

# Tutorial Letter 101/3/2018

## HAEMATOLOGY BMI3704

Semesters 1 and 2

Department of Life and Consumer Sciences

This tutorial letter contains important information  
about your module.

BARCODE

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Dear Student

## 1 INTRODUCTION

Welcome to the biomedical sciences and particularly haematology! I hope that you will have an enjoyable and fruitful academic year. This module is offered in the Department of Life and Consumer Sciences and your lecturer for this module is **Mr MC Monyama**. I would like to take this opportunity to wish you success with your academic year.

We would also like to encourage you to register on myUnisa. Please check this site regularly for updates, posted announcements and additional resources uploaded throughout the semester. Rapid communications throughout the semester(s) have been made possible through myUnisa. You can use the myUnisa site to submit assignments and we strongly recommend that you submit your assignment online as this will ensure that you receive rapid feedback and comments, access your official study material, have access to the Unisa Library functions, 'chat' to your lecturers or to fellow students and participate in online discussion forums and obtain access to all manner of learning resources.

If at any stage while you are studying you have any questions or require assistance with problems, we are available to assist you. Our contact details are listed in section 3: Lecturer(s) and contact details in this tutorial letter.

Tutorial matter may include the following:  
Tutorial Letters 101 and 201

Some of this tutorial material may not be available when you register. If this is the case, this tutorial material will be posted to you as soon as possible. Please note that tutorial matter is also available on myunisa. PLEASE read the instructions in this tutorial letter carefully and prepare Assignments 01 and 02 ONLY for the semester for which you are REGISTERED. Once you have completed and submitted the assignments you can use the questions in the other assignments as practice or in preparation for the exam. It is very important that your first assignment reaches Unisa on or before the due date. Students who have not submitted this assignment by the due date will not be allowed to write the examination.

## 2 PURPOSE AND OUTCOMES

### 2.1 Purpose

Qualifying students are able to know, understand and apply the basic principles and theory relating to haematology. The purpose of this module is to enable you, the individual learner, to identify and apply laboratory practices, processes and principles of haematology to solve clinical problems involving blood.

### 2.2 Outcomes

The student will be able to:

- Describe the process of haematopoiesis
- Describe erythrocytes and their functions in the human body
- Describe white blood cells and their function in the human body
- Describe various pathologies related to different types of the cells

### 3 LECTURER(S) AND CONTACT DETAILS

#### 3.1 Lecturer(s)

Lecturer: Mr MC Monyama  
Telephone number: +27 11 670 9562 (during office hours 8:00 – 16:00)  
Email address: [monyamc@unisa.ac.za](mailto:monyamc@unisa.ac.za)

Postal address:  
The Lecturer  
Department of Life and Consumer Sciences  
Private Bag x6  
Florida  
1710

**NOTE:** You may enclose more than one letter in an envelope, but do not address enquiries to different departments (e.g. Despatch and Library Services) in the same letter. This will cause a delay in the replies to your enquiries. Please write a separate letter to each department and mark each letter clearly for the attention of that department. **Letters to lecturers may not be enclosed together with assignments.** Always write your **student number and the module code** at the top of your letter.

#### 3.2 Department

The Department of Life and Consumer Sciences is located in the Calabash Building, Unisa Science Campus, Roodepoort, Johannesburg. The Departmental telephone number is +2711 471 2230 and the Departmental fax number is +2711 471 2796.

#### 3.3 University

Should you need to contact the university about matters not related to the content of this module, consult the publication *study@unisa*, which you received with your study material. This brochure contains information on how to contact the university (e.g. to whom you can write for different queries, important telephone and fax numbers, addresses and details of the opening and closing times of particular facilities).

You can also make use of the following contact routes:

**Unisa website** <http://www.unisa.ac.za> & <http://mobi.unisa.ac.za>

**Email** (general enquiries) [info@unisa.ac.za](mailto:info@unisa.ac.za)

International students are urged to make use of the email address [info@unisa.ac.za](mailto:info@unisa.ac.za)

[study-info@unisa.ac.za](mailto:study-info@unisa.ac.za) queries related to application and registration.

