# National University of Singapore BSc (Pharmaceutical Science) (Honours) programme

# **Sample Study Plan**

\* Note that the minimum workload per semester is 18 MCs, except in graduating semester or during UPIP (refer to NUS undergraduate workload).

Year 1	Sem 1	PHS1101^ The Billion-Dollar Pill – Bench to Bedside Drug Development (4 MC)	Pair 1 (Odd): HSA1000 Asian Interconnections (4MC)#  Pair 2 (Even): HSS1000 Understanding Social Complexity (4MC)#	Pair 1 (Odd): HSH1000 The Human Condition (4MC)#  Pair 2 (Even): HSI1000 How Science Works, Why Science Works (4MC)#	Pair 1 (Odd): GEA1000 Quantitative Reasoning with Data (4MC)#  Pair 2 (Even): DTK1234 Design Thinking (4MC)#	UE 1
2	Sem 2	PHS2102 Physicochemical and Biochemical Principles of Drug Action (4 MC)	Pair 1 (Odd): HSS1000 Understanding Social Complexity (4MC)#  Pair 2 (Even): HSA1000 Asian Interconnections (4MC)#	Pair 1 (Odd): HSI1000 How Science Works, Why Science Works (4MC)#  Pair 2 (Even): HSH1000 The Human Condition (4MC)#	Pair 1 (Odd): DTK1234 Design Thinking (4MC)#  Pair 2 (Even): GEA1000 Quantitative Reasoning with Data (4MC)#	Writing
	Sem 1	PHS2101 Physiology for Pharmaceutical Science (4 MC)	PHS2103 Essentials of Pharmaceutical and Synthetic Chemistry (4 MC)	Digital Literacy	UE 2	UE 3
ar 3 Year	Sem 2	PHS2104  Macromolecules in Pharmaceutical Science (4 MC)	PHS2105 Principles of Pharmaceutical Formulations I (4 MC)	PHS2191 Laboratory Techniques in Pharmaceutical Science I (4 MC)	Artificial Intelligence	Scientific Inquiry II
	Sem 1	PHS3101 Principles of Pharmaceutical Formulations II (4 MC)	PHS3191 Laboratory Techniques in Pharmaceutical Science II (4 MC)	Interdisciplinary I	Communities and Engagement	UE 4
Year 4 Year	Sem 2	PHS3102 Principles of Drug Design and Development (4 MC)	LSM3211 Fundamental Pharmacology (4 MC)	Interdisciplinary II	UE 5	UE 6
	Sem 1	PHS4101 Pharmacokinetics and Biopharmaceutics (4 MC)	PHS4121 Regulation of Healthcare Products (4 MC)	PHS/PR420x * Elective (4 MC)	UE 7	UE 8
	Sem 2	PHS/PR420x * Elective (4 MC)	UE 9	UE 10	UE 11	UE 12

#### Note:

- 1) Students are strongly encouraged to complete all CHS Common Curriculum modules in their first two years except for the following 3 modules:
  - Communities and Engagement module can be taken from Years 2 to 4
  - Two Interdisciplinary modules can be taken in Years 3 and 4
- 2) Actual pre-allocation pairings of CHS Common Curriculum modules can be found here.

# Key:

Major Requirements (15 modules) (60 MCs) – Module marked by ^ will be offered in both semesters. For modules marked by \*, students can choose to read two 4-MC electives or one 8-MC research project.

CHS Common Curriculum (13 modules) (52 MCs) – Modules marked by # will be pre-allocated.

