FACULTY OF MEDICINE

University of Jaffna

STUDENT GUIDE

INTEGRATED INTRODUCTORY MODULE

Medical Education Unit
Faculty of Medicine
University of Jaffna – Sri Lanka

Preface

This student guide is prepared to facilitate students to go through the first few weeks of life in the medical faculty smoothly. The Integrated introductory module is designed in such a way to make students adapt to the learning environment of a university. This includes a few tips on adult learning, learning styles, self-learning, how to adapt to the university life, the code of conduct for students and the outline of the programme. This is an integrated module where introduction into English, IT, PPDS and Basic Anatomy are incorporated. Medical Student Union activities are also incorporated so that a conducive learning environment is created for the new entrants.

Contributors:

Prof M G Sathiadas

Dr B Balagobi

Dr N Romini

Mr K Ananthakrishnan

Mr K Sanmugananthan

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1. Introduction

1.1. What do you expect on the first few weeks?

Hoping to start medical school this September? The last couple of years preparing for medical school felt like an eternity, with constant hurdles along the whole way, but you finally have an offer – and you should be proud of yourself!

A huge weight has been lifted from your shoulders, however it's not long till it's replaced by another: the daunting prospect of starting medical school. So: what should you expect in your first week at medical school?

Whatever your experience, your first few weeks as a medical student will be a memorable one which you will hopefully look back on with fondness. It's as exciting as it's terrifying. The key message is don't panic. You'll get into the swing of things before you know it.

1.2. The difference between School and University

During school especially A/L, you're in a class with a maximum of may be 40 students who you know well and who you share other classes with. Your teachers know your name, they monitor your progress and behaviour and notice any differences.
They may even have a Parents' Day where they inform your parents of their concerns. You feel cared for and that someone is looking out for your wellbeing and education.

Fast forward to being in medical school and suddenly you're sharing a lecture hall with **nearly 200 students** and a lecturer that's talking at you for over an hour. You may have the occasional fortnightly tutorial or workshop, but you don't necessarily have consistency with the tutor; they are selected depending on the topic you're studying. **Coaching doesn't happen in the university;** it is about learning on your own i.e. **Self Learning**.

In Medicine, you are entirely responsible for yourself, and you have to have that motivation within you to go to your lectures or catch up on them online, to go to your dissections. It's so easy to fall into a routine of not doing anything throughout the year and cramming as much as possible during exam season. This learning will go on and medicine being a subject that is changing fast to keep yourself updated **lifelong learning** is important.

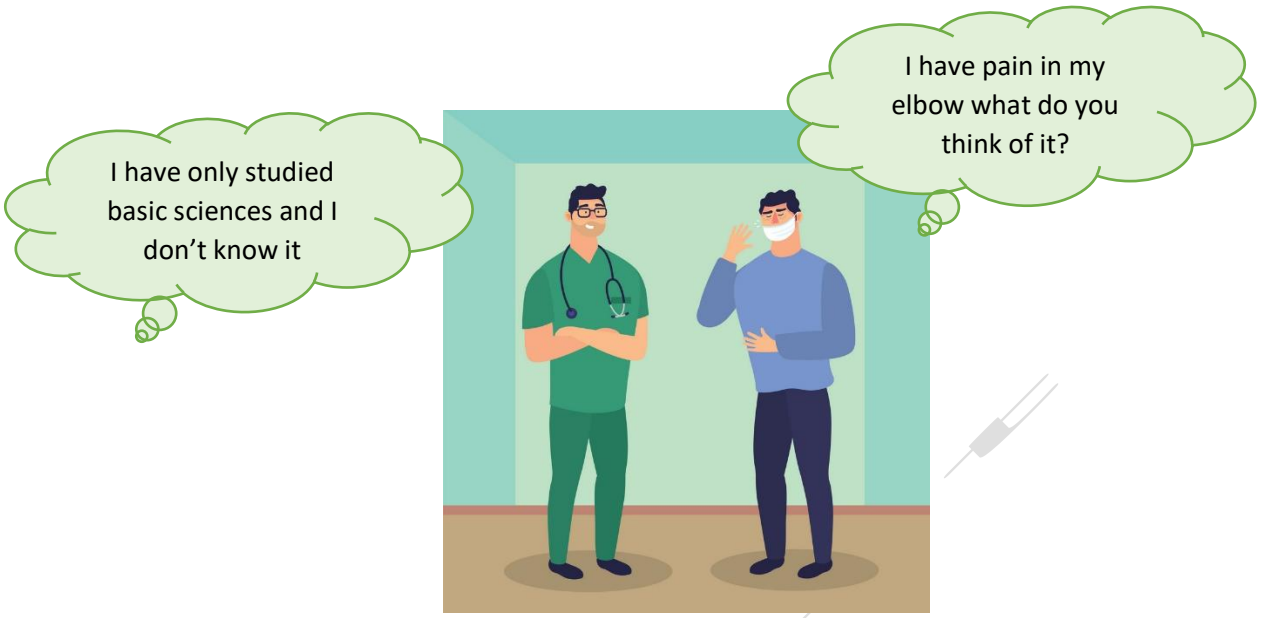
1.3.Expect to feel overwhelmed

It's hard enough starting university, leaving home, maybe even moving to a different city or country, but starting a medical degree can feel all the more overwhelming. Aside from getting to grips with university life, you will be exposed to a whole **new language of medical terminology**, you will be bombarded with lectures on **professionalism** and your responsibilities as a medical student and you will be introduced to **a completely different way of learning**.

Remember that it's natural for people to want to impress on their first day, but ultimately, everyone is in the same boat and everyone is as capable as each other.

As soon as you reveal that you are a medical student, people (and family in particular) will expect you to know what specialty you want to specialise in, what the cause of their elbow pain is and what your opinion is on their recent visit to the doctor.

At first it can be rather amusing but then can become quite frustrating. **Just be patient** and explain that your guess is as good as theirs at this stage of your training!



1.4. Expect to feel the urge to make friends immediately

This applies to all students but medics in particular since they can have very different timetables than other university students and their course can start a few weeks earlier. There is always pressure to make friends from your very first day and to socialise every day of the week. The friends people make at freshers' week are not necessarily the friends they stick with a few months down the line.

So, take a step back, relax and take your time when building relationships with people. Everyone is eager to impress during the first few weeks so be patient and try to get to know people slowly, talk to students from different backgrounds and don't rush into creating a friend group from day one.

Building relationships

- Take your time
- Talk to all and get to know them
- Be proactive
- Surround yourself with likeminded people
- Befriend who will notice you when you are down

Becoming more independent and proactive is something essential if you want to not only survive in medicine, but also thrive. It's important to surround yourself with like-minded people who can also motivate and inspire you, as well as be your support network when times are rough.

You *need* to have people (be they fellow students, friends, or even family) that will notice when you haven't been doing much revision or attending many lectures or lessons and will help you through it.

In the same way, though you are not responsible for other students, it's good to be that person for them too. Medical school can be an overwhelming, lonely and a tough adjustment, so it's a good idea to stick together.

1.5.Expect to feel like you need to buy every single medical textbook

Whether advised by senior medical students or lecturers, resist the urge to buy every single medical textbook available.

Take your time to find out what your style of learning is. Borrow books from the library and test them out for a few days before deciding to purchase anything and remember that there are plenty of free online resources that you will use time and time again.