[assign@unisa.ac.za](mailto:assign@unisa.ac.za) for assignment enquiries

[exams@unisa.ac.za](mailto:exams@unisa.ac.za) for examination enquiries

[despatch@unisa.ac.za](mailto:despatch@unisa.ac.za) for study material enquiries

[finan@unisa.ac.za](mailto:finan@unisa.ac.za) for student account enquiries

[myUnisaHelp@unisa.ac.za](mailto:myUnisaHelp@unisa.ac.za) for assistance with myUnisa

[myLifeHelp@unisa.ac.za](mailto:myLifeHelp@unisa.ac.za) for assistance with myLife email accounts

**SMS** 32695 – South Africa only

You will receive an auto response SMS with the various SMS options. The cost per SMS is R1.00.

**Fax** 012 429 4150

**NOTE:** Whenever you contact the university, whether in writing or telephonically, always mention the **module code and your student number**.

### myUnisa webpage (Unisa's online campus)

Access to the myUnisa website requires a computer that is linked to the internet (internet access is available to you at provincial libraries, internet cafés and Unisa regional telecentres, see myUnisa for a list of these places in your area). You should also note that some of these centres allow free internet access on presentation of your student card.

Go to: <https://my.unisa.ac.za/portal/>

For module-specific information, log in and click on:

BMI3704-18-S1 (for semester 1)

OR

BMI3704-18-S2 (for semester 2)

With the aid of myUnisa, you will ultimately be able to use the internet to perform all study-related functions which are now normally done by telephone, regular postal service or personal visits to the campus.

If you have online access, you should do the following to get started with this module:

- Go to myUnisa (<http://my.unisa.ac.za>)
- Log in with your myUnisa login details. If you are not sure how to do this, consult the publication [study@unisa](mailto:study@unisa). You should have received this with your study material. Alternatively, use the link to access the publication.)
- Once logged in, you will see a link to the module code. If this is not at the top of your screen, click on 'More sites' and select it from the drop-down menu.
- Once you are in the site for this module, read the welcome message.
- Now click on **Additional Resources**, then on the subfolder **Tutorial Matter**, and then on **Tutorial Letter 101**. Read this letter carefully.
- Take particular note of the online links listed in **section 4.3, Electronic Reserves (e-Reserves)**.

You will find that this module requires you to use the internet to access information on aspects of virology. Please take careful note of details of published articles and online links and the information in the associated online articles. NOTE: you will be required in your assignments to accurately refer to articles that you access online.

## 4 RESOURCES

### 4.1 Prescribed books

There is no prescribed textbook for this module. However, please make use of a modern physiology textbook such as that prescribed for FIS1601 as a general reference for this module. In this particular textbook, the chapter entitled "Blood" will provide a good haematological knowledge base.

Please refer to the list of official booksellers and their addresses in the Unisa brochure, [study@unisa](mailto:study@unisa).

If you have difficulty in locating an appropriate textbook at the Unisa Booksellers, please contact the Unisa Prescribed Book Section at Tel: 012 429-4152 or e-mail [vospresc@unisa.ac.za](mailto:vospresc@unisa.ac.za).

Textbooks can be ordered on the Internet at <http://amazon.com> or <http://www.kalahari.net> or <http://www.exclusivebooks.com>. Note that second-hand books are available at the following Web sites: <http://www.amazon.com> or <http://www.fetchbooks.com>.

## 4.2 Recommended books

There are no specific recommended books for this module.

## 4.3 Electronic reserves (e-reserves)

As indicated on the previous page, you will be required to make use of the internet to access information relating to this module. This is an important learning activity for you as you consider future studies, for example at the Honours level. Thus, please will you enthusiastically adopt this method of learning and include details of your online learning as references at the end of your assignment 2 answers.

An important site to start with for this module is:

<http://www.hopkinsmedicine.org/hematology/fellows/summer%20course/schedule.html>

This site describes haematology lectures provided to

Note that announcements will be posted on myUnisa as and when required.

Please access the following online sites that will provide a base of knowledge for you. In addition, please then access more recent online sites to update and extend your knowledge of this module.

