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## JOINT DEGREE PROGRAMME NUS BACHELOR OF SCIENCE (HONOURS) IN LIFE SCIENCES WITH UNIVERSITY OF DUNDEE

### 1. Overview of Programme

This Joint Degree Programme (JDP) National University of Singapore (NUS) Bachelor of Science (Honours) in Life Sciences [BSc (Hons)] with University of Dundee (UoD) is designed to be completed in four years, and to be taught in NUS and UoD. The programme combines the strengths of both universities' undergraduate curricula, integrates overseas experience into the undergraduate studies, and awards a jointly validated BSc (Hons) degree qualification.

NUS students in this JDP will complete the degree requirements as per that of NUS BSc (Hons) degree in Life Sciences. Participants will spend the first two-and-a-half years in NUS before joining UoD for three regular semesters (i.e., the 6<sup>th</sup> to 8<sup>th</sup> semesters inclusive of their course of undergraduate studies).

Life Sciences at UoD is of the highest rated for Biological Sciences in the UK. Its School of Life Sciences offers twelve major BSc Honours degree programmes in Biological and Biomedical Sciences, all with accreditation from the Royal Society of Biology.

[University of Dundee](#) | [School of Life Sciences](#)

### 2. Three Tracks to Choose From

The curriculum of the study abroad segment at UoD is designed to focus on a selected area in Life Sciences. By completing the requirements of each track, the corresponding Life Sciences Major specialisation will be conferred.

- Drug Design and Discovery – Biomedical Science Specialisation (BMS)
- Developmental Biology – Biomedical Science Specialisation (BMS)
- Plant Science – Ecology, Evolution and Biodiversity Specialisation (EEB)

NUS students are to conduct research projects in UoD focusing on their chosen tracks.

### 3. JDP Requirements

Please refer to the following set of programme requirements and the recommended study plans for this JDP in Annex A.

- For CHS Cohorts AY2021/22 onwards – Annex A (pages 4 to 6)

#### 4. Tuition Fee

Semester	Tuition Fee Payable To	Tuition Fee Rate
Semesters 1 to 5 (in NUS)	Tuition fee is payable to NUS for the BSc (Hons) degree.	NUS annual tuition fees are available <a href="#">here</a> .
Semesters 6 to 8 (in UoD)	Tuition fee is payable to NUS for the BSc (Hons) degree, as per student on exchange. Miscellaneous fee or equivalent applicable and payable to UoD.	NUS annual tuition fees are available <a href="#">here</a> .

#### 5. Admissions

**Eligible undergraduate candidates will need to gain entry to NUS CHS and declare reading Life Sciences Major as the primary discipline.**

Students reading Life Sciences as the primary Major may apply for admission to this JDP the latter half of Year 1 Semester 2. Successful candidates will join the JDP from Year 2 onwards. All applicants will go through a selection and those shortlisted will be required to attend an interview to assess their academic competencies, aptitude, and suitability for the programme.

#### 6. Continuation Requirements

NUS students reading this JDP must maintain a GPA of 4.00 or above (out of 5.00) for the BSc (Hons) degree. A student whose GPA falls below 4.00 for any semester will be reviewed for continuation with the programme. The student may exit the JDP and complete the default BSc (Hons) degree in NUS. NUS students in this programme may also choose to withdraw and continue with the default BSc (Hons) degree.

#### 7. Application for Cohort AY2024/2025 Intake

Interested Life Sciences Major freshman of Cohort AY2024/2025 may apply during the latter half of Semester 2 when the application call is issued via NUS email. Applicants should expect a GPA of at least 4.00 at the end of second semester (i.e., Year 1), and shortlisted candidates will be required to attend an interview.

