UNIVERSITY OF NATAL

GRADUATION/DIPLOMA CEREMONY

1986

SATURDAY 3rd MAY

10h30

PIETERMARITZBURG

OFFICERS

Chancellor: The Honourable Mr Justice R.N. Leon
Q.C.,B.A.,LL.B.(Natal)

Vice-Chancellor and Principal: P. de V. Booysen
M.Sc. Agric. (Natal), Ph.D. (California).

Chairman of Council: L.S. Robinson
LL.D. (honoris causa) (Natal)

Vice-Principal: G.D.L. Schreiner
B.Sc.(Witwatersrand), M.A., Ph.D.(Cantab.)

President of Convocation: J.M. Pet
Pr. Eng., B.Sc. Eng., M.S.A.A.C.E.

Orator: C.O. Gardner
B.A. Hons. (Natal), M.A. (Oxon)

Registrar: T.E. Cochran
B.Com.(Natal)

DEANS OF FACULTIES

Education: R.K. Muir
B.A. B.Ed., Ph.D.
(Witwatersrand), T.T.D.

Science: R.N. Pienaar
M.Sc. (Witwatersrand),
Ph.D. (Natal)

On reaching the Chancellor's stall, remain standing until the mace bearer is clear of the front of the stage and, if necessary, until the music has ceased, then announce

"BY THE VIRTUE OF THE AUTHORITY ~~ENTRUSTED~~ VESTED IN ~~TO~~ ME, I CONSTITUTE THIS CONGREGATION OF THE UNIVERSITY OF NATAL FOR THE CONFERMENT OF DEGREES."

PRAYER

Remain standing and remove cap while Professor Bredenkamp offers the prayer.

Replace cap and sit.

PRESENTATION OF DIPLOMATES AND GRADUANDS

As each Dean rises, he will doff his cap to you - doff yours in reply. This procedure is followed on each occasion that you are addressed as "Mr Chancellor" and before each participating officer returns to his seat.

When the first graduand for each degree kneels before you, you cap him and repeat the formula as shown in the programme for each degree, loud enough for the audience to hear. Thereafter, as you cap each student, name the degree in an undertone.

DISSOLUTION OF CONGREGATION

"BY VIRTUE OF THE AUTHORITY ~~ENTRUSTED TO~~ VESTED IN ME, I DISSOLVE THIS CONGREGATION OF THE UNIVERSITY OF NATAL, SALVA SIT UNIVERSITAS NOSTRA, QUOD PRECANTES DISCEDAMUS."

PROGRAMME

The Chancellor constitutes the congregation

PRAYER

Prof. V.J. Bredenkamp
B.A. (Rhodes), M.A. (Oxon),
M.A. Ph.D. (Princeton)

WELCOME TO GUESTS

The Vice-Chancellor

PRESENTATION OF DIPLOMATES AND GRADUANDS

The Deans of Faculties

THE UNIVERSITY CHOIR

Conductor: Pessa Weinberg
M.Mus.(Unisa), L.T.C.L.

Odi et Ami ..... Carl Orff
Israeli Folk Song ..... arr. by Ralph Hunter
Extract from Porgy and Bess ..... George Gershwin

HONORARY DEGREE

The Orator presents
the Honorary Graduand
KENNETH BROWN HARTSHORNE
Doctor of Literature

ADDRESS

K.P. Hartshorne
B.A. (Hons) (London), M.Ed.,
(Unisa), Hon. LL.D. (Witwatersrand)
Dip. Ed. (London)

The Chancellor dissolves the congregation

The congregation is requested to stand while the academic procession enters and leaves the hall.
Only officially authorised persons are permitted to take photographs during the ceremony.

All Diplomates, Graduates, Parents, Friends and Staff are invited to partake of refreshments in the William O'Brien Junior Common Room at the conclusion of the ceremony.

UNIVERSITY EDUCATION DIPLOMA (NON-GRADUATE)

DEAN : Mr. Vice-Chancellor,

I have the honour to present for the University Education Diploma (Non-Graduate).....

DIPLOMATES

DIPLOMA IN SPECIALISED EDUCATION (SCHOOL LIBRARIANSHIP)

DEAN : Vice-Chancellor,

I have the honour to present for the Diploma in Specialised Education (School Librarianship).....

HIGHER DIPLOMA IN EDUCATION (NON-GRADUATE)

DEAN : Mr. Vice-Chancellor,

I have the honour to present for the Higher Diploma in Education (Non-Graduate) .....

UNIVERSITY EDUCATION DIPLOMA (POST-GRADUATE)

DEAN : Mr. Vice-Chancellor,

I have the honour to present for the University Educati Diploma (Post-Graduate).....

HIGHER DIPLOMA IN EDUCATION (POST-GRADUATE)

DEAN : Mr. Vice-Chancellor,

I have the honour to present for the Higher Diploma in Education (Post-Graduate) .....

DIPLOMATES

UNIVERSITY EDUCATION DIPLOMA (NON-GRADUATE)

Nozaïc, Debra Yrlande, B.A.(Hons.)

DIPLOMA IN SPECIALISED EDUCATION (SCHOOL LIBRARIANSHIP)

Dawood, Ally Dawood, B.A. (Unisa)
Fareed, Shakilla
Hamilton, Margaret Eileen
Khan, Faized
Lombo, Sipho
Moodley, Dorasamy Gangatharan
Moodley, Mariemuthoo
Naidoo, Shunmogum Manickum
Padayachee, Janakeammal Subramany
* **Pierce,** Jennifer, B.A.(Witwatersrand)
Poole, Colleen Ann

* Diploma awarded with distinction

HIGHER DIPLOMA IN EDUCATION (NON-GRADUATE)

Klein, Erna, B.A.
Maharaj, Dinesh, B.A.
Maharaj, Nirmala, B.A.

UNIVERSITY EDUCATION DIPLOMA (POST-GRADUATE)

Browne, Philippa Alys, B.A.
* **Ffrench-Constant,** Tanya Mary-Louise, B.A.
Krige, Francois Joseph, B.A. (Rhodes)
Still, Margaret Jane, B.Sc.(Hons)
van Wyk, Leon Johannes Lourens, B.Sc. Agric.
Witthoft, Robert Rheinhold, B.Com.

