Nova Scotia Agricultural College

Calendar 1979/80

Seventy Fourth Annual

CALENDAR

OF THE

NOVA SCOTIA AGRICULTURAL COLLEGE

TRURO

UNDER

The Nova Scotia Department of Agriculture and Marketing

1979-1980

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INDEX

APPLICATION FOR ADMISSION [1979]
NOVA SCOTIA AGRICULTURAL COLLEGE

Date .....

Name in full .....

Address .....

Postal Code ..... Telephone No. .....

Name of Community .....

Birthday .....
Day Month Year

Name of Parents .....

or
Next of Kin ..... Relationship .....

Address .....

If you are not in high school during the 1978-79 school year, what educational institution or instutitions have you attended since you were in high school?

.....

Course Desired:

Technician:

Agricultural Business — First year ..... Second year .....
Agricultural Engineering First year ..... Second year .....
Animal Science — First year ..... Second year .....
Farm Equipment — First year ..... Second year .....
Plant Science First year ..... Second year .....
Special — .....

Technology:

Biology Laboratory — First year ..... Second year .....
Chemistry Laboratory — First year ..... Second year .....
Farming — First year ..... Second year .....
Ornamental Horticulture — First year ..... Second year .....
Directed Studies — Final year .....

Degree:

Agricultural Science — First year ..... Second year .....
Agricultural Engineering — First year ..... Second year .....
Special — .....

Students who intend to take the **pre-veterinary option** in the Agricultural Science Degree course should indicate this by writing "pre-vet" after First year, Agricultural Science.

Applications will not be considered until a complete (to date) and official transcript of high school marks have been submitted.

Candidates who have attended a post-secondary institution are also required to submit a complete (to date) and official transcript of their record there.

What high school did you attend? .....

.....

State employment experience, giving name and address of employers .....

.....

In submitting this application form I hereby agree to abide by the rules and regulations of the College.

Signature of Applicant .....

Signature of Parent or Guardian .....
(Required only if applicant is under 19)

Please complete the reverse side

Questions to be answered and form returned to:
THE REGISTRAR
THE NOVA SCOTIA AGRICULTURAL COLLEGE
TRURO
B2N 5E3

Please check applicable items below in answering the question "Where did you hear about the Nova Scotia Agricultural College?"

Through:
(a) 4—H . . . . . .

(b) School Counsellor . . . . . .

(c) An Agricultural Representative . . . . . .

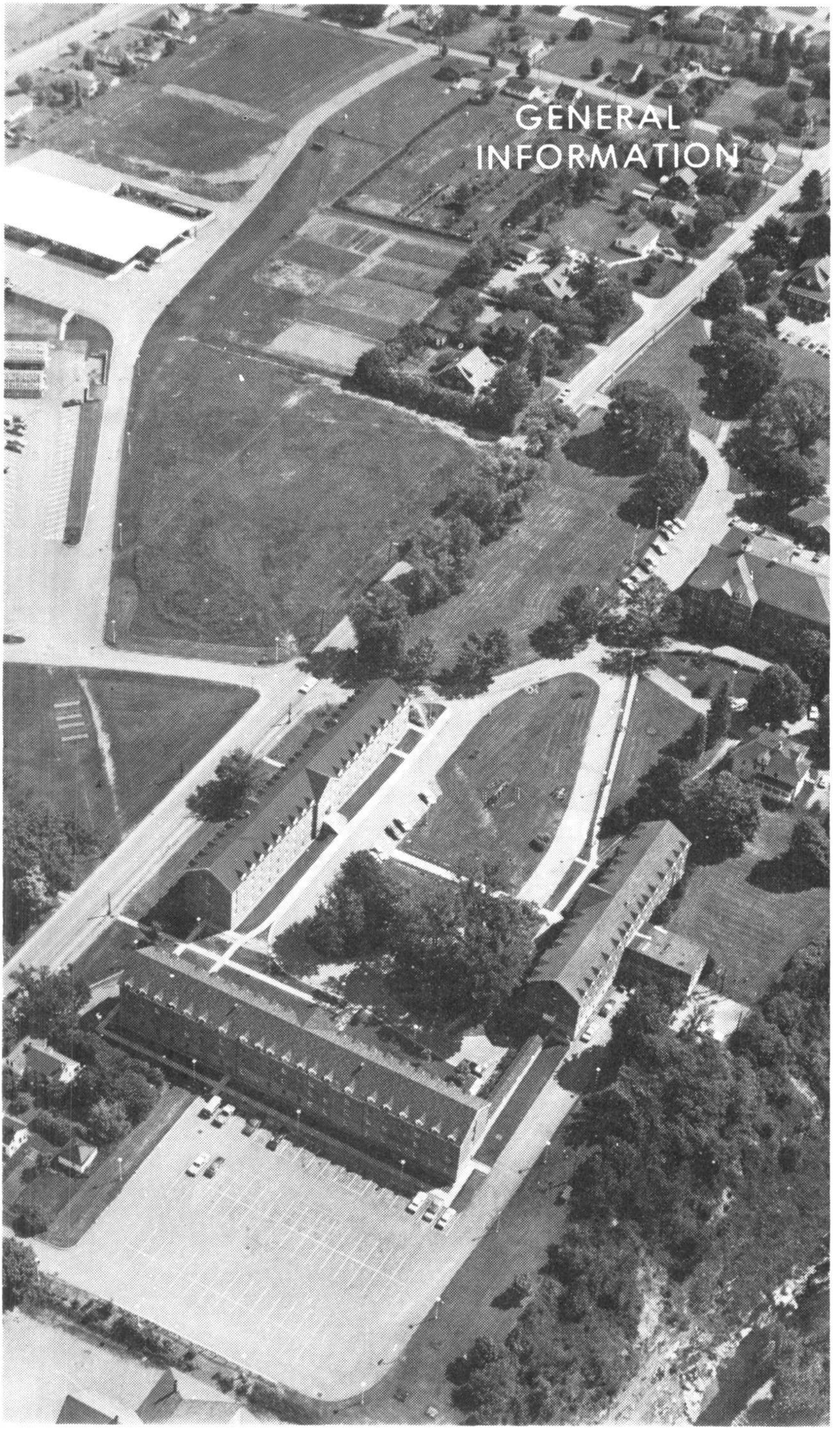
(d) Parents . . . . . .

(e) Career Event . . . . . .

(f) A Friend . . . . . .

(g) A Graduate of the College . . . . . .

(h) Other . . . . . .


GENERAL
INFORMATION

1979 CALENDAR

JULY 1979

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	-	-	-	-
-	-	-	-	-	-	-

AUGUST 1979

S	M	T	W	T	F	S
-	-	-	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	-
-	-	-	-	-	-	-

SEPTEMBER 1979

S	M	T	W	T	F	S
-	-	-	-	-	-	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	-	-	-	-	-	-

OCTOBER 1979

S	M	T	W	T	F	S
-	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	-	-	-
-	-	-	-	-	-	-

NOVEMBER 1979

S	M	T	W	T	F	S
-	-	-	-	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	-
-	-	-	-	-	-	-

DECEMBER 1979

S	M	T	W	T	F	S
-	-	-	-	-	-	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	-	-	-	-	-

1980 CALENDAR

JANUARY 1980

S	M	T	W	T	F	S
-	-	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	-	-
-	-	-	-	-	-	-

FEBRUARY 1980

S	M	T	W	T	F	S
-	-	-	-	-	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	-
-	-	-	-	-	-	-

MARCH 1980

S	M	T	W	T	F	S
-	-	-	-	-	-	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	-	-	-	-	-

APRIL 1980

S	M	T	W	T	F	S
-	-	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	-	-	-
-	-	-	-	-	-	-

MAY 1980

S	M	T	W	T	F	S
-	-	-	-	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
-	-	-	-	-	-	-

JUNE 1980

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	-	-	-	-	-
-	-	-	-	-	-	-

CALENDAR FOR SESSION—1979-80

1979

August 20-August 31	Chemistry refresher course for selected first-year Degree students (commences at 1:30 p.m.).
August 27-Sept. 7	Chemistry and Mathematics refresher courses for selected first-year Technician students (commences at 1:30 p.m.).
Sept. 5-7	Supplementary examinations.
Sept. 10	Registration for students registering for the first time.
Sept. 11	Registration for returning students.
Sept. 12	Lectures commence at 8:15 a.m.
October 8	Thanksgiving Day. No classes.
Nov. 1-3	College Royal
Nov. 10-12	Long week-end. No classes.
Dec. 10-21	First semester examinations.

1980

January 7	Second semester lectures commence at 8:15 a.m.
Feb. 23-Mar. 2	Mid-term break for individual study.
April 4	Good Friday. No classes.
April 14-24	Second semester examinations.
May 1	Graduation exercises.

Trueman House, Chapman House and Fraser House will be open as follows:

—for Refresher course students, the mornings of August 20 and 27.
—for students who have to write supplemental examinations, after dinner on September 4.
—for all new students, after dinner on September 9.
—for all other students, after dinner on September 11.

Any student who wishes to use residence facilities before the times set down above will be charged at the rate of $6.00 per bed-night.

A student who wishes to register late must make the necessary arrangements through the Registrar's office. Unless the arrangements for late registration are made in time for the applicant to have all first semester payments in the Accounting Office not later than September 11, a penalty of $5.00 will be imposed for each day of lectures until registration has been completed.

OFFICERS OF ADMINISTRATION

Principal
H.F. MacRAE, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (McGill)

Principal Emeritus
KENNETH COX, B.S.A. (Toronto), M.S.A. (McGill), L.L.D. (McGill)

Vice-Principal
I.M. FRASER, B.Sc. (Dalhousie), M.A. (Maine)

Dean, Vocational and Technical Education
A.D. ELLS, B.Sc. (Agr.) (McGill), M.A. (Acadia)

Registrar
P.Y. HAMILTON, B.Sc. (Agr.) (McGill), M.Sc. (Maine)

Librarian
B.S. SODHI, B.A., (Punjab), M.A. (Punjab), Dip. L. Sc., (Punjab)

Dean of Students—Chaplain
REV. D.I. MacEACHERN, B.A. (Mt. Allison), M. Div. (Pine Hill)

Deans of Residence
K.S. MARCHANT, B.P. Ed. (New Brunswick), M.S. (Springfield)

S.J.B. STACKHOUSE, B.Sc. (Ag. Ec.) (Guelph), M.Sc. (Guelph)

J.M. SMITH, B.P. Ed. (Dalhousie)

Director of Athletics
K.S. MARCHANT, B.P. Ed. (New Brunswick), M.S. (Springfield)

Placement Officer
D.E. MacLEOD, B.A. (Dalhousie), B.Ed. (Acadia)

Business Manager
R.F. McEWAN

Secretary
MRS. A. MARIE HARTIGAN

FACULTY

Principal
H.F. MacRAE, B.Sc.(Agr.)(McGill), M.Sc. (McGill), Ph.D. (McGill)

Agricultural Engineering
JAMES ADAMS, B.Sc. (Strathclyde), M.Sc. (Reading)
Associate Professor

J.T. MacAULAY, B.S.A. (Toronto), B.E. (Nova Scotia Technical College), M.Sc. (Guelph)
Associate Professor

G.E. TOWNSEND, B.Sc. (Agr.) (McGill)
Assistant Professor

J.D. CUNNINGHAM, B.S.A. (Toronto), B.E. (Nova Scotia Technical College)
Assistant Professor

D.A. BROWNING, B.E. (Nova Scotia Technical College)
Lecturer

P.L. HARVARD, B.Sc. (Agr. Eng.) (McGill), M.Sc. (McGill)
Lecturer

J.D. MacAULAY, B.S.A. (Toronto), M.Sc.(Guelph), Ph.D. (Br. Columbia)
Visiting Lecturer

Animal Science

L.M. COCK, B.Sc. (Agr.) (McGill), M.S. (Wisconsin), Ph.D. (Maine)
Professor

S.L. CURTIS, B.S.A. (Toronto), M.Sc. (Massachusetts), Ph.D. (Minnesota)
Associate Professor

P.Y. HAMILTON, B.Sc. (Agr.) (McGill), M.Sc. (Maine)
Associate Professor

W.G. MATHEWSON, B.Sc. (Agr.) (Aberdeen), D.T.A. (Trinidad), M.Sc. (Aberdeen)
Associate Professor

D.C. CROBER, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (British Columbia)
Associate Professor

M.A. PARSONS, B.S. (Animal and Veterinary Sciences) (Maine)
Lecturer

A.R. MAIN, D.V.M. (Toronto)
Sessional Lecturer [N.S. Dept of Agriculture]

G.W. CHANT, B.S.A. (Guelph)
Sessional Lecturer [N.S. Dept. of Agriculture]

Biology

L.A. McFADDEN, B.Sc. (Agr.) (McGill), M.Sc. (Cornell), Ph.D. (Cornell)
Professor

A.E. ROLAND, B.A. (Acadia), M.A. (Toronto), Ph.D. (Wisconsin), D.Sc. (Acadia), F.A.I.C.
Professor Emeritus

M.E. NEARY, B.Sc. (Agr.) (McGill)
Professor Emeritus

R.B. PORTH, B.S.A. (Br. Columbia), M.S.A. (Br. Columbia), Ph.D. (McGill)
Associate Professor

L.J. EATON, B.Sc. (Acadia), M.Sc. (Dalhousie)
Assistant Professor

L.E. CROSBY, B.Sc. (Acadia), M.Sc. (Acadia)
Assistant Professor

R.K. PRANGE, B.Sc. (Acadia), M.Sc. (Br. Columbia)
Lecturer

Chemistry

W.M. LANGILLE, B.Sc. (Acadia), M.Sc. (McGill)
Associate Professor

H.F. MacRAE, B.Sc. (Agr.)(McGill), M.Sc. (McGill), Ph.D. (McGill)
Principal and Professor

H.M. MacCONNELL, B.Sc. (Agr.) (McGill), M.Sc. (McGill)
Associate Professor

K.S. MacLEAN, B.Sc. (Dalhousie), M.Sc. (McGill)
Associate Professor

J.E. HAWLEY, B.Sc. (Agr.) (McGill)
Assistant Professor

A.S. PAYNE, B.Sc. (Agr.) (McGill), M.Sc. (McGill)
Assistant Professor

A.R. ROBINSON, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph.D. (McGill)
Assistant Professor

J.G. BEKE, B.S.A. (Br. Columbia), M.Sc. (Manitoba), Ph.D (Alberta) Sessional Lecturer [N.S. Dept. of Agriculture]

Economics and Business Management

J.C. TAIT, B.Sc. (Agr.) (McGill), M.Sc. (New Hampshire)
Associate Professor

A.D. ELLS, B.Sc. (Agr.) (McGill), M.A. (Acadia)
Associate Professor

D.E. ARNFAST, B.B.A. (St. Francis Xavier)
Assistant Professor

S.J.B. STACKHOUSE, B.Sc. (Ag. Ec.) (Guelph), M.Sc. (Guelph)
Assistant Professor

Humanities

K.S. MARCHANT, B.P.Ed. (New Brunswick), M.S. (Springfield)
Associate Professor

PARKER COX, B.A. (Acadia), M.A. (Toronto)
Professor Emeritus

REV. D.I. MacEACHERN, B.A. (Mt. Allison), M. Div. (Pine Hill)
Associate Professor

D.E. MacLEOD, B.A. (Dalhousie), B.Ed. (Acadia)
Assistant Professor

P.M. SANGER, B.A. (Melbourne), B.Ed. (Acadia), M.A. (Victoria)
Assistant Professor

J.M. SMITH, B.P. Ed. (Dalhousie)
Lecturer

Mathematics and Physics

S.G. SMITH, B.Sc. (Mt. Allison), M.Sc. (Windsor)
Associate Professor

I.M. FRASER, B.Sc. (Dalhousie), M.A. (Maine)
Associate Professor

V.L. SAXON, B.Sc. (Dalhousie), M.B.A. (Dalhousie), B.Ed. (Acadia), B.Eng. (N.S. Technical College)
Associate Professor

C.T. MADIGAN, B.Sc. (Windsor), M.Sc. (Windsor)
Associate Professor

R.V. BUCKLER, B.Sc. (Acadia), B.Ed. (Acadia)
Assistant Professor

Plant Science

J.S. BUBAR, B.Sc. (Agr.) (McGill), M.S. (Pennsylvania

State), Ph.D. (McGill)
Professor

J.E. SHUH, B.S.A. (Toronto), M.Sc. (McGill)
Professor Emeritus

K. PADMANATHAN, B.Sc. (Madras), B.Sc. (Agr.) (Colombo), M.Sc. (Pennsylvania State), Ph.D. (Pennsylvania State)
Professor

W. BADCOCK, B.Sc. (Agr.) (McGill), M.Sc. (McGill)
Assistant Professor

R.W. DANIELS, B.Sc. (Agr.) (McGill), M.S. (Michigan State)
Associate Professor

T.H. HALIBURTON, B.Sc. (Agr.) (McGill), M.S. (Cornell)
Assistant Professor

W.J. HIGGINS, B.Sc. (Mt. Allison), M.S. in Ed. (Niagara)
Assistant Professor

SCHEDULE OF PAYMENTS

The College reserves the right to make changes without notice in its published scale of charges for tuition, board and lodging, and other fees. Refunds will not be made except as stated below.

These charges are for the regular academic year. Students taking courses or projects in the summer period and who utilize residence facilities will be charged for room and board at the rate of $40 a week.

All payments are due on the dates stated. Fees not paid at registration time in September are subject to a late payment fee of $20 which will increase to $50 on October 15. January (1980) payments not made in full on or before January 21 are subject to a late payment fee of $20 increasing to $50 on February 18.

DEGREE COURSES

Payments due Sept. 10 (returning students Sept. 11), 1979

Tuition	$325
Board and lodging	660
Caution, laboratory and key deposit	32
Students' Council and athletics	65
Medical fee	6
	$1088

Books (estimated)	$125

Payments due January 8, 1980

Tuition	$ 325
Board and lodging	$ 725
	$1050

Books (estimated)	$125

It is recommended that every student registering for a Chemistry course purchase and use a laboratory coat. Estimated cost, $8-$10.

TECHNICIAN AND TECHNOLOGIST COURSES

Tuition is free to residents of the Atlantic Provinces, the governments of which are sharing operating costs of these Courses. For all other students, tuition fees are $325 per semester.

Payments due Sept. 10 (returning students Sept. 11), 1979

Board and lodging	660
Caution, laboratory and key deposit	32
Students' Council and athletics	65
Medical fee	6
	$763

Books (estimated)	$100

Payments due January 7, 1980

Board and lodging	$725

Books (estimated)	$100

The United Students' Council has approved a fee of $6.00 for the medical services fund to be collected from all students at time of registration. The fund provides non-prescription drugs and other supplies for the infirmary. It will not provide for prescription drugs, hospitalization or operations. All doctor's services will be requested by the College Health Service.

Except for health or other compelling compassionate reasons, a student who withdraws after the commencement of lectures will receive no refund of the tuition fee. Keeping in mind that no part of the registration deposit will be refunded, a student who withdraws after the first two weeks of term will receive a refund of the balance of his payment for board

but no part of his payment for room rent. (The rate for room rent is $20.00 per week.)

If a student withdraws during the first week of the academic year, the Students' Council and Medical Services fees will be refunded. After the first week there will be no refund except for a withdrawal for health or other compelling compassionate reasons. After a student has withdrawn the Students' Medical Fund will have no further responsibility for him.

RESIDENCE ACCOMMODATIONS

Board and lodging facilities are available for male and female students. Students who wish to reserve a room are required to pay a deposit of $25.00, returning students before June 30, and new students when they receive their letter of admission to the College. The deposit will be credited to the student's board and lodging account.

An applicant for whom a room has been reserved and who finds it necessary to cancel his reservation will be refunded his deposit, provided that notice of cancellation reaches the Registrar's office not later than September 1.

CAUTION AND LABORATORY DEPOSIT

Every student, at time of registration, must make a cash deposit of $32.00 with the Registrar to cover breakage.

Damage to floors, walls, doors, windows, lighting or furniture in any bedroom will be charged to the occupants of the room in equal shares, and damage to the common parts of the College and residences will be charged to the entire student body if the offender is not charged and punished. The sum charged in any case will be in excess of the amount necessary to repair the damage.

All caution deposits are subject to a general levy through the office of the Dean of Students for untraceable breakage and damage to buildings and equipment.

This fee, less deductions, will be refunded before the beginning of the next college year.

CANADA STUDENT LOANS PLAN

The Government of Canada makes available to eligible students enrolled in the Degree and Technical Courses loans and bursaries totaling up to $2800 for a student in one year. Application for a certificate of eligibility must be made to the issuing authority of the province of residence of the applicant.

Borrowers under the plan are required to repay principal and pay interest, but no payments are required as long as they are full time students at a specified post-secondary educational institution.

Application forms are available as follows:

Nova Scotia Students	— Department of Education Box 578 Halifax, N.S. B3J 2S9
New Brunswick students	— Department of Youth Centennial Building Fredericton, N.B. E3B 5H1
Prince Edward Island students	— Department of Education Box 2000 Charlottetown, P.E.I. C1A 7N8
Newfoundland students	— Department of Education Confederation Building St. John's, Nfld. A1C 5R9

The application should be completed and filed with the issuing authority during the early summer, so that there will be time for the issuing of an eligibility form before Registration Day. The applicant will then present the Certificate of Eligibility at the time of registration. Having had it signed by the Registrar, he may take it to any bank to arrange for funds.

A student who intends to finance his education with Canada Student Loan funds but has not received his Certifi-

cate of Eligibility prior to registration must pay the required fee at registration time. He should, therefore, arrange the necessary temporary financing before his arrival for registration.

Living Allowance for P.E.I. Students

A living allowance of $15.00 per week will be provided for Prince Edward Island students in good standing from Federal-Provincial funds if an application is made to the Director of Rural Development, Department of Agriculture and Forestry, Charlottetown, at as early a date as possible. Students who, at registration, present a letter from the above Department, indicating eligibility for assistance, are credited with this allowance.

Canadian Army Welfare Fund Bursaries:

Bursaries of up to $1,000 annually may be awarded to dependents of former members of the Canadian Army who enter the degree, technician, or technology courses at NSAC.

Financial need is the determining factor in the selection of recipients.

Applications are obtained from the Manager, Canadian Army Welfare Fund, East Memorial Building, Wellington Street, Ottawa. K1A 0P4.

Applications must be submitted by July 1.

Refund for New Brunswick Students:

Students from the Province of New Brunswick taking any two-year course will have one return railroad fare refunded to them each year by the New Brunswick Department of Agriculture. Such refund will be made at the close of the second term, provided that they have passed the requirements for the year. No application is necessary.

GENERAL INFORMATION

The Nova Scotia Agricultural College was formally opened in 1905 to assume and expand the work which for several years had been carried on by the School of Horticulture in Wolfville and the School of Agriculture in Truro. The College operates under authority of an act of the legislature of Nova Scotia.

Over the years instruction has been offered at various levels: among them credits towards a degree in Agriculture, semi-vocational courses, technical courses, and vocational short courses. In 1979-80 credits towards a science degree in Agriculture, an engineering degree in Agriculture, a pre-veterinarian course, five technician courses, five technology courses and numerous vocational short courses will be offered.

During the seventy-four years of its existence the Nova Scotia Agricultural College has had very close affiliations with the Ontario Agricultural College of the University of Guelph and Macdonald College of McGill University, at which institutions most of its graduates from the Degree Course have completed the studies for a degree. It now offers two years of a four-year course in Agricultural Science and two years of a four-year course in Agricultural Engineering.

Students who take the one-year pre-veterinary course and are successful, apply for admission to the University of Guelph to continue in the course leading to Doctor of Veterinary Medicine. Those not admitted for the Veterinary program may enter the second year of the Agricultural Science Degree course at N.S.A.C. and proceed in the program leading to a B.Sc. (Agr.).

Graduates of the pre-engineering course at the Nova Scotia Agricultural College will be admitted without further examination by the Nova Scotia Technical College to the second last year of a course leading to the degree of Bachelor of Engineering with specialization in Agricultural Engineering.

The University of Maine will consider for admission to its second last year in Agricultural Science a limited number of graduates of the Nova Scotia Agricultural College who have been recommended by the Vice-Principal.

To the student who wishes to farm, to accept employment in a farm-related industry, or to engage in professional agriculture, the College offers courses designed to better fit him for the line of endeavor he wishes to follow.

Agriculture offers to the alert man the widest possible field for study and opportunity. Its problems are a challenge to the keenest minds that can be brought to bear upon them, and it offers to many a young man the possibility of a career that will bring opportunity for useful service and distinction.

The record of the graduates of this institution, over the seventy-four years the College has been in existence, is conclusive evidence that students can obtain a sound agricultural education in the courses offered at the Nova Scotia Agricultural College, located on a 550 acre property at Bible Hill, a mile north-east of Truro, Nova Scotia.

The College is well equipped with buildings. Cumming Hall, Harlow Institute, Agricultural Engineering Building, Collins Horticultural Building, Dairy Building, Cox Institute of Agricultural Technology, Boulden Building, Agricultural Mechanics Building, Hancock Veterinary Building and a modern farm building complex provide adequate teaching facilities for all subjects offered and offices and laboratories for a large proportion of the staff of the Nova Scotia Department of Agriculture and Marketing. Fraser House, Trueman House and Chapman House provide living accommodations for male and female students. The most recent additions are

a complete and modern Athletic Centre and a new building housing a modern dining facility and student centre.

The Faculty reserves the right to withhold any first year courses for which less than five students apply.

The Faculty will give sympathetic consideration to any student who wishes to take a special selection of courses in order to fill a specific need. The choice of subjects will be limited to those that do not conflict when scheduled.

Students may write examinations in either of the two official languages of Canada.

The various courses arranged for the 1979-80 college year are listed and described elsewhere in the calendar. The Faculty reserves the right to make any revisions and additions that may be found necessary.

Post Office Address:

All mail should be addressed:
Nova Scotia Agricultural College,
Truro, N.S. B2N 5E3

Telephone:

Nova Scotia Agricultural College, Truro, 902-895-1571

Banks:

The following chartered banks have branches in Truro:
The Bank of Nova Scotia
The Bank of Montreal
The Canadian Imperial Bank of Commerce
The Royal Bank of Canada
The Toronto-Dominion Bank
The Bank of Montreal, Bible Hill

Telegrams:

Offices of Canadian National-Canadian Pacific Telecommunications are located in Truro.
Address all telegrams in care of:
Nova Scotia Agricultural College, Truro, N.S.

Express and Freight:

Express or freight may be forwarded to the Nova Scotia Agricultural College by either the Canadian National Railways or the Canadian Pacific Railways, since both lines maintain offices in Truro.

College Colors:
Royal Blue and Regular Gold.

Churches:
The following churches, to which students are invited, are located in Truro and Bible Hill:

First Baptist Church
Immanuel Baptist Church
Zion Baptist Church
St. John's Anglican Church
St. George's Anglican Church
St. James Presbyterian Church
First United Church
Brunswick Street United Church
St. Andrew's United Church
St. David's United Church
Salvation Army
Calvary Pentecostal Church
Wesleyan Methodist Church
Church of the Immaculate Conception
John Calvin Christian Reformed Church

THE COLLEGE WINTER FAIR

During each College year, the students put on a College Winter Fair, or College Royal, as it is frequently called. The show is a competition in fitting and showmanship rather than a contest among the horses, cattle, sheep, swine and poultry shown in the exhibition.

