RHODES UNIVERSITY
Where leaders learn

The Department of Computer Science

Rhodes University has a history of high achievement and is committed to meeting the challenges of the present and future. It is an internationally accepted education centre of excellence, which recognises its southern African setting and the need to meet international standards in an open society. The University is dedicated to cultivating intellects in people who will courageously pursue the truth whatever the circumstances.

Please read this handbook. It is designed to make your life easier
and facilitate the smooth running of the Department.
We welcome your comments and suggestions.

Please refer to the online version of this handbook at
https://www.ru.ac.za/computerscience/studying/handbook/
for updated information about courses and related details.

Cover Photograph

The research project from which these images were taken focused on implementing a computational approach to black hole optics using raytracing on a GPU. The images show a variety of ray-traced starfield backgrounds with and without black holes. Where no black hole is present, the images present an undistorted grid in flat spacetime; however, the presence of a black hole (with mass M = 1.0) in the images shows gravitational lensing and shadow formation. This work was done by Jessica Ackerman.

Contacting the Department

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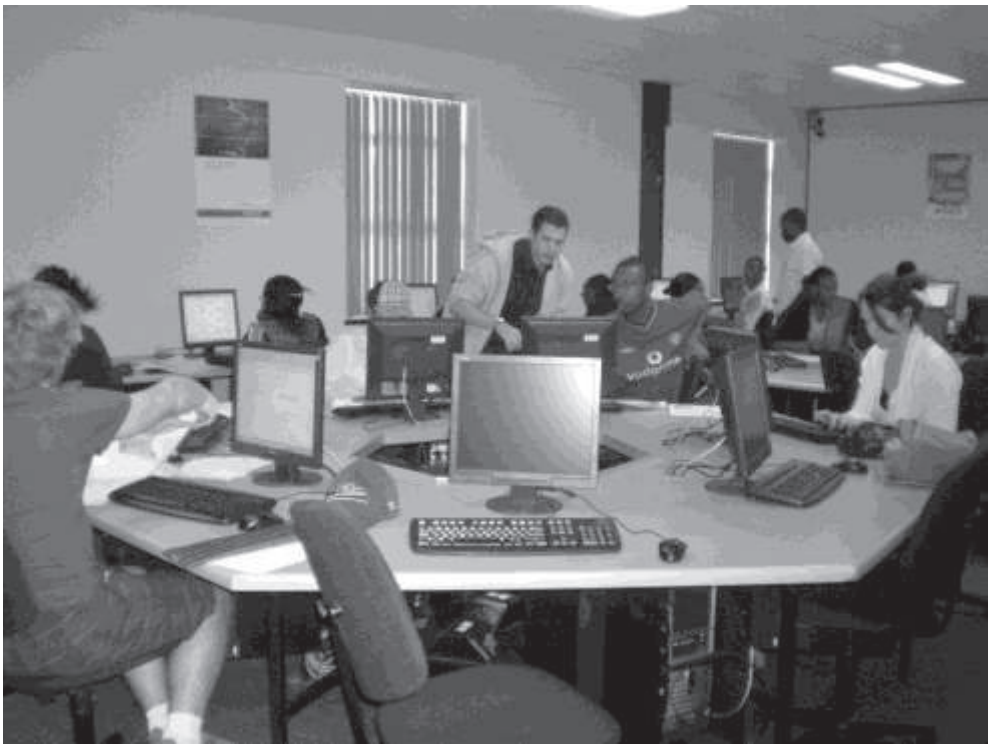

Contents

Welcome to the Department of Computer Science

Our era will be known in history as the Information Age, characterised by increasing dependence on Information & Communication Technology (ICT). In the Department of Computer Science, we are committed to preparing you for life in this new world by equipping you with the requisite knowledge to exploit ICT to take advantage of the explosion of available information.

Do you imagine yourself as an information security specialist, a project manager, a software engineer, a network administrator, an Artificial Intelligence (AI) or general ICT consultant, an entrepreneur in ICT sales and servicing, or perhaps a data or systems analyst? Perhaps you are heading towards a teaching or academic career in ICT or a research-oriented scientific occupation? Alternatively, your aspirations might be for a career in commerce or finance, the arts or social science, pharmacy or medicine, or journalism or law. You may simply wish to be able to meet the growing challenges of information technology in your workplace. The inclusion of Computer Science in your degree will empower you to do all of this.

ICT, particularly the rapidly evolving AI technologies, is consistently changing our society by changing the way our economy, education system, and social and cultural interaction work. This is particularly relevant to the kinds of activities graduates encounter in their day-to-day personal and professional lives. As technology progresses, it will become increasingly important to have knowledge and understanding of the nature of technologies, and how they are changing. Anticipating these changes will enhance the choices you make in your personal and working life. Naturally, the more knowledge you have, the more you will be able to exploit the power of ICT.

We invite you to take advantage of being at one of the finest universities in Africa for studying the various aspects of ICT. A degree in Computer Science from Rhodes University is held in high esteem throughout the country and abroad.

The Department of Information Systems dovetails with and complements Computer Science at Rhodes University, with the two departments working closely together. The Computer Science Department offers a single-semester course that prepares prospective Information Systems students for courses in their second year of study. Many students study Computer Science and Information Systems together as their major subjects, and this combined study of the two subjects can continue into postgraduate degrees. Whereas Computer Science concentrates on the technical aspects of applying relevant technologies in the implementation of effective software solutions, Information Systems addresses human, management and strategic aspects of information technology.

Computer Science is offered as a 3-year major course in the Faculties of Science, Commerce and Humanities.

