



**HKU
Med**

**LKS Faculty of Medicine
School of Nursing
香港大學護理學院**

THE UNIVERSITY OF HONG KONG

LKS FACULTY OF MEDICINE

SCHOOL OF NURSING

Bachelor of Nursing (Full-time) Programme

Year 1 (Class 2027)

**BMSN1601 – Foundation of Life Sciences
COURSE MANUAL**

September 2022

Bachelor of Nursing (Full-time) Programme

Learning Outcomes

The graduates of the Bachelor of Nursing (Full-time) Programme will be able to:

1. Function competently and independently in the role of the nurse;
2. Promote health to clients and assist with the restoration and maintenance of optimal health;
3. Demonstrate an understanding of the cultural competence and leadership characteristic within nursing profession;
4. Perform evidence-based nursing practice;
5. Use ethical principles and legal parameters in nursing practice; and
6. Assume responsibility for self-evaluation, professional and academic development.

1. TEACHING TEAM

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Teaching Team:

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Tutors:

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Students are advised to contact individual teachers if they have any questions or encounter difficulties during revision.

2. COURSE DESCRIPTION

This course serves as the foundation course for the subsequent life science course in year II and year III. A series of lectures on basic biochemistry and physical principles that are applicable to Life Science is included as to provide sufficient science background for students to understand life Science subjects. The course also examines the concepts related to the structure and function of the human body, including discussions of the organization of the body from the single cell to the coordinated whole. A major theme is the interaction of all body systems for the maintenance of a stable internal state, a condition known as homeostasis. The focus throughout the course will be interrelation of structure and function in cells, tissues and systems (integumentary, cardiovascular, respiratory, digestive, urinary, musculoskeletal, nervous and reproductive systems). The course serves as a basis for understanding the normal processes of life.

3. STUDENT LEARNING OUTCOMES

On completion of the course, students will be able to:

	This learning outcome meets with Programme outcome
1) Apply basic biochemistry and physical principles in the interpretation of life science phenomena.	No. 1, 2, 4, 6
2) Describe the anatomical and functional organization of the body from the single cell to the coordinated whole.	No. 1, 2, 4, 6
3) Describe the concept of homeostasis.	No. 1, 2, 4, 6
4) Describe the interrelation of structure and function in cells, tissues, and systems (integumentary, haematologic, cardiovascular, respiratory, digestive, urinary, musculoskeletal, nervous, endocrine and reproductive systems).	No. 1, 2, 4, 6

4. TIME TABLE

Ref No#	Date	Day	Time	Venue *	Topic	Lecturer
I	2022-09-06	Tue	1330-1420	3SR-LT1	Introduction of Life Sciences Programme & Life Sciences Assessment	Ma-CW Yang-J
L1	2022-09-06	Tue	1430-1520	3SR-LT1	Some basic chemistry: elements and compounds	Ho-J
L2	2022-09-06	Tue	1530-1620	3SR-LT1	Chemical reactions	Ho-J
L3	2022-09-07	Wed	0830-0920	3SR-LT2	Water: its structure and life supporting properties	Ho-J
L4	2022-09-07	Wed	0930-1020	3SR-LT2	The building blocks of life	Ho-J
L5	2022-09-08	Thu	1030-1120	3SR-LT1	Energy and metabolism	Ho-J
R1	2022-09-08	Thu	1130-1220	3SR-LT1	Review session (Biochemistry)	Ho-J
L6	2022-09-13	Tue	1430-1520	3SR-LT1	Physics applicable to circulatory system	Ma-CW
L7	2022-09-13	Tue	1530-1620	3SR-LT1	Physics applicable to respiratory system	Ma-CW
T1	2022-09-14	Wed	0830-1020	Zoom	T1 – Group I	Cheung-D
					T1 – Group II	Fung-J
					T1 – Group III	Lam-H
					T1 – Group IV	Yang-C
					T1 – Group V	Yeung-M
L8	2022-09-15	Thu	1030-1120	3SR-LT1	Concept of homeostasis of the body	Chan-E
L9	2022-09-15	Thu	1130-1220	3SR-LT1	Introduction to cell	Cheung-L
L10	2022-09-20	Tue	1330-1420	3SR-LT2	Introduction to cell physiology (Transmembrane transport of molecules)	Ma-CW
L11	2022-09-20	Tue	1430-1520	3SR-LT2	Structural organization of body	Cheung-L
L12	2022-09-21	Wed	0830-0920	3SR-LT2	Heart, vessels and lymphatic system	Liu-R
L13	2022-09-21	Wed	0930-1020	3SR-LT2	Fluid & blood	Hung-P
L14	2022-09-22	Thu	1030-1120	3SR-LT1	Introduction to the circulatory system	Hung-P
L15	2022-09-22	Thu	1130-1220	3SR-LT1	Introduction to the respiratory system	Liu-R
L16	2022-09-23	Fri	1330-1420	3SR-LT1	Introduction to the mechanism of breathing & ventilation	Ma-CW
L17	2022-09-23	Fri	1430-1520	3SR-LT1	Gas exchange & transport	Ma-CW
CA1	2022-09-23 – 2022-09-25	Fri - Sun	1700 - 2359	Moodle	Continuous Assessment on L1 – L12	Ma-CW
L18	2022-09-27	Tue	1330-1420	3SR-LT1	Introduction to the endocrine system	Chu-JYS
L19	2022-09-27	Tue	1430-1520	3SR-LT1	Thermoregulation	Chan-E
L20	2022-09-29	Thu	1030-1120	3SR-LT1	Anatomy of abdomen	Huen-M
L21	2022-09-29	Thu	1130-1220	3SR-LT1	Digestive system	Huen-M
L22	2022-09-30	Fri	1330-1420	3SR-LT1	Functions of GI organs	Ma-CW
R2	2022-09-30	Fri	1430-1520	3SR-LT1	Review session (Physiology)	Ma-CW
T2	2022-10-05	Wed	0830-1030	Zoom	T2 – Group I	Cheung-D
					T2 – Group II	Fung-J
					T2 – Group III	Lam-H
					T2 – Group IV	Yang-C
					T2 – Group V	Yeung-M
L23	2022-10-06	Thu	1030-1120	3SR-LT1	Anatomy of urinary system	Fonseca-G
L24	2022-10-06	Thu	1130-1220	3SR-LT1	Anatomy of male reproductive system	Fonseca-G
L25	2022-10-07	Fri	1330-1420	3SR-LT1	Anatomy of female reproductive system	Fonseca-G
L26	2022-10-07	Fri	1430-1520	3SR-LT1	Introduction to basic renal processes	Ma-CW
CA2	2022-10-07 – 2022-10-09	Fri - Sun	1700 - 2359	Moodle	Continuous Assessment on L13 – L23	Ma-CW