## 4.4 Library services and resources information

For brief information, go to [www.unisa.ac.za/brochures/studies](http://www.unisa.ac.za/brochures/studies)

For detailed information, go to <http://www.unisa.ac.za/library>. For research support and services of personal librarians, click on "Research support".

The library has compiled a number of library guides:

- finding recommended reading in the print collection and e-reserves – <http://libguides.unisa.ac.za/request/undergrad>
- requesting material – <http://libguides.unisa.ac.za/request/request>
- postgraduate information services – <http://libguides.unisa.ac.za/request/postgrad>
- finding, obtaining and using library resources and tools to assist in doing research – [http://libguides.unisa.ac.za/Research\\_Skills](http://libguides.unisa.ac.za/Research_Skills)
- how to contact the library/finding us on social media/frequently asked questions – <http://libguides.unisa.ac.za/ask>

## 5 STUDENT SUPPORT SERVICES

Important information appears in your *study@unisa* brochure.

## 6 STUDY PLAN

Use your *study@unisa* brochure for general time management and planning skills.

This is a semester module over 15 weeks and requires 120 hours of study time. This means that you will have to study 8 hours per week for this module. The following is a recommended time schedule which can be used as a guideline for studying this module. Below this time schedule please see an example of a study plan.

ACTIVITY	HOURS
Reading and re-reading study guide	10
Reading relevant chapters in the prescribed textbook	35
Completing study guide activities	10
Studying for and completing the Assignments	20
Studying for examination	40
Final revision	5
<b>TOTAL</b>	<b>120</b>

Week	Activity (each week represents 8 hours of study time)
1	Read through your study material (your tutorial letter) and, if you have one, skim through a textbook and identify the relevant chapters in the text. Start accessing articles online. This exercise allows you to gain an overall picture of the module.
2	
3	Read through your textbook, using your study guide, and identify all key areas.
4	
5	
6	Complete and submit Assignment 1. Please allow sufficient time for the assignment to reach Unisa before the due date.
7	Begin with your in-depth study of the initial study units. Please prepare study notes whilst reading and learning the material.  Start to complete your Assignment 2
8	
9	
10	Complete and submit Assignment 2. Depending on how you will submit the completed assignment, please note that you should allow sufficient time for the assignment to reach Unisa before the due date.
11	
12	Begin with your in-depth study of later study units. Please prepare study notes while reading and learning the material.
13	
14	
15	Revision and preparation for the exam.

## 7 PRACTICAL WORK AND WORK-INTEGRATED LEARNING

There are no practicals for this module.

## 8 ASSESSMENT

### 8.1 Assessment criteria

### 8.2 Assessment plan

#### Summary as to how your final mark will be calculated

##### Formative assessment:

Assignment 01 (10% of year mark)

Assignment 02 (90% of year mark)

##### Summative assessment:

Examination

Year mark (30% of final mark)

Examination mark (70% of final mark)

Final mark

### 8.3 Assignment numbers

#### 8.3.1 General assignment numbers

Assignments are numbered consecutively per module, starting from 01.

#### 8.3.2 Unique assignment numbers

Each semester consists of two assignments.

##### SEMESTER 1

Assignment 01: 671902

Assignment 02: 623731

##### SEMESTER 2

Assignment 01: 735905

Assignment 02: 801434

### 8.4 Assignment due dates

##### SEMESTER 1

Assignment 01: 16<sup>th</sup> March 2018

Assignment 02: 20<sup>th</sup> April 2018

##### SEMESTER 2

Assignment 01: 17<sup>th</sup> August 2018

Assignment 02: 21<sup>st</sup> September 2018



## 8.5 Submission of assignments

Both the assignments are compulsory and must be submitted on or before the stipulated due date. **To receive quicker, online feedback and comments on your assignments submit your assignment electronically.** If you intend to post your assignment, please complete and post it at least **a week** before the due date to ensure that we receive it in time. Please note that **FAILURE TO SUBMIT ASSIGNMENT 01 WILL RESULT IN YOUR NOT BEING ALLOWED ADMISSION TO THE EXAMINATION.** In exceptional circumstances, only a **valid** medical certificate associated with a valid long-term illness will be considered as a reason for the late submission of an assignment. In such a case, please notify the lecturer well in advance. Note that if no arrangements were made, the assignment will not be marked. Please attach the medical certificate at the back of your assignment and ensure that you have certified copies of such a certificate.