Following the undergraduate degree, a fourth-year Honours degree in Computer Science allows study in more specialised areas of computing and introduces a project on a larger scale than is possible in undergraduate years. The fourth year of study also provides the minimum status needed for registration by professional bodies and for international recognition (such as would be required to register as a graduate student at a foreign university).

The Department of Computer Science houses a strong postgraduate school which prepares MSc and PhD students. Work is particularly concentrated in the field of Distributed Multimedia, as Rhodes is sponsored as a Centre of Excellence in this area by Telkom SA. The work of this centre incorporates information security, machine learning, image processing, parallel computing, data analytics, data communication and networks, and ICT for development.

Our Department places great importance on the teaching and learning processes in tertiary education, and the competent and passionate lecturers endeavour to provide a stimulating learning environment.

From the Head of Department's keyboard

It is my privilege to pick up the role of Head of Department again from January 2026, following on from Prof. Karen Bradshaw. Karen has led the Department very capably for the past three years, and we owe her a huge debt of gratitude for bringing us through some very challenging and difficult times.

The academic discipline of Computer Science and the ICT industry have always been rapidly changing fields, and nothing has changed recently. Recent developments in machine learning (ML) and large language models (LLMs) have impacted many areas of human activity, and continue to do so at a rapid pace. Unfortunately, these developments are often accompanied by an uncritical, unquestioning acceptance of claims about their abilities. For example, many of the currently popular LLM systems are popularly referred to as examples of "artificial intelligence" (AI), while, in fact, they are very far from exhibiting any form of human-like intelligence. Fortunately, we have a well-prepared and highly-skilled teaching and research staff with many years of experience in the fields of machine learning, deep learning, and other related areas, who are very well-equipped to educate future leaders in this field.

Reflections on 2025

One of the highlights of 2025 was Prof. Dane Brown's award of the Vice Chancellor's Distinguished Research Award at the Graduation ceremony in April. This was followed by an opportunity for Dane to give a public lecture in August in which he described his research on the use of ML models in computer vision to detect and track moving objects, such as people and fish.

The achievements of our top students in 2024 were recognised through the award of the following course prizes at a celebration held during the April graduation period in 2025. Our congratulations go to these students for their outstanding performance in their courses.

- Open Box Prize for Computer Science I: Martin Vosloo
- Janinne Franke Prize for Computer Science II: Theodore Masi
- BSG Consulting Prize for Computer Science III: Theresa Rautenbach
- Open Box Prize for Computer Science Honours: Luke Goodall
- Janinne Franke Prize for Best Computer Science Honours Project: Lonwabo Mfazwe
- Centre of Excellence Prize for Postgraduate Research: Alden Boby

In July we were fortunate to have a visit from Prof.Barry Irwin, an international cybersecurity expert. Barry is a Visiting Professor in the Department from Noroff University College in Norway. During his visit, he gave a fascinating, in-depth seminar about Advanced Persistent Threats, which are stealthy, long-term cyberattacks targeting a specific network or system.

2025 also marked Prof.Dave Sewry's retirement from Rhodes University after 39 years of dedicated service. While he has most recently served the University as Dean of Commerce and as Acting CFO (Chief Financial Officer), Dave started out at Rhodes as a Computer Science student in the late 1970s. After completing his MSc in Computer Science, he worked in the IT industry in Gauteng for a few years before returning to Rhodes as a Lecturer in Computer Science. He was subsequently appointed as a Professor in the Department of Information Systems, before stepping into the role of Dean of Commerce. Dave's dedication and deep institutional knowledge will be sorely missed as he retires, but we wish him well as he moves into this next phase of his life. As an Emeritus Professor, he will continue to have an office in the Hamilton Building after retirement, and we look forward to his continued presence and contributions in this role.

Staff News

Sabbatical leave is a special form of leave for academic staff to allow them time away from their teaching and administrative duties to focus on research and keep up-to-date with the latest developments and trends in their fields. Prof. Karen Bradshaw will be taking a well-earned sabbatical for 2026 to focus on her research after her term as Head of Department. Dr Stones Dalitso Chindipha will also be on sabbatical leave for the second semester in 2026, and I will be taking a sabbatical myself from July 2026 to June 2027. We welcome back Dr Yusuf Motara after his sabbatical in 2025, and Dr Zelalem Shibeshi will return from his sabbatical leave in July 2026, so there will be plenty of staff coming and going over the next year!

As we face the opportunities and challenges that lie ahead of us in 2026, know that, as a Department, we are committed to doing all that we can to educate and equip our students in their mastery of information and communication technologies. I wish you all the best for the year: may it be a good and successful one for us all.

George Wells
January 2026

Departmental Vision and Mission

Our vision is to be a leading African university, providing globally respected education and research in Computer Science.

Our mission is to be a leading force in shaping the development of Computer Science, through appropriate high-quality research and consulting, and through the education of a spectrum of graduate professionals, competent to meet the future computing needs of their disciplines.

FOUNDATIONAL POLICIES

To achieve our mission and vision, we recognise that we must:

Curriculum

- Produce graduates who will have acquired sound practical skills, and who also have a healthy understanding of the theoretical basis of the subject, and the need to base technology on solid scientific principles.
- Provide specialised programmes that cater for the different needs and abilities of a widely heterogeneous audience, allowing for the possibility of various entry/exit points.
- Develop a curriculum in which all the various components interface in a properly defined and cohesive manner.
- Encourage a culture of renewal by reviewing the curriculum periodically.
- Attract postgraduate students, and foster postgraduate research in areas of Computer Science that can be realistically pursued.