P1 A	2022-10-18	Tue	1330-1520	DL	The trunk demonstration (Group A) (2 hr)	Yang-J Cheung-A Cecot-TS Fonseca-G Liu-R
P1 A	2022-10-18	Tue	1530-1720	DL	The trunk demonstration (Group B) (2 hr)	Yang-J Cheung-A Cecot-TS Fonseca-G Liu-R
T3(a)	2022-10-19	Wed	0830-1020	Zoom	T3 – Group III	Lam-H
T3(b)	2022-10-20	Thu	1030-1220	Zoom	T3 – Group I	Cheung-D
					T3 – Group II	Fung-J
					T3 – Group IV	Yang-C
					T3 – Group V	Yeung-M
L27	2022-10-21	Fri	1330-1420	3SR-LT1	Introduction to reproductive physiology	Lee-CKF
L28	2022-10-21	Fri	1430-1520	3SR-LT1	Excitable tissues	Ma-CW
Test	2022-10-22	Sat	1400-1600	LT3 + LT4	Test 1 (Group A) [1430-1530]	Ma-CW
Test	2022-10-22	Sat	1400-1600	MDL1,2,3	Test 1 (Group B) [1430-1530]	Yang-J
L29	2022-10-25	Tue	1430-1520	LT3 + LT4	Introduction to nervous system	Chang-R
L30	2022-10-25	Tue	1530-1620	LT3 + LT4	Brain functions	Ma-CW
L31	2022-11-01	Tue	1530-1620	LT3 + LT4	Autonomic nervous system	Ma-CW
L32	2022-11-02	Wed	0830-0920	3SR-LT2	Anatomy of integumentary system	Cecot-TS
L33	2022-11-03	Thu	1030-1120	3SR-LT1	Introduction to musculoskeletal system	Cheung-L
L34	2022-11-03	Thu	1130-1220	3SR-LT1	Introduction to bone & muscle physiology	Ma-CW
L35	2022-11-08	Tue	1330-1420	LT1 + LT2	Surface anatomy	Yang-J
D1a	2022-11-08	Tue	1430-1455	LT1 + LT2	Debriefing of Test 1	Yang-J
D1b	2022-11-08	Tue	1455-1520	LT1 + LT2	Debriefing of Test 1	Ma-CW Ho-J
R3	2022-11-10	Thu	1030-1220	LT1 + LT2	Review session (Anatomy)	Cecot-TS
L36	2022-11-11	Fri	1330-1420	LT3 + LT4	Growth & development/ life cycle	Ma-CW
L37	2022-11-11	Fri	1430-1520	LT3 + LT4	Introduction to microbes & infectious disease	Chan-MCW
CA3	2022-11-11 – 2022-11-13	Fri - Sun	1700 - 2359	Moodle	Continuous Assessment on L24 – L35 including P1A	Ma-CW
T4	2022-11-16	Wed	0830-1020	Zoom	T4 – Group I	Cheung-D
					T4 – Group II	Fung-J
					T4 – Group III	Lam-H
					T4 – Group IV	Yang-C
					T4 – Group V	Yeung-M
R4 & E	2022-11-18	Fri	1330-1520	3SR-LT1	Review session (Physiology) & Course evaluation	Ma-CW
Test	2022-11-26	Sat	1400-1600	LT1	Test 2 (Group A) [1430-1530]	Ma-CW
Test	2022-11-26	Sat	1400-1600	MDL1,2,3	Test 2 (Group B) [1430-1530]	Yang-J
D2a	2022-11-30	Wed	0830-0920	3SR-LT1	Debriefing of Test 2	Ma-CW
D2b	2022-11-30	Wed	0930-1020	3SR-LT1	Debriefing of Test 2	Yang-J