Application window	<b>Open till 18 April 2025</b>
Online application portal	The portal will be accessible <a href="#">here</a> during the application window.
Application criteria	<ul style="list-style-type: none"> <li>- GPA of at least 4.0.</li> <li>- Pass in (or reading) at least two of these courses – LSM1111, LSM210x, LSM22xx.</li> <li>- Grades of B+ or above for all LSM courses read by the end of Year 1.</li> </ul>
Documents to prepare for uploading as part of application	In a single PDF document labelled with applicant's name: <ul style="list-style-type: none"> <li>- One-page personal statement of interest in this programme and highlights of relevant credentials.</li> <li>- Latest CV/Résumé.</li> </ul>
Interview	Shortlisted applicants will be informed the details of interview, and it will tentatively take place in April 2025 (may be subjected to changes).

Application outcome	All applicants will be informed the outcome after Semester 2 AY2024/25 results release.
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## 8. Enquiry

Please contact Life Sciences Enquiry [dbsbox2@nus.edu.sg](mailto:dbsbox2@nus.edu.sg).

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*Please see the list of courses in University of Dundee and corresponding NUS course codes to be mapped to for credit-and-grade transfer, on Page 7.*

## Annex A

### JDP roadmaps for student admitting first at NUS as Life Sciences Major, for CHS Cohort AY2021/22 onwards.

#### (A) Area of Focus – Drug Design and Discovery

Requirements	Year 1	Year 2	Year 3	Year 4
CHS Common Curriculum	<b>Semesters 1 and 2</b> <input type="checkbox"/> Asian Studies <input type="checkbox"/> Humanities <input type="checkbox"/> Social Sciences <input type="checkbox"/> Scientific Inquiry I <input type="checkbox"/> Data Literacy <input type="checkbox"/> Design Thinking	<b>Semesters 1 and 2</b> <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Communities and Engagement <input type="checkbox"/> Writing <input type="checkbox"/> Scientific Inquiry II <input type="checkbox"/> Digital Literacy <input type="checkbox"/> 1x Interdisciplinary Course	<b>Semester 1</b> <input type="checkbox"/> 1x Interdisciplinary Course	
Major in Life Sciences	<b>Semesters 1 and 2</b> <input type="checkbox"/> LSM1111 Biological Challenges and Opportunities for Humankind <input type="checkbox"/> LSM2105 Molecular Genetics <input type="checkbox"/> LSM2107 Evolutionary Biology	<b>Semesters 1 and 2</b> <input type="checkbox"/> LSM2106 Fundamental Biochemistry <input type="checkbox"/> LSM2191A/B Laboratory Techniques in Life Sciences <input type="checkbox"/> Pass 1x LSM22xx/32xx (excluding LSM2289# and LSM3289#)	<b>Semester 1</b> <input type="checkbox"/> LSM3211 Fundamental Pharmacology <input type="checkbox"/> Pass 2x LSM22xx/32xx/42xx (excluding LSM2289#, LSM3289# and LSM4288#), recommended: - LSM3210A/B Metabolism and Regulation - LSM3220 Genes, Genomes and Biomedical Implications	
Unrestricted Electives	<b>Semesters 1 and 2</b> <input type="checkbox"/> Unrestricted Elective 1 – CM1102 Chemistry – The Central Science	<b>Semesters 1 and 2</b> <input type="checkbox"/> Unrestricted Elective 2 – CM2122 Organic Chemistry in Life and Medicine <input type="checkbox"/> Unrestricted Elective 3 – ZB2101 Introductory Bioinformatics	<b>Semesters 1</b>	
UoD Courses			<b>Semester 2</b> <input type="checkbox"/> UoD Course – BS32003 Drug Discovery and Development (15 credits) <input type="checkbox"/> UoD Course – BS32007 Organic Synthesis (15 credits) <input type="checkbox"/> UoD Course – BS32010 Applied Bioinformatics (15 credits) <input type="checkbox"/> UoD Course – BS32011 Practical Project A/Lab Mini-project (15 credits)  <i>60 credits = 20 Units</i>	<b>Semester 1 and 2</b> <input type="checkbox"/> UoD Course – BS31004 Biochemistry and Cell Biology (15 credits) <input type="checkbox"/> <b>UoD Course – BS41004 Research Project: Biological Sciences (40 credits) (Mapped to 8MC LSM4288x + 5MC LSM4910 = 13MC)</b> <input type="checkbox"/> <b>UoD Course – BS41005 Research Skills in Biological Sciences (20 credits) (Mapped to 7MC LSM4917 = 7MC)</b> <input type="checkbox"/> UoD Course – BS42004 Advanced Modern Drug Discovery (15 credits) <input type="checkbox"/> UoD Course – BS42011 Biological Chemistry (15 credits) <input type="checkbox"/> UoD Course – One BS3/4xxxx course (15 credits)  120 credits = 40 Units