People

- Encourage and reward excellence, and facilitate ongoing improvement of qualifications, standards of teaching and research, and publications.
- Participate in the creation of computer-based systems relevant to industry and society at large.
- Conduct research in areas that will enhance and promote the chosen emphases of the Department.
- Foster a respectful and inclusive working environment in which interpersonal relationships between and amongst staff and students allow for the development of all parties as individual, innovative thinkers, but also as members of well-managed teams.
- Engender a sense of passion for our discipline amongst our students and staff.

Facilities

- Provide the best possible facilities and support to promote research and teaching.

Publicity

- Attract a diverse body of engaged students of the highest possible calibre to the Department from all sectors of the local, national and international community.
- Heighten the awareness of the unique possibilities afforded by the quality of our Department among learners, graduate students, prospective employers, and industry partners.

Staff of the Department

PROFESSOR GEORGE WELLS

Head of Department
On sabbatical (July – Dec)

g.wells@ru.ac.za
046-603-8296
Room 007

Professor Wells is a graduate of Rhodes University. He completed his PhD degree in Parallel and Distributed Computing at the University of Bristol.

Research interests: Distributed and parallel processing, data communications, multimedia applications, Java.

MR JAMES CONNAN

Acting HoD (Semester 2)
Head of the Centre of Excellence

j.connan@ru.ac.za
046-603-8297
Room 108

Mr Connan holds an MSc in Computer Science from Stellenbosch University.

Research interests: Computer vision, machine learning, ubiquitous computing, integration of signed and verbal communication.

PROFESSOR KAREN BRADSHAW

On sabbatical

k.bradshaw@ru.ac.za
046-603-8633
Room 004

Professor Bradshaw obtained her PhD from Cambridge University through an 1851 Royal Exhibition Scholarship. She is also a Rhodes graduate with an MSc degree. Before returning to Rhodes, she lectured at the tertiary level within Southern Africa and has also worked in industry in both the UK and Zimbabwe.

Research interests: Distributed and parallel processing including GPGPU, deep learning applications, computer simulation and modelling, and CS education.

PROFESSOR NOMUSA DLODLO

CS1L Course Co-ordinator
CS112 Course Co-ordinator

n.dlodlo@ru.ac.za
046-603-8544
Room 002

Professor Dlodlo holds a PhD in Computer Science from the Liverpool John Moores University (United Kingdom), a Masters in Informatics from the Leningrad Engineering and Economics Institute (Russia), a Postgraduate Certificate in Higher Education from the Namibia University of Science and Technology (Namibia), a Postgraduate Diploma in Higher Education from Rhodes University (South Africa). She is an NRF-rated researcher.

Research interests: ICT4D including ICT in education, ICT in health, ICT in business, Internet of Things for development, blockchaining.

PROFESSOR DANE BROWN

Master's & Doctorate Co-ordinator

d.brown@ru.ac.za
046-603-8625
Room 106

Professor Brown holds a PhD in Computer Science from Rhodes University. His PhD research on multimodal biometrics involved various image processing and machine learning techniques. His MSc from the University of the Western Cape involved efficient parallel processing techniques on both the CPU & GPU in South African Sign Language recognition. He is a passionate lecturer in Computer Science and a member of SAYAS and IEEE.

Research interests: Computer vision in agriculture and marine biology, signal processing, machine learning and artificial intelligence, information security and biometrics.

DR YUSUF MOTARA

CS2 Course Co-ordinator

y.motara@ru.ac.za
046-603-8628
Room 025

Dr Motara is a graduate of Rhodes University with a PhD in Computer Science. He lectures occasionally, but prefers to teach.

Research interests: Functional programming, modeling, software development, computer science education.

DR ZELALEM SHIBESHI

CS302 Course Co-ordinator
On sabbatical (Jan – Jun)

z.shibeshi@ru.ac.za
046-603-8626
Room 003

Dr Shibeshi holds a PhD from Rhodes University, a BSc in Physics, an Associate Degree in Computer Science, and an MSc in Information Science, all from Addis Ababa University, Ethiopia. He worked as a Senior Lecturer at the University of Fort Hare before joining Rhodes University.

Research interests: Multimedia service development and real time communication, APIs for Telco services, machine learning (especially NLP), information retrieval, and IoT in agriculture.

MR JOSH VAN STADEN

CS301 Course Co-ordinator

joshua.vanstaden@ru.ac.za
046-603-8294
Room 101

Mr van Staden obtained his MSc in Physics researching radio interferometry. His thesis focused on implementing accelerated models of the radio antenna primary beam, along with extended radio sources. He is currently in the process of working towards a PhD in the field of machine learning, which is where his research interests currently lie. Specifically, he has a keen interest in computer vision, and using it as a form of non-invasive biometric in video footage.

Research interests: Computer vision and machine learning.

DR STONES DALITSO CHINDIPHA

Honours Course Co-ordinator
On sabbatical (July – Dec)

s.chindipha@ru.ac.za
046-603-8293
Room 006

Dr Chindipha obtained his PhD in Computer Science from Rhodes University, in which he explored the feasibility of collecting cyber threat intelligence using smaller network sensors and datasets. His novel mathematical models developed in the process, maintained high accuracy despite reduced data range and volume. His Master's degree delved into cyber threats from open-source intelligence data.

Research interests: Network security, cyber security, information security analytics, big data analytics, cyber threat intelligence, malware analysis and applications of machine learning in network and cyber security.

MR MARC MARAIS

CS1 Course Co-ordinator

marc.marais@ru.ac.za
046-603-8371
Room 105

Mr Marais holds an MSc in Computer Science from Rhodes University. His thesis focused on applying pose estimation and deep learning techniques for signer-independent sign language recognition. Currently, his PhD research focuses on pose-based continuous sign language recognition and translation.

