SCOTIA

RICULTURAL COLLEGE

NDAR 1976 - 1977

SEVENTY FIRST ANNUAL

CALENDAR

OF THE

NOVA SCOTIA AGRICULTURAL COLLEGE

TRURO

UNDER

The Nova Scotia Department
of Agriculture and Marketing

1976—1977

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APPLICATION FOR ADMISSION (1976)
NOVA SCOTIA AGRICULTURAL COLLEGE

Date .....

Name in full .....

Address .....

Telephone No. .....

Name of Community .....

Birthday .....
Day Month Year

Name of Parents .....

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

Address .....
If you were not in high school during the 1975-76 school year, what educational institution or institutions 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.....

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.....
	Third year.....	

Applications for admission to the first year of the Degree Course will not be considered until an official transcript of matriculation marks (Provincial or School) has been submitted.

Applications for admission to the first year of the Technician or Technology Course will not be considered until an official transcript of the required marks (Provincial or School) has been submitted.

Candidates who have attended a post-secondary institution are also required to submit a transcript of the 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

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 .....

1976 CALENDAR

JULY						
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						
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						
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						
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						
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						
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	

1977 CALENDAR

JANUARY						
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						
S	M	T	W	T	F	S
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH						
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						
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						
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						
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 — 1976-1977

1976

August 23-Sept. 3	Chemistry refresher course for selected first year Degree students (commences at 1:30 p.m.).
August 30-Sept. 10	Chemistry and Mathematics refresher courses for selected first year Technician students (commences at 1:30 p.m.).
September 8-10	Supplemental examinations.
September 13	Registration for students registering for the first time.
September 14	Registration for returning students.
September 15	Lectures commence at 8:15 a.m.
October 11	Thanksgiving Day. No classes.
November 5-7	Long week-end. No classes.
December 6-17	First term examinations.

1977

January 3	Second term lectures commence at 8:15 a.m.
February 26-March 6	Mid term break for individual study.
April 8	Good Friday. No classes.
April 17-27	Second term examinations.
May 4	Graduation exercises.

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

- —for Refresher course students, the mornings of August 23 and 30.
- —for students who have to write supplemental examinations, after dinner on September 7.
- —for all new students, after dinner on September 12.
- —for all other students, after dinner on September 13.

Any student who wishes to use residence facilities before the times set down above will be charged at the rate of $5.00 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 term payments in the Accounting Office not later than September 9, 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
J.E. SHUH, B.S.A. (Toronto), M.Sc. (McGill)

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. Mac Rae, B.Sc. (Agr.) (McGill), M.Sc. (McGill), Ph. D. (McGill)

Agricultural Engineering

D.E. CLARK, B.S.A. (Toronto), M.S.A. (Toronto)
Associate Professor

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

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

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

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. (Trindad)
Assistant Professor

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

A.R. MAIN, D.V.M. (Guelph)
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)
Associate Professor

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

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

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

Chemistry

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

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

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

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

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

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

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

Economics and Business Management

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

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

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

S.J.B. STACKHOUSE, B.Sc. (Ag. Ec.) (Guelph), M.Sc. (Guelph)
[**Lecturer**]

Humanities

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

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

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

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

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

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

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

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

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

D.R. LYNCH, B.Sc. (Agr.) (Natal), M.Sc. (Natal), Ph.D. (Guelph)
Assistant Professor

J.A. MORLEY, B.S. (Texas Tech), M.S. (Texas Tech), N.P.D.
Assistant Professor

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

All payments are to be made on the dates stated. Fees not paid at registration time are subject to a late payment fee of $20, which will increase to $30 on October 31, 1976 and February 16, 1977. This also applies to students who have applied for Canada Student Loans and have not had them finalized.

DEGREE COURSES

Payments due September 13, 1976

Tuition	$300
Board and lodging	$490
Caution and laboratory deposit	$ 20
Students' Council	$ 55
Medical fee	$ 6
	$871

Payments due January 3, 1977

Tuition	$300
Board and lodging	$550
	$850

Books (estimated), September 13, 1976 ..... $100

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
Free to residents of the Atlantic Provinces, the governments of which are sharing operating costs of these Courses.

Payments due September 13, 1976

Board and lodging	$490
Caution and laboratory deposit	$ 20
Students' Council	$ 55
Medical fee	$ 6
	$571

Payments Due January 3, 1977

Board and lodging	$550

Books (estimated), September 13, 1976 $ 75

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 $15.00 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 $20.00 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 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 students enrolled in the Degree and Technical Courses loans of up to $2400. 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.

New Brunswick students — Department of Youth
Centennial Building
Fredericton, N.B.

Prince Edward Island students — Department of Education
Box 2000
Charlottetown, P.E.I.

Newfoundland students — Department of Education
Confederation Building
St. John's, Nfld.

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

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 1976-77 credits towards a science degree in Agriculture and an engineering degree in Agriculture, five technician courses, technologist courses and vocational short courses will be offered.

During the seventy-one years of its existence the Nova Scotia Agricultural College has had very close affiliations with the Ontario Agricultural College (now a 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 leading to a degree. It now offers two years of a four-year course in Agricultural Science and three years of a five-year course in Agricultural Engineering.

Students registered in the Degree Course in Agricultural Science can prepare themselves for application for admission to the Ontario Veterinary College, University of Guelph.

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 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-one 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, The Agricultural Engineering Building, The Collins Horticultural Building, The Dairy Building, The Cox Institute of Agricultural Technology, The Boulden Building, The Agricultural Mechanics Building, The 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 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 1976-77 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 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.

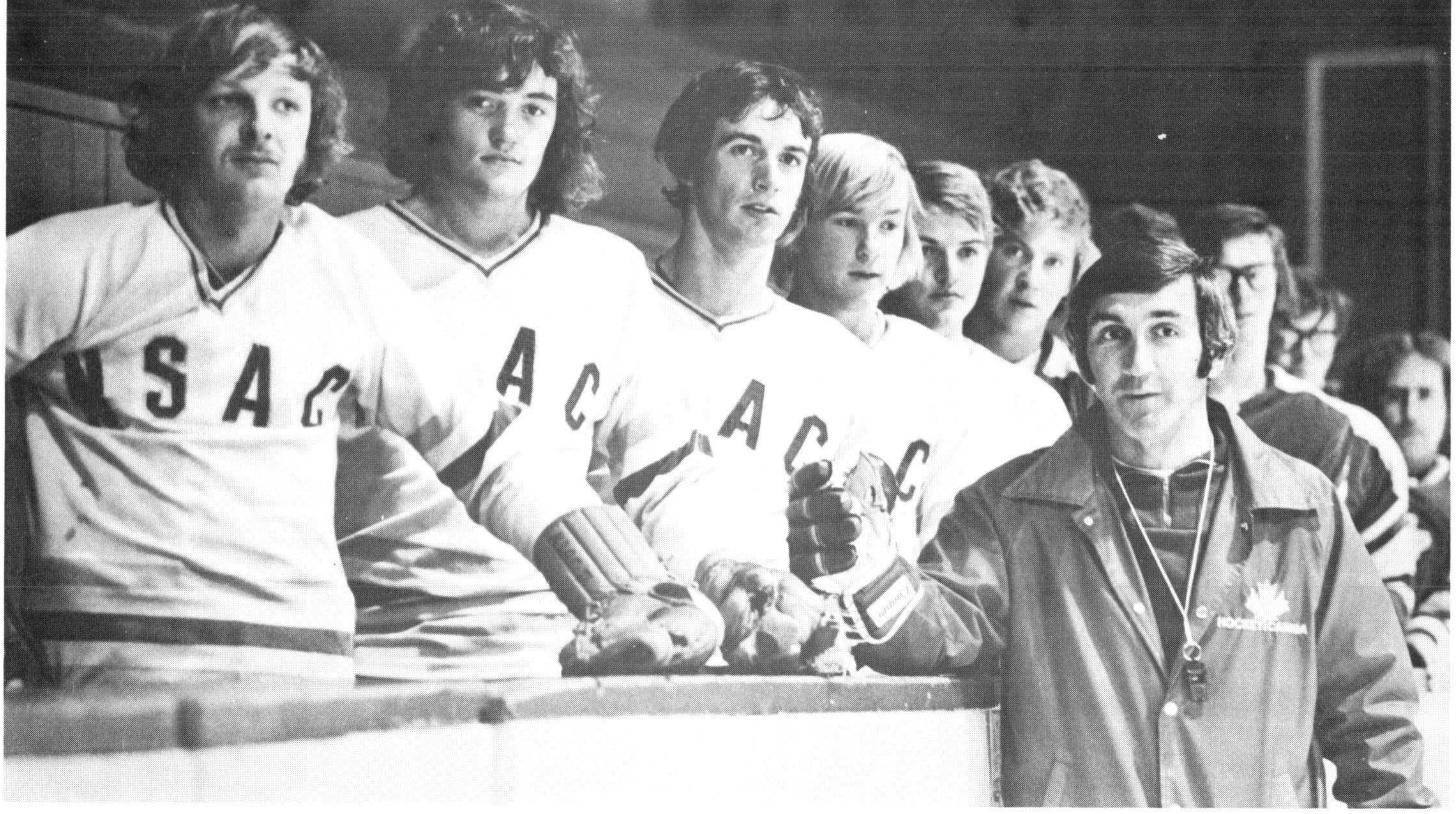
College Colors:

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. J ames 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



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 penalties 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 or in the Dining Hall during regular meals.

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 explusion.

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 $2.00 fee is charged for registration. Vehicles brought to

campus during the year will be registered with the Grounds Superintendent.

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. Freshman students will be assigned parking space at the paved parking lot next to the Poultry Building.

5. Faculty and staff will obtain registration forms and stickers from the Grounds Superintendent.

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

7. The on campus student parking areas are designated as:
   (a) behind Chapman House
   (b) parking lot at Poultry House
   All other areas which comprise the N.S.A.C. area are off limits to in-residence student parking.

8. The parking and traffic regulations will be enforced by the Grounds Superintendent.

9. One week after registration, warnings will be issued to unregistered vehicle owners. Further violations of regulations shall be subject to a fine of $2.00 for a second violation and $5.00 for a third or subsequent violation. Fines are payable at the college business office. Repeated offenders may have their cars removed and parking privileges suspended at the discretion of the parking committee.

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 exits, 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.

RAILROAD FARES REFUNDED

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.

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 throughout the year with units of competition formed on a class basis. A variety of sports is offered including softball, soccer, hockey, basketball, and volleyball.

(b) Intercollegiate Athletics: The women's division competes in the intermediate (J.V.) division of the Atlantic Women's Intercollegiate Athletic Association. The major team sports are field hockey and basketball. The women also compete in a local broomball league. The men's division of athletics compete in the Nova Scotia College Conference. Soccer, 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 U.N.B. and Macdonald College

(c) Physical Education (H05): 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 the conditions of the Atlantic Intercollegiate Athletic Association:

1. A student may not carry more than one subject from year to year.
2. Any first year subject must be cleared prior to third year participation.

3. A student repeating a year and a transferred failed student are ineligible to play.
4. A student withdrawing at Christmas is ineligible to participate until a year following the date of his withdrawal, providing at that time, the student has an academic record that permits his participation.

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.

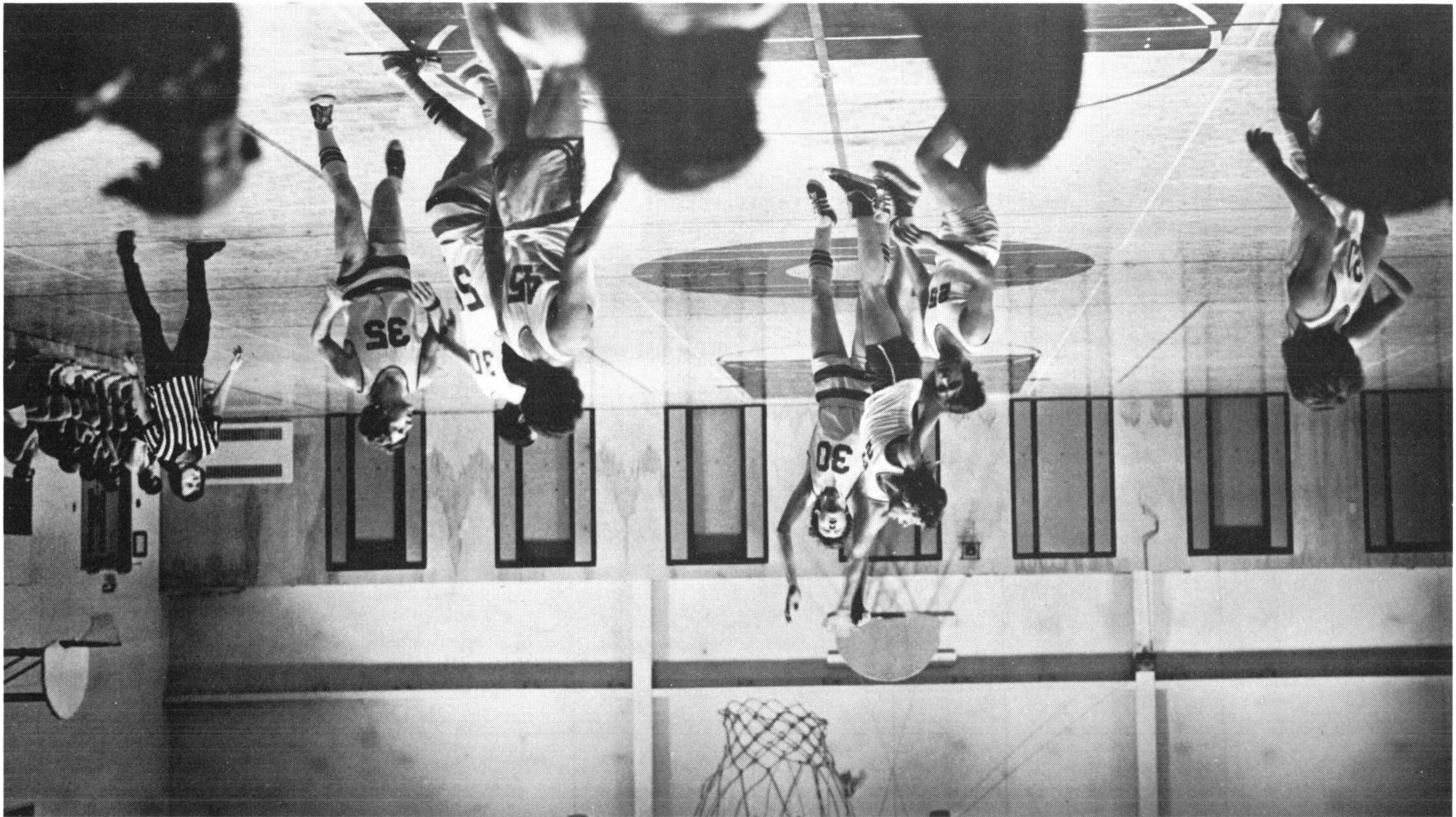
Students who lose time from classes due to participating in outside games will not receive an attendance credit for the time lost.