Unrestricted Electives (12 modules) (48 MCs)

To graduate with a Major in Pharmaceutical Science, student must have read and passed at least one of the following:

- (1) PHS3288 or
- (2) PHS4288 or
- (3) Any UPIP/FASSIP module

# National University of Singapore BSc (Pharmaceutical Science) (Honours) programme

## Sample Study Plan with Life Sciences Minor

\* Note that the minimum workload per semester is 18 MCs, except in graduating semester or during UPIP (refer to NUS undergraduate workload).

ar 1	Sem 1	PHS1101^ The Billion-Dollar Pill – Bench to Bedside Drug Development (4 MC)	Pair 1 (Odd): HSA1000 Asian Interconnections (4MC)#  Pair 2 (Even): HSS1000 Understanding Social Complexity (4MC)#	Pair 1 (Odd): HSH1000 The Human Condition (4MC) #  Pair 2 (Even): HSI1000 How Science Works, Why Science Works (4MC) #	Pair 1 (Odd): GEA1000 Quantitative Reasoning with Data (4MC) #  Pair 2 (Even): DTK1234 Design Thinking (4MC) #	Writing
ır 2 Year	Sem 2	PHS2102 Physicochemical and Biochemical Principles of Drug Action (4 MC)	Pair 1 (Odd): HSS1000 Understanding Social Complexity (4MC)#  Pair 2 (Even): HSA1000 Asian Interconnections (4MC)#	Pair 1 (Odd): HSI1000 How Science Works, Why Science Works (4MC)#  Pair 2 (Even): HSH1000 The Human Condition (4MC)#	Pair 1 (Odd): DTK1234 Design Thinking (4MC) #  Pair 2 (Even): GEA1000 Quantitative Reasoning with Data (4MC) #	LSM1111 Biological Challenges and Opportunities for Humankind
	Sem 1	PHS2101 Physiology for Pharmaceutical Science (4 MC)	PHS2103 Essentials of Pharmaceutical and Synthetic Chemistry (4 MC)	Digital Literacy	LSM21XX/22XX (excluding LSM2288, LSM2289)	UE 1
ar 3 Year	Sem 2	PHS2104 Macromolecules in Pharmaceutical Science (4 MC)	PHS2105 Principles of Pharmaceutical Formulations I (4 MC)	PHS2191 Laboratory Techniques in Pharmaceutical Science I (4 MC)	Artificial Intelligence	Scientific Inquiry II
	Sem 1	PHS3101 Principles of Pharmaceutical Formulations II (4 MC)	PHS3191 Laboratory Techniques in Pharmaceutical Science II (4 MC)	Communities and Engagement	LSM32XX/42XX (excluding LSM3289, LSM4288x)	LSM32XX/42XX (excluding LSM3289, LSM4288x)
Year 4 Year	Sem 2	PHS3102 Principles of Drug Design and Development (4 MC)	<b>LSM3211</b> Fundamental Pharmacology (4 MC)	Interdisciplinary I	LSM22XX/32XX/ 42XX (excluding LSM2288, LSM2289, LSM3289, LSM4288x)	UE 2
	Sem 1	PHS4101 Pharmacokinetics and Biopharmaceutics (4 MC)	PHS4121 Regulation of Healthcare Products (4 MC)	PHS/PR420x * Elective (4 MC)	Interdisciplinary II	UE 3
	Sem 2	PHS/PR420x * Elective (4 MC)	UE 4	UE 5	UE 6	UE 7

#### Note:

- 1) Students are strongly encouraged to complete all CHS Common Curriculum modules in their first two years except for the following 3 modules:
  - Communities and Engagement module can be taken from Years 2 to 4
  - Two Interdisciplinary modules can be taken in Years 3 and 4
- 2) Actual pre-allocation pairings of CHS Common Curriculum modules can be found here.

### Key:

Major Requirements (15 modules) (60 MCs) – Module marked by ^ will be offered in both semesters. For modules marked by \*, students can choose to read two 4-MC electives or one 8-MC research project.

CHS Common Curriculum (13 modules) (52 MCs) – Modules marked by # will be pre-allocated.

Life Sciences Minor (5 modules) (20 MCs)

Unrestricted Electives (7 modules) (28 MCs)

To graduate with a Major in Pharmaceutical Science, student must have read and passed at least one of the following:

- (1) PHS3288 or
- (2) PHS4288 or
- (3) Any UPIP/FASSIP module

# **National University of Singapore BSc (Pharmaceutical Science) (Honours) programme**

# Sample Study Plan with Forensic Science Minor

\* Note that the minimum workload per semester is 18 MCs, except in graduating semester or during UPIP (refer to NUS undergraduate workload).