Research interests: Computer vision in sign language processing, machine learning, and pose estimation applications.

MR BILLY MORGAN

Manager: ICT

b.morgan@ru.ac.za
046-603-8291
Room 119

Mr Morgan has a background in electronics and worked in industry for a number of years before taking a position at Rhodes University. He is a graduate of Rhodes University in Computer Science and Information Systems.

Research interests: Developing workspace integrated solutions to streamline business processes.

MR OLA TERU

Senior ICT Specialist

agboola.teru@ru.ac.za
046-603-8264
Room 118

Mr Teru is an IT professional with an academic background in Physics and Electronics, and an MSc degree in Physics (Microwave Energy) from the University of Fort Hare, Alice, where he worked in the ICT Department of the University before joining Rhodes University at the end of 2024. His career spans over 15 years, during which time he held various IT roles, including Systems Administrator and IT Support Manager.

Research interests: To adapt technology in support of business objectives. Strong advocate for open-source software.

MRS JILL JAPP

Senior ICT Specialist

j.japp@ru.ac.za
046-603-8291
Room 120

Mrs Japp obtained a BCom degree, majoring in Accounting, Computer Science, and Information Systems from UPE (now NMMU) in 2002. She started her career in IT support in Durban, working for a software development company. After relocating to PE as an IT Consultant for the SpecSavers group, she moved to Grahamstown to take up the position of Software Support Consultant in the IT Division at Rhodes University at the end of 2004. She joined the department in January 2007 as ICT Specialist, and Senior ICT Specialist in 2023.

Research interests: Digital design and forensics.

MRS CARO WATKINS

Admin Manager

c.watkins@ru.ac.za
046-603-8291
Room 011

Mrs Watkins is a Computer Science graduate of UCT and worked in the IT industry for 15 years as a programmer, analyst and later as a project and support manager. She now manages the administration for the department.

MS MICHELLE COUPÉ

Office Administrator

m.coupe@ru.ac.za
046-603-8244
Room: Reception

Ms Coupé handles the finances for the department. She is also the IS departmental administrator.

MS NOLU PLAATJIE

Admin Assistant

nolubalalo.plaatjie@ru.ac.za
046-603-8291
Room: Reception

Ms Plaatjie is the CS departmental administrator and also shares responsibility for other administrative and financial functions in the department.

MS LUTHANDO NKAYI

Receptionist/Administrator

luthando.nkayi@ru.ac.za
046-603-8247
Room: Reception

Ms Nkayi is the receptionist and shares responsibility for the administrative functions in the department.

Departmental Dynamics

COMMUNICATION WITH THE DEPARTMENT

One of the distinctive features of Rhodes University is the accessibility of the academic staff. We strive to run an open and approachable department, and encourage feedback on all aspects. We are eager to know about problems you might have that pertain to our courses. Please approach the appropriate people with your concerns. If you don't know who the appropriate person is, the departmental administrators are a good place to start.

In addition to academic support, Rhodes University has structures for dealing with crises that may be affecting your personal and academic lives. We encourage you to make use of the Student Advisor's office and the various counselling facilities that exist on campus. These facilities may also refer you to other divisions on campus that can help out with your particular needs.

ADMINISTRATION

Our departmental administrators are Ms Michelle Coupé and Ms Nolu Plaatjie. Theirs are the friendly faces in the Hamilton Building reception. You should consult them about any general administrative matter (submitting leave of absence forms, collecting handouts, looking for lost property, and so on) during office hours.

CLASS REPRESENTATIVES

During the first few weeks of the year, we ask each class to elect a class representative to liaise with the Department on issues of common concern to the class as a whole. We encourage you to communicate with your class representative, but this should not preclude individuals from approaching the staff of the Department directly.

SUBJECT LECTURERS

Concerns about specific subject topics should be directed to the lecturer presenting that topic. They are present at practical sessions as well as lectures, and you should arrange an appointment with them at a convenient time if you need anything more than a quick reply. While we welcome your feedback, it should be remembered that courses cannot be tailored to individual preferences.

TUTORIAL ASSISTANTS

All undergraduate classes have tutors who are senior students in the Department. They assist with laboratory sessions and tutorials. Please make use of these tutors during the times that they are available. Please respect their time outside of official tutorial and practical slots; the graduate tutors are also at Rhodes to work on their degrees, and if you see them sitting in the laboratory late at night, it means that they are under pressure from their own work, not waiting to help you with your uncooperative computer.

COURSE CO-ORDINATORS

You should approach your course co-ordinator with any issue that you cannot take to your current lecturer, or that concerns the structure of the course as a whole.

Course co-ordinators for this year:

CS1L	Prof. Nomusa Dlodlo
CS112	Prof. Nomusa Dlodlo
CS1	Mr Marc Marais
CS2	Dr Yusuf Motara
CS301	Mr Josh van Staden
CS302	Dr Zelalem Shibeshi
Honours (Sem 1)	Dr Dalitso Chindipha
Honours (Sem 2)	Mr Josh van Staden
MSc & PhD	Prof. Dane Brown

DEPARTMENTAL ADMIN MANAGER

Mrs Caro Watkins is the departmental Admin Manager, and deals with student problems that cannot be solved by the administrators.

HEAD OF DEPARTMENT

The Head of the Department is your final recourse in the Department, and should generally be approached only when the other avenues have not solved your problem, or when referred by a lecturer. Please email him to make an appointment to see him.

TECHNICAL PROBLEMS

Please report faults in the Hamilton labs to cis-support@ru.ac.za. Please note that students are **not allowed** to attempt to repair any piece of hardware themselves. Even if you are technically very competent, this could lead to problems with our insurance policy.