In addition to livestock classes, the show also features competiton in Agronomy, Horticulture and Farm Management and a series of educational demonstration booths.

The program and show are administered by students who hold the various offices necessary for the satisfactory operation of an exhibition.

THE ANIMAL SCIENCE CLUB

Students interested in animal studies are welcome to join and take part in the Animal Science Club. The activities of this student-operated club include visits to livestock operations, meetings and special guests on livestock topics and livestock evaluation studies and competitions.

A major project of the club is the selection and training of a livestock evaluation "team" to take part in the livestock evaluation competition at the Royal Winter Fair in Toronto. Participation in this competition is made possible by Mr. Clarence Kloosterhof of Clarence Farm Services Ltd., Truro, N.S., who gives $500 annually towards the expenses of the project.

STUDENT PLACEMENT SERVICE

The Nova Scotia Agricultural College provides facilities and personnel to assist graduates and undergraduates to obtain part-time, summer, and permanent employment.

The Placement Officer contacts representatives of industry, business and government to arrange for on and off-campus recruitment of students.

Individual counselling related to career planning and employment information associated with agriculture is available. Students are informed of employment opportunities in the College newspaper and by notices circulated on bulletin boards at various locations on campus. Information on career planning and potential employers is also available at the Placement Office and College Library.

RULES AND REGULATIONS

GENERAL REGULATIONS

All students are under the charge of the Principal and are responsible to him at all times for their conduct. The Principal is authorized to make such additional regulations as may be found necessary for the discipline of the College and to impose fines or other penalites for any infraction of rules and regulations.

All students are expected to attend all lectures, discussion groups, and laboratory periods, whether scheduled on the timetable or announced by the instructor. The members of the Faculty believe that a student for his own good should miss as few instructional periods as possible.

Students wishing to absent themselves from classes for compassionate reasons must obtain permission from the Registrar or, in his absence, The Dean of Students.

A student who arrives late for class may be refused admission.

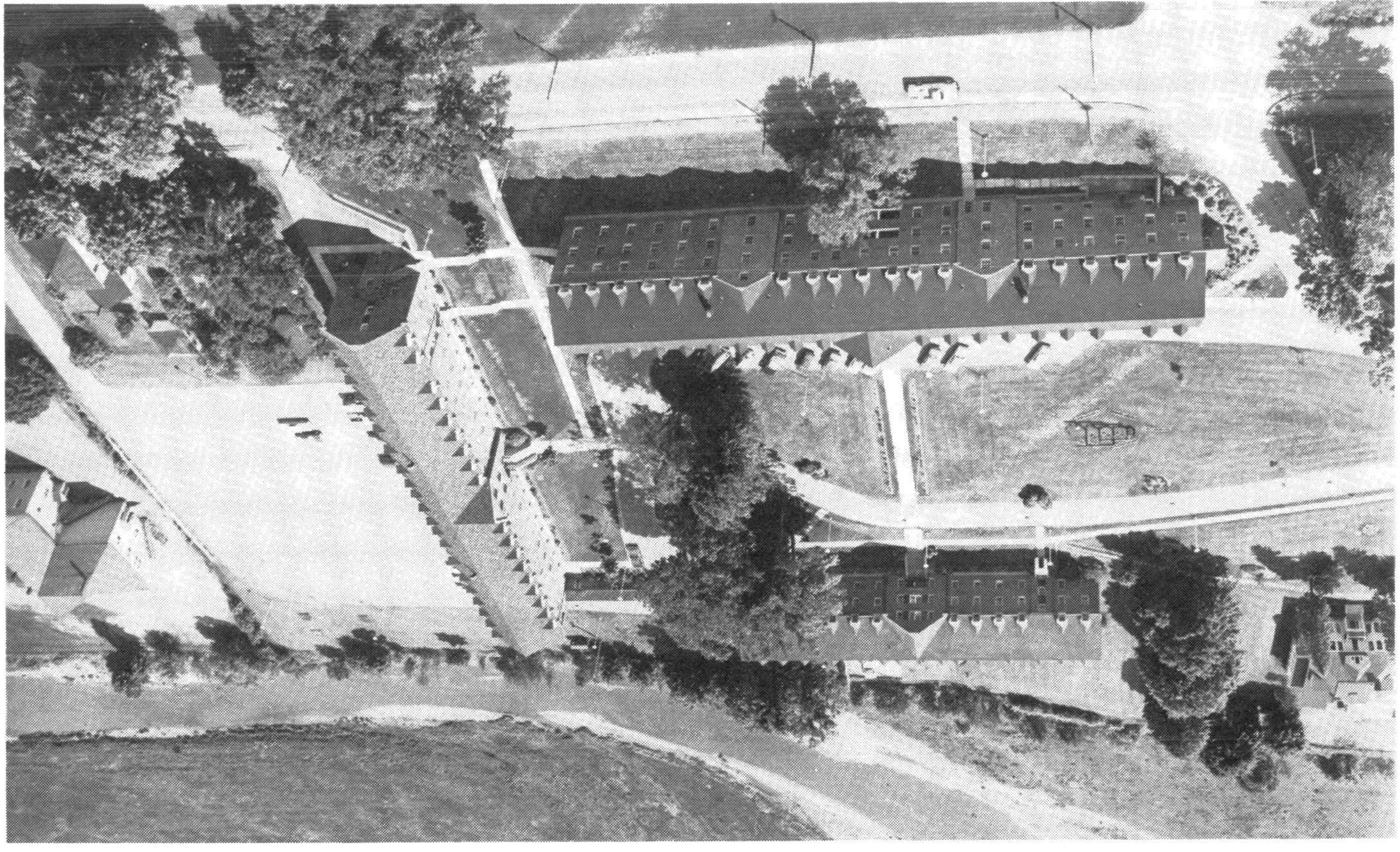
A student may, at the discretion of the instructor, be permitted to audit a course. The privilege may be withdrawn by the instructor at any time while the course is in progress. Students who are granted auditing privileges are not permitted to write tests, examinations or to be otherwise evaluated in the course audited.

All illness must be reported through the nurse to the Registrar's office.

Tampering with fire protection equipment is forbidden.

Students must not destroy, deface, or meddle with college property.

Every student is expected to show, both within and without the college, such respect for order, morality and the rights of others and such sense of personal honour as is demanded of good citizens. Students found guilty of immoral, dishonest or improper conduct, violation of rules, or failure to make satisfactory progress, shall be liable to college discipline including: suspension from classes or residence,



disqualification from competing for honours or prizes, or withdrawal from the College.

No smoking is allowed in classrooms or laboratories during regular class and laboratory hours, in the gymnasium, in the Dining Hall during regular meals and in the Athletic Centre at any time.

Any form of disorderly conduct, drunkenness, or public display of intoxicating beverages is forbidden on campus and at all college functions.

Firearms which are to be kept on campus must be left at the owner's risk in the custody of the Dean of Students.

Students are required to participate in approved orientation activities. All forms of initiation and hazing are forbidden.

Students found in unauthorized places on campus may be subject to immediate expulsion.

RESIDENCE REGULATIONS

Residence Regulations are to be found in the Student Handbook, a copy of which will be distributed to all students.

Students living out of residence must obey all residence rules and regulations while visiting in the residences.

Students will be required to provide their own towels, soap and drinking glass. Sheets, pillow, pillow cases, blankets and furniture will be provided by the College.

Students wishing accommodation for over night visitors in a residence must obtain permission from the Dean of Students.

Meal tickets for single meals may be bought from the attendant at the door of the cafeteria.

USE OF MOTOR VEHICLES

The operation of a motor vehicle while in residence at the College is a privilege which may be withdrawn at the discretion of the Principal.

Students in residence who bring motor vehicles to the campus or those who live in the surrounding area and are desirous of parking their vehicle on Campus must register the ownership of the vehicle, together with its license number, with the grounds superintendent or a body appointed by the Principal, at the opening of the academic year, or within three days after the vehicle is brought to campus.

Students are required to observe campus traffic and parking regulations. Fines are levied by the Principal or an appointed body for failure to comply with these regulations.

TRAFFIC AND PARKING REGULATIONS

1. Any member of the College community — faculty, staff or student — who wishes to bring a vehicle on campus must have it registered.

2. Students will register vehicles at the time of registration and receive a sticker which is to be displayed on the lower right hand corner of the rear window of the vehicle. A $5.00 fee is charged for registration. Vehicles brought to campus during the year will be registered with the Campus Parking Committee.

3. Off-campus students bringing vehicles to the campus will register their vehicles and park in their designated area and are subject to the same regulation as on-campus students.

4. Faculty and staff will obtain registration forms and stickers from the Campus Parking Committee.

5. The specified parking areas which are to be used are noted on campus maps and by signs at parking locations.

6. The on campus student parking areas are designated as:
   (a) behind Chapman House
   (b) slotted area to rear of Cumming Hall
   (c) beside poultry building

   All other areas which comprise the N.S.A.C. area are off limits to in-residence student parking.

7. The parking and traffic regulations will be enforced by the Parking Committee, Resident Deans and Grounds Superintendent.

8. Vehicles parked in unauthorized areas will be towed away at the owner's expense.

MEDICAL EXAMINATION

New students at time of registration must be in possession of a medical certificate dated not more than 30 days previous to registration. If required, students must submit to further medical examinations upon request.

All candidates who are accepted will be sent a medical report form; should the form not be sent with the letter of acceptance, the candidate for admission should ask for one.

CONTAGIOUS OR INFECTIVE DISEASES

Students on holiday or accepted candidates for admission who become subject to an attack of any contagious or infective disease, or who reside in any dwelling in which any such disease exists, shall be subject to quarantine regulations approved by the medical profession.

In all cases of students, or accepted candidates for admission, suffering from, or coming in contact with those suffering from any contagious or infective disease, a medical certificate shall be required before they are allowed to return to the College.

STUDENT GOVERNMENT

Through a system of self-government students are encouraged to accept the greatest possible amount of responsibility in connection with their own affairs. Only students taking regular courses are allowed to act as executive members of the Students' Council, or as members of student committees.

A committee of Faculty members, appointed by the Faculty to act in an advisory capacity, cooperates with student committees on financial, literary, social and athletic affairs in order that every possible benefit may be derived from such activities.

SOCIAL

All social activities on the campus are supervised by a committee appointed by the United Students' Council. Informal dances and other social functions are held from time to time.

ATHLETICS

The athletic program involves the following:

(a) Intramural athletics. The intramural program continues through the year with units of competition including softball, soccer, hockey, basketball, volleyball, badminton, curling, table tennis, racquet ball, squash, handball, and cross-country skiing. Competition may be by class or residence floor, by a league draft system or co-ed.

(b) Intercollegiate Athletics: The men's and women's division of athletics compete in the Nova Scotia College Conference. Field hockey, soccer, volleyball, basketball and hockey are the major team sports of this five team league. The college is a member of the Canadian Colleges Athletic Association, a national body, promoting competition for non-degree granting colleges. The college also competes in annual Woodsmen meets at UNB and Macdonald College.

(c) Physical Education (HO5): This is an elective program of life long activities offered and open to all interested students. These activities include tennis, golf, swimming, equestrian training, cross-country skiing, badminton and curling.

ATHLETIC REGULATIONS

All students are eligible to play for teams representing the College, subject to conditions established by the NSAC and the Canadian Colleges Athletic Association.

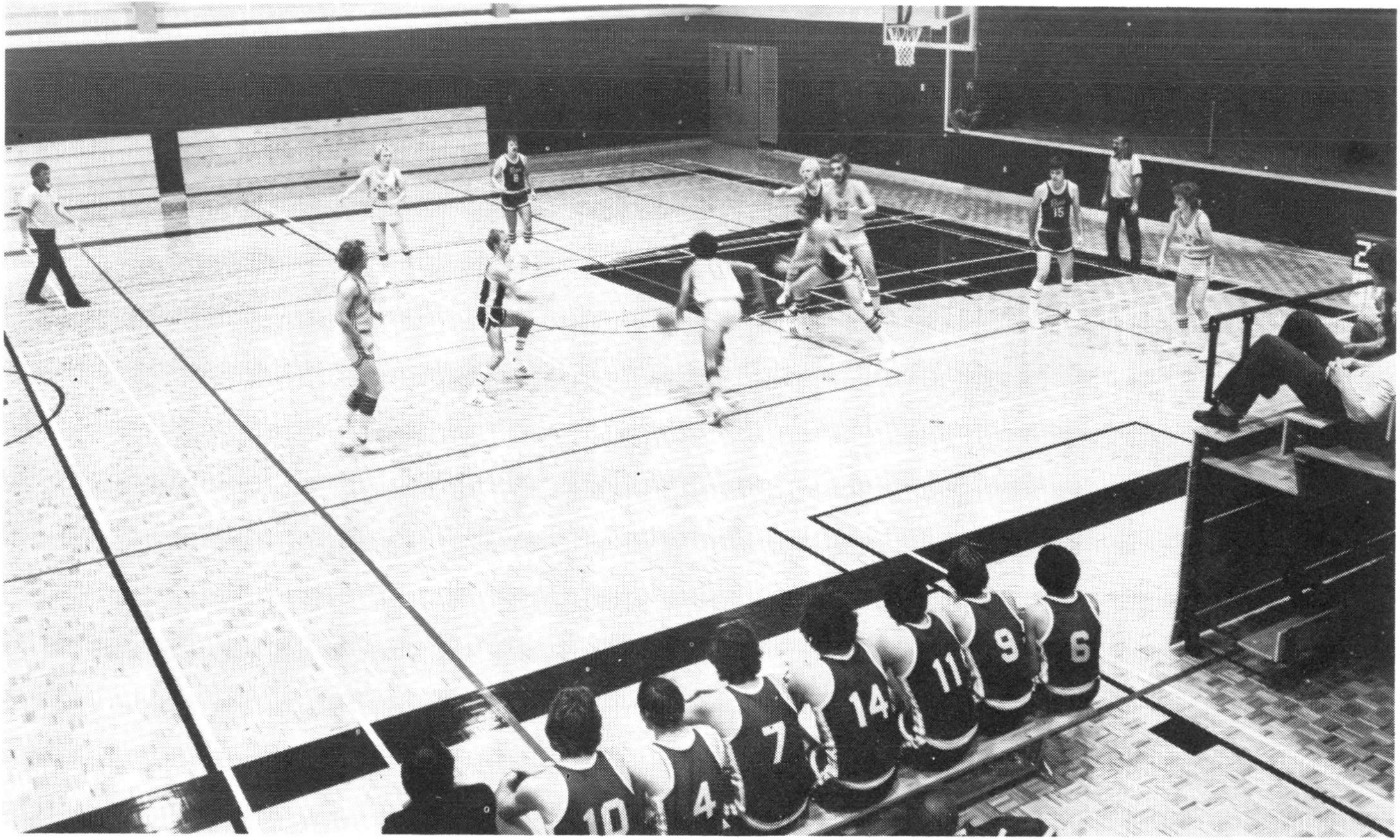
All teams or groups that go to any community or institution to participate in athletic or other activities must be accompanied by a member of the College staff.

OUTSIDE SPORTS

A student wishing to participate in athletics other than those sponsored by the College must apply in writing to, and obtain permission from, the Principal before participating either as a player or an official.

Any expenses incurred through injury while playing in outside games will be the responsibility of the student concerned, and will not be the responsibility of the students' medical fund.

Students who lose time from classes due to participating in outside games will not receive an attendance credit for the time lost.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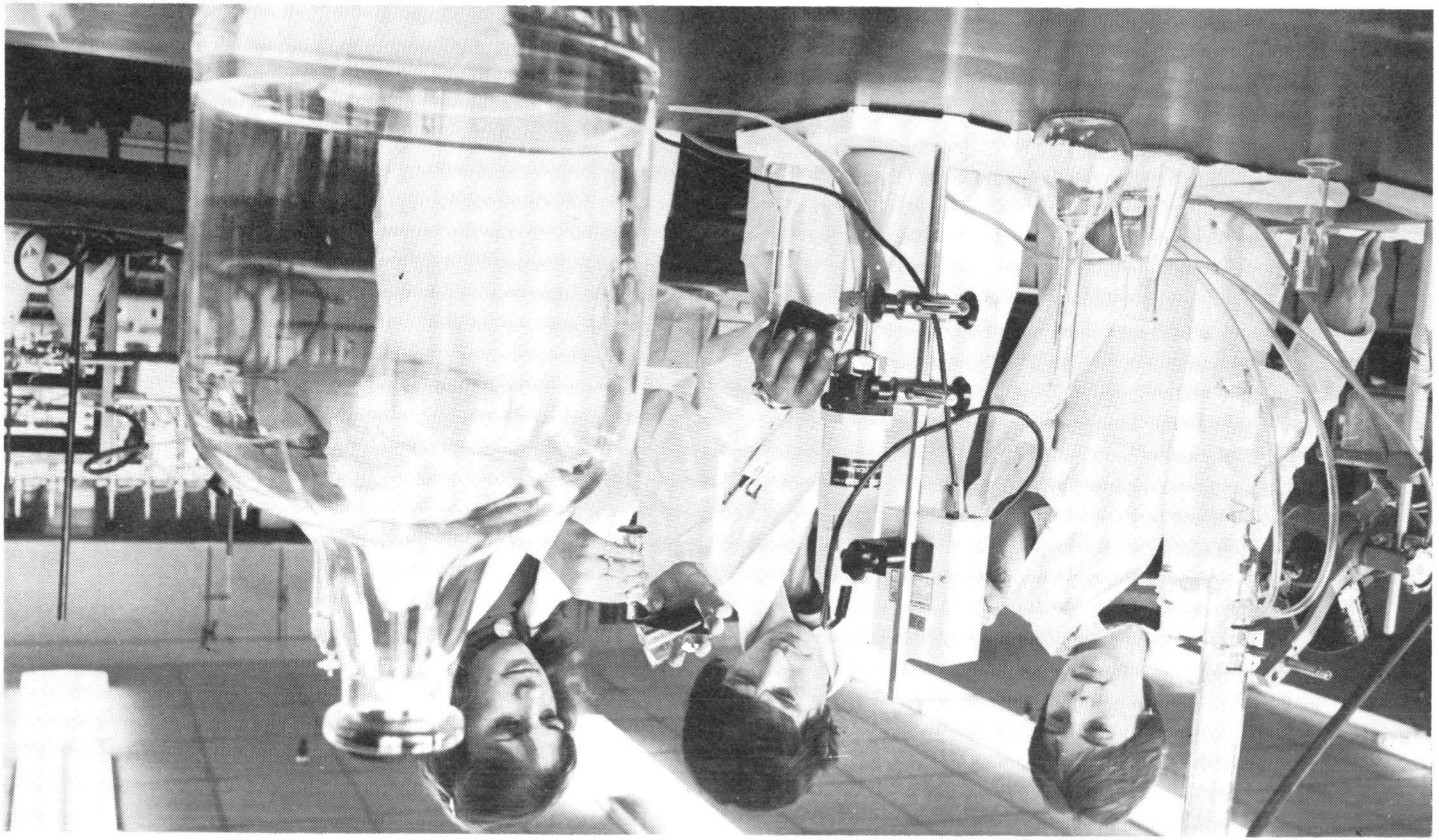
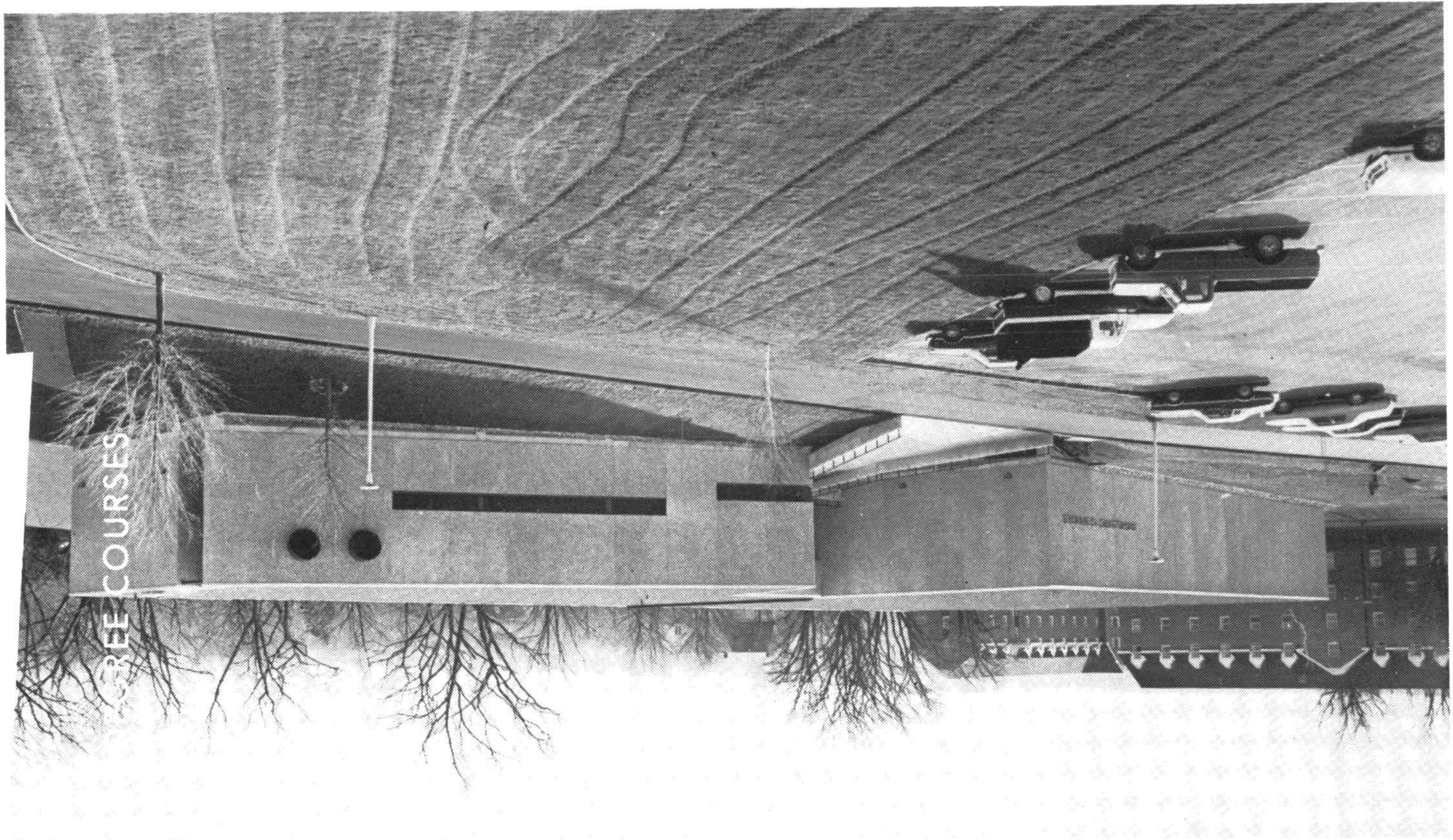



FREE COURSES

DEGREE COURSES

The Nova Scotia Agricultural College offers the first two years of a four-year course leading to a degree in Agricultural Science (B.Sc. (Agr.)) and the first two years of a four-year course leading to a degree in Agricultural Engineering (B.E. (Agr.)). Most of its graduates in Agricultural Science complete the work for a degree at Macdonald College of McGill University, the University of Guelph or the University of Maine. Most of its graduates in Agricultural Engineering proceed to the Nova Scotia Technical College for the final two years.

NSAC also offers a one-year pre-veterinary course for students from the Atlantic Provinces who intend to apply for admission to the program leading to Doctor of Veterinary Medicine at the University of Guelph. Those students who are successful in passing this one-year program at NSAC but are not admitted to the Veterinary program, continue at NSAC in the second year of the Agricultural Science Degree course.

Graduates in Agricultural Science may choose from a wide variety of disciplines in their final two years of the B.Sc. (Agr.) program; economics, the pure sciences, agricultural science, the environmental sciences and food sciences.

Students in the Agricultural Science and Engineering courses who complete the prescribed number of credits with no mark below fifty per cent of the maximum mark obtainable and who are in good standing will be granted a Degree Course Diploma. The Diploma confers upon recipients the status of "Associate of the Nova Scotia Agricultural College."

In Agricultural Science and Agricultural Engineering, a high honours diploma will be awarded to a student who has attained an average of eighty per cent or better on the work of the two years and an honours diploma to one who has attained an average of at least seventy-five per cent.

Entrance Requirements

All candidates for admission to the Agricultural Science Degree Course must: present certificates showing an average of at least 60% with no mark below 50% in Grade XII (Nova Scotia 012, New Brunswick 121 or 122, Prince Edward Island University preparatory or their equivalent) English, Mathematics, Chemistry, Biology or Physics and one additional subject.

All candidates for admission to the Agricultural Engineering Degree Course must: present certificates showing an average of at least 60% with no mark below 50% in Grade XII (Nova Scotia 012, New Brunswick 121 or 122, Prince Edward Island University preparatory or their equivalent) English, Mathematics, Chemistry, Physics and one other subject (preferably Biology).

All candidates for admission to the one-year Pre-Veterinary course must: present certificates showing an average of at least 60% with no mark below 50% in Grade XII (Nova Scotia 012, New Brunswick 121 or 122, Prince Edward Island University preparatory or their equivalent) English, Mathematics, Chemistry, Biology, and Physics.

All candidates must: present a satisfactory medical certificate dated not more than thirty days prior to registration.

Graduates of Newfoundland Grade XI will be required to complete with an average of at least 60% an academic year in advance of that year in the subjects indicated above.

Supplemental Examinations

A student who has made an average of at least 50% and has passed in at least half of his subjects may write one supplemental examination in any failed subject on which he has made at least 35%. The supplemental examination must be written in either June or September immediately following. A student in final year may write one supplemental examination in January if the passing of that examination, and success with all final semester examinations can make the student eligible for graduation.

Application for permission to write a supplemental examination in June must be submitted before June 8 and for permission to write in September, before August 17.

The fee for a supplemental examination will be $5.00. No supplemental examination is to be written until the required fee has been paid. If a student does not show to write a supplemental examination, the fee is forfeited. Should a candidate for a supplemental examination not give notice and pay the required fee on time but present himself for an examination, he may, at the discretion of the Registrar and the instructor, be permitted to write upon payment of $20.00 per examination.

Academic Standing

All students are assessed at the end of each semester. Those with failing averages (less than 50%) or failures in half or more of the subjects in which they are registered may be required to terminate their studies.

Key to Identification and Scheduling of Subjects

The subjects listed in the following syllabi of courses and in the descriptions of subjects beginning on page 56 are identified as to discipline and approximate academic level by letter and number codes. The disciplines are coded as follows:

Agricultural Engineering	**AE**	Economics and Business	**EB**
Animal Science	**AS**	Humanities	**H**
Biology	**B**	Mathematics and Physics	**MP**
Chemistry	**C**	Plant Science	**PS**

All subjects with numbers of 100 or over are degree credit. Most subjects with numbers between 100 and 190 inclusive are part of the first year of the curriculum and numbers 200 to 290 inclusive part of the second year. Thus B100 is a Biology course offered in first year of the degree course curriculum. EB250 is an Economics and Business course offered in the second year of the curriculum. Both courses are credit toward a B.Sc. (Agr.) degree.

