Tutorial Letter 101/0/2022

Theoretical Computing

COS1501

Year module

School of Computing

IMPORTANT INFORMATION

Please register on myUnisa, activate your myLife e-mail account and make sure that you have regular access to the myUnisa module website, COS1501-2022-Y1, as well as your group website.

Note: This is a fully online module. It is, therefore, only available on myUnisa.

BARCODE

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1 INTRODUCTION

Welcome to COS1501! This is a fully online year module presented by the School of Computing. (The previous module code was COS101S.)

Because this is a fully online module, you will need to use myUnisa to study and complete the learning activities for this module. Visit the website for COS1501 on myUnisa frequently. The website for your module is COS1501-22-Y1.

You have to work through the lessons on myUnisa and follow the instructions when you are guided to work through the respective study guide units. As from 2021 this module will be a year module, and not a semester module. I urge you to study this tutorial carefully if you are repeating the module, as information regarding assignment submission have changed drastically.

This module focuses on discrete mathematics and its application in Computer Science. Concepts and skills needed for a theoretical understanding of Computer Science are introduced. If you feel a flash of fear when you hear the word “theoretical”, just remember that theory is much tidier than practice: one knows precisely what the meaning of the terms is and the problems always have solutions. Rigorous proofs are expected in this module.

This module does not involve practical work on a computer, but there is a strong emphasis on practicing the skills acquired by means of doing many exercises and the assignments.

Studying a mathematical module is rather like learning to play a musical instrument – the more you practice, the better you become! If you put an honest effort into trying to do the self-assessment exercises and assignments, we believe that by the end of the year you will be able to do many things you had never heard of before, and enjoy doing them.

All other tutorial letters are available on myUnisa under Additional Resources. All tutorial letters contain important information, so make sure you read each one carefully.

The letters are of three kinds:

- those numbered 101 (such as this one), 102 and 103 are concerned specifically with the tutorial matter for COS1501;
- those numbered 201, 202, 203 contain solutions to assignments;
- Tutorial letter 102 and the tutorial letter 103 under Additional Resources contain some important information, such as solutions to the self-assessment exercises in the 101;
- the COSALL tutorial letter contains important information (including the names and contact numbers of lecturers) for all students in the School of Computing. The School of Computing is situated at the Florida campus.

NOTES REGARDING THE myUnisa SYSTEM

We refer to the following tabs/items on or reference to the myUnisa system throughout this letter:

- myUnisa tools
- myModules
- Sites
- Signing into the system
- Assessment info
- Additional Resources
- Discussion forum
- Official study material
- Online assignments / exams
- Announcements
- Lessons
- E-tutor sites

Please note that all reference to / description of the above, refers to the current myUnisa system. The University is planning to upgrade this system for 2022. As we do not yet have all the details of how the system will change, we will inform you of any changes early in 2022, during which time any procedures/guidelines described in this letter, will be updated if needed.

1.1 Getting started

Owing to the nature of this module, you can read about the module and find your study material online. Go to the website at https://my.unisa.ac.za and log in using your student number and password. Click on "myModules" at the top of the web page and then on "Sites" in the top right corner. In the new window, click on the grey Star icon next to the modules you want displayed on your navigation bar. Close the window in the top right corner. Then select the option "Reload to see your updated favourite sites". Now go to your navigation bar and click on the module you want to open.

We wish you every success with your studies!

2 OVERVIEW OF COS1501

2.1 Purpose

Students who have completed this module successfully will be able to critically apply the fundamental knowledge and skills of discrete mathematics. The module forms part of the theoretical foundation of a Computer Science major. This background is relevant to computing fields such as relational databases, the development of provably correct programs, and the analysis of algorithms that will contribute to the development of computing in Southern Africa, Africa, or globally. The module will support further studies and applications in the computing discipline.