COURSE ASSESSMENTS

All courses have a pass mark of 50%. A supplementary examination is granted only if a student attains a course mark between 40% and 49%. From 2025, all examinations have a subminimum of 40%. This means that if you have attained a pass mark for the course, but have failed to reach the subminimum of 40% for any examination contributing to that course mark, you will need to rewrite the examination(s) and obtain 40% or more in order to pass the course. Note that aggregation cannot take place if you have a failed subminimum (FSM) for any of the courses being aggregated.

A final year student who requires only one semester credit to graduate is normally granted a last-outstanding course supplementary examination.

The final mark for each course consists of a semester and an exam mark. Information on the relevant ratio of semester vs. exam marks per course is given in the respective course pages in this handbook. The weighting of the various components included in the semester mark, however, is left to the discretion of the lecturer in charge of the course, and might only be finalised on completion of the course.

COURSE EVALUATIONS

In the Department of Computer Science, we regularly ask you to fill in course assessments, and your responses are taken seriously. Please fill in your course assessments as conscientiously as you can. They are extremely valuable in improving our courses and facilities.

RESOURCES

Textbooks: Prescribed textbooks are available from Van Schaik Bookstore.

Course material: Course notes are printed by the Department for some of the modules.

Library: The University Library has an excellent holding of Computer Science textbooks.

RUconnected: The Departmental RUconnected pages have all relevant information regarding the courses, often including additional readings and other resources.

ROSS: Please ensure that you check these pages regularly and ensure that all discrepancies in marks are reported to the secretaries.

LEAVE OF ABSENCE (LOA)

Leave of absence will only be granted for health and tragic reasons, e.g. death in your immediate family, and rarely for occasions such as attending interviews, sporting functions, weddings, religious and cultural events or other social occasions. As preparation for entering the workplace as a professional, we expect you to make every reasonable effort to meet deadlines and to observe professional standards for requesting time off for genuine illness. Please apply for an LOA at reception. They are not granted until they have been signed by a member of the Department.

Tests

If you are granted an LoA for a test, you will receive the average of all your tests for the semester. Should you miss more than one test, you will receive zero for subsequent missed tests.

Practicals

For the first-year courses (CS1L, CS112, CS101 and CS102), if you are granted an LoA for a practical, you will receive an average of your practicals for that section. You will be given an average for at most two practicals. All missed practicals thereafter will receive zero. For senior courses (CS2 and CS3), you need to ask your lecturer for an extension via email to allow you to complete the practical in your own time. The extension is granted at the lecturer's discretion. Normally, a maximum extension of one week will be granted for this purpose.

PROGRAMMING COMPETITIONS

There are several intervarsity programming competitions that take place throughout the year, including:

- Standard Bank IT Challenge – sometime between May and August.
- ACM South Africa Programming Contest – normally late in the 2nd semester.

- Cluster Competition run by the Centre for High Performance Computing – first round involves a week-long summer school in the July holidays, and the final round is a 5-day competition in late November/early December.
- SanRen Cyber Security Challenge – final round in early December, but this is normally only open to Honours students.

Details of these events will be circulated to eligible students when they become available.

BURSARIES

Full details of the bursaries available to students at Rhodes can be obtained from the University Financial Aid Office. Several companies offer contractual bursaries to Computer Science students (these are the kind that you have to work back), and details of these will be emailed to students as they become known.

MONITORING YOUR PROGRESS

Practical marks are not a reliable indicator of what your final performance in the course is likely to be. A combination of your test mark and your practical mark (in the ratio of exam to semester mark weightings) is a more reliable indicator. These marks are almost always released on ROSS and/or RUconnected.

DP requirements exist to help ensure that you keep up with the course. Failure to meet these requirements can severely affect your chances of being permitted to write the exams. The onus is on you to ensure that you are meeting the requirements! Attitudes at university are rather different from those in many schools.

If you show little interest or skip classes, you may find that the staff show no sympathy when you fail. Since computer studies are not offered in all schools, we have to start by accommodating many of the students who may have had little or no experience with a computer. Initially, courses may seem "easy" to some, but it is unwise to develop bad habits because you think it is a "walk in the park". Our experience has shown that good Computer Science students come to lectures and keep up with their work. BE WARNED - the pace hots up, and it is very easy to be left behind if you don't stay on top of the workload.

Did you know that if you work harder, you will pay lower tuition fees? Rhodes University offers tuition fee rebates for undergraduate students who achieve good marks. Similarly, Rhodes offers scholarships for postgraduate degrees based on previous academic achievement. Details are available from the Financial Aid Office or from the Division of Student Affairs.

SMOKING

There is a no smoking policy in Rhodes University buildings. If you want to smoke, please do so outside of the building, at least 10 meters away from any entrance or window.

UNDERGRADUATE LABORATORIES

The Jacaranda Laboratory will be the venue for CS1L and CS112 practicals. The Jacaranda laboratory, along with the Union, the Eden Grove and Fountain labs, are general undergraduate laboratories, exclusively for the use of Rhodes students. As such, they are YOUR LABORATORIES, and you need to take responsibility for keeping them tidy and pleasant to work in.

The Undergraduate Laboratories in the Hamilton Building are exclusively for the use of currently registered Computer Science first-, second- and third-year students, as well as Information Systems 202 and third-year students. We also accommodate other Computer Science and Information Systems courses where possible. Since it is your lab, you are entitled to ask anyone who is not a Computer Science or Information Systems student, or is doing something that is clearly not part of their Computer Science or Information Systems assignments, to vacate a workstation so that you can make use of it. We will support you when you do this, so don't be shy.