Subjects with numbers between 10 and 80 are offered in one or more of the technician and/or technology courses. In general, the number indicates the level at which the subject is offered in the program of study. For example, C10a is a chemistry subject offered in the first year, first semester of the technician courses. AE55b is an agricultural engineering subject offered in the second year, second semester of the Agricultural Engineering and Farm Equipment technician courses. B71b is a biology subject offered in the second year,

second semester of the Chemistry Laboratory Technology Course.

The semester of the academic year in which a subject is scheduled to be offered is indicated by the small letters "a" (first semester), "b" (second semester), "a, b" (both first and second semester), or "c" (summer term) immediately following the course identification.

SYLLABUS
AGRICULTURAL SCIENCE

The requirements for a diploma is successful completion of Semesters I and II, the English course H205 in Semester IV, and sufficient additional credits to make up a total of at least sixty-two credits. The same requirement, with the appropriate selection of subjects in second year, prepares students for admission of the third year in any one of several options of the B.Sc. (Agr.) courses at the University of Guelph, Macdonald College of McGill University or the University of Maine (see page 17).

SEMESTER I

		Credits
B100a	The Plant Kingdom	3
C100a	Chemical Principles	3
H200a	Technical Writing and English and American Authors	3
MP100a	Calculus and Analytic Geometry I	3
PS100a	Principles of Crop Production	3
*MP090a	Introductory Physics	

*MP090a will be taken unless the student has completed this subject at the Grade XII (N.S., N.B., P.E.I.) level or its equivalent.

SEMESTER II

AS100b	Introductory Animal Science	3
B110b	The Animal Kingdom	3
C110b	Organic Chemistry	3
EB110b	Economics of Agriculture	3
MP105b	Calculus and Analytic Geometry II	3
MP110b	Modern Physics	3

SEMESTERS III & IV

A student who successfully completes the first two semesters will normally take from 10 to 12 of the following subjects in the third and fourth semesters. The selection of subjects will depend on the area of specialization the student intends to follow, and will be limited to those subjects which do not present conflicts in the timetable.

		Credits
AE220b	Agricultural Structures	3
AE230b	Agricultural Mechanization	2
AE260c	Surveying	2
AS210a	Selected Studies in Animal Science	3
B200a	Cell Biology	3
B225b	Microbiology	3
B240a	Introduction to Genetics	3
B245b	Agricultural Genetics	3
B255a	Plant Protection	3
B260b	Plant Physiology	3
B270a	Principles of Ecology	3
C200a	Biochemistry I	3
C205b	Biochemistry II	3
C220a	Introduction to Soil Science	3
EB200a	Principles of Economics-Micro	3
EB210a	Accounting	3
EB220b	Production Economics	3
EB230a	Principles of Marketing	3
EB240a	Farm Management	3
EB255b	Macro Economics	3
EB260b	Quantitative Economics	3
H120a	Sociology I	3
H125b	Sociology II	3
H140a,b	Personnel Management	3
H150b	History of Agriculture	2
H205b	Canadian Literature	3
H210b	Communications and Extension Methods	3
MP200a,b	Statistics and Agricultural Experimentation	3
MP220a	Computer Programming	3
PS200b	Greenhouse Crop Production and Floriculture	3

SYLLABUS
AGRICULTURAL ENGINEERING

The requirement for a diploma is successful completion of all courses listed. Graduates are admitted to the third year of the Bachelor of Engineering course at the Nova Scotia Technical College. Graduates may also be admitted to the third year of Engineering at other Universities.

SEMESTER I

		Credits
AE100a	Graphics and Projection	3
AE110a	Statics	3
C120a	Engineering Chemistry I	3
H200a	Technical Writing and English and American Authors	3
MP100a	Calculus and Analytic Geometry	3
PS100a	Plant Science	3

SEMESTER II

AE105b	Graphics and Design	3
AE120b	Dynamics	3
AE260c	Surveying	2
C125b	Engineering Chemistry II	3
EB110b	Economics of Agriculture	3
MP106b	Calculus for Engineers	3
MP120b	Electrical Phenomena	3

SEMESTER III

AE225a	Thermodynamics	3
AE240a	Material Science	3
AS220a	Animal Science	2
B220a	Microbiology for Engineers	3
MP220a	Computer Programming	3
MP230a	Multivariable Calculus	3
MP240a	Electric Circuits	3

SEMESTER IV

		Credit
AE220b	Agricultural Structures	2
AE230b	Agricultural Mechanization	2

AE245b	Strength of Materials	3
AE250b	Fluid Mechanics	3
EB255b	Macro Economics	3
H205b	Canadian Literature	3
MP235b	Differential Equations and Linear Algebra	3

SYLLABUS
PRE-VETERINARY MEDICINE

Students who wish to attempt a program of study that can lead to a degree in Veterinary Medicine take the degree course subjects listed below. Only applicants that have successfully completed all three science subject (Chemistry, Biology, and Physics), in addition to Mathematics and English, at the University preparation Grade XII level can complete this program of study in one year.

SEMESTER I

		Credits
B100a	The Plant Kingdom	3
C100a	Chemical Principles	3
H200a	Technical Writing and English and American Authors	3
MP100a	Calculus and Analytic Geometry I	3
MP130a	Physics for Life Science I	3

SEMESTER II

AS100b	Introductory Animal Science	3
B110b	The Animal Kingdom	3
C110b	Organic Chemistry	3
EB110b	Economics of Agriculture	3
MP105b	Calculus and Analytic Geometry II	3
MP135b	Physics for Life Science II	3

The selection of students for admission to the Pre-Veterinary year of study at the University of Guelph occurs at NSAC during or after successful completion of the above program. An average of 75% or higher is required to assure consideration by the selection committee.

Students selected at NSAC to continue in the program leading to a D.V.M. are admitted to another Pre-Veterinary

year of subjects at the University of Guelph before being considered for admission to the four-year course in Veterinary Medicine.

Those students who successfully complete the Pre-Veterinary course at NSAC but are not selected to continue in the program of study leading to a D.V.M., are admitted to the second year of the Agricultural Science Degree course at NSAC. These students may choose Animal Science or any one of a wide selection of options offered in the last two years of the B.Sc. (Agr.) program at the University of Guelph, Macdonald College of McGill University, or the University of Maine.

Most options in the B.Sc. (Agr.) programs lead to opportunities for graduate studies at the M.Sc. and Ph.D. levels.


MF
1085

TECHNICIAL STUDIES AT THE NOVA SCOTIA AGRICULTURAL COLLEGE

Standing Equivalent To
N.S. Grade XI (U.P.) with 50% in
English, Math., one Science, and two Other Subjects

Year No.1 Farm Equip.
Year No.1 Agr. Eng.
Year No.1 Pl. Sc.
Year No.1 An. Sc.
Year No.1 Agr. Bus.

Year No.2 Farm Equip.
Year No.2 Agr. Eng.
Year No.2 Pl. Sc.
Year No.2 An. Sc.
Year No. 2 Agr. Bus.

Technician Dipl. in Farm Equip.
Technician Dipl. in Agr. Eng.
Technician Dipl. in. Pl. Sc
Technician Dipl. in An. Sc.
Technician Dipl. in Agr. Bus.

One Year of Directed Studies

Diploma of Technology (Dipl. T.) in Directed Studies

Standing Equivalent to N.S. Grade XII (U.P.)
with 60% in Chem., Math., English, & Biology
OR
Year No. 1 of Plant Science or Animal Science

Year No. 1 Ornamental Hort. Technology
Summer Program N.S.A.C.
Year No. 2 Ornamental Hort. Technology
Diploma of Technology (Dipl. T.) in Ornamental Horticulture Technology

Year No. 1 Bio. Lab. Technology
Year No. 2 Bio. Lab. Technology
Diploma of Technology (Dipl. T.) in Biology Laboratory Technology

Year No. 1 Chem. Lab. Technology
Year No. 2 Chem. Lab. Technology
Diploma of Technology (Dipl. T.) in Chemistry Laboratory Technology

Year No. 1 of Pl. Sc., Agr. Bus. An. Sc.
4 mo. farm exp.
Year No. 1 Farming Tech.
7 months on-farm training
Final semester Farming Tech.
Diploma of Technology (Dipl. T.) in Farming Technology

Enter a Career Related to Training and Interest

TECHNICIAN COURSES

To satisfy the needs of the farm and farm-related businesses and services, the Nova Scotia Agricultural College offers a broad program of studies leading to Technician Diplomas.

Entrance Requirements

All candidates for admission

(a) should be eighteen years of age, on or before the opening day of the College year (mature younger candidates will be considered);

(b) must present a satisfactory medical certificate dated no more than thirty days previous to registration;

(c) must present themselves for a selection interview when required;

(d) must present evidence of having obtained pass standing in one of the programs (university preparatory) outlined below:

(1) Nova Scotia — 011 or better, English, Mathematics, a science, and two additional subjects;
(2) New Brunswick — 122 English and 112 or better Mathematics, a science and two additional subjects;
(3) Prince Edward Island — Grade XII English, Grade XI or better Mathematics, a science and two additional subjects;
(4) Newfoundland — Grade XI English, Mathematics, a science and two additional subjects.

Applicants of mature age or from a general course program can be considered if they offer evidence of probable success.

Candidates with at least 60% in Mathematics at the 012 (N.S.) level, the 122 (N.B.) level, or the Grade XII (P.E.I.) level will be exempted from Mathematics MP10 and MP11.

Candidates with at least 60% in Chemistry at the 012 (N.S.) level, the 122 (N.B.) level, or the Grade XII (P.E.I.) level will be exempted from Chemistry C10 and C11.

Candidates with at least 60% in Biology at the 012 (N.S.) level, the 122 (N.B.) level, or the Grade XII (P.E.I.) level will be exempted from Biology B10.

Applicants should understand that possession of the minimum entrance requirements will not guarantee admission.

Students who complete all the course requirements with no mark below fifty per cent of the maximum mark obtainable and are in good standing will be awarded a Technician Diploma and thus become "Associates of the Nova Scotia Agricultural College with all the rights and privileges pertaining thereto."

A high honours diploma will be awarded to a student who has attained an average of at least eighty per cent and an honours diploma to one who has attained an average of at least seventy-five per cent.

Refresher Course

Candidates whose preparation is not considered adequate may be required to enrol for a refresher course in one or more subjects which will be offered from August 27 to September 7. The additional cost will be for books and for board and lodging.

Supplemental Examinations

A student in a Technical Course may write a supplemental examination in a maximum of half of the subjects for which he or she is enrolled, if his combined average for all subjects is above 50% and the mark in the failed subject(s) is at least 35%.

Provided that the disqualifying conditions stated above do not apply, a student may write one supplemental examination in a subject, either in June or September immediately following the failure. He may not register for the regular second academic year if he, after writing supplementals, has failed to receive a pass mark in more than two subjects.

A student in final year may write one supplemental examination in January if the passing of that examination, and success with all final semester examinations can make the student eligible for graduation.

Application for permission to write a supplemental examination in June must be submitted before June 9 and for permission to write in September before August 17.

The fee for a supplemental examination in any subject will be $5.00. Should a candidate for a supplemental examination not give notice and pay the required fee on time but present himself for an examination, he may, at the discretion of the Registrar and the instructor, be permitted to write upon payment of a fee of $20. per examination. If a student does not show for a supplemental examination the fee is forfeited.

Academic Standing

All students are assessed at the end of each semester. Those with failing averages (less than 50%) or failures in half or more of the subjects in which they are registered may be required to terminate their studies.

AGRICULTURAL BUSINESS TECHNICIAN

The Nova Scotia Agricultural College offers a two year course in Agricultural Business to help students prepare themselves for careers on the farm as business managers or as managers and supervisors in farm-related business firms.

FIRST ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab.**	**Course No. and Name**	**Lec.**	**Lab.**
AE10a Agricultural Engineering I	2	2	AE17b Agricultural Engineering II	2	2
B10a Biological Principles	3	4	C11b Chemistry II	2	2
C10a Chemistry I	2	2	C13b Soil Chemistry	2	2
C12a Soil Physics	2	2	EB11b Applied Accounting and Taxation	2	2
EB10a Accounting	2	2	EB13b Micro Economics	3	0
EB12a Macro Economics	3	0	H11b Modern Literature (opt.)	3	0
H10a,b Technical Writing	3	0	H12b Leadership Development	1 week	
MP10a Agricultural Mathematics I	3	0	MP11b Agricultural Mathematics II	3	0

SECOND ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab**
AE40a Field Machinery	2	2	AE61b Farm Tractors	2	2
EB40a Marketing Practices	1	4	EB41b Business Law	3	0
EB43a,b Agricultural Business Project	0	4	EB42b Applied Farm Management	1	4
EB240a Farm Management	2	4	EB220b Production Economics	2	4
H120a Sociology I	3	0	H12b Leadership Development	1 week	
H140a Personnel Management	3	0	H125b *Sociology II	3	0
PS40a *Field Crop Production I	2	2	or		
			H210b *Communications & Extension Methods	3	0
			PS41b *Field Crop Production II	3	2
EITHER BLOCK A					
PS53a Vegetable Production	3	3	PS42b Cash Crops & Seed Production	2	1
			or		
			PS49b Potato Production	2	2
OR BLOCK B					
AS10a *Livestock Production (ruminant)	3	2	AS12b *Livestock Production (non-ruminant)	3	2

*Students may apply to take a substitute production subject

AGRICULTURAL ENGINEERING TECHNICIAN

The Nova Scotia Agricultural College offers a two-year course to help students prepare themselves for careers as Agricultural Engineering Technicians on farms or in farm-related firms and services.

FIRST ACADEMIC YEAR

Semester A

Course No. and Name	Lec.	Lab
AE12a Drafting I	0	4
AE13a Shopwork I	2	4
AE14a Surveying	2	2
EB10a Accounting or	2	2
EB12a Macro Economics	3	0
H10a,b Technical Writing	3	0
MP10a Agricultural Mathematics I	3	0
MP12a Statics	2	4
PS12a Soils & Crops I	2	2

Semester B

Course No. and Name	Lec.	Lab
AE19b Drafting II	0	4
AE20b Shopwork II	2	4
AE21b Oil Hydraulics I	2	2
AE22b Engineering Principles	3	0
EB11b Applied Accounting and Taxation or	2	2
EB13b Micro Economics	3	0
H11b Modern Literature (opt.)	3	0
H12b Leadership Development	1 week	
H140b Personnel Management	3	0
MP11b Agricultural Mathematics II	3	0
PS13b Soils & Crops II	2	2

SECOND ACADEMIC YEAR

Semester A

Course No. and Name	Lec.	Lab
AE41a Farm Buildings I	2	4
AE42a Farm Power I	2	4
AE43a Farm Machinery I	2	4
AE45a Soil & Water Management	2	2
AE47a Agr. Engineering Project	0	2
AS10a Livestock Production (ruminant)	3	2
B10a Biological Principles	3	4

Semester B

Course No. and Name	Lec.	Lab
AE51b Farm Buildings II	1	4
AE52b Farm Power II	1	4
AE53b Farm Machinery II	1	4
AE55b Materials Handling Equipment	2	4
AE58b Electrical Controls	1	4
AE62b Properties of Materials	1	2
AS12b Livestock Production (non-ruminant)	3	2
H12b Leadership Development	1 week	

ANIMAL SCIENCE TECHNICIAN

The Nova Scotia Agricultural College offers a two-year course in Animal Science to help students prepare themselves for careers on farms as animal specialists or as animal science technicians in farm-related services and industries.

FIRST ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab.**
AE10a Agricultural Engineering I	2	2	AE17b Agr. Engineering II	2	2
AS10a Livestock Production (ruminant)	3	2	AS12b Livestock Production (non-ruminant)	3	2
AS11a,b Animal Husbandry Skills	0	2	B16b Biology II	2	4
B15a Biology I	3	4	C11b Chemistry II	2	2
C10a Chemistry I	2	2	C13b Soil Chemistry	2	2
C12a Soil Physics	2	2	H11b Modern Literature (Opt.)	3	0
H10a,b Technical Writing	3	0	H12b Leadership Development	1 week	
MP10a Agricultural Mathematics I	3	0	MP11b Agricultural Mathematics II	3	0

SECOND ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab.**
AE40a Field Machinery	2	2	AE61b Farm Tractors	2	2
AS40a Feeds and Feeding	3	2	AS43b Meat & Livestock Products	2	2
AS41a Milk & Dairy Products	2	2	AS44b Animals Breeding	3	0
AS42a Breeds & Selection	1	2	AS45b Animal Science Seminar	1	0
AS46a Animal Physiology	2	2	AS47b Animal Health	2	2
AS48a,b Animal Science Project	0	4	EB13b Micro Economics	3	0
EB12a Macro Economics	3	0	H12b Leadership Development	1 week	
H120a Sociology I	3	0	H125b Sociology II	3	0
PS40a Field Crops Production I	2	2	or		
			H140b Personnel Management	3	0
			PS41b Field Crops Production II	3	2

FARM EQUIPMENT TECHNICIAN

The Nova Scotia Agricultural College offers a two-year course to help students prepare for careers in farm equipment dealerships involving the adjustment, maintenance and repair of farm equipment.

FIRST ACADEMIC YEAR

Semester A

Course No. and Name	Lec.	Lab.
AE12a Drafting I	0	4
AE13a Shopwork I	2	4
AE14a Surveying	2	2
EB10a Accounting or	2	2
EB12a Macro Economics	3	0
H10a,b Technical Writing	3	0
MP10a Agricultural Mathematics I	3	0
MP12a Statics	2	4
PS12a Soils & Crops I	2	2

Semester B

Course No. and Name	Lec.	Lab.
AE19b Drafting II	0	4
AE20b Shopwork II	2	4
AE21b Oil Hydraulics I	2	2
AE22b Engineering Principles	3	0
EB11b Applied Accounting and Taxation or	2	2
EB13b Micro Economics	3	0
H11b Modern Literature (opt.)	3	0
H12b Leadership Development	1 week	
H140b Personnel Management	3	0
MP11b Agricultural Mathematics II	3	0
PS13b Soils & Crops II	2	2

SPRING PROGRAM: SEMESTER C

Course No. and Name	Time
AE23c Farm Equipment Servicing	6 weeks

SECOND ACADEMIC YEAR

Semester A

Course No. and Name	Lec.	Lab.
AE42a Farm Power I	2	4
AE43a Farm Machinery I	2	4
AE44a Welding I	0	4
AE46a Oil Hydraulics II	1	4
AE48a Shop Management	2	2
AE49a Electrical Systems	1	3
AE50a Equipment Overhaul I	0	8

Semester B

Course No. and Name	Lec.	Lab.
AE52b Farm Power II	1	4
AE53b Farm Machinery II	1	4
AE54b Welding II	1	4
AE55b Materials Handling Equipment	2	4
AE56b Tractor Overhaul	0	8
AE57b Equipment Overhaul II	0	8
AE60b Inventory Control	2	0
H12b Leadership Development	1 week	

PLANT SCIENCE TECHNICIAN

The Nova Scotia Agricultural College offers a two-year course in Plant Science to help students prepare themselves for careers on farms as plant specialists or as plant science technicians in farm-related services and industries.

FIRST ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab.**
AE10a Agricultural Engineering I	2	2	AE17b Agricultural Engineering II	2	2
B15a Biology I	3	2	B16b Biology II	2	4
B13a Plant Identification	2	2	C11b Chemistry II	2	2
C10a Chemistry I	2	2	C13b Soil Chemistry	2	2
C12a Soil Physics	2	2	H11b Modern Literature (opt.)	3	0
H10a,b Technical Writing	3	0	H12b Leadership Development	1 week	
MP10a Agricultural Mathematics I	3	0	MP11b Agricultural Mathematics II	3	0
PS10a Plant Science Skills I	0	2	PS11b Plant Science Skills II	0	4

SECOND ACADEMIC YEAR

Semester A			Semester B		
Required plus block A, B, or C Courses					
Course No. and Name	**Lec.**	**Lab.**	**Course No. and Name**	**Lec.**	**Lab.**
B43a Entomology	2	2	B40b Plant Pathology	2	3
EB10a Accounting	2	2	B41b Plant Physiology	2	2
H120a Sociology I	3	0	H12b Leadership Development	1 week	
PS52a,b Plant Science Project	0	4	EB11b Applied Accounting and Taxation	2	2

Block A - Ornamental and Turf

AE14a Surveying	2	2	H140b Personnel Management	3	0
AE59a Horticultural Machinery	2	2	PS46b Turf Management II	1	2
PS45a Turf Management I	2	2	PS51b Ornamental Horticulture II	3	4
PS50a Ornamental Horticulture I	3	4			

Block B - Greenhouse, Fruit & Garden Crops

AE59a Horticultural Machinery	2	2	AE58b Electrical Controls	1	4
H140a Personnel Management	3	0	PS44b Tree Fruits	1	2
PS43a Berry Crop Prdouction	1	2	PS48b Greenhouse Crops	1	2
PS47a Greenhouses	1	2			
PS53a Vegetable Production	3	3			

Block C - Crop Production

AE40a Field Machinery	2	2	AE61b Farm Tractors	2	2
PS40a Field Crops Production I	2	2	PS41b Field Crops Production II	3	2
PS53a Vegetable Production	3	3	PS42b Cash Crops & Seed Production	2	1
			PS49b Potato Production	2	2

TECHNOLOGY COURSES

The Nova Scotia Agricultural College offers specialized courses to help persons prepare themselves for careers associated with laboratory techniques in Biology and Chemistry, with the practice of Ornamental Horticulture, and the practice of Farming. These studies lead to a Diploma of Technology (Dipl. T.) in Chemistry, a Diploma of Technology (Dipl. T.) in Biology, a Diploma of Technology (Dipl. T.) in Ornamental Horticulture, or a Diploma of Technology (Dipl. T.) in Farming.

The college also offers courses designed to help Technicians become more proficient in their chosen fields of agricultural endeavour. These studies lead to a Diploma of Technology (Dipl. T.) in Directed Studies.

Technology Studies for Graduate Technicians

A candidate who has received his Technician Diploma in Agricultural Business, Agricultural Engineering, Animal Science, Farm Equipment or Plant Science or who has equivalent standing may apply for a year of directed study leading to a Diploma of Technology. If his study record is good and he shows evidence of being capable of doing independent study, his application will be favourably considered.

For admission such a candidate must;

(a) present a satisfactory medical certificate
(b) submit a program of study to the Technician-Technologist Syllabus Committee; and
(c) present himself for interviews when requested.

"Program of Study" forms are available from the office of the Dean of Vocational and Technical Education. Application forms accompanied by a completed "Program of Study" should be submitted to the Registrar before May 1 of the year in which study is to commence.

Each program of study must contain at least four one semester subjects, additional projects, and laboratory experience.

Candidates will, as a general rule, select courses from the following list:

—AS70b Animal Nutrition
—B255a Plant Protection
—EB70a Farm Planning
—EB71b Market Planning
—MP70a Basic Statistics
—PS76b Crop Physiology
—Selected subjects from Technician courses
—Selected subjects from Degree courses for which prerequisites are met.

Studies in Biology and Chemistry Laboratory Technology and in Ornamental Horticulture Technology

A candidate for a Diploma of Technology may qualify for admission to the two-year courses in one of three ways:

(1) for Biology or Chemistry Laboratory Technology, he may satisfactorily complete the first year of a Technician Course in Animal Science or Plant Science, and, for Ornamental Horticulture Technology, he may satisfactorily complete the first year of a Technician Course in Animal Science, Plant Science or Agricultural Business;

(2) he may complete Grade XII (N.S. 012, N.B. 122, P.E.I. Academic XII) or its equivalent with marks of not less than 60% in English, Mathematics, Chemistry and Biology;

or (3) he may complete university courses at the 100 level in English, Mathematics, Biology and Chemistry.

In addition each candidate must present a satisfactory medical certificate and present himself for interviews when requested.

Accepted candidates will follow the syllabus for the course in which they have registered. The descriptions of each individual subject are found in the section of the Calendar beginning on page 58.

BIOLOGY LABORATORY TECHNOLOGY

The Nova Scotia Agricultural College offers a course to help students prepare for work as biology laboratory technologists with Agricultural and Biological Research Agencies, University Biology Departments, Food Processing and Distribution Companies, Environmental Control Services, Quality Control and Testing Services, or with Product Development Programs.

Required Technician subjects or equivalent:

B10a [illegible] b, C10a, C11b, MP10a, MP11b, and H10a,b

First Academic Year

	Semester A	Lec	Lab		Semester B	Lec	Lab
B44a	Microbiology I	2	3	B42b	Botanical Laboratory Techniques	2	3
B70a	Microtechniques I	3	4	B71b	Microtechniques II	2	4
C12a	Soil Physics	2	2	C13b	Soil Chemistry	2	2
C40a	Chemistry Laboratory Techniques	0	4	B45b	Microbiology II	2	3
PS100a	Plant Science	3	2	AS100b	Animal Science	3	2
C42a	Organic Chemistry	3	4	C43b	Bio-Organic Chemistry	3	4

Second Academic Year

	Semester A	Lec	Lab		Semester B	Lec	Lab
B270a	Ecology	2	3	B72b	Laboratory Animal Care	2	3
C45a	Qualitative Analysis	3	4	C46b	Quantitative Analysis	3	4
MP70a	Statistics	3	0	C44b	Instrumentation I	2	3
B255a	Plant Protection	3	3	B41b	Plant Physiology	2	2
B13a	Plant Identification	2	2	AS47b	Animal Health	2	2
AS46a	Animal Physiology	2	2	AS70b	Animal Nutrition	3	0

CHEMISTRY LABORATORY TECHNOLOGY

The Nova Scotia Agricultural College offers a course to help students prepare for work as a Chemistry Laboratory Technologist with Agricultural and Chemical Research Agencies, University Chemistry Departments, Food Processing and Distribution Companies, Environmental Control Services, Quality Control and Analysis Services, or with Product Development Programs.

Required Technician subjects or equivalent: B10a, [redacted]
C10a, C11b, MP10a, MP11b, and H10a,b

FIRST ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab**
C40a Chemistry Laboratory Techniques I	0	4	C41b Chemistry Laboratory Techniques II	0	2
C42a Organic Chemistry	3	4	C43b Bio-Organic Chemistry	3	4
C45a Qualitative Analysis	3	4	C44b Instrumentation I	2	3
C100a Chemistry (lecs only)	3		C46b Quantitative Analysis	3	4
MP40a Electrical Measurements	2	2	MP41b Light & Optics	2	2
MP100a Calculus	3	0	One approved elective from outside the Chemistry Department		

SECOND ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab**
C70a Instrumentation II	3	4	C71b Instrumentation III	3	4
C74a Glass Blowing	0	4	C73b Laboratory Organization and Management	2	4
C75a Food Chemistry I	3	4	C76b Food Chemistry II	3	4
MP70a Statistics	3	0	MP71b Computer Programming	1	0

One approved elective from outside the Chemistry Department.

C80: Chemistry Project and Seminar

ORNAMENTAL HORTICULTURE TECHNOLOGY

The Nova Scotia Agricultural College offers a two-year course to help students prepare themselves for careers with landscaping firms, planning agencies, recreational parks, institutions or self-employed roles as Ornamental Horticultural Technologists.