2.2 Outcomes

For this module, you will have to master several outcomes:

- *Specific outcome 1*: Manipulate logical arguments, using a variety of mathematical tools.
- *Specific outcome 2*: Construct proofs in a clear and concise way using mathematical reasoning techniques.
- *Specific outcome 3*: Demonstrate knowledge and understanding of the definitions, laws and operations of set theory.
- *Specific outcome 4*: Synthesise and critically analyse relations, functions and binary sets that are represented as sets containing ordered pairs.
- *Specific outcome 5*: Perform operations on vectors and matrices.

3 CURRICULUM TRANSFORMATION

Unisa has implemented a transformation charter based on five pillars and eight dimensions. In response to this charter, we have placed curriculum transformation high on the teaching and learning agenda. Curriculum transformation includes the following pillars: student-centred scholarship, the pedagogical renewal of teaching and assessment practices, the scholarship of teaching and learning, and the infusion of African epistemologies and philosophies. These pillars and their principles will be integrated at both programme and module levels as a phased-in approach. You will notice a marked change in the teaching and learning strategy implemented by Unisa, together with how the content is conceptualised in your modules. We encourage you to embrace these changes during your studies at Unisa in a responsive way within the framework of transformation.

4 LECTURER(S) AND CONTACT DETAILS

4.1 Lecturer(s)

The primary lecturer for this module is Ms Drina du Plessis
Department: School of Computing
Telephone: 011 670 9109 / 0607666031
E-mail: **dpleshw@unisa.ac.za**

Whenever you contact a lecturer via e-mail, please include your student number in the subject line to enable the lecturer to help you more effectively.

4.2 Department

You can contact the School of Computing as follows:

Telephone number: **011 670 9200**

E-mail: **computing@unisa.ac.za**

4.3 University

To contact the University, follow the instructions on the Contact us page on the Unisa website. Remember to have your student number available whenever you contact the University. If you have **administrative enquiries** relating to **registrations, fees, assignment submission, and examination matters such as aegrotats and special exams,** you can also consult the brochure entitled *Study @ Unisa*.

5 RESOURCES

5.1 Joining myUnisa

The myUnisa learning management system is the University's online campus which will help you communicate with your lecturers, other students and the administrative departments within Unisa. To claim your myUnisa account, please follow the steps below:

1. Visit the myUnisa website at https://my.unisa.ac.za/portal
2. Click on the **"Claim Unisa login"** link on the top of the screen under the orange user ID box.
3. A new screen will load, prompting you to **enter your student number**. Please enter your student number and click **"continue"**.
4. Enter your surname, your full name, your date of birth and, finally, your South African ID number (for South African citizens) OR your passport number (for foreign students). Then click "continue". **Remember to enter either an ID number or a passport number, NOT both.**
5. Please read through the guidelines and **click all the check boxes** to acknowledge that you have read all the information provided. Once you are done, click the **"Acknowledge"** button to redirect you to the final page in the process.
6. The final page will display your myLife e-mail address, and your **myLife AND myUnisa password**. This password will also be sent to the cellphone number displayed on the page for safekeeping.
7. Please note that it can take up to 24 hours for your myLife e-mail account to be created.

Remember, the password provided is your myUnisa **AND** myLife password.

5.2 Prescribed book(s)

There are no prescribed book for this module. You will receive a study guide under Official study material on myUnisa.

3 Recommended book(s)

Should you wish to know more about a particular topic, you may consult the following books. Please note that these books are not necessarily included in the Study Collection in the Unisa library. The library cannot guarantee that they will be available.

ENSLEY, D.E. AND CRAWLEY, J.W. Discrete Mathematics: Mathematical Reasoning and Proof with Puzzles, Patterns and Games. John Wiley & Sons, Inc., 2006.

GRIMALDI, R.P. Discrete and Combinatorial Mathematics: An applied Introduction, 5th edition. Pearson Education, 2004.

JOHNSONBAUGH, R. Discrete Mathematics, 7th edition. Pearson Education Inc., 2009.

LABUSCHAGNE, W.A. A User-friendly Introduction to Discrete Mathematics for Computer Science. Pretoria, UNISA, 1999.

