UNIVERSITY OF JOHANNESBURG

FACULTY OF SCIENCE

LEARNING GUIDE

MODULE: Informatics 2B: Internet Electronic Commerce

CODE: IFM02B2 / IFM2B10

THIS MODULE SPECIFIC LEARNING GUIDE IS INTENDED TO BE USED IN CONJUNCTION WITH THE GENERAL UNDERGRADUATE LEARNING GUIDE

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Please note

The most up-to-date and correct version of this
Informatics 2B Learning Guide
is available electronically on Eve.

In the event of any differences between this copy and the copy currently on Eve, the student is to default to the version available on Eve.

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Contents

1. WELCOME

The Academy of Computer Science & Software Engineering and the Faculty of Science extends a warm welcome to its Informatics 2B students.

This course is designed to familiarise individuals with current and emerging electronic commerce technologies using the Internet. Topics include Internet technology for business advantage, managing electronic commerce funds transfer, reinventing the future of business through electronic commerce, business opportunities in electronic commerce, electronic commerce Web site design, social, political and ethical issues associated with electronic commerce, and business plans for technology ventures.

2. ABOUT THIS LEARNING GUIDE

This learning guide contains details specific to the Informatics 2B module and should be used **in conjunction** with the Academy of Computer Science & Software Engineering's Undergraduate General learning guide. Students are to defer to this module specific learning guide in the event that information published herein conflicts with instructions published in the general guide.

3. THE MODULE

Module name:	Informatics 2B: Internet Electronic Commerce
Prerequisites for module:	Successful completion of Informatics 2A (IFM2A10)
Module NQF level:	6
NQF Credits: (calculated according to notional hours)	20
Duration of Module: (Weeks/Semester)	14 weeks
Type of Module:	Semester 2 Module
Language of Delivery:	English

3.1. PURPOSE OF MODULE

The module ensures that a student will have knowledge of the architecture and functioning of the Internet; will be able to explain how the Internet can be used in applications such as the WWW, e-commerce and e-mail and explain the role of network security in the protection of information and to introduce the student to ethical and professional issues with relevance to Information Technology.

3.2. MODULE OUTCOMES & MODULE ASSESSMENT CRITERIA

MODULE OUTCOMES	MODULE ASSESSMENT CRITERIA
At the end of this module the student should be able to do the following:	*The student will be assessed as competent if:*
• Describe key features of electronic commerce.	• The key features of electronic commerce are listed correctly. • Each feature is accurately described demonstrating an awareness of the role electronic commerce can play in supporting the economic environment. • Information is communicated reliably and coherently.
• Evaluate the role of the Internet in applications.	• The role of the Internet in applications is correctly identified and described generally. • Application specific roles are described in the following applications: The World Wide Web, e-commerce and e-mail. • Technical details surrounding the various applications are correctly elaborated and logically presented.

MODULE OUTCOMES	MODULE ASSESSMENT CRITERIA
At the end of this module the student should be able to do the following:	*The student will be assessed as competent if:*
• Define electronic commerce business models and strategies.	• Electronic commerce business models and strategies are correctly listed. • Relevant theoretical aspects of electronic commerce business models and strategies are discussed concisely. • Various business models and strategies can be critically evaluated against each other.
• Identify appropriate technologies to meet different electronic commerce objectives.	• Electronic commerce objectives are correctly identified and discussed comprehensively. • Technologies are appropriately selected to implement different electronic commerce objectives. • Advantages and disadvantages of different technologies are adequately discussed and evaluated.
• Critically evaluate security measures in **electronic commerce** over the Internet.	• Security concerns stemming from the technical design and implementation of the Internet are accurately described. • Security measures in electronic commerce over the Internet are listed, accurately described and critically evaluated.

MODULE OUTCOMES	MODULE ASSESSMENT CRITERIA
At the end of this module the student should be able to do the following:	*The student will be assessed as competent if:*
• Explain ethical and professional considerations for Information Technology.	• The ethical, legal and cultural environment of electronic commerce is effectively described. • Issues surrounding electronic commerce in a specific socioeconomic environment are listed and evaluated. • Ethical and professional considerations for Information Technology are correctly applied in a specified context.
• Design a simple three-tier client/server system.	• A web page is effectively designed and implemented in a convenient language such as HTML. • An object oriented server and a relational database for executing e-commerce transactions over the Internet are successfully set up and utilised. • Electronic commerce applications are appropriately criticised in a specified context. • A simple three-tier client/server system is correctly designed and implemented by utilising appropriate methods and technologies.
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3.3. MODULE RESOURCES

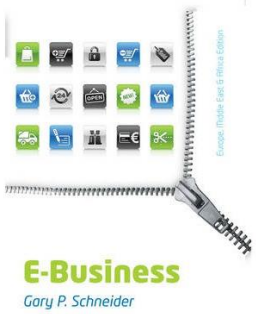
A blended learning approach that makes use of the following teaching/learning methodology opportunities and experiences is used:

- Lectures.
- Tutorial classes.
- Module website (http://eve.uj.ac.za).
- MSDN Academic Alliance (MSDNAA) Software.
- Using books and subject-related periodicals.
- Consultations with module lecturer.
- Consultations with module tutors.
- Practical assignments which take place in the computer laboratories.