1.6.Mentor Programme

The Faculty has a system of giving each student a lecturer to go to for guidance, support, or confide in called the mentor. They should be your port of call if you need advice or have any concerns, and they can be extremely helpful.

That motivation you had during A-Levels can easily disappear. The mentors are there to help you. The Mentor Programme is designed to: improve general wellbeing, enhance your personal and professional development, motivate you to be more engaged in the undergraduate programme and with the faculty community, to direct you to the available opportunities and resources, and to provide career counselling and guidance when you need it.

1.7.Student responsibilities

Students have a responsibility to know the information provided regarding the following so that a clear understanding of the university system is obtained. Students are advised to search for this information during the IIM.

- Academic programmes
- Regulations and procedures (see University Calendar)
- The organizational structure of the university and faculties, and service centers and units (see University Handbook and Faculty Prospectuses)

- Degree programmes and courses offered by the faculties (see Faculty Undergraduate and Postgraduate Prospectuses or Course Catalogues)

- University By-laws governing the conduct and discipline of students (see Codes of Practices on Students Discipline).

1.8.Medical Curriculum

The programme is divided into three phases and each phase is completed with an end of phase examination. The Pre-clinical phase, conducted during Phase I, provides learning of structure and function of the human body and introduces their clinical and community application.

During Phase II, students go for clinical rotations at the Teaching Hospital in the mornings and for Para-clinical teaching-learning activities in the afternoons at the Faculty. The Para-clinical subjects deal with abnormal structure and function in disease states and their application in clinical situations, medicines, therapeutics, and prevention and control of diseases. Phase II ends with the Second Examination for Medical Degrees. Phase III comprises Clinical subjects exclusively.

You will be having a lecture on the medical curriculum, and you are expected to go through the curriculum book prior to the lecture/discussion.

You can obtain the details from the link below:

http://www.med.jfn.ac.lk/index.php/course-detail/

1.9.Student handbook

This handbook will give you a clear idea of the vision, mission, and outcome of the MBBS programme, overview of the curriculum and assessment formats. In addition, it also provides information on the awards, prizes, rules and regulations.

You are expected to read the handbook beforehand for activities conducted during this module.

The link for the hand book is given below:

http://www.med.jfn.ac.lk/wp-content/uploads/2021/07/Student-Hand-Book.pdf

1.10. Faculty activities

Several academic and extra-curricular activities take place in the faculty and it is better for you to be aware of these. The information will be updated regularly on the faculty website. You can visit the link to obtain the news.

http://www.med.jfn.ac.lk/

1.11. Student charter

University Student Charter is a guide for students enrolled in state universities as well as a document that states the conditions of the contract that exists between the university and its students. It also serves as a guide to the academic, administrative and support staff and the public, as it emphasizes the commitment expected from all stakeholders for the smooth functioning of state universities.

It includes the guiding Principles on which National Universities are governed:

Openness

Equity and Diversity

Commitment to Uphold Democratic Rights and Social Norms

Role of National Universities

Centres of Excellence in Teaching and Learning

Centres of Excellence in Research and Innovation

You can obtain further details from the link:

https://www.ugc.ac.lk/downloads/student_charter/SC_English.pdf

Equity and Diversity in the student charter means a commitment to uphold democratic rights and social norms: All state universities are committed to providing provisions to preserve democratic principles and norms, guaranteeing the rights of individuals (rights of expression of opinion, forming associations and interest groups, living in dignity and self-respect free from any

harassment, abuse, and intimidation, right of privacy, etc.) and maintaining a just and righteous society within the institution (free of evils such as drugs, alcohol and substance abuse and disrespect for written and unwritten laws and norms of the civil society).

1.12. Code of conduct and student discipline

The Faculty of Medicine and University of Jaffna sanctions as a principle the concept of responsible student freedom. The faculty expects and encourages the students to conduct themselves as mature adults. Students should abide by the laws of the state, norms of natural justice, social norms and accepted moral standards.

The university is also concerned about the conduct of the students outside the physical boundaries of the campus.

The students should know the general guidelines of the UGC. They are available via the same link under general governance and management of the state universities.

https://www.ugc.ac.lk/downloads/student_charter/SC_English.pdf

Prohibited unethical and unlawful activities are listed under part IV of the student charter.

1.13. Ragging

Ragging is now a criminal offence under the Anti Ragging Law passed by the Parliament in 1998. Hazing or ragging is interpreted as any act (by an individual or group) whether physical, mental, emotional or psychological, which subjects another person, voluntarily or involuntarily, to anything that maybe considered as abuse, mistreat, degrade, humiliate, harass or intimidate, whether on or off the campus.

1.14. Sexual Harassment/Sexual Misconduct

The university student population is a mixed, usually in equal proportions of males and females. Notwithstanding all moral, ethical and religious values instilled into the human being, there are people who force their will on others causing sexual harassment and misconduct. If any person under the university administration commits an act of sexual harassment or misconduct by trying to impose their sexual desires on another person, be it a person of the opposite sex or of the same sex, and if a complaint is received, action will be taken under the prevailing law to bring justice and punish the offender.

2. Integrated Learning

Integration is of key importance for medical education because basic science learning is placed in the context of clinical and professional practice and is considered by students to be more meaningful and relevant. Integrated courses there is a systems-based approach to teaching, where students will learn the anatomy, physiology and biochemistry related to the clinical teaching and that system. It is a **way of connecting skills and knowledge from multiple sources and experiences or applying skills and practice in various settings**. It simply means bridging connection between academic knowledge and practicals. The IIM tries to implement the fundamentals of integration.

Every attempt is made to de-emphasize compartmentalization of disciplines so that horizontal and vertical integration takes place in various phases of the curriculum.

Advantages of Integration

- Perception of the learning environment is better
- Student satisfaction increases with better academic performance
- Quality of life improves as less stressful
- Better comprehension
- Relates to community and patients
- Promotes teamwork and Improves communication
- Promotes self-study
- Increases the humanitarian approach

2.1.Integrated Introductory Module

This is a newly designed bridging module for medical students. The programme consists of lectures, visits, practicals, small group discussion and problem-based learning sessions. Previously the introductory phase consisted of English, IT core modules, PPDS and an Introductory programme. Currently it is combined as an integrated introductory module.

2.2.**Aim of the Module**:

To guide the students to become self-directed learners and improve their language, communication and information technology skills.

2.3.Intended Learning Outcomes:

By the end of this module, you should be able to:

- Understand the role of a doctor in the community and the importance of inter professional collaboration
- Know the code of conduct for students and the examination rules and regulations
- Identify the co-curricular activities and their importance for learning
- Know the various facilities available and their roles in undergraduate learning
- Recognize the importance of competency in English and IT in medicine
- Demonstrate effective written and verbal communication skills
- Develop listening skills to understand opinions and draw inferences
- Draw factual information and abstract ideas from a wide range of electronic and other sources
- Prepare a document using word processing
- Choose and effectively deliver a presentation
- Demonstrate the ability to use web-browsing, email, and literature survey
- Improve life skills by enhancing personal development, professional development, leadership management and Ethics

2.4.Description of the Module

This module is part of the orientation programme so that the students get adapted to the university system. This programme is designed in such a way that the students have the freedom to experience the change in their learning style and interact with peers and teachers for better development of self.

