Computer Science Lecturers' Association

NEWS

Maart 1983 March

NUUS

Rekenaarwetenskap-dosentevereniging

CONTENTS

INHOUD

EDITORIAL

The first quarter of 1983 is well under way and everybody is
hard at work. We hope that 1983 will be a very prosperous year
for all of us!

I would like to extend my thanks to everybody for the friendly
cooperation I have experienced so far in matters relating to the
association.   Thank you for your willingness to supply informa-
tion on curriculum design for publication in the previous edition
of the news letter.   I sincerely hope that the contents will be
of practical value.   While in a thanking mood, I would like to
acknowledge your friendly help in supplying a list of prescribed
books for publication in this news letter.   I am also grateful
for the news items I have recieved on activities in your depart-
ment.

I would like to extend a farewell bid on behalf of the society to
all our colleagues who have left us at the end of 1982.   At the
same time we wish all the new colleagues who have joined our ranks
a harty welcome.   We trust that they will have a long and plea-
sant association with our society.

This issue of the news letter covers news on the coming conference;
has news of general interest and is concluded with a list of pres-
cribed text books in use at the universities and technikons
during 1983.

ENJOY YOUR READING!

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REDAKSIONEEL

Die eerste kwartaal van 1983 het reeds ver gevorder en almal is hard aan die werk. Ons vertrou dat 1983 vir een en almal net die beste sal oplewer.

Ek wil graag u almal bedank vir die vriendelike en heelhartige samewerking tot dusver in sake wat die Vereniging raak. Baie dankie vir u bereidwilligheid om die gegewens in verband met u leerplanne en kursusse beskikbaar te stel vir publikasie in die vorige uitgawe van die nuusbrief. Ek vetrou dat die informasie daarin vervat van bruikbare waarde sal wees. Ek wil dan sommer ook almal bedank wat informasie oor voorgeskrewe handboeke gestuur het vir publikasie in hierdie nuusbrief. Baie dankie ook vir die nuusbrokkies oor aktiwiteite in u departement wat ons ontvang het.
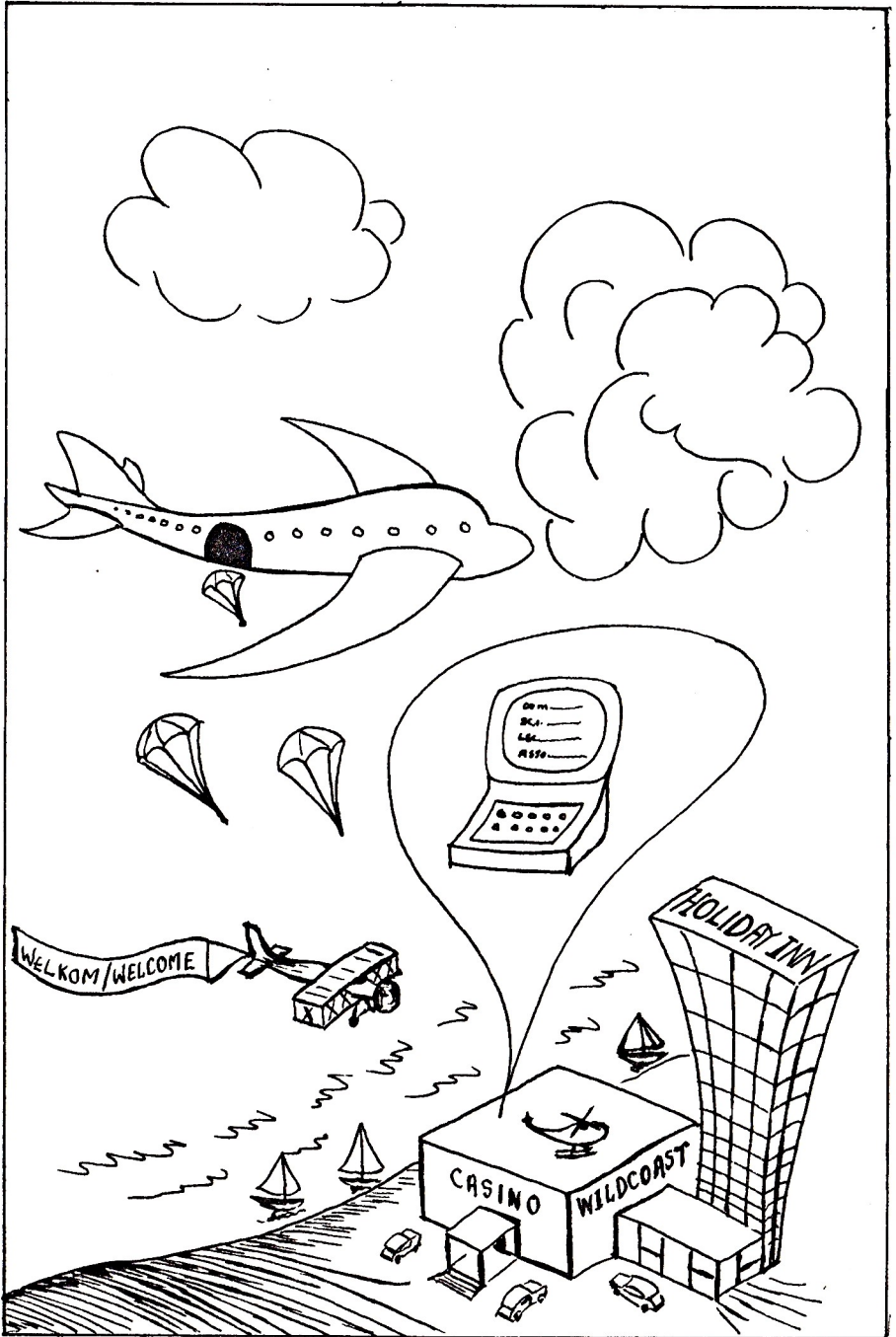
Ons wil namens die Vereniging sterkte aan al die kollegas toewens wat ons geledere verlaat het. Baie welkom ook aan nuwe kollegas wat sopas, by ons aangesluit het. Ons vertrou dat u 'n lang en aangename verbintenis met die Vereniging sal hê.

Hierdie uitgawe word gewy aan nuus oor die komende konferensie; aan algemene nuusbrokkies en aan 'n lys van voorgeskrewe handboeke wat by die universiteite en technikons voorgeskryf is vir 1983.

LEKKER LEES!

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KONFERENSIE 1983

Soos u seker almal teen hierdie tyd weet het die firma CDC
goedgunstiglik ingestem om die 1983 konferensie te borg.   Ons
wil langs hierdie weg namens die Vereniging vir CDC by voorbaat
bedank vir hulle bereidwilligheid om die 1983 konferensie 'n
werklikheid te maak.

Die konferensie vind vanaf Woensdag 29 Junie tot Vrydag 1 Julie
1983 plaas by die Wildcoast Holiday Inn net suid van Port
Edward langs die Transkeise kus.

VERVOER EN VERBLYF-REëLINGS

Die basiese pakket wat in samewerking met CDC uitgewerk is, is
die volgende:

'n Bydrae van R100,00 per konferensieganger word gevra.   Hierdie
bydrae dek 'n retoervliegtuigkaartjie vanaf die naaste lughawe aan
u universiteit tot op die lughawe Louis Botha by Durban; 'n retoer
buskaartjie vanaf Louis Botha tot by die hotel; 'n dubbelkamer vir
twee nagte wat u met een ander konferensieganger deel; alle ge-
wone etes gedurende die konferensie asook 'n formele dinee op Don-
derdagaand.