Required Technician subjects or equivalent: B10a, ~~B12b~~ or ~~B14b~~ B15a and B16b
C10a, C11b, MP10a, MP11b, and H10a,b

FIRST ACADEMIC YEAR

Semester A		Lec.	Lab	Semester B		Lec.	Lab
Course No. and Name				**Course No. and Name**			
AE11a	Horticultural Engineering I	0	3	AE18b	Horticultural Engineering II	1	3
B13a	Plant Identification	2	2	B40b	Plant Pathology	2	3
B43a	Entomology	2	2	B41b	Plant Physiology	2	2
C12a	Soil Physics	2	2	C13b	Soil Chemistry	2	2
PS45a	Turf Production I	2	2	PS46b	Turf Production II	1	2
PS50a	Ornamental Horticulture I	2	4	PS51b	Ornamental Horticulture II	2	4
PS54a	Plant Propagation	1	2				

SPRING PROGRAM - Semester C

PS70c Landscaping Techniques - 6 weeks to be announced

SECOND ACADEMIC YEAR

Course No. and Name		Lec.	Lab.	Course No. and Name		Lec.	Lab
AE14a	Surveying	2	2	EB11b	Applied Accounting & Taxation	2	2
AE45a	Soil & Water Management	2	2	~~H140b~~	~~Personnel Management~~ H210 Communication and Ext. Methods	3	0
AE59a	Horticultural Machinery	2	2	EB41b	Business Law	3	0
EB10a	Accounting	2	2	PS72b	Ornamental Horticulture IV	3	6
~~H120a~~	~~Sociology I~~ H140 Personnel Management	3	0	PS74b	Art & Design II	3	0
PS71a	Ornamental Horticulture III	3	6	PS75b	Ornamental Horticultural Project	0	4
PS73a	Art & Design I	3	0	PS77b	Greenhouse + Landscape Crops 2	2	2

COURSE IN FARMING TECHNOLOGY

Students wishing to pursue studies leading to a Diploma of Technology in Farming register for the first year of the Agricultural Business, Animal Science or Plant Science course. After successfully completing the year, their applications are considered for the Farming Technology Course. Students with equivalent prerequisites from other college programs can also be considered. If accepted, the student's program of study includes a minimum of three semesters of prescribed courses and eleven months of on-farm training. Seven months of the on-farm training is under the direction of a farming instructor.

FARMING TECHNOLOGY

The Nova Scotia Agricultural College offers a course to help students prepare for a career as a farmer on a self-employed basis, or as a manager on a commercial farm.

FIRST ACADEMIC YEAR

Four months of approved farm experience must be completed prior to September of the first academic year.

Semester A

Course No. and Name	Lec.	Lab
AE40a Field Machinery	2	2
~~AE45a Soil and Water Management~~	~~2~~	~~2~~
AS10a Livestock Production (ruminant)	3	2
~~AS42a Breeds and Selection~~	~~1~~	~~2~~
EB10a Accounting	2	2
EB40a Marketing Practices	1	4
EB240a Farm Management	3	4
PS40a Field Crop Production I	2	2

Semester B

Course No. and Name	Lec.	Lab
AE61b Farm Tractors	2	2
~~AE55b Materials Handling Equipment~~	~~2~~	~~4~~
AS12b Livestock Production (non-ruminant)	3	2
EB11b Applied Accounting and Taxation	2	2
~~EB41b Business Law~~	~~3~~	~~0~~
EB220b Production Economics	2	4
PS41b Field Crops Production II	3	2
~~PS200b Greenhouse Crops Production~~	~~0~~	~~3~~

Equivalent to six more courses from the list of approved electives.

SUMMER AND SECOND YEAR

Semester A

On-Farm Training - * a seven month contract between April and January

Semester B

Course No. and Name	Lec.	Lab.
EB42b Applied Farm Management	1	4
EB72b Farm Project	0	4
Four more courses from the list of approved electives		

APPROVED ELECTIVES

Semester A

Course No. and Name	Lec.	Lab
AE13a Shopwork I	1	4
AE45a Soil and Water Management	2	2
AS11a,b Animal Husbandry Skills	0	2
AS40a Feeds & Feeding	3	2
AS42a Breeds and Selection	1	2
AS46a Animal Physiology	2	2
B43a Entomology	2	2
PS10a Plant Science Skills I	0	2
PS43a Berry Crop Prod.	1	2
PS53a Vegetable Prod.	3	3
One Humanities Subject		

Semester B

Course No. and Name	Lec.	Lab.
AE20b Shopwork II	1	4
AE21b Oil Hydraulics I	2	2
AE55b Materials Handling Equipment	2	4
AS44b Animal Breeding	3	0
AS47b Animal Health	2	2
AS70b Animal Nutrition	3	0
B40b Plant Pathology	2	3
B41b Plant Physiology	2	2
EB41b Business Law	3	0
PS11b Plant Science Skills II	0	4
PS44b Tree Fruits	1	2
PS42b Cash Crops and Seed Production	2	1
PS49b Potato Production	2	2
PS76b Crop Physiology	3	2
PS200b Greenhouse Crop Production	3	2

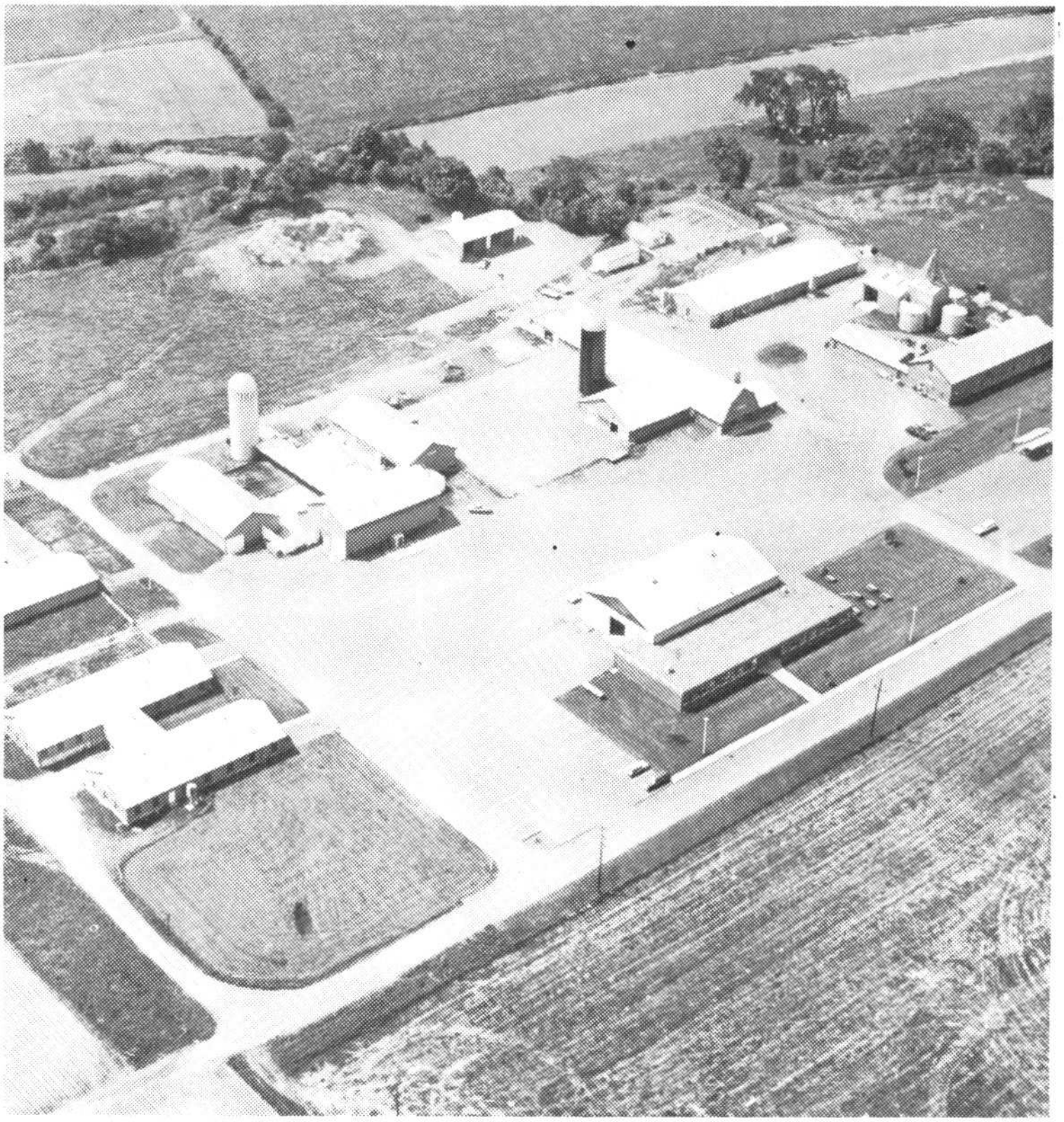
*The student will be placed on a selected farm for seven months (May to December inclusive) of intensive farm training with the farm operator as instructor. Satisfactory levels of proficiency must be attained in a number of farm

skills, and in the planning and management aspects of operating a farm. A comprehensive farm planning project is begun during this phase of the training program.

Qualification for Diploma

Students who complete all the requirements with no mark below fifty per cent of the maximum mark obtainable will be granted a Diploma of Technology (Dipl. T.).

A high honours diploma will be awarded to a student who has attained an average of at least eighty per cent and an honours diploma to one who has attained an average of at least seventy-five per cent.



DESCRIPTION OF SUBJECTS

The subject descriptions are grouped according to discipline and are in alphabetical and numerical order.

The Faculty reserves the right to make any revisions or additions which may be necessary.

AGRICULTURAL ENGINEERING

AE 10a: **Agricultural Engineering I**
Instructors: **Prof. Townsend and Mr. Burr**

Topics covered include: Farmstead planning, a practical discussion on the use of electricity for light, heat and power, the design of farm water systems with emphasis on sources of water, quantity required, pumps and their theory of operation and safety around the farm.

Laboratory periods are usually in the form of tours both on and off campus. They include visits to large and small commercial farms, soil and water engineering projects and a modern wood manufacturing firm.

Fall semester — 2 lecs and 2 labs per week.

AE 11a: **Horticultural Engineering I**
Instructors: **Prof. Townsend and Mr. Morash**

The basic skills of drafting are taught. Lettering, the use of drawing instruments, orthographic drawing and sketches in both pencil and ink are covered.

Fall semester — 3 labs per week.

AE 12a: **Drafting I**
Instructors: **Prof. Townsend and Mr. Morash**

A course which helps the student develop his skills in lettering, orthographic drawings and sketching by the use of drawing instruments, drafting machines, printing aids, etc.

Fall semester — 4 labs per week.

AE 13a: **Shopwork I**
Instructors: **Messers. Burr, Hampton, Morash and Bhola**

The selection, operation and maintenance of work shop tools including the power grinder, drill press, fly press, metal band saw, iron worker, metal bender, squaring shears, box and pan brake and forming rolls; also use of portable wood and metal working tools. Students are introduced to the operation of a metal lathe and milling machine. Considerable welding is done using electric, acetylene and spot welding machines. Some practice is given on the hard-to-weld metal such as aluminium and magnesium alloys. Identification and heat treatment of metals are also studied.

Fall semester — 2 lecs and 4 labs per week.

AE 14a: **Surveying**
Instructors: **Prof. Cunningham and Mr. Taylor**

An introduction to surveying methods including field practice using tapes, levels and transits. Standard field notes are emphasized. Basic construction surveying is also introduced.

Fall semester — 2 lecs and 2 labs per week.

Text: Kissam, *SURVEYING PRACTICE* (latest edition)

AE 17b: **Agricultural Engineering II**
Instructors: **Prof Townsend and Messrs. Burr and Morash**
Prerequisite: **AE 10**

Insulation, ventilation and proper temperature control in farm buildings is discussed. Lectures also include the parts of the structure from the foundation to the roof, concrete construction, wood construction, and use of metals in building construction. The soil and water field is introduced by reference to land clearing, open drainage, under drainage, and land reclamation as well as erosion control. Laboratories consist of drafting exercises in printing and drawing by the orthographic, oblique and isometric methods along with sketching.

Winter semester — 2 lecs and 2 labs per week.

AE 18b: **Horticultural Engineering II**
Instructors: **Prof. Townsend and Mr. Morash**
Prerequisite: **AE 11**

Pictorial drawings, the use of symbols, drafting aids and topographical mapping are practiced. Lectures include various ways of computing land areas, quantities of fill used for land shaping, the principles of mixing, placing and curing of concrete, the use of iron and wood for fences, furnishings, and walks with emphasis on durability.

Winter semester — 1 lec and 3 labs per week.

AE 19b: **Drafting II**
Instructors: **Prof. Cunningham and Mr. Morash**
Prerequisite: **AE 12a**

A continuation of drawing including pictorial drawings and sketches, sections and developments, farm building plans using printing machines, tracing tables, and planimeters.

Winter semester — 4 labs per week.

AE 20b: **Shopwork II**
Instructors: **Messrs. Burr, Hampton, Morash and Bhola**
Prerequisite: **AE 13**

Individual projects are undertaken by students, using the skills acquired in AE 13a. These projects are selected by the student and may be of metal or wood or a composite utilizing the shop equipment and machinery in the metal working, welding, and woodworking shops. Projects will be agriculturally oriented.

Winter semesters — 2 lecs and 4 labs per week.

AE 21b: **Oil Hydraulics I**
Instructors: **Prof. MacAulay and Mr. Mitchell**

A study of liquids at rest and in motion and the flow of liquids through pipes and orifices. Volumes and pressure measurements are made and hydraulic pump operation (both water pumps and industrial hydraulic pumps) is studied.

Winter semester — 2 lecs and 2 labs per week.

AE 22b: **Engineering Principles**
Instructor: **Prof. Cunningham**

An applied mechanics course providing a basic understanding of weights, forces, moments, and pressures as applied to frames and machines. Force, torque, power, and horsepower, as applied to power sources and uses are studied. The use of common engineering materials and shapes as applied to simple machines and structures is introduced.

Winter semester — 3 lecs per week.

AE 23c: **Farm Equipment Servicing**
Instructors: **Agricultural Engineering Department Staff**

A spring course during which the student studies and

works with a selected farm equipment dealer-instructor. Instruction will cover all aspects of the farm equipment dealership operation. Students will be rated on a specific list of skills and procedures.

AE 40a: **Field Machinery**
Instructors: **Prof. MacAulay and Mr. Hampton**

An introduction to the operation, maintenance and selection of farm machinery used in modern agriculture. Tillage, application, and harvesting equipment will be studied.

Fall semester — 2 lecs and 2 labs per week.

AE 41a: **Farm Buildings I**
Instructors: **Prof. Cunnigham and Mr. Morash**

Construction of building elements will be studied, calculations and drawings will be made and costs considered. Measurements and drawing of existing buildings and planning and drawing of proposed livestock, crop or service buildings will be carried out. Environment considerations will be studied with calculation of insulation values.

Fall semester — 2 lecs and 4 labs per week.

Text: *CANADIAN FARM BUILDING CODE*

AE 42a: **Farm Power I**
Instructors: **Messrs. Taylor and Mitchell**

The types, functions, selection, and care of farm diesel and gasoline engines are studied. The safe use of power and hand tools as well as farm power shop equipment is emphasized.

Fall semester — 2 lecs and 4 labs per week.

AE 43a: **Farm Machinery I**
Instructors: **Prof. MacAulay and Mr. Hampton**

This course is designed to provide an insight into the selection and care of tillage, application and harvesting equipment. The cost of owning and operating modern field machinery systems is investigated.

Fall semester — 2 lecs and 4 labs per week.

Text: Kepner, Bainer, and Barger, *PRINCIPLES OF FARM MACHINERY*

AE 44a: **Welding I**
Instructors: **Messrs. Burr and Hampton**
Prerequisite: **AE 13**

This course is a continuation of AE 13. Principles and practices of oxyacetylene and electric arc welding, cutting and brazing of cast iron and steel in flat, vertical and overhead positions are studied. Safety precautions, electrodes, welding joint design, hard surfacing, and electric arc welding machine construction are investigated.

Fall semester — 4 labs per week.

AE 45a: **Soil and Water Management**
Instructors: **Messrs. Smyth and Taylor**

An introduction to soil and water engineering including land drainage, irrigation systems, water storage structures, erosion control, land clearing, rudimentary hydrology, and other associated topics. Laboratory periods cover observations, measurements and elementary design problems.

Fall semester — 2 lecs and 2 labs per week.

Text: Schwab, Frevert, Barnes, and Edminister, *ELEMENTARY SOIL AND WATER ENGINEERING.*

AE 46a: **Oil Hydraulics II**
Instructors: **Prof. MacAulay and Mr. Mitchell**
Prerequisite: **AE 21**

A study of power transmission by hydraulic systems as applied to mobile agricultural equipment is carried out. Typical tractor, open centered, closed centered, and pilot operated hydraulics systems, hydrostatic transmission, power steering, hydraulic motors and other accessories are studied. Techniques of testing, repairing and maintaining systems are covered.

Fall semester — 1 lec and 4 labs per week.

AE 47a: **Projects**
Instructors: **Agricultural Engineering Department Staff**

This is an opportunity to examine in detail specific agricultural topics of interest to the students. The use of

knowledge and skills acquired in courses related to the topic may be incorporated into the project plan. Approved projects will be carried out by the student under the supervision of selected staff members.

Fall semester — equivalent to 2 labs per week.

AE 48a: **Shop Management**
Instructors: **Prof. Cunningham and Mr. Mitchell**

Shop organization, responsibilities, communication with customers and employees as well as the efficient utilization of resources are covered. Work orders, warranty claims, pre-delivery and follow-up procedures are studied.

Fall semester — 2 lecs and 2 labs per week.

AE 49a: **Electrical Systems**
Instructor: **Mr. Taylor**

General D.C. wiring and trouble shooting using modern test equipment is studied. Generators, starters, alternators, and other electrical components of an engine will be studied in theory and that theory will be applied to actual operating conditions.

Fall semester — 1 lec and 3 labs per week.

AE 50a: **Equipment Overhaul I**
Instructors: **Messrs. Mitchell and Bhola**

In this course several types of machines are repaired but before any reconditioning begins the student will provide a list of parts required. The cost of these parts and labour are discussed relative to economic feasibility of doing the reconditioning. The work is then done under supervision and the performance of the machine is evaluated under field conditions.

Fall semester — 8 labs per week.

AE 51b: **Farm Buildings II**
Instructors: **Profs. Cunningham, Browning and Mr. Morash**
Prerequisite: **AE 41**

The study of buildings carried out in Farm Buildings AE 41a will be continued with emphasis on structural and functional

design. Selection of roof trusses and beams will be considered, heat loss calculations made and Materials Handlings in farmsteads studied. Model buildings or information panels on a specific subject will be designed, drawn and constructed.

Winter semester — 1 lec and 4 labs per week.

Text: *CANADIAN FARM* BUILDING CODE

AE 52b: **Farm Power II**
Instructor: **Messrs. Taylor and Mitchell**
Prerequisite: **AE 42**

Trouble-shooting with test equipment is studied. Maintenance and repair of small engines is covered. The principles of operation and the care of the tractor power train are emphasized.

Winter semester — 1 lec and 4 labs per week.

AE 53b: **Farm Machinery II**
Instructors: **Prof. MacAulay and Mr. Hampton**
Prerequisite: **AE 43**

An intensive study of the operational characteristics and maintenance of machinery used on modern farms. Extensive use will be made of selected manuals and agricultural engineering literature.

Winter semester — 1 lec and 4 labs per week.

AE 54b: **Welding II**
Instructors: **Messrs. Burr and Hampton**
Prerequisite: **AE 44**

Oxyacetylene, electric arc and spot welding equipment is studied in detail. Included in the demonstrations and practice are 3 position welding, electrode selection, welding joint design for ferrous and non-ferrous metals. Determining the strength of any weld can be accomplished by use of modern testing machine.

Winter semester — 1 lec and 4 labs per week.

AE 55b: **Materials Handling Equipment**
Instructor: **Prof. Cunningham and Mr. Bhola**

The operating characteristics and maintenance of all types of materials handling equipment used around the farmstead from the milker to the silo unloader to the gutter cleaner are studied. Laboratory work will include trouble shooting and the reconditioning of available farmstead equipment.

Winter semester — 2 lecs and 4 labs per week.

AE 56b: **Tractor Overhaul**
Instructor: **Mr. Taylor**

A diagnosis of the faulty tractor system is carried out. Complete overhaul including cylinder boring, bearing fitting, clutch adjustment, etc. are covered. Cost of repairs are estimated before repairing begins and actual costs are tabulated.

Winter semester — 8 labs per week.

AE 57b: **Equipment Overhaul II**
Instructors: **Messrs. Mitchell and Bhola**
Prerequisite: **AE 50**

This course is a continuation of AE 50a during which the student is encouraged to improve his proficiency in reconditioning and evaluating the performance of many types of equipment.

Winter semester — 8 labs per week.

AE 58b: **Electrical Controls**
Instructors: **Prof. Townsend and Messrs. Burr, Hampton and Mitchell**

This is a study of electrical controls and various types of switches such as limit, micro, mercury, remote control, photoelectric, etc. The application of temperature and humidity controls for plant and animal environment is studied.

Winter semester — 1 lec and 4 labs per week.

AE59a: **Horticultural Machinery**
Instructors: **Messrs. Taylor, Hampton and Mitchell**

An introduction to the selection and proper operation of horticultural machinery used by the ornamental and land-

scape horticulturalist. Tillage, application, lawn and ornamental maintenance equipment, small internal combustion engines as well as the principles of hydraulics will be studied.

Fall semester — 2 lecs and 2 labs per week.

AE 60b: **Inventory Control**
Instructor: **Mr. Smyth**

Different methods of controlling the inventory of parts and machines are studied. Procedures for ordering parts and machines are investigated.

Winter semester — 2 lecs per week.

AE 61b: **Farm Tractors**
Instructors: **Messrs. Taylor and Mitchell**

An introduction to the principle of operation of the gasoline and diesel engine is studied and practiced. This includes parts identification, assembly procedure and servicing.

Winter semester — 2 lecs and 2 labs per week.

AE 62b: **Properties of Materials**
Instructors: **Prof. Havard and Messrs. Burr and Bhola**

The characteristics, requirements and selection of various materials including metals, plastics, lumber and concrete are studied and the standards and tests applied to these materials considered. The reaction of materials to various conditions of use including loading are investigated.

Winter semester — 1 lec and 2 labs per week.

AE 100a: **Graphics and Projection**
Instructor: **Prof. Adams and Mr. Bhola**

Freehand sketching and instrument drawing are used to explore the fundamental principles of projection and to apply these to the solution of problems of orthographic projection in descriptive geometry as required by the design process. Emphasis is placed on the application of graphical techniques to the solution of engineering problems.

Fall semester — 2 lecs and 4 labs per week.

Text: A.S. Levens, *GRAPHICS-ANALYSIS AND CONCEPTUAL DESIGN*

AE 105b: **Graphics and Design**
Instructor: **Prof. Adams and Mr. Bhola**
Prerequisite: **AE100**

Graphical techniques are applied to vector analysis of design problems and to the presentation of design data. Design practices are investigated and used in student projects aimed at developing creativity in the design process.

Winter semester — 1 lec and 4 labs per week.

Text: A.S. Levens, *GRAPHICS-ANALYSIS AND CONCEPTUAL DESIGN*

AE 110a: **Statics**
Instructors: **Profs. MacAulay and Browning**

A course dealing with forces acting on bodies at rest in two and three dimensions. Concepts of equilibrium and equivalent force systems are used to analyze structures, frames and machines. Friction, controids and moments of inertia are introduced to develop an ability to analyze and solve problems in a logical manner.

Fall semester — 3 lecs and 3 labs per week.

Text: Beer & Johnson, *VECTOR MECHANICS FOR ENGINEERS*, McGraw-Hill

AE 120b: **Dynamics**
Instructor: **Prof. J.D. MacAulay**
Prerequisite: **AE 110**

A course dealing with rectilinear and curvilinear motion of particles, force, mass and acceleration, work and energy, impulse and momentum. To provide a sound background in the principles of particle and line motion.

Winter semester — 2 lecs and 2 labs per week.

Text: Beer & Johnson, *VECTOR MECHANICS FOR ENGINEERS*, McGraw-Hill

AE 220b: **Agricultural Structures**
Instructors: **Profs. Adams and Browning**

An introduction to farmstead design, layouts and plans, environmental conditions and functional requirements of structures for product storage and livestock will be given. Construction methods and material standards will also be considered.

Winter semester — 2 lecs and 2 labs per week.

Texts: (1) *CANADIAN FARM BUILDING CODE*
(2) *MIDWEST PLAN SERVICE STRUCTURES AND ENVIRONMENT HANDBOOK*

AE 225a: **Thermodynamics**
Instructors: **Profs. Havard and Browning**

A study of the conservation of energy and mass in flow and non-flow systems and processes, application of the first and second laws in cycles using ideal gases and vapors; including the properties of liquids and vapors, processes and cycles, and energy balances.

Fall semester — 3 lecs and 3 labs per week.

Text: Von Wylen and Sonnatog, *FUNDAMENTALS OF CLASSICAL THERMODYNAMICS,* SI Version (second edition)

AE 230b: **Agricultural Mechanization**
Instructors: **Prof. MacAulay and Mr. Hampton**

Modern crop production equipment is studied with a view to understanding the function of the machine as a unit and as part of the production system. The capacity as well as the costs associated with different machinery management systems will be investigated.

Winter semester — 2 lecs and 2 labs per week.

Text: Kepner, Bainer, and Barger, *PRINCIPLES OF FARM MACHINERY*

AE 240a: **Material Science**
Instructor: **Prof. Havard**

The objective of this course is to give the student a basic understanding of the significance of structure in determining

the useful properties of materials. Topics include: mechanical properties; property transformations; thermal properties; wear; corrosion.

Fall semester — 3 lecs and 2 labs

Text: Brick, Pense, Gordon, *THE STRUCTURE AND PROPERTIES OF ENGINEERING MATERIALS* (fourth edition)

AE 245b: **Strength of Materials**
Instructor: **Prof. Saxon**

The course consists of the analysis of mechanical structures with respect to the loads applied and the resulting deformations. This then permits the selection of materials with the required dimensions for the structures. Topics covered include: centric loading, principal stresses, flexural loading, deflection of beams and shafts, torsional loading, combined loadings.

Winter semester — 3 lecs and 2 labs per week.

Text: MECHANICS OF MATERIALS, (3rd edition), Higdon, Ohlsen, Stiles, Weese

AE 250b: **Fluid Mechanics**
Instructors: **Profs. Harvard and MacAulay**

A study of physical properties of liquids and gases, fluid statics, and fluid flow; including pressure, Manometry hydrostatic forces, stream lines and tubes, continuity, momentum, Bernoulli equation, flow measurement, viscours flow and dimensionless numbers.

Winter semester — 3 lecs and 2 labs per week.

Text: Streeter, *FLUID MECHANICS*, McGraw-Hill

AE 260c: **Surveying**
Instructors: **Prof. MacAulay and Mr. Taylor**

An introduction to the use of surveying instruments, including distance measurement, differential and profile levelling and transit traverse projects.

2 weeks following the winter semester

Text: Kissan, *SURVEYING PRACTICE*, McGraw-Hill

ANIMAL SCIENCE

AS 10a: **Livestock Production [ruminant animals]**
Instructor: **Prof. Curtis**

An introduction to the production of dairy cattle, beef cattle and sheep. The course will emphasize management of commercial enterprises of each of these three phases of animal agriculture.

Fall semester — 3 lecs and 2 labs per week.