The students will have a series of lectures, site visits, practical sessions in language and IT skills. The latter will be taught in state-of-the-art IT laboratories and resource centres.

Special lectures will be conducted on code of conduct, rules and regulations of examination procedures, mission and objectives of the faculty, medical curriculum, library facilities and access, student welfare and wellbeing, sports and recreational activities as well as student societies.

PPDS activities are also incorporated into this module and they will cover some sessions on coping strategies, time management, relaxation techniques and empowering students to cope with stresses of campus life.

The academic activities will begin once this module is completed in 4 weeks.

2.5.Information Technology

It is expected to provide sufficient knowledge, skills and attitudes to make use of Information Technology for effective learning and practice in Medicine.

2.6.English

The medium of instruction at the Faculty of Medicine is English. The English sessions aim to enhance the communicative competence in all the four language skills (reading, listening, writing, and speaking) to facilitate you to follow their course in medicine and in their profession afterwards

2.7.The Programme of the IIM

Hr	Activity	Content/Topic	Person/Department
3	Welcome	Ceremonial procession and welcome of newcomers	Dean/SAR
2	Group work	Introduction to each other Meeting the mentors	Preclinical coordinator
1	Lecture	Medical Curriculum	Head MEU
1	Lecture	Student welfare and financial support	AR/welfare/wellbeing cell Alumni JMF
1	Group discussions	Medical students and the community	Dept. Community Medicine
1	Lecture	Code of conduct	Student counselor - FM
2	Group discussions	Student charter	Wellbeing
4	Visit	Facilities available at the University Sports/Health centre/ canteen/ IT Centre/ Bookshop/Faculty premises	MSU/Physical education
4	Visit	Library Teaching Hospital	Snr. Assist. Librarian MSU
1	Lecture	Examination regulations – General	SAR Examination branch
1	Lecture	Examination for the FM/Jaffna	Chairman CDEC
1	Lecture	Introduction to PPDS - curriculum and exam methods	PPDS
1	Lecture	Know thyself, motivation, enhancing personality, achievement	PPDS
2	Discussion/group work	Building effective Relationships/ Enriching the relationships	PPDS
1	Visit	Introduction to Well-being Centre	Coordinator/WWB
2	Lecture	Answering simple questions, finding main ideas from complex texts and inferring	DELT
2	SGD	Introduce doctor-patient communication skills based on Calgary Cambridge model	PPDS/DELT
2	Group activity	Role play	PPDS

2	Lecture	Communicate information, abstract ideas and arguments at a more complex level, in both spoken and written form.	DELT
2	Group activity	Role play Participate effectively in a conversation and develop the conversation based on other speakers' responses	PPDS
1	Lecture	Differentiating main and supporting ideas and taking notes.	DELT
1	Practical/Demo	Use of computer networks and communication services, Connecting to the Internet, Terminology of the internet, Web Browsing, e-mail, Downloading, Videoconferencing, Shared resource, Telenet, E-Learning, E-Commerce etc Creating blogs	IT
1	Group activity	Familiarise the faculty website, student handbook and curriculum books	IT
2	Lecture/Demo	Challenges of Information Technology - Health, Ergonomics & the Environment, Cyber Ethics, Threats and Safeguarding Computers and Communications Systems	IT
2	Group activity	Written communications – email/letters	DELT/IT/PPDS
1	Lecture	Understanding opinions and drawing inferences	DELT
2	Group activity	Student debate	PPDS/IT/DELT
1	Lecture	Career Prospects	Career Guidance Coordinator
2	Lecture	Writing short descriptions on familiar topics, summarizing and organizing ideas effectively into paragraphs and using a range of appropriate linking devices	ELTU
2	Practicals/Demo	Documentation of project reports/thesis – Sections, Cover pages, Chapters, Footnotes, Table of Contents, Figures and Tables captions, Citation and Bibliography and Index, familiarizing with track changes etc	IT

2	Practicals/Demo	Creating a Presentation, Editing a Presentation, Layouts, Themes, Inserting Information into PowerPoint	IT
2	Practicals/Demo	Introduction to Electronic Spreadsheet, Working with worksheets and workbooks, formatting cells and worksheets, page setup and printing, creating and modifying chart	IT
2	Group activity	Student Presentations	PPDS/IT/ELTU
1	Discussion/group work	Medical Profession : Different perspective	PPDS
1	Discussion/group work	Ethics and Etiquette in medical field	PPDS
2	Discussion/group work	Building effective Relationships / Enriching the relationships	PPDS
2	Group activity	Campus Stories கதைகள் කතන්දර	SWWC/DELT
2	Group activity	Learning languages through interaction – trilingual activity	SWWC/DELT
1	Discussion/group work	Planning and managing “TIME”	PPDS
1	Discussion/group work	Learning basic and applied medical science in phase I	PPDS
1	Discussion/group work	Preparing for preclinical teaching and exams	Pre clinical staff
2	Group activity	Introduction to Anatomy	Department of Anatomy
2	Group activity	Introduction to Biochemistry	Department of Biochemistry
2	Group activity	Introduction to Physiology	Department of Physiology
2	Discussion/group work	Stress and coping with stress	SWWC
2	Group activity	Relaxation techniques	PPDS

2	Discussion/group work	Facing a time of crisis	PPDS
1	Lecture and group work	Reflective learning	MEU
1	Discussion/group work	Learning style	PPDS
6	Training	First Aid	St. John ambulance
2	Discussion/group work	Harassment/ragging/sexual violence	SWWC
2	Discussion/group work	Diversity and inclusion	SWWC
2	Discussion/group work	Mindfulness	PPDS
2	Group activity	Post evaluation and feedback	Preclinical coordinator

3. Personal and Professional development

Professional growth in medicine is about gaining new skills and experience. Personal development fits alongside professional growth. This means if you want to develop professionally you need to develop personally first. You should be able to handle your fears, take more responsibility and succeed with greater challenges.

3.1. The Personal and Professional Development Stream (PPDS)

The PPD stream runs throughout the medical course to train you so that you become a doctor with good knowledge, skills and attitudes.

The aim of the PPDS is to develop personal skills and personality of the students with a view to improve their learning abilities during the studentship and afterwards for continuous professional development and to improve the quality of the service provided.

The PPDS is divided into four thematic areas to be covered in a spiral manner throughout the phases. The themes are:

- Personal development
- Professional development
- Leadership and management
- Ethics

During the Introductory period you are expected to learn and experience the following through all the learning activities.

Personal development

- Develop key attributes to know self
- Relate learning as a discipline
- Appraise enhancing personality and know the importance of achievement
- Identify stress reducing techniques like relaxation, mindfulness and coping with stress

- Identify effective relationships and enriching the relationships
- Demonstrate time management
- Develop attributes and soft skills to enhance personal role in the Practice of Medicine
- Utilise effective communication skills

Professional Development

- Explain the medical profession in the context of Society
    - Relate the perspective of a doctor
    - Show and practice etiquette in the medical field
- Developing the attributes of Medical Professionalism
    - Define medical professionalism
    - Adapt basics of doctor-patient relationship
- Value that medicine involves life-long learning, continued professional development and ongoing appraisal of performance of self and the quality of the practice
    - Demonstrate self-care, self-reflection and self-assessment
    - List the bodies that maintain professional conduct in Sri Lanka
- Identify online behaviour that is inconsistent with professionalism

Leadership and Management

- Develop effective time management
- Model clinical leadership
- Formulate a self-development plan
- Infer principles of teamwork in medicine

Ethics

- Develop etiquette in medical field
- Model the behavior in the Faculty and public domains
- Choose and implement dress code
- Explain the concept of punctuality
- Select the communication style- with colleagues and community
- Describe the use of social media/IT
- Identify self-discipline

3.2.Adult learning and learning styles

Adult learning is different from children as;

- They need to know why they should learn something.
- They need internal motivation.
- They want to know how learning will help them specifically.
- They bring prior knowledge and experience that forms a foundation for their learning.
- They are self-directed and want to take charge of their learning journey.
- They find the most relevance from task-oriented learning that aligns with their own realities.

