solving methodologies, result analysis and deriving conclusions and formulating recommendations of future work.
Authentic Assessment	This course situates your FYP in the context of an authentic workplace environment, allowing you to apply your knowledge to a problem that is potentially relevant, significant in the real world. Furthermore, you will have to sharpen your oral and written communication skills in response to the diverse workplace colleagues and real-world stakeholders.
Experiential Learning	Informally, you will gain from this course a myriad of workplace experiences to help cultivate important professional behaviours and attitudes. Even though these are not formally assessed, you will gain formative feedback and perhaps even testimonies that can support your future work.

Reading and References

References:

1. Johnson Stephen F, Gostelow J Paul and King W Joseph, Engineering and society: challenges of professional practice, Prentice Hall, 2000. (TA157, J73)
2. National Academy of Engineering, The Engineer of 2020: Visions of Engineering in the New Century. (ISBN 978-0-309-09162-6 | DOI 10.17226/10999)
3. Peter M Senge, The Fifth Discipline: The Art & Practice of The Learning Organization, Doubleday, 2006. (ISBN 0-383-51725-4)

Course Policies and Student Responsibilities

As a student of the course, you are required to abide by both the University Code of Conduct and the Student Code of Conduct. The Codes provide information on the responsibilities of all NTU students, as well as examples of misconduct and details about how students can report suspected misconduct. The university also has the Student Mental Health Policy. The Policy states the University's commitment to providing a supportive environment for the holistic development of students, including the improvement of your mental health and wellbeing. These policies and codes concerning students can be found in the following link, <https://www.ntu.edu.sg/life-at-ntu/student-life/student-conduct>.

Academic Integrity

An internship concerns work in a professional setting. As with good academic work, good professional work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of professional and academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

<https://www.ntu.edu.sg/life-at-ntu/student-life/student-conduct>

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of integrity in all the work you do as a student of NTU. Not knowing what is involved in maintaining integrity does not excuse professional and academic

dishonesty. You need to actively equip yourself with strategies to avoid all forms of professional and academic dishonesty, including and not limited to, plagiarism, fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the [academic integrity website](#) for more information. Consult your faculty supervisor if you need any clarification about the requirements of professional and academic integrity in the course.