Ten einde die vervoerkoste so laag moontlik te hou word die lug-
diensbespreking volgens die APEX-stelsel gedoen, waar besprekings
minstens twee maande vooruit gemaak moet word.

Teen die tyd dat hierdie nuusbrief u bereik, sal u hopelik reeds
'n persoonlike uitnodiging van CDC ontvang het.   Indien u moontlik
nie 'n uitnodiging ontvang het nie, moet u my asseblief so spoedig
moontlik kontak.

ONDERWERPE VAN DIE KONFERENSIE

Alhoewel 'n hele aantal onderwerpe van algemene belang gedurende die
konferensie bespreek sal word, sal die klem op twee temas val,
naamlik:

(1) Die benadering tot navorsing by die onderskeie universiteite.

(2) 'n Toekomsblik op die ontwikkeling van Rekenaarwetenskap in
     Suid-Afrika met spesiale verwysing na die rol van universi-
     teite en technikons.

Ten einde die bal aan die rol te sit ten opsigte van die eerste
tema, word elke universiteit versoek om skriftelik 'n kort opsomming
van navorsingsaktiwiteite wat tans onderneem word aan my deur te
stuur voor 15 Mei 1983.   Verder moet elke universiteit 'n verteen-
woordiger benoem om die verslag tydens die konferensie voor te dra.

Die verslag moet redelik oorsigtelik van aard wees met 'n maksimum voordragtyd van 10 minute. Na afhandeling van die onderskeie verslae sal twee sprekers 'n samevatting van die verslae lewer ten einde 'n navorsingsprofiel te identifiseer, terwyl elke spreker ook sy siening ten opsigte van 'n definisie van 'n basiese navorsingsmodel sal gee.

Wat die tweede tema betref, naamlik 'n toekomsblik op rekenaarwetenskap in die RSA, sal een spreker die rol van die universiteite toelig, terwyl 'n tweede spreker die rol van die technikons sal bespreek. Die onderwerp word afgelsuit met 'n paneelbespreking.

SPREKERS

Deur die bemiddeling van CDC het ons die dienste van dr Conrad Wogrin, direkteur van rekenaardienste aan die universiteit van Massachusetts en voormalige voorsitter van CDC se gebruikersgroep bekom. Op hierdie stadium is dr Wogrin se onderwerp ongelukkig nog nie bekend nie.

Dr Dewald Roode van die RGR en professor honorêr aan die universiteit van Pretoria het goedgunstiglik ingestem om die onderwerp oor die ontwikkeling van rekenaarwetenskap vanuit die oogpunt van universiteite in te lei, terwyl mnr Hennie Groenewald van die Pretoria Technikon oor die rol van die technikons sal praat.

Prof. Roelf van den Heever en prof. Denis Riordan is die sprekers wat die problematiek rondom navorsingswerk sal toelig.

Prof. Ken MacGregor van die universiteit van Kaapstad het vriendelik ingewillig om die toespraak tydens die dinee te lewer.

Ons wil sommer nou reeds al die sprekers by voorbaat bedank vir hulle bereidwilligheid om tydens die konferensie op te tree.

Behalwe die reeds genoemde sprekers, sal die voorsitters van sessies en paneellede later aangekondig word.

Liewer laat as nooit !!!

CONFERENCE 1983

As almost all of you certainly know by this time, the firm CDC
has kindly agreed to act as sponsor for the 1983 conference. Our
Society would like to thank CDC before hand for their generous
gesture, making the 1983 conference a reality.

The conference is scheduled from Wednesday June 29, to Friday
July 1, 1983 at the Wild Coast Holiday Inn just south of Port
Edward, along the Transkei coast.

TRANSPORT AND ACCOMODATION ARRANGEMENTS

The basic package, negotiated with CDC consists of the following:

A contribution of R100,00 per delegate is payable to CDC.   This
contribution covers a return air ticket from your nearest airport
to Louis Botha near Durban; a return bus ticket from Louis Botha
to the hotel; a double room for two nights to be shared with another
delegate; all the usual meals during the conference as well as
the formal dinner on Thursday evening.

In order to minimize transport costs, bookings will be done on
the APEX scheme, where group bookings have to be finished at least
two months before departure.

By the time this news letter reaches you, you should have received
a personal invitation from CDC to the conference.   If you have not
received an invitation by this time, please contact me without de-
lay.

TOPICS FOR THE CONFERENCE

Although a number of topics will be discussed, the main emphasis
will be focused on the following:

(1) Research activities at the universities
(2) A preview on the development of computer science in South Africa
     with special reference to the role of universities and technikons

To kick off with the first topic, all universities are requested to
compile a short written report on research activities presently
being undertaken and to mail it to me before May 15, 1983.   Each
university is further requested to nominate one of their staff mem-
bers to read this report at the conference.   The report must be of
a general nature and must not take longer than 10 minutes to deliver.
The discussion of this topic will be continued by two speakers who
will make a summary of the different reports in order to identify
a research profile.   Each speaker will also give his personal view
on a research model suitable for South African universities.

As far as the second topic is concerned, namely a preview on the development of computer science in the RSA, the respective roles of the universities and technikons will be highlighted by two speakers.   The topic will be concluded with a panel discussion.

SPEAKERS

With the aid of CDC, the services of dr Conrad Wogrin, director of Computing at the University of Massachusetts and former chairman of the CDC user group have been obtained.   At this stage the topics to be covered by dr Wogrin are not known.

Dr Dewald Roode from the CUC and honorary professor at the University of Pretoria has kindly agreed to introduce the subject of computer science at the universities, while mr Hennie Groenewald from the Pretoria Technikon will discuss the future role of the technikons.

Prof. Roelf van den Heever and Prof Denis Riordan are the speakers on the research topic.

Prof Ken MacGregor from UCT has kindly agreed to deliver the dinner speach on Thursday evening.

On behalf of us all I would like to thank the speakers for their willingness to deliver the addresses during the conference.

Apart from the above mentioned speakers, the chairmen and panel members will be announced at a later stage.

NEWS / NUUS

We have received the following news from the different departments.

Ons het die volgende nuus van die verskillende departemente ontvang.

FORT HARE

Mr and Mrs Marsh have left for Rhodes University.
Mrs T Khalili has been appointed as lecturer and Mr MM Matibe as junior lecturer.

UNIVERSITY OF NATAL (PIETERMARITZBURG)

Mr C Scogings has left the CSIR to join the department of Computer Science here as lecturer.

Prof Ridler form Zimbabwe visited the department for a month commencing the 15th of January.   He and Prof N Phillips jointly worked on a microcomputer operating system project.

UNIVERSITEIT VAN DIE NOORDE

Mnr AG Cilliers is vanaf 1 Maart 1983 aangestel as lektor.

UNIVERSITEIT VAN PORT ELIZABETH

Mnr H Venter het die departement verlaat en werk nou by die WNNR.
Mnr MJ Wagener is aangestel as junior lektor.
Prof Gedeon de Kock is terug van langverlof wat hy by die WNNR deurgebring en navorsing gedoen het op die gebied van databasisse en inligtingstelsels.