AS 11a,b: **Animal Husbandry Skills**
Instructor: **Prof. Mathewson**

Practical experience in the treatment and handling of animals and related equipment. Students participate in the regular work of the various animal units. On occasion they are required to be on hand at times other than the normal class hours, e.g. morning milking.

Winter and fall semesters — 2 labs per week.

AS 12b: **Livestock Production [non-ruminant animals]**
Instructors: **Profs. Crober and Curtis**

An introduction to the production of poultry and swine with lesser time allotment to horses and laboratory animals. The course will emphasize the management of commercial enterprises of poultry and swine.

Winter semester — 3 lecs and 2 labs per week.

AS 40a: **Feeds and Feeding**
Instructor: **Prof. Cock**

This is a study of the various commonly used feedstuffs with respect to their nutrient content and feeding value. The nutrient requirements of farm livestock and the balancing of rations to meet growth, production, and reproduction needs are covered.

Fall semester — 3 lecs and 2 labs per week.

AS 41a: **Milk and Dairy Products**
Instructor: **Prof. Chant**

Studies in the composition and properties of milk and its products with consideration of the processes of pasteurization, homogenization and quality control.

Fall semester — 2 lecs and 2 labs per week.

AS 42a: **Breeds and Selection**
Instructor: **Prof. Mathewson**

A study of the history of livestock selection and a consideration of the present breeds. Laboratory periods will emphasize live animal appraisal and a familiarization with common livestock breeds and strains.

Fall semester — 1 lec and 2 labs per week.

AS 43b: **Meat and Livestock Products**
Instructors: **Profs. Curtis and Crober**

The basic science of meat, wool and eggs with emphasis on their marketing and processing for retail consumption.

Winter semester — 2 lecs and 2 labs per week.

AS 44b: **Animal Breeding**
Instructor: **Prof. Mathewson**

In this course the theoretical and practical application of inheritance in the breeding and selecting of animals is studied.

Winter semester — 3 lecs per week.

AS 45b: **Animal Science Seminar**
Instructors: **Animal Science Staff**

Students will meet weekly to report on and discuss Animal Science related topics. Students will be encouraged to report on their projects.

Winter semester — 1 lec per week.

AS 46a: **Animal Physiology**
Instructor: **Prof. Crober**

This course considers the fluids of the body, circulation, respiration, digestion, absorption, excretion, energy ex-

change, muscular activity, neurology, endocrinology and reproduction of domestic animals.

Fall semester — 2 lecs and 2 labs per week.

AS 47b: **Animal Health**
Instructor: **Prof. Main**

Systems of sanitation and hygiene. Promotion of animal health. Causes, signs, prevention, and control of common diseases of livestock are discussed.

Winter semester — 2 lecs and 2 labs per week.

AS 48a,b: **Projects**

This is an opportunity to examine in detail specific agricultural topics of interest to the students. Projects will be organized and carried out by the students under the supervision of various staff members.

Both semesters — Time to be arranged

AS 70b: **Animal Nutrition**
Instructor: **Prof. Parsons**

A study of the principles of the nutrition of animals. Emphasis is given to the needs and utilization of specific nutrients. Some discussion will be related to current research reports.

Winter semester — 3 lecs per week.

Text: Maynard and Loosli, *ANIMAL NUTRITION*

AS 100b: **Animal Science**
Instructors: **Profs. Mathewson, Crober and Cock**

An introduction to the principles of commercial animal agriculture. Topics covered include: breeding systems, physiology of reproduction and lactation, animal nutrition, a survey of animal agriculture and applied management skills.

Winter semester — 3 lecs and 2 labs per week.

Text: Hammond, *FARM ANIMALS*

AS 210a: **Selected Studies in Animal Science**
Instructors: **Animal Science Staff**

A non-structured course offering students the opportunity to study, in depth, one aspect of Animal Science.

Instruction will be by selected texts, informal discussion and practical experience. Suggested areas of study are: dairy cattle production, beef cattle production, sheep production, swine production, and poultry production.

Fall semester — 3 lecs per week.

AS 220a: **Animal Production Methods**
Instructor: **Prof. Hamilton**

The management of cattle, sheep, swine, and poultry will be discussed. An overview of the industry will be presented. Emphasis will be on operational practice.

Fall semester — 2 lecs and 2 labs per week.

Text: To be announced

BIOLOGY

B 10a: **Biological Principles**
Instructor: **Prof. Eaton**

An introduction to the biological principles that are most important in agriculture. Topics include the structure, growth and reproduction of both plants and animals, and an introduction to genetics and ecology.

Fall semester — 3 lecs and 4 labs per week.

Text: Otto and Towle, *MODERN BIOLOGY*

B13a: **Plant Identification**
Instructor: **Prof. Prange**

A course covering the classification and naming of plants with special attention given to our common species including the weeds, trees, shrubs, and grasses. The important plant families will be considered, along with laboratory work in identification.

Fall semester — 2 lecs and 2 labs per week.

Texts: Roland, *The Flora of Nova Scotia*
Mulligan, *Common Weeds of Canada*

B15a: **Biology I**
Instructor: **Prof. Eaton**

A course stressing biological principles important to the study of both plants and animals. Emphasis is placed on cell structure and function, agricultural genetics, and breeding.

Fall semester — 2 lecs and 4 labs per week.

Text: Otto and Towle, *Modern Biology*

B16b: **Biology II**
Instructor: **Prof. Eaton**

This course is a continuation of B15 and includes specific areas of Agricultural biology such as plant and animal structure, ecology, and the relationship of man to his environment.

Winter semester — 2 lecs and 4 labs per week.

Text: Otto and Towle, *Modern Biology*

B40b: **Plant Pathology**
Instructor: **Prof. McFadden**

An introduction to the nature, cause and control of plant diseases due to bacteria, fungi, nematodes, viruses and mycoplasmas. Emphasis will be placed on the infection process, resistance mechanisms, relation of environment to disease development, and methods of control. Emphasis is placed on representative diseases affecting economic crops in the Atlantic region.

Winter semester — 2 lecs and 3 labs per **week**.

Text: Roberts and Boothroyd, *FUNDAMENTALS OF PLANT PATHOLOGY*

B 41b: **Plant Physiology**
Instructor: **Prof. Prange**

A course dealing with the structure of plants and how they live, grow, and reproduce. The various plant processes such as photosynthesis, respiration, absorption, nutrition, transpiration and growth are included, along with a study of the various factors that influence the growth and economic production of crops.

Winter semester — 2 lecs and 2 labs per week.

Text: Bleasdale, *PLANT PHYSIOLOGY IN RELATION TO HORTICULTURE*

B 42b: **Botanical Laboratory Techniques**
Instructor: **Prof. McFadden**

A practical course stressing the essentials of plant propagation, transplanting and growing techniques used in the greenhouse. Emphasis is placed on the culture of algae, fungi, pteridophytes and bryophytes commonly used for teaching and laboratory experiments. Included will be an introduction to tissue culture techniques, and a major project.

Winter session — 2 lecs and 3 labs per week.

B 43a: **Entomology**
Instructor: **Prof. Eaton**

This course deals with the economic aspects of insects and other animal type pests common to the Atlantic Provinces. Structure, growth, reproduction, distribution and other factors involving control are considered.

Fall semester — 2 lecs and 2 labs per week.

B 44a: **Microbiology I**
Instructor: **Prof. Porth**

An introduction to the science of microbiology. Lectures will be concerned with the concepts of microbial classification, structure, microscopic observation, isolation, cultivation, nutrition, growth, metabolism, and identification. Special attention will be given to the relationships of micro-organisms of water and foods. Laboratory work will stress the principles and procedures of staining, preparation of microbial media, isolation techniques, culturing, biochemical tests and identification.

Fall semester — 2 lecs and 3 labs per week.

Text: Brock and Brock, *BASIC MICROBIOLOGY*

B 45b: **Microbiology II**
Instructor: **Prof. Porth**

This course is a continuation of Microbiology I. Lectures will be concerned with infection and immunity, mutation, soil microbiology, ruminant microbiology, mycotoxins in feeds, silage microbiology, production of industrial and medicinal compounds. Laboratory work will stress isolation and identification of unknowns, followed by detailed studies of certain agricultural topics including soil, milk, water, and foods.

Winter semester — 2 lecs and 3 labs per week.

Text: Brock and Brock, *BASIC MICROBIOLOGY*

B 70a: **Microtechniques I**
Instructor: **Prof. Crosby**

Preparation of temporary and permanent whole mounts for microscopical examinations; staining of prepared slides; cytological work.

Fall semester — 3 lecs and 4 labs per week.

Text: Gallagher and Kozloff, *ESSENTIALS OF PRACTICAL MICRO-TECHNIQUE*

B 71b: **Microtechniques II**
Instructor: **Prof. Crosby**
Prerequisite: **Microtechniques I**

A continuation of Microtechniques I. Use of the microtome, staining and slide preparation; also histochemical techniques.

Winter semester — 2 lecs and 4 labs per week.

Text: Gallagher and Kozloff, *ESSENTIALS OF PRACTICAL MICRO-TECHNIQUE*

B 72b: **Laboratory Animal Care**
Instructors: **Prof. Crober and Miss deVouge**

This course includes both the theoretical and practical aspects of small animal care. Students will be introduced to the operation of the Animal Care Centre on campus. Instruction is given on handling, sexing, injection techniques, blood sampling and euthanasia using laboratory mice, rats, rabbits and guinea pigs. A major project and field trips to other animal care units in the area are included.

Winter semester — 2 lecs and 3 labs per week.

B 100a: **The Plant Kingdom**
Instructor: **Prof. McFadden**

An evolutionary review of the plant kingdom with the classification, morphology and life cycles of representatives of the algae, fungi, bryophytes and tracheophytes. Special attention will be given to the fungi with an introduction to plant pathology. The Angiosperms will be briefly considered, with a review of the evolution and history of our flora.

Fall semester — 3 lecs and 4 labs per week.

Text: Bold, THE PLANT KINGDOM

B 110b: **The Animal Kingdom**
Instructor: **Prof. Crosby**

An evolutionary review of the animal kingdom with reference to the classification, morphology and life cycles of representatives of the Protozoa and the metazoan phyla. An introduction to vertebrate embryology and vertebrate histology will also be considered.

Both semesters — 3 lecs and 4 labs per week.

Text: Boolootian and Stiles, *COLLEGE ZOOLOGY* (ninth edition)

BIOLOGY

B 200a: **Cell Biology**
Instructor: **Prof. Crosby**

An introduction to the structure and function of procaryotic and eucaryotic cells. Emphasis will be placed on the ultrastructure and biochemical significance of cellular organelles. Topics to be considered will include bioenergetics, biosynthesis of macromolecules, regulation of metabolic processes, photosynthesis, glycolysis, respiration, membranes, nature of the nerve impulse and action potential and molecular biology of muscle.

Fall semester — 3 lecs per week plus a major assignment.

Text: Novikoff and Holtzman, *CELLS AND ORGANELLES*

B 220a: **Microbiology for Engineers**
Instructor: **Prof. Porth**

A general survey of the microbial world with emphasis on types of micro-organisms, naming, structure, growth, metabolic reactions, energy transformations, culturing, methods of control, and population dynamics. Special attention will be given to the use of micro-organisms in areas of agricultural technology such as food, milk, silage, livestock waste management, enzymes and fermented beverages. The role of micro-organisms in nitrogen fixation, ruminant digestion, antibiotic production, petroleum prospecting and material spoilage, will be discussed.

Fall semester — 3 lecs per week.

B 225b: **Microbiology**
Instructor: **Prof. Porth**

A general introduction to microbiology. Topics include history, morphology, structure, cultivation, reproduction, metabolism, genetics, classification and control of micro-organisms. The importance of micro-organisms to soil productivity, foods, industry, veterinary science, public health and sanitation will be discussed.

Winter session — 3 lecs and 3 labs per week.

Text: Pelezar, Reid and Chan, *MICROBIOLOGY*
(fourth edition)

B 240a: **Introduction to Genetics**
Instructor: **Prof. Padmanathan**

Study of heredity and variation in plants and animals, including man; the relationships of genetics to evolution and breeding practices.

Fall semester — 3 lecs and 2 labs per week.

Text: To be announced

B 245b: **Agricultural Genetics**
Instructor: **Prof. Padmanathan**
Prerequisite: **B 240**

Further study of genetic material and population genetics. Emphasis is placed on application of genetics to plant and animal improvement.

Winter semester — 2 lecs and 2 labs per week.

Text: To be announced

B 255a: **Plant Protection**
Instructor: **Prof. McFadden**

An introduction into the principles of protecting plants from diseases, insects and weeds. Included will be a study of the more important problems affecting crops in the Maritimes. The safe use and handling of fungicides, insecticides and herbicides is emphasized. Information on the chemistry, mode of action, formulations, and compatability of pesticides is covered as well as the Pesticide Act.

Fall semester — 3 lecs and 3 labs per week.

B 260b: **Plant Physiology**
Instructor: **Prof. Eaton**

A study of the different functions of the plant, including growth, photosynthesis, mineral nutrition, water relations and translocation of solutes, plant orientation, development and reproduction.

Winter semester — 3 lecs and 2 labs per week.

Text: Noggle and Fritz, *INTRODUCTORY PLANT PHYSIOLOGY*

BIOLOGY

B 270a: **Ecology**
Instructor: **Prof Prange**

An introductory course dealing with ecological principles as they relate to individuals, populations and communities. The interactions between organisms and the physical environment will be discussed, along with the various types of communities found in the Atlantic Provinces.

Fall semester — 2 lecs and 3 labs per week.

Text: Smith, ELEMENTS OF ECOLOGY AND FIELD BIOLOGY

CHEMISTRY

C 10a: **Chemistry I**
Instructor: **Prof. Hawley**

A course that stresses fundamental concepts of Chemistry in relation to the Agricultural Industry. Topics discussed include S.I. System, properties of matter and energy, basic atomic stucture, Periodic Table, bonding, electronic arrangements, basic reactions and problem solving. The properties of some specific elements such as nitrogen, sulfur, phosphorus, and iron will be related to the Agricultural industry.

Fall semester — 2 lecs and 2 labs per week.

Text: To be selected.
Laboratory manual and course outline provided.

C 11b: **Chemistry II**
Instructor: **Prof. Hawley**
Prerequisite: **C 10**

Specific topics to be discussed include solutions, electrochemistry and corrosion, metallurgy, agricultural alloys, commercial fertilizer preparations, water, water softening, radioactive isotopes, sewage disposal, explosives, fuels. An introduction to some practical organic and biochemistry is included. Some specific materials will be examined and the safety precautions involved in their proper use in the home, shop, farm and lab will be stressed.

Winter semester — 2 lecs and 2 labs per week.

Text: To be selected.
Laboratory manual and course outline provided.

C 12a: **Soil Physics**
Instructors: **Prof. Beke and Mr. Higgins**

A course designed to emphasize the importance of physical properties of soils as related to fertility and productivity. Soils are studied with particular reference to soil composition, texture, structure, clay content, organic matter, soil water, soil air, soil temperatures, compaction, drainage, soil development processes and soil profiles. Atlantic Provinces soils are examined in the laboratory to

assist students in understanding and managing soils from a physical aspect.

Fall semester — 2 lecs and 2 labs per week.

Text and laboratory manual: To be selected.

C 13b: **Soil Chemistry**
Instructors: **Prof. Langille and Mr. Higgins**

This course is a study of the chemical properties of soils and chemical reactions associated with soil components and additives as fertilizers, limestones and organic materials as they relate to plant growth. The relationship of such materials in the soil to growing crops and soil enhancement is developed. As well, individual nutrient elements are studied.

Winter semester — 2 lecs and 2 labs per week.

Text and laboratory manual: To be selected.

C 40a: **Chemistry Laboratory Techniques I**
Instructor: **Prof. Robinson**

An introduction to general chemistry techniques relating to normal laboratory procedures. Instruction in the use and handling of toxic chemicals; the potential hazards associated with various pieces of laboratory equipment; laboratory reports; glass working; responsibilities of a chemistry laboratory worker; the mathematical calculation of typical chemical problems. The laboratory exercises will serve as an introduction to some of the chemicals, methods and equipment used in the normal chemistry laboratory.

Fall semester — 4 labs per week.

Text: To be announced.

C 41b: **Chemistry Laboratory Techniques II**
Instructor: **Prof. Robinson**

A course designed to assist students in organizing, understanding using and evaluating chemical calculations and problems. The material presents a practical foundation for techniques of solving chemical laboratory problems in the preparation of solutions, expressions of concentration, dilution problems, preparation of graphs, calculations in

gravimetric and titrimetric analysis and miscellaneous calculations. The subject material will also deal with various hazards encountered in a chemistry laboratory.

Winter semester — 2 labs per week.

Text: To be selected.

C 42a: **Organic Chemistry**
Instructor: **Prof. Payne**

An introductory course designed to familiarize the student with the theories and principles of organic chemistry as they apply to certain basic classes of organic compounds including alkanes, alkenes, alkynes, polyolefins, aromatic hydro-carbons, alcohols and mercaptans. The nomenclature of these classes of compounds and their application to plant and animal life is stressed.

Laboratory procedures are correlated with lecture material with modern procedures and techniques being employed to illustrate the preparation, extraction, purification, properties and reactions of various organic compounds discussed.

Fall semester — 3 lecs and 4 labs per week.

Text: To be announced.
Laboratory Manual: Mimeographed procedures.

C 43b: **Bio-Organic Chemistry**
Instructor: **Prof. Payne**
Prerequisite: **C 42**

A continuation of the introduction to the basic classes of organic compounds is presented in this course. Aldehydes, ketones, amines, carboxylic acids and their derivatives are studied. The student is also introduced to biochemistry through a preliminary study of carbohydrates, lipids, proteins, nucleic acids, vitamins, hormones, and enzymes.

Laboratory exercises closely parallel the topics presented in lecture and are designed to make the student aware of the properties and reactions characteristic of the organic and biochemical compounds studied.

Winter semester — 3 lecs and 4 labs per week.

Text: To be announced.
Laboratory manual: Mimeographed procedures

C 44b: **Instrumentation I**
Instructors: **Profs. MacLean, Robinson and Mrs. Blackie**

An introduction to the theory and practical basic skills of the more commonly used instrumental methods of analysis. The areas covered are: calorimetry including auto-analyser techniques, atomic absorption, flame photometry, turbidimetry, polarimetry and refractometry.

Winter semester — 2 lecs and 3 labs per week.

Text: James W. Robinson, *UNDERGRADUATE INSTRUMENTAL ANALYSIS*

C 45a: **Qualitative Analysis**
Instructor: **Prof. Hawley**

Semimicroanalysis is used to evaluate the qualitative nature of inorganic and organic agricultural materials. Theory includes separations and reactions of Groups I-IV cations and anions, solutions, equilibria, Law of Mass Action, solubility products, hydrolysis, common ion effect, electroyltes, electrolysis, redox reactions, complex ions, oxidation potentials, pH indicators, buffers.

Fall semester — 3 lecs and 4 labs per week.

Text: Layde and Busch, *INTRODUCTION TO QUALITATIVE ANALYSIS*

C 46b: **Quantitative Analysis**
Instructor: **Prof. MacConnell**
Prerequisite: **C 45**

This course introduces the student to basic analytical principles and techniques. The lecture portion of the course includes the evaluation of analytical data, preparation of samples for analysis, principles of gravimetric analysis, acid-base titrations, oxidation-reduction methods including potentiometric titrations, precipitation and complex formation titrations, colorimetry and an introduction to instrumentation. The laboratory portion of the course is designed to illustrate the analytical principles studied in lecture and to enable the student to develop good analytical technique. Wherever possible, agricultural materials are used for analysis.

Winter semester — 3 lecs and 4 labs per week.

Text: Peters, Hayes and Hieftje, *A BRIEF INTRODUCTION TO MODERN CHEMICAL ANALYSIS*

C 70a: **Instrumentation II**
Instructor: **Prof. MacLean**

A study of the more advanced methods of absorption and emission spectroscopy and an introduction to thermo and electro chemistry. The following methods are studied: ultra violet and infrared absorption, spectroscope and optical emission spectrograph, calorimetry, potentiometry including specific ion electrodes and conductivity.

Fall semester — 3 lecs and 4 labs per week.

Text: James W. Robinson, *UNDERGRADUATE INSTRUMENTAL ANALYSIS*

C 71b: **Instrumentation III**
Instructor: **Prof. MacLean**

A continuation of the study of the theory and practical techniques of electrochemistry followed by a study of instrumental separation techniques and an introduction to radioactivity measurements. The topics covered are electrolysis, polarography, gas-liquid, paper, thin-layer, column and ion exchange chromatography, electrophoresis and radioactivity.

Winter semester — 3 lecs and 4 labs per week.

Text: James W. Robinson, *UNDERGRADUATE INSTRUMENTAL ANALYSIS*

C 73b: **Laboratory Organization and Management**
Instructor: **Prof. Langille**

A course designed to familiarize the students with the design, planning, organization and operation of modern chemistry laboratories. As well, the recording and keeping of records and reporting of analytical results are studied. Specifically arranged for Chemistry Laboratory Technologist students, the course places emphasis on the understanding of all phases of laboratory operation with special reference to a Technologist's area of participation in it.

Winter semester — 2 lecs and 4 labs per week.

Text: To be selected.

C 74a: **Glass Blowing**
Instructor: **Mr. Higgins**

The introduction of students to the art of blowing glass; familiarization with glass blowing procedures and methods; utilization of methods and materials to modify, repair and construct laboratory glass equipment.

Fall semester — 4 labs per week.

C 75a: **Food Chemistry I**
Instructor: **Prof. Robinson**
Prerequisite: **C 42, C 43, C 45, C 46**

A study of the chemistry and technology of carbohydrates, fats and proteins. Attention will also be directed towards the basic principles involved in their determination in foods and feeds.

The laboratory will deal with the qualitative and quantitative physical and chemical techniques used in the analysis of foods and feeds.

Fall semester — 3 lecs and 4 labs per week.

Text: Meyer, *FOOD CHEMISTRY*

C 76b: **Food Chemistry II**
Instructor: **Prof. Robinson**

A study of the composition, chemistry and technology of various products such as milk, eggs, meats, and cereals.

The laboratory will deal with the qualitative and quantitative physical and chemical techniques used in the analysis of agricultural products.

Winter semester — 3 lecs and 4 labs per week.

Text: Meyer, *FOOD CHEMISTRY*

C80: **Chemistry Project**
Instructors: **Chemistry Staff**

A chemistry project and seminar program lasting the entire year. It is organized on an individual basis with each student.

Both semesters—6 to 8 lab periods per week as assigned.

C 100a: **Chemical Principles**
Instructor: **Prof. MacConnell**

A study of atomic theory, periodicity, chemical reactions, thermo chemistry, geometrical forms of molecules, chemical equilibrium and oxidation-reduction reactions. Also included is an extensive study of the chemistry of solutions of weak electrolytes.

Fall semester — 3 lecs and 4 labs per week.

Text: Masterton and Slowinski, *CHEMICAL PRINCIPLES USING THE INTERNATIONAL SYSTEM OF UNITS* (fourth edition)

C 110b: **Organic Chemistry**
Instructor: **Prof. Hawley**
Prerequistie: **C 100**

A study of basic classes of organic compounds including alkanes, alkynes, petroleum and petrochemicals, cyclo-paraffins, alcohols, aldehydes, ketones, alkyl halides, mono-carboxylic acids, acid anhydrides, salts, amides, ethers, and amines.

Winter semester — 3 lecs and 4 labs per week.

Text: Morrison and Boyd, *ORGANIC CHEMISTRY* (3rd edition)

C 120a: **Engineering Chemistry I**
Instructor: **Prof. MacLean**

A study of solid, liquid and gaseous fuels, nuclear power, atmospheric pollution, lubrication and lubricants, brake fluid and antifreeze and the chemistry of their application to engineering problems.

Fall semester — 3 lecs and 4 labs per week.

Text: Munroe, *CHEMISTRY IN ENGINEERING*

C 125b: **Engineering Chemistry II**
Instructor: **Prof. MacLean**
Prerequisite: **C 120**

A study of the engineering topics; rust and corrosion, plastics, elastomers, protective coatings, uses and requirements of domestic and industrial water, sewage disposal and explosives.

Winter semester — 3 lecs and 4 labs per week.

Text: Munroe, *CHEMISTRY IN ENGINEERING*

C 200a: **Biochemistry I**
Instructor: **Prof. MacConnell**
Prerequisite: **C 110**

This course consists of a study of the following topics: biological elements, buffers, amino acids and proteins, lipids, membrane structures, carbohydrates, nucleic acids, vitamins, hormones and enzymes.

Fall semester — 3 lecs and 4 labs per week.

Text: Lehninger, *BIOCHEMISTRY* (second edition)

C 205b: **Biochemistry II**
Instructor: **Prof. MacConnell**
Prerequisite: **C 200**

This course includes a study of the following topics: enzyme kinetics, mechanisms of enzyme action, digestion and absorption, bioenergetics, catabolism of carbohydrates, lipids and nitrogen compounds, selected biosyntheses, nitrogen fixation and metabolism control mechanisms.

Winter semester — 3 lecs and 4 labs per week.

Text: Lehninger, *BIOCHEMISTRY* (second edition)

C 220a: **Introduction to Soil Science**
Instructor: **Prof. Langille**
Prerequisite: **C 100, C 110**

The general principles of soil science relating to the

origin, the development and classification of soils; the physical and chemical properties of soils are related to soil management, crop production, soil problems, land use, trace elements and pesticides in soils.

Fall semester — 3 lecs and 4 labs per week.

Text: Brady, *THE NATURE AND PROPERTIES OF SOIL*, (eighth edition)

ECONOMICS AND BUSINESS

EB 10a: **Accounting**
Instructor: **Prof. Arnfast**

This is a study of the basic principles and procedures relevant to the accounting function of a business. Some of the topics discussed in the course are: recording transactions in an accounting system, year-end adjustments, purchases and sales, control of cash transactions and financial statements.

Fall semester — 2 lecs and 2 labs per week.

Text: Meigs et al, *ACCOUNTING: THE BASIS FOR BUSINESS DECISIONS*

EB 11b: **Applied Accounting & Taxation**
Instructor: **Prof. Arnfast**
Prerequisite: **EB 10**

The emphasis of this course will be the application of accounting principles and procedures to farm accouting situations. Some of the topics discussed in the course are: fixed assets and depreciation, inventories, payrolls, financial statements. Considerable time will be spent on the study of Canadian Income Tax laws as they apply to the farm business.

Winter semester — 2 lecs and 2 labs per week.

EB 12a: **Macro Economics**
Instructor: **Prof. Tait**

An introduction to the study of Macro Economics in a Canadian context. Topics covered include: national accounts, public finance, money and banking, and international trade. Current problems in the Canadian Economy are drawn on to emphasize the theory.

Winter semester — 3 lecs per week.

Text: Armstrong, *THE CANADIAN ECONOMY & ITS PROBLEMS*

EB 13b: **Micro Economics**
Instructor: **Prof. Tait**

An introduction to the theory of the firm. The course examines the theory of demand and supply, distribution of income, forms of business organizations in Canada, and the levels of competition in the agricultural industry. Application of the various theories to explain the agricultural industry is stressed.

Fall semester — 3 lecs per week.

EB 40a: **Marketing Practices**
Instructor: **Prof. Ells**

The current practices involved in marketing farm products produced in the Atlantic Provinces are studied. The conditions affecting these practices and the groups of people that can bring about changes are identified

Special attention is paid to consumer behaviour, supplier behaviour, market structures, price determination, marketing boards, and marketing commissions.