3.3.Self-directed learning

Self-directed learning (sometimes called self-direction learning) is the process where individuals take initiative in their learning—they plan, carry out, and evaluate their learning experiences without the help of others. Learners set goals, determine their educational or training needs, implement a plan, and more to enhance their own learning. Self-directed learning may happen outside the classroom or inside of it, with students working by themselves or collaborating as part of their self-directed learning process.

For many adults, self-directed learning happens naturally without anyone explaining it or suggesting it. Adult learners are more prone to self-directed learning because they are often excited about their education and feel confident in their ability to take it on themselves. For many adult students, self-directed learning is a fantastic way to learn.

During the IIM the students are expected to identify their strengths and weaknesses in learning, English and IT.

Those who need extra support especially in English and IT can voluntarily indicate their needs and they will be supported by the staff. They also must indicate their learning needs and weaknesses so that those areas can be taught. This can be conveyed to the relevant people through the respective mentors.

3.4.Learning styles

Each student's learning style is different. What works for one may not work for others. The key learning styles are described below.

Visual Learners

Someone with a preference for visual learning is partial to seeing and observing things, including pictures, diagrams, written directions and more. This is also referred to as the "spatial" learning style.

Auditory Learners

These students would much rather listen to a lecture than read written notes, and they often use their own voices to reinforce new concepts and ideas. These types of learners prefer reading out loud to themselves. They aren't afraid to speak up in class and are great at verbally explaining things.

Kinesthetic learners

These students are sometimes called tactile learners, learn through experiencing or doing things. They like to get involved by acting out events or using their hands to touch and handle in order to understand concepts. These types of learners might struggle to sit still and often excel at sports or like to dance. They may need to take more frequent breaks when studying.

Reading/writing learners

They prefer to learn through written words. While there is some overlap with visual learning, these types of learners are drawn to expression through writing, reading articles or books, writing in diaries, looking up words in the dictionary and searching the internet for just about everything.

What is your learning style?

By trying out the questionnaire, you can find out your learning style. **(Annexure 1)**

3.5.Few tips regarding adult learning techniques

1. Manage your learning. You probably have some awareness of your own strengths and weaknesses in the classroom and that means you can take more responsibility for how you learn. If you know you don't do well with class lectures, prepare by doing the reading in advance.
2. Go above and beyond. Perhaps in your earlier studies you were content to sit back and let the teacher lead the way, but things are different now. Pursue topics that interest you outside of class, ask questions and read beyond the syllabus. Actively contribute to class discussion. Your teacher will appreciate your enthusiasm.
3. Challenge yourself. Don't shy away from something if it is difficult. Remember that you can always get help when you need it. Ask your teacher, department head, or anyone else at the faculty.
4. Stay Organised. The key to success is staying organized so you ensure you prioritize different tasks effectively and switch between them more efficiently.
5. Take time to study. There's a lot more independent action expected of you as a medical student, particularly when it comes to reading and reviewing material at home. Lectures will cover a vast area in one hour and it's up to you to maintain a regular study routine.
6. Study smart and save time by being more strategic in your approach to learning. This means discovering how to take better notes, engage with the material in a productive way, quickly assess the gist of a text and scan for more detailed information.
7. In addition to study strategies, developing the skills you need to be an effective researcher are also important.
8. There are a wide variety of library resources available online today so make sure you know how to log-in and access them from home.
9. Meet other students. Getting together to discuss the lessons or share notes helps reinforce learning in memory; commiserating about assignments and exam results can reduce anxiety.

4. INTRODUCTION TO CORE KNOWLEDGE IN ANATOMY

Anatomy is the study of body structures and their relationships to one another. Anatomical terms are used to describe specific areas and movements of the body as well as the relation of the body parts to each other. Anatomical terms are essential for health professionals in order to effectively communicate with colleagues in a scientific manner.

1. **Anatomical position (Figure 1):**

Anatomical position is defined as standing erect, feet together, palms and feet face forward and thumbs point away from the body. This position is the standard reference point in which all positions, planes and movements are described.

Figure 1: Anatomical position

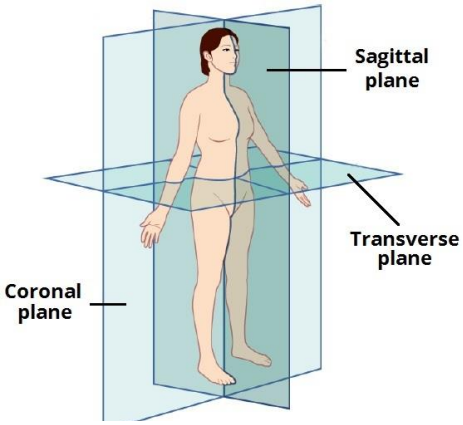


Figure 2: Anatomical planes

2. **Anatomical planes (Figure 2):**

Anatomical planes are the fixed lines of references along which the body is often divided or sectioned to facilitate the detail view of the anatomical structures. Studying the body from different views allows one to obtain the three dimensional perspective outlook.

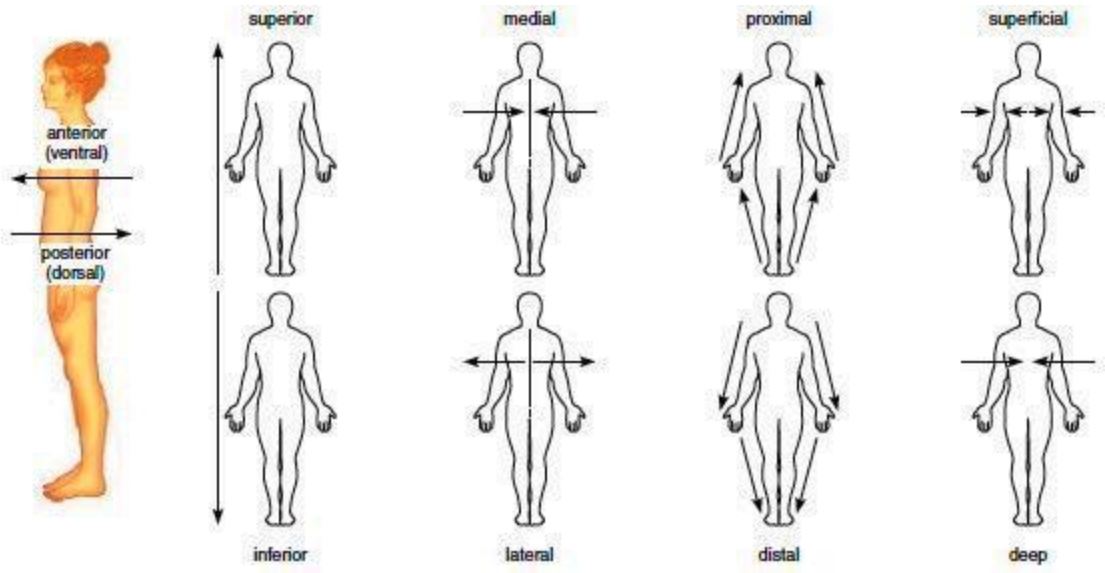
They are

1. **Sagittal** or lateral plane – plane dividing the body into right and left portions. 2 types,
    a. **Median**/mid sagittal plane: divides the body in to equal right and left halves.
    b. **Para median**/para sagittal plane: divides the body in to unequal halves.
2. **Coronal** or frontal plane – plan dividing the body into front and back portions
3. **Axial or transverse plane** –plan dividing the body into upper and lower portion

3. **Anatomical directions:**

   Directional terms describe the positions of structures relative to other structures or locations in the body.

