LSM4299 APPLIED PROJECT IN LIFE SCIENCES (16 MCs; Graded)

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1. Module Description

For students pursuing Bachelor of Science (Honours) degree with primary major in Life Sciences, to participate full-time in a six-month-long project in an applied context that culminates in a project presentation and report.

2. Rationale

The module LSM4299 Applied Project in Life Sciences is an option offered to Life Sciences Majors to be considered for the completion of the Level 4000 Honours year major requirements. Differing from and as an alternative to LSM4199 Honours Project in Life Sciences which generally involves a topic of basic or preclinical research, LSM4299 serves as a platform to accommodate internship and professional placements in applied and industrial contexts, as well as projects that are of non-basic/preclinical science research nature. Relevant projects of non-academic research nature may be in the areas of, but not limited to, administration and management, outreach and public awareness, marketing and business strategy, etc.

Please note that unlike LSM4199, this module LSM4299 does not contribute to the fulfillment of a specialisation in Life Sciences Major. Students embarking on LSM4299 and still wish to achieve a specialisation for the Life Sciences Major should make plans to complete six taught modules of LSM42xx all listed in the same specialisation. Also note that unlike UPIP, LSM4299 projects need to be broadly related to Life Sciences.

3. Criteria

These are the criteria to be met to be recognised as an opportunity for LSM4299:

- An internship encompassing a project with defined aims/objectives and deliverables;
- An applied context relating in any way and extent to Life Sciences;
- A length of full-time commitment of 20-24 weeks;
- Preferably (but not necessarily) to be based out of the University, including overseas. (If the internship is within the six Life Sciences teaching departments, it should clearly be of non-academic research nature. For example: An internship project on teaching and pedagogical research with an educator track faculty member within the 6 Life Sciences departments in NUS)

4. Pre-requisites

a. Fulfillment of the major requirements of Life Sciences at BSc standard (i.e. Levels 1000, 2000 and 3000 Major Requirements); and
b. Obtained a minimum overall CAP of 3.20 (for Matriculation Cohorts AY2012/2013 onwards) on completion of 100MCs (Modular Credits) or more.

5. Aims and Learning Outcomes

An Honours level project in an applied context immerses and prepares Life Sciences Major students with practical experience that differs from the nature of basic and preclinical science research. This is an equivalent to the default Honours year research project for students whose interests and directions lie beyond research in an academic environment.

This module acts as a platform for interested students to:

a) Initiate and engage full-time in a credit-earning project which deviates from the default basic and preclinical science research;
b) Participate in a credit-earning project that serves as partial fulfilment to the Honours year requirements for Life Sciences Major;
c) Provide opportunities for students to translate knowledge learnt in the class to perform technical assignments in an actual working society;
d) Pick up the desired work attitudes and professionalism through learning and interactions with supervisors, co-workers, clients and other people related to the organisations/companies where the project is conducted;
e) Appreciate and internalise intangible attributes such as working independently as well as in a team, safety consciousness, and info-communication technology proficiencies;
f) Have a head-start in career search before graduation.

This module will also allow participating organisations/companies to be aware of NUS Life Sciences Major students and graduates, as well as to participate fully as our partners in cooperative education.

6. Workload, Duration and Timeline

Students embarking on an LSM4299 Applied Project will commit 20-24 weeks (i.e. 5-6 months) of full-time work. In academic record this is regarded as a module that is one regular semester in duration. Participating students are not expected to read other modules in NUS during the working hours within this period of commitment. Students may take LSM4299 in either Semester 1 (starting in June/July) or Semester 2 (starting in November/December), and complete modules for graduation requirements in the other regular semester.

For LSM4299 to be completed in:	**Semester 2 AY2020/2021**
Official semester window	11th January to 8th May 2021
Minimum duration	20 weeks
Application deadline	4th December 2020
Latest start date	**14th December 2020**
Latest end date	**30th April 2020**
Report to be submitted by	Week 13 (Date TBC)
Presentation would be scheduled	Week 13 (Date TBC)
Module registration / Grade issue in	AY2020/2021 Semester 2

For LSM4299 to be completed in:	Semester 1 AY2021/2022
Official semester window	2nd August to 4th December 2021
Minimum duration	20 weeks
Application deadline	30th June 2021
Latest start date	**12th July 2021**
Latest end date	**22nd November 2021**
Report to be submitted by	Week 13 (Date TBC)
Presentation would be scheduled	Week 13 (Date TBC)
Module registration / Grade issue in	AY2021/2022 Semester 1

7. Procedures

a) Project/Internship Search and Application

To look for a suitable and approved internship for LSM4299, please go onto NUS TalentConnect to apply. Self-sourced internships will not be considered as internships must be approved by the LSM4299 coordinators before students can apply.

b) Project/Internship Work Plan – *By Student in Consultation with Workplace Supervisor*

Every project/internship crafted for LSM4299 has to be reviewed and approved by the LSM4299 Coordinating Committee. A Work Plan is required as part of the application. It should include:

- Name of Organisation / Company / Institution / Unit
- Workplace Supervisor
- Project Title
- Project Aims/Objectives
- Project Description
- Relevance of Project with regards to Life Sciences
- Specific timeline/deadlines for assessments (see below Section 8. Assessments)

c) LSM4299 Staff Assessor

Every student taking LSM4299 would be tagged to a staff member whom will assess him/her. Students need not search for a staff assessor for LSM4299; this will be assigned by the LSM4299 Coordinating Committee for every approved project/internship.