* Diploma awarded with distinction

HIGHER DIPLOMA IN EDUCATION (POST-GRADUATE)

Acutt, Michael Esmund, B.Com.
Adams, Margaret Jillian, B.A.
Adie, Susan Collette, B.A.F.A.
Aldworth, Walter Jeremy Koch, B.A. (Rhodes)
Anderson, Hazel Jean, B.A.F.A.
Beattie, Chantél Elizabeth, B.A.F.A.
Bell, Catherine Lisa, B.A.
Black, Philippa Joan, B.A.
Borner, Jacqueline, B.Sc.Home Econ.
Brauteseth, Beverley-Anne, B.Sc.Home Econ.
Brennan, Judith Christine, B.A.
Bridglall, Niranjan, B.A.
Brown, Darrel John, B.Agric.Mgt.
Camp, Lloyd Temple, B.A.
Chater, Michael Rogers, B.Sc.(Hons)
Cockin, Michelle Anne, B.Sc.(Cape Town)
Collins, Gary James, B.Sc.Agric.
Court, Jennifer Elaine, B.A.
Court, Susan Diane, B.A.
Cox, Janine Megan, B.A.
Cresswell, Sarah Jane, B.A.
Dedekind, Irma, B.Sc. (Pret.)
de Mik, Marja Thea Els, B.A.
Dick, Jean Margaret, B.A.
Dickson, Dennis Collins Selvum, B.A.(U.D.W.)
Dove, Gordon Douglas, B.A. (Witwatersrand), B.A.(Hons) (Unisa)
Duffy, Marie, B.A.(Rhodes)
Dunton, Debra Susan, B.A.
Early, Heather Elizabeth, B.A.
Ebenezer, Miranda Naomi, B.A.
Erlank, Karen Lee, B.A.
Everitt, Susan Patricia, B.Sc.(Hons) (Stell)
Farquharson, Jeremy John, B.A.

BACHELOR OF SCIENCE

(A) UPON THOSE PRESENT

DEAN : Mr Chancellor,

I have the honour to present for the degree of Bachelor of Science .....

CHANCELLOR : I CONFER UPON YOU THE DEGREE OF BACHELOR OF SCIENCE

(B) UPON THOSE NOT PRESENT

DEAN : Mr Chancellor,

I have the honour to request you to confer the degree of Bachelor of Science upon those not present who have qualified for the degree

CHANCELLOR : I CONFER THE DEGREE OF BACHELOR OF SCIENCE UPON THOSE NOT PRESENT WHO HAVE QUALIFIED FOR THE DEGREE.

Farrell, Hugh Kevin, B.Soc.Sc.
Fitschen, Amanda Kate, B.Com.
Forsyth, Wendy Margaret, B.A.
Fourie, Vanessa Fay, B.A.
Gibbs, Craig Andrew, B.A.(Witwatersrand)
Glaser, Carole Mary, B.A.
Goedeke, Hubert Ludwig, B.A.
Goosen, Yvette, B.A.
Graaf, Andrew Robert, B.A.
Haskins, Jeremy, B.A.
Hitchcock, Sarah Alice, B.Sc.
Holloway, Deborah, B.Soc.Sc.
Hoskins, Oregan Percival Mark, B.A.
Hudson, Elmore, B.A.
Jeena, Madhumati, B.A.
Jobson, Susan Mary, B.A.
Kaiser, Delene Anne, B.Sc.(Hons)
Khan, Muhammad Iqbal Hoosain, B.A.
Killick, Yvette Jennifer, B.Sc.
Kirkness, Moira Frances, B.A.
Koch, Sherryl Anne, B.Sc.
Kunene, Zandile Lynette, B.A.
Labuschagne, Lesley Marie, B.A.F.A.
Langley, Dillon Neil, B.Sc.
Larsen, Kari Louise, B.A.
le Roux, Andrea Loretta, B.A.(Hons)
le Vieux, Michelle, B.Sc.Agric.
Liengme, Duncan Philippe, B.Sc.Agric.
Madhanpall, Anwhar, B.A.
Matthews, John Charles, B.A., LL.B
McLeod, Robert Michael, B.A.F.A.
Melville, Anna Lise, B.A.
Mitchell, Jennifer Jean, M.Sc.
Moerdyk, Michele Louise, B.A.
Mohanlal, Damyendra, B.Sc.
Morgan, Francois, B.A.
Naidoo, Sagaran, B.Sc.
Nair, Robert John Charles, B.Com.
Ndlela, Zamani Templeman, B.Com. (Zululand)
Nevin, Catherine Jane, B.Sc.
Nicholls, Priscilla May, B.A.
Norman, Lynette Joan, B.A.
Nozaic, Bruce Vivian, B.Sc.
O'Connor, Kerry Louise, B.A.
Passmore, Antony Roy, B.A.F.A.
Paterson, Vaughan William, B.A.
Pillay, Nadarajan Sivalingam, B.A.(U.D.W.)
Ralfe, Alison, B.Sc.
Raw, Catherine Ann, B.A.
Reiche, Bruce Charles, B.Com.
Röhrs, Anke, B.A.(Pret.)
Rudolph, Graham Hardy, B.Sc.Agric.
Sandy, Margaret Carol, B.Sc.
Scanes, Susan Dorothy, B.A.
Scarola, Silvana Marietta, B.Sc.
Schütte, Karin, B.A.
Scott, Heather Audrey, B.Sc.
Seggie, Linda, B.A.
Sekul, Helen Patricia, B.A.
Setterberg, Shirley Lynne, B.Com.
Singh, Anupa, B.Sc(Trinity Coll. Dublin)
Simpson, Lindsay Anne, B.A.
Starmer, Kathryn Margaret, B.Com.
Subedar, Nasreen, B.A.
Surgey, Jennifer Patricia, B.A.
Temple, Matthew Angus, B.Soc.Sc.
Templeton, Jennifer Barbara, B.A.
Tyson, Dean Richard, B.Sc.
Underhill, Louise, B.A.
van der Kolk, André, B.Sc.Agric.
van Niekerk, Keith David, B.Sc.(Hons)
Waters, Merle, B.Sc.
Watson, Margaret Anne, B.Com.
Webber, Carol Maude, B.Sc.
Wertheim, Marion Marcelle, B.A.
Westra, Centa Maria, B.A.
Williamson, Nicola Jane, B.Sc.
Wood, Judy Helen, B.A.(Cape Town)

GRADUANDS

BACHELOR OF SCIENCE

† **Alborough,** Linda Deanne (Microbiology/ Plant Pathology, Biochemistry)
Allen, Susan Lea
Allwright, Michelle Joy
Almond, Joanne Lesley
Andrew, Sally Ann
Archer, Yvette Cecelia
† **Baxter,** Susan Elizabeth (Applied Mathematics, Genetics)
† **Blatch,** Shellee Gene
Brauteseth, Debra
Brophy, Tegan Faine
Brown, Raylan Talbot
Bruorton, Michael Russell
Burns, Vanessa Carol-Lyn
Bursey, Mary Louise (Zoology)
Chapman, Robin Arthur
Cocksedge, Mark Burden
Coleman, Andrew Charles
Croft, Graeme John Bruce
Crouch, Ian James
Dedekind, Manfred Otto (Physics, Applied Physics)
† **Dely,** Rowan Arthur (Computer Science)

BACHELOR OF EDUCATION

(A) UPON THOSE PRESENT

DEAN : Mr. Chancellor,

I have the honour to present for the degree of Bachelor of Education.....