ROSEN, K.H. Discrete Mathematics and its Application, 6th edition. McGraw-Hill, 2007.

Recommended books can be requested online, via the Library catalogue.

5.4 Optional CAI tutorial

The computer-aided instruction (CAI) tutorial “Relations” will not be available on CD as from 2020. You can download it from the website as explained in Section 9 (Frequently asked questions) in this Tutorial letter. The interactive CAI tutorial is a supplementary study aid. It deals with sets and the main properties of relations, such as reflexivity, irreflexivity, symmetry, antisymmetry and transitivity. It also explores the properties of different types of relations. These concepts are discussed in study units 3, 5 and 6 of the study guide. **This CAI is not compulsory and you will not be examined on any specific example in the CAI,** but if you do not understand sets and relations, and their properties, the CAI tutorial is a good exercise to go through.

5.5 Electronic reserves (e-reserves)

There are no specific e-reserves for this module.

E-reserves can be downloaded from the Library catalogue. More information is available at https://libguides.unisa.ac.za/request/request

5.6 Library services and resources

The Unisa Library offers a range of information services and resources:

- For a general Library overview, go to https://www.unisa.ac.za/sites/corporate/default/Library/About-the-Library Library @ a glance
- For detailed Library information, go to https://www.unisa.ac.za/sites/corporate/default/Library

- For research support and services (eg personal librarians and literature search services) go to https://www.unisa.ac.za/sites/corporate/default/Library/Library-services/Research-support

The Library has created numerous **Library guides** to assist you: http://libguides.unisa.ac.za

Recommended guides:

- Request recommended books and access e-reserve material: https://libguides.unisa.ac.za/request
- Requesting and finding library material: Postgraduate services: https://libguides.unisa.ac.za/request/postgrad
- Finding and using library resources and tools (Research Support): https://libguides.unisa.ac.za/research-support
- Frequently asked questions about the Library: https://libguides.unisa.ac.za/ask
- Services to students living with disabilities: https://libguides.unisa.ac.za/disability
- A-Z databases: https://libguides.unisa.ac.za/az.php
- Subject-specific guides: https://libguides.unisa.ac.za/?b=s
- Information on fines & payments: https://libguides.unisa.ac.za/request/fines

Assistance with **technical problems** accessing the Unisa Library or resources: https://libguides.unisa.ac.za/techsupport

Lib-help@unisa.ac.za (insert your student number in the subject line please)

General library enquiries can be directed to Library-enquiries@unisa.ac.za

6 STUDENT SUPPORT SERVICES

The *Study @ Unisa* website is available on myUnisa: www.unisa.ac.za/brochures/studies

This website has all the tips and information you need to succeed at Unisa.

6.1 First-Year Experience Programme @ Unisa

For many students, the transition from school education to tertiary education is beset with anxiety. This is also true for first-time students to Unisa. Unisa is a dedicated open distance and e-learning institution. Unlike face-to-face/contact institutions, Unisa is somewhat different. It is a mega university and all our programmes are offered through a blended learning mode or fully online learning mode. It is for this reason that we thought it necessary to offer first-time students additional/extended support so that you can seamlessly navigate the Unisa teaching and learning journey with little difficulty and few barriers. In this regard we offer a specialised student

support programme to students entering Unisa for the first time. We refer to this programme as Unisa's First-Year Experience (FYE) Programme. The FYE is designed to provide you with prompt and helpful information about services that the institution offers and how you can access information. The following FYE programmes are currently offered:

- FYE website: All the guides and resources you need to navigate through your first year at Unisa can be accessed using the following link: www.unisa.ac.za/FYE
- FYE e-mails: You will receive regular e-mails to help you stay focused and motivated.
- FYE broadcasts: You will receive e-mails with links to broadcasts on various topics related to your first-year studies (eg videos on how to submit assignments online).
- FYE mailbox: For assistance with queries related to your first year of study, send an e-mail to fye@unisa.ac.za

6.2 E-tutors

With effect from 2013, Unisa offers online tutorials (e-tutoring) to students registered for modules at NQF level 5, 6 and 7, this means qualifying undergraduate modules.