1. Superior: means the part is above another or closer to head (cranial).
2. Inferior: means the part is below another or towards the feet (caudal).
3. Anterior: means towards the front (the eyes are anterior to the brain) [ventral].
4. Posterior: means toward the back (the pharynx is posterior to the oral cavity) [dorsal].
5. Medial: relates to the imaginary midline dividing the body into equal right and left halves (the nose is medial to the eyes).
6. Lateral: means to words the side with respect to the imaginary midline (the ears are lateral to the eyes).
7. Ipsilateral: refers to the same side (the spleen and descending colon are ipsilateral).
8. Contralateral: refers to the opposite side (the spleen and gallbladder are contralateral).
9. Proximal: is used to describe a part that is closer to the trunk of the body or closer to another specified point of reference than another part (the elbow is proximal to the wrist).
10. Distal: it means that a particular body part is farther from the trunk or farther from another specified point of reference than another part (fingers are distal to the wrist).
11. Superficial: means situated near the surface. Peripheral also means outward or near the surface.
12. Deep: is used to describe parts that are more internal.
13. Prone: lying face down position
14. Supine: lying face up
15. Unilateral: pertaining to one side of the body
16. Bilateral: pertaining to both side of the body
17. Internal Vs External: refers to a hollow structure (external being outside and internal being inside)

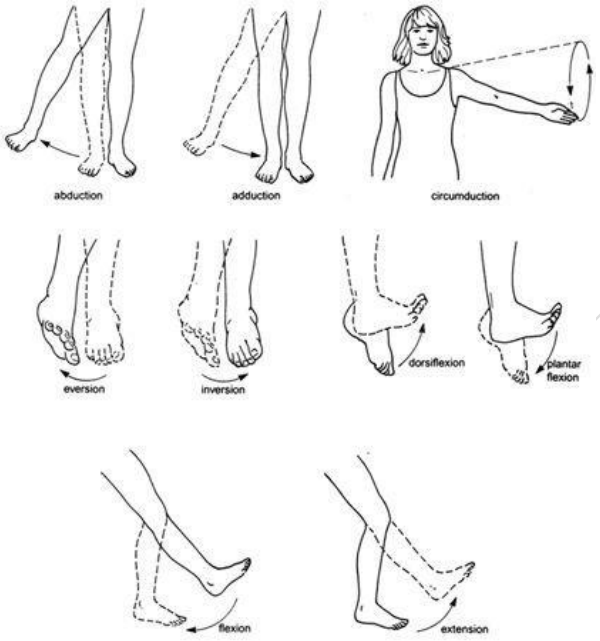


4. **Anatomical movements:**

   Anatomical movements are used to describe the action of muscles upon the skeleton. The muscles contract to produce the movements at joints.

1. Flexion – refers to a movement that decreases the angle between the two body parts.
2. Extension - refers to a movement that increases the angle between the two body parts.
3. Abduction –is a movement away from the midline
4. Adduction – is a movement towards the midline.
5. Supination - turning the arm or foot upward
6. Pronation – turning the arm or foot downward
7. Dorsiflexion –refers to flexion at the ankle joint.
8. Plantarflexion - refers to extenson at the ankle joint.
9. Lateral flexion – side bending left or right
10. Rotation – turning on a single axis
11. Medial rotation –is a rotational movement towards the midline.
12. Lateral rotation - is a rotational movement away the midline.
13. Circumduction – moves a limb in circular manner. It is a combination of flexion, extension, adduction and abduction
14. Inversion -involves the movement of the sole towards the median plane
15. Eversion - involves the movement of the sole away from the median plane

16. Ulnar deviation -movement of wrist towards the ulnar side
17. Radial deviation - movement of wrist towards the radius side
18. Opposition – movement of the thumb across the palm of the hand
19. Elevation – movement in a superior direction
20. Depression - movement in an inferior direction
21. Protraction- moving a part forward
22. Retraction - moving a part backward
23. Hyperextension – extension of a joint beyond its normal range of motion.

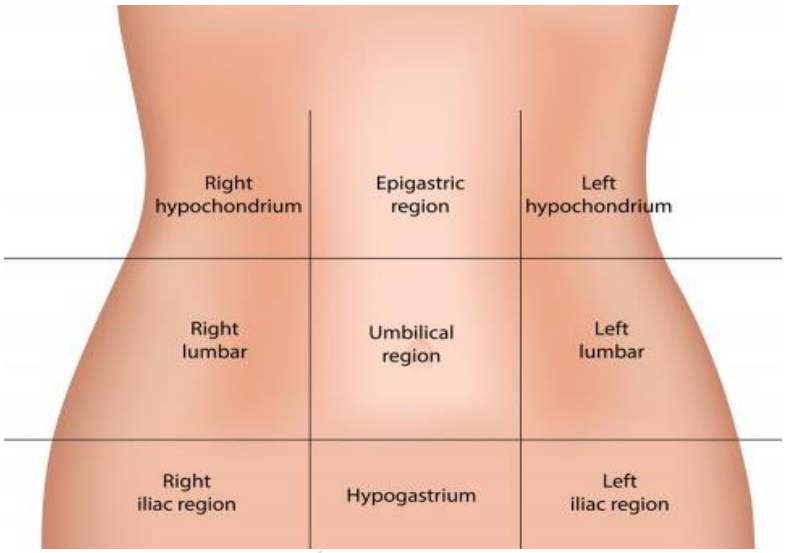


5. **Common terms:**

1. Abdominal = region between the thorax and pelvis
2. Antebrachial = forearm
3. Cubital = elbow
4. Antecubital = front of elbow
5. Axillary = armpit
6. Brachial = upper arm
7. Cephalic =towards head
8. Caudal=towards feet
9. Cervical = neck

10. Costal = ribs
11. Femoral =thigh
12. Gluteal =buttock
13. Lumbar =lower back

6. **The abdominal area is subdivided into 9 regions.**

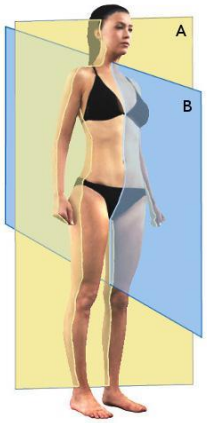


Exercise 1.

Terms to know (Search via google/use medical dictionary and the meaning of following words in your note book and discuss with your colleague): You will have a quiz competition on this later.