CHANCELLOR : I CONFER UPON YOU THE DEGREE OF BACHELOR OF EDUCATION

(B) UPON THOSE NOT PRESENT

DEAN : Mr. Chancellor,

I have the honour to request you to confer the degree of Bachelor of Education upon those not present who have qualified for the degree

CHANCELLOR : I CONFER THE DEGREE OF BACHELOR OF EDUCATION UPON THOSE NOT PRESENT WHO HAVE QUALIFIED FOR THE DEGREE

† **Dennehy,** Maureen Elizabeth (Zoology, Microbiology/Plant Pathology)
Domleo, Frank Bretton
Douglass, Deborah
Dubber, Yvonne Carol (Economics)
Duff, Sandra
Eichstadt, Susan Lesley
Emanuel, Margot Jill
Ferguson, Rory Robert
Goedeke, Egmont Hubert
Goldsworthy, Debra-Ann
Hardman, Kathleen Suzanne Joan
† **Harris,** Barbara Jill (Botany)
† **Hill,** Beverley Elizabeth (Chemistry, Applied Chemistry)
Hollinshead, Kevin Dean
Holmes, Janet Margaret
Homann, Beverley Donna
Hughes, Antony Douglas
Ismail, Shenaz
† **Jeans,** David Richard (Genetics)
Jones, Brett Maurice
Joughin, Jane Isobel (Botany)
Kennedy, Clare Frances
Klingenberg, Gisela
Knowles, Richard Hugh
Lahner, Robert Henry
Lee, Neville Brian
Maharaj, Sanjay Balkishore
Malissar, Dean Graham Shane
Manickum, Thavrin
Maritz, Lynette Maria
McKenzie, Margaret Ashleigh
Meagher, Katherine
Moodley, Reneè Ansuria
Mooney, Yvette Marie
Mostert, Craig Andrew
Naidoo, Pravindra
Naidoo, Rajendran Somasundram
Nel, Helen Maria
Nicolson, Andrew Richard
Noble, Maxine Juliet
Ösz, Miklos Andras
Paxton, Kevin Lionel
Pillay, Manushani
Plunkett, Jennifer Susan
Ramsay, Nirvana
Reich, Kevin Fenwick
Rippon, Christopher Nigel
Rix, Lesley Anne
† **Roberts,** Clifford William Hall (Chemistry)
Robinson, Simon Boyd
Rogers, Gregory Michael
Rushworth, Linda Helen
Schmitting, Ingrid Lilli
† **Shuttleworth,** Karen Jean (Applied Mathematics)
Singh, Suvir
Slon, Barry Michael
Snow, Gary Bruce
Stevens, Walter Aylen
Strauss, Jonathan Patrick
Taylor, Carol Wendy
Taylor, William Armstrong
Thomas, Malcolm Alexander
Thorington, Neil (Economics)
Topping, Christopher Charles
Truter, Peter John
Turco, Jane Olwen
Turner, Claire
van Coller, Toni Audrey
van der Merwe, Alexander David
† **van Schoor,** Michelle Justine (Microbiology/Plant Pathology)
Webber, Carol Maude
Winter, Sheree Dawn
Wolff, Brendon Bernhard
Wood, Alan Robert
Zeef, Leo Arnoldus Hendrikus

Major subjects which candidates have passed in the First Class are shown after their names.

† Degree awarded with distinction.

BACHELOR OF EDUCATION

	Discipline
Anderson, Diana, B.A.(Unisa), Dip.Sp.Ed	Educational Psychology
Andrews, Sydney George, B.A., H.D.E.	Education
Avery, Neil Eric, B.A., H.D.E.	Education
Brown, Robert Seath Ford, B.Sc., H.D.E.	Education
Bull, Llewellyn Gordon, B.A. (Unisa), H.D.E.	Education

BACHELOR OF SCIENCE (HONOURS)

(A) UPON THOSE PRESENT

DEAN : Mr Chancellor,

I have the honour to present for the degree of Bachelor of Science Honours .....

CHANCELLOR : I CONFER UPON YOU THE DEGREE OF BACHELOR OF SCIENCE HONOURS

(B) UPON THOSE NOT PRESENT

DEAN : Mr Chancellor,

I have the honour to request you to confer the degree of Bachelor of Science Honours upon those not present who have qualified for the degree

CHANCELLOR : I CONFER THE DEGREE OF BACHELOR OF SCIENCE HONOURS UPON THOSE NOT PRESENT WHO HAVE QUALIFIED FOR THE DEGREE

Chetty, Alumalamma, B.A.(Unisa) ..... Education
Drysdale, Rory Brian, B.Com., H.D.E. ..... Education
Groenewald, Jane Elizabeth, B.A., H.D.E. ..... Education
Habib, Nazeera, B.Paed. (U.D.W.) ..... Education
Hadebe, Bhekumuzi Reginald, B.A. U.E.D. (Zululand) ..... Education
Heymans, Cilliers, B.A.(Pret.), H.D.E. ..... Education
Karodia, Ahmed Said, B.A.(Hons), H.D.E. ..... Education
Langley, Robert William, M.Sc.,H.D.E. ..... Education
Lucas, Carole Leila, B.Sc. (Witwatersrand) ..... Education
Luiz, Alexandra Joan, B.A., H.D.E. ..... Education
Marais, Theodore Henri, B.A., S.T.D. (Capetown), D.S.E.(Unisa) ..... Educational Psychology
Marriemuthu, Deenadayalan, B.A.(Unisa) ..... Education
McGill, Dudley John, B.A.(Hons), H.D.E.(Rhodes) ..... Education
Mnikathi, Hlalanathi Pious, B.A.(Zululand) ..... Education
Moodley, Arumugam, B.A. (Unisa) ..... Education
Naidoo, Nadas Narismaloo, B.A., S.D.E.D. (Unisa) ..... Education
Rabie, Erika Elizabeth, B.A.(Hons)(Capetown), H.D.E. ..... Education
Singh, Baijnath, B.A.(Unisa) ..... Education
Sukhram, Bahadurlall, B.A.(Unisa) ..... Education
Ward, Jean Mary, B.A.(Unisa) ..... Educational Psychology

BACHELOR OF SCIENCE (HONOURS)