#### Notes:

In NUS, 36 Units for Major, 52 Units of CHS Common Curriculum and 12 Units of Unrestricted Electives are to be completed (100 Units).

In UoD, 30 Units for Major (courses in bold); and 30 Units of Unrestricted Electives are read (not bold).

UoD course BS41004 Research Project: Biological Sciences (40 credits) to be mapped to NUS 8 Units of LSM4288M + 5 Units of LSM4910 (in total 13 Units).

UoD course BS41005 Research Skills in Biological Sciences (20 credits) to be mapped to NUS new exchange enrichment code with 7 Units – LSM4917.

## (B) Area of Focus – Developmental Biology

Requirements	Year 1	Year 2	Year 3	Year 4
CHS Common Curriculum	<b>Semesters 1 and 2</b> <input type="checkbox"/> Asian Studies <input type="checkbox"/> Humanities <input type="checkbox"/> Social Sciences <input type="checkbox"/> Scientific Inquiry I <input type="checkbox"/> Data Literacy <input type="checkbox"/> Design Thinking	<b>Semesters 1 and 2</b> <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Communities and Engagement <input type="checkbox"/> Writing <input type="checkbox"/> Scientific Inquiry II <input type="checkbox"/> Digital Literacy <input type="checkbox"/> 1x Interdisciplinary Course	<b>Semester 1</b> <input type="checkbox"/> 1x Interdisciplinary Course	
Major in Life Sciences	<b>Semesters 1 and 2</b> <input type="checkbox"/> LSM1111 Biological Challenges and Opportunities for Humankind <input type="checkbox"/> LSM2105 Molecular Genetics <input type="checkbox"/> LSM2107 Evolutionary Biology	<b>Semesters 1 and 2</b> <input type="checkbox"/> LSM2106 Fundamental Biochemistry <input type="checkbox"/> LSM2191A/B Laboratory Techniques in Life Sciences <input type="checkbox"/> LSM2233 Cell Biology	<b>Semester 1</b> <input type="checkbox"/> LSM3233 Developmental Biology <input type="checkbox"/> Pass 2x LSM22xx/32xx/42xx (excluding LSM2289#, LSM3289# and LSM4288#), recommended: - LSM3234 Biological Imaging of Growth and Form - LSM4232 Advanced Cell Biology	
Unrestricted Electives	<b>Semesters 1 and 2</b> <input type="checkbox"/> Unrestricted Elective 1	<b>Semesters 1 and 2</b> <input type="checkbox"/> Unrestricted Elective 2	<b>Semesters 1</b> <input type="checkbox"/> Unrestricted Elective 3	
UoD Courses			<b>Semester 2</b> <input type="checkbox"/> UoD Course – BS32005 Cell & Developmental Biology (15 credits) <input type="checkbox"/> UoD Course – BS32006 Cell Signalling (15 credits) <input type="checkbox"/> UoD Course – BS32029 Cell Proliferation and Survival Mechanisms Underlying Disease (15 credits) <input type="checkbox"/> UoD Course – BS32012 Practical Project B/Lab Mini-project (15 credits)  <i>[Exemption of BS31004 as pre-requisite needed.]</i>  60 credits = 20 Units	<b>Semester 1 and 2</b> <input type="checkbox"/> UoD Course – BS31006 Gene Regulation & Expression (15 credits) <input type="checkbox"/> <b>UoD Course – BS41004 Research Project: Biological Sciences (40 credits) (Mapped to 8MC LSM4288x + 5MC LSM4910 = 13MC)</b> <input type="checkbox"/> <b>UoD Course – BS41005 Research Skills in Biological Sciences (20 credits) (Mapped to 7MC LSM4917 = 7MC)</b> <input type="checkbox"/> UoD Course – BS42008 Stem Cells in Development and Disease (15 credits) <input type="checkbox"/> UoD Course – BS42010 Advanced Gene Regulation and Expression (15 credits) <input type="checkbox"/> UoD Course – BS42013 Advanced Cell Signalling (15 credits)