- Artery, Vein, Capillaries, Nerve, Muscle, Bone, Tendon, Cartilage, Aponeurosis, capsule, bursa, cavity, canal, fascia, duct, Epithelium, foramen, fold, fossa, fovea, Genu, hilum, corpus, cervix, isthmus, joints, lobe, meatus, ligament, labium(lip), periostium, plexus, ramus, pouch, raphe, root, sac, sinus, spine, sulcus, Tract, tubercle, tuberosity, valve, viscus, notch
- Plasma, Blood, Haemoglobin, Epithelium, Endothelium, Systemic circulation, Pulmonary circulation, Portal circulation, Red blood cells, White blood cells, Neutrophils, Platelets, Aorta, Pulmonary artery, Lymphatics, Lymphnode, Haemostasis, Homeostasis, Lymph, Oedema, clot, Anaemia

Exercise 2: Practice Questions (Select one correct answer)

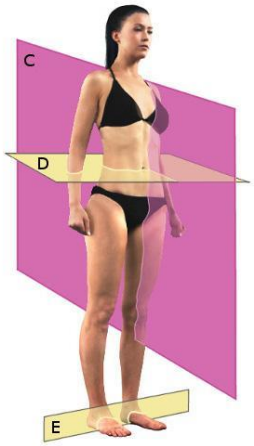


1. What does A indicate?

A. Saggital plane
B. Coronal plane
C. Transverse/axial plane/Horizontal plane
D. Median plane
E. Paramedian plane

2. The **median plane** divides the body into:

A. anterior and posterior halves
B. Equal left and right halves
C. Unequal right and left halves
D. superior and inferior sections
E. Lateral and medial portions



3. Which letter indicates a **sagittal plane?**

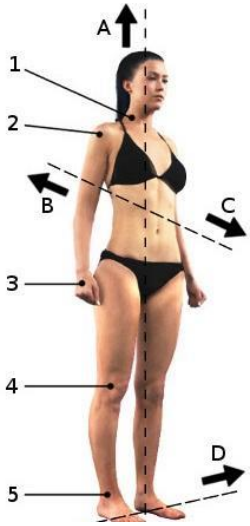
1.C

2.D

3.E

4. In the internationally accepted ‘anatomical position’, the feet are together and the palms of the hands face.

   A. Anteriorly
   B. Posteriorly
   C. Medially
   D. Laterally
   E. Superiorly



5. An area of the body nearer to the front (shown as **direction C** on the image) is referred to as:

   A. Anterior
   B. Posterior
   C. Inferior
   D. Medial
   E. Caudal

6. An area of the body further from the median plane (shown as direction D on the image) is referred to as:

   A. Medial
   B. Anterior
   C. Caudal
   D. Lateral
   E. Ventral

7. Which of the following is lateral to the eye?

   A. Nose
   B. Eyebrow
   C. Forehead
   D. Ear
   E. Cheek

8. Which of the following is inferior to lower lip?

    A. Teeth
    B. Upper lip
    C. Angle of mouth
    D. Chin
    E. Nose

9. Adduction means

    A. Turning the arm upward
    B. Move the limb towards the midline
    C. Move the limb away from midline
    D. Bending the forearm at elbow joint/decrease the angle in a joint.
    E. Turning the hand towards the floor

10. From the anatomical position, turning the palm to face the body is an example of ...

    A. Adduction
    B. Flexion
    C. Medial rotation
    D. Lateral rotation
    E. Circumduction

11. What do we call a muscle that increase the angle at a joint?

    A. Flexor
    B. Extensor
    C. Adductor
    D. Abductor
    E. Lateral rotator

12. Flexing the foot at the ankle is called ...

    A. Supination
    B. Dorsiflexion
    C. Planter flexion
    D. Inversion
    E. Eversion

13. Circumduction of a limb means moving it in which of the following ways?

    A. Anteriorly and posteriorly
    B. Medially and laterally
    C. Circular movement
    D. Towards the roof

14. Which of the following prefixes means 'away'?

A. Ad
B. Ab
C. An
D. Anti
E. Di

15. What do you understand by prefix “Sub”?

A. Medial
B. Under
C. Over
D. Lateral
E. Anterior

Exercise No:3 (Single word answer)

1.The fluid that circulates through the body carrying nutrients and oxygen to the cells and carrying waste products away from cells for elimination: …….

2. The transparent fluid in which many important chemicals are dissolved, and in which are suspended red and white blood cells and platelets: …….

3. Cells which carry oxygen from the lungs to cells of the body: …….

4. White blood cells which help to prevent infection and diseases: ……

5. Cells which assist the clotting process when injury occurs: …….

6. Vessels that carry blood from the heart: ……

7. Most arteries carry oxygenated blood; this is the exception: …….

8. Arteries which supply oxygenated blood to the heart muscle: …….

9. Vessels that transport blood to the heart: …….

10. Most veins carry deoxygenated blood; these are the exceptions: …….

11. The circulation of blood from the right ventricle of the heart to the lungs and back to the left atrium: ……...

12. The circulation of blood from the left ventricle of the heart via the aorta to all parts of the body: …….

13. Venous blood passes from the capillary bed of the digestive system, via the capillary bed of the liver in this circulation system: …….

14. The interior lining of the blood vessels: …….

15. Interior lining of intestine: ……

Exercise 4: QUIZ Competition (Terminology of Basic science): will be organized jointly by MSU, immediate seniors and preclinical departments.

Exercise 5: Debate (Do we have to study medicine in English medium Vs Mother tongue, which is more beneficial?) : will be organized by PPDS and Department of English.

References:

- https://teachmeanatomy.info/the-basics/anatomical-terminology/
- https://www.kenhub.com/en/library/anatomy/human-anatomy-terminology
- https://www.britannica.com/science/anatomy
- https://youtu.be/f_kWMY1oX1E
- file:///C:/Users/HP1/Downloads/2865949_HSCIC%20Basic%20Anatomy%20Physiology%20Manual_web.pdf

5. Information Technology

Activity 1 – Word processing

Select a topic and get materials (text and images) related to that topic from the internet. Design a book in MS word with two chapters by considering the following instructions. Use the proper features available in MS-word rather than typing them directly in the pages.

Text Formatting should be like below.

Paragraphs	**Heading Styles**
Font Color – Black	Heading1 - Font Color – Blue, Font size – 16, Font style - Bold
Font size - 12	Heading l2 - Font Color – Green, Font size – 14, Font style - Bold
Alignment – Justify	Heading 3 - Font Color – Purple, Font size – 12, Font style - Bold
Line spacing – 1.5	

Page setup

Your document should have the pages of A4-size, with 3cm top margin, 3cm bottom margin, 2.5cm left margin and 2.5cm right margin

Use page breaks and section breaks properly wherever it is necessary.

Cover page

A front page needs to be inserted using cover page facilities.

Chapters

Chapters need to have a minimum of 4 pages each.

The headings and subheadings of the chapters have to be numbered using Multilevel List (minimum three levels) facilities which need to be linked with Heading styles.

Figures and Tables

Each chapter needs to have a minimum of three images with captions.

Create a minimum of three tables in these chapters with captions.

Those captions need to be inserted using “Insert Caption” facilities and the chapter number also has to include.

Make a minimum of three cross-references in text for both figures and tables.

Footnote and End note

Put some footnotes and endnotes inside the chapters.