Students visit a series of firms and organizations involved in marketing farm products. The managers of these organizations assist with the instruction.

Fall semester — 1 lec and 4 labs per week.

EB 41b: **Business Law**
Instructor: **Prof. Arnfast**

This course will introduce several topics relevant to the management of a business. The major topics to be discussed and studied are: types of business organizations, legal structure in Canada, criminal and civil law, contracts, mortgages, leins, insurance and marketing boards. Emphasis will be placed on relating the above topics to farm and farm-related business.

Winter semester — 3 lecs per week.

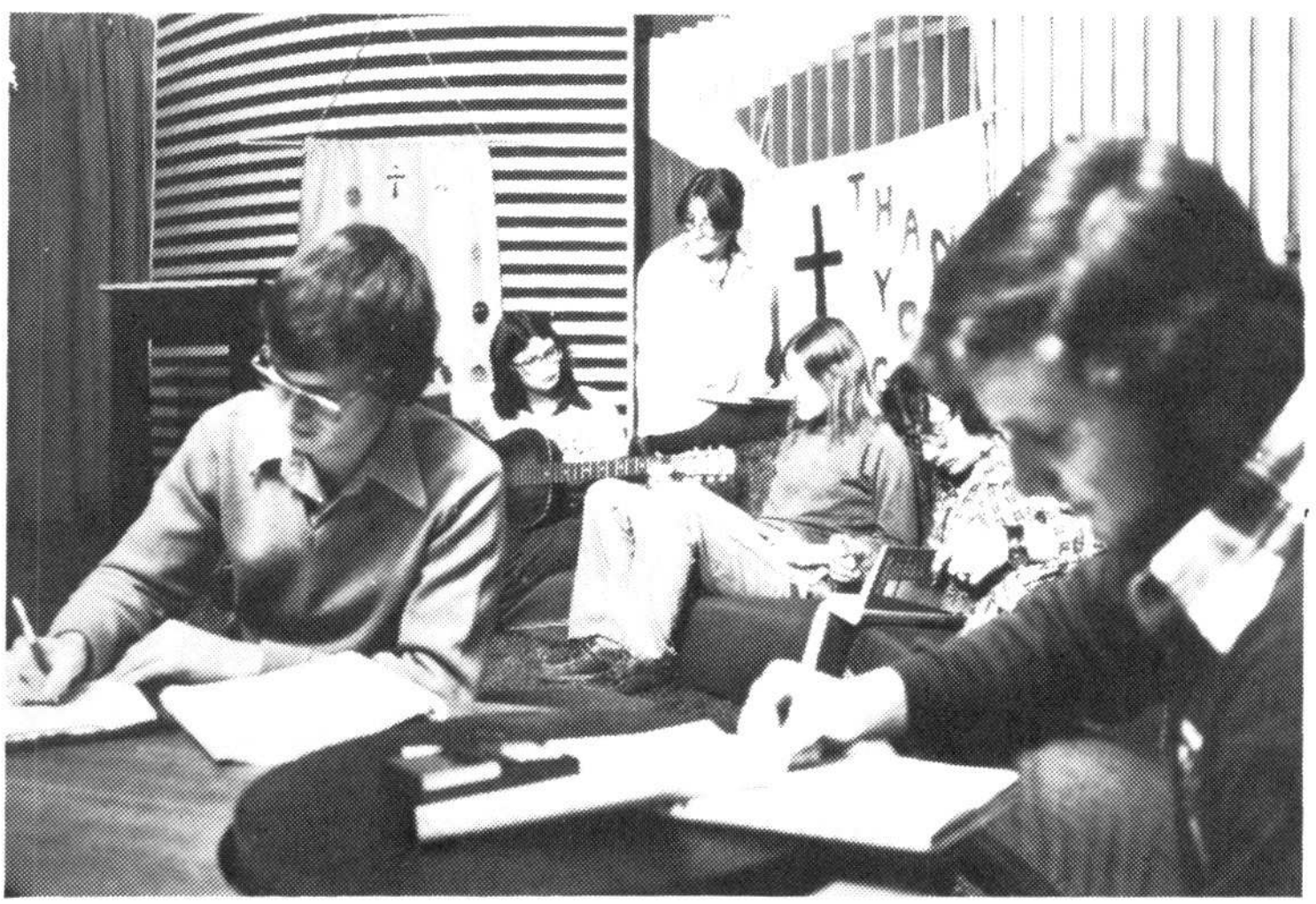
EB 42b: **Applied Farm Management**
Instructor: **Prof. Tait**

The course is designed to transfer classroom teaching to real farm situations. Students will have an opportunity to apply the principles of Farm Management on production farms. Some of the requirements will be: to analyze farm records, do credit analysis, develop farm plans, and evaluate machinery, livestock and crop decisions, based on actual farm cases.

Winter semester — 1 lec and 4 labs per week.

EB 43a,b: **Projects**

This is an opportunity to examine in detail specific agricultural topics of interest to the students. Projects will be



organized and carried out by the students under the supervision of various staff members.

EB 70a: **Farm Planning**
Instructor: **Prof. Stackhouse**

This course is designed to examine selected areas in farm management. While emphasis is placed on the financial aspects of farm management, areas of marketing and production will also be examined in relation to the decision-making process.

Specific topics include: evaluation of the legal forms of the farm entity; concepts of risk and uncertainty in farm planning; farm diversification; the farmer and the futures market; forward contracting; lease versus purchase decisions for fixed assets; estate planning and the use of computerized farm planning packages in decision-making.

Fall semester — 2 lecs and 2 labs per week.

EB 71b: **Market Planning**
Instructor: **Prof. Arnfast**
Prerequisite: EB 70

The emphasis of this course will be the application of marketing principles to the marketing of agricultural products. The following topics will be discussed: marketing concept, consumer behavior, marketing process, middleman, facilitating agencies, co-operatives, marketing boards, physical distribution, promotion, pricing.

Winter semester — 2 lecs and 2 labs per week.

EB 72b: **Farm Project**
Instructors: **Committee headed by member of the Farm Management Department**

The farm project relates the college course program with the on-farm training. It stresses the application of information to a specific farm situation.

The farm for this project may be the home farm or any other farm. An intimate knowledge of the farm is necessary. The student, therefore, must have access to the farm and to detailed information about it.

The prepared project consists of three sections:

(a) a detailed inventory of land, building, machinery and all other farm resources. An analysis of the present farm operation.

(b) an outline of the student's objectives and projected plans for the farm.

(c) a practical step-by-step (year-by-year) program for the changes necessary to reach these goals.

The farm project is introduced to the student in the first technology year, before the commencement of the seven months of on-farm training. All the required data for the farm inventory is collected during the on-farm training period. The final work on the prepared project is done in the last college semester. Though most of the work is done outside of the scheduled class time, one afternoon per week is scheduled for special instruction and for presentations. Each student is required to present a minimum of one seminar on his farm plan to the project class and the instructor committee.

Winter semester — 4 labs per week.

EB 110b: **Economics of Agriculture**
Instructor: **Prof. Stackhouse**

This introductory course is designed to survey the areas of concentration in the agricultural economics and agribusiness discipline. Throughout the course, economic and business principles will be presented and applied in an agricultural context. This will provide the student with an introduction to the areas of the discipline as well as a means toward understanding the structure and objectives of Canadian and Atlantic agriculture. Specific topic areas in this course include: introductions to the market model, market and price analysis, production economics, farm agribusiness analysis, policy and resources development.

Winter semester — 3 lecs per week.

EB 200a: **Micro Economics**
Instructor: **Prof. Stackhouse**

This course introduces the principles of microeconomic theory. Alternate models of consumer and firm behavior are examined. Areas of emphasis include the evaluation of individual and market demand and supply analysis, measurement

and interpretation of elasticity, the theories of consumer choice, cost analysis of the firm, market classifications of competition, and evaluation of the firm in the various forms of competition.

Fall semester — 3 lecs per week.

EB 210a: **Accounting**
Instructor: **Prof. Arnfast**

This is a study of the basic principles of procedure relevant to the accounting function of a business firm. Project work with farm and farm-related business records is included in the course to assist the student in acquiring a working knowledge of the above principles and procedures.

Fall semester — 2 lecs and 2 labs per week.

EB 220b: **Production Economics**
Instructor: **Prof. Tait**

An introduction to the study of economic principles used to analyze production and resource use in agriculture. Areas of emphasis include the economic examination of the factor-factor, factor-product, and product-product relationships of the farm production system.

Practical examples and lab exercises are used to illustrate and re-enforce the concepts presented in the classroom.

Winter semester — 2 lecs and 4 labs per week.

EB 230a: **Principles of Marketing**
Instructor: **Prof. Arnfast**

This course is designed to introduce the student to the principles of marketing. However, an attempt will be made to relate these principles to what is actually happening in the marketing of Canada's agricultural products. The course utilizes both text and case material to give the student an understanding of the activities underlying the flow of goods from producer to consumer.

Fall semester — 3 lecs per week.

EB 240a: **Farm Management**
Instructor: **Prof. Tait**

The principles and methods of organizing and analyzing farm businesses are examined. Practical problems associated with financial analysis, planning, capital budgeting, resource use and credit acquisition are included. The role of the farm manager is identified throughout.

Fall semester — 2 lecs and 4 labs per week.

EB 255b: **Macro Economics**
Instructor: **Prof. Stackhouse**

An introduction to the study of economics. The course is designed to acquaint the student with the main elements of macro economic theory. Emphasis will be placed on the application of theories to current Canadian economic problems. Topics covered include: system overview, national income analysis, monetary policy, fiscal policy and international trade.

Winter semester — 3 lecs per week.

EB 260b: **Mathematical Economics**
Instructor: **Prof. Stackhouse**
Prerequisites: **MP100, EB110, EB200**

Introduction to the frequently used mathematical methods of economic analysis. It also provides the student with the basics required in more advanced economics courses that have a quantitative content.

Areas of concentration are: 1. Elements of Mathematical Economic Models. II. Linear Models and Matrix Algebra, III. Linear Programming, IV. Applications of Classical Calculus to Economic Problems, and V. Optimization Theory.

Winter semester — 3 lecs per week.


STAR WARS

HUMANITIES

H 05: **Physical Education**

This is an elective program of life-long activities offered and open to all interested students. These activities include tennis, golf, swimming, equestrian training, cross-country skiing, badminton and curling.

H 10a,b: **Technical Writing**
Instructor: **Prof. Sanger**

The objective of this course is to provide instruction in: (1) basic scientific report and review paper writing, (2) grammar and spelling, (3) business letter writing, with specific reference to the employment application letter and data sheet, (4) the cultural, social, and historical background of agriculture and its related trades. Students must write a major term paper.

Both semesters — 3 lecs per week.

H 11b: **Modern Literature [Opt.]**
Instructor: **Prof. Sanger**

The objective of this course is to study five or six modern North American, European or Russian authors. Books by Greene, Pasternak, Atwood, Frost, Silone, Ringuet, Steinbeck, and Hemingway have been used. Students must write a major term paper.

Winter semester — 3 lecs per week.

H 12b: **Leadership Development**
Instructor: **To be announced.**

A course designed to assist students in developing discussion techniques, leadership styles and skills in group dynamics. The tools of communication and related leadership skills will be applied to problem-solving exercises involving study groups on work simplification topics. Through group study, practical solutions will be applied to work problems with the object of finding easier and better ways to do special tasks, thus avoiding waste of time, money, materials, equipment and human resources. The role of community and agricultural organizations in initiating

change is also considered.

Winter semester — 1st year 1 week
2nd year 1 week
Total length of course 2 weeks

H 70a: **Typing**
Instructor: **Mrs. Hayman**

Mastery of the typewriter keyboard; development of speed and accuracy in typing and other typing skills to be integrated and applied to realistic production problems.

Fall semester — 2 lecs and 2 labs per week.

H 71b: **Office Practices and Business Machines**
Instructor: **Mrs. Hayman**

Preparation of business letters, office forms, papers, business documents; filing; calculator keyboard; duplicating machines. Application of these skills will be useful in future work.

Winter semester — 2 lecs per week.

H 120a: **Sociology I**
Instructor: **Prof. MacEachern**

Through assigned readings from the text and in lectures, students will be challenged to examine the question of the extent to which man is predetermined and/or predefined by his society. In this way, insight is given into basic sociological concepts.

The first part of the course will focus on the individual and the socialization process. The second part will deal with concepts used to analyze the social organization of society. The third part will centre on concepts related to social change.

An in-depth study is made of society from a sociological base with the examination of a contemporary book.

Fall semester — 3 lecs per week.

Texts: Landis, *SOCIOLOGY CONCEPTS AND CHARACTERISTICS* (third edition); Kesey, *ONE FLEW OVER THE CUCKOO'S NEST:* Hailey, *WHEELS:* Hailey, *THE MONEYCHANGERS.*

H 125b: **Sociology II**
Instructor: **Prof. MacEachern**

An examination of society will be undertaken with emphasis on man in community with consideration of affluency and poverty; the family; human values within society.

Winter semester — 3 lecs per week.

Texts: Streib, THE CHANGING FAMILY; ADAPTATION AND DIVERSITY; Mannes, LASTRITES; Frankl, MAN'S SEARCH FOR MEANING.

H 140a,b: **Personnel Management**
Instructors: **Profs MacLeod and Saxon**

Through lectures, assigned readings and case studies, students are introduced to the basic concepts of personnel management. Emphasis is placed on the management of human resources as it applies to small and medium-sized business organizations.

Both semesters — 3 lecs per week.

Text: Reber and Terry, *BEHAVIORAL INSIGHTS FOR SUPERVISION.*

H 150b: **History of Agriculture**
Instructor: **Prof. Cock**

A study of the development of agriculture from its earliest beginnings to the present day, with special emphasis on the effects these developments have had on the history of mankind.

Winter semester — 2 lecs per week.

H 200a: **Technical Writing and English and American Authors**
Instructor: **Prof. Sanger**

The objective of this course is to provide instruction in: (1) Basic scientific report and review paper writing; (2) Business letter writing, with specific reference to the employment application letter and data sheet; (3) American and British literature from the end of the eighteenth to the middle of the nineteenth centuries. Students must write a major term paper in the literature part of the course.

Fall semester — 3 lecs per week.

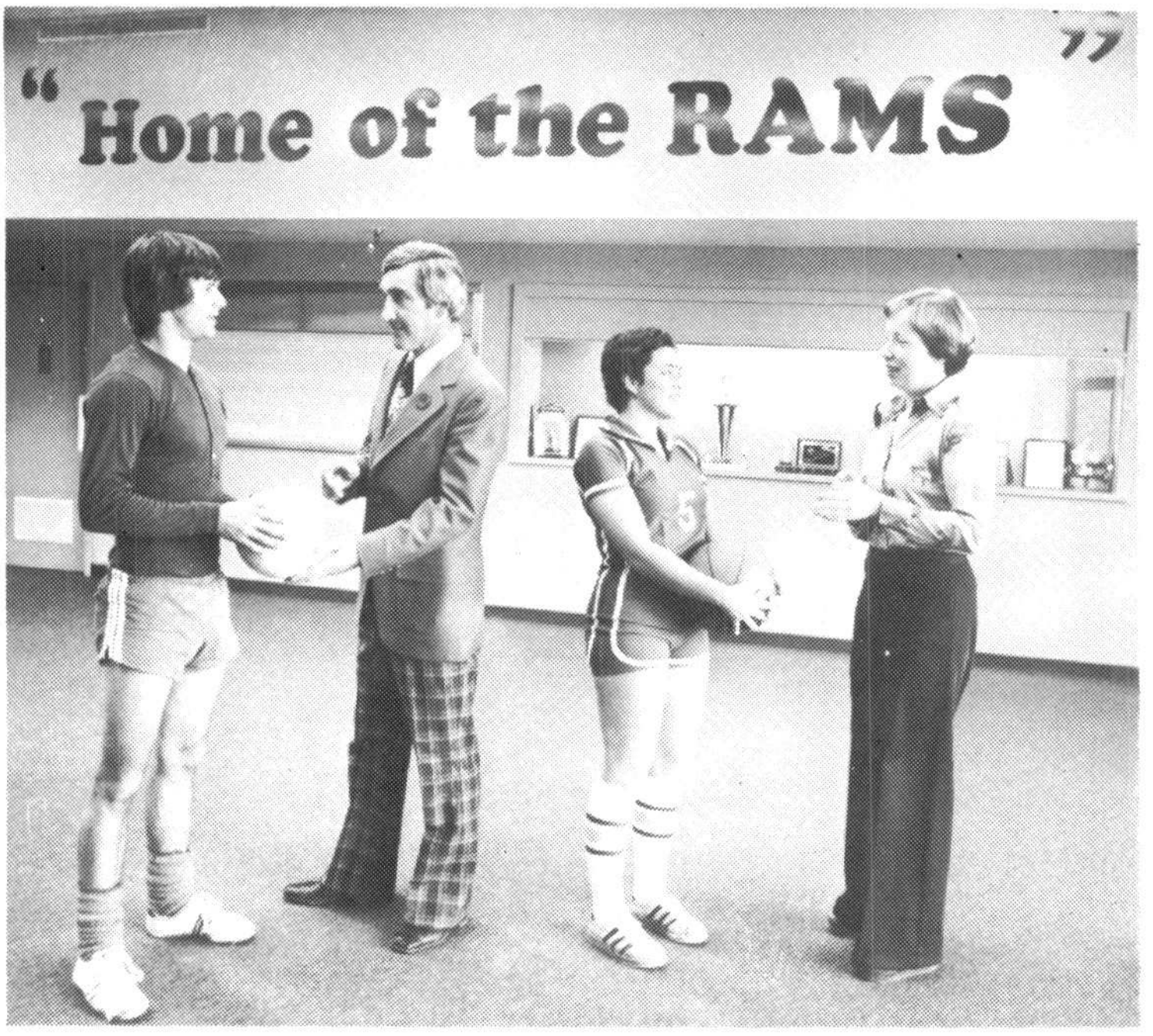
H 205b: **Canadian Literature**
Instructor: **Prof. Sanger**

The objectives of this course are to: (1) provide a general survey of Canadian literature from colonial times to the present; (2) examine specifically four or five twentieth century Canadian novels. Books by Callaghan, MacLennan, Ringuet, Aguin, O'Hagan, Atwood, and Buckler have been used. Students must write a major term paper.

Winter semester — 3 lecs per week.

H 210b: **Communications and Extension Methods**
Instructor: **Mr. Mildon**

A study of the principles and methods of extension work. The course will include rural sociology, program development, leadership training and communication skills. Emphasis will be placed on acquainting the student with the methods used in carrying out extension programs. Considerable attention will be given to the area of effective communication associated with extension programs.



MATHEMATICS AND PHYSICS

MP 10a: **Agricultural Mathematics I**
Instructor: **Prof. Buckler**

The mathematics program for technicians is one in which mathematical concepts are applied to problems in agriculture. The topics for Part I of the course are mathematical operations, percentage, linear and simultaneous equations, quadratic equations, exponents, logarithms, math of finance, ratio, proportion, variation. The SI System of units is used throughout the course.

Winter semester — 3 lecs per week.

Text: Notes prepared by the Mathematics and Physics Department

MP11b: **Agricultural Mathematics II**
Instructor: **Prof. Buckler**

Part II of the mathematics program for Technicians is a continuation of the application of mathematical concepts to problems in agriculture. The following topics are covered: arithmetic and geometric progressions, trigonometry, lengths, areas, volume, graphs, emperical curve fitting, and special applications of practical measurements. The SI System of units is used.

Winter semester — 3 lecs per week.

Text: Notes prepared by the Mathematics and Physics Department

MP 12a: **Statics**
Instructor: **Prof. Buckler**

An introduction to statics. It involves forces, graphical and mathematical addition of vectors, free body and force diagrams, the conditions for equilibrium for concurrent coplanar forces, parallel forces, and noncurrent non-parallel forces, centre of gravity of regular areas, friction, its coefficient, and the inclined plane.

Laboratory instruction is a part of the course, permitting the student to perform elementary experiments which

demonstrate the principles he is studying, and to develop techniques of solving physical problems.

Fall semester — 2 lecs and 4 labs per week.

Text: To be announced.

MP 40a: **Electricity and Electrical Measurements**
Instructor: **Prof. Buckler**

Part I is a basic course in electricity and electrical measurements. Emphasis is placed on the study of series and parallel circuits, Ohm's law and Kirchhoff's law. Both direct current and alternating current problems and exercises are employed. Elements of magnetism, resistance, capacitance, inductance, impedance, power and resonance of the A.C. circuit are considered.

The laboratory part of the course involves carrying out actual electrical measurements of a technical nature, in addition to verifying the laws studied. The techniques of handling and using electrical instruments are stressed and combined with theory to develop solutions to practical problems.

Fall semester — 2 lecs and 2 labs per week.

Text: Buhan and Schmitt, *TECHNICAL ELECTRICITY AND ELECTRONICS*

MP 41b: **Light and Optics**
Instructor: **Prof. Buckler**

Part II is a course in light and optics. It consists of the study of photometry, regular and diffused reflections, laws of reflection, mirrors, images, mirror formulas, optical density, index of refraction, laws of refraction, critical angle, lenses, ray diagrams, images, color, constructive and destructive interference, diffraction and polarization. In the laboratory part of the course the student becomes involved in optical measurements that verify and demonstrate the elements studied, and extend the techniques of solving problems.

Winter semester — 2 lecs and 2 labs per week.

Text: To be announced.

MP 70a: **Basic Statistics**
Instructor: **Prof. Padmanathan**

Populations and samples, frequency distributions, sampling theory, tests of hypotheses, linear regression and correlation, analysis of variance, discussion of experimental designs.

Fall semester — 3 lecs per week.

Text: To be announced.

MP 71b: **Computer Programming**
Instructor: **Prof. Madigan**

This course provides an introduction to the methods of computer programming through the BASIC language. Students will become familiar with the operation of a time-sharing system by running their own programs.

Winter semester — equivalent to two lectures per week.

MP 090: **Introductory Physics**
Instructor: **Prof. Saxon**

An introductory course for entering students who do not have the equivalent of Nova Scotia Grade XII Physics. The course topics are mechanics, heat, light and electricity. The laboratory emphasizes the experimental foundations of physics and allows the student to acquire skills in measurement through practice.

Fall semester — 3 lecs and 4 labs per week.

Text: To be announced.

MP 100a: **Calculus and Analytical Geometry I**
Instructor: **Prof. Fraser**

A study of limit and the derivative with applications to maxima and minima, velocity and acceleration; differentiation of the trigonimetric, exponential and logarithmic functions. Topics from Analytic Geometry are covered at appropriate stages throughout the course.

Fall semester — 3 lecs per week.

Text: Swokowski, *CALCULUS—A FIRST COURSE*

MP 105b: **Calculus and Analytic Geometry II**
Instructor: **Prof. Fraser**

A continuation of MP 100 dealing mainly with the integral calculus. Both definite and indefinite integrals will be studied with application to areas, volumes, hydrostatic pressure and work. The final part of this course will deal with sequences and series. As in the case of MP 100, topics from Analytic Geometry will be covered at appropriate stages of this course.

Winter semester — 3 lecs per week.

Text: Swokowski, *CALCULUS—A FIRST COURSE*

MP 106b: **Calculus for Engineers**
Instructor: **Prof. Saxon**

The Fundamental Theorem of calculus, and the indefinite and definite integral, are studied with application to the solution of engineering problems. Topics included: Analytic geometry; series; sequences; exponential function; logarithmic function; numerical integration.

Spring semester — 4 lecs and 2 labs per week.

Text: To be announced.

MP 110b: **Modern Physics**
Instructor: **Prof. Smith**

A treatment of the conceptional foundations including mass, length, time, kinematics, Newton's laws, frames of reference, relative motion including Galileon Relativity and Special Relativity, Momentum, energy, and the conservation principle and the conceptional foundations.

The quantum nature of energy and an introduction to quantum mechanics, an investigation of the nucleus, with regard to nuclear structure, binding energy, and nuclear size. Nuclear reactions, particles and fission are discussed.

Winter semester — 3 lecs and 4 labs per week.

MP 120b: **Electrical Phenomena**
Instructor: **Prof. Smith**

The physics of electrical and magnetic effects. Electric charges, fields and potential. Capacitance and dielectrics. Electric currents and elementary D.C. Circuits, Magnetic fields, induced emf, magnetic circuits.

Electrical measurements are carried out as laboratory work.

Winter semester — 3 lecs and 2 labs per week.

Text: Sears & Zemansky, *UNIVERSITY PHYSICS*

MP130a: **Physics for Life Sciences I**
Instructor: **Prof. Smith**

Basic physics principles necessary for the understanding of instrumentation and biophysical topics form the core of the course.

Topics include mechanics, motion and force, concepts of energy, pressure and fluid flow. Calorimetry and heat transfer methods are applied to such topics as basic metabolic rate and size of an animal.

Elementary optics and optical instruments are treated, with application to biological reasearch.

Fall semester — 3 lecs and 4 labs per week.

MP135b: **Physics for Life Sciences II**
Instructor: **Prof. Smith**

A continuation of Physics 130a. The electric charge, field, potential, simple electric circuits are taken up, and their importance in instrumentation explored. The magnetic field is included.

The atom and the nucleus is explored, with relation to the process called radioactivity.

Winter semester — 3 lecs and 4 labs per week.

MP 200a,b: **Statistics and Agricultural Experimentation**
Instructor: **Prof. Padmanathan**
Prerequisite: **MP 100**

Descriptive statistics; normal frequency distributions; probability; statistical inference; binomial, poisson and chi-square distributions; tests of significance; regression and correlation; sampling; planning of experiments; analysis of variance of simple designs.

Both semesters — 3 lecs per week.

Text: To be announced.

MP 220a: **Computer Programming**
Instructor: **Prof. Madigan**

Programming techniques for high speed digital computers. Instruction in FORTRAN AND BASIC. Instruction in the CDC6400 computer operating system.

Fall semester — 2 lecs and 2 labs per week.

MP 230a: **Multivariable Calculus**
Instructor: **Prof. Madigan**
Prerequisites: **MP 100, MP 106**

Covers vectors, differential calculus of several variables, multiple integration.

Fall semester — 4 lecs and 2 labs per week.

MP 235b: **Differential Equations and Linear Algebra**
Instructor: **Prof. Madigan**

Elementary differential equations, first order equations, types of second order equations and solutions. Applications to physical problems. Vectors, and vector products, differentiation, integration, matrices, linear transformations, eigenvalues.

Winter semester — 4 lecs and 2 labs per week.

MP 240a: **Electric Circuits**
Instructor: **Prof. Smith**

DC resistive circuits, and analysis using Kirchoff's laws, superposition, Thevenin's theorem, Norton's theorem, Delta-Wye transformations, transients and R-C, R-L, RLC circuits.

Sinusoidal currents and voltages, AC circuits, transformers, semi-conductor devices.

Fall semester — 3 lecs and 2 labs per week.

PLANT SCIENCE

PS 10a: **Plant Science Skills I**
Instructor: **Prof. Badcock**

The techniques and skills used in plot seeding, forage harvesting, corn harvesting, yield and dry matter determinations are demonstrated and studied in detail. Seed testing, seed stratification, bulb forcing, as well as propagation of hardwood and softwood cuttings are undertaken.