Students are encouraged to make use of the available resources for the module. Such sources include:

- Module website (http://eve.uj.ac.za)
- Lecture notes
- Prescribed textbook

3.3.1. Prescribed Textbook



Title: E-Business, Europe, Middle East & Africa Edition

Author: Gary P. Schneider

Publisher: CENGAGE Learning

ISBN-13: 9781408093672

3.3.2. Other Reading

Additional material will be provided or made downloadable from the course website or other indicated sites.
In order to complete their research assignment, students will be required to make use of the Electronic Databases offered to all UJ students.
Instructions on the use of the UJ Electronic Databases are provided in Subsection 6.4 of the Undergraduate General Learning Guide. A lecture will also be offered by the Faculty of Science librarian, Ms Pavlinka Kovatcheva (see schedule).

3.3.3. Development Tools

The following software is required for students to complete their practical assignments in Informatics 2B10:

- Microsoft Visual Studio 2015 Community Edition
- A Text Editor such as Notepad/WordPad (supplied with Microsoft Operating Systems) or Notepad++ (Available online)

The Microsoft Visual Studio 2015 Community Edition suite is provided in the computer laboratories in which the practical sessions take place.
Under the MSDN licensing agreement, the Academy is also able to provide its students with Microsoft Visual Studio 2015 Community Edition for academic purposes, allowing students to complete the assignments on their own computers.
At present, there are four ways to obtain Microsoft Visual Studio 2015 Community Edition:

1. **MSDN Assistant** – an assistant is responsible for the loan of Microsoft Visual Studio 2015 Community Edition DVDs to students. Students wishing to borrow the Microsoft Visual Studio 2015 Community Edition DVD must come in person with their student card in order to take a DVD out for a given time (normally three days). The assistant's times are posted at the Academy's notice boards. Please note that students failing to return their DVD in the allotted time will be blacklisted and disallowed from lending media in future.
2. **Campus Download** – students may download an ISO of Microsoft Visual Studio 2015 Community Edition Express Edition from http://eve.uj.ac.za/vs/. This download is only accessible from E-Ring 203 to 207 (Practical labs).

4. LECTURES, TUTORIALS & PRACTICALS

The Informatics 2B module consists of three lectures, one practical session (of which students must attend one) and one tutorial classes each week.

The attendance of the lectures and practical sessions is compulsory for ALL Informatics 2B students. Material may also be covered during the practical sessions.

The complete Informatics 2B timetable has been reproduced on the following page ***(please do not use the timetable on the UJ Student Portal as this information may not necessarily be correct!)***:

TIME	MON
07:00-08:30 & 08:30-10:00 Assessment	
10:00-10:45	O1
10:50-11:35	O2
11:40-12:25	Z1
12:30-13:15	Z2
13:20-14:05	K1 P1
14:10-14:55	K2 P2
15:00-15:45	H1 P3
15:50-16:35	H2 P4
16:40-17:25	R3
17:30-18:15	R4

	TIME	TUE	WED	THU	FRI
	08:00-08:45	G1	G2	L1	Z3
	08:50-09:35	N1	M3	L2	Z4
	09:40-10:25	N2	M4 P12	R1 P21	**Lecture**
	10:30-11:15	M1	T1 P13	R2 P22	
	11:20-12:05	M2	**Practical**	T3 P23	O4
	12:10-12:55	Q1		T4 P24	Culture Period
	13:00-13:45	Q2		**Lecture**	Culture Period
	13:50-14:35	I1 P6	J1 P17	**Tutorial**	J3 P29
	14:40-15:25	I2 P7	J2 P18	I3 P27	J4 P30
	15:30-16:15	K3 P8	C1 P19	I4 P28	C3 P31
	16:20-17:05	K4 P9	C2 P20	O3	C4 P32
	17:10-17:55	L3	N3	G3	S3
	18:00-18:45	L4	N4	G4	S4

Students must attend classes in the following allocated venues:

Activity		Venue
Lectures *(attend all three lectures every week)*		
Thursdays (13h00 – 13h45)	*H3*	E-Les 100
Fridays (09h40 – 11h15)	*Q3-Q4*	D-Les 101
Practical Sessions *(attend this practical session every week)*		
Wednesdays (11h20 – 13h45)	*P14 – P16*	E-Ring 203 – 207
Tutorial Classes *(all students must attend the tutorial)*		
Thursday (13h50 – 14h35)	*H4*	D Lab Basement K01

4.1. LECTURES

Students should ensure that they are on time for all lectures. Students that arrive late are requested to enter the venue as quietly as possible so as not to disturb the lecture. **It is also the responsibility of the student to find out about any announcements that have been missed.**

Students who have a valid reason for leaving a lecture early are requested to discuss the matter with the lecturer before the start of the lecture. Students needing to leave during the lecture are requested to exit the venue as unobtrusively as possible. Once the lecture has started, conversations with other students should be kept to a minimum.

Cell phones should be switched off or on silent during lectures, as they can be distracting to both the lecturer and the students.

4.2. PRACTICAL SESSIONS

Practical sessions take place in the computer laboratories E-Ring 203 to 207 every Wednesday from 11h20 to 13h45.

The attendance of practical sessions is **compulsory** as this will give the student the opportunity to explain his/her assignment and obtain further assistance. **As such, submitted assignments will not be marked if the student is not present during the marking of the practical assignment and fails to make alternative arrangements.**

To make an alternative arrangement, students must contact the LECTURER before 11h00am on the Wednesday of the week that the practical assignment is due.

Students are expected to have completed their assignment before the start of the practical session. While waiting to be marked, students will be provided with additional exercises to complete.

Please be aware that there is a limited amount of time to mark all of the assignments in the practical session. Students cannot expect to monopolise the time of the assistants. Although every attempt will be given to assist the students during the practical session, the ***assistants will only assist with a single question at a time and spend no more than 10 minutes with a student per question*****. Students will be expected to have attempted to solve their problem, and have a candidate solution in place.**

Furthermore, while the practical assignments are being marked by the assistants, there is not enough time available to explain the errors the student made when they were completing the practical assignment. Students will be referred to the Student Assistants in Assistants Lab for further explanation.

Requirements for the submission of practical assignments and any absenteeism from practical sessions are discussed in detail in the Academy of Computer Science & Software Engineering Undergraduate General Learning Guide.

The first practical session will take place on the 26th of July, 2017.

Students with timetable clashes are urged to contact the lecturer as soon as possible to make any necessary arrangements. It is the responsibility of the student to inform the lecturer of any timetable clashes.

4.3. TUTORIAL CLASSES

The purpose of tutorial classes is to increase the student's exposure to problem-solving by means of providing additional exercises related to the material covered during the week to complete.

There is ONE tutorial class taking place each Thursday from 13h50 to 14h35 directly after the lecture. It is compulsory for all students to attend the tutorial each week.

5. LECTURERS

Name:	Mr R Maluleka	Mr HJC van der Westhuizen
Qualifications:	• BSc (Computer Science) • BSc Hons (Mathematics) • MSc (Informatics & IT)	• BSc (IT) • BSc Honours (IT)
Telephone:	TBA	TBA
E-Mail:	rmaluleka@uj.ac.za	cvanderwesthuizen@uj.ac.za
Consultation Hours:	Thursdays, 15:30-16:15 (I4/P28)	**By appointment**

6. SCHEDULED PROGRAMME

Students are requested to review the work schedule below, paying particular attention to the dates of the assessment opportunities.

Any valid clashes with other subjects must be brought to the attention of the lecturer within the first week of the semester to be considered for possible rescheduling – PLEASE NOTE THAT ASSESSMENTS SCHEDULED FOR OTHER MODULES THAT WILL CLASH WITH ANY INFORMATICS LECTURES MUST BE BROUGHT TO THE ATTENTION OF THE LECTURERS.

Note that this schedule is subject to change during the semester. Always check Eve for any updates on the course. Use EVE as your main source of information.