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 competition 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.




FRASER HOUSE

DEGREE 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 and the first three years of a five year course leading to a degree in Agricultural Engineering. 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. Qualified graduates may be considered for admission to the course in veterinary medicine offered by the University of Guelph.

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

Students 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, 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.

In 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 second and third 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 must:

(a) 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.

(b) 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 grade in the subjects listed 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, unless the failure is made in the first term of the final year, in which case an examination may be written before January 31 immediately following.

Application for permission to write a supplemental examination in June must be submitted before June 10 and for permission to write in September before August 20.

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.

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 55 are identified as to discipline and approximate academic level by letter and number codes. The disciplines are coded as follows:

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

All subjects with numbers of 100 or over are degree credit. Most subjects with numbers between 100 and 190 inclusive are in the first year of the curriculum, numbers 200 to 290 inclusive in the second year, and 300 to 390 inclusive in the third 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), or ''c'' (summer term) immediately following the course identification.

SYLLABUS

AGRICULTURAL SCIENCE

The requirement for a diploma is 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. All first year students must elect one of several Physical Education programs offered.

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
*B090a	Principles of Biology	
*MP090a	Introductory Physics	

*B090 or MP090 will be taken unless the student has completed both these subjects at the grade XII (N.S., N.B., P.E.I.) level or its equivalent.

SEMESTER II

AS100b	Introductory Animal Science	3
B110a,b	The Animal Kingdom	3
C110b	Organic Chemistry	3
EB100b	Macro Economics	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 semester. 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
AE220a	Agricultural Structures	3
AE230a	Agricultural Mechanization	2
AE240b	Surveying	2
AS210a	Selected Studies in Animal Science	3
B200a	Cell Biology	3
B205b	Histology	3
B210a	Embryology	3
B220a	Microbiology for Engineers	3
B225b	Microbiology	3
B240a	Introduction to Genetics	3
B245b	Agricultural Genetics	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
EB250b	Economics of Agriculture	3
EB260b	Quantitative Economics	3
H100a	Sociology I	3
H110b	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
MP210a	Electrical Phenomena	3
PS200b	Greenhouse Crop Production and Floriculture	3

SYLLABUS

AGRICULTURAL ENGINEERING

The requirement for a diploma is successful completion of all courses listed. All first year students must elect one of several Physical Education programs offered.

SEMESTER I

		Credits
B100a	The Plant Kingdom	3
C120a	Engineering Chemistry I	3
H200a	Technical Writing and English and American Authors	3
MP100a	Calculus and Analytic Geometry	3
MP120a	Physics for Engineers I	3
PS110a	General Plant Science	2

SEMESTER II

B110a,b	The Animal Kingdom	3
C125b	Engineering Chemistry II	3
EB100b	Marco Economics	3
H205b	Canadian Literature	3
MP105b	Calculus and Analytic Geometry II	3
MP125b	Physics for Engineers II	3

SEMESTER III

AE200a	Principles and Applications of Orthogonal Projection	2
AE210a	Introductory Statics	2
AE220a	Agricultural Structures	3
AE230a	Agricultural Mechanization	2
B220a	Microbiology for Engineers	3
MP220a	Physics for Engineers III	3
MP230a	Mathematics for Engineers	3

SEMESTER IV

AE205b	Graphics in Design	2
AE215b	Advanced Statics	2
AE240b	Surveying	2

AS100b	Introductory Animal Science	3
MP225b	Physics for Engineers IV	3
MP235b	Mathematics for Engineers II	3

SEMESTER V

AE300a	Strength of Materials I	3
AE310a	Dynamics of Particles	2
AE330a	Fluid Mechanics	3
C220a	Introduction to Soil Science	3
MP300a	Differential Equations I	3
MP310a	Electrical Circuits I	3

SEMESTER VI

		Credit
AE305b	Strength of Materials II	3
AE315b	Dynamics of Rigid Bodies	3
AE320b	Thermodynamics	3
EB250b	Economics of Agriculture	3
MP200a,b	Statistics and Agricultural Experimentation	3
MP305b	Differential Equations II	3
MP315b	Electrical Circuits II	3

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.

In-Service Training on Topic Related to Course and Career Interests

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 M10.

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.

Candidates with pass standing 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(a).

Candidates for Agricultural Engineering with pass standing in Physics at the 012 (N.S.) level, the 122 (N.B.) level or the Grade XII (P.E.I.) level will be exempted from Physics M11(b).

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 percent.

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 30 to September 10. The additional cost will be for books and for board and lodging.

Supplemental Examinations

A student in a Technician Course may write a supplemental examination in a maximum of three subjects 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 member of the graduating class who has no outstanding subjects from first year and who fails one subject only (the mark must be at least 35%) in the first semester of the final year, may write a supplemental examination before January 31 immediately following.

Application for permission to write a supplemental examination in June must be submitted before June 10 and for permission to write in September before August 20.

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.

Financial Assistance

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 Extension, Department of Agriculture, Charlottetown, at as early a date as possible. The allowance will be credited, by the College, to each student's account at the beginning of the first and second terms.

Career Introduction Program

All first year students will be strongly encouraged to complete a career introduction program between their first and second years. A statement of the student's progress in this program will be included in his record as evidence of supplemental training.

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 Biology I	3	2	B12b Biology II (optional)	2	2
C10a Chemistry I	2	2	C11b Chemistry II	2	2
C12a Soil Physics	2	2	C13b Soil Chemistry	2	2
EB10a Accounting	2	2	EB11b Applied Accounting and Taxation	2	2
EB12a Marco Economics	3	0	EB13b Micro Economics	3	0
H10a,b Technical Writing	3	0	EB14b Work Simplification	1 week	
MP10a Agricultural Mathematics I	3	0	H11b Modern Literature (opt.)	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 Agr. Business Project	0	4	EB42b Applied Farm Management	1	4
EB240a Farm Management	3	2	EB220b Production Economics	2	4
H120a Sociology I	3	0	H125b* Sociology II	3	0
H140a Personnel Management	3	0	or		
PS40a * Field Crop Production I	2	2	H210b* Communications & Extension Methods	3	0
			PS41b* Field Crop Production II	2	2
EITHER BLOCK A					
PS53a Vegetable Production	3	4	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			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab**
AE12a Drafting I	0	4	AE19b Drafting II	0	4
AE13a Shopwork I	2	4	AE20b Shopwork II	2	4
AE14a Surveying	1	2	AE21b Oil Hydraulics I	2	2
EB10a Accounting	2	2	AE22b Engineering Principles	3	0
or			EB11b Applied Accounting	2	2
EB12a Macro Economics	3	0	and Taxation or		
H10a,b Technical Writing	3	0	EB13b Micro Economics	3	0
MP10a Agricultural Mathematics I	3	0	EB14b Work Simplification	1 week	
MP12a Statics	2	4	H11b Modern Literature (opt.)	3	0
PS12a Soils & Crops I	2	2	H140b Personnel Management	3	0
			MP11b Agricultural Mathematics II	3	0
			PS13b Soils & Crops II	2	2

SECOND ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab**	**Course No. and Name**	**Lec.**	**Lab**
AE41a Farm Buildings I	2	4	AE51b Farm Buildings II	1	4
AE42a Farm Power I	2	4	AE52b Farm Power II	1	4
AE43a Farm Machinery I	2	4	AE53b Farm Machinery II	1	4
AE45a Soil & Water Management	2	2	AE55b Materials Handling Equipment	2	4
AE47a Agr. Engineering Project	0	2	AE58b Electrical Controls	1	4
AS10a Livestock Production (ruminant)	3	2	AE62b Properties of Materials	1	2
B10a Biology I	3	4	AS12b Livestock Production (non-ruminant)	3	2

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	B12b Biology II	2	4
B10a Biology I	3	4	CIIb Chemistry II	2	2
C10a Chemistry I	2	2	C13b Soil Chemistry	2	2
C12a Soil Physics	2	2	EB14b Work Simplification	1 week	
H10a,b, Technical Writing	3	0	H11b Modern Literature (Opt.)	3	0
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 Animal Breeding	3	0
AS42a Breeds & Selection	1	2	AS45b Animal Science Seminar	1	0
AS46a Animal Physiology	2	2	AS47b Animal Pathology	2	2
AS48a.b Animal Science Project	0	4	EB13b Micro Economics	3	0
EB12a Macro Economics	3	0	H125b Sociology II	3	0
H120a Sociology I	3	0	or		
PS40a Field Crops Production I	2	2	H140b Personnel Management	3	0
			PS41b Field Crops Production II	2	2

FARM EQUIPMENT TECHNICIAN

The Nova Scotia Agricultural College offers a two-year course to help students prepare for careers 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	1	2
EB10a Accounting	2	2
or		
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	2	2
and Taxation or		
EB13b Micro Economics	3	0
EB14b Work Simplification	1 week	
H11b Modern Literature (opt.)	3	0
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 II	0	8
AE57b Equipment Overhaul II	0	8
AE60b Inventory Control	2	0

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 Agr. Engineering II	2	2
B10a Biology I	3	2	B12b Biology II	2	2
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	ÈB14b Work Simplification	1 week	
H10a,b Technical Writing	3	0	H11b Modern Literature (opt.)	3	0
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	EB11b Applied Accounting and Taxation	2	2
PS52a,b Plant Science Project	0	4			
Block A - Ornamental and Turf					
AE14a Surveying	2	2	AE59b Horticultural Machinery	2	2
PS45a Turf Management I	2	2	H140b Personnel Management	3	0
PS50a Ornamental Horticulture I	2	4	PS46b Turf Management II	1	2
			PS51b Ornamental Horticulture II	2	4
Block B - Greenhouse, Fruit & Garden Crops					
H140a Personnel Management	3	0	AE58b Electrical Controls	1	4
PS43a Berry Crop Production	1	2	AE59b Horticultural Machinery	2	2
PS47a Greenhouses	1	2	PS44b Tree Fruits	1	2
PS53a Vegetable Production	3	4	PS48b Greenhouse Crops	1	2
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	2	2
PS53a Vegetable Production	3	4	PS42b Cash Crops & Seed Production	2	1
			PS49b Potato Production	2	2

TECHNOLOGY COURSES

The Nova Scotia Agricultural College 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. Specialized courses are also available 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.

Technology Studies for Graduate Technicians

A candidate who has received his Technician Diploma in Agricultural Business, Agricultural Engineering, Animal Science 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 two full year subjects, additional projects, and laboratory experience.

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

—AS70b Aninal Nutrition
—C72b Plant Nutrition
—EB70a Farm Planning
—EB71b Market Planning
—MP70a Basic Statistics
—PS41b ~~Field Crops Production II~~ Oilseed Crops & Soil Science

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 subjects will be found on the pages which follow.

BIOLOGY LABORATORY TECHNOLOGY

The Nova Scotia Agricultural College offers a course to help students prepare for work as a biology laboratory technologist 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, B12b, 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**
B43a Entomology	2	2	B42b Laboratory Practices I	2	3
C42a Organic Chemistry	3	4	C43b Bio-Organic Chemistry	3	4
B100 Botany	3	4	B110b The Animal Kingdom	3	4
H120a Sociology I	3	0	MP41b Light and Optics	2	2
MP40a Electrical Measurements	2	2			
			EITHER BLOCK A		
B13a Plant Identification	2	2	B40b Plant Pathology	2	3
			B41b Plant Physiology	2	2
			OR BLOCK B		
AS46a Animal Physiology	2	2	AS47b Animal Pathology	2	2
			AS70b Animal Nutrition	3	0

SECOND ACADEMIC YEAR

Semester A			Semester B		
Course No. and Name	**Lec.**	**Lab.**	**Course No. and Name**	**Lec.**	**Lab**
B70a Microtechniques I	2	4	B71b Microtechniques II	2	4
B72a Lab Practices II	2	3	B73b Microbiology	2	3
C45a Qualitative Analysis	3	4	C46b Quantitative Analysis	3	4
H70a Typing	2	0	H71b Office Practices and Business Machines	2	0
MP70a Statistics	3	0	H125b Sociology II	3	0
			or		
			H140b Personnel Management	3	0
			MP71b Computer Programming	1	0

In addition to these courses a Biology Project and Seminar Porgram, lasting the entire year will be organized on an individual basis with each student. At least three more lab periods per week will be provided for work on this requirement.

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 equivalents: B10a, B12b, C10a, C11b, MP10a, MP11b and H10a,b

FIRST ACADEMIC YEAR

Semester A

Course No. and Name	Lec.	Lab
C40a Chemistry Laboratory Techniques and Safety	0	4
C42a Organic Chemistry	3	4
C45a Qualitative Analysis	3	4
C100a Chemistry (lecs only)	3	
MP40a Electrical Measurements	2	2
MP100a Calculus	3	0

Semester B

Course No. and Name	Lec.	Lab
C41b Chemistry Calculations	0	2
C43b Bio-Organic Chemistry	3	4
C44b Instrumentation I	2	3
C46b Quantitative Analysis	3	4
MP41b Light & Optics	2	2

One approved elective from outside the Chemistry Department

SECOND ACADEMIC YEAR

Semester A

Course No. and Name	Lec.	Lab
C70a Instrumentation II	3	4
C74a Glass Blowing	0	4
C75a Food Technology I	3	4
MP70a Statistics	3	0

Semester B

Course No. and Name	Lec.	Lab
C71b Instrumentation III	3	4
C73b Laboratory Organization and Management	2	4
C76b Food Technology II	3	4
MP71b Computer Programming	1	0

One approved elective from outside the Chemistry Department.

A Chemistry Project and Seminar Program lasting the entire year, will be organized on an individual basis with each student. From six to eight more laboratory periods per week will be provided for work on this requirement.