**Notes:**

In NUS, 36 Units for Major, 52 Units of CHS Common Curriculum and 12 Units of Unrestricted Electives are to be completed (100 Units).

In UoD, 30 Units for Major (courses in bold); and 30 Units of Unrestricted Electives are read (not bold).

UoD course BS41004 Research Project: Biological Sciences (40 credits) to be mapped to NUS 8 Units of LSM4288C + 5 Units of LSM4910 (in total 13 Units).

UoD course BS41005 Research Skills in Biological Sciences (20 credits) to be mapped to NUS new exchange enrichment code with 7 Units – LSM4917.

### (C) Area of Focus – Plant Science

Requirements	Year 1	Year 2	Year 3	Year 4
CHS Common Curriculum	<u>Semesters 1 and 2</u> <input type="checkbox"/> Asian Studies <input type="checkbox"/> Humanities <input type="checkbox"/> Social Sciences <input type="checkbox"/> Scientific Inquiry I <input type="checkbox"/> Data Literacy <input type="checkbox"/> Design Thinking	<u>Semesters 1 and 2</u> <input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Communities and Engagement <input type="checkbox"/> Writing <input type="checkbox"/> Scientific Inquiry II <input type="checkbox"/> Digital Literacy <input type="checkbox"/> 1x Interdisciplinary Course	<u>Semester 1</u> <input type="checkbox"/> 1x Interdisciplinary Course	
Major in Life Sciences	<u>Semesters 1 and 2</u> <input type="checkbox"/> LSM1111 Biological Challenges and Opportunities for Humankind <input type="checkbox"/> LSM2105 Molecular Genetics <input type="checkbox"/> LSM2107 Evolutionary Biology	<u>Semesters 1 and 2</u> <input type="checkbox"/> LSM2106 Fundamental Biochemistry <input type="checkbox"/> LSM2191A/B Laboratory Techniques in Life Sciences <input type="checkbox"/> LSM2233 Cell Biology	<u>Semester 1</u> <input type="checkbox"/> LSM3233 Developmental Biology <input type="checkbox"/> Pass 2x LSM22xx/32xx/42xx (excluding LSM2289#, LSM3289# and LSM4288#), recommended: - LSM2254 Fundamentals of Plant Biology - LSM4251 Plant Growth and Development	
Unrestricted Electives	<u>Semesters 1 and 2</u> <input type="checkbox"/> Unrestricted Elective 1	<u>Semesters 1 and 2</u> <input type="checkbox"/> Unrestricted Elective 2	<u>Semesters 1</u> <input type="checkbox"/> Unrestricted Elective 3	
UoD Courses			<u>Semester 2</u> <input type="checkbox"/> UoD Course – BS32005 Cell & Developmental Biology (15 credits) <input type="checkbox"/> UoD Course – BS32006 Cell Signalling (15 credits) <input type="checkbox"/> UoD Course – BS32008 Plant Science (15 credits) <input type="checkbox"/> UoD Course – BS32012 Practical Project B/Lab Mini-project (15 credits)  <i>[Exemption of BS31004 as pre-requisite needed.]</i>  60 credits = 20 Units	<u>Semester 1 and 2</u> <input type="checkbox"/> UoD Course – BS31004 Biochemistry and Cell Biology (15 credits) <input type="checkbox"/> <b>UoD Course – BS41004 Research Project: Biological Sciences (40 credits)</b> (Mapped to 8MC LSM4288x + 5MC LSM4910 = 12MC) <input type="checkbox"/> <b>UoD Course – BS41005 Research Skills in Biological Sciences (20 credits)</b> (Mapped to 7MC LSM4917 = 7MC) <input type="checkbox"/> UoD Course – BS42005 Advanced Plant Science (15 credits) <input type="checkbox"/> UoD Course – BS42010 Advanced Gene Regulation and Expression (15 credits) <input type="checkbox"/> UoD Course – One BS3/4xxxx course (15 credits) (15 credits)  120 credits = 40 Units