* The arrangement of Zoom Tutorials will be available in course Moodle.

The schedule and arrangement of teaching sessions may be revised later. If there are any changes later, a revised version of this file will be uploaded to Moodle.

Venues:

LT1	Lecture Theatre 1, G/F, William M W Mong Block, 21 Sassoon Road
LT2	Lecture Theatre 2, G/F, William M W Mong Block, 21 Sassoon Road
LT3	Lecture Theatre 3, G/F, William M W Mong Block, 21 Sassoon Road
LT4	Lecture Theatre 4, G/F, William M W Mong Block, 21 Sassoon Road
3SR-LT1	Lecture Theatre 1, 1/F, HKUMed Academic Building, 3 Sassoon Road
3SR-LT2	Lecture Theatre 2, 1/F, HKUMed Academic Building, 3 Sassoon Road
MDL1	Multidisciplinary Lab 1, G/F, Room LG-09 Laboratory Block, 21 Sassoon Road
MDL2 & 3	Multidisciplinary Lab 2 & 3, G/F, Room LG-01 & 02, Laboratory Block, 21 Sassoon Road
DL	Dissecting Laboratory, Room L1-01, 1/F, Laboratory Block, 21 Sassoon Road

5. TEACHING AND LEARNING STRATEGIES

Teaching will be in the form of lectures, laboratory sessions, tutorials and review sessions.

Note: The medium of teaching is English, and 100% of the course will be conducted in English.

6. COURSE ASSESSMENT

Component	Weighting	Date	This assessment method meets with course <u>learning outcome</u>
a) 3 Online Assessments	10%	Please see timetable	No. 1, 2, 3, 4
b) 2 Tests	30%	Please see timetable	No. 1, 2, 3, 4
c) Tutorials	10%	Please see timetable	No. 1, 2, 3, 4
d) Examination (One 2-hour written paper at the end of semester I)	50%	To be confirmed	No. 1, 2, 3, 4

7. GRADE DESCRIPTORS AND STANDARDS

<u>Grade</u>	<u>Standard</u>	<u>Grade Point</u>	<u>Numerical Score</u>
A+ } A } A- }	Excellent	4.3 4.0 3.7	96 – 100 91 – 95 86 – 90
B+ } B } B- }	Good	3.3 3.0 2.7	81 – 85 76 – 80 71 – 75
C+ } C } C- }	Satisfactory	2.3 2.0 1.7	67 – 70 63 – 66 59 – 62
D+ } D }	Pass	1.3 1.0	55 – 58 50 – 54
F	Fail	0	Below 50

Excellent indicates an outstanding level of achievement. The student gives evidence of logical development and synthesis of information as well as critical thinking ability.

Good indicates an above average achievement. The student is able to discuss the topic with supportive viewpoints and his/her work shows some independent thought and/or critical analysis.

Satisfactory indicates an acceptable level of achievement. The student gives evidence of satisfactory knowledge of the topic and has minimal errors in understanding. A limited degree of logical and critical thought is evident in his/her work.

Pass indicates the student's performance has just reached as the acceptable level of achievement.

Fail indicates failure to achieve the required standard.

8. RECOMMENDED READING LIST

Required Textbooks:

- Eric P. Widmaier, Hershel Raff, Kevin T. Strang (2022) Vander's Human Physiology: the mechanisms of body function, 16th edition, McGraw-Hill.
- Kenneth S. Saladin (2019) Human Anatomy, 6th edition, McGraw-Hill.
- Additional reading materials will be recommended by the teachers during the lectures.

Reference:

- Arthur C. Guyton and John E. Hall (1997) Human physiology and mechanisms of disease, 6th edition, Saunders.