For detailed information and requirements with regard to assignments, see the brochure entitled *study@unisa*, which you received with your tutorial material.

**Note: Prepare only the assignments for the semester for which you are registered.**

Assignments may not be submitted by fax or email. You may submit written assignments and assignments completed on mark-reading sheets either by regular postal service **or** mobile MCQ submission **or** electronically via myUnisa. Make a copy of your assignment for your own reference and if the original is lost at any stage during the submission process.

Unisa is implementing onscreen marking of assignments to help you receive quicker feedback on your assignments. This will not be the case for all your modules, however, most modules from the Department of Life and Consumer Sciences can be marked in this way.

To allow us to mark your assignment onscreen, you need to do the following:

**Submit the PDF document (your assignment) via myUnisa (online).**

## 8.6 The assignments

Assignments are seen as part of the learning process for this module. As you complete the assignment, study the textbook, consult other resources, discuss the work with fellow students or tutors or do research - you are actively engaged in learning. Looking at the assessment criteria (e.g. the action words and the mark allocation) given for each assignment will help you to understand what is required of you more clearly.

There are TWO assignments for this module for each semester. You will find the assignments for:

**Semester 01** (January to June) in **Appendix A**, and  
**Semester 02** (July to December) in **Appendix B** of this tutorial letter.

The **due dates** are given with each assignment in Appendix A and B.

The **first** assignment of each of your courses is **compulsory**. You will qualify for **examination admission** for a course only if you submit the first assignment by the due date. If more than one assignment is set for a course, all the assignments for that course will be taken into consideration when calculating your year mark. Thus, to ensure a good year mark that contributes to improving your final mark, submit all your assignments in time.

## 8.7 Other assessment methods

**Not applicable**

## 8.8 The examination

Use your *study@unisa* brochure for general examination guidelines and examination preparation guidelines.

This module is offered in a semester period of fifteen weeks. This means that if you are registered for the first semester, you will write the examination in May/June 2018 and the supplementary examination will be written in October/ November 2018. If you are registered for the second semester you will write the examination in October/November 2018 and the supplementary examination will be written in May/June 2019.

For examination admission it is compulsory for you to hand in the first assignment for this module. It is also to your own advantage to do the assignments in order to test your understanding of the subject, and to establish how well prepared you are for the examination. You need to obtain a minimum of 40% in your examination to be able to pass. If you do not obtain at least 40% in the exams, you will fail even if the combination of year and exam mark is more than 50%. You will also need a minimum of 40% in the examination to obtain admission to a supplementary examination.

You require a final mark of 50% to pass this module. Please see the examples below:

- Exam mark below 40% will result in your failing this module.
- Exam mark 40% and Year mark 50% (combination of your first and second assignment marks) = A final mark of 43% - you will be allowed to write a supplementary exam.  
Calculated as:  
 $40 \times 70\% (0.70) = 28\%$   
 $50 \times 30\% (0.30) = 15\%$
- Exam mark 50% and Year mark 60% = A final mark of 53% - you will pass this module  
Calculated as:  
 $50 \times 70\% (0.70) = 35\%$   
 $60 \times 30\% (0.30) = 18\%$

As you can see from these examples it is important to obtain a minimum of 40% for your exam, as well as submitting both your assignments and work hard to obtain a good year mark to ensure that you pass the module.

You will have the opportunity to give an account of your studies in a two-hour examination paper (per module). You will be informed by letter of the dates, places and venues of the examinations. Examination guidelines, posted on myUnisa will give you pointers as to how to prepare for the examination. Revision should be done thoroughly before the examination. Contact us immediately, preferably by direct email, if you encounter any problems. Students can also refer to the *study@unisa* brochure for general examination guidelines and examination preparation guidelines. The examination paper is a two (2) hour examination and consists of questions such as those requiring you to provide definitions of terms, draw labelled diagrams as well as answering short and longer essay questions.