Discipline

Albertyn, Christopher George Neale, B.Sc. ..... Psychology
Aveling, Theresa Ann Sheila, B.Sc. ..... Microbiology/Plant Pathology
Bates, Joanne Elizabeth, B.Sc. ..... Microbiology/Plant Pathology
Bennett, Andrew Leopold, B.Sc. ..... Entomology
Blatch, Gregory Lloyd, B.Sc. ..... Biochemistry
* **Boelhouwers,** Jan Cornelis, B.Sc. ..... Geography
Bullock, Lynette Madoline, B.Sc. ..... Chemistry
* **Cadman,** Mandy-Jane, B.Sc. ..... Botany
* **Cartwright,** Susan Ann, B.Sc., ... Chemistry
Chuturgoon, Anil Amichund B.Sc., ... Biochemistry
Downs, Colleen Thelma, B.Sc. ..... Zoology
Dyer, Peter Ronald, B.Sc. ..... Chemistry
Eagle, Matthew John, B.Sc. ..... Statistics
Faurie, Alida Susanna, B.Sc. ..... Zoology
Flett, Bradley Charles, B.Sc. ..... Microbiology/Plant Pathology
Francis, Lucille Felicity, B.Sc. ..... Chemistry
Gaydon, Paul Nicholas, B.Sc., ... Chemistry
Hamer, Michelle Luane, B.Sc. ..... Zoology
Hanssen, Mary Gayle, B.Sc. ..... Geology
Haverly, Christopher Anthony William, B.Sc. ..... Chemistry
* **Hensman,** Bridget Ann, B.Sc. ..... Genetics
Hiscocks, Kay Sheila, B.Sc. ..... Zoology
Howard, Gerald James, B.Sc. ..... Hydrology
Jamieson, Geraldine Margaret, B.Sc. ..... Chemistry
Kidson, Rayna Joan, B.Sc. ..... Botany
Lang, Linda Ann, B.Sc. ..... Biochemistry
Loizou, Georgia, B.Sc. ..... Chemistry
McLuckie, Craig Stafford, B.Sc. ..... Geology
Meiklejohn, Keith Ian, B.Sc., ... Geography

MASTER OF EDUCATION

(A) UPON THOSE PRESENT

DEAN : Mr. Chancellor,

I have the honour to present for the degree of Master of Education.....

CHANCELLOR : I CONFER UPON YOU THE DEGREE OF MASTER OF EDUCATION

(B) UPON THOSE NOT PRESENT

DEAN : Mr. Chancellor,

I have the honour to request you to confer the degree of Master of Education upon those not present who have qualified for the degree

CHANCELLOR : I CONFER THE DEGREE OF MASTER OF EDUCATION UPON THOSE NOT PRESENT WHO HAVE QUALIFIED FOR THE DEGREE

MASTER OF SCIENCE

(A) UPON THOSE PRESENT

DEAN : Mr. Chancellor,

I have the honour to request you to confer the degree of Master of Science.....

CHANCELLOR : I CONFER UPON YOU THE DEGREE OF MASTER OF SCIENCE

(B) UPON THOSE NOT PRESENT

DEAN : Mr. Chancellor,

I have the honour to request you to confer the degree of Master of Science upon those not present who have qualified for the degree

CHANCELLOR : I CONFER THE DEGREE OF MASTER OF SCIENCE UPON THOSE NOT PRESENT WHO HAVE QUALIFIED FOR THE DEGREE

Nänni, Rupert Frederick, B.Sc. ..... Zoology
* **Nicholson,** Robert Ian Denholm, B.Sc. ..... Botany
Nuttall, Richard Jolyon, B.Sc. ..... Zoology
Ovendale, Bruce, B.Sc. ..... Geology
Richards, Harry William, B.Sc. ..... Zoology
* **Schauerte,** Anneliese, B.Sc. ..... Mathematics
Snyman, Willem Adriaan, B.Sc. ..... Zoology
Sowden, Miles, B.Sc. ..... Chemistry
Taylor, William Armstrong, B.Sc. ..... Zoology
Thomas, Robert John Henry, B.Sc. ..... Chemistry
* **Tonin,** Antonio Francesco Gino, B.Sc. ..... Zoology
Tychsen, Priscilla Frances Marjory, B.Sc. ..... Botany
van den Berg, Ingrid Meta, B.Sc. ..... Zoology
Vietti, Andrew Joseph, B.Sc. ..... Micro/Plant Pathology
Weddepohl, Jan Peter, B.Sc. ..... Hydrology

* Degree awarded in the First Class

MASTER OF EDUCATION

Discipline

Blacquiere, Arie, B.A.(Cape Town), B.Ed. ..... Education
Thesis:The Effect of Language Laboratory on language teaching: A comparative study.

‡ **Candotti,** Sandra Marian, B.A.(Hons)(Unisa), H.D.E. ..... Educational Psychology

‡ **Mans,** Elsa Maria, B.A.(Hons), H.D.E.(Unisa) ..... Educational Psychology

Mncwabe, Mandla Patrick, B.Paed, B.Ed.(Zululand) ..... Education
Thesis: A critical analysis of some selected aspects of student wastage and drop-out among Kwa-Zulu Secondary and High School Standard 8, 9 and 10 pupils with special reference to Southern Kwa-Zulu.

‡ **Naidoo,** Ramsamy Munsamy, Dip.Sp.Ed, B.A.(Hons)(U.D.W.) ..... Educational Psychology

‡ Qualified as an Educational Psychologist

MASTER OF SCIENCE

Discipline

† **Dickinson,** John Richard, B.Sc.(Hons) ..... Botany
Thesis: [18-^{14}C]-Adenine and [1-^{14}C]-Isopentenyl Pyrophosphate- precursors for root-produced cytokinins in the tomato *(Lycopersicon Exculentum* Mill.).

Dickerson, Clinton, Bryan, B.Sc.(Hons) ..... Physics
Thesis: Slip and work softening in Aluminium crystals.

Drews, Johann Heinrich, B.Sc. (Hons) ..... Chemistry
Thesis: Synthetic and spectrometric studies of chromone derivatives.

Hammerton, Russell David, B.Sc.(Hons) (Bristol) ..... Botany
Thesis: The viability and germinability of seeds of *Hypoxis Rooperi* T. Moore.

Hay, Gilmour Duncan, B.Sc.(Hons) ..... Zoology
Thesis: The Macrobenthos of the St Lucia Narrows.

Infield, Michael Mark, B.Sc.(Hons)(Durham) ..... Natural Resources
Thesis: Wildlife Resources, utilization and attitudes towards conservation: A case study of the Hluhluwe and Umfolozi Game Reserves in Natal/KwaZulu.

Leslie, Graeme Walker, B.Tech.(Hons)(Brunel) ..... Entomology
Thesis: The Arthropod predators of *Eldana Saccharina* Walker. (Lepidoptera: Pyralidae) Their identification and relative importance.

† **Kelly,** Kathleen Mary, B.Sc.(Hons), ... Botany
Thesis: The germination of *Aspalathus linearis* (N.L. Burnham) Dahlgren R.M.T.