The Hamilton labs will be closed for maintenance after the last CS/IS exam and for the long vacation, as well as occasionally during term time at the discretion of the technical section. Please report faults in the Hamilton labs to cis-support@ru.ac.za.

LOST PROPERTY

Lost property, e.g. USB drives, pencil cases, books, keys, cell phones, cell phone chargers, clothes, etc., that you pick up in the lab, should be handed in to the Hamilton reception. After a week, personal items will be sent to Campus Security.

EQUIPMENT

The undergraduate and postgraduate labs in the Department of Computer Science house up-to-date personal computers and high-end research equipment. The Windows operating system has a broad range of installed software to support the students' learning. Postgraduates get to choose and install their own operating system that is best suited to the work they do.

The high-end research equipment is specialised. Groups and interest areas like Security, Machine Learning, GPGPU, Robotics, Image Processing, Networking, and our Telkom Centre of Excellence are appropriately equipped for their respective work.

All computing facilities are networked, and all students are granted access to the Internet. Our networking facilities are excellent. Computer facilities are granted to all users of the system for education purposes only, on the understanding that they will be used only by the person to whom they were granted. See the "Acceptable Use Policy" below. At the same time, we like to encourage those students who wish to get computer experience outside the narrow confines of the course exercises. You are welcome to work on extramural projects, as long as you accept that students doing course-related academic work must be given priority in a crowded lab environment.

Students should ensure that their work is backed up regularly. Having your own external hard drive or USB stick will come in handy.

All the computer equipment and software required to complete coursework is provided for students using the laboratories. However, for undergraduate students who do want to get a laptop, we suggest that they go with the same minimum specification as our lab computers - Intel 12th Gen i5, 16GB RAM, 1TB SSD and running Windows 11 Pro. For licensing reasons, not all the software needed can be installed on private laptops. Any postgraduates wanting to purchase a laptop to complement their postgraduate studies should discuss the requirements with their supervisor.

PRINTING

Laser printing is available on all floors in the Hamilton Building, and in the general labs. Students need to transfer funds via ROSS, and MUST specify which labs they will be printing from. Please remember that computer paper costs money and has an impact on the environment; try to keep paper wastage down.

ACCEPTABLE USE POLICY (AUP) FOR RHODES UNIVERSITY COMPUTER EQUIPMENT

To obtain permission to use the general computing facilities, you need to agree to adhere to the following conditions:

- Only staff and students of the University are allowed to use the computing facilities. No one else may be present in the laboratories without permission.
- You may not allow another person to use your facilities, or make use of facilities allocated to another person (i.e. don't log in using someone else's login credentials).
- Equipment is to be used responsibly. Don't meddle with parts of the computing systems to which you do not have the right of access. Do not attempt to bypass security mechanisms put in place by the IT Division of the University.
- The software and manuals made available for your use are the property of Rhodes University. You may not make copies of them or remove them from the premises without written permission.
- You are required to observe instructions that are issued specifying ways in which the facilities shall be used.
- Anyone who violates these conditions will be subject to disciplinary action.
- Rhodes University accepts no responsibility for the integrity of computing facilities. You should keep your own backups of valuable work.
- These conditions of use may be varied from time to time at the discretion of the IT Director.
- Permission to use the computing facilities will normally be granted for one calendar year at a time.

This is a simplified version of the acceptable use policy - the full version is more wordy and can be found at https://www.ru.ac.za/media/rhodesuniversity/content/institutionalplanning/documents/policies/Acceptable_Use_Policy_2023.pdf. Before you are allowed to make use of computing facilities, you have to agree to adhere to the full version and to cooperate fully with any inquiry into your use of Rhodes' facilities.

ADDITIONAL NOTES REGARDING THE USE OF HAMILTON BUILDING INFRASTRUCTURE

- All of the standard Rhodes University AUP rules apply to the facilities in the Hamilton Building.
- The Hamilton Building infrastructure exists in part to support your courses in the Department of Computer Science. You are encouraged to make use of the facilities to store your coursework, but you are advised not to store personal or private data or email on the systems or servers as the administrative policy is one where the Systems Administrators have complete access to everything. We routinely inspect data stores for contraband files and may need to inspect user profiles if diagnosing problems.
- While we take reasonable measures to ensure the integrity and safety of the data stored on our servers, we do not make any guarantees about this. Keep your own backups of data that you cannot afford to lose.

A more detailed series of notes regarding the infrastructure, services and facilities available in the Hamilton Building may be found at *http://www.ict.ru.ac.za/*. This resource will be updated from time to time, so it is worth reviewing occasionally.

PUBLIC HOLIDAYS

To keep all practicals in step with lectures for each week, practicals that fall on a public holiday will be held on an alternative weekday, normally from 7 pm to 10 pm, as follows:

If a public holiday falls on a	The practical will be rescheduled on
Monday	Following Tuesday night
Tuesday	Following Wednesday night
Wednesday	Following Thursday night
Thursday	Previous Tuesday night
Friday	Previous Wednesday night

Plagiarism Policy

Students are referred to the University's Policy on Plagiarism, which gives full details of the processes to be followed in cases of plagiarism. This document serves to give specific details of the Department's implementation of this policy, and is subject to the provisions of the University policy and any changes that may be made to it.
(See https://www.ru.ac.za/media/rhodesuniversity/content/institutionalplanning/documents/policies/Common_Faculty_Policy_ and_Procedures_on_Plagiarism.pdf)

DEFINITION OF PLAGIARISM

The University defines plagiarism quite simply as "taking and using the ideas, writings, works or inventions of another, from any textual or internet-based source, as if they were one's own". In Computer Science, "ideas, writings, works or inventions" includes computer programs, or parts of computer programs. One of the most common instances of plagiarism encountered in Computer Science is the unacknowledged submission of part or all of another person's work as one's own work for practical assignments. This, or any other instance of plagiarism (e.g. unacknowledged referencing or direct quotation), is taken very seriously by the Department and by the University.