8. Assessment

General Assessment Structure:

A. Monthly log submissions (10%)
B. Performance assessment at workplace (40%)
C. Individual Presentation (20%)
D. Report (30%)

A. Monthly log submissions (10%) – *Assessed by Staff Assessor; submitted by Student every month.*

A total of **five** work progress logs have to be submitted. Each log is submitted monthly in IVLE and each successfully received log will be awarded up to 2% to the final score.

B. Performance assessment at workplace (40%) – *Assessed by Workplace Supervisor; submitted by Workplace Supervisor at the end of the project. This would be coordinated by the LSM4299 committee.*

An assessment on the work performance of the student would be carried out by the workplace supervisor at the end of the project.

	Criteria	Full Marks
(a)	**General Work Attitude** (i.e. attendance, promptness in meeting timelines, professional conduct and outlook)	
(b)	**Initiative and Relevant Skills/Competencies** (i.e. pro-activeness; logical and systematic problem-solving capacity; ability and proficiency in performing the assigned work/tasks)	
(c)	**Teamwork** (i.e. ability and willingness to work co-operatively with others as a group/team to achieve common objectives)	
(d)	**Flexibility** (i.e. ability to adapt and work effectively in different situations and contexts; capacity to deal with changes)	
	Total	**40**

C. Individual Presentation (20%) – *Assessed by Staff Assessor; presented by Student at the end of the project.*

An individual presentation would be delivered by the student at the end of the project, to give an overview of the job and project experience in about 10 minutes, and should cover:

- Job responsibilities and profile of the company/organization;
- Description, progress and deliverables of project;

- Skills learnt and their impacts on individual career development, as well as the connections between the project completed and the knowledge received from the undergraduate Science and Life Sciences education.

	Exceeds Expectations	Adequate	Unsatisfactory	Marks:
Content and Presentation	• Title and aims of internship clearly stated from the beginning. • Clear introduction of company and internship presented. • Description, progress and deliverables of internship explored precisely. • Clear conclusions from internships and has future directions of individual career development.	• Vague title with no aims of internship. • Attempts introduction of company and internship but does not fully succeed. • Included description, progress and deliverables of project but they are not clear. • Little to unclear conclusions from internship and vague future directions of individual career development.	• Lack title of Internship. • Introduction of company and internship not presented appropriately. • Little or no description, progress and deliverables of project. • No conclusions from internship and future directions of individual career development.	
Clarity and Engagement	• Speech is loud and clear, confident and keeps eye contact with audience. • Uses natural gestures and movements. • Well-rehearsed with no 'reading' from slides or script • Answered questions with confidence.	• Clear speech from student. • Uses a few gestures or movements but does not look natural. • Make infrequent eye contact; 'Reads' from notes most of the time. • Ambiguous answers for questions.	• Unclear speech (too fast/too slow) with some stuttering. Voice too soft. • Unengaging presentation. Lacks confidence • 'Reading' directly from slides or notes. • Could not answer questions.	
			Total	**/20**

D. Report (30%) – *Assessed by Staff Assessor; submitted by Student at the end of the project.*
A self-evaluation report would be submitted by the student at the end of the project, covering contents including:

- Description and profile of the company/organization/section/department;
- Job responsibilities and project undertaken;
- Progress of project and how the deliverables may translate to business strategy/solution;
- Reflections on skills picked up and how these would impact individual career development, as well as the connections between the project completed and the knowledge received from the undergraduate Science and Life Sciences education.

	Exceeds Expectations	Adequate	Unsatisfactory	Marks:
Coverage and Quality	• Clear title produced. • Clear description and understanding the nature of the business that the organization is in. • Clear and attractive report. No spelling or grammar mistakes.	• Vague title produced • Description and understanding the nature of the business that the organization is in could be clearer and/or better organized. • Clear report with few spelling and grammar mistakes.	• No title produced • Lack of description and understanding the nature of the business that the organization is in. • Formatting inconsistencies. Spelling and/or grammar mistakes on slides.	
Communication and Critical Thinking	• Very well written with clear view of future directions and individual career development. • Demonstrate clear aptitude for learning new things. • Able to express data concisely, clearly and convincingly	• Generally written well with vague conclusions and future directions of individual career development. • Demonstrate little motivation for learning new things • Attempt to express data concisely, clearly and convincingly	• No conclusions and future directions of individual career development. • Did not demonstrate any motivation for learning new things. • Unable to express data concisely, clearly and convincingly	
Connections	• Clear relevance to Life Sciences. • Managed to apply Life Sciences knowledge to the internship.	• Unclear relevance to Life Sciences. Struggling to link various points to prove relevance. • Attempt to apply Life Sciences knowledge but lack clarity.	• Unable to find a relevance to Life Sciences • Unable to apply knowledge from Life Sciences to internship	
			Total	**/30**
Comments:				

The direct total score of the four assessment components would be the final score to the module.

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