You will be informed later by letter of the dates, places and venues of the two-hour examination required per module. Exam guidelines, posted on myUnisa will give you pointers on how to prepare for the examination. Revision should be completed before the examination and you

should contact us immediately by email if you encounter any problems. Students can also refer to the *study@unisa* brochure for general examination guidelines and examination preparation guidelines.

## 9 FREQUENTLY ASKED QUESTIONS

The *study@unisa* brochure contains an A-Z guide of the most relevant study information.

## 10 SOURCES CONSULTED

Not applicable.

## 11 IN CLOSING

Not applicable

## 12 ADDENDUM

Appendix A – Assignments for the first semester

Appendix B – Assignments for the second semester

### Plagiarism

It is incumbent of all of us to behave ethically and so I would seriously remind you of a major problem regarding unethical behavior in education, namely plagiarism.

**Plagiarism** is the act of taking words, ideas and thoughts of others and passing them off as your own. It is a form of theft which involves a number of dishonest academic activities. The *Disciplinary code for students* (2004) is given to all students at registration. You are advised to study the *Code*, especially sections 2.1.13 and 2.1.4 (2004:3-4). Also read the University's Policy on (*Copyright infringement and plagiarism*).

### Avoiding Plagiarism

We cannot place enough emphasis on the seriousness of plagiarism. Please do not plagiarise – it is a form of THEFT. If plagiarism is detected, lecturers cannot determine if the student has learnt the subject material and so it is very difficult to assign a mark. In this case, the assessor must ask the question: “Who is being assessed, the student who prepared the assignment or the author of the plagiarised text?”

Ideally, the student should understand and learn the subject matter and write an assignment answer on this material in his/her own words. If, for whatever reason, this is difficult for the student to achieve, we recommend that the student answer the question by:

- Writing down subject material from the text
- Remembering to place this quote within inverted commas
- Ending the quote by supplying a correct reference of the author of this quoted material
- providing a few personal sentences that indicate that the student has reflected on this material.

Note: This latter reflection indicates that the student has read, understood and can place the answer in an academic, personal, social, research. etc context.

## **APPENDIX A: FIRST SEMESTER COMPULSORY ASSIGNMENTS**

**Department of Life and Consumer Sciences**

**Haematology III – BMI3704**

**Semester code: 01**

### **Assignment 01**

**Due Date: 16<sup>th</sup> March 2018**

**Unique assignment number: 671902**

### **INSTRUCTIONS**

- 1) Type your assignment on a computer. You may print on ordinary white paper and not necessarily the Unisa typing paper provided. Please use 1,5 spacing and Arial or a similar font of 11 or 12 pitch. Leave a line open between questions. If you are not able to type your assignment on a computer, use a black or blue pen and please write neatly.
- 2) If you want to submit a hard copy of this assignment, use the assignment cover and envelope provided. When stapling your answers inside the cover, staple only in the top left-hand corner.
- 3) Your student number is the number just below your address. This number must be filled in on the assignment cover and must also be quoted in all correspondence with the university
- 4) Answer all questions as briefly and clearly as possible in your own words.
- 5) Number your answers correctly.

**QUESTION 1**

Write short explanatory notes on the following:

1.1 Lymphocytopenia

1.2 Blood stem cells

1.3 Main functions of blood

1.4 Hematopoiesis

1.5 Myelogenous

**[5x4=20]**

**QUESTION 2**

2.1 What is the molecular composition of haemoglobin? (5)

2.2 Does the functionality of haemoglobin as a protein depend on its tertiary or quaternary structure? Elaborate. (5)

**[10]**

**QUESTION 3**

Discuss disorders of neutrophil and monocyte function

**[20]**

**QUESTION 4**

Explain in detail the disorder of platelet function.

**[20]**

**TOTAL MARKS =70**

**Department of Life and Consumer Sciences**

**Haematology III – BMI3704**

**Semester code: 01**

**Assignment 02**

**Due Date: 20<sup>th</sup> April 2018**

**Unique assignment number: 623731**

**INSTRUCTIONS**

- 1) Type your assignment on a computer. You may print on ordinary white paper and not necessarily the Unisa typing paper provided. Please use 1,5 spacing and Arial or a similar font of 11 or 12 pitch. Leave a line open between questions. If you are not able to type your assignment on a computer, use a black or blue pen and please write neatly.
- 2) If you want to submit a hard copy of this assignment, use the assignment cover and envelope provided. When stapling your answers inside the cover, staple only in the top left-hand corner.
- 3) Your student number is the number just below your address. This number must be filled in on the assignment cover and must also be quoted in all correspondence with the university
- 4) Answer all questions as briefly and clearly as possible in your own words.
- 5) Number your answers correctly.