UNLESS EXPLICITLY PERMITTED TO DO SO BY THE RELEVANT LECTURER, STUDENTS SHOULD NEVER SUBMIT ANYTHING THAT IS NOT THEIR OWN WORK FOR ANY ASSIGNMENT. NOTE THAT WORK GENERATED BY AN AI TECHNOLOGY IS NOT CONSIDERED TO BE YOUR OWN WORK. IF A STUDENT IS IN ANY DOUBT AS TO THE LEGALITY OF THE USE OF ANY MATERIALS OR ASSISTANCE RECEIVED FOR AN ASSIGNMENT, THEY SHOULD CONSULT THE LECTURER FOR CLARIFICATION.

Students should also note that assisting someone else to commit plagiarism (e.g. by providing them with your work, which they then submit as their own) is just as serious an offence as the act of plagiarism itself, and will be dealt with in the same way, with the same penalties.

DISCIPLINARY PROCEDURES

All cases of plagiarism are subject to disciplinary procedures as laid down in the University's Plagiarism Policy, and are handled by the Department's Plagiarism Committee.

Plagiarism Committee

The Department Plagiarism Committee consists of two independent members of the academic staff, appointed by the Head of Department. The Department Admin Manager may also be in attendance at the hearing to provide administrative support.

Classification of Plagiarism

The University Policy categorises plagiarism into three classes:

a) First time, minor infringements. These are handled directly by the staff member who detects the offence, or who set the assignment. A student who wishes to appeal a Category A offence may write to the Head of Department, and the Departmental Plagiarism Committee will hear the matter.
b) Repeated minor offences, minor offences at senior levels, or first-time, more serious offences. These will be reported to the Head of Department and referred to the Department Plagiarism Committee for a hearing.
c) Major, extremely serious infringements, such as plagiarism in assignments that comprise more than 30% of the final mark. These will be referred to the Senate Standing Committee on Plagiarism for a hearing.

Penalties

For Category B offences, the Department Plagiarism Committee shall consider the case and make a decision on the severity of the offence and, where appropriate, the penalty to be applied. The usual scale of penalties is as follows:

First, minor offence: a drastically reduced mark (often zero) awarded for the entire assignment for all students involved.
Second offence, or major offence: loss of the DP certificate for the course.

The usual penalties may be increased or reduced at the discretion of the Department Plagiarism Committee, depending on the facts of each individual case. Offences older than two years will not be held against you.

You will receive a finding in writing, including reasons, if the Department Plagiarism Committee finds against you, within five (5) days of the hearing.

Appeals
A student may appeal the findings of the Department Plagiarism Committee or the penalty imposed to the Head of Department. The HoD, in consultation with the Department Plagiarism Committee, will consider the appeal and make a final decision (if the HoD is the complainant, another senior member of the academic staff will take his/her place).

NOTE: A possible reason for appeal is for a student whose work has been used to submit proof that their involvement in the plagiarism incident was without their knowledge or active participation. In such cases, the marks for the assignment will usually be reinstated, or the withdrawal of the DP certificate reversed. Appeals for partial marks to be awarded for the assignment will not be considered.

Final Appeal
The final decision of the Department Plagiarism Committee may be appealed to the University's Senate Standing Committee on Plagiarism. However, students should note that very serious penalties may be applied by the Senate Committee, and that this is not a step to be taken lightly. An appeal must be lodged within five (5) days of receiving written reasons for the Department Plagiarism Committee's decision.

Reporting
Students should also note that all cases of plagiarism are recorded and are reported to the Senate Standing Committee on Plagiarism periodically. Should your DP be removed, it will be indicated on your academic record.

DP Regulations

The University has a system whereby students who perform badly, or who do not meet minimum attendance standards, are not granted a "DP Certificate" ("DP" stands for Duly Performed). Without the "award" of such a certificate – they do not actually exist in paper form – a student is not permitted to write the final and crucial qualifying examination in the particular subject. You are expected to attend all class lectures, tutorials, and practical sessions. The requirement that you submit all assignments and tests is strictly enforced. In particular, each practical assignment must be completed and submitted on or before the due date specified for that assignment. Usually you are given about a week to complete each exercise, and even if you are ill at the time of a practical class you will normally be expected to make up the work in your own time.

Besides the "official" tests as scheduled in this handbook, lecturers are free to set other tests at very short notice. These also fall within the rules laid out here.

DP REGULATIONS FOR CS1L, CS112, CS101 & CS102 ONLY

The nature of the CS1L, CS112, CS101 and CS102 semester courses require that a different set of DP regulations be applied.

- For your CS1L DP to be granted, you are required to maintain an average of at least 50% for your practicals, and achieve an average of at least 40% for your tests.
- For your CS112, CS101 and CS102 DP to be granted, you are required to maintain an average of at least 40% for your practicals and achieve an average of at least 40% for your tests.
- No extensions will be granted for tests, but you may be given an average at the end of the semester if you have been granted a leave of absence.
- Practical assignments and tests missed without leave of absence will gain you a mark of 0 (zero). It is in your best interest to ensure that you hand in all practical assignments and write all tests, otherwise, you will endanger your chances of achieving the minimum requirements as stated above. You are encouraged to keep your test and practical marks as high as possible so that you don't endanger your chances of achieving the minimum requirements.