Citations & Bibliography

Generate a minimum of three references for books and journal articles using manage source facilities and insert the Bibliography in the page previous to the last one.

Index

Select a minimum of ten words for the index from the chapters and insert the index on the last page.

Table of Contents

On the page next to the cover page the "Table of Contents" need to be inserted.

List of Figures and Tables

Another two pages following the "Table of Contents" page need to have the "List of figures" and "List of Tables" in each.

All these "Table of Contents", "List of figures" and "List of Tables" should be created automatically after designing the chapters without typing them.

Track changes:

Know how to operate the track changes and its functions

Page number

Cover page – No page number The three pages following after the Cover page – Use simple alphabets, Chapters – Numbers with chapter number

Activity 2 – Spreadsheet application

The following table shows the detail of patients admitted to a hospital. This is a data set from an investigation of food poisoning. Use proper formulas to answer the questions **e to j and n**.

a. Create a table in the cell range A1:K11 in sheet1, as shown below. When creating the table the questions b and c need to be satisfied.

	A	B	C	D	E	F	G	H	I	J	K
1	**Patient Data**										
2	Name	Sex	Date of Birth	Height (cm)	Weight (Kg)	Others with similar symptoms	Eaten Suspected Food?	Date of admittance	Symptoms		
3									Cramping	Bloody Diarrhea	Vomiting
4	Janagan Malliga	F	09/05/1956	168	70	Husband	No	20-Mar-19	1	1	0
5	Silva Kumarika	F	06/13/1978	160	46	None	No	19-Mar-19	1	1	1
6	Siva Krishna	M	04/24/1999	156	65	None	Milk	17-Mar-19	0	1	0
7	Mohamad Asrof	M	12/29/1945	170	92	None	No	17-Mar-19	0	1	0
8	John Ruwins	M	08/13/1967	174	88	Wife	No	19-Mar-19	0	1	1
9	Kumaran Raji	F	09/08/1974	160	58	Husband	No	18-Mar-19	1	1	1
10	Gamini Malini	F	05/31/2011	124	32	Brother, Sister	Apple Juice	15-Mar-19	0	1	0
11	Kandaiya Ragu	M	07/27/1990	170	95	None	Swimming pool water	25-Mar-19	1	1	1

b. Data validation

i) Validate the column **Sex** using the following instruction:

Validation – Select “F” or “M” using the drop down list.

Input Message – Select one from the list.
Error Alert style – Stop
Error Alert Message –Data is not in the list.

ii) Validate the cells in the range I4:K11 using the following instruction:

Validation rule – Value must be 1 or 0.

Input Message – Enter 1 or 0.
Error Alert style – Stop
Error Alert Message – Your data is not in the given format.

c. Do the following formatting in the sheet 1.
   i) Merge the cells from A1 up to K1.
   ii) Make the merged cells content Bold with color red and double underline, set the font to 18-point Arial Black.
   iii) Set the green color background for the cells from A1 to K1.
   iv) Set the text direction to the cells A2 to K3.
   v) Set the proper data type, format and alignment for cells as shown in the above table.

d. Rename the sheet1 as **Patient**.

e. Insert a new column between the "Name" and "Sex" and named it as "Name with Initials". Extract the surname and put it with initial in the new column as shown in the brackets. (e.g. Janagan Malliga → J.Malliga)

f. If a particular patient is having minimum two of the three symptoms (minimum two 1^{s}) then it is suspected to be food poisoning. Name the column after the symptom as "Food poisoning" and put "1" if the patient is suspected of food poisoning otherwise put "0".

g. Insert a new column after the "Data of Birth" and name it as "Age". Calculate the age in years and put it in this column.

h. Insert a new column after the "Data of admittance" and name it as "Weekday". Find the weekday of admittance for each patient and put it in this column.

i. Insert a new column after "Weight" and name it as "BMI". Calculate the BMI using the following formula.

BMI = Weight (kg) ÷ Height^2 (m^2)

j. Insert a new column after "BMI" and rename it as "Category". Using the following information and VLOOK function find the category of each patient.

BMI Range	Category
< 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
> 29.9	Obese

k. Use conditional formatting to give different colours to the font of cells belonging to the weight column according to the following conditions.
(weight >= 80 → Red, 80 > weight >=60 → Blue, 60 > weight → Green)

l. Copy the sheet Question1 and paste it in sheet 2. Sort the copied table in ascending order regarding the Sex and then Date of Birth. Also rename the sheet 2 as **Data**.

m. Use advanced filter to retrieve the records of patients who haven't eaten suspected food and whose family members did not have similar symptoms. Put the result in a new location in the Sheet "Data".

n. Create the following table in the worksheet "Data" and count the No of males (M) and females (F).

Gender	**Number**
M	
F	

o. Create a column chart (Clustered column) using the table in question n.

Chart Title**:** Gender Comparison

Vertical axis Title**:** Number

Horizontal axis Title**:** Gender

6. English Language

Activity 1

You will be taken around by the student union or by dedicated staff to visit the faculty, the university, Teaching Hospital and few historical sites in Jaffna. After each site visit, it is expected that you write a small description about your visit.

Site visit description

1. **The faculty premises**

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2. **The main University complex**

---

3. **The Teaching Hospital Jaffna**

---

4. **Nallur Kovil**

---

5. **Manthirimanai**

---

6. **The Jaffna Library**

---

7. **Nagavihara and Ariyakulam area**

---

8. **The Jaffna fort**

Activity 2

1. Find a partner from your batch and play the roles of a doctor and a patient. Imagine that the patient has pain. Record your conversation and send it to through 'WhatsApp' to the imaginary doctor collegue. You must exchange your roles. Include the following in your conversation.

Your Registration Number and the index number, if given.

- Introduce yourself, identify your patient and obtain consent to speak with them. Should you wish to take notes as you proceed, ask the patient's permission to do so.
- Ask the patient to present his/her Complaint.
- Ask questions about the complaint. You may use the following mnemonic **SOCRATES**

- Site: Where exactly
- Onset: When started; whether constant/intermittent, gradual/ sudden?
- Character: e.g. sharp, burning, tight?
- Radiation: move anywhere?
- Associations: e.g. sweating, vomiting.
- Time course: follow any time pattern, how long the pain lasted?
- Exacerbating / relieving factors: what makes it better or worse?
- Severity: How bad (using the 1-10 scale)?
    - (Clarify patient's statements that are unclear)
- Gather information about a patient's other medical problems
- Drug History
    - Find out what medications the patient is taking, including dosage and how often they are taking them; find out if the patient has any allergies.
- Gather some information about the patient's family history, e.g. diabetes or heart diseases. Find out if there are any genetic conditions within the family.
- Find out more about the patient's background. Remember to ask about smoking and alcohol.
- Thank and leave (finish) conversation

Activity 3

Imagine you are a medical doctor. Using the information you gathered from the conversation in Activity 1, write (the body paragraph/s of) a referral letter to a consultant summarizing the problems the patient has

---

Activity 4 (Combined activity with English and IT)

Draft an email requesting your teacher to excuse you from attending the practical class in Biochemistry. You need to write the email to the Head Department of Biochemistry. You need a subject line, a body and copy the mail to the preclinical coordinator too.