**Notes:**

In NUS, 36 Units for Major, 52 Units of CHS Common Curriculum and 12 Units of Unrestricted Electives are to be completed (100 Units).

In UoD, 30 Units for Major (courses in bold); and 30 Units of Unrestricted Electives are read (not bold).

UoD course BS41004 Research Project: Biological Sciences (40 credits) to be mapped to NUS 8 Units of LSM4288C + 5 Units of LSM4910 (in total 13 Units).

UoD course BS41005 Research Skills in Biological Sciences (20 credits) to be mapped to NUS new exchange enrichment code with 7 Units – LSM4917.

**Annex B**
**UoD courses and corresponding NUS course codes and titles (no. of Units)**

UoD Course		NUS Course	
Code	Title	Code	Title
BS32010	Applied Bioinformatics (15 credits)	LSM3910	Applied Bioinformatics (5 Units)
BS32007	Organic Synthesis (15 credits)	LSM3911	Organic Synthesis (5 Units)
BS32003	Drug Discovery and Development (15 credits)	LSM3913	Drug Discovery and Development (5 Units)
BS31004	Biochemistry and Cell Biology (15 credits)	LSM3914	Biochemistry and Cell Biology (5 Units)
BS32005	Cell & Developmental Biology (15 credits)	LSM3915	Cell & Developmental Biology (5 Units)
BS31006	Gene Regulation & Expression (15 credits)	LSM3916	Gene Regulation & Expression (5 Units)
BS32006	Cell Signalling (15 credits)	LSM3917	Cell Signalling (5 Units)
BS32008	Plant Science (15 credits)	LSM3918	Plant Science (5 Units)
BS32029	Cell Proliferation and Survival Mechanisms Underlying Disease (15 credits)	LSM3919	Cell Proliferation and Survival Mechanisms Underlying Disease (5 Units)
BS32011	Practical Project A/Lab Mini-project (15 credits)	LSM3921	Practical Project A/Lab Mini-project (5 Units)
BS32012	Practical Project B/Lab Mini-project (15 credits)	LSM3922	Practical Project B/Lab Mini-project (5 Units)
BS3xxxx	[For any one other BS3xxxx course] (15 credits)	LSM3995	Exchange Enrichment Course (5 Units)
BS41004	Research Project: Biological Sciences (40 credits)	LSM4288M/ LSM4288E LSM4910	Research Project in Life Sciences (8 Units) Exchange Enrichment Course for UoD JDP (5 Units)
BS41005	Research Skills in Biological Sciences (20 credits)	LSM4917	Research Skills in Biological Sciences (7 Units)
BS42004	Advanced Modern Drug Discovery (15 credits)	LSM4912	Advanced Modern Drug Discovery (5 Units)
BS42013	Advanced Cell Signalling (15 credits)	LSM4913	Advanced Cell Signalling (5 Units)
BS42011	Biological Chemistry (15 credits)	LSM4914	Biological Chemistry (5 Units)
BS42005	Advanced Plant Science (15 credits)	LSM4915	Advanced Plant Science (5 Units)
BS42010	Advanced Gene Regulation and Expression (15 credits)	LSM4916	Advanced Gene Regulation and Expression (5 Units)
BS42008	Stem Cells in Development and Disease (15 credits)	LSM4918	Stem Cells in Development and Disease (5 Units)
BS4xxxx	One BS4xxxx course (15 credits)	LSM4995	Exchange Enrichment Course (5 Units)