Week	Date	Wed	Thu	Fri
1	24 Jul – 28 Jul	**Prac 1 Released**	**Chapter 1**	**Chapter 1**
2	31 Jul – 04 Aug	**Prac 1 Due** **Prac 2 Released**	**Chapter 2**	**Chapter 2**
3	07 Aug – 11 Aug	**National Women's Day**	**Chapter 3**	**Chapter 3**
4	14 Aug – 18 Aug	**Prac 2 Due** **Prac 3 Released**	**Chapter 4**	**Chapter 4**
5	21 Aug – 25 Aug	**Prac 3 Due** **Prac 4 Released**	**Chapter 5**	**Chapter 5**
6	28 Aug – 01 Sep	**Semester Test 1(Theory)**	**Chapter 6**	**Chapter 6**
7	04 Sep – 08 Sep	**Prac 4 Due** **Group Prac Released**	**Chapter 7**	**Chapter 7**
	09 Sep – 17 Sep	**Mid Semester Break**		
8	18 Sep – 22 Sep	**Semester Test 2(Prac)** **Prac 5 Due** **Prac 6 Released**	**Chapter 8**	**Chapter 8**
9	25 Sep – 29 Sep	**Prac 6 Due** **Prac 7 Released**	**Chapter 9**	**Chapter 9**
10	02 Oct – 06 Oct	**Prac 7 Due** **Prac 8 Released**	**Monday Timetable**	**Chapter 11**
11	09 Oct – 13 Oct	**Semester Test 3(Theory)**	**Chapter 11**	**Chapter 11**
12	16 Oct – 20 Oct	**Prac 8 Due**	**Chapter 12**	**Chapter 12**
13	23 Oct – 27 Oct	**Group Prac Due**	**Chapter 13**	**Chapter 13**
14	30 Oct – 03 Nov	**Prac 9 Due**	**Chapter 14**	**Chapter 14**

7. ASSESSMENTS

An integrated approach to assessment whereby assessment forms an integral part of teaching and learning is followed:

- **Formative Assessment** – students are assessed continuously throughout the module through two written semester tests, a practical test, practical assignments and class tests.
- **Summative Assessment** - a two-hour examination that is representative of all the work covered is written at the end of the semester.

To pass the Informatics 2B module, students will need to successfully complete a number of assessment opportunities. The listing of each assessment opportunity and their weight towards the Module / Semester mark is presented below.

Assessment	Counts	Towards	Counts	Towards
Individual Practical Assignments	15%	Practical Mark 50%	50 %	Final Mark
Semester Test 2: Practical (**ST2**)	20%			
Group Practical Assignment	15%			
Semester Test 1: Written (**ST1**)	22.5%	Theory Mark 50%		
Semester Test 3: Written (**ST3**)	22.5%			
Class Tests	5%			
Examination			50 %	

Exam Entrance Requirements:

In addition to requiring a 50% Final Mark to pass the module, students are also reminded of the following additional requirements:

- A minimum of 40% for the **Module / Semester** is required to gain entrance to write the Examination.
- A minimum of 50% for the **Practical Component Mark** is required to gain entrance to write the Examination.
- A minimum of 40% must be obtained in the **Examination**.

7.1. CLASS TESTS

As the final assessment in the module is of a theoretical nature, it is in the interest of the students to properly and adequately prepare for completing written assessments. To this end, each lecture, tutorial and practical session presents an opportunity for a class test. Students should, therefore, be prepared to write class tests that will count towards the semester mark.

7.2. PRACTICAL ASSIGNMENTS

Every week, students will be given a new practical assignment which they are to completed and upload for the following week. For further information on the requirements and submission of practical assignments, please refer to the Section 8 in the Undergraduate General Learning Guide.

7.3. SEMESTER TESTS

Assessment scope may be subject to change, make sure to check Eve and make note of class announcements. It is the responsibility of the student to do so.

7.3.1. Semester Test 1 (Written)

Marks:	75
Duration:	90 minutes
Scope:	Chapters 1,2,3,4 and 6 HTML, CSS and basic ASP.Net
Date, Time & Venue:	30 August 2017 @ 11h30am; TBA
Supplementary Test Details	
Application Cut-Off:	6 September 2017
Date, Time & Venue:	18 September 2017@ 8h00am; TBA

7.3.2. Semester Test 2 (Practical)

Marks:	100
Duration:	120 minutes
Scope:	All practical content covered until the test
Date, Time & Venue:	20 September 2017 @ 11h30am; Venues: E-Ring 203 – 207

Supplementary Test Details	
Application Cut-Off:	27 September 2017
Date, Time & Venue:	2 October 2017 @ 08h00am

7.3.3. Semester Test 3 (Written)

Marks:	75
Duration:	90 minutes
Scope:	Chapters 7,8,9, 11 HTML, MS SQL Server and ASP.Net
Date, Time & Venue:	11 October 2017 @ 11h30am; Venue TBA
Supplementary Test Details	
Application Cut-Off:	18 October 2017
Date, Time & Venue:	23 October 2017 @ 08h00am; Venue TBA

7.4. EXAMINATION

The examination is a 2-hour theory paper worth 100 marks which can test on all work that was covered during the course of the semester which is not limited to the lecture notes but should include the research assignment and the practical assignments. A summary of the examination information may be found below.

Exam Code:	134 Z
Marks:	100
Duration:	2 hours
Scope:	All work covered during the Semester
Date, Time & Venue:	28 November 2017 @ 16h30 (Session 3), Venue TBA