7. Attendance for the IIM

Attendance is compulsory for all activities of the module. Students' attendance will be marked in all sessions. Students whose attendance is found to be inadequate (<80%) will be instructed to follow the module with the subsequent batch. An 80% of attendance for the activities conducted at the IIM is needed to sit the first examination for medical degrees. If the student fails to show 80% attendance the student will be referred to a special committee of three senior teachers to analyse the problems and to suggest a course of action recommended by the faculty board.

8. Assessment of IIM

There will be no end of module summative assessment in the module.

Continuous assessments as Formative assessments of the presentation on a general topic and an assignment under PPDS should be completed by term 3 of phase I. The students are expected to commence the process during the introductory period.

9. MSU activities that will be done during the IIM which will be supervised by student counsellors

Visiting historical sites of Jaffna – Co-curricular activities

Share the experience in their presentation/writeups

Sports competition and Games – week1

Group song competition – week 2

Group dancing – week 3

Drama – week 4

10. Annexures

a. Annexure 1 - Learning Style Questionnaire

The modality (learning channel preference) questionnaire reproduced here is by O'Brien (1985).

To complete, read each sentence carefully and consider if it applies to you. On the line in front of each statement, indicate how often the sentence applies to you, according to the chart below.

Please respond to all questions.

1 - Never applies to me, 2 - Sometimes applies to me, 3 - Often applies to me.

SECTION ONE:

1. _____I enjoy doodling and even my notes have lots of pictures and arrows in them.

2. _____I remember something better if I write it down.

3. _____I get lost or am late if someone tells me how to get to a new place, and I don't write down the directions.

4. _____When trying to remember someone's telephone number, or something new like that, it helps me to get a picture of it in my mind.

5. _____If I am taking a test, I can "see" the textbook page and where the answer is located.

6. _____It helps me to look at the person while listening; it keeps me focused.

7. _____Using flashcards helps me to retain material for tests.

8. _____It's hard for me to understand what a person is saying when there are people talking or music playing.

9. _____It's hard for me to understand a joke when someone tells me.

10. _____It is better for me to get work done in a quiet place.

Total_____

SECTION TWO:

1. _____ My written work doesn't look neat to me. My papers have crossed-out words and erasures.

2. _____ It helps to use my finger as a pointer when reading to keep my place.

3. _____ Papers with very small print, blotchy dittos or poor copies are tough on me.

4. _____ I understand how to do something if someone tells me, rather than having to read the same thing to myself.

5. _____ I remember things that I hear, rather than things that I see or read.

6. _____ Writing is tiring. I press down too hard with my pen or pencil.

7. _____ My eyes get tired fast, even though the eye doctor says that my eyes are ok.

8. _____ When I read, I mix up words that look alike, such as "them" and "then," "bad" and "dad."

9. _____ It's hard for me to read other people's handwriting.

10. _____ If I had the choice to learn new information through a lecture or textbook, I would choose to hear it rather than read it.

Total_____

SECTION THREE:

1. _____ I don't like to read directions; I'd rather just start doing.

2. _____ I learn best when I am shown how to do something, and I have the opportunity to do it.

3. _____ Studying at a desk is not for me.

4. _____ I tend to solve problems through a more trial-and-error approach, rather than from a step-by-step method.

5. _____ Before I follow directions, it helps me to see someone else do it first.

6. _____ I find myself needing frequent breaks while studying.

7. _____ I am not skilled in giving verbal explanations or directions.

8. _____ I do not become easily lost, even in strange surroundings.

9. _____ I think better when I have the freedom to move around.

10. _____ When I can't think of a specific word, I'll use my hands a lot

Total_____ SCORING:

Now, add up the scores for each of the three sections and record below.

The maximum score in any section is 30 and the minimum score is 10. Note the preference next to each section.

Section One score: _____(Visual)

Section Two score: _____(Auditory)

Section Three score: _____(Kinesthetic)

Annexure b – Common Anatomical terminologies and how they were derived

Abbreviation	Meaning G – Greek L - Latin	Example	Abbreviation	Meaning G – Greek L - Latin	Example
a-, (an-)	G,without	anemia anencephalic	**delta**	G, triangle	deltoid
ab-	L, away from	abduct	**di-**	G, double two	digastric
acro-	G, tip	acromion process	**dis-**	L, separation	dissect
ad-	L, toward	adduct	**duco-**	L, to lead	abduct
ambi-	L,both	ambidextrous	**ect-**	G, outside	ectoderm
ana-	G,apart	anatomy	**-ectomy**	G, excision	hysterectomy
ante-	L, before	anteversion, antebrachial	**end-(ent-)**	G, within	endothelium
anti-	G, against	antiseptic	**epi-**	G, upon	epicondyle
arthr- (arthro-)	G, a joint	arthritis	**ex-(exo-)**	G& L out	exocrine
auto-	G, self	autonomic, autonomous	**extra-**	L, outward	extracellular
bi-	I, two double	bilateral	**fossa**	L, ditch	infra spinous fossa
brachi-	G,arm	brachial artery	**gastr- (gastro-)**	G, belly	gastritis, digastric
brachium-	L, arm	antebrachium	**glenoid**	G, socket	glenoid fossa
brevis	L, short	peroneus brevis	**glosso-(gloss)**	G, tongue	styloglossus
capit- (caput-)	L, head	semispinalis capitis	**hyper-**	G, above over	hypertrophy hyperextension
cauda	L,tail	cauda equina	**hypo-**	G, under less	hypotension
cervix	L, neck	cervix of uterus	**infra-**	L, below	hypotension
chondro-	L, catrillage	chondrocyte	**inter-**	L, between	intertubercular

circum-	L, around	circumflex	**intr-(intra-)**	L, within	intravenous, intrahepatic
condyle	G, knuckle	humeral condyles	**linea**	L, line	linea aspera
coracoid	G, beak	coracoid process	**lingua-**	L, tongue	lingual artery
corona	L, crown	coronary ligament	**meta-**	G, beyond	metatarsal
coronoid	L, crows beak	coronoid process	**myo-**	G, muscle	myotome
cornu	L, horn	greater cornu of hyoid	**-oid**	G, appearance	glenoid
costa	L, rib	intercostal	**omo**	G, scapula, shoulder	omohyoid
crus	L, leg	crus of penis	**-otomy**	G, to open	craniotomy
crux	L, cross	cruciate ligament	**para-**	G, beside	paravertebral
peri	G, around	perichondrium	**super-**	L, over	superficial
peroneus	G, fibula	peroneus longus peroneal nerve	**supra-**	L, above	supraorbital
post-	L, after behind	postnatal	**sym- (syn-)**	G, together	symphysis, synthesis
pre-	L, after	preganglionic	**teres**	L, round	ligamentum teres
ram-	L, branch	ramus	**trans-**	L, across	transfusion
re-	L, again back	recurrent	**tome**	G, cutting	anatomy
rect-	L, straight	rectus femoris	**tuber**	L, swelling	tubercle
ren	L, kidney	renal	**ultra-**	L, beyond	ultrastructure
retro-	L, back	retroperitoneal	**vagina**	L, sheath, sleeve	vaginal process
sect-	L, to cut	dissect	**vas**	L, duct, vessel	vas deferens
serra-	L, saw like	serratus anterior	**vent- (ventr-)**	L, belly	ventral
splenius	G, bandage	splenius capitis	**versio**	L, a turning	anteversion
sub-	L, under	subdural			