DP REGULATIONS FOR SENIOR UNDERGRAD COMPUTER SCIENCE COURSES

- When circumstances dictate (for example, in the case of extended illness), an extension of up to three days may be allowed. Only in exceptional circumstances will extensions beyond that time be allowed, and assignments will never be accepted after model solutions have been released.
- If you have achieved an average of less than 30% for tests by the end of the semester, your DP will be refused.
- Unless you maintain an average of at least 40% for practicals, your DP will be refused.
- The student bears the onus of proof for disputes around practical hand-ins.
- Extensions for practicals will only be granted when a leave of absence is granted.
- Evidence of any concessions must be in writing and signed by a staff member of the Computer Science Department.
- It is your responsibility to make sure that you have signed any class attendance registers that are circulated. Students caught signing the class register on behalf of others will face disciplinary action.

DP SUMMARY

The Department is under no obligation to issue friendly warnings to students who do not meet the requirements outlined above. If you fail to perform duly, you will not be awarded your DP. After that, any appeals must be made in writing, and are unlikely to succeed.

With respect to work that is not submitted, the following will apply separately in each semester.

With leave of absence: first-year courses		Credit	Penalty
Practicals	for the first two not handed in on time	You will be given your practical average for the relevant section in the semester.	No DP penalty
	for the third and subsequent ones not handed in on time	You will be awarded a mark of zero.	DP may be refused
Tests or Tutorials	for the first one missed	You will be given your test average for the semester.	No DP penalty
	for the second and subsequent ones missed	You will be awarded a mark of zero.	DP may be refused

With leave of absence: senior courses		Credit	Penalty
Practicals	for the first two not handed in on time	You must submit the assignment within any extended time allowed for you for credit to be granted, otherwise a mark of zero will be awarded.	No DP penalty
	for the third and subsequent ones not handed in on time	You will be awarded a mark of zero.	DP may be refused
Tests or Tutorials	for the first one missed	You will get your test average for the semester.	No DP penalty
	for the second one missed	You may be allowed to take a make-up test; if not, you will be given a mark of zero.	No DP penalty
	for the third and subsequent ones missed	You will be awarded a mark of zero.	DP may be refused

With no leave of absence: all courses		Credit	Penalty
Practicals	for the first two not handed in on time	You will be awarded a mark of zero.	No DP penalty
	when the next one is not handed in	You will be awarded a mark of zero.	DP may be refused
Tests or Tutorials	for the first one missed	You will be awarded a mark of zero. No chance will normally be given to “catch up”.	No DP penalty
	when the next one is missed	You will be awarded a mark of zero	DP may be refused

DP WITHDRAWALS, EXTENDED DPS, AEGROTATS, LEAVE OF ABSENCE

The Computer Science Department has separated three roles:

- **Legislature:** We make our rules in keeping with University policies. We don’t amend them on the fly. They protect our courses and our students. They are in this handbook. They are not attendance-based, but are based on performance. They are particularly lenient with low subminima – this guards against you having one or two “bad days”. If you don’t make one of our DP subminima, even on a close miss, you are nowhere near having performed adequately. Do the course again.
- **Judiciary:** Did we apply the rules correctly in accordance with the facts of the case? We will rectify any errors we may have made.
- **Clemency & Appeals:** We don’t do this! We accept the need for appeals, but these need to go to the higher authorities who take a global view of your overall situation, be it academic or personal. The Dean of your faculty is the appropriate person to look at your overall academic performance and your plans to obtain your degree, and can make a recommendation to our Department. Similarly, the Division of Students Affairs’ office has qualified people who can assess your personal circumstances and make recommendations to our Department.

Submit any appeals in writing to the appropriate Dean within two weeks of the event. The Dean will make a recommendation to the Head of Computer Science.

Please do not come to the staff of the Department with your reasons for why a decision to remove your DP should be reconsidered. We want to be helpful, but we are not qualified to make judgements on non-academic grounds, and so we do not consider "DP appeals". Put them in writing to your Dean who is in a better position to evaluate your claims with regard to your overall academic programme and best interests.

EXTENDED DP

In exceptional circumstances, the Department may grant an extended DP. An extended DP allows a student to repeat the course without having to fulfil the coursework requirements. The coursework mark for the previous registration of the course will be carried forward. To be granted an extended DP a student's semester mark must be greater than 60% and exam mark must be greater than 40%. If the semester was passed and the student wishes to upgrade the mark, then the 60% semester mark condition may be waived.

PRACTICAL SUBMISSION RULES

The following rules will apply to any practicals submitted during the year:

- CS112 & CS1L practicals assigned during a practical session must be completed and handed in by the end of the week (unless the lecturer in charge specifically indicates otherwise).
- For CS1 and senior courses, a practical assigned during a practical session must be completed by the next practical session (unless the lecturer in charge specifically indicates otherwise).
- Practicals must be submitted via RUconnected, or as required by the lecturer.
- No late practicals will be accepted unless you have a leave of absence in which case you must hand in the practical by any extended deadline that has been set.
- Unless submitted via RUconnected, the correct, fully completed cover sheet must accompany each practical submitted. Otherwise, the practical will not be accepted (you will receive a mark of zero).
- You will only be permitted to change practical days under extreme circumstances. If this is on a temporary basis, it is your responsibility to ensure your practical is still submitted during the practical session to which you are normally assigned.
- Marked practicals will be handed back during the following practical session after the session in which the practical was handed in. Please complain to the lecturer in charge if this does not occur.
- Teamwork in practicals can only take place with the **explicit** approval of the lecturer concerned. Team composition must be ratified in writing with the lecturers concerned.