Once you have been registered for a qualifying module, you will be allocated to a group of students with whom you will be interacting during the tuition period as well as with an e-tutor who will be your tutorial facilitator. Thereafter you will receive an sms informing you about your group, the name of your e-tutor and instructions on how to log onto myUnisa in order to receive further information on the e-tutoring process.

Online tutorials are conducted by qualified e-tutors who are appointed by Unisa and are offered free of charge. All you need to be able to participate in e-tutoring is a computer with internet connection. If you live close to a Unisa regional center, please feel free to visit this center to access the internet. E-tutoring takes place on myUnisa where you are expected to connect with other students in your allocated group. It is the role of the e-tutor to guide you through your study material during this interaction process. To get the most out of online tutoring, you need to participate in the online discussions that the e-tutor will be facilitating. Please make use of this opportunity. The e-tutor is also available if you need any help with questions from old exam papers – post your questions on the discussion forum of your e-tutor group, and the e-tutor and your fellow students will comment and assist.

There are modules that students have been found to repeatedly fail, these modules are allocated face-to-face tutors and tutorials for these modules take place at the Unisa regional centers. These tutorials are also offered free of charge, however, it is important for you to register at your nearest Unisa regional center to secure attendance of these classes.

6.3 Free computer and internet access

Unisa has entered into partnerships with establishments (referred to as Telecentres) in various locations across South Africa to enable you (as a Unisa student) free access to computers and the Internet. This access enables you to conduct the following academic related activities: registration; online submission of assignments; engaging in e-tutoring activities and signature courses; etc. Please note that any other activity outside of these is for your own costing e.g.

printing, photocopying, etc. For more information on the Telecentre nearest to you, please visit **www.unisa.ac.za/telecentres.**

7. HOW TO STUDY ONLINE

7.1 What does it mean to study fully online?

Studying fully online modules differs completely from studying some of your other modules at Unisa.

- **All your study material and learning activities for online modules are designed to be delivered online on myUnisa.**
- **All your assignments must be submitted online.** This means that you will submit all your assignments on myUnisa. In other words, you may **NOT** post your assignments to Unisa using the South African Post Office.
- **All communication between you and the University happens online.** Lecturers will communicate with you via e-mail and SMS, and use the **Announcements,** the **Discussion Forums** and the **Questions and Answers** tools. You can also use all of these platforms to ask questions and contact your lecturers.

7.2 myUnisa tools

The main tool that we will use is the **Lessons tool**. This tool will provide the content of and the assessments for your module. The lessons contain many videos that you may watch, should you battle to understand certain concepts in the textbook. **Please note that these videos are not compulsory to watch, and that you will not be examined on them**. However, they are quite helpful if you need to refresh your memory about specific topics in the textbook.

It is very important that you log in to myUnisa regularly. We recommend that you log in at least once a week to do the following:

- **Check for new announcements.** You can also set your myLife e-mail account so that you receive the announcement e-mails on your cellphone.
- **Do the Discussion Forum activities.** When you do the activities for each lesson, we want you to share your answers with the other students in your group. You can read the instructions and even prepare your answers offline, but you will need to go online to post your messages. Your e-tutor will post the activities on the Discussion Forum.
- **Do other online activities.** For some of the lesson activities you might need to complete a **Self-Assessment** exercise. Do not skip these activities because they will help you complete the assignments and the activities for the module.

We hope that by giving you extra ways to study the material and practise all the activities, this will help you succeed in the online module. To get the most out of the online module, you **MUST** go online regularly to complete the activities and assignments on time.

8. ASSESSMENT

8.1 Assessment criteria

The assessment criteria is given per specific outcome:

Specific outcome 1:

Think in an abstract way, to manipulate logical arguments, using a variety of mathematical tools.