**QUESTION 1**

Explain in detail the disorder of platelet function.

[20]

**QUESTION 2**

With the aid of a diagram, describe the process of haematopoiesis.

[20]

**QUESTION 3**

With the aid of schematic drawings, explain the sequence of events during early T-cell development.

[15]

**QUESTION 4**

Discuss disorders of neutrophil and monocyte function.

[20]

**QUESTION 5**

Discuss the pathogenesis, incidence and classification of acute myeloid leukemia.

[25]

**TOTAL MARKS =100**

## **APPENDIX B: SECOND SEMESTER COMPULSORY ASSIGNMENTS**

**Department of Life and Consumer Sciences**

**Haematology III – BMI3704**

**Semester code: 02**

**Assignment 01**

**Due Date: 17<sup>th</sup> August 2018**

**Unique assignment number:735905**

### **INSTRUCTIONS**

- 1) Type your assignment on a computer. You may print on ordinary white paper and not necessarily the Unisa typing paper provided. Please use 1,5 spacing and Arial or a similar font of 11 or 12 pitch. Leave a line open between questions. If you are not able to type your assignment on a computer, use a black or blue pen and please write neatly.
- 2) If you want to submit a hard copy of this assignment, use the assignment cover and envelope provided. When stapling your answers inside the cover, staple only in the top left-hand corner.
- 3) Your student number is the number just below your address. This number must be filled in on the assignment cover and must also be quoted in all correspondence with the university
- 4) Answer all questions as briefly and clearly as possible in your own words.
- 5) Number your answers correctly.



**QUESTION 1**

Write short explanatory notes on the following:

- 1.1 Thrombosis
- 1.2 Anaemias
- 1.3 Haemophilia A
- 1.4 Ineffective thrombopoiesis
- 1.5 Quantitative platelet disorders

**[4X5=20]**

**QUESTION 2**

What are blood stem cells?

**[10]**

**QUESTION 3**

Discuss conditions particularly associated with lymphocytosis.

**[20]**

**QUESTION 4**

Explain thrombocytopenia as a result of drugs or toxins in a human system.

**[20]**

**TOTAL MARKS =70**

**Department of Life and Consumer Sciences**

**Haematology III – BMI3704**

**Semester code: 02**

**Assignment 02**

**Due Date: 21<sup>st</sup> September 2018**

**Unique assignment number: 801434**

**INSTRUCTIONS**

- 1) Type your assignment on a computer. You may print on ordinary white paper and not necessarily the Unisa typing paper provided. Please use 1,5 spacing and Arial or a similar font of 11 or 12 pitch. Leave a line open between questions. If you are not able to type your assignment on a computer, use a black or blue pen and please write neatly.
- 2) If you want to submit a hard copy of this assignment, use the assignment cover and envelope provided. When stapling your answers inside the cover, staple only in the top left-hand corner.
- 3) Your student number is the number just below your address. This number must be filled in on the assignment cover and must also be quoted in all correspondence with the university.
- 4) Answer all questions as briefly and clearly as possible in your own words.
- 5) Number your answers correctly.

**QUESTION 1**

Explain the causes of monocytosis, eosinophil and basophil leukocytosis.

**[20]**

**QUESTION 2**

Discuss the prophylaxis of bacterial infection, viral infection and fungal infection under the management of haematological malignancy.

**[20]**

**QUESTION 3**

Describe conditions particularly associated with lymphocytosis.

**[15]**

**QUESTION 4**

What do you understand by coagulation disorder? Elaborate.

**[20]**

**QUESTION 5**

Give an overview of arterial thrombosis; include its pathogenesis and clinical risk factors in your discussion.

**[25]**

**TOTAL MARKS =100**