PU vir CHO

Mnr Meyer het as gevolg van gesondheidsredes afgetree. Ons wil hom graag 'n spoedige herstel toewens.
Mej AC Molenhuis is tydelik in die departement aangestel.   Van hierdie jaar is twee personeellede naamlik Mnr Jordaan en Mev Slabbert permanent by die Vaalrivierse tak van die universiteit.

RHODES UNIVERSITY

Dr Harvey and Mr Cragg have left the department.

Mr T Marsh has joined the department as senior lecturer,
Mrs Marsh as PLATO instructor and Mr AJ Ebden as lecturer.

UNIVERSITEIT VAN WES-KAAPLAND

Wat studentegetalle hierdie jaar betref is daar 80 eerstejaars, 8 tweedejaars en 7 derdejaars.   'n Spesiale dienskursus wat 'n algemene inleiding en 'n eerste vlak Basic en COBOL programmering insluit word deur 120 studente bygewoon.
Die Plato-stelsel word in hierdie kursus gebruik.

UNIVERSITY OF THE WITWATERSRAND (DEPT. OF COMPUTER SCIENCE)

John Lazar, who recently (1982) completed B.Sc (Hons) in Computer Science at Wits, has been awarded a Rhodes scholarship. He plans to undertake graduate studies in Computer Science at the University of Oxford, commencing in September 1983. For the first six months of this year he will hold a part-time post as assistant lecturer at Wits.

Twenty registrations were received for the Higher Diploma in Computer Science, which is now in its second year. The course is intended for graduate students in other disciplines and extends over 2 years of part-time study.

Delivery of a DEC VAX 11/730 computer system for the Computer Science Department is expected within the next few weeks. The machine is intended for research and advanced teaching.

We would like to congratulate prof Judy Bishop with the new additon to her family.

UNIVERSITY OF THE WITWATERSRAND (BIS)

Miss Wanda Orlikowski having completed her M.Comm dissertation in "System Design Methods" has left Wits in order to do a Ph.D in the USA.

Mrs Estelle Brodie has joined the department after 8 years with UNIVAC where she taught programming and operating systems.

UNISA

Mnr Michael A Morris is aangestel as Senior Lektor. Hy het in 1970 sy B.Sc met Toegepaste Wiskunde en Wiskunde as hoofvakke aan Rhodes behaal, en 'n M.Sc in Digital Systems Design aan die Cranfield Institute of Technology in Engeland. Hy was verbonde aan die WNNR as Seksiehoof by Stelselsingenieurswese en Stelselbetuurder by SASOL (Secunda).

Mej Aletta Minders is aangestel as Assistent Navorser. Sy het haar B.Sc met Rekenaarwetenskap en Wiskunde as hoofvakke in 1980 aan UP verwerf en was intussen by SANLAM en YSKOR as programmeerder werksaam.

UNIVERSITY OF BOPHUTHATSWANA

We would like to welcome Mrs Carmen Eshraghi head of the Department of Data Processing to our association.

RAU

Daar is twee nuwe aanstellings in die department. Mnr Jan Eloff is aangestel as Lektor en mnr Pierre Mulder as tydelike junior lektor. Mnr Eloff het in 1980 sy M.Sc aan die RAU behaal en het die afgelope twee jaar militêre diensplig verrig waar hy werksaam was onder Kol. Von Solms.
Ons wil ook graag vir mev Danita Nel gelukwens met haar nuwe seun.

TECHNIKON NATAL

'n Univac 1100/60 iş aan die begin van 1983 geinstalleer.   Dit word gebruik
vir die administratiewe en akademiese dataverwerking van die Technikon.

Inskrywings vir die eerste jaar vir die voltydse diploma-kurus in datdaver-
werking het met 50% toegneem van 50 na 75.

Die Nasionale Hoër Diploma in Elektroniese Dataverwerking word hierdie jaar
vir die eerste keer aangebied as 'n deeltydse kursus wat oor twee jaar strek.

TECHNIKON MABOPANE OOS

Mnr GD Olivier berig dat hulle sopas die eerste studente vir die sertifikaat
en diploma kursusse in Elektroniese dataverwerking geregistreer het.   Daar
bestaan nog vakatures vir lektore.   Veral graduandi van Fort Hare en die
Universiteit van die Noorde is welkom om met hom te skakel.

REKENAARVERENIGING/COMPUTER SOCIETY

Dr Roode berrig dat die verslag van die NPI teen 15 Maart voltooi sal wees.
Daar kan verwag word dat aanbevelings in die verslag aanleiding kan gee
tot 'n interessante debat in die rekenaar gemeenskap.

REKENAAR OF KOMPER?

Ten spyte van pogings in sekere kringe in die Afrikaanse pers
om die woord "komper" in die Afrikaanse taal in te burger, blyk
dit uit 'n briefwisseling tussen prof. Roelf van den Heever en
die Huisgenoot en Beeld, dat hierdie woord nie algemene inslag
gevind het nie.

In die KENNIS-GIDS word die woord komper as volg gedefinieer:

KOMPER - Die woord is gemunt deur FL Alexander, in lewe kuns-
kritikus van Die Burger en kurator van die Joodse Mu-
seum in Kaapstad. Daar is al baie besware teen die
maaksel geopper, waarvan die vernaamste is dat dit
" 'n afleiding sonder 'n stam" is: 'n mens kan immers nie
"komp" nie. Nogtans het dit die voordeel bo rekenouto-
maat dat afleidings van komper wel geredelik gemaak kan
word: verkomper of komperiseer, komperkunde, ens. Om
'n "computer" bloot 'n rekenaar te noem, deug nie juis nie,
want die woord het reeds drie ander betekenisse, nl.
"iemand wat bekwaam kan reken", "boek met klaar uitge-
werkte antwoorde op berekenings" en "elektriese of mega-
niese rekenmasjien". Ook elektroniese rekenaar haal
nie die paal nie, want selfs 'n goedkoop sakrekenaartjie
is deesdae elektronies.

Mnr Rossouw, assistent-redakteur van die Huisgenoot skryf in sy
brief:

Ek kan dit net noem dat ons deesdae glad nie meer eintlik 'n voor-
keur vir komper het nie. Trouens, ek dink die woord rekenaar
word meer dikwels gebruik. Ek persoonlik verkies dit omdat Reg
Dodds van Stellenbosch se rekenaarsafdeling my oorreed het dat
'n "computer" niks meer is as 'n rekenaar wat miljarde sommetjies
maak nie.

Die Beeld het die volgende te sê in 'n brief aan dr Roode oor die
gebruik van die woord komper in 'n berig:

Redaksioneel het ons reeds geruime tyd gelede besluit om die
woord rekenaar te gebruik wanneer ons computers vertaal of
beskryf. Die besluit is helaas, nie tot op alle vlakke deur-
gevoer nie. Dat ons 'n eienaam soos die Rekenaarsgebruikersraad
verwring het tot Kompergebruikersraad, is ook 'n fout.... en ek
vertrou ons vermy die slaggate in toekomstige loopbaanbylaes.

Op grond van bogenoemde versoek Roelf van den Heever dat ons as
dosente waar moontlik die gebruik vandie woord **rekenaar**
onder die aandag van ons studente en ook die publiek as sodanig
sal bring.

Ons sluit ook die volgende twee rympies wat ons van Roelf ontvang
het in:

DIE KLAGTE VAN DIE REKENAAR

Sê iemand miskien 'komper' daar?
nee-wat dit maak my sommer naar.