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 equivalents: B10a, B12b, C10a, C11b, MP10a, MP11b, and H10a,b

FIRST ACADEMIC YEAR

Semester A

Course No. and Name	Lec.	Lab.
AE11a Horticultural Engineering	1	4
B13a Plant Identification	2	2
B43a Entomology	2	2
C12a Soil Physics	2	2
PS45a Turf Production I	2	2
PS50a Ornamental Horticulture I	2	4
PS54a Plant Propagation	1	2

Semester B

Course No. and Name	Lec.	Lab
AE18b Horticultural Engineering II	1	4
AE59b Horticultural Machinery	2	2
B40b Plant Pathology	2	3
B41b Plant Physiology	2	2
C13b Soil Chemistry	2	2
PS46b Turf Production II	1	2
PS51b Ornamental Horticulture II	2	4

SPRING PROGRAM - Semester C

PS70c Landscaping Techniques - 6 weeks to be announced
PS75c Ornamental Horticulture Project

SECOND ACADEMIC YEAR

Course No. and Name		
AE14a Surveying	2	2
AE45a Soil & Water Management	2	2
EB10a Accounting	2	2
H120a Sociology I	3	0
PS47a Greenhouses	1	2
PS71a Ornamental Horticulture III	3	6
PS73a Art & Design I	3	0

Course No. and Name	Lec.	Lab
C72b Plant Nutrition	2	0
EB11b Applied Accounting and Taxation	2	2
EB14b Work Simplification	1 week	
H140b Personnel Management	3	0
PS48b Greenhouse Crops	1	2
PS72b Ornamental Horticulture IV	3	6
PS74b Art & Design II	3	0

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
AS10a Livestock Production(ruminant)	3	2
EB10a Accounting	2	2
EB40a Marketing Practices	1	4
EB240a Farm Management	3	2
PS40a Field Crop Production I	2	2

Semester B

Course No. and Name	Lec.	Lab
AE61b Farm Tractors	2	2
AS12b Livestock Production (non-ruminant)	3	2
EB11b Applied Accounting and Taxation	2	2
EB220b Production Economics	2	4
PS41b Field Crops Production II	2	2

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
AS11a,b Animal Husbandry Skills	0	2
AS40a Feeds & Feeding	3	2
AS46a Animal Physiology	2	2
B43a Entomology	2	2
PS10a Plant Science Skills I	0	2
PS43a Berry Crop Production	1	2
PS53a Vegetable Production	3	4

Semester B

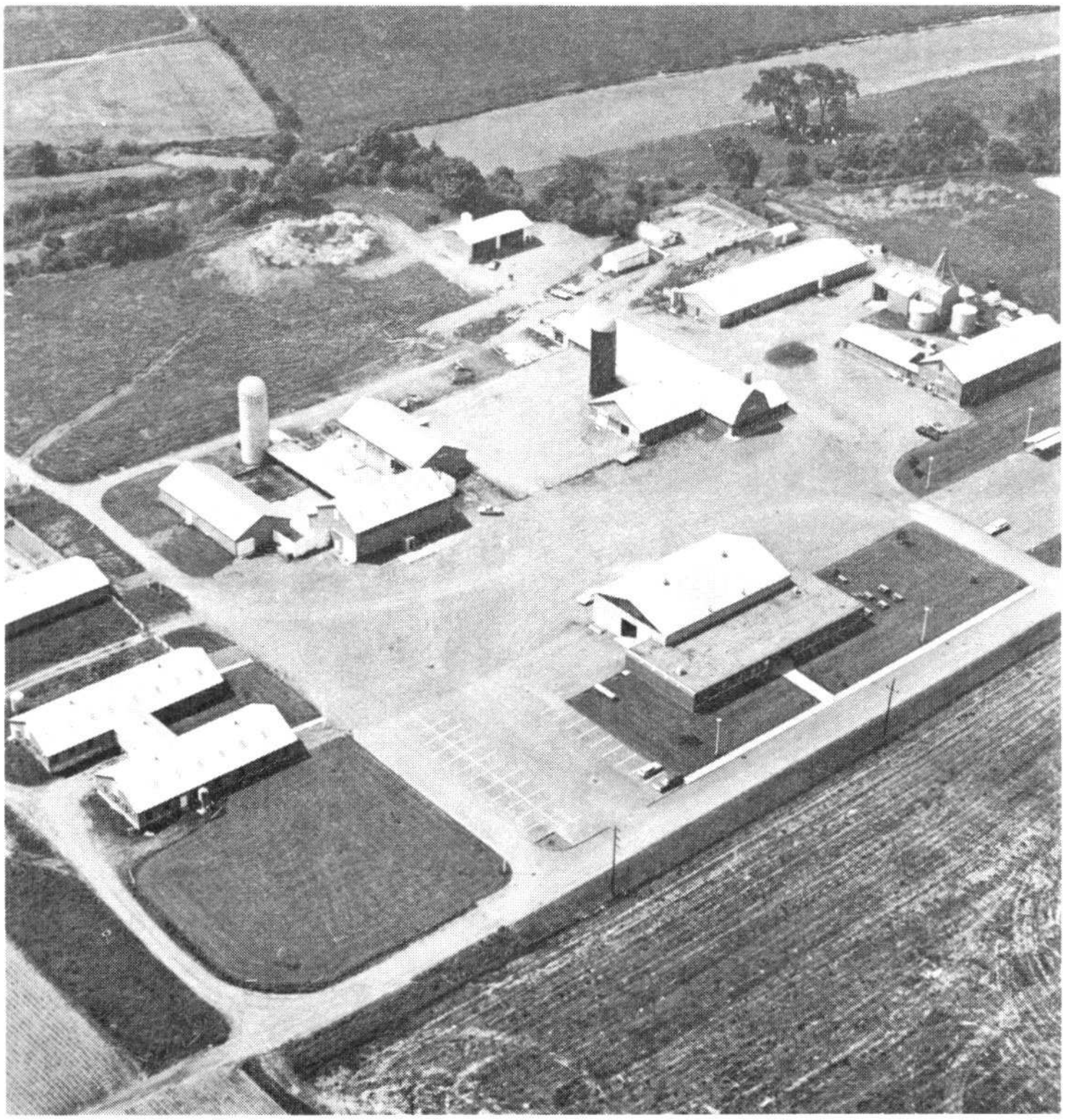
Course No. and Name	Lec.	Lab
AE20b Shopwork II	1	4
AE21b Oil Hydraulics I	2	2
AS44b Animal Breeding	3	0
AS47b Animal Pathology	2	2
AS70b Animal Nutrition	3	0
B40b Plant Pathology	2	3
B41b Plant Physiology	2	2
PS11b Plant Science Skills II	0	4
PS44b Tree Fruits	1	2
PS42b Cash Crops and Seed Production	2	1
PS49b Potato Production	2	2

*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 percent 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 numberical 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**

This is an introductory course in farm buildings. The lectures are on the farmstead and its utilities. Planning and farm safety are stressed. Utilities such as electricity usage, water sources and systems as well as sewage treatment is covered. Environmental requirements and control in farm buildings is introduced.

Laboratories consist mainly of tours of the farm building complex here at N.S.A.C. pointing out the engineering features involved. Drafting is introduced late in the term.

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, and Morash**

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. MacAulay 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 15b: **Engineering Principles**
Instructor: **Prof. MacAulay**

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 16b: **Oil Hydraulics I**
Instructors:**Prof. MacAulay and Mr. Taylor**

A study of liquids at rest and in motion and the flow of liquids through pipes and orifices. Volume 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 17b: **Agricultural Engineering II**
Instructors:**Prof. Townsend and Messrs. Burr and Morash**
Prerequisite:**AE 10a**

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 11a**

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 - 3 labs per week.

AE 19b: **Drafting II**
Instructors: **Prof. Townsend 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, and Morash**
Prerequisite: **AE 13a**

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 orientated.

Winter semesters - 2 lecs and 4 labs per week.

AE 21c: **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.

Spring Term - approximately 6 weeks

AE 40a: **Field Machinery**
Instructors: **Prof. Clark 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. Adams and Mr. Morash**

Construction of building elements will be studied, calculations and drawings will be made and costs considered. Measuring and drawings will be made and costs considered. Measuring 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—1975

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

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. Clark 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

AE44a: **Welding I**
Instructors: **Messrs. Burr and Hampton**

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: **Prof. MacAulay and Mr. 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.

AGRICULTURAL ENGINEERING

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**
Prerequisite: **AE 166**
Instructor: **To be announced**

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,b: **Projects**
Instructors: **Agricultural Engineering Department Staff**

Students will be encouraged to apply knowledge and skills acquired in other courses so that approved projects will be successfully completed.

Both semesters - equivalent to 2 labs per week for two semesters.

AE 48a: **Shop Management**
Instructor: **To be announced**

Shop organization, responsibilites, 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: **To be announced**

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**
Instructor: **To be announced**

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: **Prof. Adams and Mr. Morash**
Prerequisite: **AE 41a**

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 Handling 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—1975

AE 52b: **Farm Power II**
Instructors: **Messrs. Taylor and Hampton**
Prerequisite: **AE 42a**

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. Clark and Mr. Hampton**
Prerequisite: **AE 43a**

AGRICULTURAL ENGINEERING

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**
Instructor: **To be announced**
Prerequisite: **AE 44a**

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: **To be announced**

The operating characteristics and maintenance of all types of materials handling equipment from the milker to the silo unloader to the gutter cleaner used around the farmstead 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: **To be announced**

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**
Instructor: **To be announced**
Prerequisite: **AE 50a**

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 Morash**

This is a study of electrical controls and various types of swithes 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

AE 59b: **Horticultural Machinery**
Instructors: **Profs. Clark and MacAulay, Messrs. Taylor and Hampton**

An introduction to the selection and proper operation of horticultural machinery used by the ornamental and landscape horticulturalist. Tillage, application, lawn and ornamental maintenance equipment, small internal combustion engines as well as the principles of hydraulics will be studied.

Winter semester - 2 lecs and 2 labs per week

AE 60b: **Inventory Control**
Instructor: **To be announced**

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 Hampton**

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.

AGRICULTURAL ENGINEERING

Winter semester - 2 lecs and 2 labs per week.

AE 62b: **Properties of Materials**
Instructor: **Prof. Adams and Messrs. Burr and Morash**

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 200a: **Principles and Applications of Orthagonal Projection**
Instructor: **Prof. Adams**

Freehand sketching and instrument drawing are used to explore the fundamental principles or 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 - 1 lec and 3 labs per week

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

AE 205b: **Graphics in Design**
Instructor: **Prof. Adams**

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 3 labs per week.

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

AE 210a: **Introductory Statics**
Instructor: **Prof. J. T. MacAulay**

This course deals with a study of forces acting on particles and on rigid bodies in two and three dimensions with equilibrium and distributed forces (centroids and centres of gravity). The Vector approach is used and Vector methods are used in problem solution.

Fall semester - 3 lecs per week.

AE 215b: **Advanced Statics**
Instructor: **Prof. J.T. MacAulay**

A continuation of AE 210 dealing with analysis of structures, frames and machines, forces in beams, friction, moments of inertia and method of virtual work.

Winter semester - 3 lecs per week

Text: Beer & Johnson, VECTOR MECHANICS FOR ENGINEERS: STATICS, McGraw-Hill (latest edition)

AE220a: **Agricultural Structures**
Instructor: **Prof. Adams**

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

Fall semester - 2 lecs and 2 labs per week

Reference text: CANADIAN FARM BUILDING CODE–1975

AE 230a: **Agricultural Mechanization**
Instructor: **Prof. Clark**

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.

Fall semester - 1 lec and 2 labs per week

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

AGRICULTURAL ENGINEERING

AE 240b: **Surveying**
Instructor: **Prof. J.T. MacAulay**

This course covers the use and adjustment of surveying instruments, measurements of distance, differential and profile levelling in transit traverses and running simple curves.

Winter semester - 2 lecs and 2 labs per week.
(May require at least a week after examinations in field exercises, depending on the weather during the term.)

Text: Kissam, SURVEYING PRACTICE

AE 300a: **Strength of Materials I**
Instructor: **Prof. Saxon**
Prerequisite: **AE 210**

An introduction to engineering materials and their properties. The stress-strain relationship for tension, compression and shear. The shear, bending moments and deflection in beams are topics covered. Emphasis is placed on problem solving.

Fall semester - 3 lecs per week.

Text: Higdon, Ohlsen, Stiles, Weese, MECHANICS OF MATERIALS, (2nd edition)

AE 305b: **Strength of Materials II**
Instructor: **Prof. Saxon**

The course consists of the analytical treatment of torsion in shafts, statically indeterminate beams, columns and combined stresses. Use is made of testing facilities to demonstrate the properties of materials.

Winter semester - 3 lecs per week

Text: Higdon, Ohlsen, Stiles, Wesse, MECHANICS OF MATERIALS, (2nd edition)

AE 310a: **Dynamics of Particles**
Instructor: **Prof. J. D. MacAulay**

AGRICULTURAL ENGINEERING

AGRICULTURAL ENGINEERING

A course dealing with rectilinear and curvilinear motion of particles, kinetics of particles, force mass, and acceleration, work and energy, impulse and momentum.

Fall semester - 2 lecs and 1 lab per week.

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

AE 315b: **Dynamics of Rigid Bodies**
Instructor: **Prof. J. D. MacAulay**

A course dealing with kinematics and kinetics of rigid bodies; forces, accelerations, energy and momentum methods are studied. Introduction to kinetics in three dimensions and elementary mechanical vibrations.

Winter semester - 2 lecs and 1 lab per week.

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

AE 320b:**Thermodynamics**
Instructor: **Prof. J. T. MacAulay**
Prerequisite: **MP 225 and MP 235**

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 vapours; Including the properties of liquids and vapours, processes and cycles.

Winter semester - 3 lecs and 1 lab per week.