McConnell, Catherine Susan, B.Sc.(Hons)(Witwatersrand) ..... Zoology
Thesis: Co-existence of the Golden Mole *Amblysomus hottentotus* and the Mole Rat *Cryptomys hottentotus.*

† **Meyer,** Hendrik Johannes, B.Sc.(Hons)(Pret) ..... Botany
Thesis: Nutrition Requirements for the *In Vitro* culture of *Manihot Esculenta* Crantz.

† **Nelson,** Warrick Reginald, B.Sc.Agric. ..... Botany
Thesis:The effects of seaweed concentrate on the growth of wheat.

Robson, Gary, B.Sc.(Hons) ..... Zoology
Thesis: Aspects of the Biology of a new species of South African *Patella* (Mollusca : Gastropoda Patellidae).

† **Schaper,** Ian, B.Sc.(Hons) ..... Chemistry
Thesis: A Theoretical and experimental study of selected 4-spin systems.

Schultz, Craig Basil, B.Sc.(Hons) (Rhodes) ..... Hydrology
Thesis: The sensitivity of output from a distributed hydrological model to rainfall input.

Slater-Kinghorn, Barbara Jillian, B.Sc.(Hons) ..... Chemistry
Thesis: Synthetic and Mechanistic Studies on Pentenynes.

† **Weller,** Ann Rosalind Mary, B.Sc.(Hons) ..... Physics
Thesis: Calculation of Molecular pair-interaction effects on bulk properties of Gases.

† **Whyte,** Ian John ..... Natural Resources
Thesis: The present ecological status of the Blue wildebeest *(Connochaetes taurinus taurinus, Burchell* 1823) in the central district of the Kruger National Park.

† Degree awarded with distinction

DOCTOR OF PHILOSOPHY IN THE FACULTY OF EDUCATION

Discipline

Naguran, Chinnapen Amatchi, M.Ed.(U.D.W.) ..... Education
Thesis: A critical study of aspects of Political, Constitutional, Administrative and Professional Development of Indian Teacher Education in South Africa with particular reference to the period 1965-1984.

Shuttleworth, Dorothea Henrietta, M.Ed. ..... Education
Thesis: Coding Competence and the learning of Afrikaans as a second Language.

GRADUATION EULOGY

CHINNAPEN AMATCHI NAGURAN

Starting his career as a teacher with a Std 8 certificate and two-year teachers' diploma, CHINNAPEN NAGURAN is now Chief Planner of Education in the Department of Education and Culture of the House of Delegates. In this capacity especially, he has been in an excellent position to survey the complex setting - political, constitutional, administrative and professional - of teacher education for the community to which he has devoted his professional life.

As an examiner notes, his dissertation draws on and co-ordinates a vast amount of primary sources, largely uncollated hitherto, and another notes that it constitutes a beacon for those exploring where the community's education has come from. In examining recent statistics, he raises important issues within present practice and indicates where education is likely to go. Having been involved in a crucial stage of the development of education in a particular group, and writing when education in South Africa is in turmoil, CHINNAPEN NAGURAN could hardly remain dispassionate, but the thesis is a notable contribution to understanding the development of education in South Africa to the mid-eighties. Moreover it sets a seal on the patient development of his own study from a young teacher to one recognised as an authority on the education of teachers for his community.

DEAN: Mr. Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Education : CHINNAPEN AMATCHI NAGURAN.

CHANCELLOR : I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF EDUCATION.

GRADUATION EULOGY

DOROTHEA HENRIETTA SHUTTLEWORTH

The stimulus for DOT SHUTTLEWORTH'S research was the experience of many years of teaching Afrikaans to English-speaking pupils. The problem she found within classroom constraints was to bring the learner to use the second language correctly and creatively without interference from the mother-tongue. Pupils are aware of what they want to say, but are not able to say it in the second language and usually try to translate from the mother-tongue.

In her thesis, she outlined a teaching strategy based on the principle that all learning is a decision-making process and that language learning requires the making of coding decisions. She boldly questioned much of the methodology in vogue in second-language teaching and related a theory of language acquisition to a practical strategy for teaching in which pupils are enabled to use the language without translating from the mother-tongue.

All her examiners agreed that her review of the literature was impressive and, although she entered a field where conflicting theories compete for acceptance, she was able to convince them, in the words of one of them, that her contribution represents a creative and exciting contribution to the understanding of second language teaching.

DEAN: Mr. Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Education : DOROTHEA HENRIETTA SHUTTLEWORTH.

CHANCELLOR : I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF EDUCATION.

DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE

Discipline

Aken, Mark Ernest, B.Sc.(Hons) ..... Botany
Thesis: A study of the marine phytoflagellate *Pyramimonas pseudoparkeae* Pienaar and Aken (Prasinophyceae).

Ameer, Farouk, B.Sc.(Hons) ..... Chemistry
Thesis: Studies directed towards the Synthesis of Necic Acids.

Balkwill, Kevin, B.Sc.(Hons)(Witwatersrand) ..... Botany
Thesis:Taxonomic studies in the tribe Justicieae of the family Acanthaceae.

Cook, Elizabeth Louise, M.Sc. ..... Botany
Thesis: The Senescence of the cut carnation *(Dianthus caryophyllus* L. cv. White Sim) flower.

Erasmus, Daniël Jacobus, M.Sc. ..... Botany
Thesis: Achene Biology and the Chemical Control of *Chromolaena Odorata.*

Graham, Elizabeth Beryl, B.Sc.(Hons) ..... Physics
Thesis: A theoretical investigation of optical phenomena in transmission.

Gray, James Steward Sanders, M.Sc.Agric. ..... Biochemistry
Thesis: A contribution to the Biochemistry of *Erwinia Chrysanthemi.*

Jeenah, Mohamed Sayed, M.Phil.(Polytechnic of N.London) ..... Biochemistry
Thesis: Enzymatic Conversion of Sterigmatocystin to Aflatoxin B_1.

Lawson, David, M.Sc.(Aberdeen) ..... Natural Resources
Thesis: The Ecology and Conservation of Suni in Natal.

Smit, Diana Norah, B.Sc.(Hons) ..... Chemistry
Thesis: The synthesis and chemistry of some metallophosphorus cluster compounds of Ruthenium.

Westlake, Kenneth, M.Sc.(Trent Polytechnic) ..... Biochemistry
Thesis: The Occurence of Mycotoxins in feedstuffs in Natal and aspects of their metabolism in the Rumen.

GRADUATION EULOGY

MARK ERNEST AKEN

Ever since Mark Aken was a child he has been fascinated by the sea and the wealth and abundance of our marine flora and fauna. It was therefore not surprising that he came to university with the long term objective of studying marine biology.

He did not however envisage that he would ever become fascinated by the relatively unknown group of microscopic marine plants referred to collectively as the nanoplankton. These organisms are of such minute dimensions that they can only effectively be studied with the electron microscope.