Assessment criteria

- Predicates and symbols are used, to represent properties or relations, all formulated as English sentences;
- A given set of logical connectives is used to combine propositions and predicate logic atoms, correctly, from given English sentences into equivalent logic sentences;
- Truth tables illustrate the result of logical connectives, with the correct relationships;
- Quantifiers generalise over predicate logic sentences, within the context;
- Classifications of compound statements include tautology, contradiction or neither;
- Arguments around propositional and a predicate logic sentences are valid.

Specific outcome 2:

Construct proofs in a clear and concise way using mathematical reasoning techniques.

Assessment criteria

- Diagrams and mathematical notation are used to represent the structure of the problem correctly;
- Rigorous, precise and convincing proofs are constructed correctly (direct proofs, proof by contraposition, proof by contradiction);
- A counterexample is provided correctly in the case where a mathematical statement is not always true.

Specific outcome 3:

Demonstrate knowledge and understanding regarding the definitions, laws and operations of set theory.

Assessment criteria

- Sets are represented correctly using various notations;
- New sets constructed from existing one using set operations are valid;
- Set equality are determined correctly;
- A counter-example in the case of set inequality is correct;
- Sets represented using Venn diagrams are valid;
- Equality of Venn diagrams are determined correctly;
- A counter-example in the case of inequality of Venn diagrams is correct;
- New Venn diagrams constructed from existing ones using set operations are valid.

Specific outcome 4:

Synthesise and critically analyse relations, functions and binary sets that are represented as sets containing ordered pairs.

Assessment criteria

- Particular properties of relations are identified correctly;
- Different kinds of relation are defined correctly;
- Synthesised relations of a given kind are correct;
- New relations constructed from existing ones are valid;
- Functions having particular properties are identified correctly;
- Inverse function of a given function are defined correctly;
- The composition of two given functions is valid;
- Synthesised functions of a given kind are valid;
- Properties of binary operations can be determined correctly;
- Synthesised binary operations satisfying given properties are valid.

Specific outcome 5:
Perform operations on vectors and matrices.

Assessment criteria

- Operations on vectors and matrices are applied in order to construct different ways of storing and listing numbered information correctly.
- The synthesised vector or matrix that fits a place-holder within an equation or that holds defined properties is correct.

8.2 Assessment plan

- To complete this module, you will be required to submit 4 assignments.
- All information on when and where to submit your assignments will be made available to you via the myUnisa site for your module.
- Due dates for assignments, as well as the actual assignments are available on the myUnisa site for this module.
- To gain admission to the examination, you will be required to submit at least one assignment.
- Your assignments will all be MCQ assignments.
- The assignment weighting for the module is 20%.
- The examination will be a timed MCQ exam, and will be written online on myUnisa.
- The examination will count 80% towards the final module mark.
- In Section 8.3 below, an example is given of how to calculate your year mark.

Why do assignments? In the first place, we need to provide proof to the Department of National Education that you are an active student. To gain admission to the exam, it is **compulsory** to submit **at least one assignment** by **the due date of Assignment 1**, otherwise **you will not have exam admission.**

Important: Take special note of the self-assessment exercises and their solutions that are provided in tutorial letter 102 and tutorial letter 103.

The following is a breakdown of the study programme and the formal assessment activities as they become due during the year. Please turn the page for the study programme:

Study programme for the year 2022:

Month	**Weeks per month**	**Activity**	**Assignment due dates and unique numbers**
Jan to 3 March		**Registration**	
March	21 March 28 March	Study unit 1 to 2 in study guide Study unit 2 to 3 in study guide	
April	4 April 11 April 18 April 25 April 30 April	Do related self-assessment questions Study unit 3 to 4 in study guide Do related self-assessment questions Revise study units 1 to 3. (Unit 4 will be tested in Assignment 2) **Assignment 1 is now opened on myUnisa.** You can submit Assignment 1 until 10 May. Two attempts are allowed. Highest marks will be taken. Start with assignment 1	Self-assessment exercises are NOT submitted. It is for you to practice and make sure that you understand the content
May	3 May 9 May 16 May 23 May 30 May 31 May	Continue with assignment 1 **Submit assignment 1 by 10 May** **Revise unit 4.** Start with study unit 5 in study guide Study unit 5 in study guide Study unit 6.1 to 6.3 in study guide Do associated self-assessment questions **Assignment 2 is opened on myUnisa.** You can submit Assignment 2 until 14 June. Two attempts are allowed. Highest marks will be taken.	**10 May Assignment 1 (**multiple choice via the online platform on myUnisa) **UNIQUE NUMBER 164428**
June	6 June 13 June 20 June 27 June 30 June	Start assignment 2 **Submit assignment 2 by 14 June** Study units 6.4, 6.5, 7 Do associated self-assessment questions Study unit 8 Do associated self-assessment questions Study unit 9 Do associated self-assessment questions **Assignment 3 is opened on myUnisa.** You can submit Assignment 3 until 20 July. Two attempts are allowed. Highest marks will be taken.	**14 June Assignment 2 (**multiple choice via the online platform on myUnisa) **UNIQUE NUMBER 164555**

July	4 July 11 July 18 July 25 July 31 July	Study unit 9 Do associated self-assessment questions **Complete compulsory Assignment 3 and submit by 20 July** Revise study units 1 to 4 **Assignment 4 is opened on myUnisa.** You can submit Assignment 4 until 22 August. Two attempts are allowed. Highest marks will be taken. **Please note that Assignment 4 will be like an exam. It will therefore benefit you greatly to do this assignment.**	**20 July Assignment 3 ((**multiple choice via the online platform on myUnisa) **UNIQUE NUMBER 164568**
August	1 August 8 August 15 August 22 August 29 August	Revise study units 5 to 7 Revise study units 8 to 10 Start with assignment 4 **Complete and submit Assignment 4 by latest 22 August** Start examination preparation.Work through Assignment solutions Work through old exam papers, and practice and example exam papers under Additional resources Work through study guide	**22 August Assignment 4 (**multiple choice via Online assessment tab on myUnisa) **UNIQUE NUMBER 164596**
Sept	Check for your exam timetable on myUnisa	**Do revision and prepare for online examination**	Make a note of the exam date and prepare accordingly
Oct	Examination period starts 17	**Do revision and prepare for online examination**	Make a note of the exam date
Nov	Exams continue	**Do revision and prepare for online examination**	
Dec	Exam marks released		

8.3 Year mark and final examination

An integrated assessment system is used for this module. **This means that your final mark is based not only on your examination mark, but also on your performance during the year.** Assignments do not only provide you with an opportunity to evaluate your understanding of the prescribed material (or to give you feedback on your readiness for the examination), but also make a contribution towards your year mark.

Your **final mark** will be calculated as follows:

Year mark (out of 100) × 20% + Examination mark (out of 100) × 80%

In order to pass this module, a final mark of at least 50% is required.

Your **year mark** is based on your assignment marks. Different weights are allocated to the individual assignments. If an assignment is not submitted or is submitted late (for whatever reason), no marks are awarded for such an assignment. *It is your responsibility to ensure that your assignments are submitted on time*. Multiple choice assignments are marked by a computer system at a time set out by the Assignment Section of Unisa – lecturers can therefore not give any extension for multiple choice assignments.

There are **4 assignments** for this module. Assignments will be made available on myUnisa. You will be informed where to find your assignments. The following weights are allocated to the individual assignments:

- Assignment 01: **15%**
- Assignment 02: **30%**
- Assignment 03: **30%**
- Assignment 04: **25%**

Example: The following example shows how the assessment system works, assuming that assignments 01, 02, 03 and 04 were all submitted.

Assignment	**Mark**	**× Weight**	**Contribution to year mark**	**Type of assessment**
01	90%	× 0.15	13.5%	MCQ – more details will be given via an announcement
02	90%	× 0.30	27%	MCQ – more details will be given via an announcement
03	90%	× 0.30	27%	MCQ – more details will be given via an announcement
04	90%	X 0.25	22.5%	MCQ – more details will be given via an announcement
year mark			90%	

The resulting year mark is 90%.