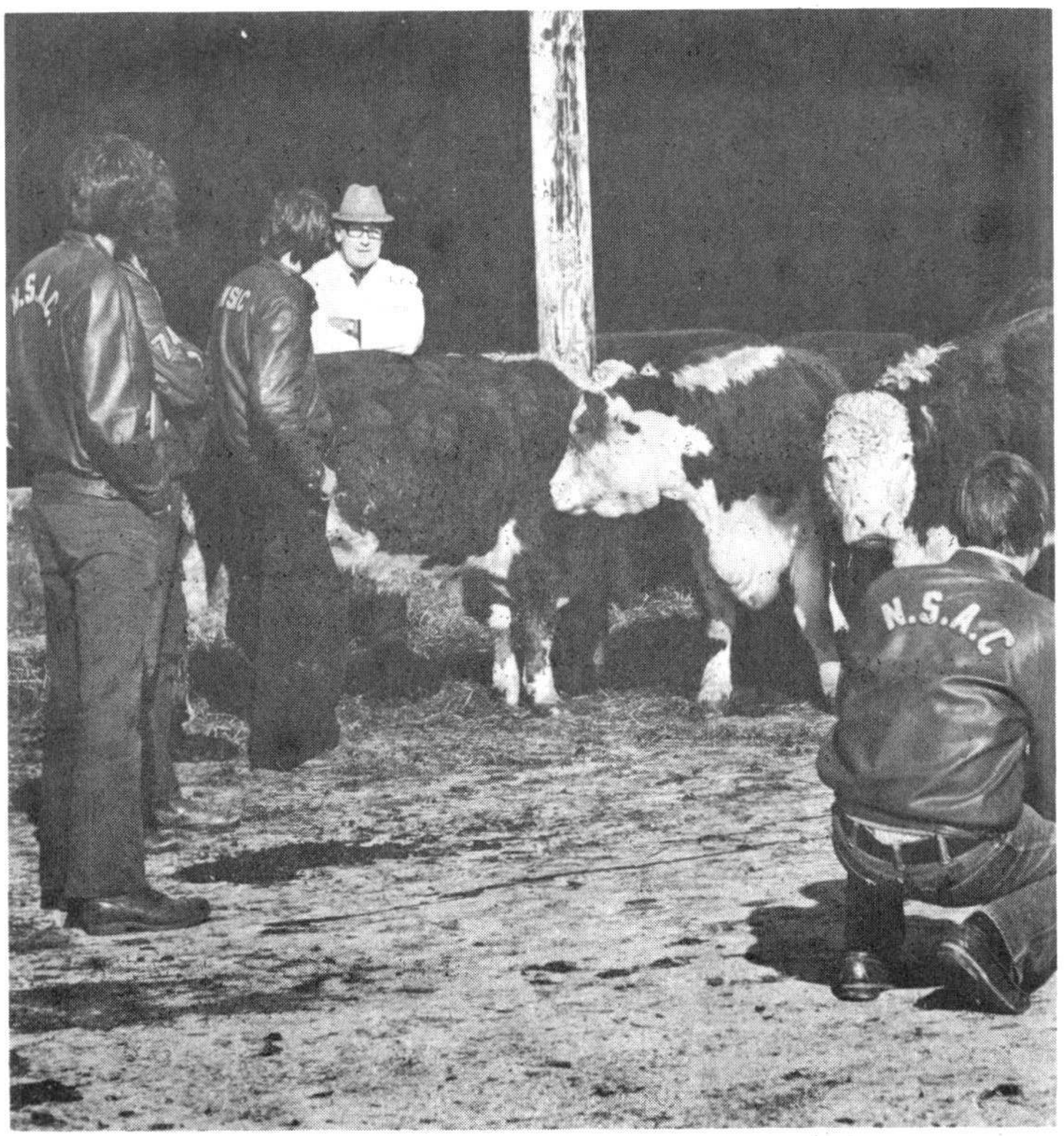
Text: VanWylen & Soontag, FUNDAMENTALS OF CLASSICAL THERMODYNAMICS, Wiley Mark, THERMODYNAMICS, Prentice Hall

AE 330a: **Fluid Mechanics**
Instructor: **Prof. J. T. 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, momentym, Bernoulli equation, flow measurement, friction and Reynolds number.

Fall semester - 3 lecs and 1 lab per week

Text: Streeter, FLUID MECHANICS, (5th edition), 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 handling of animals and related equipment. In addition to the formal laboratory periods, students will be assigned to participate in the activities of the various animal units.

Winter semester - 2 labs per week.

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

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.

AS41a: **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, homogenziation 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

ANIMAL SCIENCE

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

This course considers the fluids of the body, circulation, respiration, digestion, absorption, excretion, energy exchange, 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 100b: **Introductory Animal Science**
Instructors: **Prof. Mathewson, Sefton and Cock**

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

Both semesters - 3 lecs and 2 labs per week

Text:Cole, INTRODUCTION TO LIVESTOCK PRODUCTION

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, poultry production, animal breeding systems and animal nutrition.

Fall semester - 3 lecs per week.

BIOLOGY

B 10a: **Biology I**
Instructor: **Prof. Eaton**

This is an introduction to the biological principles that are most important in agriculture. The structure, growth and reproduction of both plants and animals are discussed, with an introduction to genetics and ecology.

Fall semester - 3 lecs and 4 labs per week.

B 12b: **Biology II**
Instructor: **Prof Eaton**

A course stressing biological principles important to agriculture, but in more detail than Biology I. Genetics, plant and animal breeding, topics in ecology and human problems such as disease and pollution will be discussed, as well as details of plant and animal anatomy and function.

Winter semester - 2 lecs and 4 labs per week

B 13a: **Plant Identification**
Instructor: **Prof. Roland**

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

B 40b: **Plant Pathology**
Instructor: **Prof. McFadden**

An introduction to the nature, cause and control of plant disease 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

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

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

B 42b: **Laboratory Practices I**
Coordinator: **Prof. Porth**

Methodology involved in the feeding and handling of animals commonly used in laboratory experiments; principles and techniques related to photography, including camera types, light meters, film, printing, enlarging and microscope photography; the culture and care of plants used in botany, including the use of pesticides; culture of the fruit fly Drosophilla spp. for genetics experiments.

Winter semester - 2 lecs and 3 labs per week

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

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.

Winter semester - 2 lecs and 2 labs per week

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

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

Fall semester - 2 lecs and 4 labs per week.

BIOLOGY

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

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

Winter semester - 2 lecs and 4 labs per week.

B 72a: **Laboratory Practices II**
Coordinator: **Prof. Porth**

This course consists of the collection, preparation, classification and control of field and greenhouse insects, the procedures and techniques involved in ecological field studies including a major collection from aquatic or terrestrial environments; the principles, operation and care of laboratory instruments and equipment.

Fall semester - 2 lecs and 3 labs per week

B 73b: **Microbiology**
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 microorganisms to water, soil, the food industry, and diseases of animals and man. Laboratory work will stress the principles of staining, preparation of microbiological media, culturing and biochemical tests.

Winter semester - 3 lecs and 3 labs per week.

B 090a: **Principles of Biology**
Instructor: **Prof. Crosby**

An introduction to biology and laboratory work, with emphasis on the basic biological concepts to give an

understanding of the organization and operation of biological systems. These will include the requirements, acquisition, utilization and transfer of energy, basic structure and co-ordination of activities, reproduction, genetics and evolution.

Fall semester - 3 lecs and 4 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.

B 110a,b: **The Animal Kingdom**
Instructor: **Prof. Neary**

A review of the animal kingdom with reference to the structure and biology of the Protozoa and various metazoan phyla; important aspects of entomology, animal parasitism, life histories, elements of vertebrate embryology, animal ecology and evolution.

Winter semester - 3 lecs and 4 labs per week.

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

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.

B 205b: **Histology**
Instructor: **Prof. Crosby**

An introduction to general histology. The fine structure of cells and microscopical anatomy of tissues are discussed. Details of cell structure and tissue organization are studied in the laboratory with emphasis on light microscope recognition and interpretation of electron micrographs.

Winter semester - 2 lecs and 4 labs per week.

B 210a: **Embryology**
Instructor: **Prof. Crosby**

A study of the developmental patterns exhibited by vertebrates together with an analysis of the casual interrelationships of the developmental process.

Fall semester - 3 lecs and 4 labs per week

B 220a: **Microbiology for Engineers**
Instructors: **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 microorganisms in areas of agricultural technology such as food, milk, silage, livestock waste management, enzymes and fermented beverages. The role of microorganisms 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 microorganisms. The importance of microorganisms to soil productivity, foods, industry, veterinary science, public health and sanitation will be discussed.

Winter semester - 3 lecs and 3 labs per week.

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 240a**

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

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

Winter semester - 3 lecs and 2 labs per week.

CHEMISTRY

B 270a: **Ecology**
Instructor: **Prof. Eaton**

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 2 labs per week.

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 structure, 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**
Instructor: **Prof. Langille**

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**
Instructor: **Prof. Langille**

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 and Safety**
Instructor: **Prof. Robinson**

An introduction to general chemistry techniques and manipulations relating to normal laboratory procedures. Instruction on hazards and toxic potentials associated with the use of various pieces of equipment and chemicals. Proper use and handling of equipment, chemicals; glass

working; chemical measurements; laboratory reports; responsibilities of a chemistry laboratory worker.

Fall semester - 4 labs per week

Text:To be announced.

C 41b: **Chemical calculations**
Instructor: **Prof. Robinson**

A course designed to assist students in organizing, understanding, using and evaluating chemical calculations and problems. The subject matter includes an introduction to the various units of measurements used in chemistry; chemical factors and fundamental calculations in gravimetric, titrimetric analysis and solution strength; weight relations; oxidation-reduction; miscellaneous calculations; chemical equilibria and Law of Mass action: reliability of analytical results.

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**
Prerequisiste: **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 enzynes.

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**
Instructor: **Prof. MacLean**

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**

Using semimicroanalysis 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, electrolytes, electrolysis, redox reactions, complex ions, oxidation potentials, pH, indicators, buffers.

CHEMISTRY

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: Gilreath, ELEMENTARY QUANTITATIVE CHEMISTRY

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 radio-activity measurements. The topics covered are electroylsis, polarography, gas-liquid, paper, thin-layer, column and ion exchange chromatography, electrophoresis and radioactivity.

Winter semester - 3 lecs and 4 labs

Text: James W. Robinson, UNDERGRADUATE INSTRUMENTAL ANALYSIS

C 72b: **Plant Nutrition**
Instructors: **Profs. Langille and MacLean**

A study of the importance and function of major and minor elements in plant growth and the nutrient levels required for optimum production. Deficiency and toxicity symptoms will be examined as well as the diagnostic techniques used to identify these conditions.

Winter semester - 2 lecs per week

Text: To be selected

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 is 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 Technology I**
Instructor: **Prof. Robinson**
Prerequisites: **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 1 lab per week

Text: To be selected

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

A study of the composition, chemistry and technology of various agricultural 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 1 lab per week

Text: To be selected

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 (Third edition)

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

A study of basic classes of organic compounds including alkanes, alkynes, petroleum and petrochemicals, cyclo-paraffins, alcohols, aldehydes, ketones, alkyl halides, monocarboxylic 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

CHEMISTRY

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: To be announced.

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, carabolish of carbohydrates, lipids and nitrogen compounds, selected biosyntheses, nitrogen fixation and metabolism control mechanisms.

Winter semester - 3 lecs and 4 labs per week

Text: To be announced.

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 as related to soil management, crop production, soil problems and land use.

Fall semester - 3 lecs and 4 labs per week

Text: Millar, Turk, and Foth, FUNDAMENTALS OF SOIL SCIENCE (Fourth 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 accounting 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

ECONOMICS AND BUSINESS

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. Applicatin of the various theories to explain the agricultural industry is stressed.

Fall semester - 3 lecs per week

EB 14b: **Work Simplification**

This is a practical course in the organized use of common sense to find an easier and better way to do a job and avoid waste of time, money, materials, equipment and other important factors.

Time to be arranged.

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

The current practices involved in marketing farm products produced in the Atlantic Region 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

ECONOMICS AND BUSINESS

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, middle-man, 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 100b: **Macro Economics**
Instructor: **Prof. Tait**

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

Text: Archer, INTRODUCTORY MACROECONOMICS: A CANADIAN ANALYSIS

EB 200a: **Principles of Economics - Micro**
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 and procedures 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 - 1 lec and 2 labs per week.

ECONOMICS AND BUSINESS

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

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 3 labs per week.

EB 250b: **Economics of Agriculture**
Instructor: **Prof. Stackhouse**

This course involves the study of the agricultural sector of the Atlantic Region relative to the Canadian Agricultural system. Major emphasis is placed on the examination of agricultural and resources development policies and institution. Specific topic areas include examination of:basic economic theory applied to the Agricultural Industry; the problem of instability in agriculture; the major federal and provincial farm policies and institutions; Canadian involvement in world agriculture; and the future prospects for Canadian agriculture in domestic and foreign markets.

Representatives from various federal and provincial agencies, private organizations and other members of the Economics and Business Department will be used as resource individuals to develop these topic areas throughout the course.

Winter semester - 3 lecs per week

EB 260b: **Quantitative Economics**
Instructor: **Prof. Stackhouse**
Prerequisites: **MP105, EB100, EB210**

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

Text: Chiang, Alpha C., FUNDAMENTAL METHODS OF MATHEMATICAL ECONOMICS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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.

Fall semester - 3 lecs per week

Winter semester - 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 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

HUMANITIES

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 100a: **Sociology**
Instructor: **Prof. MacEachern**

Through assigned readings and in lectures, students are given an insight into basic sociological concepts. Emphasis is placed on man's antiquity, man's nature, and man in community with specific emphasis on marriage and the family. Consideration is given as well to an examination of specific sub-cultures.

Fall semester - 3 lecs per week

Texts: Shinn, R. THE TANGLED WORLD, Berger, P. INVITATION TO SOCIOLOGY, Streib, G.F., THE CHANGING FAMILY and other assigned readings.

H 110b: **Sociology II**
Instructor: **Prof. MacEachern**

The examination of society with emphasis on man in community through consideration of human values, morals and decision making. An in-depth study is made on the theme of Death and Dying.

Winter semester - 3 lecs per week

Texts: Shinn, R., THE TANGLED WORLD, Adams, I., THE POVERTY WALL, Frankl V., MAN'S SEARCH FOR MEANING, Kubler-Ross, E. ON DEATH AND DYING

H 140a,b: **Personnel Management**
Instructor: **Prof. MacLeod**

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 lec per week

Texts: Reber and Terry, BEHAVIORAL INSIGHTS FOR SUPERVISION
Rohrer, Hibler & Repogle, MANAGING THROUGH INSIGHT

H 150b: **History of Agriculture**
Instructor: **Prof Shuh**

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

HUMANITIES

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: **Prof. Burt**

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.

Winter semester - 3 lecs per week.

MATHEMATICS AND PHYSICS

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

Part I of the mathematics program covers the application of the following topics to agriculture.