During his honours year he first made contact with the organism that was to have a profound effect on his future career and form the basis for his doctoral studies - the green flagellate *Pyramimonas*.

His examiners have all commented that his doctoral thesis is one of the most detailed and complete studies of a single organism they have encountered. His attention to meticulous detail has enabled him to ellucidate aspects of its ultrastructure, biology, nutrition, ecology, biochemistry, evolution and life cycle.

His published work has already drawn exceptionally favourable comments from phycologists around the world and his work will serve as a model for future studies in marine nanoplankton biology.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science :
MARK ERNEST AKEN.

CHANCELLOR:
I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

GRADUATION EULOGY

FAROUK AMEER

Senecio alkaloids, present as toxic principles in a number of common and harmless-looking plants, such as *Senecio isatideus* and *Senecio retrorsus*, have long been the focus of research in the Chemistry Department.

Earlier work, under Professor Frank Warren, was directed towards the isolation and structure determination of *Senecio* alkaloids; more recently, however, the focus of attention has moved from natural products to the total synthesis of the necic acid constituents of *Senecio* alkaloids. The construction of these necic acids from simple precursors presents considerable challenges and it is these challenges that Farouk Ameer has confronted in the successful prosecution of his doctoral research.

Farouk Ameer's work represents a broadly based approach to synthesis in which attention has been given to the preparation of suitable precursors and a careful elucidation of their properties.

Information gleaned from these studies has been applied to the total synthesis of senecivernic acid and the development of two independent routes to retronecic acid. The synthesis of these necic acids was described by the senior external examiner as "a considerable achievement".

In the words of an *unknown* Latin scholar :-

Senecio isatideus,
Senecio retrorsus,
For a chemist fastidious,
Most natural resources.

Senecio isatideus,
Senecio retrorsus,
From Mister to Doctor,
A... MEER metamorphosis.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science : FAROUK AMEER.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

GRADUATION EULOGY

KEVIN BALKWILL

When Kevin Balkwill began his research towards a Ph.D., his primary mandate was to revise the southern African members of two genera, *Dicliptera* and *Peristrophe*, which are members of a huge tribe in the Acanthaceae, well known for its complexity.

With the zeal of a true taxonomist, Kevin Balkwill investigated all facets of his plants. His study of character variation is comprehensive and the results are presented in an imaginative manner. He elucidated the complex and often neglected inflorescence characters, examined every aspect of the flower including its pollen and pigments and revealed the taxonomic potential in hitherto unexpected areas such as the surface of the seed and minute features of the nectaries. One examiner, commented that these are just the sort of characters which a good modern taxonomic Ph.D. thesis might be expected to reveal and Mr Balkwill met this expectation with 'conspicuous success'. *Dicliptera* and *Peristrophe* were previously badly known, but Mr Balkwill's revision has created order out of the chaos.'

However, Mr Balkwill's contribution goes far beyond taxonomic monographs of *Dicliptera* and *Peristrophe* in southern Africa. He has shown great initiative in seeking to place the genera in the broader context of the family. As a result of his systematic analysis of the patterns of variation exhibited within the family, he has accumulated an impressive knowledge of the Acanthaceae and the original conclusions that he reaches concerning the classification of southern African Acanthaceae will undoubtedly be accepted by the botanical community. His thesis has been described as an outstanding contribution to our knowledge of the family and the basis for further studies in the Acanthaceae, not only in this country but in other parts of the world.

DEAN : Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science : KEVIN BALKWILL.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

GRADUATION EULOGY

ELIZABETH LOUISE COOK

Elizabeth Louise Cook obtained her B.Sc.Hons. degree from this University with distinction. She subsequently decided to read for an M.Sc. paying attention to the ageing or senescence process which has fascinated man for centuries. As study material she chose the carnation which is a popular cut flower; annual sales in the United States alone amounting to approximately 200 million dollars.

By careful experimentation Miss Cook set about extending the longevity of the carnation cut-flower. During the course of her investigation she succeeded in extending the life-span of this flower for up to 16 days. This extension will ensure that this flower will increase in popularity with the general public. In addition it will ensure that these flowers can be profitably transported over much longer distances.

Miss Cook paid meticulous attention to the physiology of the cut flower and showed beyond doubt that flower longevity is partly under hormonal control. Her studies highlighted the role of ethylene as the causal agent for flower senescence. All examiners complimented Miss Cook on her thorough approach. Her results have been well received at International Conferences and in the international literature where it is agreed that she has made a substantial contribution to our understanding of flower senescence. If applied in the local cut-flower industry her results could result in the establishment of a South African Flower Industry which may well develop beyond the exploitation of our indigenous flora.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science : ELIZABETH LOUISE COOK.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

GRADUATION EULOGY

DANIEL JACOBUS ERASMUS

Daniel Jacobus Erasmus is a graduate of this University. He excelled during his post-graduate years and obtained both his B.Sc. Hons. and M.Sc. degrees with distinction. Throughout his student days he showed a keen interest in alien invader weeds which are of great economic importance to South Africa. He elected to work on *Chromolaena odorata*, better known as the Triffid weed, which is spreading rapidly along the Natal coast and is fast moving into inland areas. This weed is regarded as one of the ten most serious invaders in South Africa and is creating serious problems as it overruns the natural vegetation, agricultural land and plantations.

Mr Erasmus soon established that working on Triffid weed is no trifling matter and that in depth studies of its biology was required if control and management programmes were to be formulated. For this reason Mr Erasmus made an in depth and meticulous study of this plant. These studies included an investigation of its seed biology, a thorough investigation with respect to means of breaking seed dormancy, and eradication using herbicides.

The work presented for this Ph.D. not only highlighted the problems associated with this weed but also offers hope for its control in infested areas. A management programme based on sound and proven facts can now be implemented. The findings of this study has been published internationally and has been met with great enthusiasm in many countries where Triffid weed has established itself as an aggressive invader. The positive and holistic approach taken by Mr Erasmus should go a long way in providing the means for containing the rapid spread of this noxious weed.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science : DANIEL JACOBUS ERASMUS.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

GRADUATION EULOGY

ELIZABETH BERYL GRAHAM

The interaction of light and matter has been studied extensively both with a view to understanding the nature of light and to probing the structure of matter. These words constitute the opening sentence of Mrs Elizabeth Graham's doctoral thesis entitled "A theoretical investigation of optical phenomena in transmission". It is with revealing the structure of matter that her research has been concerned. This she achieved by means of a unified theory relating all possible optical effects exhibited by a light beam passing through matter to the symmetry of a crystal or, in the case of a fluid, to the properties of its molecules. Among these effects are certain forms of birefringence and dichroism which had been predicted in 1948 by an American physicist called Jones, but, because he supplied neither a theory nor an indication of the substances in which these effects might occur, they have remained as unknown to-day as they were in 1948. Not to be outdone by a Jones, Mrs Graham has made good these deficiencies in what her examiners have described as a remarkable achievement and a fine piece of work deserving congratulation. Also recognised by them was her exceptional ability to present theoretical ideas in lucid form. Despite this lucidity she now brings confusion to a family in which her husband is also a doctor of physics.