Het jy dit ook gehoor?
Sies, dit klink nou regtig goor.

As tekenaars teken
moet rekenaars reken
en klink dit nie vir jou baie lomp
as kompers dan moet komp?

As leerlinge leer
en studente studeer
moet kompers kompileer
ai, dit maak my ore seer!

Waar met rekenaars, dit rekenariseer
sal kompers dit net kompliseer.

Sien jy nou waarom ek kla
en hoekom ek só mooi vra.....

Vir eens en vir altyd ... al is dit swaar
noem my tog 'n rekenaar!

KOMPER OF REKENAAR?

Komper of rekenaar?
Dit maak my skoon mal
Die ene werk met die ander se gal.

Dis hamers en spykers, skroewedraaiers, die lot,
alles koördineer saam in 'n bose komplot.
Nou vra ek myself af, ek wil net graag weet:
Hoe op dees aarde beitel die hardeware
antwoorde en inligting op mense se vrae?

Apparatuur, ja, dit klink meer na die ding
waarmee mens vrae stuur en waardeur jy dan kry: inligting.
Sekondêre geheue en hoofstoor ook, ja,
dit vorm alles deel van die fisiese sy van ta.

Sagteware, wat sluit dit tog nou in?
Watte en kussings om die harde klank van die hamer te verdring?
Dalk flennie en linne?, dit skiet my mos nou te binne,
hoe kan sulke ware besluit oor jou syfers en vrae?

Programmatuur is baie meer daarvoor.
Dis mos die dinge wat verwerking aanspoor.
Funksionering word beheer en vergemaklik,
al die takies wat jy insleutel word saaklik.
Dit word verwerk om gevraagde inligting te gee,
so bly almal gelukkig en tevree.

Voer jy maar jou komper met spykers en linne.
Gee my liewer 'n rekenaar met syfers en sinne.
Komper of rekenaar
Dit maak 'n mens mal
Pasop net, die komper werk dalk met jou gal.

Applications for overseas research grants

We have received a notice from the CSIR in connection with
applications for funds for research grants in Israel which
have to be completed before March 31, 1983.   For further
details, contact the registrar of your university.

Aansoeke om oorsese navorsingstoekennings

Ons het 'n skrywe vanaf die WNNR ontvang waarin voornemende
aansoekers om toekenning van fondse vir navorsing in Israel
genooi word om aansoek te doen voor 31 Maart 1983.   Kontak
die registrateur van u universiteit vir nadere besonderhede.

VOORGESREWE BOEKE 1983
PRESCRIBED BOOKS

Op die volgende aantal bladsye volg 'n lys van handboeke in Rekenaarweten-
skap wat gedurende die akademiese jaar 1983 by tersiêre opvoedkundige in-
stelling in die RSA gebruik word.

Hierdie lys bevat slegs die boeke wat werklik gebruik word en sluit nie die
boeke wat aanbeveel is in nie, tensy anders aangedui.

Ons hoop dat hierdie lys vir u van praktiese nut sal wees by die seleksie
van boeke.

Die belangrikste oogmerke van die lys is:

(1) Om in een publikasie 'n volledige lys van voorgeskrewe boeke in
     rekenaarwetenskap in die RSA te verskaf

(2) Om boeke wat in algemene gebruik is te identifiseer

(3) Om die seleksie van handboeke te vergemaklik deurdat advies oor die
     geskiktheid en bruikbaarheid van boeke uitgeruil kan word.

In die geval van die technikons, het ons reaksie ontvang van die Technikon
van die Witwatersrand, van Mabopane Oos en van Natal.

By Wits Technikon is al die boeke wat deur die departement Nasionale Op-
voeding aanbeveel is, gelys.   Slegs die boeke wat voorgeskryf is, is onder-
streep.

On the following pages we have listed the computer science text books used
during the 1983 academic year at the tertiary educational institutions in
the RSA.

This list only contains the text books in actual use and does not include the
recommended books, except where indicated otherwise.

We sincerely hope that this list will be of practical use in the selection
of text books.

The main objectives of this list are:

(1) The compilation in one publication of all the prescribed computer
     science text books in the RSA

(2) To identify books in general use

(3) To assist in the selection of books by creating the possibility of
     interchanging information and advice on the suitability of text books.

In the case of the technikons we received information from the Technikon
of the Witwatersrand, from Mabopane East and from Natal.

The Wits Technikon list contains all the text books recommended by the
department of National Education.   The books actually prescribed, are
underlined.

University of Cape Town

A.   UNDERGRADUATE

1.   FISRT YEAR

No recommended text

Supplementary Reading:

Grogono
Programming in Pascal
Addison-Wesley

2.   SECOND YEAR

Recommended Texts

Jensen & Wirth
Pascal - User Manual and Report
Springer Verlag

Popkin
Introductory Structured Cobol Programming
Van Nostrand

Supplementary Reading

Lister
Fundamentals of Operating Systems
MacMillan

Page & Wilson
Information, Representation & Manipulation in a Computer
Cambridge University Press

3.   THIRD YEAR

Recommended Texts

Tennent
Principles of Programming Languages
Prentice-Hall

Date
An Introduction to Database Systems
Addison-Wesley

Supplementary Reading

Aho & Ullman
Principles of Compiler Design
Addison-Wesley

Cole
Computer Communications
MacMillan

Durban-Westville

1. COMPUTER SCIENCE I

    Forsythe et Al
    A First Course in Computer Science (2nd Edition)
    Wiley

2. COMPUTER SCIENCE II

    Data Structures:

    Aho, Hopcroft and Ullman
    Data Structures and Algorithms
    Addison-Wesley

    Hardware:

    Prescribed:

    Levin MH
    Design and Computer Organization (1983)
    Addison-Wesley

    Recommended

    Barden W
    The Z-80 microcomputer Handbook
    HW Sams

3. COMPUTER SCIENCE III

    System Software

    Graham RM
    Principles of Systems Programming
    Wiley

    Numerical Mathematics

    Cheney & Kincaid
    Numerical Mathematics and Computing
    Brooks/Cole

4. BUSINESS DATA PROCESSING

    Cougher & McFadden
    Computer Based Information Systems
    Wiley

Fort Hare

A. UNDERGRADUATE

1. APPLIED COMPUTER SCIENCE I

Squire E
The Computer an Everyday Machine, 2nd Ed.
Addison-Wesley

Monro DM
Basic Basic
Edward Arnold

2. APPLIED COMPUTER SCIENCE II

Davis GB
Introduction to Computers, 3rd Ed.
McGraw-Hill

3. APPLIED COMPUTER SCIENCE IIIA

Davis GB
Introduction to Computers, 3rd Ed.
McGraw-Hill

Clifton HD
Business Data Systems, 2nd Ed.
Prentice-Hall

Lister AM
Fundamentals of Operating Systems, 2nd Ed.
MacMillan

Flores I
Data Structure and Management, 2nd Ed.
Prentice-Hall

4. APPLIED COMPUTER SCIENCE IIIB

Davis GB
Introduction to Computers, 3rd Ed.
McGraw-Hill

Clifton HD
Business Data Systems
Prentice-Hall

Lister AM
Fundamentals of Operating Systems, 2nd Ed.
MacMillan

Flores I
Data Structure and Management, 2nd Ed.
Prentice-Hall

Wagener JL
Fortran 77 : Principles of Programming
Wiley

B.   GRADUATE

HONNOURS

Date CJ
An Introduction to Database Systems (3rd Ed.)
Addison Wesley

Race
Case Studies in Systems Analysis
Macmillan

University_of_Natal(Durban)