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

MP 11b: **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 - 1 lec 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 varifying 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. Fraser**

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

Winter semester - equivalent of one lecture per week

MATHEMATICS AND PHYSICS

MP090a: **Introductory Physics**
Instructor: **Prof. Saxon**

An introductory course for those not having any previous physics. This course covers mechanics, heat, light, and sound.

The laboratory emphasizes the experimental foundations of physics, and gives the student an appreciation of the scientific method.

Fall semester - 3 lecs and 4 labs per week

MP 100a: **Calculcus and Analytic Geometry I**
Instructor: **Prof. Fraser**

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

Fall semester - 3 lecs per week

Text: Goodman, ANALYTIC GEOMETRY AND THE CALCULUS

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 applications 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: Goodman, ANALYTIC GEOMETRY AND THE CALCULUS

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 120a: **Physics for Engineers I**
Instructor: **Prof. Smith**

An introductory course for engineers covering statics, kinematics, dynamics, conservation of energy, conservation of momentum, gas law, thermal properties of matter and mechanical properties of matter. Basic theories are developed and verified through experimental laboratory exercises.

Fall semester - 3 lecs and 4 labs per week

Text: Bueche, PRINCIPLES OF PHYSICS

MP 125b: **Physics for Engineers II**
Instructor: **Prof. Saxon**
Prerequisite: **MP 120**

An introductory course covering wave motion, sound, electricity and magnetism, light and selected topics in modern physics.

Use is made of calculus in the solving of physical problems.

Winter semester - 3 lecs and 4 labs per week

Text: Bueche, PRINCIPLES OF PHYSICS

MATHEMATICS AND PHYSICS

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 210a: **Electrical Phenomena**
Instructor: **Prof. Smith**

This course deals with electrical and magnetic effects starting with electric fields, capacitance and motion of changes in electric fields. Electric circuits and currents are taken up, along with magnetic fields, and production of magnetic fields, and induced emfb.

Electrical measurements and measuring devices are investigated, along with alternating currents and circuits.

Fall semester - 3 lecs and 4 labs per week.

MP 220a: **Physics for Engineers III**
Instructor: **Prof. Smith**

A course for second year engineering students making use of calculus for development of theory and problem solving. Topics include statics, plane motion, work and energy, harmonic motion and hydrodynamics. Laboratory exercises are designed to give the student opportunity to apply the scientific method to verification of phenomena.

Fall semester - 3 lecs and 4 labs per week

Text: Sears & Zemansky, UNIVERSITY PHYSICS (4th edition)

MP 225b: **Physics for Engineers IV**
Instructor: **Prof. Saxon**
Prerequisite: **MP 220**

A course for second year engineering students covering heat measurement, heat transfer, thermodynamics, wave motion, acoustics, light, optics.

Winter semester - 3 lecs and 4 labs per week

Text: Sears & Zemansky, UNIVERSITY PHYSICS, (4th edition)

MP 230a: **Mathematics for Engineers I**
Instructor: **Prof. Fraser**
Prerequisites: **MP 100 and MP 105**

A more rigorous study of the theory of limit, the derivative and the integral together with a study of infinite series, curves, vectors, polar coordinates, three-dimensional analytic geometry and an introduction to computer programming.

Fall semester - 3 lecs per week

Text: A. W. Goodman, MODERN CALCULUS WITH ANALYTIC GEOMETRY

MP 235: **Mathematics for Engineers II**
Instructor: **Prof. Fraser**
Prerequisites: **MP 100 and MP 105**

A continuation of MP100 and MP105 covering differential calculus of functions of several variables, multiple integration and linear algebra.

Winter semester - 3 lecs per week

Text: A.W. Goodman, MODERN CALCULUS WITH ANALYTIC GEOMETRY

MP 300a: **Differential Equations I**
Instructor: **Prof. Fraser**
Prerequisites: **MP 230 and MP 235**

A study of differential equations covering methods of solution of first and second order equations in some detail, applications to problems in various fields, series solutions, higher order linear equations and Laplace Transforms.

Fall semester - 3 lecs per week

Text: Boyce and DiPrima, ELEMENTARY DIFFERENTIAL EQUATIONS AND BOUNDARY VALUE PROBLEMS

MP 305b: **Differential Equations II**
Instructor: **Prof. Fraser**
Prerequisites: **MP 230 and MP 235**

A continuation of MP300 dealing with systems of equations, numerical methods, boundary value problems, Fourier series and an introduction to partial differential equations.

Winter semester - 3 lecs per week

Text: Boyce and DiPrima, ELEMENTARY DIFFERENTIAL EQUATIONS AND BOUNDARY VALUE PROBLEMS.

MP 310a: **Electrical Circuits I**
Instructor: **Prof. Saxon**
Prerequisites: **MP 230 and MP 235**

Physics of electric fields, potential, capacitance, motion of ions in electric fields, current and resistance, D.C. measuring instruments and methods. The magnetic field, Ampere's law, Faraday's law, inductance, magnetic properties of matter.

Fall semester - 3 lecs and 2 labs per week

MP315b: **Electrical Circuits II**
Instructor: **Prof. Smith**
Prerequisites: **MP 230 and MP 235**

D.C. circuit analysis using Kirchoff's laws, superposition theorem, Thevenin's theorem, Norton's theorem, reciprocity

Dalta-Wye transformation, two, three and four terminal networks. Transient effects in inductance and capacitance circuits.

Sinusoidal currents and voltages, alternating current circuits, including resonance and A.C. bridges. Semiconductor devices and simple circuits.

Winter 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 studeid 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

PLANT SCIENCE

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

A continuation of PS10 Studies into 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. Lynch**

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. Lynch**

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 agronomic 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: **Profs. Bubar and Lynch**

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 semster - 2 lecs and 2 labs per week

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

PS 41b: **Field Crops Production II**
Instructors: **Profs. Bubar and Lynch**

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

Winter semester - 2 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.

PLANT SCIENCE

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 control are also discussed. Start greenhouse crops production study.

Fall semester - 1 lec and 2 labs per week

Text: Laurie, Kiplinger, Nelson COMMERCIAL FLOWER FORCING

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

A sequel to PS 47 that deals with the culture of individual greenhouse vegetable crops and the important florist crops. Carnations, chrysanthemums and roses are covered

extensively both in the classroom and the associated greenhouses. Some labs are conducted in off-campus greenhouses. Tours of the large commercial operations are also arranged.

Winter semester - 1 lec and 2 labs per week

Text: Same as for PS 47

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

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. Morley**

Fundamental principles and industry practices of growth, selection, moving and maintenance of trees, shrubs and ground covers are discussed as well as the uses of plant material 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. Morley**

A continuation of PS 50. Landscape design is introduced and drafting fundamentals are presented with special emphasis on the elements and principles of design and the systematic approach to design in the landscaping of residential sites.

Winter semester - 2 lecs and 4 labs per week

PLANT SCIENCE

PS 52a,b: **Plant Science Project**
Supervisors: **Plant Science Department staff**

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.

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

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 4 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:70a: **Landscape Techniques**
Instructor: **Prof. Morley**

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 from prepared plans.

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

A course with special emphasis on advanced arboricultural considerations including environmental and non-infectious diseases of trees, bracing and cabling, street trees, machinery, and diagnosis and evaluation of shade trees.

Fall semester - 3 lecs and 6 labs per week

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

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

Winter semester - 3 lecs and 6 labs per week.

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

Art and Design principles are examined through a study of plant and man-made materials with reference to its indoor-outdoor use. Landscape design and presentation techniques, the art of training and growing plants, as well as the art of pruning specialized plants are covered.

Fall semester - 3 lecs per week.

PLANT SCIENCE

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

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

Winter semester - 3 lecs per week

PS 75s: **Ornamental Horticulture Project**
Supervisor: **Prof. Morley**

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.

PS 100a: **Principles of Crop Production**
Instructor: **Prof. Bubar**

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 110a: **General Plant Science**
Instructor: **Prof. Shuh**

An introductory course in plant science for engineering students. The course will deal with the identification and production of some of the more common crop plants. Special attention will be given to the problems related to seedings, cultivation, and harvesting of these crops.

Fall semester - 2 lecs and 2 labs per week

Text: Martin, Leonard and Stamp, PRINCIPLES OF FIELD CROP PRODUCTION, (3rd. 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 1975-76 year. Similar, but not necessarily the same, courses will be planned for the 1976-77 year.

Greenhouse Crop Production (Forest Tree Seedlings)
Artifical Insemination
Dairy Farm Work
Groom Training
Meat Cutting
Horsemastership
Basic Farrier Training
Basic Christmas Tree Production
Maple Sap Production
Rabbit Production
Egg Production
CanFarm Record Systems
Operation and Repair of Farm Tractors
Basic Turf Production
Advanced Farrier Training
Instructing Home Gardeners
Intermediate Turf Production
Tree Fruit Production
Operation and Repair of Farm Machinery
Ornamental Horticulture
Farm Accounting
Advanced Beekeeping
Swine Herd Management
Strawberry Production
Blueberry Production
Basic Sheep Production
Basic Iron Work (Novices)
Advanced Sheep Production
Floral Design
Farm Welding
Power Saw Operation and Safety
Beef Production
Roadside Marketing

ENTRANCE REQUIREMENTS

These are specific for each course. In most cases, a candidate for admission must (a) be at least eighteen years of age, (b) present a satisfactory medical report, (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

Board at the Nova Scotia Agricultural College is $32.00 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 the Canada Department of Manpower. The amount of the assistance is determined by the department according to the student's financial responsibilites.

Young people who have been out of school for less than three years, who are not receiving unemployment insurance or assistance from other agencies, who are in a course of two weeks or longer duration, and who must live away from home during the course may qualify for a living allowance of $15.00 per week from the N.S.A.C. (Provincial Funds.)

APPLICATIONS

Adults should visit their nearest Canada Manpower Office and ask if they may be selected for training on the course or courses which meet their particular needs.

Young people 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, Agricultural College, Truro, N.S.

Location of Canada Manpower Centres in the Atlantic Region:.

Prince Edward Island

1. Dominion Building, Richmond Street, Charlottetown, P.E.I.
2. Federal Building, Central Street, Summerside, P.E.I.
3. University of P.E.I. Branch, Charlottetown, P.E.I.

New Brunswick

1. P.O. Box 1069, Moncton, N.B.
2. N.B. Institute of Technology, Mountain Road, Moncton, N.B.
3. Allaires Building, P.O. Box 518, Richibucto, N.B.
4. P.O. Box 568, Sackville, N.B.
5. P.O. Box 578, Shediac, N.B.
6. Moncton University Branch, Moncton, N.B.
7. Mount Allison University, Branch, Sackville, N.B.
8. Customs Building, 189 Prince William Street, Saint John, N.B.
9. 48 Maple Avenue, Sussex, N.B.
10. Saint John Institute of Technology, Saint John, N.B.
11. 93 Water Street, St. Stephen, N.B.
12. 205 St. Patrick Street, Bathurst, N.B.
13. 5B Adam Street, P.O. Box 610, Campbellton, N.B.
14. Federal Building, 22 Emerson Street, Edmundston, N.B.
15. Federal Building, Broadway, Grand Falls, N.B.
16. 626 Campbell Street, Fredericton, N.B.
17. Main Street, P.O. Box 370, Minto, N.B.
18. Federal Building, Pleasant Street, Newcastle, N.B.
19. Federal Building, Duke Street, Chatham, N.B.
20. Federal Building, Regent Street, Woodstock, N.B.

Newfoundland

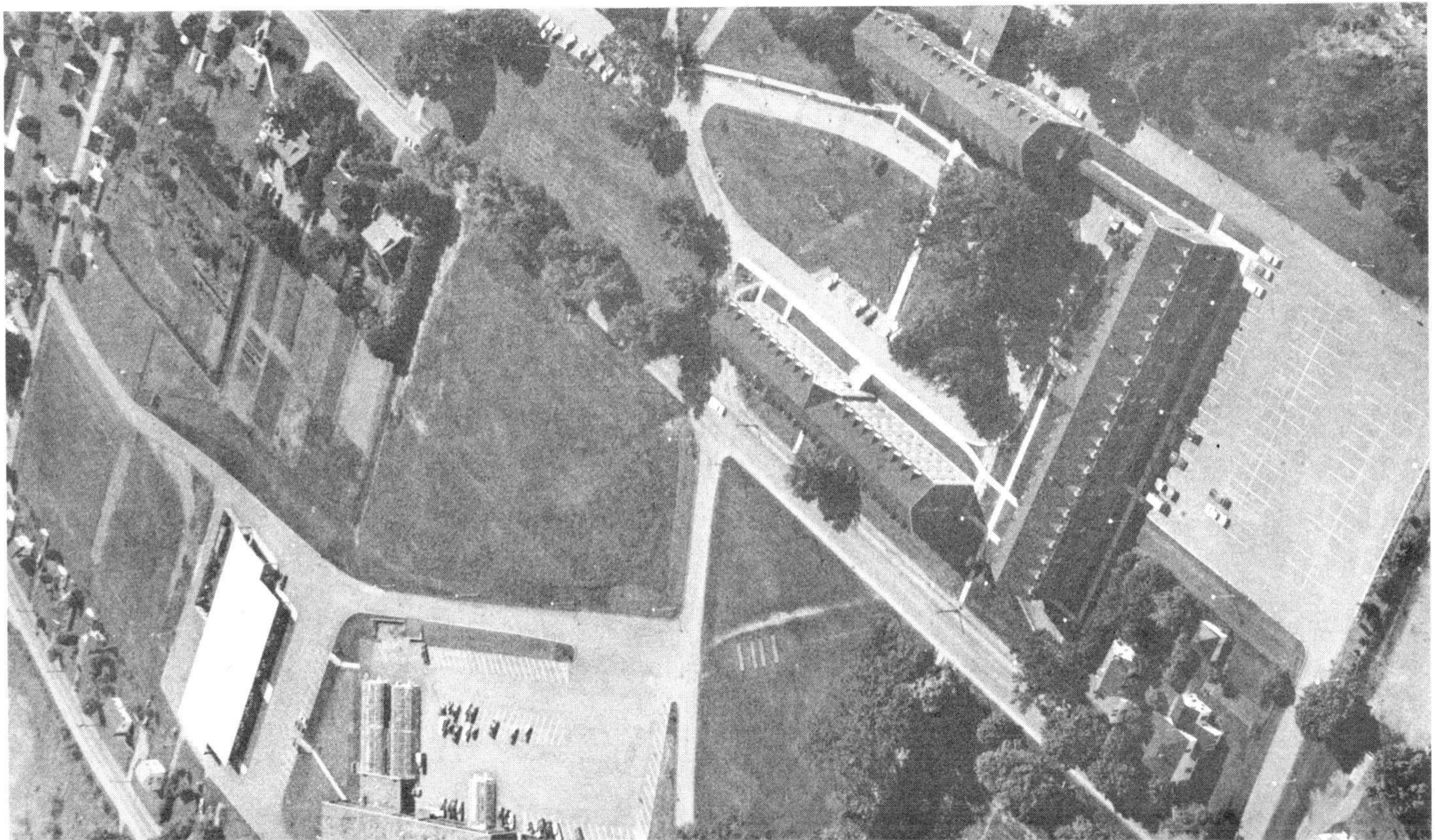
1. 4 Herald Avenue, Cornerbrook, Nfld.
2. New Mexico Drive, Harmon Drive, Stephenville, Nfld.
3. High Street, P.O. Box 480, Grand Falls, Nfld.
4. Gander, Nfld.
5. (Happy Valley), 108 Park Drive, Spruce Park, Goose Bay, Labrador, Nfld.
6. Shopping Plaza, Wabush Lake, Labrador, Nfld.
7. 391 Water Street West, P.O. Box 1900, St. John's, Nfld.
8. Newfoundland College of Fisheries, St. John's, Nfld.
9. Newfoundland College of Trades & Technical Branch, St. John's, Nfld.
10. Federal Building, Harbour Grace, Nfld.