DEAN : Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science : ELIZABETH BERYL GRAHAM.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

GRADUATION EULOGY

JAMES STEWARD SANDERS GRAY

As a result of current growth in the world population much effort is put into producing extra food. One research approach in this quest is in the control of microbial pathogens that attack crops. In this connection plant pathologists have made valuable contributions to elucidating the interaction between plants and their parasites. Before such studies and their applications can be fully effective, however, a thorough understanding of the underlying biochemistry of these interactions must be gained.

With such a goal in mind JAMES STEWARD SANDERS GRAY commenced a study on the carbohydrate metabolism of a pathogen called Erwinia chrysanthemi that cause soft rot in maize.

The first part of this work concentrated on pectate lyase, which is an enzyme, i.e., biological catalyst, that aids the breakdown of plant cell walls and allows the pathogen access to the plant host. Much valuable information with regards to this enzyme has been gathered.

Another interesting finding was that a spontaneous mutation of the organism could arise which could utilise the sugar lactose, unlike the parent organism. By painstaking work it was shown that this was due to the initiation of a transport system for lactose in the mutant. This together with other findings greatly increases our understanding of how microbial pathogens can utilize sugars derived from the host.

Two papers have already been published from this work in local journals and one is under review in an international journal.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science : JAMES STEWARD SANDERS GRAY.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

Not present

GRADUATION EULOGY

MOHAMED SAYED JEENAH

Mycotoxins are substances that are produced by fungi and are poisonous to other organisms. Thus if a food commodity becomes infected with a fungus, under certain circumstances it may become highly dangerous to the consumer.

The biochemical process that the fungus uses to produce mycotoxins are poorly understood and this includes the nature of enzymes, i.e. biological catalysts, that promote the biosynthetic reactions.

MOHAMED SAYED JEENAH set out to isolate and characterise some of the enzymes responsible for the formation of an important mycotoxin called aflatoxin. The work is very demanding in that the fungus produces the enzymes only at a particular stage in its life cycle and then only in small quantity. He was able to make enzyme preparations that were able to carry out the last part of the biosynthetic pathway. Two components were separated and characterized from this preparation, thereby greatly adding to our knowledge of certain aspects of this metabolic process.

One paper based on his results has already been published and two more are under consideration.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science: MOHAMED SAYED JEENAH.

CHANCELLOR: I CONFER ~~YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE~~. upon the Degree of Doctor of Philosophy in the Faculty of Science upon MOHAMED SAYED JEENAH in absentia

GRADUATION EULOGY

DAVID LAWSON

David Lawson came to South Africa to study the ecology of problem animals and he must have been dismayed to find that he was to study the suni. The suni inhabits dense forests and is Africa's smallest and most secretive antelope. Indeed it was a problem to even find them let alone study them. In his first Progress Report Lawson noted 'it is a very difficult project but can be done with perseverence and application'. After four years of painstaking effort only 237 animals had been sighted in the field. However, careful observation of their behaviour and feeding in the field and with captive animals, showed that unlike most antelope, suni feeds mainly on fallen leaves. This observation lead to an innovative approach to the analysis of the habitat requirements of suni which has received high praise. With his sound understanding of the ecology of suni Lawson has developed new approaches for censusing and management. These will for the first time provide conservation agencies with an effective means of conserving the species.

Lawson has shown a scholarly approach to his research and has in the words of the examiners, made a substantial contribution to new knowledge.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science: DAVID LAWSON.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

Not present

GRADUATION EULOGY

DIANA NORAH SMIT

Ruthenium is one of the more abundant of the platinum metals but does not enjoy the wide commercial application of the others such as rhodium and platinum. It is thus not surprising that concerted efforts are being made, both by local and overseas research groups, to advance our knowledge of the chemistry of ruthenium. Diana Norah Smit, a graduate of this University is to receive her doctorate to-day for her significant contribution to these efforts.

Specifically, Miss Smit designed, synthesised and studied a number of very large and complex molecules known as clusters containing as many as eight ruthenium atoms, as well as up to one hundred other atoms. Because of their complexity, these molecules exhibit unique reactivity patterns, with the added advantage of being soluble in common solvents. As such, metal cluster compounds are widely regarded as the industrial catalysts of the future. A further consequence of their size and complexity, is that the determination of their molecular structures is a major task, one which Miss Smit handled with skill and determination. Indeed her structure determinations count amongst the largest yet carried out in South Africa.

Miss Smit's other major passion is horse-riding and, by all accounts, she handles the hurdles and obstacles she meets in her equestrian pursuits as expertly and skilfully as those she encounters in ruthenium chemistry.

Not present

DEAN: Mr Chancellor : I have the honour to ~~present for~~ the degree of Doctor of Philosophy in the Faculty of Science: DIANA NORAH SMIT.

CHANCELLOR: ~~I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.~~

I confer the degree of Doctor of Philosophy in the Faculty of Science upon Diana Norah Smit in absentia

GRADUATION EULOGY

KENNETH WESTLAKE

When KENETH WESTLAKE commenced his research work in 1982, little was known with regards to the occurrence of fungal poisons, that is, mycotoxins, in animal feeds in South Africa. Furthermore nobody knew what happened in the digestive system of ruminants, when the animal was exposed to such toxins.

The subsequent work done by Kenneth Westlake has gone a long way to redress this lack of knowledge. He has shown that there is a fairly high incidence of mycotoxins in the feedstuffs used in Natal, in particular the notorious, aflatoxin, and to a lesser degree, patulin and trichothecenes.

His main contribution, however, has been in elucidation of the inter-reaction between trichothecene toxins and the microbes present in the digestive tract of ruminants. By the use of difficult anaerobic techniques he showed that certain species of microbes were capable of degrading the toxin to products that he later identified. This study explains, in part, why ruminants are more resistant to certain mycotoxins.

During the course of the work a new method for the analysis of trichothecenes and their products was developed and two papers were published in international journals. Several more papers are also currently under review.

DEAN: Mr Chancellor : I have the honour to present for the degree of Doctor of Philosophy in the Faculty of Science : KENNETH WESTLAKE.

CHANCELLOR: I CONFER UPON YOU THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF SCIENCE.

DEGREES CONFERRED IN ABSENTIA — FACULTY OF SCIENCE.