A. UNDERGRADUATE

1. SERVICE COURSE

    Introduction to Programming

    Monro DM
    Fortran
    Edward Arnold 1982

2. FIRST YEAR

    Introduction to Computing

    Schneider, Weingart & Perlman
    An Introduction to Programming and Problem Solving with Pascal
    John Wiley & Sons 1982

    Assembly Language Programming

    None

    Programming Techniques

    None

3. SECOND YEAR

    Introduction to Information Structures

    Prescribed

    None

    Recommended

    Page & Wilson
    Information Representation and Manipulation in a Computer
    Cambridge University Press 1973

    Computer Fundamentals

    Prescribed

    None

Recommended

Tanenbaum AS
Structured Computer Organisation
Prentice-Hall

Introduction to Numerical Mathematics

Prescribed

Johnson & Riess
Numerical Analysis (Second Edition)
Addison-Wesley 1982

Recommended

Pizer SM
Numerical Computing and Mathematical Analysis
SRA 1975

Introduction to System Software

Prescribed

None

Recommended

Hopgood
Compiling Techniques
MacDonald American Elsevier 1972

Barron DW
Assemblers and Loaders
MacDonald American Elsevier

Donovan JJ
Systems Programming
McGraw-Hill 1972

4. THIRD YEAR

Computer Organisation

Prescribed

None

Recommended

Tanenbaum AS
Structured Computer Organisation
Prentice-Hall

Numerical Mathematics

Prescribed

Johnson & Riess
Numerical Analysis (Second Edition)
Addison-Wesley 1982

Recommended

Pizer SM
Numerical Computing and Mathematical Analysis
SRA 1975

Curtis FG
Applied Numerical Analysis
Addison-Wesley 1970

Information Structures

Date CJ
An Introduction to Database Systems (Third Edition)
Addison-Wesley 1981

System Software

Prescribed

Calingaert P
Operating Systems Elements - A User Perspective
Prentice-Hall 1982

Recommended

Shaw A
The Logical Design of Operating Systems
Prentice-Hall 1974

University of Natal (Pietermaritzburg)

A.   UNDERGRADUATE

1.   COMPUTER SCIENCE I

   Schneider, Weingart and Perlman
   An Introduction to Programming and Problem Solving with Pascal
   Wiley & Sons 1978

2.   COMPUTER SCIENCE II

   Goldschlager and Lister
   Computer Science - A Modern Introduction
   Prentice-Hall 1982

   Page and Wilson
   Information Representation and Manipulation in a Computer
   Cambridge University Press 1973

   Dorn and McCracken
   Numerical Methods with Fortran IV Case Studies
   Wiley & Sons

3.   FORTRAN PROGRAMMING

   Munro D
   Fortran 77
   Edward Arnold 1982

4.   BUSINESS DATA PROCESSING 1

   Oliver and Chapman R.S.
   Data Processing (Fifth Edition)
   D.P. Publications 1981

   Philippakas and Kazmier
   Structured COBOL
   McGraw-Hill 1981

5.   BUSINESS DATA PROCESSING 2

   Recommended:

   Gane and Sarson
   Structured Systems Analysis
   Prentice-Hall 1979

   Alter SL
   Decision Support Systems - Current Practice and Continuing Challenges
   Addison-Wesley 1980

Martin J
Computer Data Base   Organization
Prentice-Hall 1977

Universiteit van die Noorde

A.   VOORGRAADS

1.   EERSTE JAAR

Forsythe Keenan et al
Computer Science, A First Course (Tweede Uitgawe)
John Wiley & Sons 1974

Pattis
Karel the Robot - A gentle introduction to the art of programming
John Wiley & Sons 1981

Findley & Watt
Pascal - An introduction to Methodical Programming
Pitman 1978

2.   TWEEDE JAAR

Page & Wilson
Information Representation and Manipulation in a computer (Tweede Uitgawe)
Cambridge University Press 1978

Open University M251, Units 12 & 13
Strings, Compiling
1973

Popkin
Introductory Structured COBOL programming
Van Nostrand 1981

Sloan
Introduction to minicomputers and microcomputers
Addison-Wesley 1980

3.   DERDE JAAR

Kohavi
Switching and Finite Automata Theory
McGraw-Hill 1970

Lister
Fundamentals of Operating Systems (Tweede Uitgawe)
MacMillan 1978

Wilson & Addyman
A Practical Introduction to Pascal
MacMillan 1978

Burch & Strater
Information Systems; Theory and Practice
Wiley 1974

Addisionele Kursus in Rekenaarwetenskap:

Cooper & Steinberg
Introduction to Methods of Optimization (Tweede Uitgawe)
Saunders 1970

4. SAKREKENAARWETENSKAP   TWEEDE JAAR

Brabb & McKean
Business Data Processing
Houghton Mifflin Co 1982

Struble
Business Information Processing with BASIC
Addison-Wesley 1980

5. KURSUS VIR DIPLOMA IN STAATSFINANSIES

Bernstein
Computers in Public Adminstration, An International Perspective
Pergamon Press 1976

6. BESTUURSINLIGTINGSTELSELS EN DATAVERWERKING - DERDE JAAR

Clifton
Business Data Systems
Prentice-Hall

Lucey
Management Informtion Systems
DP Publications

B. NAGRAADS

HONNEURS

Watson
Timesharing System Design Concepts
1970

Hansen
Operating System Principles
Prentice-Hall 1973

Kohavi
Switching and Finite Automata Theory
McGraw-Hill 1970

Gries
Compiler Construction for digital computers
Wiley 1971

Universiteit van die Oranje-Vrystaat

A. VOORGRAADS

1. EERSTEJAAR

   Friedman FL en Koffman EB
   Problem solving and structured programming in FORTRAN
   Addison-Wesley (1981)

2. TWEEDEJAAR

   Augenstein MJ en Tenenbaum AM
   Data structures and PL/1 programming
   Prentice-Hall (1979)

3. DERDEJAAR

   (a) Deitel HM
       An Introduction to Operating Systems
       Addison-Wesley (1983)

   (b) Martin J
       Principles of data-base management
       Prentice-Hall (1976)

   (c) Brown PJ
       Writing interactive compilers and interpreters
       John Wiley (1979)

B. HONNEURS

   (a) Teorey TJ en Fry JP
       Design of database structures
       Prentice-Hall (1982)

   (b) Ferrari Domenico
       Computer systems performance evaluation
       Prentice-Hall (1978)

   (c) Morris DJ
       Introduction to communication command and control systems
       Pergamon Press (1977)

   (d) Aho AV en Ullman JD
       Principles of compiler design
       Addison-Wesley (1977)

P.U. vir CHO

A.   VOORGRAADS

1.   EERSTE JAAR

   Rekenaarbeginsels

   Steyn T
   Rekenaarbeginsels
   Wesvalia 1982

   Bohl M
   Tools for Structured Design
   SRA 1978

   Programmering I en II

   Moore & Makela
   Structured Fortran with Watfiv
   Reston 1981

   MINIREKENAARS - B.COMM

   Golden
   Computer Programming in the BASIC language
   Harcourt

2.   TWEEDE JAAR

   Programmering III

   Van Tassel
   Program Style, Design, Efficiency, Debugging and Testing (Tweede Uitgawe)
   Prentice-Hall 1978