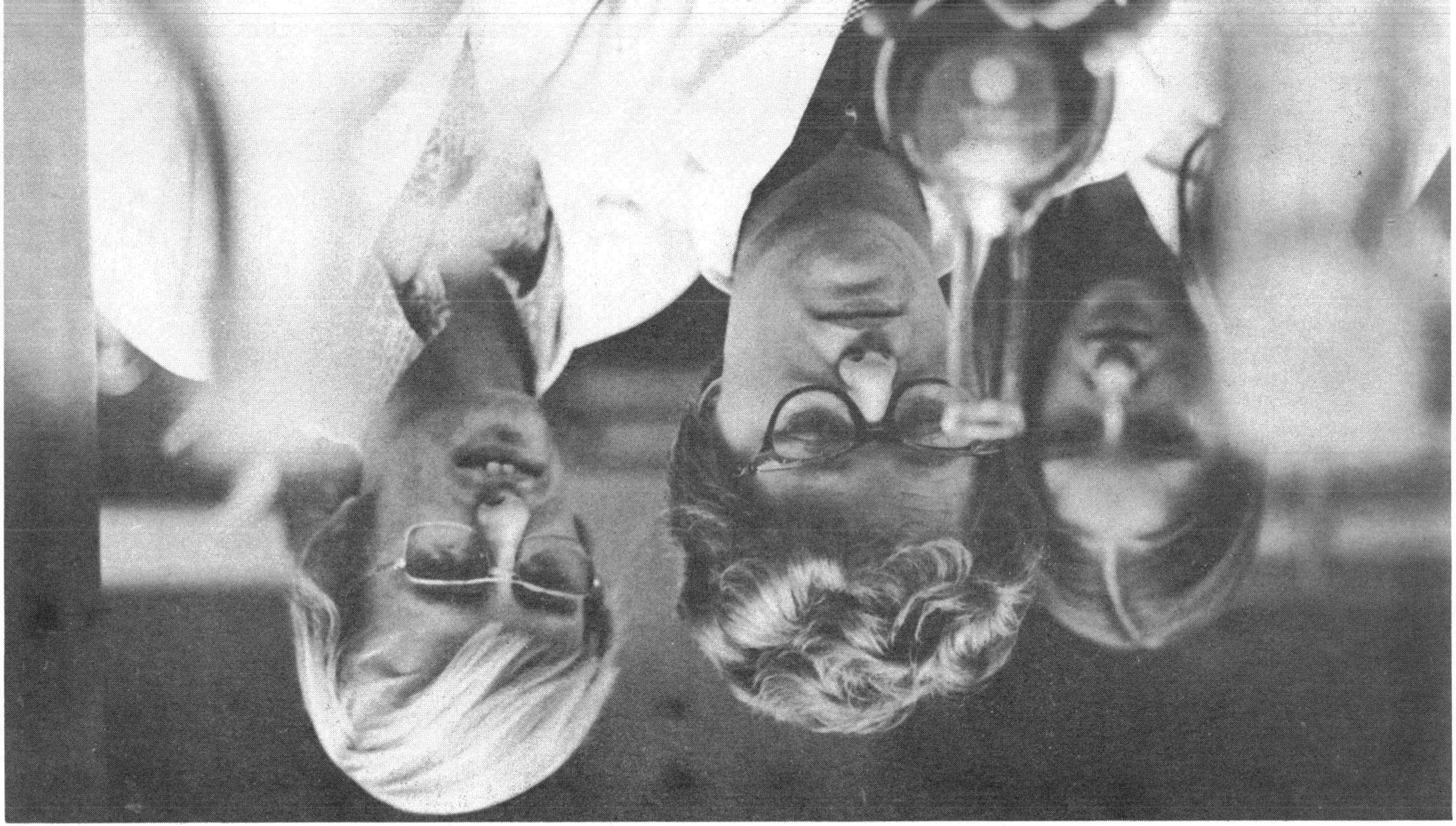
11. St. Gabriel's Hall, Marystown, Nfld.
12. Memorial University Branch, St. John's, Nfld.

Nova Scotia

1. 50 Victoria Street, Box 248, Amherst, N.S.
2. 59 Main Street, Glace Bay, N.S.
3. 35 Donald Street, New Glasgow, N.S.
4. 31 Front Street, Pictou, N.S.
5. St. Francis Xavier University, Antigonish, N.S.
6. 211 Prince Street, North Sydney, N.S.
7. Sydney Mines, N.S.
8. P.O. Box 669, Port Hawkesbury, N.S.
9. Federal Building, Railway Street, Inverness, N.S.
10. P.O. Box 220, Mulgrave, N.S.
11. P.O. Box 1120, Sydney, N.S.
12. P.O. Building, Plummer Avenue, New Waterford, N.S.
13. 15 Arlington Place, Truro, N.S.
14. Bridgewater Shopping Plaza, P.O. Box 680, Bridgewater, N.S.
15. Lunenburg, N.S.
16. 2nd Floor, Twin Tower, Royal Bank Building, 46 Portland Street, Dartmouth, N.S.
17. P.O. Box 3250, Halifax South Postal Station, Halifax, N.S.
18. Halifax North Branch, 5450 Cornwallis Street, Halifax, N.S.
19. Sunny Side Shopping Mall, P.O. Box 702, Bedford, N.S.
20. Spryfield, N.S.
21. Dalhousie University Branch, Halifax, N.S.
22. St. Mary's University Branch, Halifax, N.S.
23. Mount St. Vincent's University Branch, Halifax, N.S.

24. Federal Building, 495 Main Street, Kentville, N.S.
25. 87 Gerrish Street, Windsor, N.S.
26. Acadia University Branch, Wolfville, N.S.
27. 164 Main Street, Liverpool, N.S.
28. 13 Willow Street, Yarmouth, N.S.
29. P.O. Box 879, Digby, N.S.
30. P.O. Box 819, Shelburne, N.S.





SCHOLARSHIPS

ENTRANCE SCHOLARSHIPS [DEGREE COURSES]

NOVA SCOTIA INSTITUTE OF AGROLOGISTS SCHOLARSHIP

The Nova Scotia Institute of Agrologists has provided a scholarship of $250. 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 to 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 award, 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.

PROVINCIAL SCHOLARSHIPS: NOVA SCOTIA, NEW BRUNSWICK, AND PRINCE EDWARD ISLAND

The Provinces of Nova Scotia, New Brunswick and Prince Edward Island offer scholarships to their residents entering the Degree Course at the Nova Scotia Agricultural College with high marks. Scholarships are awarded on the basis of Christmas and Easter school marks of the matriculation year and a recommendation from the Principal or of final school marks of the matriculation year.
Application on the basis of Christmas and Easter marks must be made before May 15; candidates with high final school marks will be considered without an application. Candidates are urged to apply for consideration on the basis of school marks and a recommendation.

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.

ENTRANCE SCHOLARSHIPS [DEGREE OR TECHNICIAN COURSE]

NOVA SCOTIA AGRICULTURAL COLLEGE ALUMNI SCHOLARSHIP

The Nova Scotia Agricultural College Alumni Association offers a scholarship of $300. to a worthy student entering the first year of the Degree or Technician Course. Academic standing and financial need will be taken into consideration in awarding the scholarship. 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 a District Federation of Agriculture.

Selection will be made on the following basis:

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 technician 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.

ENTRANCE SCHOLARSHIPS [TECHNICIAN COURSE]

MARITIME CO-OPERATIVE SERVICES LTD. BURSARIES

Maritime Co-operative Services Ltd. offers three bursaries of $200. each to students entering the Technician Course.

The selection will be made on the following basis: (a) the recommednation 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 Maritime Co-operative Services Limited, 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 a daughter of a Federation member

and who is enrolled in 1976-77 in the Technician Course at this institution. The scholarship will be payable in two parts: $50. on completion of the first year 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.

PROVINCIAL SCHOLARSHIPS: NOVA SCOTIA AND NEW BRUNSWICK

The provinces of Nova Scotia and New Brunswick offer scholarships of $200. to their residents entering one of the Technician Courses at the Nova Scotia Agricultural College with an average of 80% or better.

CONTINUATION SCHOLARSHIPS [DEGREE COURSE]

(For students at the Nova Scotia Agricultural College)

THE NOVA SCOTIA FEDERATION OF AGRICULTURE SCHOLARSHIP

The Nova Scotia Federation of Agriculture offers a scholarship of $150. to a resident of Nova Scotia who has completed the work of the first year of the Degree Course and is entering the second year. Financial need and academic standing will be considered in making the award. No application is necessary.

GULF OIL CANADA LIMITED

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 $150. 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, NEW BRUNSWICK, AND PRINCE EDWARD ISLAND

The Provinces of Nova Scotia, New Brunswick and Prince Edward Island offer scholarships to their residents registered in the second or third 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.

CONTINUATION SCHOLARSHIPS

(DEGREE, TECHNICIAN AND TECHNOLOGIST)
(For students at the Nova Scotia Agricultural College)

ATLANTIC PROVINCES HATCHERY FEDERATION SCHOLARSHIP

The Atlantic Provinces Hatchery Federation offers a scholarship of $200. 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.

CONTINUATION SCHOLARSHIPS
[TECHNICIAN AND TECHNOLOGIST]
(For students at the Nova Scotia Agricultural College)

THE NOVA SCOTIA FEDERATION OF AGRICULTURE SCHOLARSHIP

The Nova Scotia Federation of Agriculture offers a scholarship of $150 to a resident of Nova Scotia who has completed the work of the first year of the Technician Course and is entering the second year. Financial need and academic standing will be considered in making the award. No application is necessary.

PROVINCIAL SCHOLARSHIPS: NOVA SCOTIA AND NEW BRUNSWICK

The provinces of Nova Scotia and New Brunswick offer to their residents enrolled in one of the Second Year Technician Courses or in the Technologist Course a scholarship of $200., provided that an average of at least 80% has been attained on the work of the previous year.

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 residents of Maine. The tuition is a variable figure, but the arrangement represents a saving of approximately $1,000 per year.

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.

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.

MARITIME CO-OPERATIVE SERVICES LIMITED SCHOLARSHIP

Maritime Co-operative Services Limited 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

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

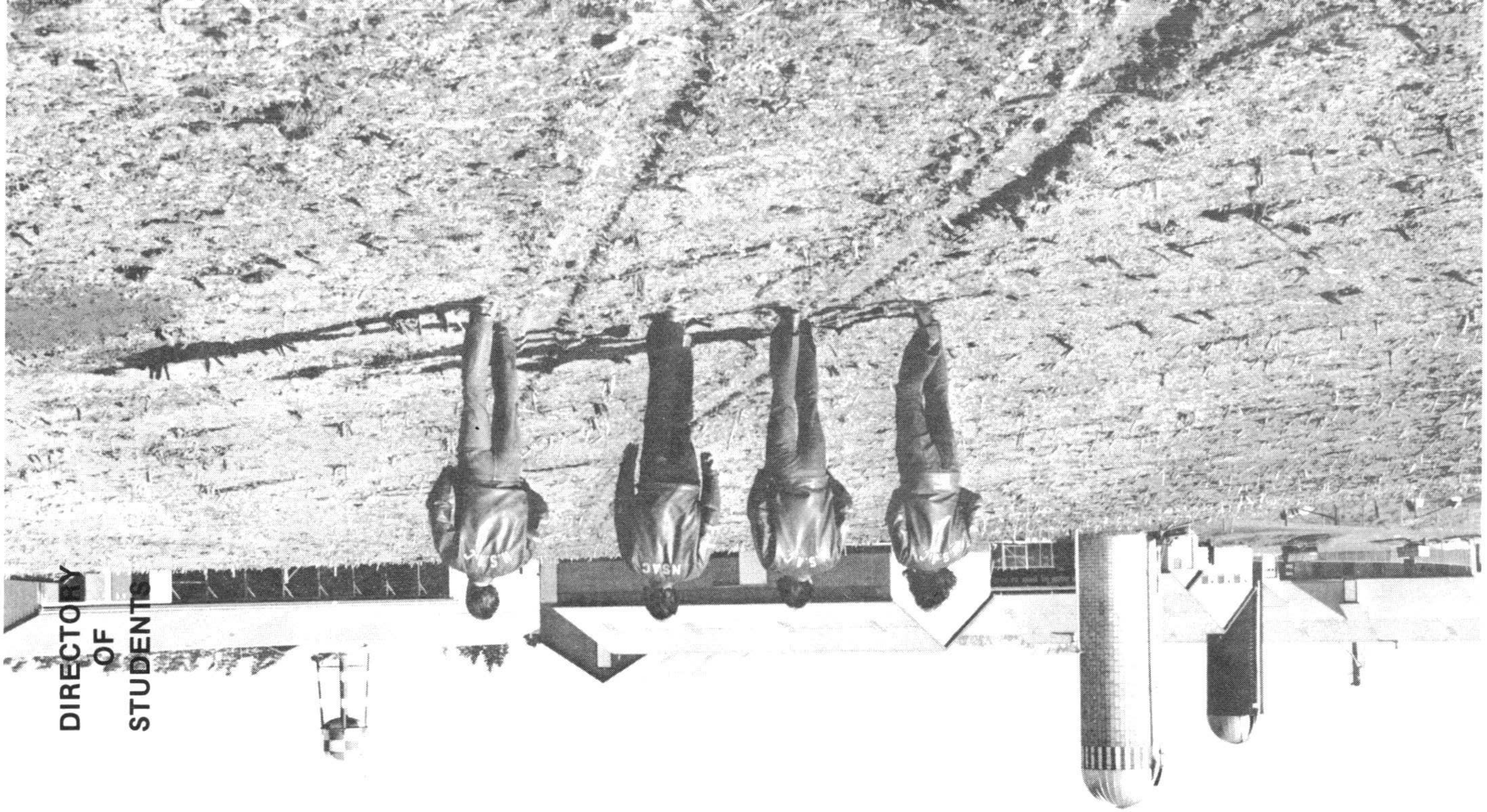
The Nova Scotia Veterinary Medical Association provides

a prize of $50. to a deserving student who excels in the Animal Physiology and Pathology 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.