Suppose you obtain 80% in the examination. The final mark will be calculated as follows:

(90 × 0.20)% + (80 × 0.80)% = (18.0 + 64.0)% = 82%.

You can therefore see that in order to get a good year mark that will not influence your examination mark negatively, it is important to put in enough effort in completing your assignments.

Note: The year mark will not contribute towards the final exam of students writing a supplementary examination.

Assignment questions will be provided online on myUnisa. Please check the announcements on a regular basis.

8.4 Assignment numbers

- There are no assignment due dates included in this tutorial letter.
- Assignment due dates for Assignments 1 to 4 will be made available to you on the landing page of myUnisa for this module, and on the calendar. We envisage that the due dates will be available to you upon registration. Note that the study programme that follows below also do not have any dates. As soon as you have registered, start at week 1 and follow the programme. We will provide you with dates as soon as possible after registration.
- Please start working on your assignments as soon as you register for the module.
- Log on to the myUnisa site for this module to obtain more information on the due dates for the submission of the assignments

8.5 Assignment due dates

- Modules offered by Unisa are either *blended* (meaning that we use a *combination* of printed and online material to engage with you) or *online* (all information is available via the *internet*). In all cases of online engagement, we use myUnisa as our virtual campus.
- As mentioned in the Introduction section, from 2022, the myUnisa virtual campus will be offered via a new learning management system. This is an online system that is used to administer, document and deliver educational material to you and support engagement with you.
- Look out for information from your lecturer as well as other Unisa platforms to determine how to access the virtual myUnisa module site.
- Information on the tools that will be available to engage with the lecturer and fellow students to support your learning will also be communicated via various platforms.
- The University undertakes to communicate as clearly and as frequently as is necessary to ensure optimum advantage in the use of the new learning management system.
- Additional information on the use of the myUnisa site for the module, as well as features to engage and communicate with your lecturer and other students will also be made available via the online site for the module.
- Therefore, log on to the myUnisa site for your module to gain more information on where to complete and/or upload your assignments and how to communicate with your lecturer.

Assignment	Due date	UNIQUE number
1	10/05/2022	164428
2	14/06/2022	164555
3	20/07/2022	164568
4	22/08/2022	164596

8.6 Assignment submission

As indicated in section 8.2, you need to complete 4 assignments online for this module. You will receive details on how and where the assignments should be submitted soon after registration.

9. CONCLUSION

Do not hesitate to contact us by e-mail if you are experiencing problems with the content of this tutorial letter or with any academic aspect of the module.

We wish you a fascinating and satisfying journey through the learning material, and trust that you will complete the module successfully.

Enjoy the journey!

Ms Drina du Plessis – lecturer for COS1501

SCHOOL OF COMPUTING

ADDENDUM A:

STEPS FOR DOWNLOADING THE CAI TUTORIAL FROM MYUNISA

The tutorial is available as a zip file under Additional Resources. The tutorial deals with logic circuits, Boolean algebra and Karnaugh diagrams. It is not compulsory to work through the tutorial, but it would benefit you greatly.

To download the tutorial:

Save COS1501.zip to your computer (Choose C drive *Documents* or wherever you want to save it) and then double-click on the saved COS1501.zip.

Choose ***extract*** from the top row of buttons on the opened page. Then click on ***extract*** **to the right** of the open window.

Double-click on the Relations folder that appears, and then double-click on the relations.exe icon (it looks like a round ball with a red ribbon around it).

You can now navigate through the tutorial.

We have tested these steps without experiencing any problem. Depending on your browser and operating system, there may be a slight variation in these steps. If you need to, ask someone more experienced with computers to help you. Also note that you should have WINZIP or 7-ZIP installed on your computer. Find it free on the internet.

This CAI tutorial is optional. No examination questions will be asked on specific examples in this tutorial.