DEAN:

Mr Chancellor: Mr/Mrs/Miss (X) .....is unable to be with us today, but I have great pleasure in requesting you to confer the degree of Doctor of Philosophy in the Faculty of Science, upon: (full names of candidate) .....in absentia.

CHANCELLOR:

I confer the degree of Doctor of Philosophy in the Faculty of Science in absentia.

CONFERMENT OF THE DEGREE OF DOCTOR OF LITERATURE IN THE FACULTY OF EDUCATION
honoris causa UPON:

KENNETH BROWN HARTSHORNE

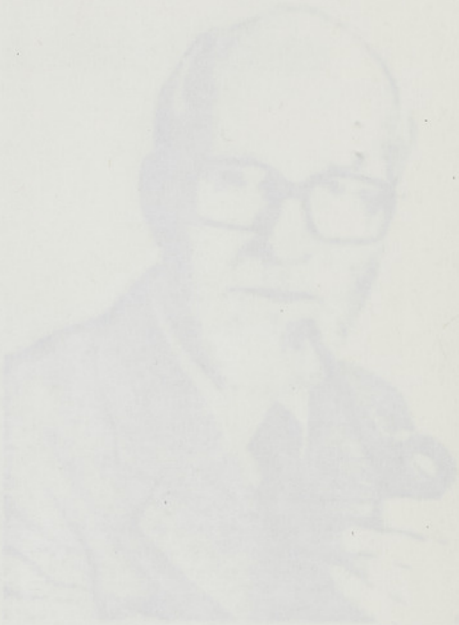
Dr Ken Hartshorne was born in County Durham, and attained both an Honours Degree in History and a teaching diploma at London University. He came to South Africa in 1938, to a secondary teaching post in black education, at Milnerton Institution, Pretoria. During the war he served in the psychological clinic of the S.A. Medical Corps; his experience there led to the production of a thesis which gained him an M.Ed. with distinction at Unisa.

He returned to black education, to become lecturer and then principal at the Normal College, Kilnerton. In the early 1950s the introduction of Bantu Education meant an unhappy transformation of the education system. Some teachers decided that they could not participate, and resigned; Ken Hartshorne was one of those who felt that, for all the constraints that lay ahead, he had to carry on out of loyalty to black teachers and pupils.

From 1953 he was steadily promoted within the Bantu Education system. He was Inspector of Education, first at Ermelo, then in Soweto. He then became, successively, Education Planner, Chief Planner, Deputy Director, and eventually Director of Education Planning. Throughout this period he struggled to introduce humane ideas and values; but in the mid-1970s he found official attitudes finally intolerable. In 1977 he took early retirement.

In 1975 he had received an honorary degree from the University of the Witwatersrand. In the years of his retirement he has been creatively active in educational matters: within school and tertiary education in Bophuthatswana; in various projects and courses for disadvantaged students at Wits; in the de Lange Commission; as an educational consultant for numerous organizations; and also as President of the English Academy.

The University of Natal honours Kenneth Hartshorne as a man whose experience in black education, and whose numerous articles, have contributed in an important way to the most enlightened contemporary thinking on the subject – to the view, in fact, that what South Africa needs is a single education system.



UNIVERSITY PRAYER

Oremus:

Oremus pro hac Universitate:

Deus Omnipotens, cuius aeternam gloriam caeli stellis fulgentibus semper enarrant, duc nos, oramus, eisdem stellis ut omnes qui in hac Universitate gubernant, docent et discunt vera humilitate aeternam inveniant veritatem.

O Deus, Lux Mundi, Sapientia Aeterna, qui illuminat omnem hominem in mundum venientem, da ut haec Universitas, veritatem et lucem docens, thesauros scientiae plenos impertiat, et quasi lucerna luceat in terra nostra efficiatque populo cor sapiens, mentem sanam et voluntatem iustam.

Recordemur coram Deo Conditores et Benefactores nostros:

Magnus es et laudabilis valde, Domine, Omnipotens Deus animarum et omnis carnis! Gratias tibi et laudem agimus pro omnibus illis Conditoribus, Benefactoribus et Praeceptoribus qui ex hac vita excesserunt in Tuo servitio; opere in terra consummato requiescant in pace.

Et da, Domine ut nos, exemplo eorum incitati, bonum eorum opus fideliter continuemus.

Let us pray:

Let us pray for this University:

Almighty God, whose everlasting glory the heavens declare with their shining stars, lead us, we pray, by the same stars that all who govern, teach, and learn in this University may, in true humility, find eternal truth.

O God, Light of the World, Eternal Wisdom that enlightens every man that comes into the World, grant that this University, as it teaches truth and light, may impart the full treasures of knowledge, and be in our land a shining luminary and inspire in the people a heart of wisdom, a pure mind and a true sense of justice.

Let us remember before God our Founders and Benefactors:

Great art Thou and very worthy to be praised, O Lord, Thou who art the almighty God of spirits and of all flesh! We render thanks unto Thee and praise for all those Founders, Benefactors and Teachers, who departed this life in Thy service. Having fulfilled their work on earth may they rest in peace.

And grant, O Lord, that we, encouraged by their example, may faithfully continue their good work.

UNIVERSITY ANTHEM

Natale solum canimus
Cui sol adest faustissimus
Almamque matrem dicimus
Aurorae Stellam colimus.

O vivas, in aeternum, vivas,
Alma mater, quae nos ditas,
Fove serva protege
Stella aurorae signum Natale.

Hic juvenes addiscimus
Ad artes corda ferimus
Qui domus species sumus,
Quocumque nos dividimus.

Hinc etsi nos discedimus
Scottarum rus meminimus
Ad Umsinduzi tendimus
Mentesque saltem vertimus.

GAUDEAMUS IGITUR

Gaudeamus igitur, juvenes dum sumus; (Rep.)
Post jucundam juventutem, post molestam
senectutem,
Nos habebit humus, nos habebit humus.

Ubi sunt qui ante nos in mundo fuere? (Rep.)
Vadite ad superos transite ad inferos,
Ubi jam fuere, ubi jam fuere.

Vita nostra brevis est, brevi finietur. (Rep.)
Venit mors velociter, rapit nos atrociter,
Nemini parcetur, nemini parcetur.

Vivat Academia, Vivant Professores, (Rep.)
Vivat membrum quodlibet, vivant membra
quaelibet,
Semper sint in flore, semper sint in flore.

Vivant omnes virgines, faciles, formosae, (Rep.)
Vivant et mulieres, dulces et amabiles,
Bonae, laboriosae, bonae, laboriosae.

Vivat et respublica, et quae illam regit: (Rep.)
Vivat nostra civitas, Maecenatum caritas,
Quae nos hic protegit, quae nos hic protegit.

Pereat tristitia, pereant osores, (Rep.)
Pereat diabolus, quivis antiburschius,
Atque irrisores, atque irrisores.