DIRECTORY OF STUDENTS



NOVA SCOTIA AGRICULTURAL COLLEGE
ENROLLMENT 1975-76

COURSES LEADING TO B.Sc. [AGR.] OR PRE-VET

First Year—Class of '77

Wanda Alexander, P. O. Box 1312, St. Stephen, N. B.
David Allen, Wellington, R. R. #2, P. E. I.
Alan Andersen, R. R. #2, Kentville, N. S.
Rollin Andrew, Milton, R. R. #2, Winsloe, P. E. I.
Karen Balloch, 68 Portledge Avenue, Moncton, N. B.
Mary Barry, 146 Ridgeway Street, Box 1331, St. John, N.B.
Yves Berube, 493 Victoria Street, Dalhousie, N.B.
Eloise Bezanson, Chester Basin, R.R. #1, N.S.
Ronald Boone, 63 Neville Street, Dominion, N.S.
Joseph Brennan, Bath, R.R. #1, N.B.
Carol Bubar, 19 North Street, Truro, N. S.
Paul Archie Bubar, Hartland, R. R. #5, N. B.
Susan Burbridge, 17 Winchester Avenue, Halifax, N. S.
Barrie Carnat, P. O. Box 14, Englishtown, N. S.
Thane Clark, Wilmot Valley, Kensington, R. R. #4, P. E. I.
Clinton Cogswell, Belcher Street, Port Williams, N. S.
William Cole, R. R. #4, Middleton, N. S.
Carrie Crosby, P. O. Box 56, Rothesay, N. B.
Peter Dawson, P. O. Box 195, Bay Roberts, Nfld.
Ralph DeLong, R. R. #1, New Germany, N. S.
Ian Dickieson, New Glasgow, P. E. I.
Claude Dube, R. R. #4, Grand Falls, N. B.
Michael Edwards, P. O. Box 9022, St. John's, Nfld.
John Elliott, Anagance, R. R. #2, Kings County, N. B.
Lynn Elliott, 30 Robie Street, Amherst, N. S.
Jo-Anne Featherstone, 8 Ivy Street, P. O. Box 746, Greenwood, N. S.
David Feindel, Aylesford, Kings County, N. S.
Michele Fillmore, 44 Centennial Drive, Apt. 10, St. John, N.B.
David Francis, Crapaud, P. E. I.
Karen Gallant, 135 Milford Road, Saint John, N. B.
Andra Gerry, P. O. Box 16, Marion Bridge, N. S.
Cheryl Gilmore, Lake Road, R. R. #1, Rothesay, N. B.
Kirsten Goodman, 95 Temperance St., New Glasgow, N.S.
Nancy Graham, 6 Concord Street, Glace Bay, N. S.

John Greenough, Newport, R.R. #3, Hants County, N.S.
Owen Hachey, 888 Chaplin Is. Road, Newcastle, N. B.
Derek Hanscome, Aroostock Junction, New Brunswick ck
Peter Harrison, 14 Grand Street, Yarmouth, N. S.
Roger Henry, 158 Nassau Street, Charlottetown, P. E. I.
Jennifer Holt, P. O. Box 136, Petitcodiac, N. B.
Wanda Horwath, 3731 Emerald St., New Waterford, N.S.
Robert Howard, Bradalbane, R.R. #1, P.E.I.
Kimberlee Hughes, R. R. #1, Wolfville, N. S.
Richard Jackson, 183 Windward Crescent, Pointe Claire, Quebec
Donna Johnston, 339 Beaver Street, Summerside, P. E. I.
Susan Johnston, Golden Grove Rd., R.R. #4, St. John, N.B.
Vicky Jolly, 546 Main Street, Kentville, N. S.
Ardyth Jones, 180 Sunset Drive, Fredericton, N. B.
Stephen Justason, Pennfield, Char. County, N. B.
Nick Kelly, 73 Terra Nova Road, St. John's, Nfld.
Maureen Kennah, 444 Rust Bank Ct., Bathurst, N.B.
Gregory Kennedy, P. O. Box 332, Charlottetown, P. E. I.
Julie Kerr, 5 Cross Road, Dartmouth, N. S.
Barry Langille, R. R. #1, Brookfield, N. S.
Chrisandra Lay, R. R. #1, Brookfield, N. S.
Carl LeBlanc, Wedgeport, Yarmouth County, N. S.
Alan Leck, 39 Ernest Avenue, Dartmouth, N. S.
Margaret Leonard, R. R. #3, Truro, N. S.
David Lewis, East Margaretsville, Annapolis County, N. S.
Mary Virginia Lewis, St. Peter's Bay, P. E. I.
Rodney Lyons, 18 Young Street, Fredericton, N. B.
Mary Matthews, P.O. Box 16, Cleveland, N.S.
Elizabeth Mellish, New Perth, Cardigan, R. R. #6, P. E. I.
Ralph Messer, 202 St. Lawrence Avenue, Oromocto, N. B.
Janet Morehouse, Noel, R. R. #1, Hants County, N. S.
Gary Morton, 8 Vimy Road, Truro, N. S.
Shane Murphy, Montague, R. R. #4, P. E. I.
Cathy MacDougall, 27 North View Drive, Antigonish, N. S.
Thora Lynn MacDougall, 11 Centennial Drive, Apt. 1, Sherwood, P. E. I.
Garry McGory, 33 Barnes Road, St. John's, Nfld.
Katherine McGowan, Lower Eel Brook, Yarmouth, N. S.
David Mackay, 161 Purcell's Cove Road, Halifax, N. S.
Frances McKenzie, 705 Sterling Road, Glace Bay, N. S.

Jennifer Neilson, R. R. #6, Fredericton, N. B.
Clive Nickerson, Keswickridge, R. R. #1, N. B.
Jill Nickerson, Box 5260, R. R. #3, Yarmouth, N.S.
Thomas O'Brien, Box 1355, R. R. #1, Yarmouth, N. S.
Eric Patterson, Wolfville, R. R. #1, Kings County, N. S.
Denise Perron, 218 Duke Street, Summerside, P. E. I.
Brian Power, 1042 Highland Avenue, New Minas, N. S.
Rose Pritchard, P. O. Box 833, Bedford, N. S.
Susan Pye, 18 Dahlia Street, Dartmouth, N. S.
Wilfred Reader, 284 Pennywell Road, St. John's, Nfld.
Gail Rennie, R.R. #1, Boutilier's Point, N.S.
Sheila Ryan, 112 Military Road, St. John's, Nfld.
Frank Slipp, R. R. #2, Woodstock, N. B.
David Taylor, 172 Valleyview Crescent, Saint John, N. B.
Elizabeth Taylor, Wood Island West, P.E.I.
Peter Toner, R. R. #1, Grand Falls, N. B.
Charles Tupper, R.R. #3, Shubenacadie, N.S.
David Vickery, R.R. #5, Geln Road, Antigonish Co., N.S.
N.S.
Dawna Vickery, R.R. #5, Purl Brook, Antigonish Co., N.S.
Michael Wolter, R. R. #1, Clarenceville, Missisquoi, P.Q.
Kathy Woolaver, Newport, Hants County, N. S.
Carolyn Wright, 25 Hillwood Crescent, Halifax, N. S.

Second Year—Class of '76

Dwight Balzer, Petitcodiac, N. B.
Stephen Baxter, 162 Burnyeat Street, Truro, N. S.
Everett Beck, R. R. #5, Debec, N. B.
Henry Braam, R. R. #2, Salisbury, N. B.
Joe Calder, 61 MacFarlane Street, Springhill, N. S.
Elaine Clark, North Wiltshire, R. R. #1, P. E. I.
Linda Coates, R. R. #3, Norton, Kings County, N. B.
Robert Cogswell, Port Williams, Kings County, N. S.
Peggy Cosman, 40 Birch Cres., Kingshurst, St. John, N.B.
Paul Dunphy, Site 73, Box 6, Torbay Road, St. John's, Nfld.
Ann Fillmore, R. R. #1, Box 100, Bathurst, N. B.
Catherine Gallivan, Lakeville, R.R. #1, Carleton Co., N.B.
Russell Gammon, R. R. #2, Pictou, N. S.
Paul Geddes, 8 Parker Street, P. O. Box 604, Truro, N. S.

Otto Goulding, 85 Cumberland Crescent, St. John's, Nfld.
Debra Holmes, 66 Church Street, Antigonish, N. S.
Philip Holmes, Box 485, St. Stephen, N. B.
Becky Hughes, Box 734, Greenwood, N. S.
Aidan Johnson, Northern Bay, Newfoundland
Edward Kendall, 6 Bonaventure Ave., St. John's, Nfld.
Mary Kenny, P. O. Box 532, Sydney, N. S.
Lynn Lavers, P. O. Box 243, Kensington, P. E. I.
Wendell Lemmon, R.R. #1, Upper Musquodoboit, N.S.
James Marr, Anagance, R. R. #2, N. B.
Gregory Muise, Quinan, Yarmouth County, N.S. . S.
Beverley MacDonald, Mount Stewart, R.R. #5, P.E.I. #5, P.
Daniel MacDonald, 128 Audrey Road, Riverview, N. B.
Elizabeth MacDonald, Crapaud, R. R. #1, P. E. I.
Susan MacDonald, R.R. #2, Marion Bridge, N.S.
Barbara McLaughlin, Andover, R. R. #2, N. B.
Bernard MacLennan, 48 James Street, Truro, N. S.
Cynthia MacLeod, R. R. #3, Howie Centre, Site 16 Comp. #1, Sydney, N. S.
David MacNeil, Main Street, Florence, N.S.
Beverley MacPhail, R.R. #2, Marion Bridge, N.S.
James Neary, 63 Roosevelt Avenue, Truro, N. S.
Fraser Nicholson, 194 South Street, Glace Bay, N.S.
Thomas O'Neill, 1995 Prince Arthur Street, Halifax, N. S.
James Profit, 356 Maple Avenue, Summerside, P.E.I.
Gerald Roberts, Kinkora, P. E. I.
Claredon Robicheau, Meteghan, Box 31, Digby County, N.S.
John Robinson, R. R. #3, Middleton, N.S.
Robert Rock, 44 Summit Street, Dartmouth, N. S.
Patricia Ross, 23 Shore Road, Sydney Mines, N.S.
Barry Russell, R. R. #1, Hillsborough, Albert County, N.B.
Stephen Russell, Amherst, R. R. #6, N. S.
Ingrid Schaad, Tatamagouche, R. R. #1, N. S.
Alan Smith, 27 Archibald Street, Truro, N. S.
Sheena Smith, 71 Richardson Avenue, Sydney, N. S.
Stephen Swan, Tatamagouche, R. R. #2, N. S.
David Sweeney, Box 2020, Yarmouth, R. R. #3, N. S.
Mary Toogood, R. R. #2, Brierly Brook, N. S.
Harry Van der Linden, Box 58, Heatherton, N. S.
Theodore Van Lunen, 25 Swanton Drive, Dartmouth, N.S.

Michael Vermeer, R. R. #2, Antigonish, N. S.
Lynn Wagner, P. O. Box 253, Berwick, N. S.
Martin Walker, 3 Hillside Avenue, Dartmouth, N.S.
Robert Wentzell, 1 Ellenvale Avenue, Dartmouth, N.S.
Stanley Wentzell, R. R. #1, Brooklyn, Queens County, N.S.
Phyllis Woodside, Kensington, R. R. #6, P. E. I.
Heather Wyatt, Site 4, Box 6, R. R. #1, Windsor Junction, Halifax County, N. S.

COURSE LEADING TO B.E. [AGR.]

First Year—Class of '78

Donald Anderson, P. O. Box 1372, Sussex, N. B.
Stephen Arbing, O'Leary, R. R. #3, P. E. I.
Arnold Beyer, R. R. #3, Norton, Kings County, N.B.
Mark Dawson, 10 Sherwood Court, Fredericton, N.B.
Donald Feldman, 88 York Street, Glace Bay, N.S.
Shaun Gillis, Little Pond, Florence, N. S.
Craig Mitchell, 5 Siesta Drive, P. O. Box 142, Truro, N.S.
Gerard MacDonell, Elmsdale, R. R. #1, Hants County, N.S.
John Robert MacKeigan, 4 Fletcher Street, Glace Bay, N.S.
Willis Payson, Bear River, Digby County, N. S.
John Rudderham, R. R. #1, North Sydney, N.S.
Peter Versloot, R. R. #3, Keswick, N. B.

Second Year—Class of '77

Colin Crabbe, Perth-Andover, N. B.
Kenneth Jeffers, 168 Young Street, Truro, N. S.
Martin Porskamp, Canning, R. R. #5, Kings County, N. S.
Glenn Ross, 48 Salter Avenue, Truro, N. S.
Stephen Tweedie, Kouchibouquac, Kent County, N.B.
Andrew Vermeulen, Milford Station, Hants County, N.S.
Robert Wilson, R. R. #1, Stanley, N. B.

Third Year—Class of '76

Laurie Cochrane, Walton, R. R. #1, Hants County, N. S.
Richard Melvin, Canning, R. R. #2, Kings County, N.S.
Wayne Wood, Mount Herbert, Charlottetown, R. R. #5, P.E.I.