   Stelselontleding en -ontwerp

   Leeson M
   System Analysis and Design
   SRA 1981

   COBOL

   Popkin
   Introductory Structured COBOL Programming
   Van Nostrand Rheinhold 1981

3.   DERDE JAAR

Databasisse

Atre S
Data Base Structured Techniques for Design, Performance and
Management
Wiley 1980

Bedryfstelsels

Tsichritzis & Bernstein
Operating Systems
Academic Press 1974

Rekenaartale en Inleiding tot Vertalers

Welsh en Elder
Introduction to Pascal
Prentice-Hall 1979

Ledgard & Marcotty
The Programming Language Landscape
SRA 1981

B.   NAGRAADS   (HONNEURS)

Databasisse

Date CJ
An Introduction to Database Systems (Derde Uitgawe)
Addison-Wesley 1981

Bedryfstelsels

Coffman & Denning
Operating System Theory
1973

Vertalerteorie

Gries
Compiler Construction for Digital Computers
Wiley 1971

Skakelteorie en Outomatateorie

Kohavi
Switching and Finite Automata Theory
McGraw-Hill 1970

Inligtingstelsels

Davis
Management Information Systems : Conceptual Foundations,
Structures and Development
McGraw-Hill 1974

Davis & Everest
Readings in Management Information Systems
McGraw-Hill 1976

2.   <u>HBA BESTUURSINLIGTINGSTELSELS</u>

Bruwer PJS
Gerekenariseerde Bestuursinligtingstelsels
Wesvalia 1982

University of Port Elizabeth

A. UNDERGRADUATE

FIRST YEAR

Science

Welsh J & Elder J
Introduction to PASCAL
Prentice-Hall

Forsythe Keenan Organick & Stenberg
Computer Science
Wiley

Economics

Struble G
Business Information Processing with BASIC
Addison-Wesley

McCracken DD
A Simplified Guide to COBOL
Wiley

SECOND YEAR

Science

Tenenbaum & Augenstein
Data Structures using PASCAL
Prentice-Hall

McCracken DD
A Simplified Guide to COBOL
Wiley

Yourdan
Managing the Structured Techniques
Prentice-Hall

Economics

Welsh & Elder
Introduction to PASCAL
Prentice-Hall

Tenenbaum & Augenstein
Data Structures using PASCAL
Prentice-Hall

Yourdan
Managing the Structured Techniques
Prentice-Hall

Ullman JD
Principles of Data Base Systems
Pittman

THIRD YEAR

Science

Ullman JD
Principles of Data Base Systems
Pittman

Ullman JD
Fundamental Concepts of Programming Systems
Addison-Wesley

Madnick & Donovan
Operating Systems
McGraw-Hill

Economics

Madnick & Donovan
Operating Systems
McGraw-Hill

B.   GRADUATE

Ullman JD
Principles of Data Base Systems
Pittman

Gill A
Applied Algebra for Computer Sciences
Prentice-Hall

Krutz R
Micro Processors & Logic
Wiley

Deitel HM
Introduction to Operating Systems
Addison-Wesley

Myers GJ
Advances in Computer Architecture
Wiley

Organick EI
Computer System Organization
Academic

Universiteit van Pretoria

A. VOORGRAADS

1. REKENAARWETENSKAP I

Teorie

Alle tersaaklike materiaal word deur die Departement opgestel en aan die studente beskikbaar gestel.

Prakties

Hume, JNP & Holt RC
Structured programming using PL/1 and SP/k.
Reston Publishing Company, Inc. 1975

2. REKENAARWETENSKAP II

Beginsels van datastrukture

Horowitz, E & Sahni S
Fundamentals of data structures
Pitman Publishing Ltd 1976

Stelselprogrammering

Danhof K & Smith C
Computing system fundamentals
Addison-Wesley Publishing Co 1981

Lister AM
Fundamentals of operating systems (Second Edition)
Macmillan Press Ltd 1979

Metodologie vir die ontwikkeling en ontwerp van programmatuurstelsels

Gane C & Sarson T
Structured systems analysis : Tools and techniques
Prentice-Hall, Inc. 1979

COBOL

McCracken DD
A simplified guide to structured COBOL programming
John Wiley & Sons, Inc. 1976

FORTRAN

Nanney TR
Computing : A problem-solving approach with FORTRAN
Prentice-hall Inc. 1981

Inleiding tot apparatuur en toepassings van mikrorekenaars

Leventhal I & Walsh C
Microcomputer experimentation with the INTEL SDK-85
Prentice-Hall Inc. 1980

3. ## REKENAARWETENSKAP III

Databasisstelsels

Date CJ
An introduction to database systems (Third Edition)
Addison-Wesley Publishing Co. 1977

Vertalerontwerp

Aho AV & Ullman JD
Principles of compiler design
Addison-Wesley Publishing Co. 1977

Gelyktydige programmering

Holt RC et al
Structured concurrent programming with operating systems applications
Addison-Wesley Publishing Co. 1978

Metodologie vir die ontwikkeling en gebruik van programmatuurstelsels

Gane C & Sarson T
Structured systems analysis : Tools and techniques
Prentice-Hall Inc. 1979

Taakbeheertale

Brown G
System 370 Job Control Language
John Wiley & Sons Inc. 1977

4. <u>INFORMATIKA</u>

Oliver EC & Chapman RJ
Data processing (Fourth Edition)
DP Publications 1979

B. <u>NAGRAADS</u>

1. <u>REKENAARWETENSKAP HONNEURS</u>

<u>Kunsmatige intelligensie</u>

Winston PH
Artificial intelligence
Addison-Wesley Publishing Co 1977

<u>Analise van algoritmes</u>

Baase S
Computer algorithms : Introduction to design and analysis
Addison-Wesley Publishing Co. 1978

<u>Grafika</u>

Giloi W
Interactive computer graphics
Prentice-Hall Inc. 1978

<u>Operasionele navorsing</u>

Wagner HM
Principles of operations research (Second Edition)
Prentice-Hall Inc. 1975

<u>Ontleding en ontwerp van rekenaar kommunikasie netwerke</u>

Tanenbaum AS
Computer networks
Prentice-Hall Inc. 1981

RAU

A. **VOORGRAADS**

Slegs 1e Semester se voorgeskrewe boeke beskikbaar.