Year 1	Sem 1	PHS1101^ The Billion-Dollar Pill – Bench to Bedside Drug Development (4 MC)	Pair 1 (Odd): HSA1000 Asian Interconnections (4MC)#  Pair 2 (Even): HSS1000 Understanding Social Complexity (4MC)#	Pair 1 (Odd): HSH1000 The Human Condition (4MC)#  Pair 2 (Even): HSI1000 How Science Works, Why Science Works (4MC)#	Pair 1 (Odd): GEA1000 Quantitative Reasoning with Data (4MC)#  Pair 2 (Even): DTK1234 Design Thinking (4MC)#	UE 1
2	Sem 2	PHS2102 Physicochemical and Biochemical Principles of Drug Action (4 MC)	Pair 1 (Odd): HSS1000 Understanding Social Complexity (4MC)#  Pair 2 (Even): HSA1000 Asian Interconnections (4MC)#	Pair 1 (Odd): HSI1000 How Science Works, Why Science Works (4MC)#  Pair 2 (Even): HSH1000 The Human Condition (4MC)#	Pair 1 (Odd): DTK1234 Design Thinking (4MC)#  Pair 2 (Even): GEA1000 Quantitative Reasoning with Data (4MC)#	Writing
	Sem 1	PHS2101 Physiology for Pharmaceutical Science (4 MC)	PHS2103 Essentials of Pharmaceutical and Synthetic Chemistry (4 MC)	Digital Literacy	FSC2101 Forensic Science	UE 2
Year 3 Year	Sem 2	PHS2104  Macromolecules in Pharmaceutical Science (4 MC)	PHS2105 Principles of Pharmaceutical Formulations I (4 MC)	PHS2191 Laboratory Techniques in Pharmaceutical Science I (4 MC)	Artificial Intelligence	Scientific Inquiry II
	Sem 1	PHS3101 Principles of Pharmaceutical Formulations II (4 MC)	PHS3191 Laboratory Techniques in Pharmaceutical Science II (4 MC)	Interdisciplinary I	Communities and Engagement	UE 3
Year 4 Ye	Sem 2	PHS3102 Principles of Drug Design and Development (4 MC)	<b>LSM3211</b> Fundamental Pharmacology (4 MC)	Interdisciplinary II	UE 4	FSC3101 Evidence in Forensic Science
	Sem 1	PHS4101 Pharmacokinetics and Biopharmaceutics (4 MC)	PHS4121 Regulation of Healthcare Products (4 MC)	PHS/PR420x * Elective (4 MC)	FSC420X or CM/FST/LSM/MA/ PC/PR/ST/ZB3288	FSC420X or CM/FST/LSM/MA/ PC/PR/ST/ZB3288
	Sem 2	PHS/PR420x * Elective (4 MC)	UE 5	UE 6	FSC420X or CM/FST/LSM/MA/ PC/PR/ST/ZB3288	UE 7

#### Note:

- 1) Students are strongly encouraged to complete all CHS Common Curriculum modules in their first two years except for the following 3 modules:
  - Communities and Engagement module can be taken from Years 2 to 4
- Two Interdisciplinary modules can be taken in Years 3 and 4
   Actual pre-allocation pairings of CHS Common Curriculum modules can be found <a href="here">here</a>.

## Key:

Major Requirements (15 modules) (60 MCs) - Module marked by ^ will be offered in both semesters. For modules marked by \*, students can choose to read two 4-MC electives or one 8-MC research project.

CHS Common Curriculum (13 modules) (52 MCs) – Modules marked by # will be pre-allocated.

Forensic Science Minor (5 modules) (20 MCs)

Unrestricted Electives (7 modules) (28 MCs)

To graduate with a Major in Pharmaceutical Science, student must have read and passed at least one of the following:

- (1) PHS3288 or (2) PHS4288 or
- (3) Any UPIP/FASSIP module