Fall semester — 2 labs per week.

Text: Hartmann & Kester, *PLANT PROPAGATION*

PS 11b: **Plant Science Skills II**
Instructor: **Prof. Badcock**

A continuation of PS 10. Studies in the uses and operation of instruments used to monitor plant growth conditions are undertaken. Automatic watering and feeding of greenhouse crops, various methods of grafting as well as the preparation of exhibition material are also studied.

Winter semester — 4 labs per week.

Text: Same as PS 10.

PS 12a: **Soils and Crops I**
Instructor: **Prof. Haliburton**

The basic properties of soils are studied and discussed in relation to their agronomic management. Particular attention is devoted to the engineering aspects of soil management. Fertilizer placement, tillage, irrigation and drainage are discussed in detail.

Fall semester — 2 lecs and 2 labs per week.

PS 13b: **Soils and Crops II**
Instructor: **Prof. Haliburton**

Edaphic and climatic factors influencing crop production together with the major food and forage crops produced in the Atlantic Region are discussed. Particular attention is devoted to types and agronimic requirements of planting, spray, tillage and harvesting machinery used in the production cycle.

Winter semester — 2 lecs and 2 labs per week.

PS 40a: **Field Crops Production I**
Instructors: **Prof. Bubar and Mr. Mahoney**

A study of grasses, legumes and other crops grown for forage or grain. Factors influencing adaptation and distribution of these crops. Emphasis is placed on crops and conditions in the Atlantic Provinces.

Fall semester — 2 lecs and 2 labs per week.

Text: Martin, Leonard and Stamp, *PRINCIPLES OF FIELD* CROP PRODUCTION (3rd edition)

PS 41b: **Field Crops Production II**
Instructors: **Prof. Bubar and Mr. Mahoney**

A continuation of PS 40 dealing with establishment, production management, harvesting and storage of forage and grain crops. The overall objective is to produce a basis for sound feed production decisions on livestock farms in the Atlantic Region.

Winter semester — 3 lecs and 2 labs per week.

Text: Same as for PS 40

PS 42b: **Cash Crops and Seed Production**
Instructor: **Prof. Bubar**
Prerequisite: **PS 40**

A follow-up to PS 40 that deals with production of field crops for industrial or commercial markets and of pedigreed and non-pedigreed seed production.

Winter semester — 2 lecs and 1 lab per week.

Text: Same as PS 40

PS 43a: **Berry Crops**
Instructor: **Prof. Badcock**

Berry crops studied include strawberries, raspberries, cranberries, blueberries, currants and gooseberries. In addition to study of all aspects of berry production, from planting to market, those aspects of tree fruits production involving harvesting and visits to orchards and processing plants are taken up during this course.

Fall semester — 1 lec and 2 labs per week.

PS 44b: **Tree Fruit Production**
Instructor: **Prof. Badcock**
Prerequisite: **PS 43**

This is a course on the culture and handling of apples, pears, peaches, plums and cherries. Topics studied are: soil management, use of fertilizers, pruning, thinning, harvesting, storage and marketing.

Winter semester — 1 lec and 2 labs per week.

Text: Teskey & Shoemaker, *TREE FRUIT PRODUCTION*

PS 45a: **Turf Management I**
Instructor: **Prof. Daniels**

A study of turf grasses adapted to the Atlantic Region. Suitability for various sites, management conditions and uses are considered. General management procedures are considered.

Fall semester — 2 lecs and 2 labs per week.

PS 46b: **Turf Management II**
Instructor: **Prof. Daniels**

A continuation of PS 45 that deals with establishment and site improvement, drainage, watering, fertilizer programs and pest control.

Winter semester — 1 lec and 2 labs per week.

PS 47a: **Greenhouses**
Instructor: **Prof. Badcock**

The various types of houses in which crops are presently grown and the associated heating systems are considered in detail. A study is made of the kinds of materials available and costs. Ventilation, relative humidity and automatic controls are discussed. Start greenhouse crops production study.

Fall semester — 1 lec and 2 labs per week.

PS 48b: **Greenhouse Crops**
Instructor: **Prof. Badcock**
Prerequisite: **PS 47**

A sequel to PS 47 that deals with the culture of individual vegetable crops and the important floral crops. Tomatoes, cucumbers, carnations, chrysanthemums, roses, bulb stock, and a variety of potted plants are covered both in the classroom and the associated greenhouses. Bedding plants are also considered. Tours of the large commercial operations are also arranged.

Winter semester — 1 lec and 2 labs per week, plus 1 week of training in a commercial greenhouse.

PS 49b: **Potato Production**
Instructor: **Prof. Haliburton**

The botanical characteristics of the potato plant, including the physiological changes involved during tuber initiation, formation and storage are considered in detail. These are related to the growing of potatoes in the field, and discussed in relation to the cultural practices involved. Seed potato production is also studied in detail.

Winter semester — 2 lecs and 2 labs per week.

PS 50a: **Ornamental Horticulture I**
Instructor: **Prof. Higgins**

Fundamental principles and industry practices of growth, selection, moving and maintenance of trees, shrubs and ground covers are discussed as well as their functional uses for the contemporary landscape. Plant identification and a plant collection is an important component of this course.

Fall semester — 2 lecs and 4 labs per week.

PS 51b: **Ornamental Horticulture II**
Instructor: **Prof. Higgins**

A continuation of PS 50. Landscape design is introduced with special emphasis on the systematic approach to creative design of a residential site.

Winter semester — 2 lecs and 4 labs per week.

PS 52a,b: **Plant Science Project**
Instructors: **Profs. Daniels and Haliburton**

A study of an agronomic or horticultural topic, which usually includes plant growing experimentation that a student will pursue in much more detail than is possible in lecture and laboratory course presentations. A student is evaluated on initiative in developing the project, competence in carrying out the practical aspects of it and demonstration of progress towards objectives set when the project is initiated.

PLANT SCIENCE

Both semesters — Time to be arranged.

PS 53a: **Vegetable Production**
Instructor: **Prof. Haliburton**

Botanical and horticultural characteristics of garden and commercial vegetable crops are studied, and related to the changing pattern of production technology, harvesting, storage and consumer requirements. Crops studied in detail include root vegetables, cole crops, peas, beans, salad and green crops.

Fall semester — 3 lecs and 3 labs per week.

Text: Ware and McCollum, *PRODUCING VEGETABLE CROPS*

PS 54a: **Plant Propagation**
Instructor: **Prof. Badcock**

This course considers the production of plants by both seed and vegetative methods. It includes a detailed study of seed germination and the advantages and disadvantages of this type of reproduction as compared to vegetative reproduction including graftage, layerage, separation and division. A study of seeding and potting composts, rooting mediums and propagating structures and associated equipment is also made.

Fall semester — 1 lec and 2 labs per week.

Text: Hartmann & Kester, *PLANT PROPAGATION*

PS 70c: **Landscape Techniques**
Instructor: **Prof. Higgins**

A summer course in which students learn techniques in maintenance and development of lawns, flower beds and shrub borders, hedges, moving trees and shrubs, pruning and tree surgery. Students participate in implementing landscape projects for prepared plans.

PS 71a: **Ornamental Horticulture III**
Instructor: **Prof. Higgins**
Prerequisites: **Ornamental Horticulture I and II**

A course with special emphasis on advanced arboricultur-

al considerations including environmental and non-parasitic injuries of trees, bracing and cabling, street trees, and evaluation of shade trees.

Fall semester — 3 lecs and 6 labs per week.

PS 72b: **Ornamental Horticulture IV**
Instructor: **Prof. Higgins**

A continuation of PS 71 with intermediate landscape architectural problems of greater complexity with continued emhasis on the systematic approach to site planning and design. Landscape illumination, estimating, documents, and specifications are discussed.

Winter semester — 3 lecs and 6 labs per week.

PS 73a: **Art and Design I**
Instructor: **Prof. Higgins**
Prerequisite: **PS 51**

Landscape design and presentation techniques as well as the selection, planting, growing, and maintenance of selected herbaceous and woody plant material are covered.

Fall semester — 3 lecs per week.

PS 74b: **Art and Design II**
Instructor: **Prof. Higgins**

A continuation of Art and Design I in which the art of gardening in containers, landscape construction, landscape paving materials, and use of mulches in the landscape are discussed.

Winter semester — 3 lecs per week.

PS 75b: **Ornamental Horticulture Project**
Supervisors: **Profs. Higgins and Daniels**

A study of a horticultural topic that a student will pursue in much greater detail than is possible in lecture and laboratory course presentations. The student is evaluated on initiative, presentation technique, and competence in carrying out the objectives of the project from the time the study is initiated until the completion of the project.

Winter semester — Time to be arranged.

PS 76b: **Crop Physiology**
Instructor: **Prof. Haliburton**

A course dealing with plant responses to environment. Competition in crop canopies for light, temperature, water, mineral elements and carbon dioxide is discussed. Particular attention is devoted to relating management practices in crop production to the principles of plant physiology.

Spring semester — 3 lecs and 2 labs per week.

PS 77b: **Greenhouse and Nursery Crops**
Instructors: **Profs. Daniels and Badcock**

Location, operation and management of the various structures used in the production of greenhouse and nursery crops are studied. Special attention will be given to the art of growing foliage, flowering and bedding plants used for interior and exterior landscaping.

Winter semester — 2 lecs and 2 labs per week.

PS 100a: **Principles of Crop Production**
Instructors: **Profs. Bubar and Daniels**

General principles underlying adaptation, improvement, culture and utilization of agronomic and horticultural crop plants. Special attention is paid to crops and discussion of principles in relation to the crops grown in the region.

Fall semester — 3 lecs and 2 labs per week.

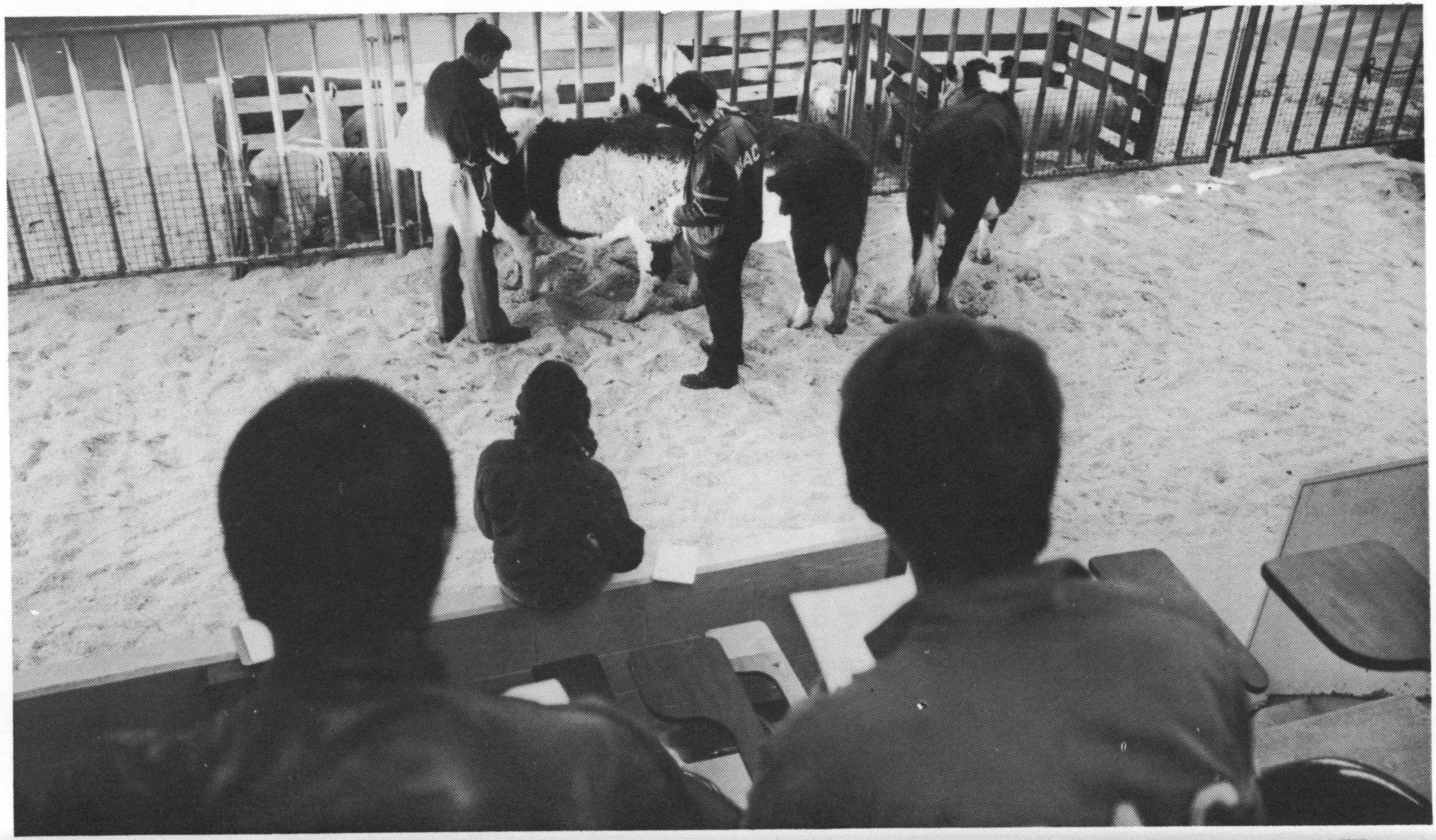
Text: Janick, Schery, Woods and Ruttan, *PLANT SCIENCE, AN INTRODUCTION TO WORLD CROPS,* (2nd edition)

PS 200b: **Greenhouse Crop Production and Floriculture**
Instructor: **Prof. Daniels**

Construction and equipment of greenhouses and related structures. Physiological principles involved in the growing and correct timing of vegetable and flower crops will be

studied and related to commercially viable plant production. Plant nutrition, propagation and greenhouse management will also be considered.

Winter semester — 3 lecs and 2 labs per week.



VOCATIONAL COURSES

VOCATIONAL COURSES

The Nova Scotia Agricultural College offers pre-employment and upgrading courses for several specific farm and farm-related careers. These may be of varying lengths and offered at different times of the year depending upon the occupation topic(s) being studied. All vocational courses lead to vocational certificates.

The following courses were planned for the ~~1978-79~~ 1979-80 year. Similar, but not necessarily the same, courses will be planned for the ~~1979-80~~ 1980-81 year.

Advanced Blueberry Production
Advanced Christmas Tree Production
Advanced Farrier Training
Artificial Insemination
Basic Christmas Tree Production
Basic Farm Welding
Basic Farrier Training
Basic Iron Work
Basic Sheep Husbandry
Blueberry Production
Canfarm Record Systems
Dairy Herd Management
Dairy Husbandry
Direct Farm Selling
Farm Accounting & Taxation
Farm Woodlot Management
Floral Design
Fox Production
Goat Husbandry
Grain Production
Horse Care Program
Introduction to Dairy Husbandry
Introductory Floral Design
Ironwork Course
Ironwork Course (Evenings)
Meat Cutting
Mink Production
Pesticides — Crop Protection, Application and Safety
Power Saw Operation & Safety
Preventive Maintenance & Repair of Farm Machinery
Preventive Maintenance & Repair of Farm Tractors
Quality Forage Production
Shoeing Courses
Swine Artificial Insemination

Swine Farm Management
Swine Herd Operation
Swine Husbandry
Supervising Blueberry Harvest Workers
Tree Fruit Production
Turf Production
Vegetable Production

ENTRANCE REQUIREMENTS

These are specific for each course. In most cases, a candidate for admission must (a) be at least ~~eighteen~~ seventeen years of age, (b) present a satisfactory medical report, if required (c) demonstrate interest in the occupation being studied, (d) be self-employed or have a letter of recommendation from an employer.

COST AND FINANCIAL ASSISTANCE

Room and board at the Nova Scotia Agricultural College is $42.00 per week.

The cost for books, student fees, and other similar charges depends upon the length of the course and the topics being covered. Rarely will such costs exceed ten dollars.

LIVING ALLOWANCES

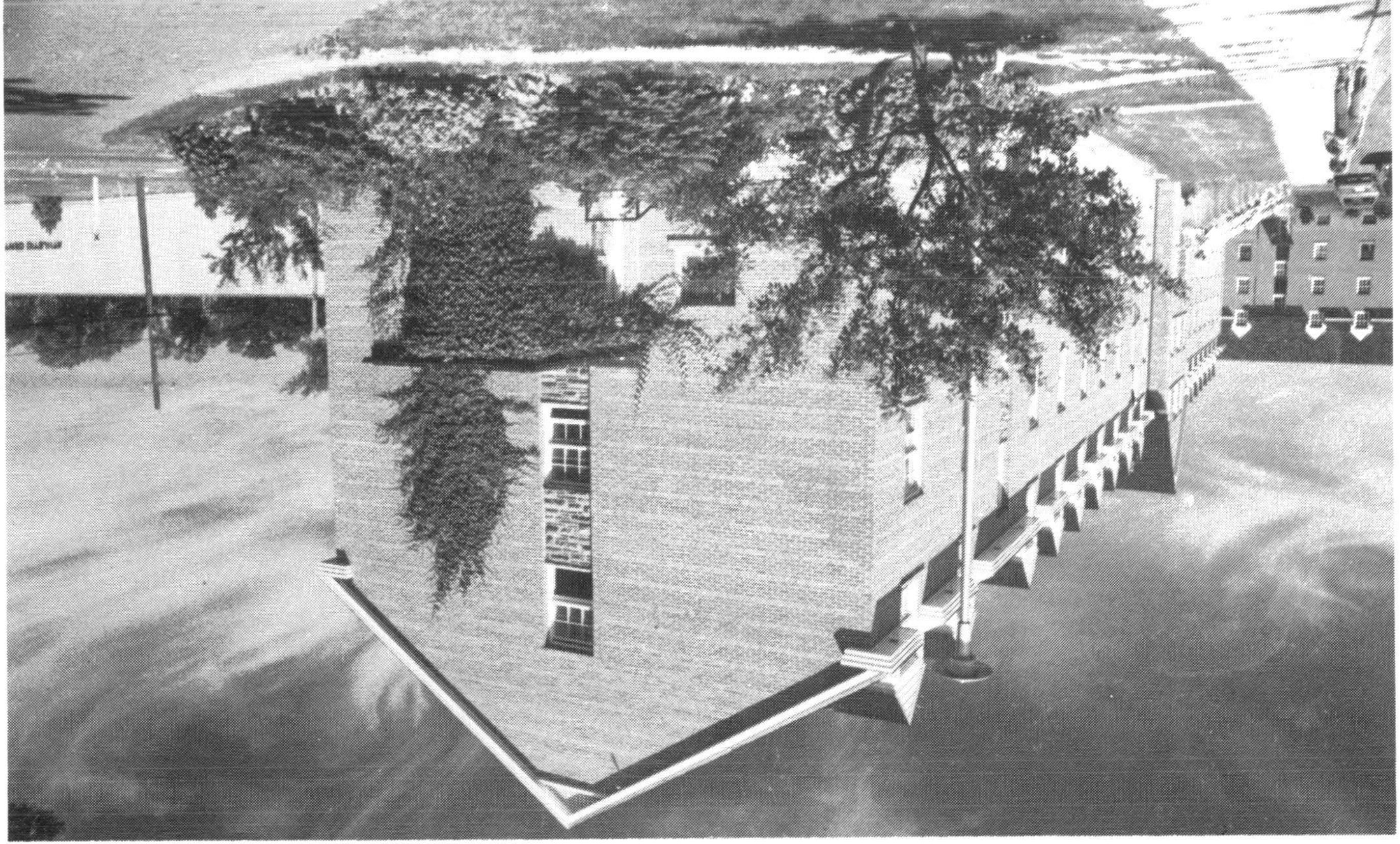
Some adults will qualify for living assistance from Employment and Immigration Canada. The amount of the assistance is determined by the department according to the student's financial responsibilities.

APPLICATIONS

Persons who ~~have just left school and who~~ are interested in any of the vocational courses should write a letter of application to the Co-ordinator of Vocational Courses, Nova Scotia Agricultural College, Truro, N.S. B2N 5E3.

CONTINUING EDUCATION

The N.S.A.C. offers evening, summer schools, and block programs from time to time for special interest groups within the agriculture and related industries on a tuition basis. For information on courses offered and costs, write Chairman, Continuing Education, Nova Scotia Agricultural College, Truro, N.S. B2N 5E3.



SCHOLARSHIPS

ENTRANCE SCHOLARSHIPS

NOVA SCOTIA INSTITUTE OF AGROLOGISTS SCHOLARSHIP

The Nova Scotia Institute of Agrologists has provided a scholarship of $500. for a resident of Nova Scotia entering the Degree Course at the Nova Scotia Agricultural College. In awarding this scholarship, the selection committee will take into consideration academic standing and financial need. Applicants should write the Registrar, Nova Scotia Institute of Agrologists, N.S.A.C., Truro, N.S. for an application form, which will be available by July 1. The application and the applicant's Grade XI and Grade XII (if the applicant has one) certificate should be in the Registrar's office not later than August 15.

CANADA PACKERS LIMITED SCHOLARSHIP

Canada Packers Limited offers a scholarship of $250. to assist a student in entering or continuing in the Degree Course at the Nova Scotia Agricultural College. Candidates for this scholarship should have a good academic record and should have taken an active interest in community agricultural activity.

In making the above aware, financial need will be taken into consideration. No application is necessary.

NOVA SCOTIA SAVINGS AND LOAN COMPANY SCHOLARSHIP

In order to encourage excellence in studies and outstanding achievement in the 4-H movement, Nova Scotia Savings and Loan Company offers a scholarship of $250. to a member of that movement who is a resident of Nova Scotia and is entering the Nova Scotia Agricultural College for the first time. In making the award, consideration will be given to academic standing, record in 4-H work, and financial need. Applications should be sent to the Registrar's office before August 1.

COBEQUID DOG CLUB SCHOLARSHIP

The Cobequid Dog Club offers a scholarship of $200. to a student of the Nova Scotia Agricultural College who is admitted to a veterinary college. Preference in the awarding of this scholarship will be given to a resident of Nova Scotia.

The selection of the recipient will be made by the Scholarship Committee, N.S.A.C. No application is necessary.

PROVINCIAL SCHOLARSHIPS: NOVA SCOTIA AND NEW BRUNSWICK

The Provinces of Nova Scotia and New Brunswick offer scholarships to their residents entering the Degree courses at the Nova Scotia Agricultural College with good marks. Scholarships are awarded on the basis of the matriculation year. In the case of students with high marks, a scholarship may be offered on the basis of mid-year and Easter marks. No application is necessary.

The Provinces of Nova Scotia and New Brunswick offer scholarships of $200 to their residents entering one of the Technical Courses at the Nova Scotia Agricultural College with an average of 80% or better. No application is necessary.

PROVINCIAL SCHOLARSHIPS PRINCE EDWARD ISLAND

The Province of Prince Edward Island offers scholarships to all residents admitted to the Degree courses at the Nova Scotia Agricultural College. For information and application forms contact:

Rural Development Section — Training
Prince Edward Island Department of Agriculture & Forestry
P.O. Box 2000
Charlottetown, P.E.I. C1A 7N8

I.O.D.E. BURSARIES

I.O.D.E. Bursaries, value $100 to $200, are awarded to entering students who show academic ability and financial need. Address applications to the Provincial Education Secretary, Provincial Chapter, I.O.D.E., 2037 Parker St., Halifax, N.S. B3K 4T6. Applications open March 1st and close May 1st.

NOVA SCOTIA AGRICULTURAL COLLEGE ALUMNI SCHOLARSHIPS

The Nova Scotia Agricultural College Alumni Association offers two scholarships of $400. to worthy students entering the first year of the Degree or Technician Course. Academic standing and financial need will be taken into consideration in awarding the scholarships. No application is necessary.

HENRY AUSTIN MEMORIAL 4-H SCHOLARSHIP

In memory of Henry Austin, a devoted friend to everyone and a dedicated leader who faithfully served the County of Cumberland for more than seven years as Agricultural Representative, a memorial fund has been established by his friends to provide an annual scholarship to a deserving 4-H Club member from Cumberland County attending first year in either Technician or Degree Course at the Nova Scotia Agricultural College, or a Home Economics Course, at the college of his or her choice.

This fund will be administered by and the selection of the recipient will be made by the Scholarship Committee of the Cumberland County Federation of Agriculture.

The value of the scholarship at this time is $100., payable in two parts: $50. on successful completion of the first term and the balance on completion of the year's course.

Applicants must possess a Grade XI High School Certificate, have completed at least two years in 4-H club work in Cumberland County, and be recommended by the District Federation of Agriculture.

1. Leadership ability and interest in community activities.
2. Scholastic standing and financial need.

Applications must be submitted to the Secretary of the County Federation of Agriculture, not later than August 31.

Application forms may be obtained from the Secretary of the District Federation of Agriculture in the candidate's area, or the Agricultural Office, Amherst.

LEONARD BEST MEMORIAL SCHOLARSHIP

The Nova Scotia 4-H Alumni Association presents a scholarship in memory of Leonard Greenwood Best. This scholarship is awarded annually to the most outstanding 4-H club member in Nova Scotia. The selection is made at the Provincial 4-H Leadership Week in Truro and is based on personality, leadership qualities, contribution to 4-H, and all-round ability. This scholarship, in the amount of fifty dollars, is to be used toward further education in any field, (Not applied for).

CANADIAN NATIONAL EXHIBITION SCHOLARSHIP FOR 4-H CLUB MEMBERS

The Canadian National Exhibition will award annually in each province, a scholarship of the value of $600. and an all-expense paid trip to the Canadian National Exhibition to a candidate wishing to enter a degree course in Home Economics, a degree course in Agriculture, a degree course in Veterinary Medicine, or a technicial course in Agriculture.

Candidates must be at least 17 years of age, have completed at least two years in 4-H Club work, and have shown qualities of leadership and an interest in community activities.

The successful candidate will receive his or her award at a fitting ceremony at the Canadian National Exhibition in the year in which it is won.

A successful candidate may have five years in which to take up his or her scholarship.

Application forms may be obtained from the Agricultural Representative.

CO-OP ATLANTIC BURSARIES

Co-op Atlantic offers three bursaries of $200. each to students entering the Technician Course.

The selection will be made on the following basis:(a) the recommendation of a local co-operative or district Federation of Agriculture, (b) need, and (c) potential for community leadership and/or co-operative endeavour.

Applications should be sent to Co-op Atlantic, Box 750, Moncton, N.B., not later than August 15.

THE LORNE S. FISHER MEMORIAL SCHOLARSHIP

In memory of the late Lorne S. Fisher, a leader and a good friend of farm organizations in his community, his county and his province, and a member of the Federation of Agriculture, the Cumberland County Federation of Agriculture has set up a scholarship of $100., open to a candidate who is a son or daughter of a Federation member and who is enrolled in 1978-79 in the Technician Course at this institution. The scholarship will be payable in two parts: $50. on completion of the first and $50. on completion of the second year.

Applications must be approved by the District Federation of Agriculture and must be submitted to the Secretary of the Cumberland Federation of Agriculture by August 31. Application forms may be obtained from the Secretary of the District Federation of Agriculture in the candidate's area.

THE BENNY DUIVENVOORDEN MEMORIAL SCHOLARSHIP

The Benny Duivenvoorden Memorial Scholarship of $500 is offered by the New Brunswick Central Artificial Breeding Co-operative to a New Brunswick 4-H member who enters a recognized college of agriculture.