1. REKENAARWETENSKAP 1A

Hume & Holt
Structured Programming Using PL/1 (Tweede Uitgawe)
Prentice-Hall 1982

2. REKENAARWETENSKAP IIA - MIKROREKENAARS B.Sc

Graham Lee
From Hardware to Software
Mac-Millan

3. REKENAARWETENSKAP IIC - STELSELONTLEDING B.Com

Yourdan, Gane, Sarson & Lister
Learning to Program in Structured COBOL
Parts 1 & 2
Prentice-Hall 1979

Gane & Sarson
Structured Systems Analysis Tools & Techniques
Prentice-Hall 1979

4. REKENAARWETENSKAP IIIA

Jensen & Tonies
Software Engineering
Prentice-Hall 1979

B. **NAGRAADS - HONNEURS**

1. REKENAARGRAFIKA

Giloi W
Interactive Computer Graphics
Prentice-Hall 1978

Newman & Sproll
Principles of Computer Graphics
McGraw-Hill

2. MIKROREKENAARS

Short KL
Microprocessors & Programmed Logic
Prentice-Hall 1981

3. BEDRYFSTELSELS

Deitel HM
An Introduction to Operating Systems
Addison-Wesley 1983

4. NUMERIESE ANALISE

Johnson & Riess
Numerical Analysis (Tweede Uitgawe)
Addison-Wesley 1982

5. DATABASISONTWERP

Date CJ
An Introduction to Database Systems (Derde Uitgawe)
Addison-Wesley 1981

Rhodes University

1. THIRD YEAR

   Winston and Horn
   LISP
   Addison-Wesley (1981)

2. HONOURS

   Backhouse RC
   Syntax of Programming Languages
   Prentice-Hall (1980)

   Henderson P
   Functional Programming (1980)

   Darlington J et al
   Functional Programming and its Applications :
     An Advanced Course
   Cambridge University Press

Universiteit van Stellenbosch

A. VOORGRAADS

1. EERSTE JAAR

Ullman JD
Fundamental Concepts of Programming Systems (Eerste Uitgawe)
Addison-Wesley 1976

2. TWEEDE JAAR

Aho, Hopcroft and Ullman
Data Structures and Algorithms
Addison-Wesley 1982

3. DERDE JAAR

Pooch, Udo & Chattargy
Minicomputers : Hardware, Software & Selection
West Publishing Co.
USA

4. DATAVERWERKING

Fuori
Introduction to the Computer (Derde Uitgawe)
Prentice-Hall 1981

Fuori, Slater & Goldsmith
Study guide and programming exercises for:
Introduction to the Computer (Derde Uitgawe)
Prentice-Hall 1981

5. DIENSKURSUSSE

Dodds R McD & Wiechers
Inleiding tot Programmering
McGraw-Hill 1980

B. NAGRAADS

1. HONNEURS

(a) Databasis Stelsels

Date CJ
An Introduction to Database Systems (Derde Uitgawe)
Addison-Wesley 1981

- 44 -

(b) Data kommunikasienetwerke

    Davies, Barber, Price & Solomonides
    Computer Network and their Protocol
    Wiley 1979

(c) Analise van Algoritmes

    Aho, Hopcroft & Ullman
    The Design and Analysis of Computer Algorithms
    Addison-Wesley 1976

(d) Stochastiese Modelering

    Schriber TJ
    General Purpose Simulation System, Simulation using GPSS
    McGraw-Hill

UNISA

A. VOORGRAADS

REKENAARWETENSKAP/COMPUTER SCIENCE

1. EERSTE JAAR

Programmering Inleiding

Hume & Holt
Structured Programming using PL/1 and SP/k
Reston 1975

2. TWEEDE JAAR

Programmering - datastrukture

Lewis & Smith
Applying Data Structures
Houghton Mifflin 1976

Hume & Holt
Structured Programming using PL/1 and SP/k
Reston 1975.

Saamsteltaal Programmering

Gear C.W.
Computer Organization and Programming (Third Edition)
McGraw-Hill 1980

Rekenaarorganisasie

Richard, Eckhouse & Robert
Minicomputer Systems : Organization, Programming and Applications
(PDP - 11) (Tweede Uitgawe)
Prentice-Hall 1979.

3. DERDE JAAR

Teorie van berekening 2

Wulf, Shaw, Hilfinger & Flon
Fundamental Structures of Computer Science
Addison-Wesley 1981.

Programmering : programtale

Nichols JE
The Structure and Design of Programming Languages
Addison-Wesley 1975.

Bedryfstelsels en Argitektuur

Tanenbaum AS
Structured Computer Organisation
Prentice-Hall 1976

Mikroverwerkers

Short KL
Microprocessors and Programmed Logic
Prentice-Hall 1981

Numeriese Metodes 1

Gerald CF
Applied Numerical Analysis
Addison-Wesley 1978

Numeriese Metodes 2

Gerald CF
Applied Numerical Analysis
Addison-Wesley 1978

INLIGTINGSTELSELS/INFORMATION SYSTEMS

4.   DIENSKURSUS:

Taggart W.M.
Information Systems
Allyn & Bacon 1980

5.   TWEEDE JAAR

Programontwerp met COBOL

Yourdon E & Gane C
Learning to Program in Structured COBOL
Parts 1 and 2
Prentice-Hall 1979

Grondbegrippe van Inligtingstelsels:

Burch, Strater & Grudnitski
Information Systems : Theory and Practice (Second Edition)
Wiley 1979

6. DERDE JAAR

Stelselontleding en Ontwerp

Gane & Sarson
Structured Systems Analysis : Tools and Techniques
Prentice-Hall 1979

Burch Strater & Grudnitski
Information Systems Theory and Practice (Second Edition)
Wiley 1979

Grondbeginsels van Databasisse

Date CJ
An Introduction to Database Systems
Addison-Wesley 1981

Kunsmatige Intelligensie/Artificial Intelligence (1)

Nilsson NJ
Problem-Solving Methods in Artificial Intelligence
McGraw-Hill 1971

of

Nilsson NJ
Principles of artificial intelligence
Tioga Publishing Company 1980

Kunsmatige Intelligensie/Artificial Intelligence (2)

Hunt EB
Artificial Intelligence
New York/San Francisco/London
Academic Press 1975

INLIGTINGSTELSELS / INFORMATION SYSTEMS

Inligtingstelsels/Information Systems (1)

Davis GB
Management Information Systems : Conceptual Foundation, Structure
and Development
McGraw-Hill 1974

Inligtingstelsels/Information Systems (2)

Geen voorgeskrewe handboeke nie

Datakommunikasie en Netwerkontwerp/Data Communication and Network Design

Tanenbaum AS
Computer Networks
Prentice Hall 1981

Stelselontleding/Systems Analysis

Couger Colter & Knapp
Advanced System Development/Feasibility Techniques
Wiley 1982

De Marco T
Structured Systems Analysis
Yourdan Press 1979

Stelselontwerp/Design of Information Systems

Yourdan & Constantine
Structured Design : Fundamentals of a Discipline of Computer Program
and System Design

Programmatuurontwikkeling/Software Development

Jensen RW & Tonies CC
Software engineering
Prentice-Hall 1979

Databasisstelsels/Database Systems

Vetter & Maddison
Database Design Methodology
Prentice-Hall 1981

Universiteit van Wes-Kaapland

A. **VOORGRAADS**

1. REKENAARWETENSKAP SPESIAAL

   Silver & Silver
   Data processing for Business (Derde Uitgawe)
   Harcourt, Brace, Jovanovich (1981)

   McCracken DD
   A Simplified Guide to Structured COBOL Programming
   Wiley 1976

2. REKENAARWETENSKAP 1

   Silver & Silver
   Data processing for Business (Derde Uitgawe)
   Harcourt, Brace, Jovanovich (1981)

   McCracken DD
   A Simplified Guide to Structured COBOL Programming
   Wiley 1976

   Gottfried BS
   Programming with Basic (Schaum)
   McGraw-Hill 1975

3. REKENAARWETENSKAP II

   McCracken DD
   A Simplified Guide to Structured COBOL Programming
   Wiley 1976

   Johnson, Hilburn & Julich
   Digital Circuits and Microcomputers
   Prentice-Hall 1979

   Burch, Strater & Grudnitski
   Information Systems : Theory and Practice (Tweede Uitgawe)
   John Wiley 1979