TECHNICIAN DIPLOMA

First Year—Class of '77

William Akey, 82 Dominion Street, Truro, N.S.
Karen Arsenault, 171 Dorchester Street, Charlottetown, P.E.I.
Leslie Babin, Box 6, Site 9, R.R. #2, Armdale, N.S.
John Besaw, P.O. Box 44, Lourdes, Port au Port, Nfld.
Charles Boyd, Bath, R.R.#1, Carleton County, N.B.
David Britten, 2045 Poplar Street, Halifax, N.S.
Betty Brown, R.R. #1, Kentville, Kings County, N.S.
James Brown, 2 Veazey Street, St. Stephen, N.B.
John Campbell, Upper Rawdon, Hants County, N.S.
Robert Campbell, Arthurette, R.R. #1, N.B.
Joseph Carmichael, Albany, R.R. #2, P.E.I.
David Carragher, Kelly's Cross, P.E.I.
Kevin Cashin, 16 Campbell Street, North Sydney, N.S.
Shannon Chandler, Maxwellton, R.R. #1, Salmon River, Digby County, N.S.
James Colburne, 81 McLean Street, Truro, N.S.
Laurie Cole, R.R. #6, Kingston, Kings County, N.S.
Charles Connors, R.R. #1, Dorchester Crossing, N.B.
Rodney Conoley, Box 85, Murdochville, Quebec
John Craswell, Tryon, Albany, R.R. #1, P.E.I.
Brian Crouse, 184 Victoria Road, Bridgewater, N.S.
Paul Crouse, R.R.#6, Bridgewater, N.S.
John Cummiskey, Charlottetown, R.R. #5, P.E.I.
Jean-Marie Cyr, Box 178, Ste. Anne Madawask, N.B.
Faye Darling, Rothesay, R.R. #4, Kings County, N.B.
Martin Dolan, 189, R.R. #1, Doyle's, O'Regan's, Nfld.
Roger Freeman, Bear River, R.R. #1, N.S.
Blaine Friars, R.R. #3, Sussex, N.B.
Paul Gaunce, R.R. #1, Sussex, N.B.
Robert Glover, Abney, Murray River, R.R. #1, P.E.I.
Margaret Haley, 266 Kingsville Road, Saint John, N.B.
Gary Halley, 60 Thorburn Road, St. John's, Nfld.
Allen Hamilton, Florenceville, R.R. #1, N.B.
Pauline Harper, 16 Arlington Avenue, Halifax, N.S.
Dale Henderson, R.R. #2, River John, Pictou County, N.S.
Sandra Higgins, 1507 Highland Street, Holliston, Mass.
Karen Hoddinott, 10 Bank Road, Grand Falls, Nfld.
Bernadette Hughes, 836 LaHave Street, Bridgewater, N.S.

Kerry Jay, Kinkora, P.E.I.
Marcus Jeffers, Mount Pleasant, R.R. #1, Oxford, N.S.
Maureen Kelly, 1731 King's Road, Sydney, N.S.
Harry Knight, Young's Cove Road, Queens County, N.B.
Kevin Little, Box 14, Middleton, N.S.
John Lundrigan, 24 Queen Street, Corner Brook, Nfld.
Roderick Lutes, 30 Garden Hill Avenue, Moncton, N.B.
Louis Melanson, Haute-Aboujagane, R.R. #1, N.B.
Kier Miller, Amherst, R.R. #4, N.S.
Wilfred Moase, Kensington, R. R. #4, P.E.I.
Richard Moskovits, 40 Tobin Crescent, St. John's, Nfld.
Michael Mulligan, Kinkora, P.E.I.
Allan MacDonald, R.R. #2, Hatfield Point, King's Co., N.B.
Maurice MacDonald, York Post Office, R.R. #1, P.E.I.
Pearl MacDonald, Wellington, R.R. #1, P.E.I.
Elton MacKay, 53 Washington Avenue, Natick, Mass.
Richard MacKenzie, New Wiltshire, R. R. #2, P.E.I.
Nelson MacKinnon, Richmond, R.R. #1, P.E.I.
Michael McLaughlin, Grand Falls, R.R. #1, N.B.
George MacLellan, 16 Northview Drive, Antigonish, N.S.
John MacLellan, Maitland, R.R. #1, Hants County, N.S.
Charlotte MacLeod, 14 Maple Street, Charlottetown, P.E.I.
Brian Nichols, R.R. #1, Belmont, Colchester County, N.S.
Joseph O'Brien, R.R. #2, Newport, Hants County, N.S.
Jeffery O'Reilly, 9 Morrison Place, St. John's, Nfld.
Anne Parson, Bloomfield, Bonavista Bay, Nfld.
Ferry Patterson, R.R. #1, Walton, Hants County, N.S.
Jocelyn Peake, 2580 Robie Street, Halifax, N.S.
Pauline Percy, Granville Ferry, Annapolis County, N.S.
Ross Perry, Box 83, Andover, N.B.
Lynette Power, Belfast, R.R. #3, P.E.I.
Roderick Pratt, St. Peter's, P.E.I.
John Purdy, Truro, R.R. #1, N.S.
George Reagh, Box 579, Middleton, N.S.
Trevor Richardson, R.R. #4, New Glasgow, N.S.
Gary Robinson, Winsloe, R.R. #1, P.E.I.
David Scammell, R.R. #3, Truro, N.S.
James Sceviour, Box 132, R.R. #1, Lewisporte, Nfld.
William Smit, R.R. #3, Waterville, Kings County, N.S.
Deborah Smith, R.R. #1, Tantallon, Glen Haven, N.S.
Stephen Wayne Smith, Box 99, Middleton, N.S.

Thomas Toner, P.O. Box 27, Grand Falls, N.B.
Gerard Toole, South Melville, Bonshaw, P.E.I.
David Totten, 1488 Prince Street, Truro, N.S.
Heather Tunnah, Petite Riviere, Lunenburg County, N.S.
Barry Uyterlinde, Winsloe, R.R. #1, P.E.I.
Gerard VanDyk, R.R. #1, Caledonia, Queen County, N.S.
Jacob Verboom, R.R. #2, Middle Musquodoboit, N.S.
Peter Vissers, R.R. #5, Bridgewater, N.S.
Randall Wallace, P.O. Box 26, Point Du Chene, N.B.
Pius Walsh, Mount Stewart, R.R. #5, P.E.I.
Catherine Watt, 105 Normandy Avenue, Truro, N.S.
Brian White, R.R. #3, Salt Springs, Pictou County, N.S.
Robert Whitman, 135 Queen Street, Truro, N.S.
Gary Wood, Alexandra, P.E.I.

Second Year —Class of '76

Carolyn Ainsworth, P.O. Box 66, Fredericton, N.B.
William Bissett, Bissett Road, Dartmouth, R.R. #1, N.S.
Leo Breau, 95 Cornhill Street, Moncton, N.B.
Diane Brodie, 15 Beechwood Crescent, Fredericton, N.B.
Douglas Cameron, Albany, P.E.I.
Brian Casey, Upper Rawdon, Hants County, N.S.
Philip Chiu, 2055 Elmhust Ave., Apt. 404, Montreal, P.Q.
Donald Cox, R.R. #1, Truro, N.S.
Ross Cox, R.R. #1, Maitland, Hants County, N.S.
Beverley deWitte, 207 W. Penna, Urbana, Illinois 61801
John Dillman, Milford Station, Hants County, N.S.
Frederika Dunnewold, R.R. #2, Scotsburn, N.S.
John Eikelenboom, Box 103, Shubenacadie, N.S.
Peter Eisener, 700 Portland Street, Dartmouth, N.S.
Neil Erb, Parrsboro, Box 7, N.S.
Oscar Fanjoy, Sussex, R.R. #4, N.B.
Barrett Foster, Cambridge Station, Kings County, N.S.
Ian Harbone, 15 Hillcrest Street, Sackville, N.B.
Karen Hardy, Alberton, P.E.I.
Caye Harris, Box 99, Bear River, Digby County, N.S.
Brenda Heron, R.R. #5, Charlottetown, P.E.I.
Byron Hovey, 77 Pitt Street, Apt. H, Saint John, N.B.
Charles Jacob, R.R. #1, Bloomfield, N.B.
Arden Little, Wentworth, N.S.

Terry Lister, Harvey Station, N.B.
Vernon Lounsbury, R.R. #2, Petitcodiac, N.B.
Shirley Melvin, 46 Canary Crescent, Halifax, N.S.
Gary Meyer, R.R. #3, Centreville, N.S.
Marquerite Miller, 3199 Connaught Avenue, Halifax, N.S.
James Muise, Box 201, Quinan, Yarmouth, N.S.
Gary Myrden, 32 West Valley Road, Corner Brook, Nfld.
Walter Myrden, 32 West Valley Road, Corner Brook, nfld.
Timothy MacAfee, 15 Louisville Street, Oromocto, N.B.
Damon McCarthy, Grand Falls, R.R. #1, N.B.
Carroll MacDonald, 11 Belmont Avenue, Stellarton, N.S.
Kevin MacDougall, 11 Centennial Drive, Apt.1, Sherwood, P.E.I.
Robert MacKenzie, R.R. #2, Scotsburn, N.S.
Dwight MacLean, Miscouche, R.R. #1, P.E.I.
Stewart MacPherson, 151 Bristol Avenue, Liverpool, N.S.
Roderick Nelson, Truro, R.R. #5,N.S.
Kenzie Patterson, R.R. #1, Bras d'Or, N.S.
Janet Power, R.R. #5, Charlottetown, P.E.I.
Donald Rafuse, Waterville, Kings County, N.S.
Gregory Riordan, R.R.#1, Bathurst, N.B.
Donald Robbins, R.R. #2, Vernon, P.E.I.
Michael Roberts, Kinkora, R.R. #1, P.E.I.
Stephen Shapre, R.R. #1, Brookfield, N.S.
Bruce Simmons, 164 East Valley Road, Corner Brook, Nfld.
Carl Stephenson, Florenceville, N.B.
Stephen Stewart, 26 Spring Street, Amherst, N.S.
Mary Van den Broek, Cardigan, P.E.I.
Bernard Van Gaal, R.R. #1, Aroostock, N.B.
John Van Kessel, R.R. #1, New Glasgow, N.S.
Henry VanVonderen, R.R. #1, AFton, N.S.
Jacob Verhulp, R.R. #7, West Royalty, P.E.I.
Ronald White, Tusket, Yarmouth County, N.S.
Joanne Wilting, R.R. #2, Cornwall, P.E.I.

TECHNOLOGY DIPLOMA

First Year —Class of '77

Beverley Bevin, 309 Windmill Road, Dartmouth, N.S.
Deborah Clark, Main Street, Mahone Bay, N.S.
Brian Cochrane, 27 Frink Street, Saint John, N.B.
Brad Crewe, 35A Mountain Avenue, Dartmouth, N.S.
Deborah DeAdder, R.R. #2, Kentville, N.S.
Laurel d'Entremont, Lower West Pubnico, N.S.
Leslie Gilchrist, 42 Rosewood Crescent, Moncton, N.B.
Anne Gray, R.R. #2, Box 45, Redbank, N.B.
Randy Hatt, 20 James Street, Kentville, N.S.
Anita Jackson, Amherst, R.R. #2, N.S.
Gaile Langille, Oakland, Mahone Bay, R.R. #2, N.S.
Anne LeLacheur, Vernon Bridge, P.E.I.
Carol Macomber, R.R. #1, Maitland, Hants County, N.S.
Brian McCullum, R.R. #1, Sussex, N.B.
Ian MacDonald, 2050 Robie Street, Halifax, N.S.
Mary MacDonald, 81 Maple Street, Moncton, N.B.
George MacLeod, R.R. #6, St. Stephen, N.B.
Sharon O'Neill, 38 Main Street, Glace Bay, N.S.
Earl Perry, St. Eleanors, Summerside, R.R. #1, P.E.I.
Norman Phinney, Reserve Mines, Cape Breton, N.S.
Evelina Smith, 56 Balsam Circle, Lower Sackville, N.S.
Christopher Trider, 19 Cleveland Cescent, Dartmouth, N.S.

FINAL YEAR—CLASS OF '76

Shelagh Barnes, 370 Hawthorne Street, Windsor, N.S.
Elaine Beaulieu, 173 Montgomery Street, Fredericton, N.B.
Patricia Berube, R.R. #1, Barney's River Station, N.S.
Lance Bishop, Andover, N.B.
Carmella Bordage, R.R. #4, Box 231, Acadieville, N.B.
Nancy Boutilier, R.R. #3, R.M.B. #85, Armdale, N.S.
Ann Bubar, Hartland, R.R. #5, N.B.
Alan Dixon, 120 Birchmount Drive, Moncton, N.B.

Donald Doncaster, P.O. Box 1043, Sackville, N.B.
Margaret Dort, 118 Johnstone Avenue, Dartmouth, N.S.
Carol Goodwin, 11 Maple Place, Kentville, N.S.
Darrell Kelly, 1731 King's Road, Sydney River, N.S.
Lloyd Kerry, 2 Richmond Street, Charlottetown, P.E.I.
Stephen King, Little River Road, Oxford, N.S.
Vernon Mingo, Truro, R.R. #3, N.S.
William Munn, 44 Hillcrest Drive, Sydney, N.S.
Lynn McAllister, 244 West Lane, Moncton, N.B.
David McCullum, R.R. #1, Sussex, N.B.
Dawn McLaughlin, Aroostock, R.R. #1, N.B.
Catherine Pray, R.R. #1, Kentville, N.S.
Michael Pulsifer, Box 219, Wolfville, N.S.
Nancy Smeltzer, 148 Belcher Street, Kentville, N.S.
Deborah Smith, 350 High Street, Summerside, P.E.I.
Dolly Stewart, Kouchibouquac, Kent County, N.S.
Tony Van den Ende, 119 McAdam Ave., Fredericton, N.B.
Vicki Weldin, 25 Raymond Drive, Lower Sackville, N.S.

SPECIAL STUDENTS

Ineke Bakker, R.R. #3, Truro, N.S.
Wayne Bohla, N.S.A.C., Truro, N.S.
John Brennan, R.R. #5, Truro, N.S.
Noreen Brennan, R.R. #5, Truro, N.S.
Leonard Eaton, N.S.A.C, Truro, N.S.
Peter Eisener, 700 Portland Street, Dartmouth, N.S.
Rod Fraser, 209 Queen Street, Truro, N.S.
Alden Knight, 444 Prince Street, Truro, N.S.
James Lynds, 73 Pleasant Street, Truro, N.S.
Allison Maynard, R.R. #1, Tyne Valley, P.E.I.
Ardith MacKay, R.R. #3, College Road, Truro, N.S.