Applications must be made to the N.B. Central A.B. Co-op, Box 1567, Fredericton, N.B.

The deadline for applications to be at the above address is August 31.

CONTINUATION SCHOLARSHIPS

(For students at the Nova Scotia Agricultural College)

THE NOVA SCOTIA FEDERATION OF AGRICULTURE SCHOLARSHIP

The Nova Scotia Federation of Agriculture offers two scholarships of $300 each to residents of Nova Scotia. One will be awarded to a student who has completed the work of the first year of the Degree Course and is entering the second year; the other will be awarded to a student who has completed the work of the first year of the Technician Course and is entering the second year of that program.

Financial need and academic standing will be considered in making the award. No application is necessary.

THE DAVID W. BROWN BURSARY

The A.C.A. Co-operative Association Ltd. offers two bursaries of $500 each, one to a worthy student in the second year of the Degree program and one to a worthy student in the second year of the Technician program. The bursaries will be awarded on the basis of scholastic achievement, need, interest in farming and the poultry industry in particular.

Applications for the bursaries must be made by May 1st. Application forms are available from the Registrar's Office.

GULF OIL CANADA LIMITED SCHOLARSHIP

Gulf Oil Canada Limited offers a scholarship of $150. to a worthy student in the second year of the Degree Course. In awarding this scholarship, academic standing and financial need will be taken into consideration. No application is necessary.

IRA L. RHODENIZER MEMORIAL SCHOLARSHIP

The Nova Scotia Federation of Agriculture offers, as a memorial to the late Ira L. Rhodenizer, long time friend of organized agriculture and the 4-H movement, a scholarship of $300. to a student in the Second Year Technician Class or the Second Year Degree Class. The recipient must be a Nova Scotian of high academic standing who has taken an active part in student affairs and has been active in the 4-H movement. The scholarship will be payable after the winner has registered for his second year. No application is necessary.

THE DR. KENNETH COX SCHOLARSHIP

As a tribute to their retiring Principal, the Class of 1964 of the Nova Scotia Agricultural College established a fund of $2000., the interest on which is to be awarded annually to a worthy student who is entering the final year in agriculture. No application is necessary.

PROVINCIAL SCHOLARSHIPS: NOVA SCOTIA AND NEW BRUNSWICK

The Provinces of Nova Scotia and New Brunswick offer scholarships to their residents registered in the second year of the Degree Course at the Nova Scotia Agricultural College who have attained a high standard on the work of the previous year. No application is necessary.

The Provinces of Nova Scotia and New Brunswick offer to their residents enrolled in one of the Second Year Technician Courses or in the Technology Courses a scholarship of $200., provided that an average of at least 80% has been attained on the work of the previous year. No application is necessary.

PROVINCIAL SCHOLARSHIPS PRINCE EDWARD ISLAND

The Province of Prince Edward Island offers scholarships to all residents registered in the second year of Degree Courses at the Nova Scotia Agricultural College. For information and application forms contact:

Rural Development Section — Training
Prince Edward Island Department of Agriculture
and Forestry
P.O. Box 2000
Charlottetown, P.E.I.
C1A 7N8

A.W. MacKENZIE SCHOLARSHIP

A scholarship of $150. is offered by A.W. Mackenzie for a student entering the second year of the Degree Course. The scholarship will be awarded on the basis of scholastic standing, need and participation in 4-H Club activities. No application is required.

ATLANTIC PROVINCES HATCHERY FEDERATION SCHOLARSHIP

The Atlantic Provinces Hatchery Federation offers a scholarship of $300. to a resident of the Atlantic Provinces who has successfully completed at least one year at the Nova Scotia Agricultural College and who is registered for an additional year. Preference will be given to a student who has an interest in poultry. If there is no candidate with an interest in poultry, preference will be given to a student with an interest in animal science. If there is no candidate with an interest in either poultry or animal science, the scholarship will be awarded to a candidate with interests in other fields.

In awarding the scholarship, financial need will be taken into consideration. Candidates should send a letter giving pertinent details to the Registrar before August 15.

THE FARM FOCUS BURSARY

The Farm Focus newspaper offers a bursary of $200. to a worthy student entering the second year of the Degree or Technician Course. Academic standing and financial needs will be taken into consideration in awarding this bursary. No application is necessary.

CANADIAN FEED INDUSTRY ASSOCIATION [ATLANTIC DIVISION] SCHOLARSHIP

The Atlantic Division of the Canadian Feed Industry Association offers a scholarship of $400. to a student who enters the final year of a Technology Course and who intends to pursue a career in farming. Academic standing; excellence in projects and assignments; and overall interest and aptitude in farming and community leadership are to be important considerations in selecting the recipient. No application is necessary.

CONTINUATION SCHOLARSHIPS

(For graduates of the Nova Scotia Agricultural College registered at other institutions)

SCHOLARSHIPS AVAILABLE AT MACDONALD COLLEGE

Two Eliza M. Jones Entrance Scholarships, valued at $500. each, for one year, are awarded to two students who obtain high standing in the graduating year at the Nova Scotia Agricultural College and who subsequently enrol in the Faculty of Agriculture. These scholarships will be made available in September when the students register at Macdonald College.

UNIVERSITY OF MAINE SCHOLARSHIP

Under an agreement between the University of Maine at Orono and the Nova Scotia Agricultural College up to five graduates each year from the two-year Degree Course in Agricultural Science who are residents of the Maritime Provinces and are recommended by the Principal may enter the penultimate year at Maine and pay the same tuition as the residents of Maine. The tuition is a variable figure, but the arrangement represents a saving of approximately $1,000 per year.

NEW BRUNSWICK POULTRY COUNCIL SCHOLARSHIP

The New Brunswick Poultry Council offers an annual scholarship of $400. to a graduate of the pre-veterinary course at N.S.A.C. who is admitted to the Ontario Veterinary College of the University of Guelph or other similar Canadian Veterinary College.

The selection of the recipient of this award shall be made by the Veterinary Selection Committee and approved by the New Brunswick Poultry Council. In the event that more than one student possesses otherwise equal qualifications for an annual award, preference shall be given to a student from New Brunswick.

Applications for this Scholarship shall be tendered to the Chairman of the Veterinary Selection Committee, Nova Scotia Agricultural College, Truro, N.S.

DR. J.G. TAGGART SCHOLARSHIP

The Ontario Agricultural College offers a scholarship of $250. in memory of Dr. J.G. Taggart, former Deputy Minister of the Canada Department of Agriculture. The Scholarship will be awarded annually to the outstanding graduate of the Nova Scotia Agricultural College who enters the fifth semester of the B.Sc. (Agr.) degree program. Apply to the Asst. Registrar, University of Guelph, before April 1st.

CANADA PACKERS LIMITED SCHOLARSHIP

Canada Packers Limited offers a scholarship of $250. to a worthy student who has satisfactorily completed the Degree Course at the Nova Scotia Agricultural College and who elects to continue in the Animal Science, Poultry or General Agriculture option at some Canadian Agricultural College. Applications for this scholarship must be made to the Registrar before April 15 of the applicant's final year at the Nova Scotia Agricultural College.

In making the above award, financial need will be taken into consideration.

CO-OP ATLANTIC SCHOLARSHIP

Co-op Atlantic offers a scholarship of $200. to a graduate of the Nova Scotia Agricultural College from the Maritime

Provinces entering the final two years at an approved agricultural college. The scholarship will be awarded on the following basis and may be tenable for two years:

(a) scholastic ability, (b) financial need, (c) knowledge and appreciation of co-operatives.

Application forms may be obtained from the Registrar of the Nova Scotia Agricultural College.

Applications must be submitted to the Registrar by April 1.

MEDALS AND PRIZES

GOVERNOR-GENERAL'S MEDAL

A silver medal was first offered for annual competition by His Excellency the Governor-General of Canada in 1914. It is awarded each year by the members of the faculty to the student of the graduating class who has attained the highest standing during his college course. In determining "highest standing", scholarship and leadership in student activities, in the order named, are the deciding factors in making this award.

THE H.J. FRASER MEMORIAL PRIZE FOR ENGLISH

In memory of the late Professor H.J. Fraser, a prize is awarded each autumn, on the recommendation of the English Department, to a second year student who achieved excellence in a first year English course at this institution.

THE R.H. STEVENSON MEMORIAL PRIZE FOR MATHEMATICS AND PHYSICS

In memory of the late Professor R.H. Stevenson, a prize is awarded each autumn, on the recommendation of the Mathematics and Physics Department, to a second-year student who achieved excellence in first-year Mathematics and Physics at this institution.

MASTER FEED PRIZES
[*Division of Maple Leaf Mills Limited*]

Maple Leaf Mills Limited provides two prizes of $25., one for second year Technician Animal Nutrition and one for Technologist Advanced Animal Nutrition.

NOVA SCOTIA VETERINARY MEDICAL ASSOCIATION PRIZE

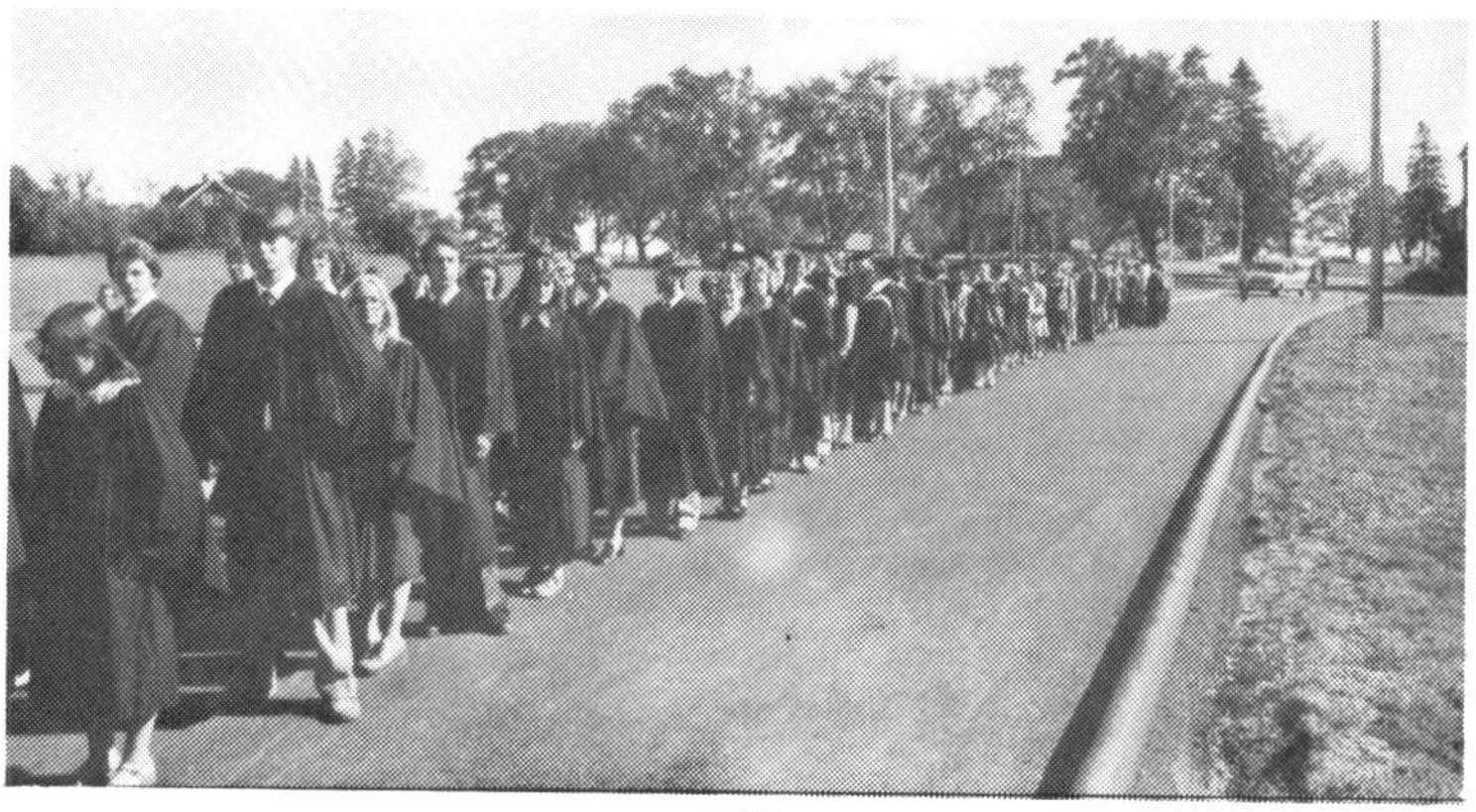
The Nova Scotia Veterinary Medical Association provides a prize of $100. to a deserving student who excels in the Animal Physiology and Animal Health courses offered to second year Technician students (Animal Science) and who subsequently enrolls in suitable courses of the Technology year.

KETCHUM MANUFACTURING COMPANY LIMITED PRIZE

The Ketchum Manufacturing Company Limited has provided a $1000. Dominion of Canada Bond, the interest on which is to be used for an annual prize available to a Nova Scotia Agricultural College graduate registered in an Animal Science option. The prize will be awarded to a worthy student with a satisfactory academic standing. Application for this prize must be made to the Registrar before April 15 of the applicant's last year at the Nova Scotia Agricultural College.

THE LORNE C. CALLBECK PRIZE

A prize of $50. is awarded each autumn by Dr. Lorne C. Callbeck to a second year degree student who excelled in the Plant Science course in his/her first year.



DIRECTORY OF STUDENTS

NOVA SCOTIA AGRICULTURAL COLLEGE

ENROLLMENT 1978-79

COURSES LEADING TO B.SC. [AGR.] OR PRE-VET
First Year — Class of '80

Beverley Allen, 15 King Square, Charlottetown, P.E.I.
Robert Arnott, R.R. #2, Port Perry, Ontario
Rita Balodis, R.R. #2, Hopewell, N.S.
Nigel Bayliss, 160 Park Street, Moncton, N.B.
Allyson Belyea, 19 Day Avenue, Dartmouth, N.S. B2W 2V5
Valerie Bishop R.R. #2, Arthurette, N.B. EOJ 1CO
Lisette Bourque, 173 Weldon Street, Moncton, N.B. EIC 5W5
Cheryl Campbell, R.R. #1, Douglastown, N.B. EOC IHO
Corinne Chisholm, 8 Landsdowne Drive, Antigonish, N.S.
Joan Chisholm, P.O. Box 10, Heatherton, N.S. BOH IRO
Kent Costello, 21 Des Brisey Cressant, Charlottetown, P.E.I. CIA 4H3
Jill Covill, Hackett's Cove, Halifax Co., N.S.
Elizabeth Croft, R.R. #2, Lunenburg, N.S. BOJ 2CO
Nancy Crowe, R.R. #5, Truro, N.S.
Andrew Currie, 228 Fulton Ave., Fredericton, N.B. E3A 2B8
Dave Dickie, 39 Archibald St., Truro, N.S. B2N 4R5
Heather Doherty, Berwick, R.R. #2, N.S. BOP IEO
Shawn Donkin, R.R. #3, Truro, N.S. B2N 5B3
Garnet Donnelly, Prince William, Lake George, N.B. EOJ ISO
Rosanne Driscoll, 5535 Sullivan Street, Halifax, N.S. B3K 1X6
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Second Year — Class of '79

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Alan Grant, 15 Parker Street, Truro, N.S. B2N 3R2
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Kenneth Higgins, 36 Greensview Drive, Sherwood, P.E.I.
Paul Jenkins, R.R. #1, Winsloe, P.E.I.
Camilla Kell, West Street, Westville, N.S.
Bonita Kelly, 538 Elmwood Drive, Moncton, N.B.
Susan Kennedy, 3669 High Street, Halifax, N.S.
Heather Kenney, 58 Slayter Street, Dartmouth, N.S.
Belinda King, 4 Shaw Lane, Glace Bay, N.S.
George Koehoorn, R.R. #2, Pictou, N.S.
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Heather Lord, 25 Smith Avenue, Truro, N.S.
Craig Matthews, Musgravetown, Bonavista Bay, Nfld.
Tammy Moore, 75 Churchill Street, Truro, N.S.
Jeffrey Morton, 8 Vimy Road, Truro, N.S. B2N 4J4
Arthur Murray, Meadowbank, P.E.I. COA IHO
Cynthia Murray, R.R. #2, St. Marys, Kent Co., N.B. EOA 3AO
Audrey McCabe, R.R. #3, Westville, N.S.
James McCarthy, P.O. Box 547, Marystown, Nfld.
Norma McCarthy, R.R. #1, Grand Falls, N.B.
Meta McCleave, R.R. #1, Bloomfield Station, N.B.
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Gayle McLaughlin, Andover, R.R. #2, N.B.
Clinton McLean, Cody's, R.R. #1, Cambridge, N.B.
Katherine MacLean, 279 Radio Street, Newcastle, N.B.
John MacQuarrie, 32 Slayter Street, Dartmouth, N.S.
Neil McTiernan, 18 Rosewood Cres., Moncton, N.B.
Douglas Nichols, Aylesford, R.R. #1, Kings Co., N.S.
Lynda Nicholls, 590 Clement, Dorval, P.Q.
Krista Norden, R.R. #7, Amherst, N.S.
Eric Odense, 72 Crichton Ave., Dartmouth, N.S.
Joan Parker, R.R. #2, Canning, N.S.
Michael Peppard, 60 Lawnwood Drive, Truro, N.S.
Boyd Peters, 48 Jutland Street, Moncton, N.B.
Gerald Phipps, 86 River Street, Fredericton, N.B.
Arthur Pick, Upper Rawdon, R.R. #1, Hants Co., N.S.
Patricia Porter, R.R. #1, Belmont, N.S.
Gerald Post, R.R. #2, New Glasgow, N.S.
Doris Price, Hopewell Cape, Albert Co., N.B.
Christine Rafuse, 192 North Street, Bridgewater, N.S.
Linda Redmond, Head Jeddore, Halifax Co., N.S.
Kimberley Richardson, Site 8, Box 20, R.R. 1, Waverley, N.S.
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Roger Russell, R.R. #6, Amherst, N.S.
Peter Scott, Debec, R.R. #5, N.B.
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Lisa Tracey, 98 Dexter Drive, Saint John, N.B.
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Paul Charles Walker, 1 Shaw Crescent, Halifax, N.S.
Pater Walsh, R.R. #1, Berwick, Kings Co., N.S.
Thomas Whitman, Lawrencetown, Annapolis Co., N.S.
Thomas Wright, Kinkora, P.E.I.

COURSE LEADING TO B.E. [AGR.]

First Year — Class of '80

Gregory Banks, R.R. #2, Fredericton, N.B. E3B 4X3
Robert Berkvens, R.R. #2, Heatherton, N.S. BOH IRO
R. Jay Brenton, 362 Brunswick St., Truro, N.S. B2N 2J7
John Dorn, R.R. #2, Oxford, N.S.
William Ellis, 37 Reservoir Ave., Glace Bay, N.S.
Val Kyte, 25 Alpaca Drive, Scarborough, Ontario
John Mayo, 4 Cedar Avenue, Pointe Claire, P.Q.
Michael Orr, 8 Ashburn Crescent, Charlottetown, P.E.I.
Reginald Peters, 63 Pleasant Street, Truro, N.S.

Edward Sexton, 130 Ennis Avenue, St. John's, Nfld.
Kevin Sibley, 52 McLean Street, Truro, N.S.
Hans Thiesfeld, 3377 Stephenson Pl., Washington, D.C. 20015

Second Year — Class of '79

Murray Amiro, Lower West Pubnico, N.S.
Gary Bishop, R.R. #1, Bridgetown, N.S.
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Christine Gorman, 43 Charles Street, Amherst, N.S.
Bruce Kinnie, R.R. #2, Moncton, N.B.
Kenneth Lingley, 10 Plymouth Rd., Dartmouth, N.S.
Steven Michaud, R.R. #2, Head of Chezzetcook, N.S.
John Mumford, R.R. #1, Truro, N.S.
Donald MacDonald, Milford Station, Hants Co., N.S.
Gerard MacDonell, Elmsdale, R.R. #1, Hants Co., N.S.
Trent Webster, Cambridge Station, Kings Co., N.S.
Peter Wilson, R.R. #1, Stanley, N.B.
Dennis Wood, 702 Waverley Rd., Dartmouth, N.S.

TECHNICIAN DIPLOMA

First Year — Class of '80

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M. Jacqueline Alain, 150 Munro Street, Bathurst, N.B. E2A IG2
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Stanley Barter, R.R. #5, Lochaber, N.S. B2G 2L3
Avis Benedict, R.R. #2, Newport, N.S. BON 2AO
John Berry, Box 24, R.R. #3, Fredericton, N.B. E3B 4X4
Margot Bishop, 253 Queen St., St. Andrews, N.B.
Donald Boleyn, Box 5, Cap-Pele, N.B. EOA IJO
Dwayne Broad, Kilburn, N.B. EOJ IRO
Randy Buchanan, P.O. Box 886, Sussex, N.B.
Hazel Burgoyne, 62 Champlain Drive, Saint John, N.B. E2J 3C7
Sharon Butt, Heatherton, Nfld.
Shirley Campbell, Scotch Village, R.R. #1, N.S.
Kenneth Carroll, 15 Blanchard Ave., Truro, N.S. B2N 4K7
Daniel Chambers, Falmouth, R.R. #2, N.S. BOP ILO
Sheldon Chisholm, P.O Box 298, Baddeck, N.S.
Andrew Clark, P.O. Box 868, Woodstock, N.B.
David Coburn, Keswick Ridge, N.B. EOH INO
David Cole, R.R. #3, Middle Musquodoboit, N.S. BON IKO

Christina Dakins, Freshwater, Placentia Bay, Nfld. AOB 1WO
David Dawson, Augustine Cove, P.E.I.
William DeHaan, R.R. #2, Cornwall, New Argyle, P.E.I.
James DeLong, R.R. #1, New Germany, N.S.
Joanna DeLong, R.R. #1, Shubenacadie, N.S.
Peter Dooley, 261 Mount Edward Road, Charlottetown, P.E.I. CIA 5TI
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Gregory Lamoreau, Centreville, N.B.
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Allan MacDougall, 20 Queen Square, Saint John, N.B. E2L 1R7
David McElhinney, R.R. #5, Truro, N.S.

W. Reid McLean, Cumberland Bay, N.B.
Daniel MacLeod, Pugwash Junction, Cumberland Co., N.S. BOK IMO
Sandra MacPherson, 6 Windward Ave., Dartmouth, N.S. B2W 2HI
Michael Newcombe, Tyne Valley, R.R. #1, P.E.I. COB 2CO
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Roderick Nielsen, R.R. #2, Stewiacke, N.S. BON 2JO
Linda Nicholson, Belle River P.O., P.E.I. COA IBO
David Nodding, R.R. #3, Lunenburg, N.S. BOJ 2CO
John Ochsner, R.R. #1, Hunter River, P.E.I. COA 1NO
Brian O'Neill, Belleisle Creek, Kings Co., N.B. EOG IEO
Wayne Parker, R.R. #2, Canning, N.S. BOP IHO
Kevin Patterson, Wentworth Road, Windsor, N.S.
Susan Patterson, 149 Orange Street, Saint John, N.B.
Peter Penny, Eldon, Belfast P.O., P.E.I. COA IAO
Michael Pickard, Bath, R.R. #3, N.B. EOJ IEO
Scott Putnam, R.R. #1, Debert, N.S. BOM IGO
Linda Reginato, R.R. #2, Marion Bridge, N.S.
Michael Robblee, R.R. #2, Wallace, N.S. BOK IYO
Andrew Ross, 1929 Rosebank Ave., Halifax, N.S.
M. Catherine Ross, R.R. #1, Bras d'Or, N.S.
David Rudderham, R.R. #1, North Sydney, N.S. B2A 3L7
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Lee Sharp, Apohaqui, R.R. #2, N.B. EOG IAO
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D. Brian Taylor, R.R. #1, Petitcodiac, N.B. EOA 2HO
Ronald teStroete, R.R. #1, Port Williams, N.S.
Steven Thomson, North Tryon, Albany, R.R. #1, P.E.I.
Anthony Van de Brand, Penobsquis, N.B. EOE ILO
John Van de Riet, R.R. #1, Shubenacadie, N.S. BON 2HO
William Van der Linden, Box 64, Heatherton, N.S. BOH IRO
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John West, Berwick, R.R. #1, N.S. BOP IEO
Gary Westenenk, R.R. #1, St. Andrews, N.S.
John White, R.R. #1, Maitland, N.S. BON ITO
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Second Year — Class of '79

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Craig Greenough, Newport, R.R. #3, N.S. BON 2AO
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Wade Murray, R.R. #1, Belmont, N.S.
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M. Catherine McCarthy, General Delivery, Grand River, N.S.
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Kevin McKenna, Norton, R.R. #3, N.B. EOG 2NO

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Janet McLaughlin, Perth-Andover, R.R. #5, N.B. EOJ IVO
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Peter MacLeod, 29 Green Hill, Sydney River, N.S.
Harold McNevin, Coleman P.O., West Devon, P.E.I.
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Normand Ouellette, 137 Portledge Ave., Moncton, N.B.
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A. Paul Read, 627 Water Street, Summerside, P.E.I.
Dale Robinson, Winsloe, R.R. #1, P.E.I.
Janet Roloson, Belfast, R.R. #1, P.E.I. COA IAO
William Rowsell, 205 Main St., P.O. Box 331, Springdale, Nfld.
Richard Russell, R.R. #1, Hillsborough, N.B. EOA IXO
Henry Schenkels, Gordon Vale Farms, R.R. #2, Boiestown, N.B.
Brian Sexton, R.R. #2, Falmouth, N.S.
Sonya Shaw, Hartland, R.R. #1, N.B. EOJ INO
Stephen Shearsmith, Box 668, Dalhousie, N.B.
Keith Simmons, Box 238, Pasadena, Nfld.
Kevin Simmons, R.R. #6, Moncton, N.B.
Ross Simmons, Summerside East, R.R. #3, P.E.I.
Siemen Speelman, Uigg, Vernon Bridge P.O., R.R. #2, P.E.I.
Douglas Sullivan, R.R. #2, Boylston, N.S.
Gerard Thebeau, R.R. #1, Rogersville, N.B.
John Van den Hof, Milford Station, N.S.
Anthony Van Dyk, R.R. #1, Caledonia, N.S.
Peter Verleun, R.R. #3, Montague, P.E.I.
John Visser, Crapaud, R.R. #2, P.E.I.
Melis Visser, R.R. #2, Crapaud, P.E.I.
Daniel Walker, 64 Park Street, Truro, N.S.
Sandra Wasson, Box 10, Allingham Park, R.R. #1, Grand Bay, N.B.
George Weir, R.R. #2, Aspen, Guysborough Co., N.S.
J. Doug Wyllie, R.R. #1, Debert, N.S.

TECHNOLOGY DIPLOMA

First Year — Class of '80

F. Carmen Anderson, East Havre Boucher, N.S. BOH IPO
Jocelyne Bordage, R.R. #4, Acadieville, Box 231, N.B.
Velma Campbell, Souris, Box 77, P.E.I.

Sherry Carroll, Milford Station, N.S.
Andrew Crouse, R.R. #3, Lunenburg, N.S. BOJ 2CO
S. Anderson DeCoste, R.R. #1, Monastery, N.S.
Arlene Ells, R.R. #5, Canning, N.S.
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