   Gerald CF
   Applied Numerical Analysis (Tweede Uitgawe)
   Addison-Wesley 1978

4. REKENAARWETENSKAP III

Gerald CF
Applied Numerical Analysis (Tweede Uitgawe)
Addison-Wesley 1978

Burch, Strater & Grudnitski
Information Systems : Theory and Practice (Tweede Uitgawe)
John Wiley 1979

Johnson, Hilburn & Julich
Digital Circuits and Microcomputers
Prentice-Hall 1979

Kohavi Z
Switching and Finite Automata Theory (Tweede Uitgawe)
McGraw-Hill 1978

Lister AM
Fundamentals of Operating Systems (Tweede Uitgawe)
MacMillan 1979

Martin J
Introduction to Teleprocessing
Prentice-Hall

Beidler J
An Introduction to Data Structures
Allyn and Bacon 1982

Cooper L & Steinberg D
Introduction to Methods of Optimization
Saunders 1970

University of the Witwatersrand

A. UNDERGRADUATE

1. COMPUTER SCIENCE II

Prescribed

Barron DW and Bishop JM
Advanced Programming - A Practical Course
Wiley

Lippiat AG
The Architecture of Small Computer Systems
Prentice-Hall

Ralston A and Rabinowitz P
A First Course in Numerical Analysis
McGraw-Hill

Recommended

Ridler PF
A Fortran Reference Manual
Pitman

Wirth N
Algorithms & Data Structures = Programs
Prentice-Hall

2. COMPUTER SCIENCE III

Prescribed

Barron DW
An Introduction to the Study of Programming
Languages (Second Edition)
Wiley

Brady JM
The Theory of Computer Science
Wiley

Calingaert P
Operating Systems
Prentice-Hall

Pyster AB
Compiler Design and Construction
van Nostrand

Recommended

Calingaert P
Assemblers, Compilers and Program Translation
Computer Science Press Inc.

Lister AM
Fundamentals of Operating Systems
MacMillan

McGettrick AD
The Definition of Programming Languages
Cambridge University Press

Meek B
FORTRAN, PL/I and the Algols
MacMillan

Wirth N
Algorithms & Data Structures = Programs

B.   GRADUATE

COMPUTER SCIENCE HONOURS

Prescribed

Aho, Hopcroft and Ullman
Design and Analysis of Algorithms
Addison-Wesley

Barret WA and Couch JC
Compiler Construction : Theory and Practice
SRA

Date CJ
An Introduction to Data Base Systems (Third Edition)
Addison-Wesley

Myers GJ
Advances in Computer Architecture (Second Editon)
Wiley

Tanenbaum AS
Computer Networks
Prentice-Hall

C.   HIGHER DIPLOMA IN COMPUTER SCIENCE

Prescribed

Barron DW and Bishop JM
Advanced Programming - a Practical Course
Wiley

Calingaert P
Operating Systems
Prentice-Hall

Recommended

Tanenbaum AS
Structured Computer Organization
Prentice-Hall

University of the Witwatersrand (BIS)

A. UNDERGRADUATE

1. BUSINESS INFORMATION SYSTEMS 1 (SPECIAL)

Recommended

Cushing BE
Accounting Information Systems and Business Organisation (Second Edition)
Addison-Wesley

2. BUSINESS INFORMATION SYSTEMS 1

Prescribed

Mandell SL
Principles of Data Processing
West

Cowan, Dirksen & Graham
An Introduction to COBOL with WATBOL
Wat. Fac.

3. BUSINESS INFORMATION SYSTEMS II

Prescribed

Housley T
Data Communications and Teleprocessing Systems
Prentice Hall

Brooks Jr. FP
The Mythical Man-Month
Addison-Wesley

Weinberg G
The Psychology of Computer Programming
Van Nostrand

Ingevaldsson L
JSP-A Practical Method of Program Design
Student Literature   Sweden 1979

Date CJ
An Introduction to Database Systems (Third Edition)
Addison Wesley (1981)

Recommended

. Grawer RJ & Crawford MA
The COBOL Environment
Prentice Hall

Davis WS
Operating Systems
Addison-Wesley

Freeman P
Software System Principles : A Survey
SRA Inc.

Barker PJ
System Software
Basic Computing Science Series

Bailey B
Data Structures
Basic Computing Science Series

Martin J
Computer Data-Base Organization
Prentice-Hall

4.   BUSINESS COMPUTER SYSTEMS

Prescribed

Cowan, Dirksen, Graham
An Introduction to COBOL with WATBOL
Wat. Fac.

Atkinson LV
Programming in Pascal

B.   GRADUATE

BIS HONOURS

Systems Analysis and Design:

Gane & Sarson
Structured Systems Analysis - Tools & Techniques
Prentice-Hall 1977

Yourdan & Constantine
Structured Design (Second Edition)
Yourdan Press 1978

Davis & Olsen
Management Information Systems (Second Edition)
McGraw-Hill

Schneiderman B
Software Psychology
Winthrop

Technikon_Mabopane-Oos

A. NASIONALE DIPLOMA IN EDV

1. EERSTE JAAR

Yourdan
Learning to program in Structured COBOL
Prentice-Hall

Davis
Computer Data Processing
McGraw-Hill 1981

Technikon Natal

A. NASIONALE DIPLOMA IN EDV

1. EERSTE JAAR

Lipschutz S & Poe A
Programming with Fortran
McGraw-Hill

Schneider, Weingart & Perlman
An Introduction to Programming and Problem Solving with Pascal
Wiley 1978

Yourdan, Gane, Sarson & Lister
Learning to Program in Structured COBOL Parts 1 and 2
Prentice-Hall 1979

Burch, Strater en Grudnitski
Information Systems : Theory and Practice
Wiley 1979

Davis GB
Computer Data Processing
McGraw-Hill

2. TWEEDE JAAR

Hughes, Pfleeger & Rose
Advanced Programming Techniques

Yourdan, Gane, Sarson & Lister
Prentice-Hall 1979

Burch, Strater & Grudnitski
Information Systems : Theory and Practice
Wiley 1979

Orilia & Stern
Business Data Processing Systems
Wiley 1977

Martin J
Design of Real-Time Computer Systems
Prentice-Hall 1967

Davis GB
Management Information Systems : Conceptual Foundations, Structure
and Development
McGraw-Hill 1974

Kieburtz RB
Structured Programming and Problem Solving with Pascal
Prentice-Hall 1978

3. DERDE JAAR

    Schaeffer H
    Data Centre Operations
    Prentice-Hall 1981

    Cook & Russel
    Introduction to Management Science
    Prentice-Hall 1977

    Naylor TH
    Corporate Planning Models
    Addison-Wesley 1979

B. NASIONALE HOëR DIPLOMA IN EDV

    Schaeffer H
    Data Centre Operations
    Prentice-Hall 1981

    Cook & Russel
    Introduction to Management Science
    Prentice-Hall 1977

Technikon Witwatersrand

A. DIPLOMA IN ELECTRONIC DATA PROCESSING

1. FIRST YEAR

Scientific Programming 1

FORTRAN
DD McCracken
A Guide to Fortran IV Programming

APL
Gilman & Rose
APL An Interactive Approach
Wiley 1976

Pascal

Webster
Introduction to Pascal
Heyden

Commercial Programming 1

COBOL
DD McCracken
A Simplified Guide to Structured COBOL programming

Yourdan, Gane, Sarson & Lister
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Installation Management

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Data Centre operations

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